

B65H

HANDLING THIN OR FILAMENTARY MATERIAL, e.g. SHEETS, WEBS, CABLES

Definition statement

This place covers:

Handling aspects of general interest relating to thin material in the form of "separate articles" such as sheets, signatures, envelopes, blanks, cards and thin piles thereof.

Handling aspects of general interest relating to thin material in the form of "continuous articles" such as webs, tapes and films.

Filamentary material such as threads, wires, ropes, cables and hoses, and cover only methods or devices of general application or interest.

The coverage of the subclass can generally be divided into:

Sheets

Feeding to processes:

- Pile supports - [B65H 1/00](#);
- Separating from piles - [B65H 3/00](#);
- Feeding to machines or processes - [B65H 5/00](#);
- Feed control - [B65H 7/00](#);
- Positioning - [B65H 9/00](#);
- Feed tables - [B65H 11/00](#);

Feeding from processes:

- Feeding from machines or processes - [B65H 29/00](#);
- Pile receivers - [B65H 31/00](#);

Particular handling processes or apparatus therefor:

- Lifting ends of piles for overlapping - [B65H 13/00](#);
- Overturning articles - [B65H 15/00](#);
- Forming batches - [B65H 33/00](#);
- Associating, gathering - ([B65H 39/00](#)), [B65H 39/02](#), [B65H 39/10](#);
- Folding - [B65H 45/00](#);
- Unfolding - [B65H 47/00](#);
- Combinations of piling and depiling - [B65H 83/00](#);
- Recirculating articles - [B65H 85/00](#);
- Control, checking, safety - [B65H 43/00](#);

Relating both to sheet and/or web handling aspects:

- Associating sheets with webs - ([B65H 39/00](#)), [B65H 39/14](#);
- Special constructions of feed or guide rollers - [B65H 27/00](#);
- Delivery apparatuses incorporating devices for performing cutting or line-perforating or other auxiliary operations - [B65H 35/00](#), [B65H 37/00](#);

Webs:

Feeding out, taking up:

- Unwinding, paying-out webs - [B65H 16/00](#);
- Advancing webs - [B65H 20/00](#);

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- Winding - [B65H 18/00](#);
- Changing the web roll - [B65H 19/00](#);
- Webs' splicing - [B65H 21/00](#);
- Registering, tensioning or guiding, controlling tension - [B65H 23/00](#);

Particular handling processes or apparatus therefor:

- Associating to or more webs - ([B65H 39/00](#)), [B65H 39/16](#);
- Separating webs - [B65H 41/00](#);
- Folding - [B65H 45/00](#);
- Unfolding - [B65H 47/00](#);
- Warning or safety devices - [B65H 26/00](#);

Relating both to sheet and/or web handling aspects:

- Associating sheets with webs - ([B65H 39/00](#)), [B65H 39/14](#);
- Special constructions of feed or guide rollers - [B65H 27/00](#);
- Delivery apparatuses incorporating devices for performing cutting or line-perforating or other auxiliary operations - [B65H 35/00](#), [B65H 37/00](#);

Filamentary material:

- Unwinding, paying out - [B65H 49/00](#);
- Forwarding - [B65H 51/00](#);
- Winding, coiling, depositing - [B65H 54/00](#);
- Wound packages - [B65H 55/00](#);
- Guides - [B65H 57/00](#);
- Tension control - [B65H 59/00](#);
- Measuring predetermined lengths - [B65H 61/00](#);
- Control, checking, warning or safety - [B65H 63/00](#);
- Securing material to cores - [B65H 65/00](#);
- Replacing, removing cores - [B65H 67/00](#);
- Interconnecting, knot-tying - [B65H 69/00](#);
- Treatment during formation of package - [B65H 71/00](#);
- Stripping-off waste material from cores - [B65H 73/00](#);
- Storing - [B65H 75/00](#);
- Covering cores not otherwise provided for - [B65H 81/00](#);

Relationships with other classification places

In general the subclass does not cover subject-matter (methods or devices) which are more intimately associated with operations, or means for performing such operations, on the thin or filamentary material than with the handling of the material per se. Such subject-matter is classified in subclasses relevant for the respective operations or means (see further explanation in "Special Rules of Classification", Note 3a and 3b). Such relevant subclasses are in particular:

- Bandages or dressings [A61F 13/00](#);
- Card games appurtenances [A63F 1/06](#);
- Cleaning of moving articles, e.g. of moving webs or of objects on a conveyor [B08B 1/20](#);
- Devices accepting or dispensing paper currency, e.g. depositing machines; Automatic teller machines (ATM) [G07D 11/00](#), [G07F 19/20](#);
- Conveying or guiding webs through rotary printing presses or machines [B41F 13/02](#);
- Conveying record carriers from one station to another [G06K 13/00](#);
- Composing machines [B41B 21/32](#);
- Counting of objects carried by a conveyor; objects in a stack [G06M 7/00](#) and [G06M 9/00](#);

Relationships with other classification places

- Feeding, positioning or storing devices, combined with, or arranged in, or specially adapted for use in connection with, apparatus for working or processing sheet metal without essentially removing material [B21D 43/00](#);
- Film-handling mechanisms in photographic machines [B41B 15/32](#);
- Film-strip handling or handling of pictures in apparatus for taking photographs or for projecting or viewing them [G03B 1/00](#) and [G03B 27/00](#);
- Handling fabrics, fibres, yarns or other material in long lengths in drying apparatus [F26B 13/00](#);
- Handling for shaping or joining of plastics, for shaping of substances in a plastic state in general or for after-treatment of shaped products, e.g. feeding the material to be shaped [B29C 31/00](#);
- Handling intimately associated with electrographic processes using a charge pattern [G03G 15/60](#), [G03G 15/65](#);
- Handling of copy- or impression-transfer material in typewriters or selective printing mechanisms [B41J 11/00](#) - [B41J 17/00](#);
- Handling of labels in labelling or tagging apparatus [B65C](#);
- Handling of sheets or webs in apparatus for, or methods of, packaging articles, not of interest apart from their application in packaging machines [B65B](#);
- Handling relating to permanently attaching together sheets, quires, or signatures [B42B](#);
- Handling sheets in book-binding [B42C](#);
- Handling sheets intimately associated with inserting documents into envelopes [B43M 3/00](#), [B43M 5/00](#) and [B43M 7/00](#);
- Handling sheets not of interest apart from its use in systems for transmission or reproduction of pictures or patterns not varying in time, e.g. facsimile transmission [H04N 1/00](#);
- Handling sheets or webs in apparatus or devices for manifolding, duplicating or printing for office or other commercial purposes, or on addressing machines or like series-printing machines [B41L](#);
- Handling means for copy matter in stamping or numbering apparatus or devices [B41K 3/44](#);
- Information storage based on relative movement between record carrier and transducer, involving handling record carriers for recording or reproducing [G11B 15/00](#) - [G11B 19/00](#), [G11B 23/00](#) and [G11B 25/00](#);
- Machines for severing e.g. by cutting, perforating, punching, stamping-out [B26D](#);
- Machines for Perforating, punching, stamping-out other than by cutting [B26F](#);
- Machines for winding capacitors [H01G 13/02](#);
- Making boxes, cartons, envelopes or bags [B32B](#);
- Manufacturing coils for magnets, inductances, transformers, by winding [H01F 41/06](#);
- Means for automatic feeding of electrodes for spot or seam welding or cutting [B23K 9/12](#);
- Measuring arrangements characterised by the use of optical means [G01B 11/00](#);
- Metal rolling involving guiding, conveying or accumulating easily-flexible work, e.g. wire, sheet metal bands, in loops or curves [B21B 41/00](#);
- Postal sorting, similar sorting of documents, e.g. cheques [B07C](#);
- Rolls, drums, discs or the like [F16C 13/00](#);
- Spinning, weaving, braiding, lace-making, knitting, sewing, making ropes or cables [D01](#) - [D07](#);
- Supports or handling devices for wafers for manufacturing semiconductor components [H01L 21/67](#);
- Transferring webs from wet ends to press sections in paper-making [D21F 2/00](#);
- Transport or storage devices, conveyor s for objects in general [B65G](#);
- Testing or determining the identity or genuineness of paper currency [G07D 7/00](#);
- Winding-up, coiling, winding-off or temporarily accumulating metal wire, metal band or other flexible metal material, characterised by features relevant to metal processing only, other than by rolling [B21C 47/00](#) and [B21C 49/00](#);
- Winding or stacking hides or leather in machines or devices for manufacturing leather [C14B 1/62](#);

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Postal sorting, similar sorting of documents, e.g. cheques	B07C
Cleaning of moving articles, e.g. of moving webs or of objects on a conveyor	B08B 1/20
Metal rolling involving guiding, conveying or accumulating easily-flexible work, e.g. wire, sheet metal bands, in loops or curves	B21B 41/00
Winding or unwinding metal band or like flexible metallic material during manufacture	B21C
Winding-up, coiling, winding-off or temporarily accumulating metal wire, metal band or other flexible metal material, characterised by features relevant to metal processing only, other than by rolling	B21C 47/00 , B21C 49/00
Feeding, positioning or storing devices, combined with, or arranged in, or specially adapted for use in connection with, apparatus for working or processing sheet metal without essentially removing material	B21D 43/00
Working or processing wire	B21F , B21G
Means for automatic feeding of electrodes for spot or seam welding or cutting	B23K 9/12
Handling for shaping or joining of plastics, for shaping of substances in a plastic state in general or for after-treatment of shaped products, e.g. feeding the material to be shaped	B29C 31/00
Film-handling mechanisms in photographic composing machines	B41B 15/32 , B41B 21/32
Conveying or guiding webs through rotary-printing presses or machines	B41F 13/02
In selective printing mechanisms	B41J
Handling of copy- or impression-transfer material in typewriters or selective printing mechanisms	B41J 11/00 - B41J 17/00
Means for handling copy matter in stamping or numbering apparatus or devices	B41K 3/44
Handling sheets or webs in apparatus or devices for manifolding, duplicating or printing for office or other commercial purposes, or on addressing machines or like series-printing machines	B41L
Handling relating to permanently attaching together sheets, quires, or signatures	B42B
Handling sheets in book-binding	B42C
Unwinding, paying-out, forwarding, or winding ropes or cables in load-moving apparatus	B61B , B65G , B66
Handling of sheets or webs in apparatus for, or methods of, packaging articles, not of interest apart from their application in packaging machines	B65B
Handling of labels in labelling or tagging apparatus	B65C
Winding or stacking hides or leather in machines or devices for manufacturing leather	C14B 1/62
Spinning, weaving, braiding, lace-making, knitting, sewing, making ropes or cables	D01 - D07

Creels, warping, beaming, or leasing machines or methods for textile manufacturing purposes	D02H
Transferring webs from wet ends to press sections in paper-making	D21F 2/00
Handling fabrics, fibres, yarns or other material in long lengths in drying apparatus	F26B 13/00
Film-strip handling or handling of pictures in apparatus for taking photographs or for projecting or viewing them	G03B
Winding, unwinding, or feeding tape to, in, or from, information-processing apparatus	G06 , G11B
Conveying record carriers from one station to another	G06K 13/00
Counting of flat articles, e.g. sheets, carried by a conveyor	G06M 7/00
Information storage based on relative movement between record carrier and transducer, involving handling record carriers for recording or reproducing	G11B 15/00 - G11B 19/00 , G11B 23/00 , G11B 25/00
Manufacturing coils for magnets, inductances, transformers, by winding	H01F 41/06
Machines for winding capacitors	H01G 13/02
Sheet handling not of interest apart from its use in systems for transmission or reproduction of pictures or patterns not varying in time, e.g. facsimile transmission.	H04N 1/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Manipulators	B25J
Cutting machines or devices in general	B26D

Special rules of classification

For filamentary material the following tables shall be used as Informative reference to identify overlapping classes to be searched in the field of textile.

Subjects/Technical fields	B65H	D01D
Creels; Yarn supply	B65H 49/02 ; B65H 49/18	
Forwarding yarns; Temporarily storing yarns	B65H 51/00 ; B65H 51/20	
Servicing units	B65H 54/26	
Traversing yarns	B65H 54/28	
Transfer tails	B65H 54/34	
Dust removal	B65H 54/702	
Depositing in zigzag or in circles	B65H 45/02 ; B65H 54/76	D01D 7/02
Yarn guides	B65H 57/00	
Adjusting or controlling tension	B65H 59/00	
Measuring yarn length; Warning/safety devices, e.g. slub catchers (see also G01B , G01N)	B65H 61/00 ; B65H 63/00	

Special rules of classification

Replacing, removing tubes/ packages; Yarn end filling	B65H 67/00	
Splicing	B65H 69/00	
Waxing, oiling	B65H 71/00	D01D 5/096
Securing packaging/tubes on a support	B65H 49/36 ; B65H 54/543 ; B65H 75/242	
Cabling Machines	B65H 81/08	

Subjects/Technical fields	D01G	D01H
Creels; Yarn supply		D01H 1/18
Servicing units		D01H 13/005
Traversing yarns		D01H 1/36 ; D01H 13/06
Transfer tails		D01H 1/38
Dust removal		D01H 11/00
Depositing in zigzag or in circles	D01G 25/00	
Yarn guides		D01H 7/18 ; D01H 13/02 ; D01H 13/04
Adjusting or controlling tension		D01H 13/10
Measuring yarn length; Warning/ safety devices, e.g. slub catchers (see also G01B , G01N)		D01H 13/14 ; D01H 13/32
Replacing, removing tubes/ packages; Yarn end filling		D01H 9/00
Splicing		D01H 4/48 ; D01H 15/00
Waxing, oiling	D01G 29/00	D01H 13/30
Securing packaging/tubes on a support		D01H 7/16

Subjects/Technical fields	D02G	D02H
Creels; Yarn supply		D02H 1/00
Forwarding yarns; Temporarily storing yarns	D02G 1/14	
Adjusting or controlling tension		D01H 13/12 ; D02H 13/22
Measuring yarn length; Warning/ safety devices, e.g. slub catchers (see also G01B , G01N)		D02H 13/02
Replacing, removing tubes/ packages; Yarn end filling		D01H 9/00
Cabling Machines	D02G 3/36	

Subjects/Technical fields	D02J	D03D
Creels; Yarn supply		D03D 39/06 ; D03D 47/34 ; D03D 49/16

Special rules of classification

Forwarding yarns; Temporarily storing yarns	D02J 13/00	D03D 47/34
Yarn guides		D03D 47/34
Adjusting or controlling tension		D03D 47/34 ; D03D 49/04
Measuring yarn length; Warning/safety devices, e.g. slub catchers (see also G01B , G01N)		D03D 51/18

Subjects/Technical fields	D03J	D04B
Creels; Yarn supply		D04B 15/38
Forwarding yarns; Temporarily storing yarns		D04B 15/48
Dust removal	D03J 1/002	D04B 35/32
Depositing in zigzag or in circles		
Yarn guides		D04B 15/54
Adjusting or controlling tension		D04B 15/44
Measuring yarn length; Warning/safety devices, e.g. slub catchers (see also G01B , G01N)		D04B 35/10
Splicing	D03J 1/16	
Waxing, oiling	D03J 1/02 ; D03J 1/04	D04B 35/24

Subjects/Technical fields	D04H	D05C
Forwarding yarns; Temporarily storing yarns		D05C 15/18
Depositing in zigzag or in circles	D04H 1/70	
Yarn guides		D05C 11/08
Adjusting or controlling tension		D05C 11/08 ; D05C 15/18

Subjects \ Technical fields	D06B
Waxing, oiling	D06B 23/02

Note 1:

The [B65H](#) scheme is applied in combination with the [B65H](#) indexing scheme for classifying complementary information which is judged to be of particular interest. The [B65H](#) indexing scheme is divided into the following themes:

- [B65H 2301/00](#) - Particular handling processes;
- [B65H 2401/00](#) - [B65H 2408/40](#) - Constructional aspects such as material choices, machine elements, parts having special functions, specific machines;
- [B65H 2511/00](#) - [B65H 2557/62](#) - Control aspects such as sensing, measuring, actuating, adjusting;
- [B65H 2601/00](#) - Problem to be solved;
- [B65H 2701/00](#) - Handled material/article;
- [B65H 2801/00](#) - Application field;

Special rules of classification

In particular, at least one of the following symbols should be given:

- [B65H 2701/17](#) - Nature of material
- [B65H 2701/18](#) - Form of handled article or web
- [B65H 2701/19](#) - Specific article or web
- [B65H 2801/00](#) - Application field

However, if for example a document already has a [B07C](#) symbol there is no need for adding [B65H 2701/1916](#) "envelopes or articles of mail";

If for example a document already has a [H04N](#) symbol there is no need for adding [B65H 2801/39](#) "Scanning".

Indexing codes of groups [B65H 2511/00](#) - [B65H 2519/00](#) and [B65H 2701/13](#) can be combined with the following symbols relating to additional characteristics or to further specify the information. The additional symbols have the meanings indicated below:

- [B65H 2220/01](#) - Indicates that the first Indexing Code relates to an entity as a function of which control, adjustment or change is performed (input);
- [B65H 2220/02](#) - Indicates that the first Indexing Code relates to an entity which is controlled, adjusted or changed by a control process (output);
- [B65H 2220/03](#) - Indicates that the first Indexing Code relates to an entity which is measured, estimated, evaluated, calculated or determined but which is not adjusted or changed by the control process per se;
- [B65H 2220/04](#) - For distinguishing "adjusting" from controlling i.e. manual adjustments;
- [B65H 2220/08](#) - For distinguishing changing an entity in function of another entity purely by mechanical means i.e. no electronics involved;
- [B65H 2220/09](#) - Indicates that several of an entity are present;
- [B65H 2220/11](#) - Indicates that the code exclusively relates to machine elements, (to be combined with one of the indicators [B65H 2220/01](#) - [B65H 2220/09](#)).

[B65H 2220/09](#) can also be combined with other symbols when it is important to mark that several of an entity are present.

Indexing Codes of groups [B65H 2301/447](#) can be combined with additional symbols [B65H 2220/01](#) and/or [B65H 2220/02](#) to indicate additional characteristics. The addition has the following meaning:

- [B65H 2220/01](#) - For indicating a transport device whose receiving section is involved in the transfer;
- [B65H 2220/02](#) - For indicating a transport device whose delivering section is involved in the transfer;
- [B65H 2220/01](#), [B65H 2220/02](#) - For indicating a transport device whose both receiving and delivering section are involved in the transfer;

Examples relating to the additional symbols:

- Code [B65H 2511/22](#), [B65H 2220/01](#) relates to control as a function of the distance between items of handled material or between handled material and machine elements, whereas the code [B65H 2511/22](#), [B65H 2220/01](#), [B65H 2220/11](#) relates to control as a function of the distance exclusively between machine elements, e.g. the nip between cylinders;
- A document disclosing a device and/or method for controlling responsive to a wrong distance between articles successively separated from a pile of article, monitoring said distance by checking the time intervals ([B65H 2513/52](#)) between the parsing of the front edges of the articles ([B65H 2701/1311](#)), and responding by changing the rotational speed of the separator ([B65H 2513/11](#)), should be classified in: [B65H 7/02](#), [B65H 2701/1311](#), [B65H 2220/01](#), [B65H 2513/52](#), [B65H 2220/03](#), or [B65H 2513/11](#), [B65H 2220/02](#).

If the device and/or method for controlling is not the main but only an additional aspect of the invention the [B65H](#) symbols can be given without the symbol [B65H 7/02](#).

Special rules of classification

If the rotational speed of the separator is changed manually by the operator the last code should be [B65H 2513/11](#) or [B65H 2220/04](#).

Only the following [B65H](#) entries should always be used for the [B65H](#) groups related to filamentary material:

- [B65H 2701/30](#) - Type of handled material;
- [B65H 2701/50](#) - Storage means;
- [B65H 2402/412](#) - Handles;
- [B65H 2402/414](#) - Manual tools;

Note 2:

If it is judged that handling aspects are relevant for both articles being fed to a process and for articles being fed from a process, they should be classified in the groups concerning "feeding to processes" as well as in the groups concerning "feeding from processes" unless precedence notes dictate otherwise.

Note 3a:

When judging whether subject-matter is to be considered as being more "intimately associated " with operations on the thin or filamentary material than with the handling of the material per se, it should be judged whether the handling aspect, in particular the handling problem to be solved, could be understood per se without referring to the particular operation, or in other words, whether the handling of the material is technically inseparable from the respective operation. If the handling aspect is clearly inseparable from the operation, then this aspect should be classified only in the subclass relevant for that operation. If the handling aspect is clearly separable from the operation, then the aspect should only be classified in [B65H](#) (see examples type A).

Note 3b:

In many cases, however, such a clear distinction concerning the technical separability cannot be made. In such cases, the subject-matter should be classified both in [B65H](#) and the subclass concerning the operation action per se. If it is judged, that the handling aspects to a large extent are technically separable from the operation, but the operation nevertheless has some bearing on the handling, then the subject-matter should be classified in the relevant [B65H](#) groups combined with an [B65H 2801/00](#) symbol indicating the operation in the form of an application field (see example type B).

- Example type A:
- A document disclosing that the feeding speed of a piece of paper in an ink jet printer is controlled as a function of the ongoing printing operation should be classified in [B41J](#) and not in [B65H](#).
- Example type B:
- A document discloses handling means for replenishing the pile of paper sheets from which sheets are continuously separated and fed to an off-set printing machine without having to stop the printing machine. The printing process as such only has a bearing on the replenishing means (handling means) in as much as the size of the handling means is dictated by the size of the off-set printing machine. Such a document should be classified in [B65H 1/30](#) together with the [B65H 2801/21](#) symbol for "industrial size printers, e.g. rotary printing press".

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Package	A mass of filamentary material, formed by coiling, depositing, or winding, with or without a supporting core or former or an enclosing container or receptacle.
Handling	Separating, orientating/positioning, feeding, gathering, collecting, storing, folding (other than in the manufacture of products), unwinding, and winding.
Filamentary material	Includes thread, wires, ropes, cables, and hoses.

Thin material	Sheets, signatures, envelopes, blanks, and thin piles thereof (hereinafter referred to as "articles"), and webs, tapes, and films, e.g. of paper, fabric, metal foil, or plastics.
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B65H 1/00

Supports or magazines for piles from which articles are to be separated (carriers used for associating, collating, or gathering articles [B65H 39/00](#))

Definition statement

This place covers:

Supports or magazines or the like for completely separate but stacked or piled articles, such as for example a pile of A4 size paper sheets. A cassette for tickets which are semi attached to each other, so that a second ticket follows automatically when pulling the first ticket, is for example not covered.

References

Limiting references

This place does not cover:

Supports or magazines intimately associated with piling of articles	B65H 31/00
Holders or dispensers for towels or tissues	A47K 10/00
Supports for sheets united without binding to form pads or blocks	B42D 5/00
Articles in a strip, to be separated by tearing, severing or cutting from the strip, for example lottery tickets	G07F 11/00

Special rules of classification

- Many aspects of [B65H 1/00](#) are relevant for or corresponds to [B65H 31/00](#);
- Carriers used for associating, collating, or gathering articles are classified in [B65H 39/00](#);
- Bank note containers, subject-matter which relates to the position of and/or functioning of the bank note container as a component as such in the bank note machine should be classified in [G07D 11/12](#);
- Details concerning arrangement or construction are classified by using symbols from [B65H 2405/10](#) - [B65H 2405/30](#);
- Elements which are manually positioned in function of the size of the supported articles, additionally classify in [B65H 2511/10](#)+ [B65H 2220/01](#) and [B65H 2511/20](#)+ [B65H 2220/04](#);
- In particular, if the distance between such elements is adjusted according to the width of the articles, additionally classify in [B65H 2511/12](#)+ [B65H 2220/01](#) and [B65H 2511/22](#)+ [B65H 2220/04](#);
- Determining, measuring the size of articles, additionally classify in [B65H 2511/10](#)+ [B65H 2220/03](#), together with a [B65H 7/00](#) symbol if it is the main aspect of the invention

B65H 1/02

adapted to support articles on edge

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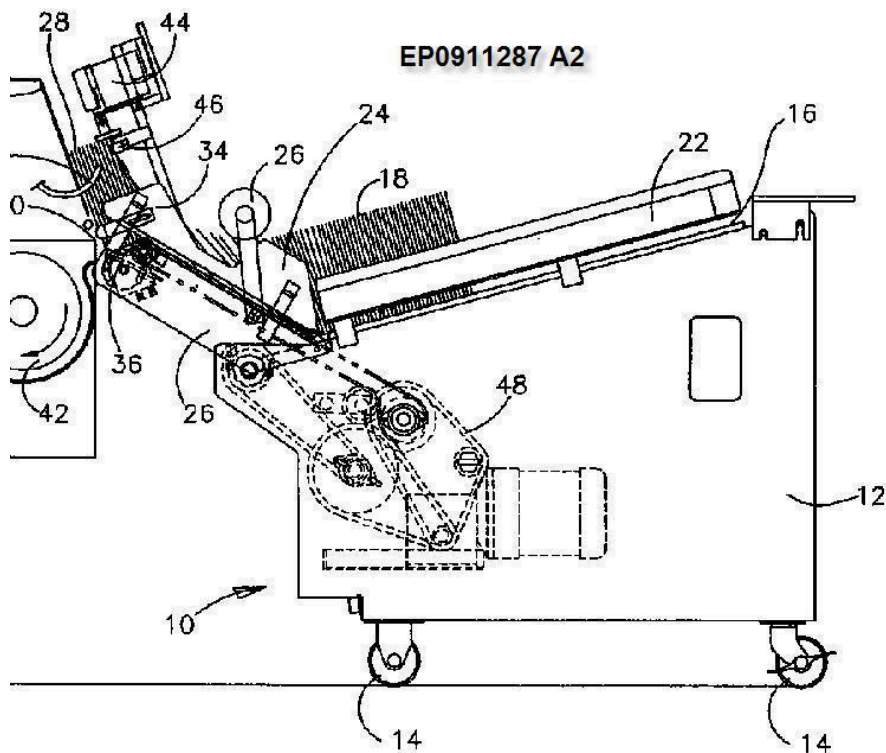
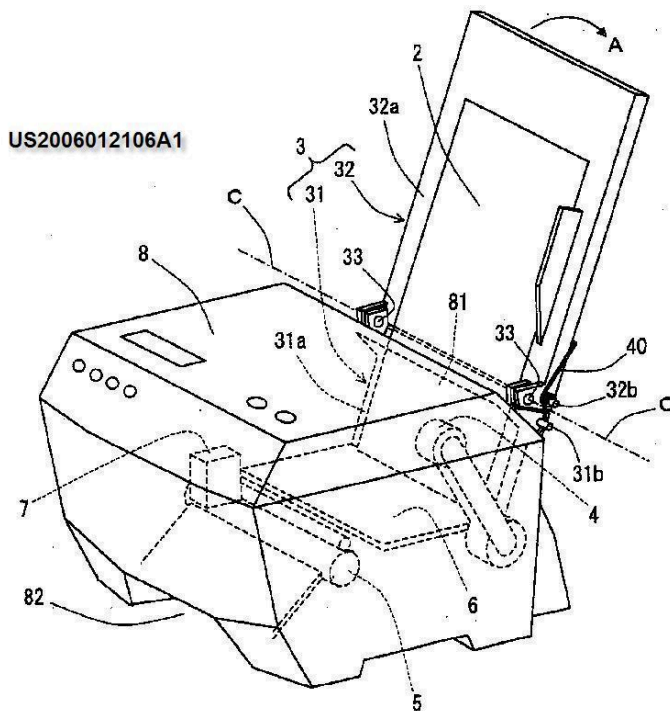
This place covers:

This subclass/group covers: Supports which carry piles in such a way that the weight of the pile is mainly supported by the edges of the articles. This is for example the case where a support which carries a square pile of articles on their surfaces is tilted from the horizontal to an angle more than 45

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degrees. The group does not cover the cases where the weight of the pile must be said to be carried equally by the edges and the surfaces of the articles. e.g. cases where a support which carries a square pile of articles on their surfaces is tilted from the horizontal to an angle of exactly 45 degrees. These cases are covered by [B65H 1/04](#).

See examples below:



B65H 1/022

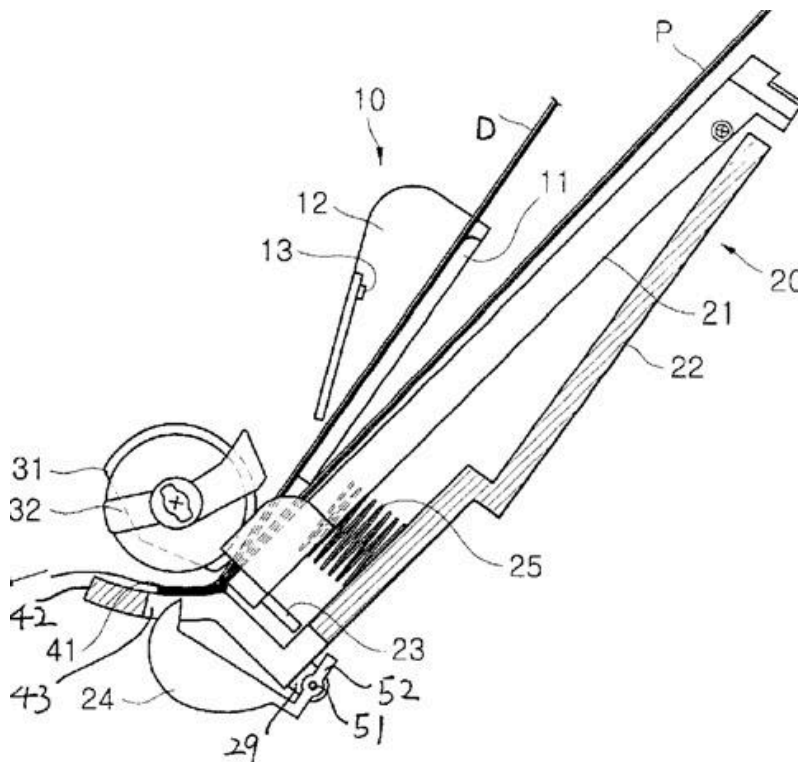
{with non-controlled means for advancing the pile to present the pile to the separating device, e.g. weights or spring}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

See the spring 25 pressing the support 21

**B65H 1/025**

{with controlled positively-acting mechanical devices for advancing the pile to present the articles to the separating device}

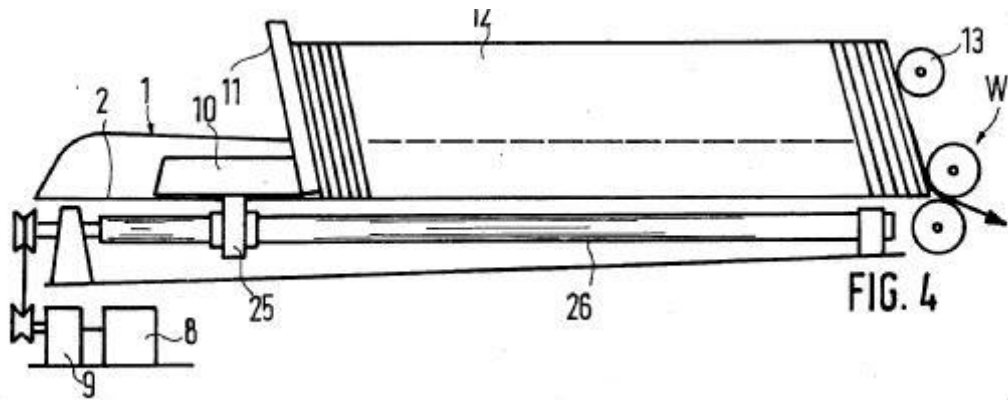
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

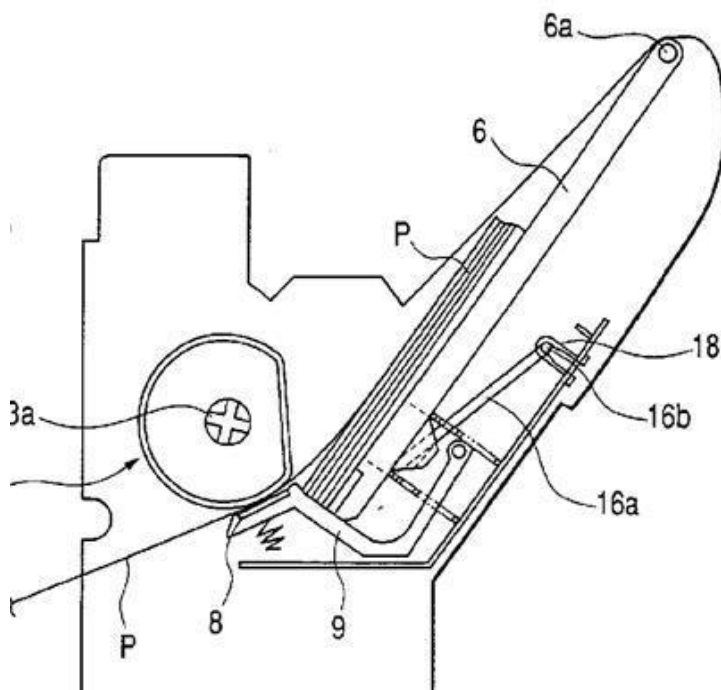
Definition statement

Mechanical device (8,9,25,26) drives the pusher (10,11)



Special rules of classification

- For specifically described control procedures the corresponding [B65H 2511/00](#) - [B65H 2557/62](#) codes and [B65H 7/00](#) scheme should be applied. For example:
- The pile is advanced/moved as a function of an absence of articles: [B65H 7/04](#) and [B65H 2511/515+](#) [B65H 2220/01](#) and [B65H 2513/40+](#) [B65H 2220/02](#)
- The position of the separation end of the pile is controlled in function of the thickness of the articles: [B65H 7/02](#) and [B65H 2511/13+](#) [B65H 2220/01](#) and [B65H 2511/20+](#) [B65H 2220/02](#);
- The type of actuator for moving the articles is indicated with an [B65H 2555/00](#) symbol.
- If the subject-matter can be classified by combining [B65H 3/0607](#) and [B65H 3/0661](#), this takes precedence. See for example, below:



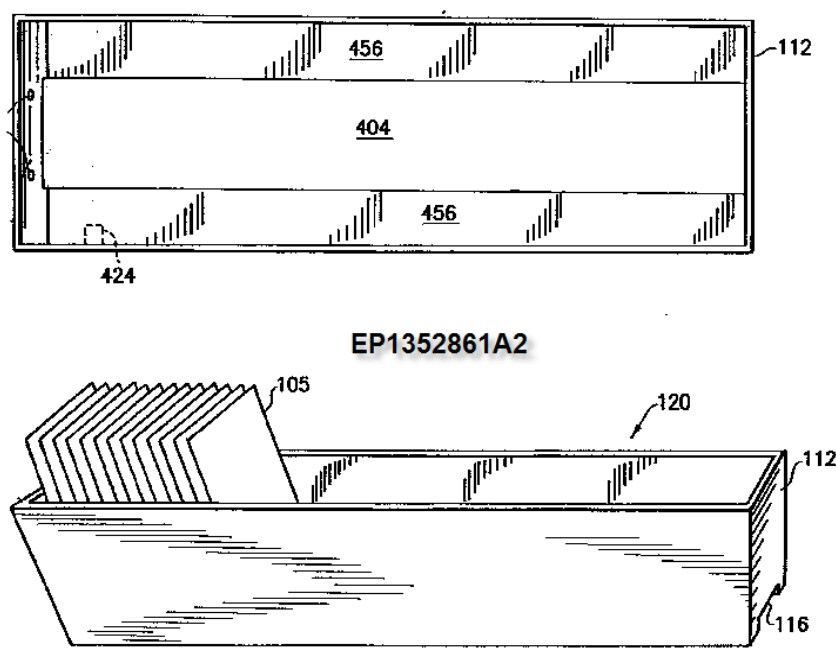
B65H 1/027

{Support fully or partially removable from the handling machine, e.g. cassette, drawer}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Copy medium cassettes for apparatuses for electro photographic processes	G03G 2215/00383
Cassettes for paper currency	G07D 11/12

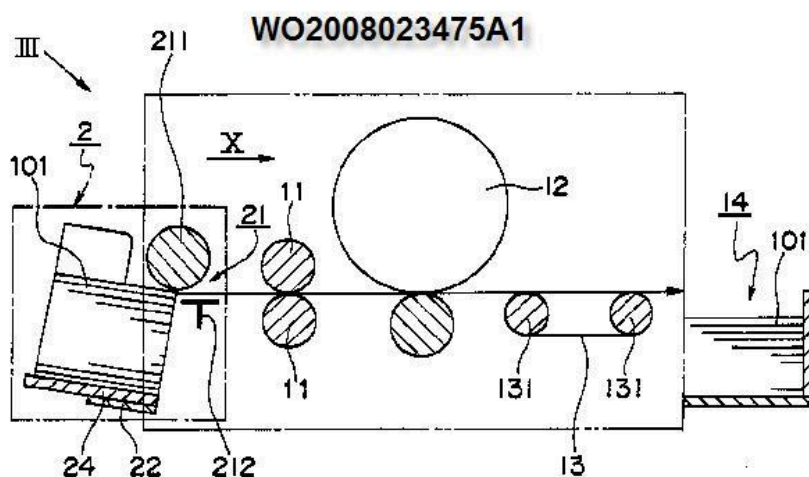
B65H 1/04

adapted to support articles substantially horizontally, e.g. for separation from top of pile

Definition statement

This place covers:

- Supports which carry piles in such a way that the weight of the pile is mainly supported by the surfaces of the articles. This is for example the case where a support which carries a square pile of articles on their surfaces is tilted from the horizontal to an angle less than 45 degrees.
- Cases where the weight of the pile must be said to be carried equally by the edges and the surfaces of the articles. e.g. cases where a support which carries a square pile of articles on their surfaces is tilted from the horizontal to an angle of exactly 45 degrees.



References

Limiting references

This place does not cover:

Supports which carry piles in such a way that the weight of the pile is mainly supported by the edges of the articles

[B65H 1/02](#) - [B65H 1/027](#)

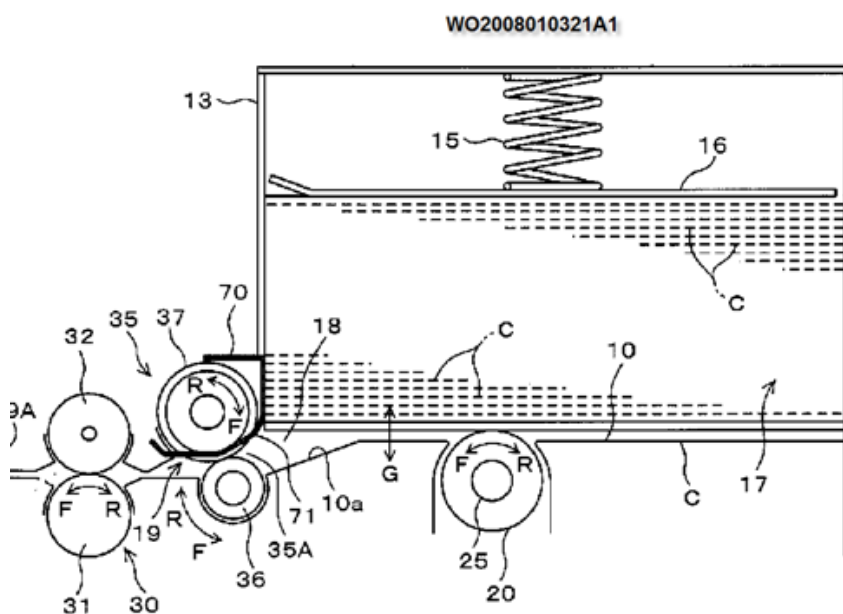
B65H 1/06

for separation from bottom of pile

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 1/08

with means for advancing the articles to present the articles to the separating device {(B65H 1/02 takes precedence)}

References

Limiting references

This place does not cover:

Supports or magazines for piles from which articles are to be separated adapted to support articles on edge	B65H 1/02
---	---------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Printers	B41J 2/1752 , B41J 13/103
Copy machines	G03G 15/6505 , G03G 15/6508

B65H 1/10

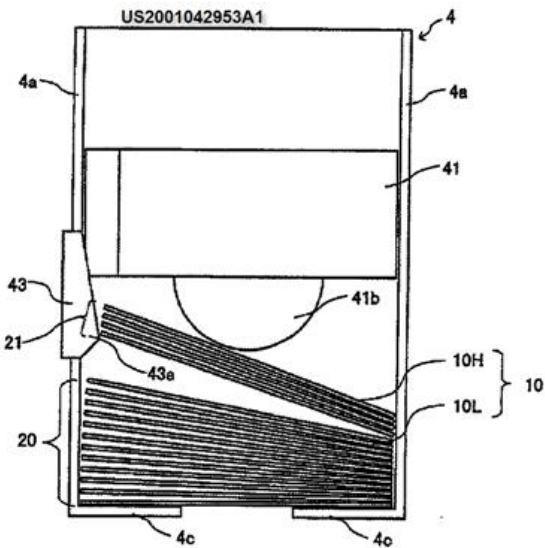
comprising weights {(B65H 1/022 takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

See the weight element (41,41b)



References

Limiting references

This place does not cover:

Supports or magazines for piles from which articles are to be separated with non-controlled means for advancing the pile to present the pile to the separating device

[B65H 1/022](#)

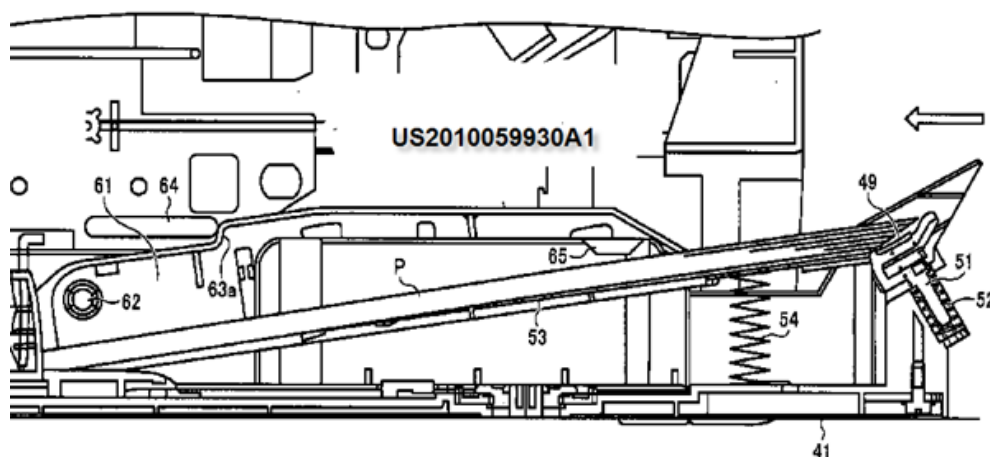
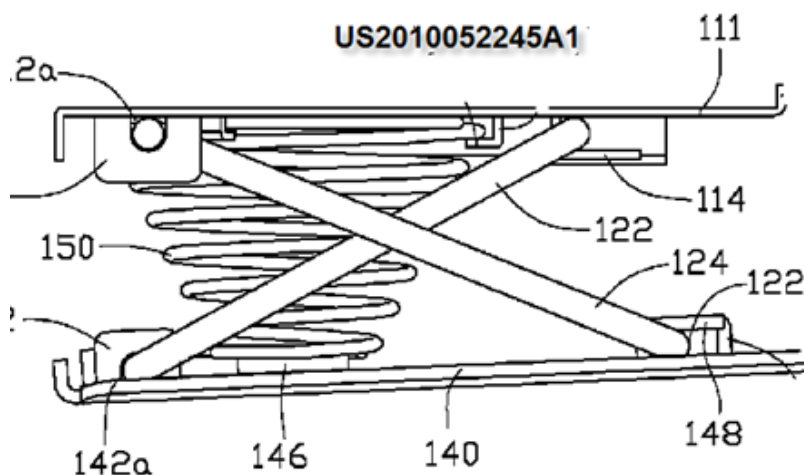
B65H 1/12

comprising spring {([B65H 1/022](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Supports or magazines for piles from which articles are to be separated with non-controlled means for advancing the pile to present the pile to the separating device	B65H 1/022
---	----------------------------

B65H 1/14

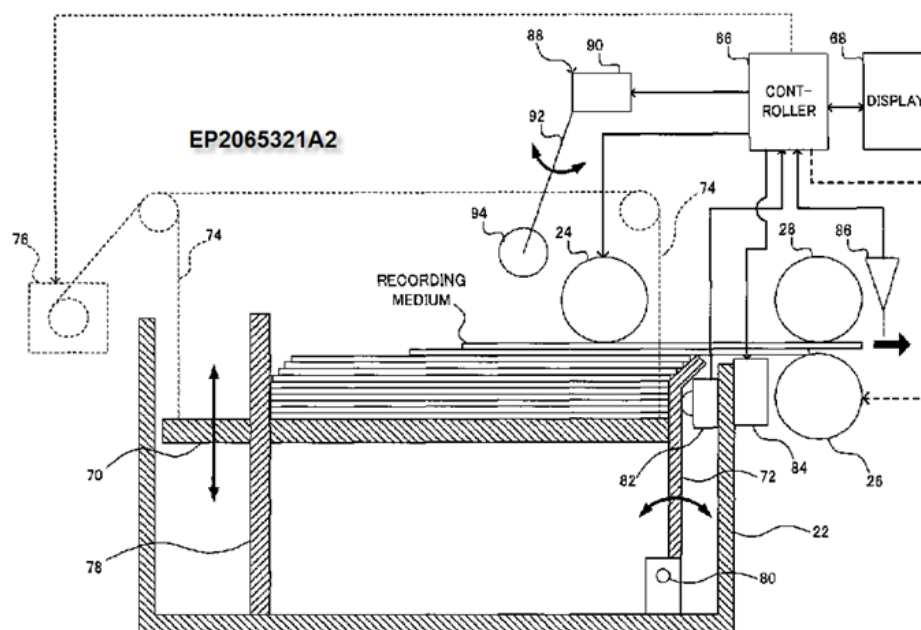
comprising positively-acting mechanical devices {([B65H 1/025](#) takes precedence)}

Definition statement

This place covers:

Specific mechanical /constructional details of the devices. e.g. the mechanical structure of the device is the main aspect.

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Supports or magazines for piles from which articles are to be separated with controlled positively-acting mechanical devices for advancing the pile to present the articles to the separating device	B65H 1/025
Rollers or like rotary separators cooperating with means for automatically separating the pile from roller or rotary separator after a separation step	B65H 3/0607

Informative references

Attention is drawn to the following places, which may be of interest for search:

Printers	B41J 2/1752 , B41J 13/103
Copy machines	G03G 15/6505 , G03G 15/6508

Special rules of classification

For specifically described control procedures the corresponding [B65H 2511/00](#) - [B65H 2557/62](#) codes and [B65H 7/00](#) scheme should be applied. For example:

- The pile is advanced/moved as a function of an absence of articles: [B65H 7/04](#) and [B65H 2511/515](#)+ [B65H 2220/01](#) and [B65H 2513/40](#)+ [B65H 2220/02](#)
- The position of the separation end of the pile is controlled in function of the thickness of the articles: [B65H 7/02](#) and [B65H 2511/13](#)+ [B65H 2220/01](#) and [B65H 2511/20](#)+ [B65H 2220/02](#)
- The type of actuator for moving the articles is indicated with a code from [B65H 2555/00](#)

B65H 1/16

comprising pneumatic or hydraulic means {([B65H 1/18](#), [B65H 1/20](#) take precedence)}

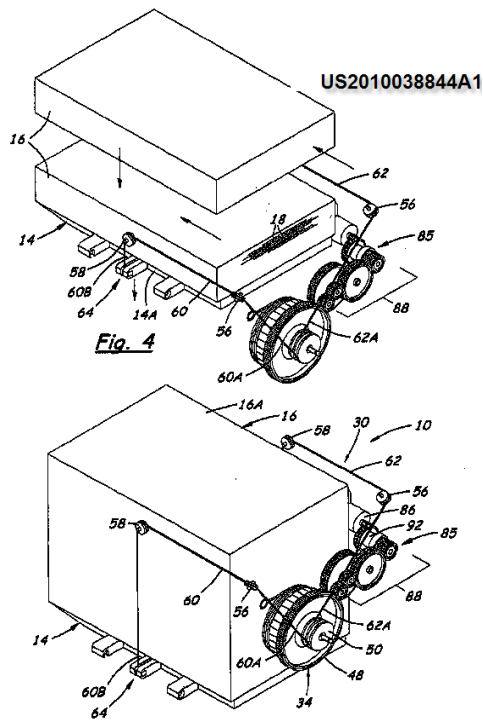
References**Limiting references**

This place does not cover:

Means for advancing the articles to present the articles to the separating device controlled by height of pile	B65H 1/18
Means for advancing the articles to present the articles to the separating device controlled by weight of pile; Floating arrangements	B65H 1/20

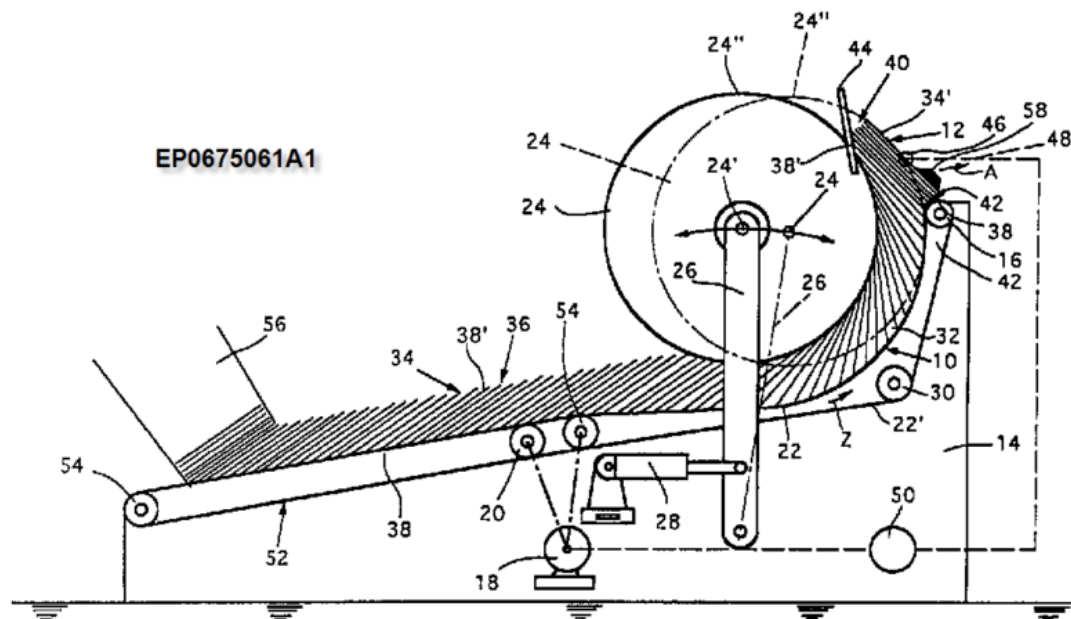
B65H 1/20**controlled by weight of pile; Floating arrangements****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 1/22****moving in direction of plane of articles, e.g. for bodily advancement of fanned-out piles****Definition statement***This place covers:*

Advancement of fanned-out piles without reversing the articles. For example from overlapped to underlapped

Illustrative examples of subject matter classified in this group:



References

Limiting references

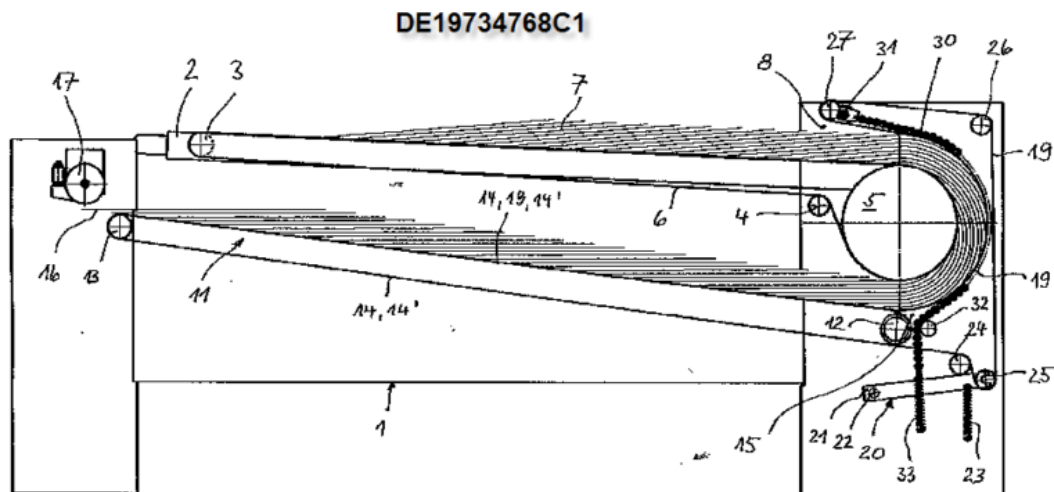
This place does not cover:

With means for replenishing the pile during continuous separation of articles therefrom	B65H 1/30
---	---------------------------

B65H 1/225**{Round stack feeders}****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



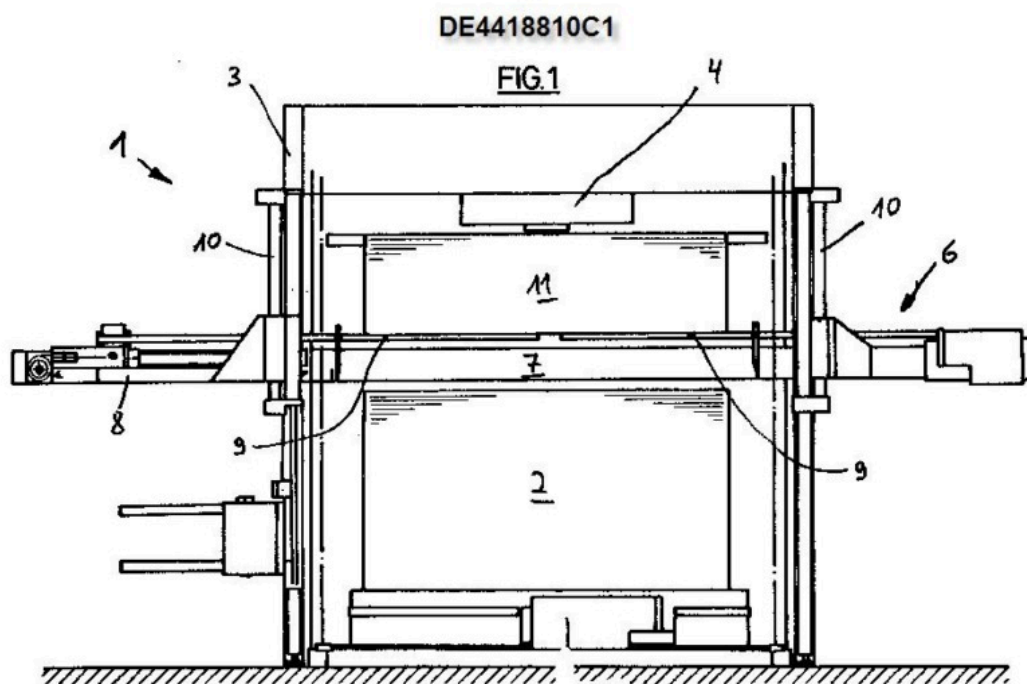
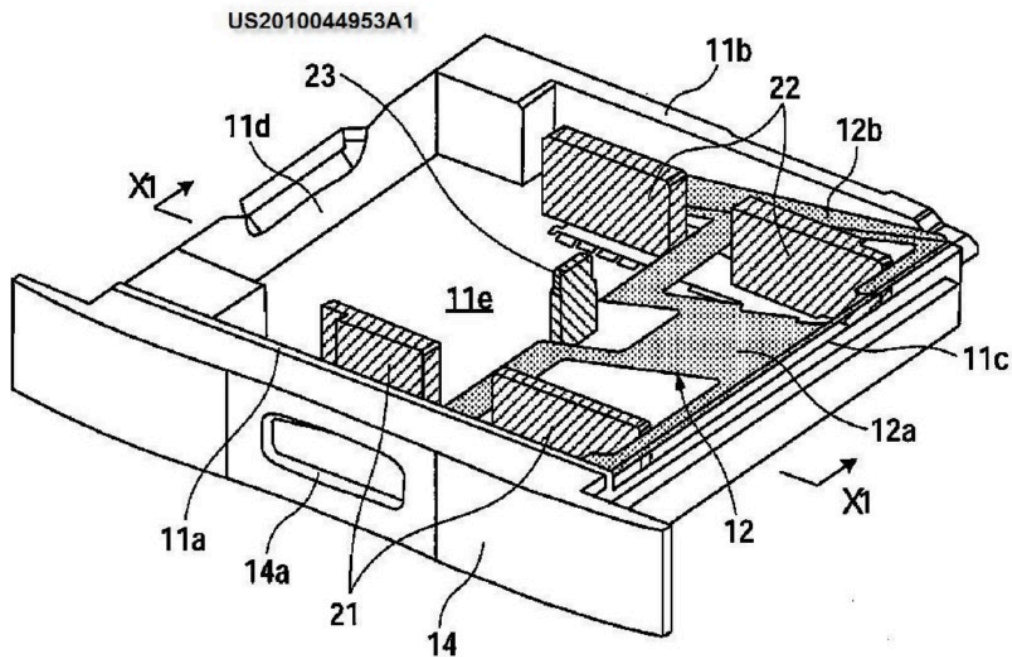
B65H 1/26

with auxiliary supports to facilitate introduction or renewal of the pile

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



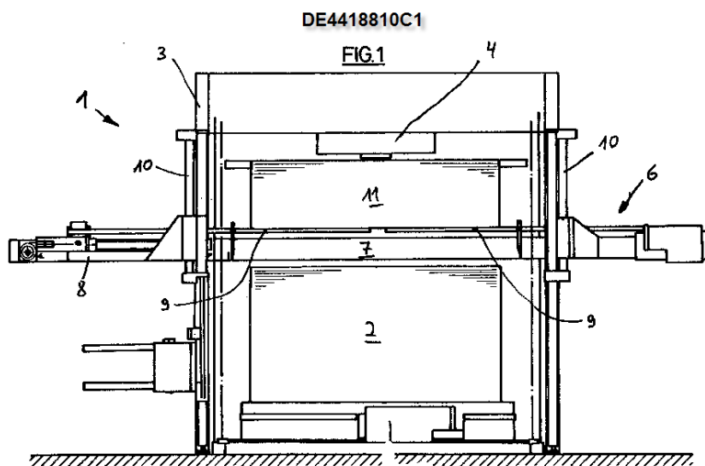
B65H 1/263

{Auxiliary supports for keeping the pile in the separation process during introduction of a new pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

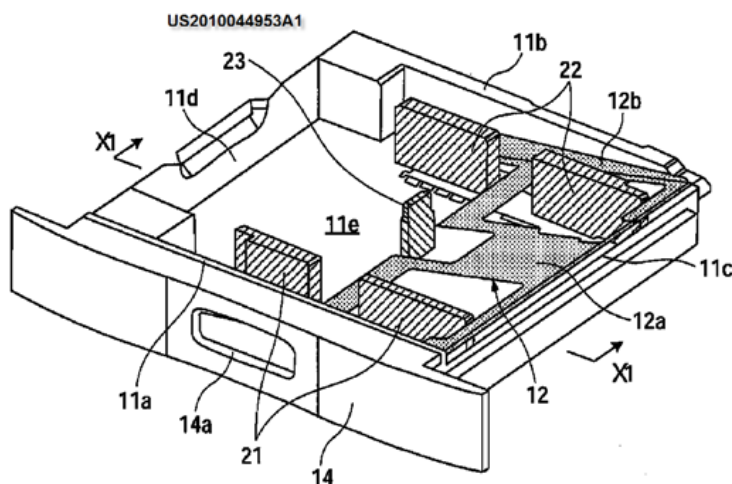
**B65H 1/266**

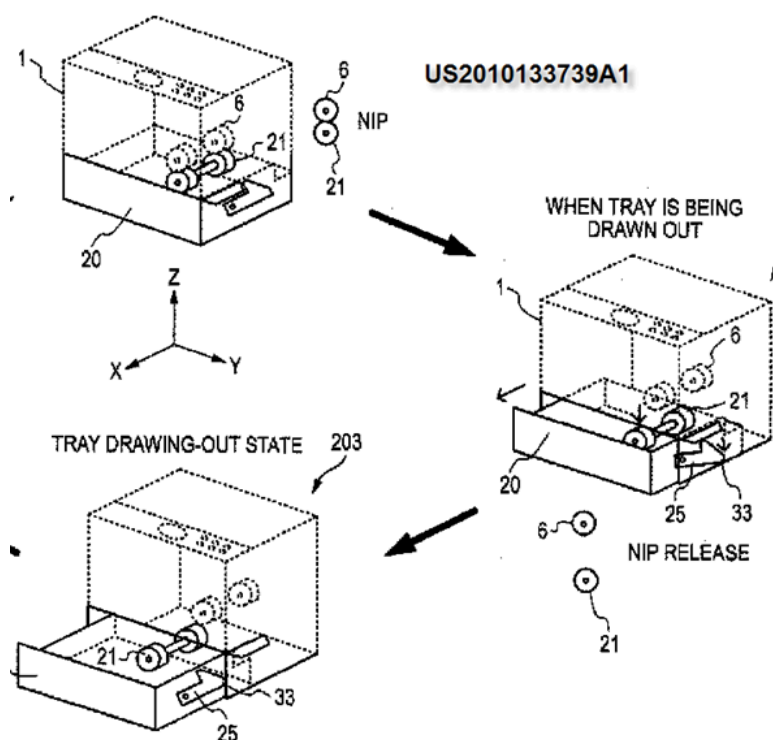
{Support fully or partially removable from the handling machine, e.g. cassette, drawer ([B65H 1/027](#) takes precedence)}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





References

Limiting references

This place does not cover:

Support fully or partially removable from the handling machine, e.g. cassette, drawer for articles supported on the edge	B65H 1/027
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Copy medium cassettes for apparatuses for electro photographic processes	G03G 2215/00383
Cassettes for paper currency	G07D 11/12

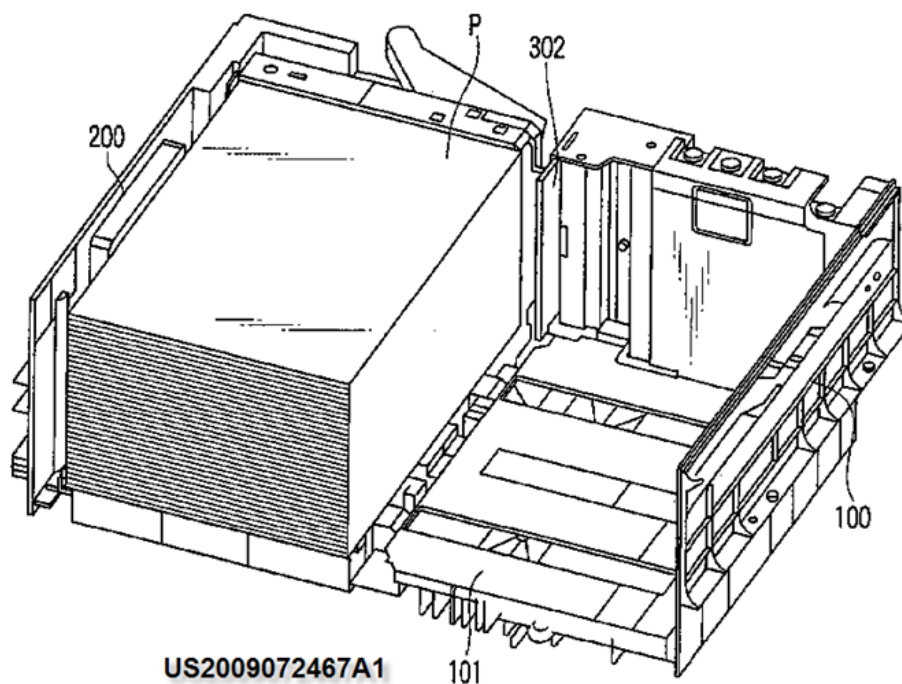
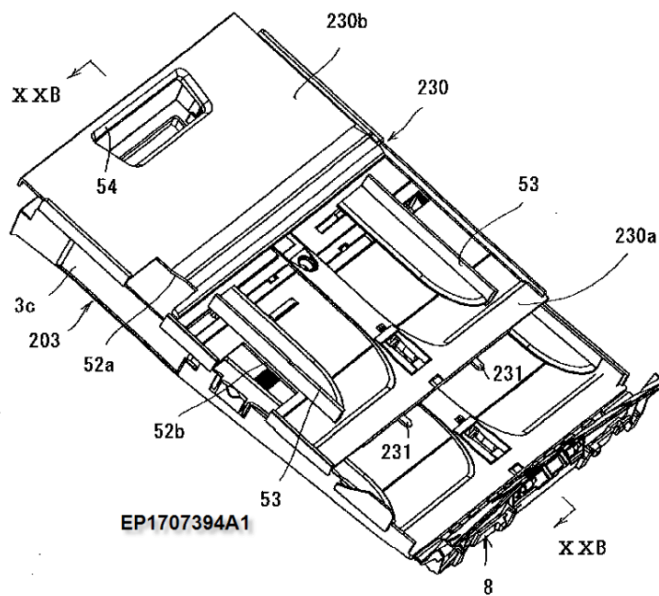
Special rules of classification

Details concerning arrangement or construction are classified by using symbols from [B65H 2405/10](#) - [B65H 2405/30](#):

- Elements which are manually positioned in function of the size of the supported articles, additionally classify in: [B65H 2511/10](#)+ [B65H 2220/01](#) and [B65H 2511/20](#)+ [B65H 2220/04](#);
- In particular, if the distance between such elements is adjusted according to the width of the articles, additionally classify in: [B65H 2511/12](#)+ [B65H 2220/01](#) and [B65H 2511/22](#)+ [B65H 2220/04](#);

B65H 1/28**compartmented to receive piles side-by-side****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:

**Special rules of classification**

Details concerning arrangement or construction are classified by using symbols from [B65H 2405/10](#) - [B65H 2405/30](#).

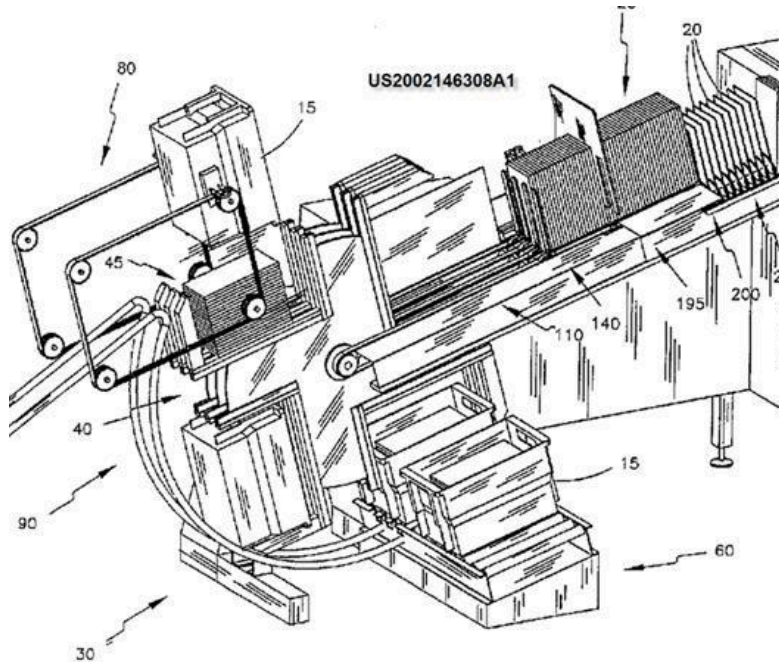
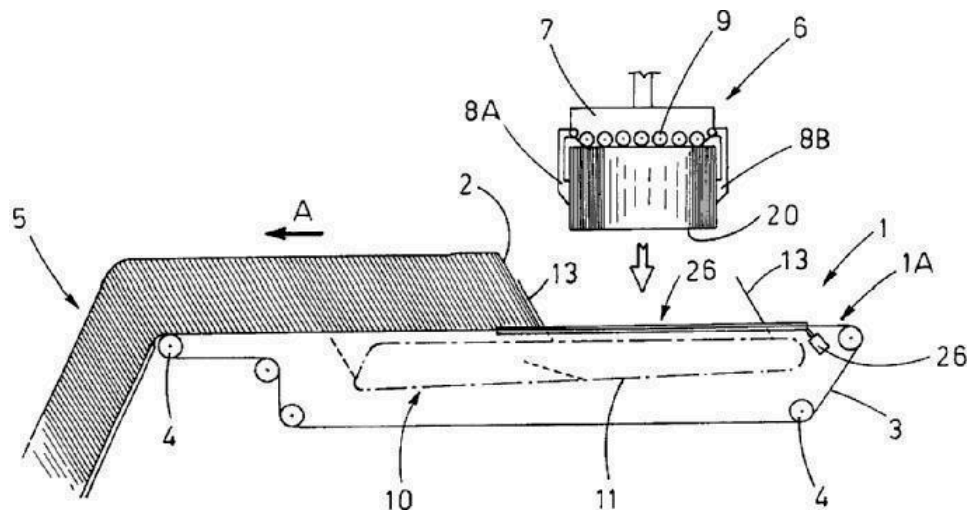
B65H 1/30

with means for replenishing the pile during continuous separation of articles therefrom {(B65H 1/22 takes precedence)}

Definition statement

This place covers:

The concept "replenishing the pile" consists in supplying complete piles or stacks to the support or magazine.



References

Limiting references

This place does not cover:

Means for advancing the articles to present the articles to the separating device moving in direction of plane of articles	B65H 1/22
--	---------------------------

Combinations of piling and depiling operations e.g. performed simultaneously, of interest apart from the single operation of piling or depiling as such	B65H 83/00
---	----------------------------

Special rules of classification

Supplying individual articles, either continuous or discontinuous to the pile during continuous separation therefrom: [B65H 83/02](#)

B65H 3/00

Separating articles from piles (associating, collating, or gathering articles [B65H 39/00](#); machines for separating superposed webs [B65H 41/00](#); unpiling thin material combined with folding [B65H 45/26](#); combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling [B65H 83/00](#))

Definition statement

This place covers:

The various arrangements for separating (i.e. removing) articles from piles to be fed to processing machines (e.g. printers) and the associated mechanisms for ensuring that the separation is performed reliably, e.g. only one article is removed each time.

References

Limiting references

This place does not cover:

Associating, collating, or gathering articles	B65H 39/00
Separating superposed webs	B65H 41/00
Separating from piles in combination with folding	B65H 45/26
Combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling	B65H 83/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Separating superposed articles transported in a stream	B65H 2301/44514
Forming postal articles into a stream:	B07C 1/02
Separation intimately linked with a paper currency sorting or counting machine	G07D 11/50

Special rules of classification

This main-group should be used only for subject-matter not being covered by any of its sub-groups.

B65H 3/02

using friction forces between articles and separator

Definition statement

This place covers:

Arrangements that use friction forces to separate the article from the pile.

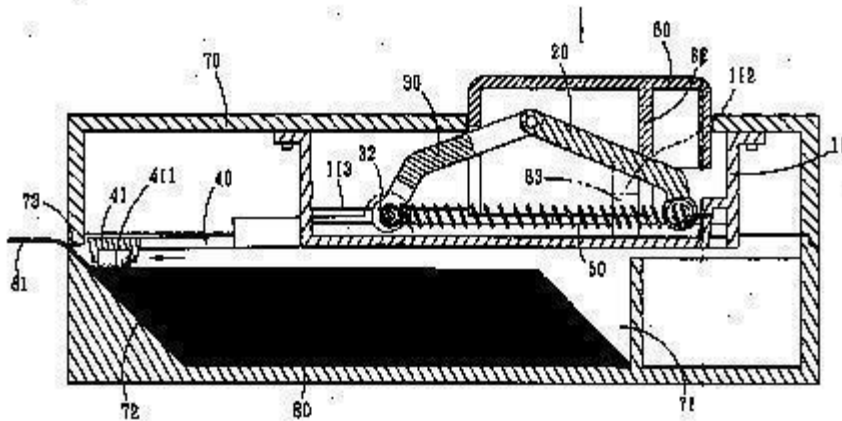


FIG. 5

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Separating articles from bottom of pile of horizontal articles	B65H 2301/42322
--	---------------------------------

Special rules of classification

This main-group should be used only for subject-matter not being covered by any of its sub-groups.

Manually powered apparatus, additionally classify also in [B65H 2403/941](#).

Relevant UCLA: 271/42 reciprocating separators

B65H 3/04

Endless-belt separators

Definition statement

This place covers:

Arrangements using an endless belt wherein the separation force is created only by friction.

References

Limiting references

This place does not cover:

Perforated belts in which suction is used to enhance adherence of the article on the belt are covered by
--

B65H 3/12

Special rules of classification

This main-group should be used only for subject-matter not being covered by any of its sub-groups.

B65H 3/042

{separating from the bottom of the pile}

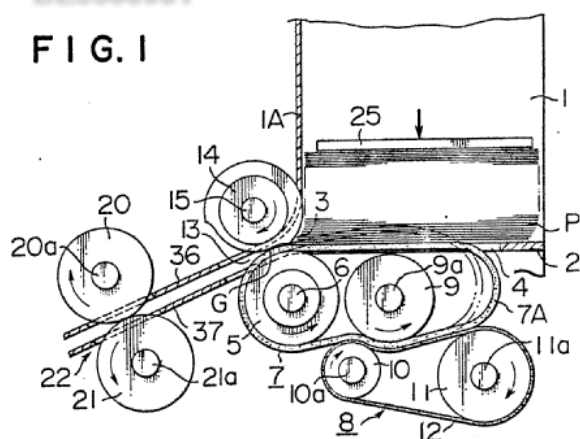
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

DE3508981

F I G. I



B65H 3/045

{for separating substantially vertically stacked articles}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(top view)

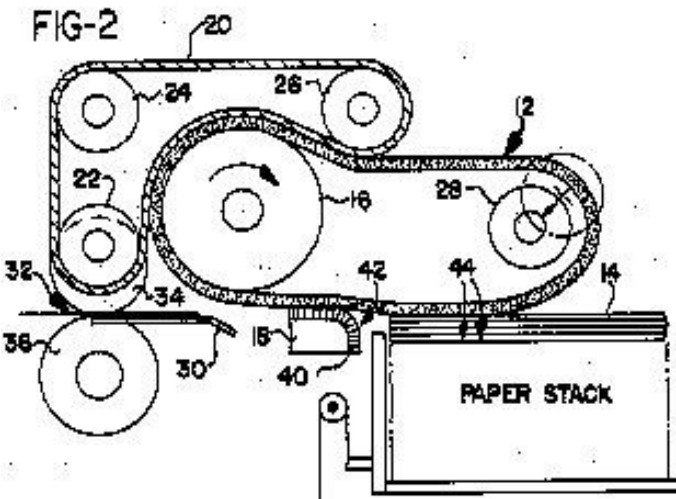
B65H 3/047

{separating from the top of a pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 3/06

Rollers or like rotary separators {(B65H 3/42 takes precedence)}

Definition statement

This place covers:

Arrangements using rollers or similar rotating devices (e.g. spheres) wherein the separation force is created only by friction.

References

Limiting references

This place does not cover:

Rollers in which suction is used to enhance adherence of the article on the roller are covered by	B65H 3/10
Separating articles from piles by two or more separators mounted for movement with, or relative to, rotary or oscillating bodies	B65H 3/42

Special rules of classification

This main-group should be used only for subject-matter not being covered by any of its sub-groups.

B65H 3/0607

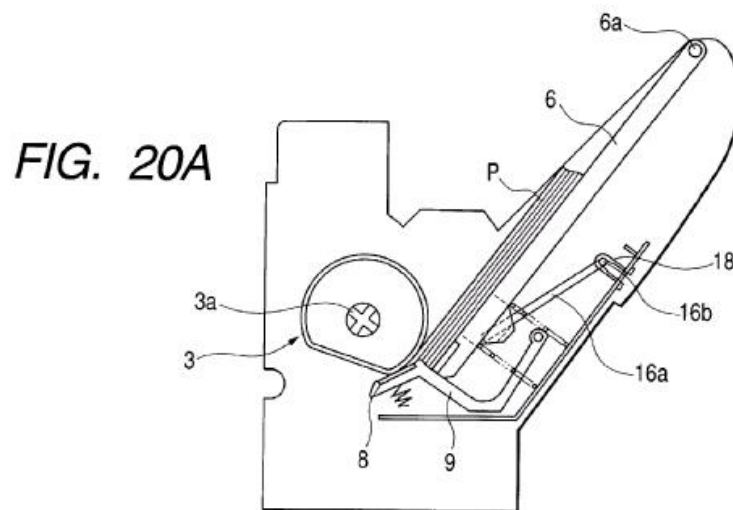
{cooperating with means for automatically separating the pile from roller or rotary separator after a separation step}

Definition statement

This place covers:

Arrangements which allow the sheet support to move towards the separator roller for sheet separation and which move the sheets away from the separator roller once the separation step is completed.

Illustrative example of subject matter classified in this group:

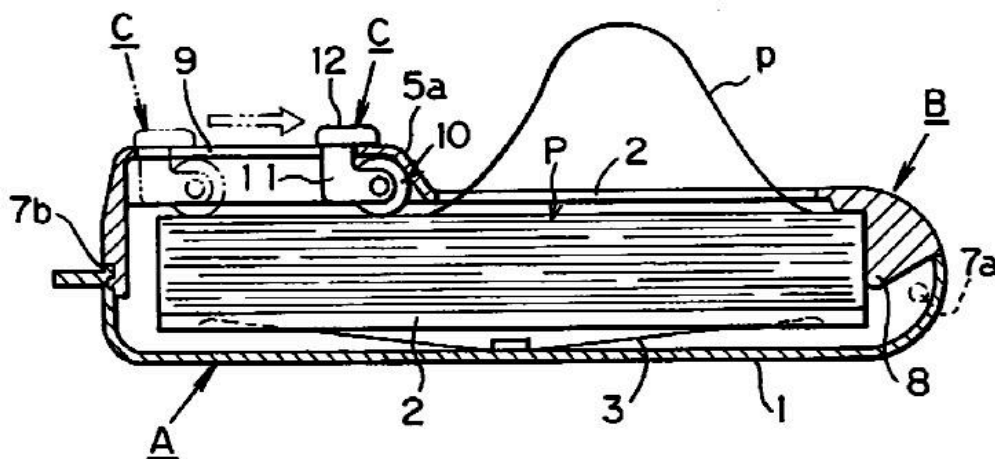
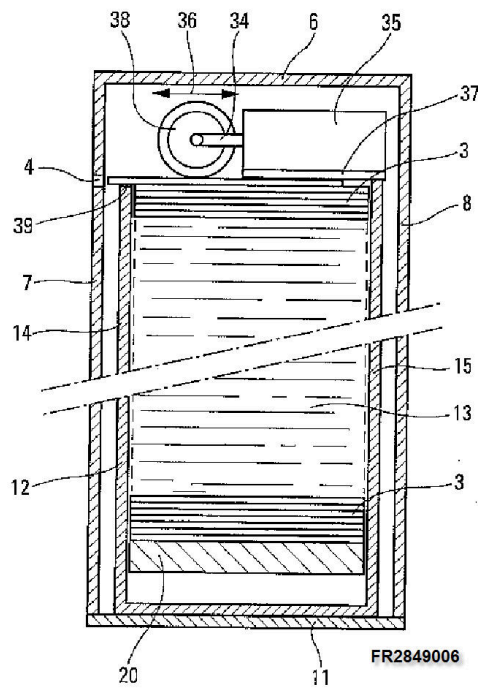
**Special rules of classification**

If the subject-matter can be classified by the combination [B65H 3/0607](#) and [B65H 3/0661](#), then this takes precedence over [B65H 1/025](#), see for example EP1681252A1.

The group takes precedence over [B65H 1/14](#).

B65H 3/0615**{reciprocating and rotatable in one direction only}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:



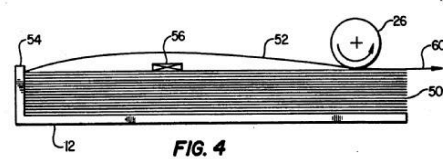
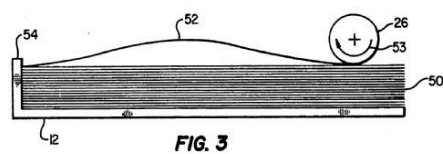
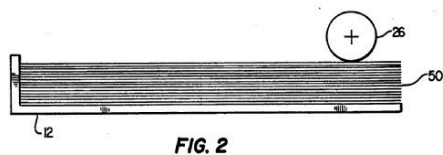
B65H 3/0623

{acting at least during a part of each separation cycle on the articles in a direction opposite to the final separating direction}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



US5195735

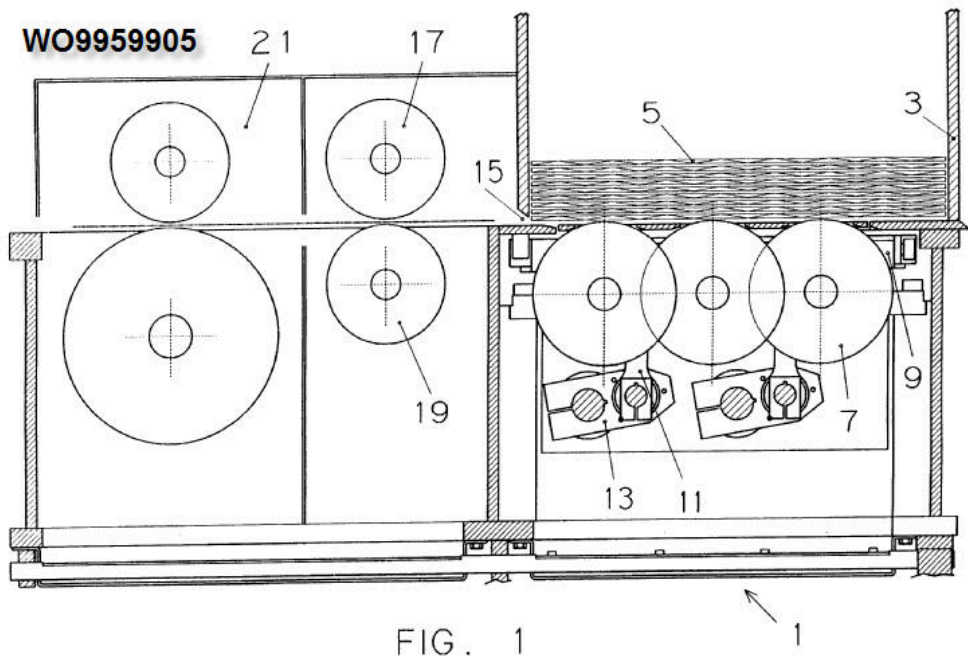
B65H 3/063

{separating from the bottom of pile ([B65H 3/0615](#), [B65H 3/0623](#) take precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Relationships with other classification places

For substantially vertical stacks with the separation roller below the stack additionally classify in [B65H 3/0653](#).

References

Limiting references

This place does not cover:

Rollers or like rotary separators, reciprocating and rotatable in one direction only	B65H 3/0615
Rollers or like rotary separators acting at least during a part of each separation cycle on the articles in a direction opposite to the final separating direction	B65H 3/0623

B65H 3/0638

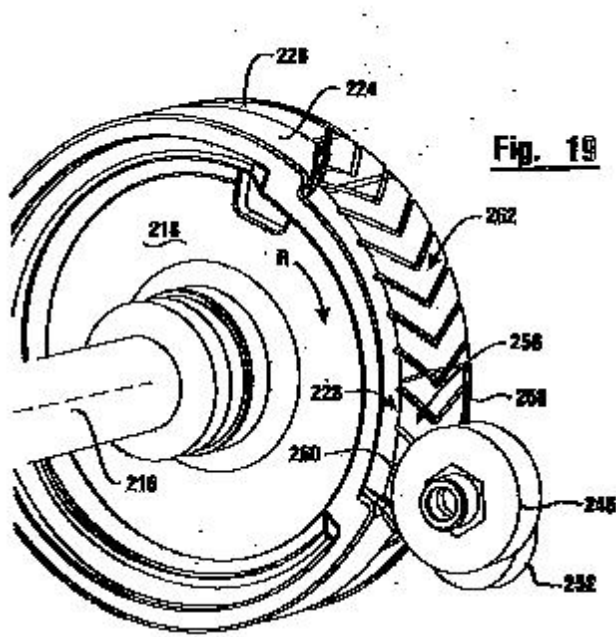
{Construction of the rollers or like rotary separators ([B65H 3/0615](#) takes precedence; construction of feed or guide rollers [B65H 27/00](#))}

Definition statement

This place covers:

Construction of rollers or the like adapted for separating articles from piles

Illustrative example of subject matter classified in this group:



Relationships with other classification places

For details concerning, e.g.

- materials used and their properties additionally classified in [B65H 2401/00](#);
- construction or arrangement of roller(s) additionally classified in [B65H 2404/10](#);
- surface of the elements in contact with the material forwarded or guided additionally classified in [B65H 2404/50](#).

References

Limiting references

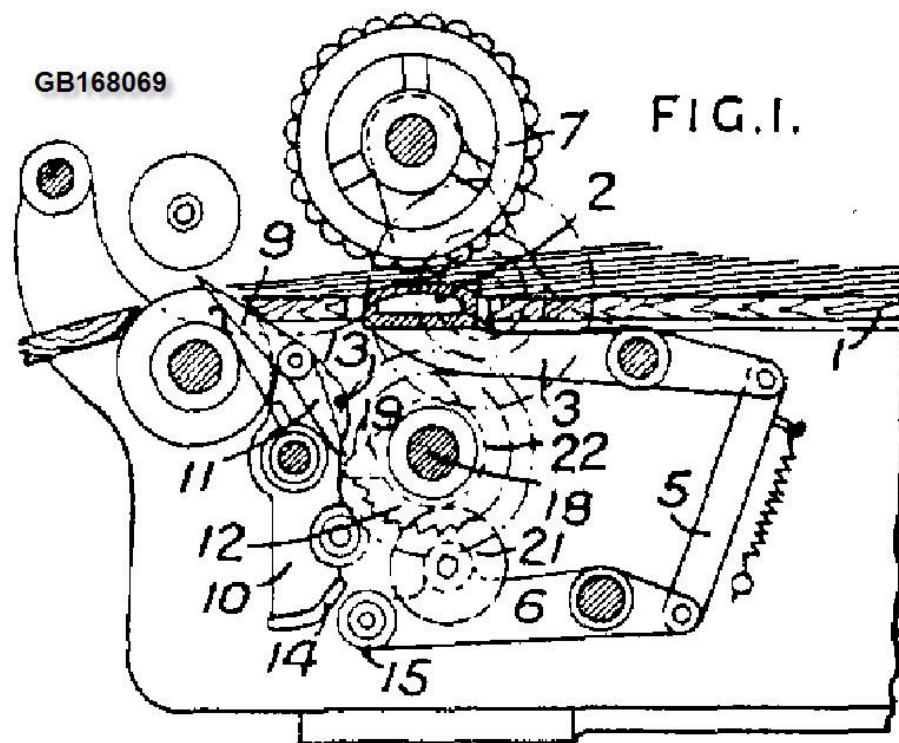
This place does not cover:

Rollers or like rotary separators, reciprocating and rotatable in one direction only	B65H 3/0615
For construction of rollers not limited to separation (e.g. feed or guide)	B65H 27/00

B65H 3/0646**{Wave generation rollers, i.e. combing wheels}****Definition statement***This place covers:*

Rollers with a plurality of surface elements which produce a pushing motion when hitting the article to be separated thereby creating a small wave in the article

Illustrative example of subject matter classified in this group:



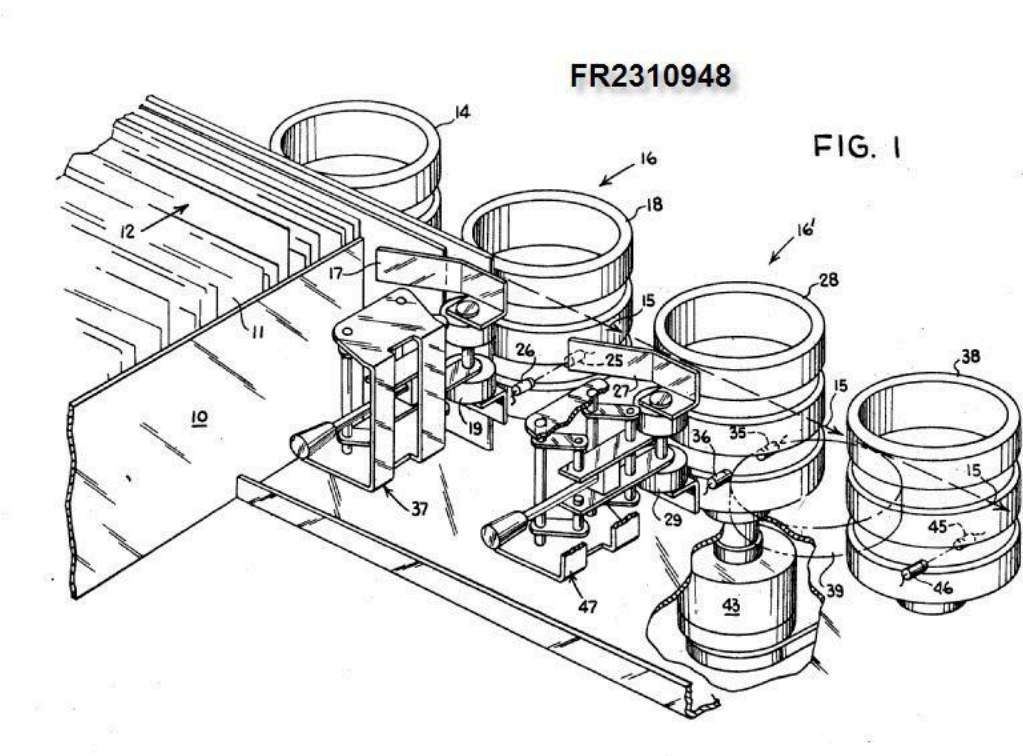
B65H 3/0653

{for separating substantially vertically stacked articles}

Definition statement

This place covers:

Separation from piles for which the weight of the pile is mainly supported by the edges of the articles. This is for example the case where a support which carries a square pile of articles on their surfaces is tilted from the horizontal to an angle more than 45 degrees.



Relationships with other classification places

For substantially vertical stacks with the separation roller below the stack additionally classify in [B65H 3/063](#).

References

Limiting references

This place does not cover:

Rollers or like rotary separators for separating inclined-stacked articles with separator rollers above the stack	B65H 3/0661
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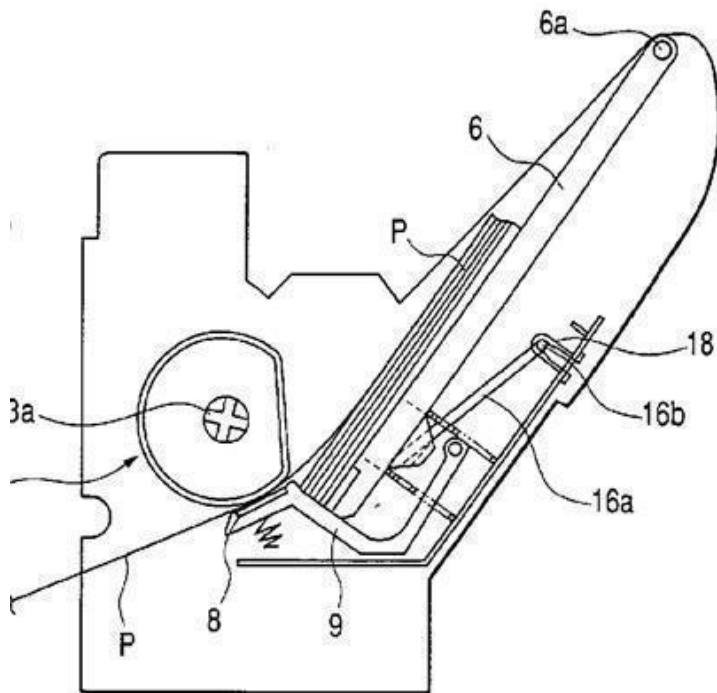
B65H 3/0661

{for separating inclined-stacked articles with separator rollers above the stack}

Definition statement

This place covers:

Arrangements wherein the stack is inclined, i.e. not completely horizontal (supported by the surface of the articles) or not completely vertical (supported by the edges of the articles).

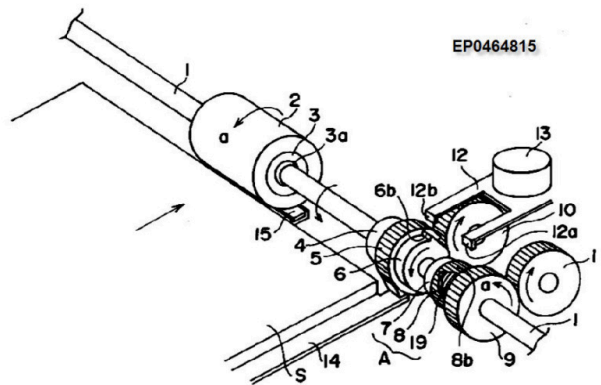
**Special rules of classification**

If the subject-matter can be classified by the combination [B65H 3/0607](#) and [B65H 3/0661](#), then this take precedence over [B65H 1/025](#), see for example EP1681252A1.

If the subject-matter can be classified by [B65H 3/0661](#), then this take precedence over [B65H 3/0653](#).

B65H 3/0669**{Driving devices therefor}****Definition statement***This place covers:*

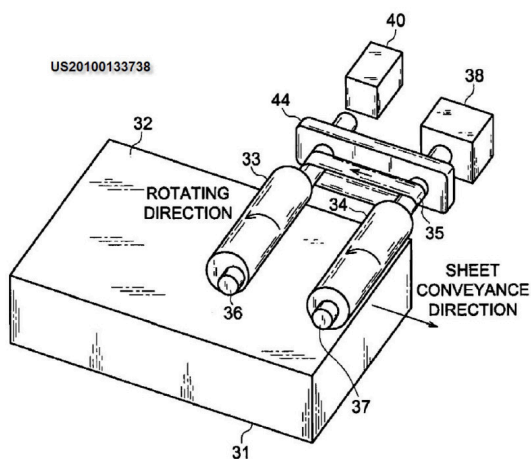
Illustrative example of subject matter classified in this group:

**Special rules of classification**

The group should always be used in combination with symbols in [B65H 2403/00](#) concerning specific power transmission and driving means.

B65H 3/0676**{with two or more separator rollers in the feeding direction}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



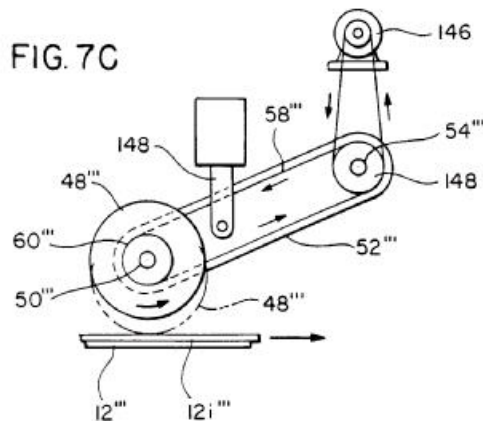
B65H 3/0684

{on moving support, e.g. pivoting, for bringing the roller or like rotary separator into contact with the pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 3/0692**

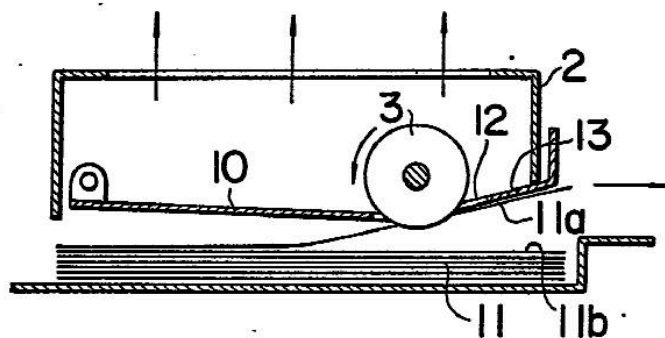
{Vacuum assisted separator rollers}

Definition statement

This place covers:

Arrangements in which suction is generated outside the roller, the roller body as such is not involved in generating vacuum

Illustrative example of subject matter classified in this group:



NL7709161

References

Limiting references

This place does not cover:

Suction rollers, the roller body as such is involved in generating vacuum	B65H 3/10
---	---------------------------

B65H 3/08

using pneumatic force {([B65H 3/40](#), [B65H 3/42](#) take precedence)}

Definition statement

This place covers:

Arrangements that use pneumatic forces to separate the article from the pile.

References

Limiting references

This place does not cover:

Separating articles from piles by two or more separators acting alternately on the same pile	B65H 3/40
Separating articles from piles by two or more separators mounted for movement with, or relative to, rotary or oscillating bodies	B65H 3/42

Special rules of classification

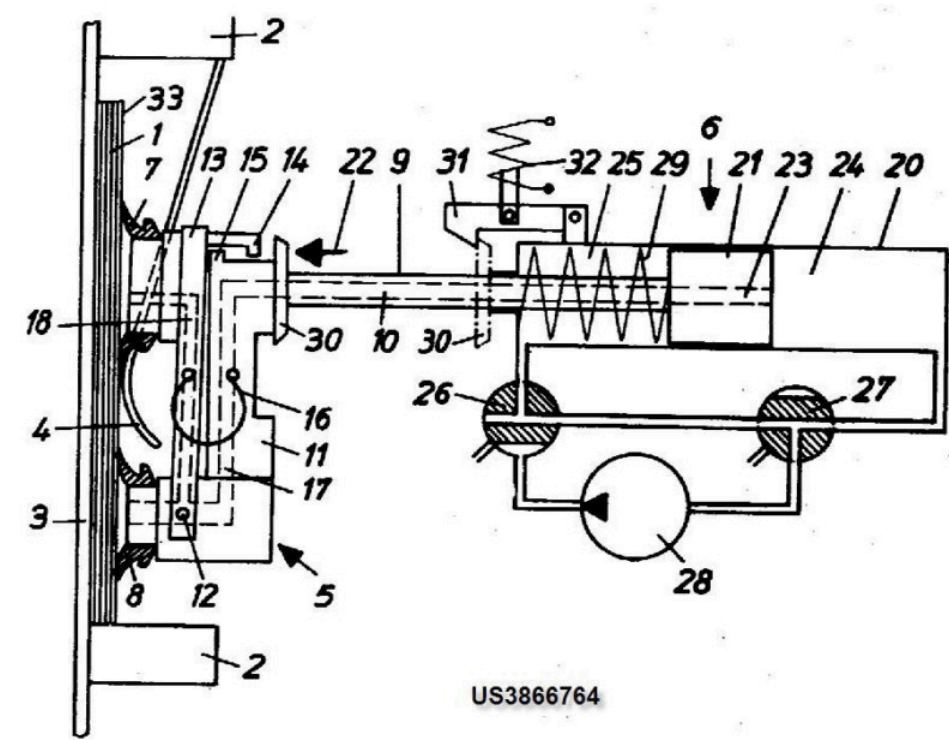
This group should be used only for subject-matter not being covered by any of its sub-groups.

B65H 3/0808

{Suction grippers}

Definition statement

This place covers:
Arrangements with piles of articles standing on edge. Horizontally piled articles are covered by the subgroups [B65H 3/0816](#) and [B65H 3/085](#).



Relationships with other classification places

For details of suction grippers additionally classify in subgroups of [B65H 2406/34](#).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Suction grippers	B65H 3/08
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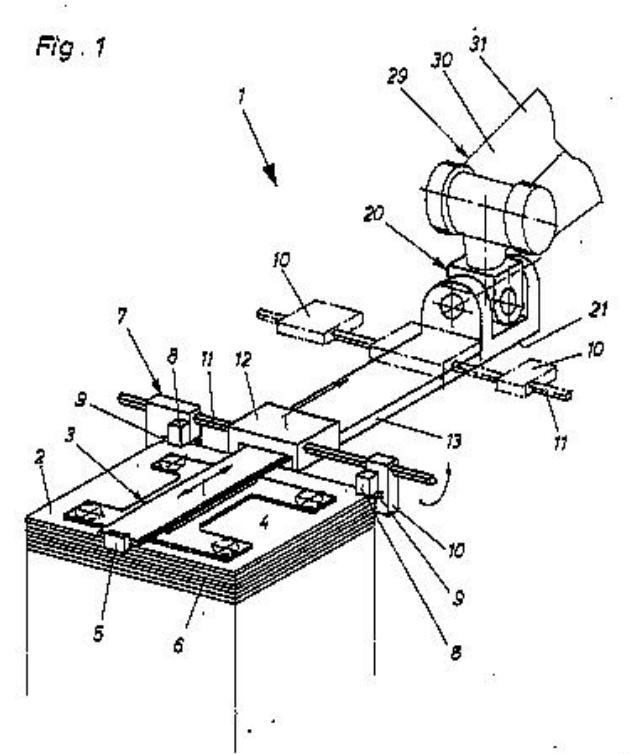
B65H 3/0816

{separating from the top of pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Relationships with other classification places

For multi-axis actuating means additionally classify in subgroups of [B65H 2555/30](#).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Pile of alternate articles	B65H 2701/18264
Devices for removing metal sheets from a stack	B21D 43/24
Destacking of articles by suction or magnetic devices	B65G 59/04
Apparatus for loading or unloading holders for X-ray films	G03B 42/045

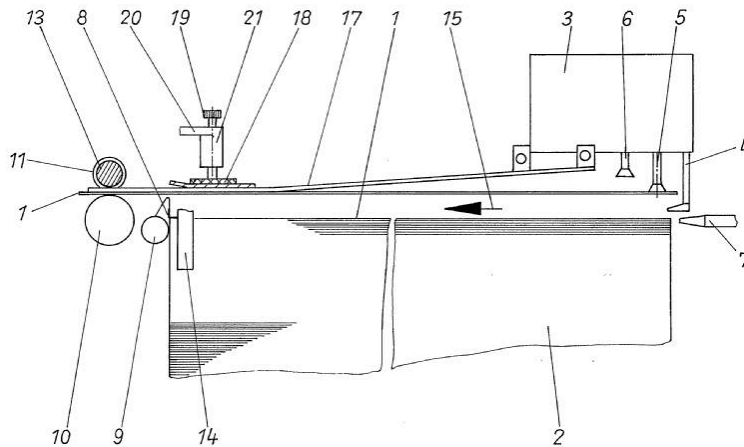
B65H 3/0825

{and acting on the rear part of the articles relatively to the final separating direction}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



DE19713919

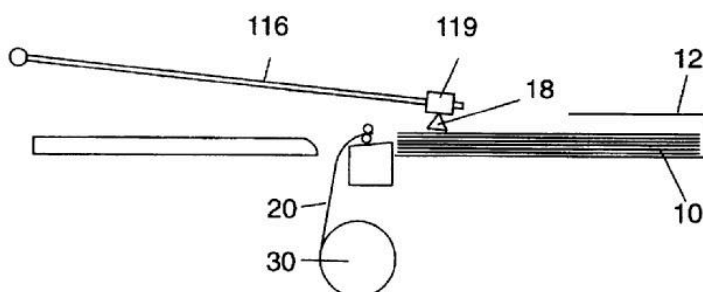
B65H 3/0833

{and acting on the front part of the articles relatively to the final separating direction}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



US5785309

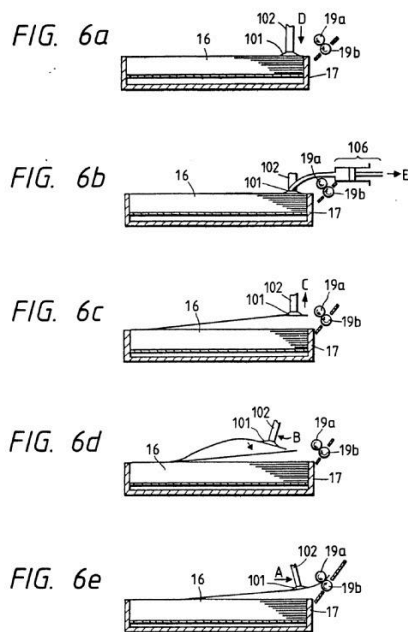
B65H 3/0841

{this action resulting at least during a part of each separating cycle, in a movement of at least the front part of the articles in a direction opposite to the final separating direction}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



EP0351205

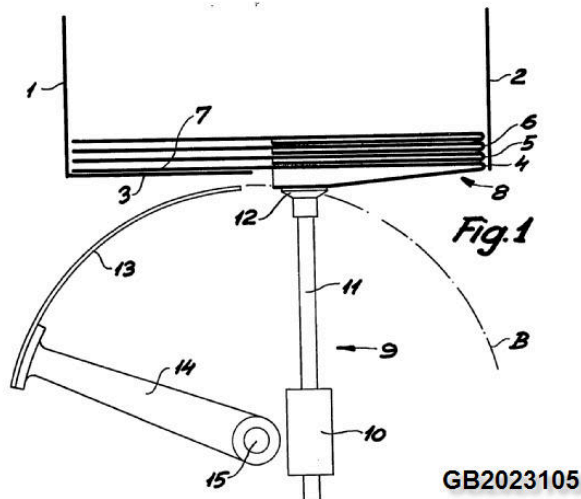
B65H 3/085

{separating from the bottom of pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

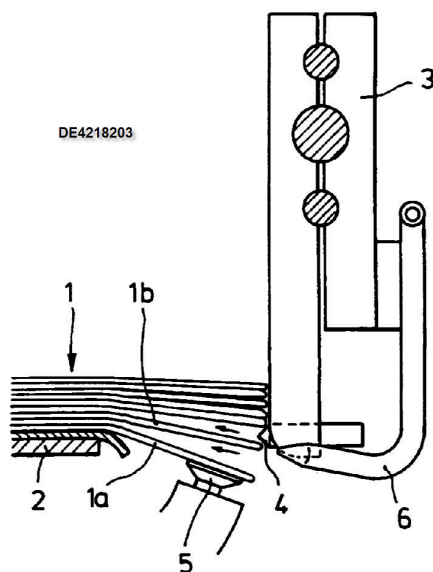
**B65H 3/0858**

{this action resulting merely in a curvature of each article being separated (in combination with the use of screw or like separators [B65H 3/28](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Separating articles from piles by screw or like separators	B65H 3/28
--	---------------------------

B65H 3/0866

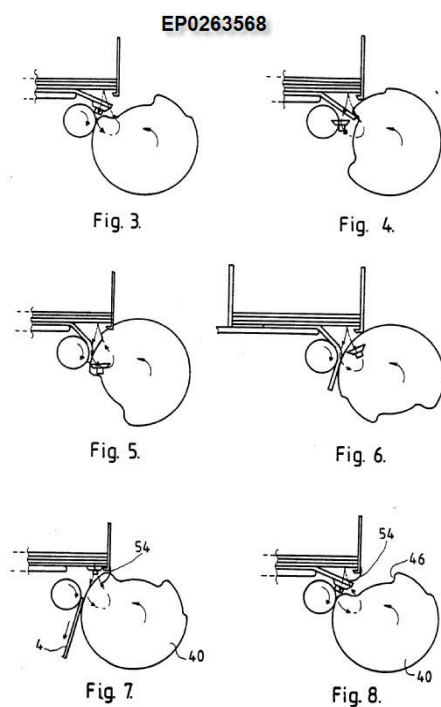
{the final separation being performed between rollers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

The front edge (10) of the article is separated by a suction element (2) whereafter a gripper (3) pulls out, that is finally separates, the whole article from the stack



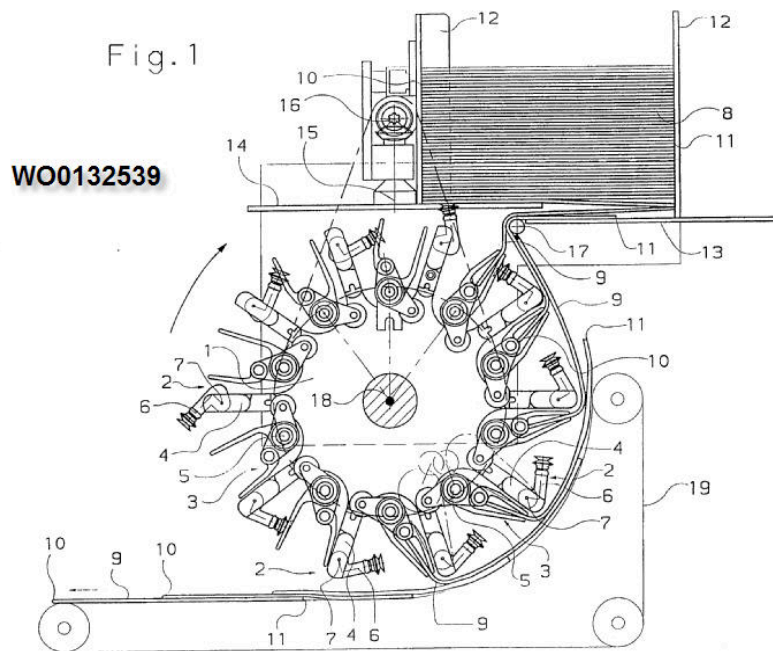
B65H 3/0875

{the final separation being performed by mechanical grippers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Elongated elements traversing pile and article to be separated (peeling)	B65H 2301/4233
--	--------------------------------

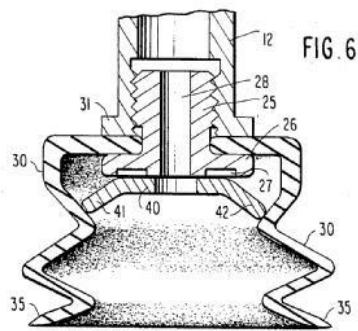
B65H 3/0883

{Construction of suction grippers or their holding devices}

Definition statement

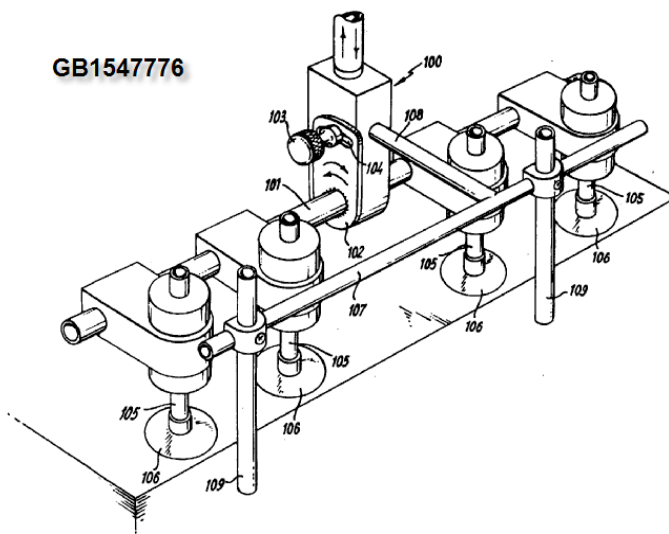
This place covers:

Illustrative examples of subject matter classified in this group:



US4589648

GB1547776

**B65H 3/0891**

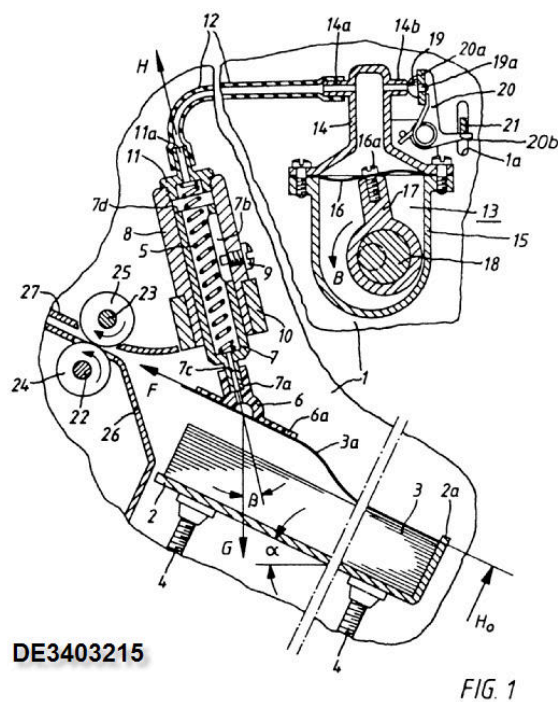
{Generating or controlling the depression ([B65H 3/0883](#), [B65H 3/14](#) take precedence; in response to abnormal circumstances [B65H 7/16](#))}

Definition statement

This place covers:

Mechanical arrangements, different from just a connection to a general vacuum source, which create the depression e.g. the vacuum which is used by the separator to perform the separation

Illustrative example of subject matter classified in this group:



Relationships with other classification places

If the control is in response to abnormal circumstances additionally classify in [B65H 7/16](#).

References

Limiting references

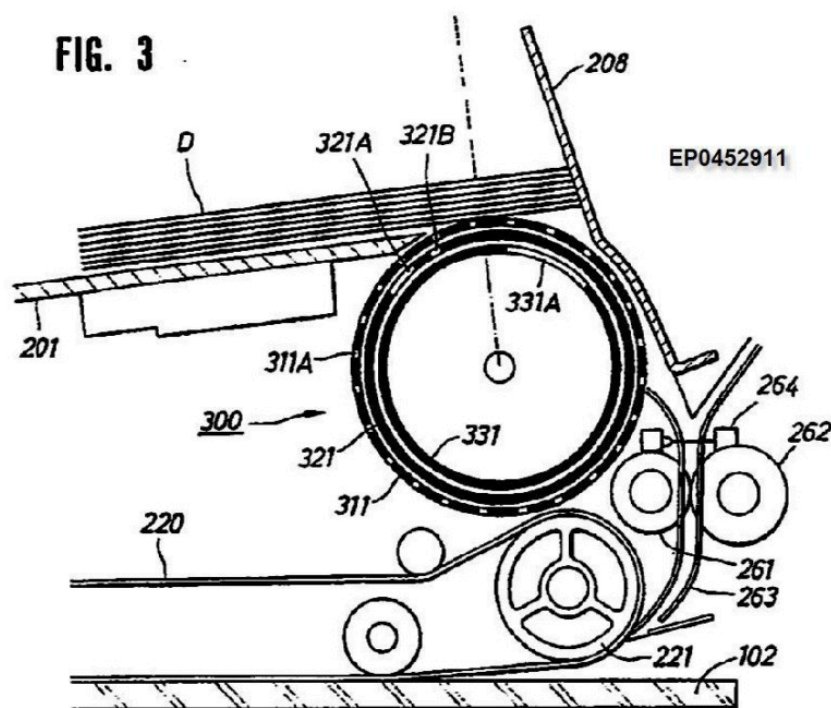
This place does not cover:

Construction of suction grippers or their holding devices	B65H 3/0883
Air blasts producing partial vacuum	B65H 3/14

B65H 3/10**Suction rollers****Definition statement**

This place covers:

Rollers wherein the suction is generated by a vacuum inside the roller.

**References****Limiting references**

This place does not cover:

For vacuum assisted friction rollers

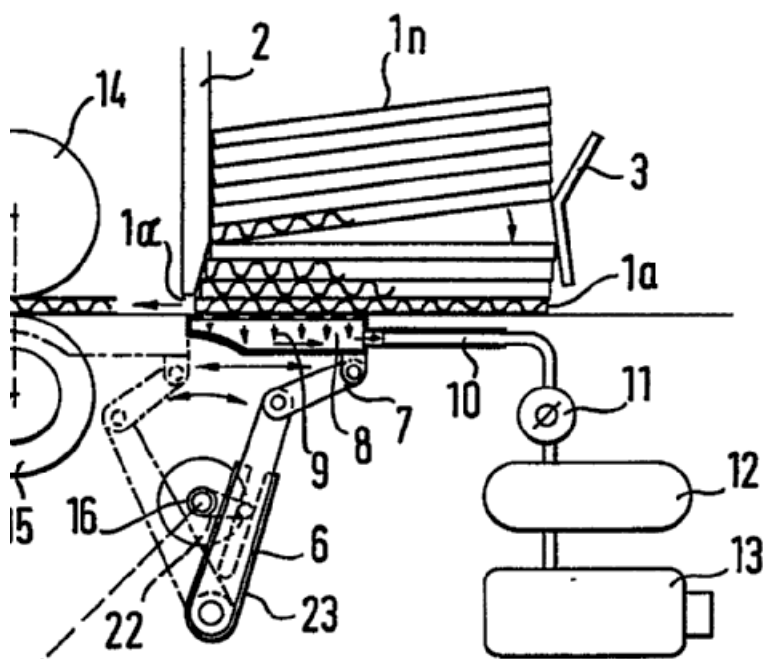
B65H 3/0692

B65H 3/122**{Suction tables}****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

suction table 8 separates an article 1a by a reciprocating movement



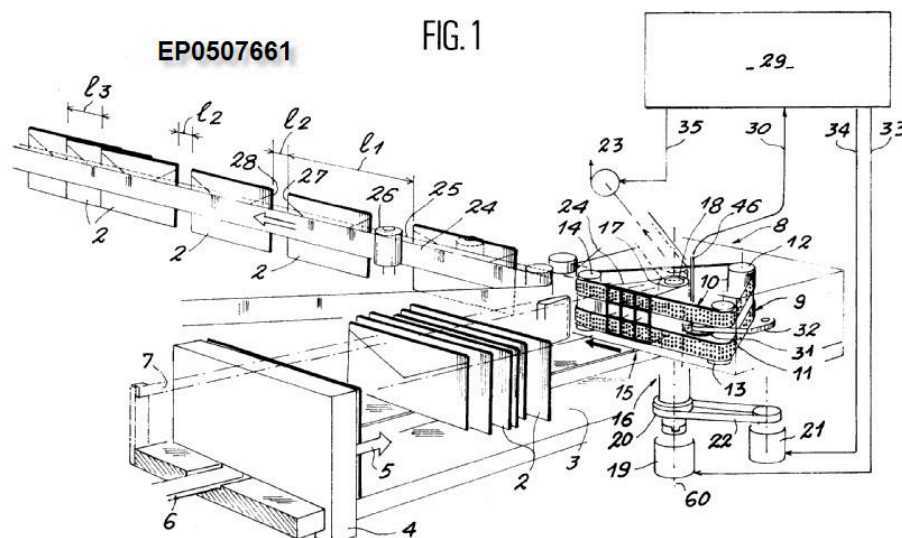
B65H 3/124

{Suction bands or belts}

Definition statement

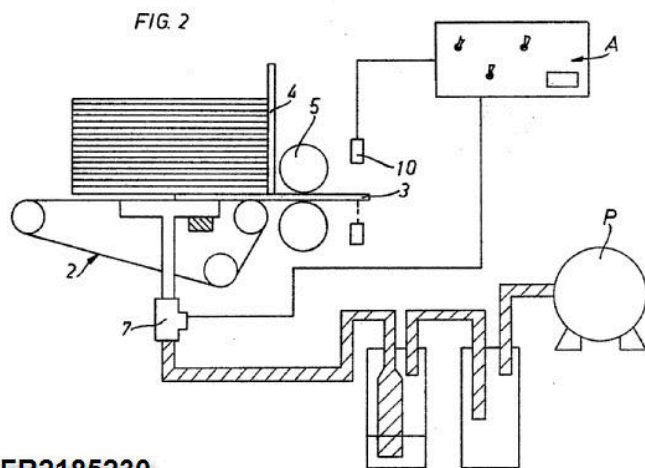
This place covers:

Arrangements with piles of articles standing on edge. Horizontally piled articles are covered by the subgroups [B65H 3/126](#) and [B65H 3/128](#).

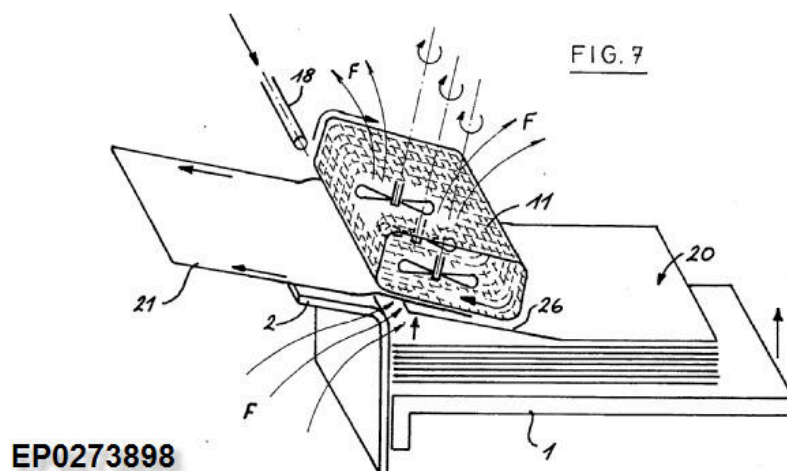


B65H 3/126**{separating from the bottom of pile}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 3/128****{separating from the top of pile}****Definition statement***This place covers:*

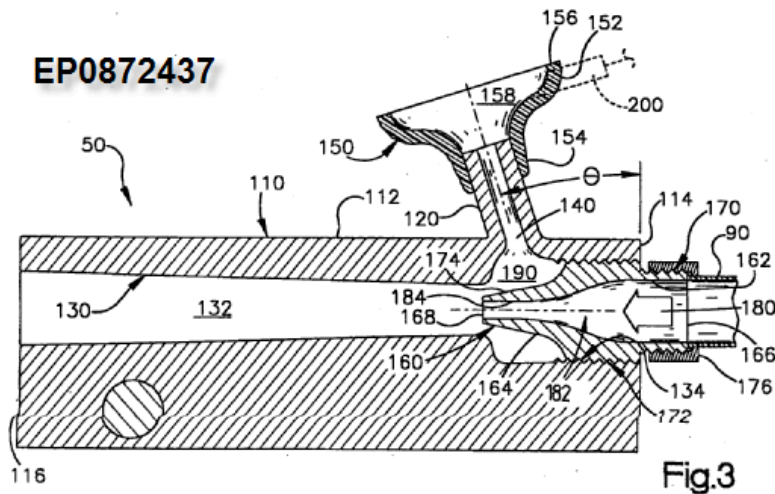
Illustrative example of subject matter classified in this group:



B65H 3/14**Air blasts producing partial vacuum****Definition statement**

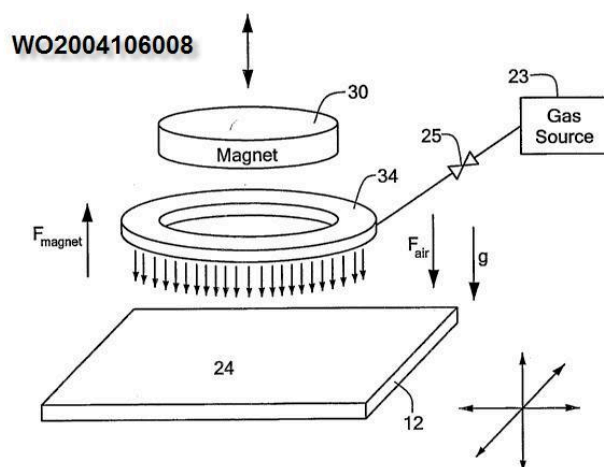
This place covers:

Illustrative example of subject matter classified in this group:

**B65H 3/16****using magnetic force****Definition statement**

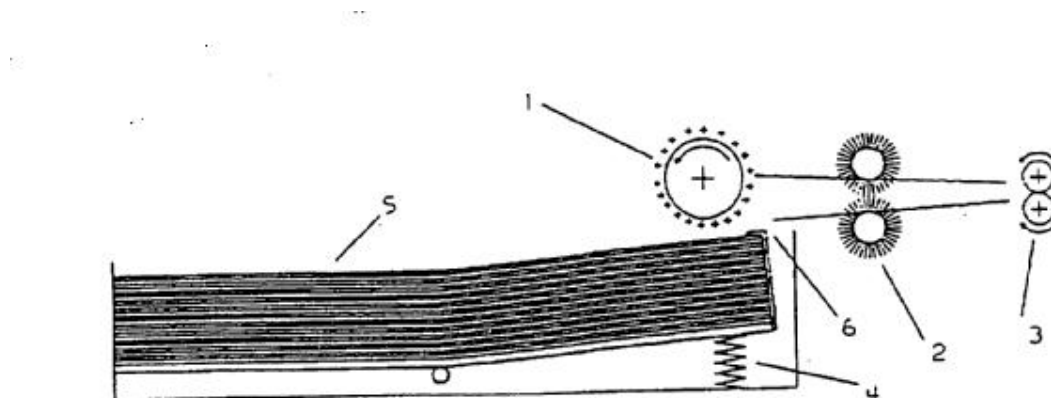
This place covers:

Arrangements that use magnetic forces to separate the article from the pile (i.e. for articles with ferromagnetic properties).



B65H 3/18**using electrostatic force****Definition statement***This place covers:*

Arrangements that use electrostatic forces (e.g. an electrostatically charged roller) to separate the article from the pile.

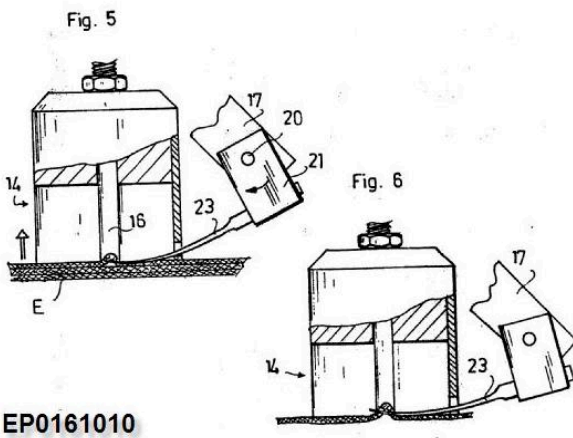
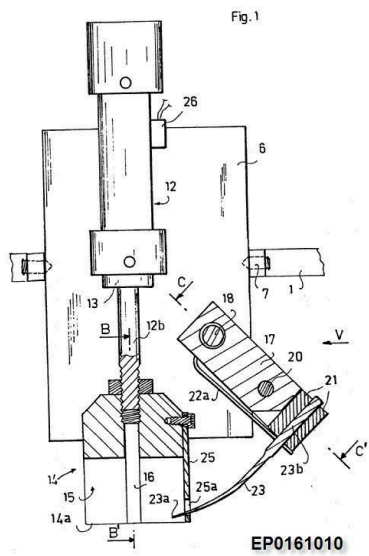
**B65H 3/20****using adhesives****Definition statement***This place covers:*

Arrangements that use adhesives to separate the article from the pile (e.g. by sticking the article on an adhesive separator).

B65H 3/22**by needles or the like engaging the articles****Definition statement***This place covers:*

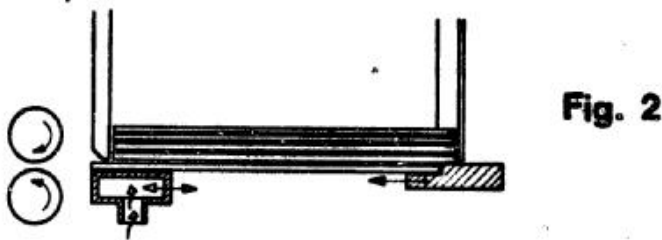
Arrangements using needles, or teeth-like elements or spike-like elements

Illustrative examples of subject matter classified in this group:

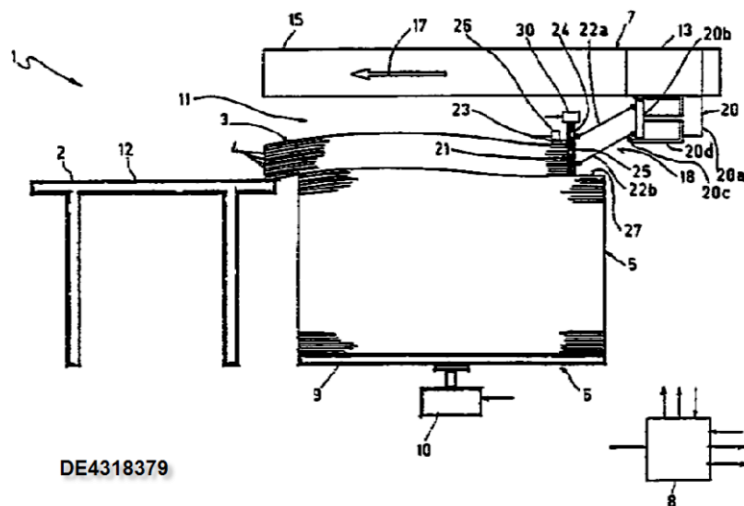


B65H 3/24**by pushers engaging the edges of the articles****Definition statement***This place covers:*

Arrangements by pushers for separating single articles from piles.

**Fig. 2****DE7515810U****B65H 3/242****{for separating a part of the pile, i.e. several articles at once}****Definition statement***This place covers:*

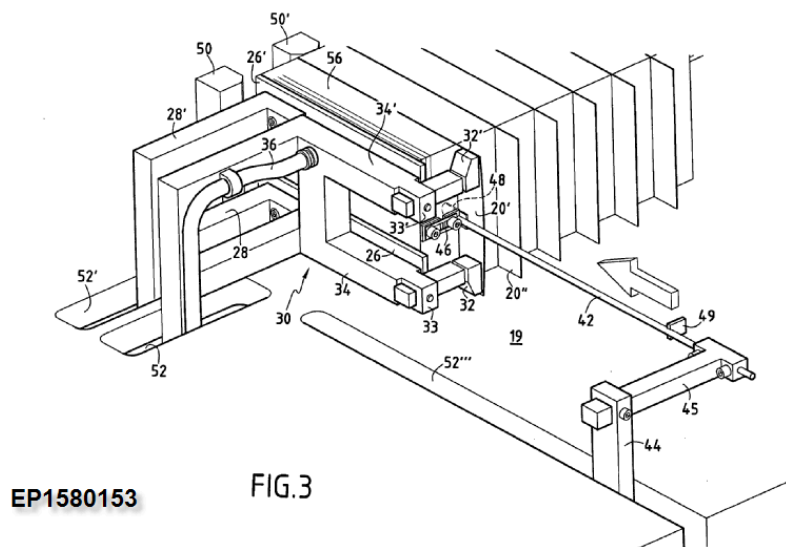
Illustrative example of subject matter classified in this group:

**DE4318379****B65H 3/245****{the pile being pre-marked}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

Definition statement

The sheets 20" is marking the intended division of the pile



EP1580153

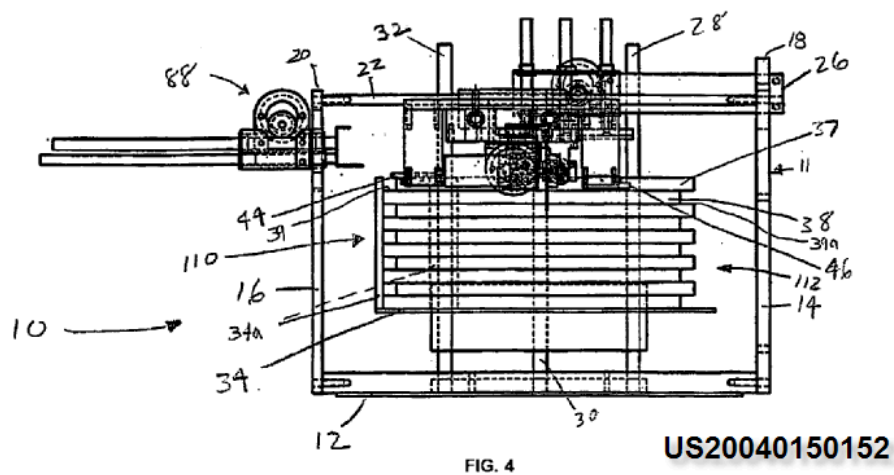
B65H 3/247

{the pile being off-set}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



US20040150152

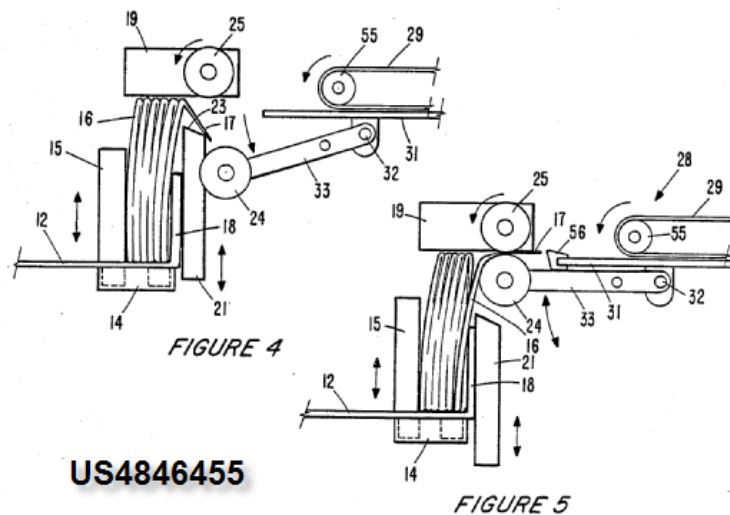
B65H 3/26

by separators engaging folds, flaps, or projections of articles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

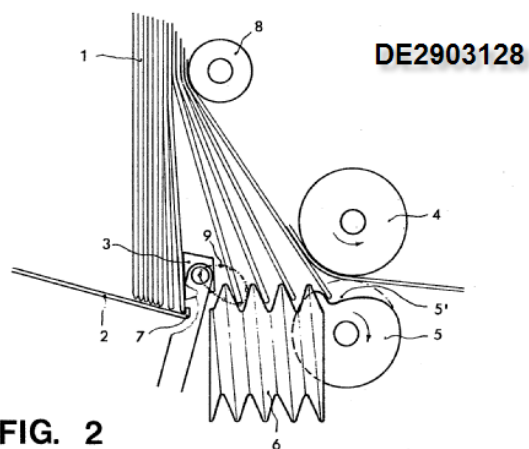
**B65H 3/28**

by screw or like separators

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 3/30

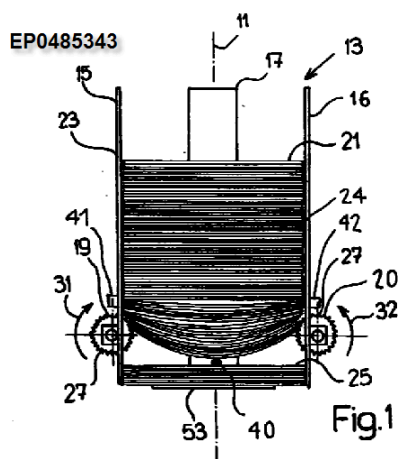
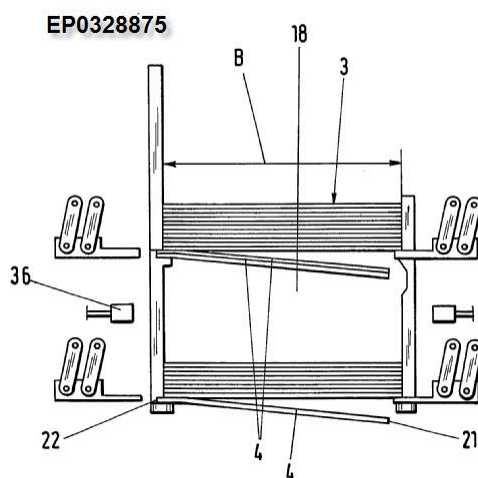
by escapement devices (screw and like separators [B65H 3/28](#)); from staggered piles; from piles of articles having staggered formations, e.g. cuts or perforations

Definition statement

This place covers:

Devices which function as article retainers when inactive, and which produce a movement which separate one or more articles when activated.

Illustrative examples of subject matter classified in this group:



References

Limiting references

This place does not cover:

Separating articles from piles by screw or like separators	B65H 3/28
--	---------------------------

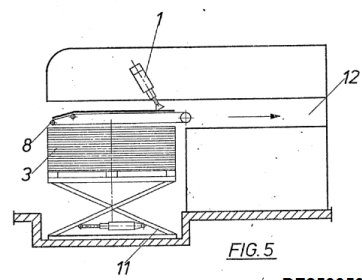
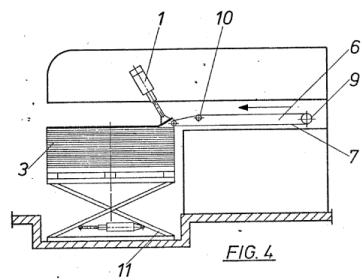
B65H 3/32

by elements, e.g. fingers, plates, rollers, inserted or traversed between articles to be separated and remainder of the pile (such elements acting only as supplementary devices to assist separation or prevent double feed [B65H 3/50](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



DE2533533

References

Limiting references

This place does not cover:

If such elements act only as supplementary devices to assist separation or prevent double feed	B65H 3/50
--	---------------------------

B65H 3/322

{for separating a part of the pile, i.e. several articles at once}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

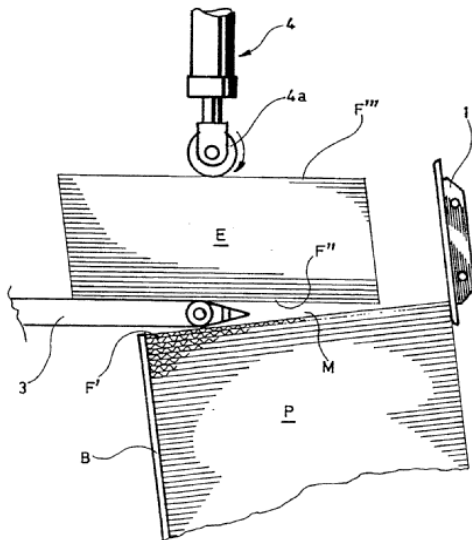


FIG. 3 E

EP0451592

B65H 3/325

{the pile being pre-marked}

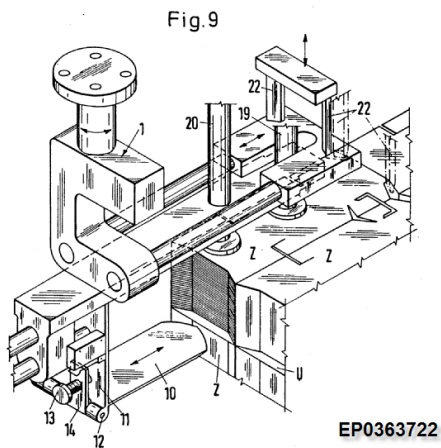
Definition statement

This place covers:

All forms of markings which make it possible to identify the intended division of the pile, for example coloured papers or strips or special shapes of the edges

Definition statement

Illustrative example of subject matter classified in this group:



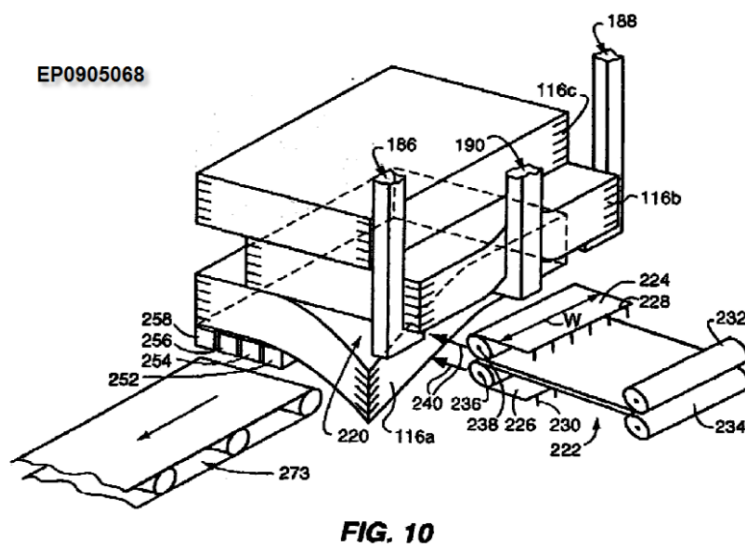
B65H 3/327

{the pile being off-set}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



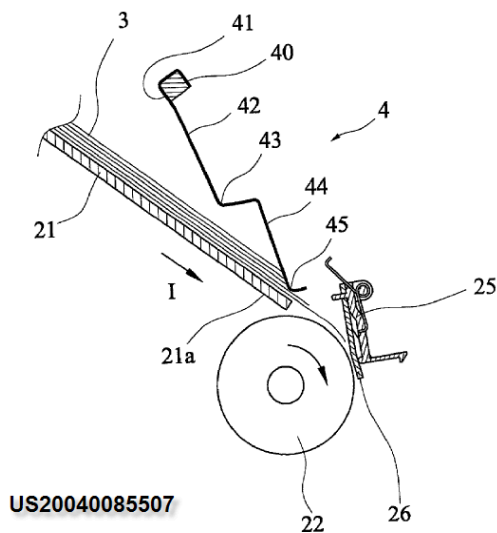
B65H 3/34

Article-retaining devices controlling the release of the articles to the separators

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

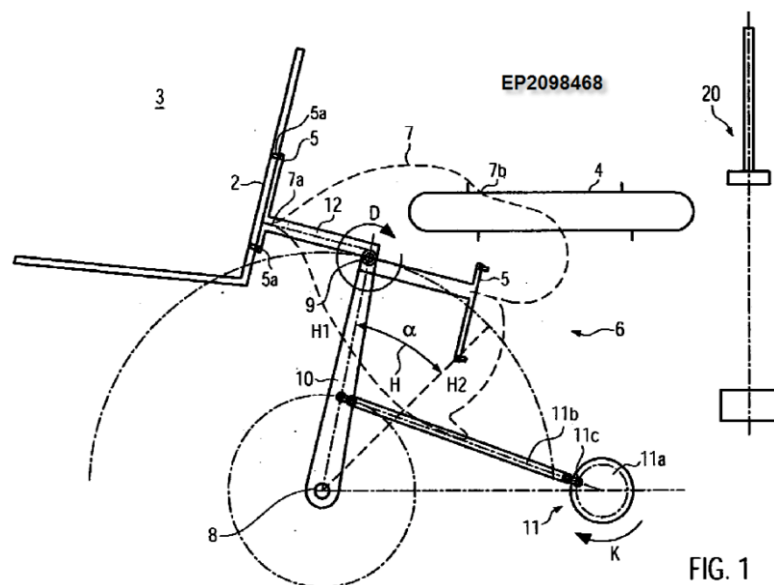
**B65H 3/36**

by separators moved in special paths, e.g. enclosing an area

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 3/38

the paths not enclosing an area

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

The separator 10 reciprocates along the broken line

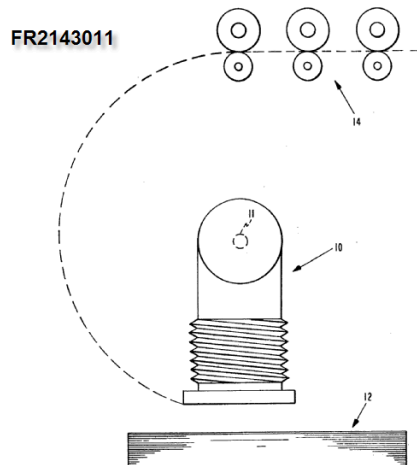


FIG. 1

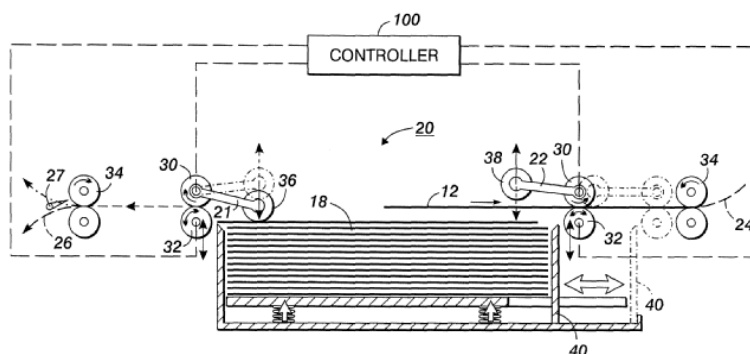
B65H 3/40

by two or more separators acting alternately on the same pile (rotary or oscillating bodies carrying two or more separators [B65H 3/42](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



EP1688378

FIG. 3

References

Limiting references

This place does not cover:

For rotary or oscillating bodies carrying two or more separators
--

B65H 3/42

B65H 3/42

by two or more separators mounted for movement with, or relative to, rotary or oscillating bodies

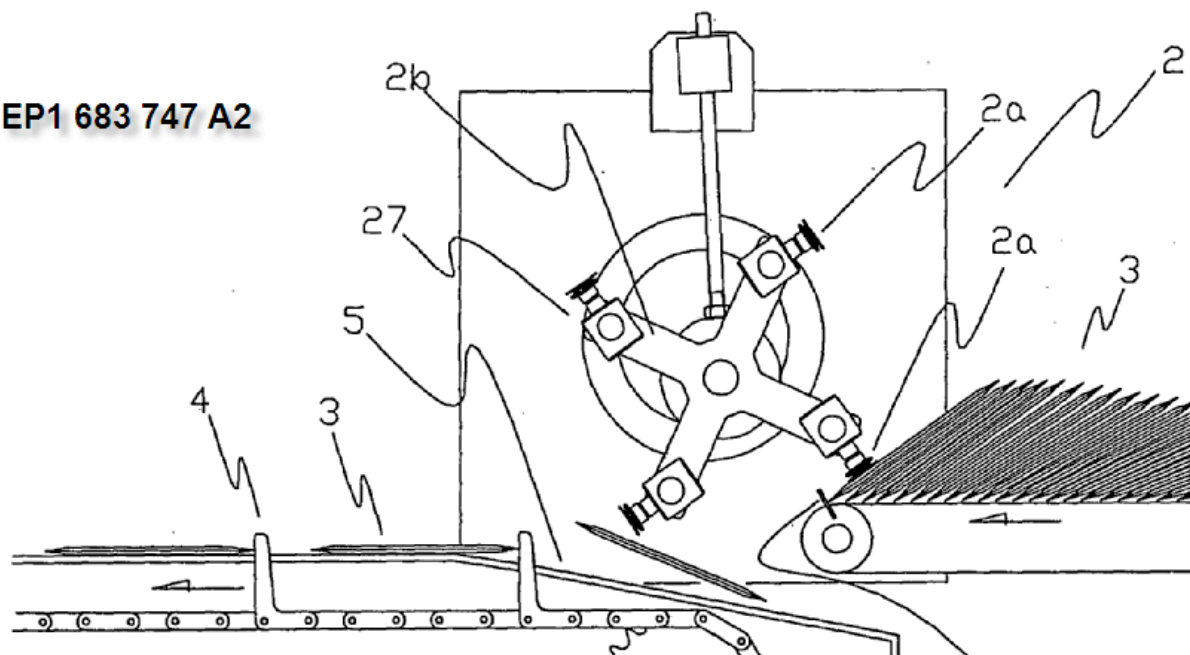
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

two or more separators 2a are mounted for movement with rotary body 2b

EP1 683 747 A2



B65H 3/44

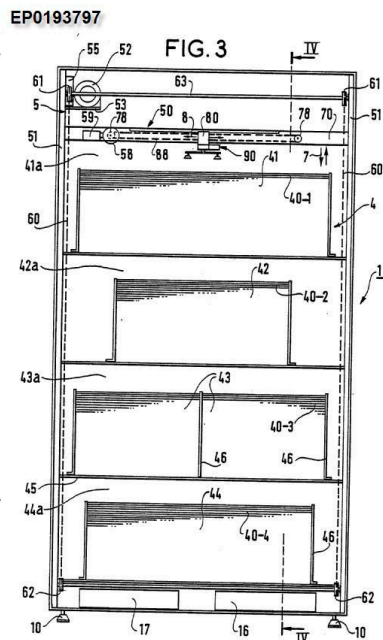
Simultaneously, alternately, or selectively separating articles from two or more piles

Definition statement

This place covers:

Arrangements in which the piles from which to separate and the sequence in which to do so can be freely chosen

Illustrative example of subject matter classified in this group:



Special rules of classification

This main group should be used only for subject matter not being covered by any of its subgroups.

B65H 3/46

Supplementary devices or measures to assist separation or prevent double feed (control means comprising detectors responsive to double feed

[B65H 7/12](#))

Definition statement

This place covers:

Devices, e.g. mechanical arrangements, or measures, e.g. procedures for driving the separator, which merely assist the separation, but which can not carry out a separation act on their own.

Relationships with other classification places

For control means comprising detectors responsive to double feed additionally classify in [B65H 7/12](#).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Assisting separation or preventing double feed	B65H 2301/4234
--	--------------------------------

Special rules of classification

This main-group should be used only for subject-matter not being covered by any of its sub-groups.

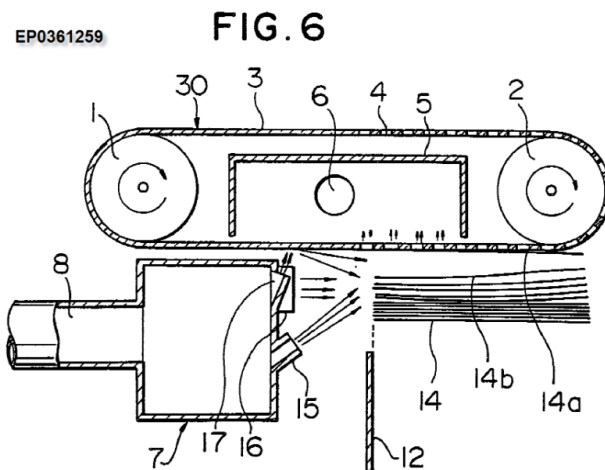
B65H 3/48

Air blast acting on edges of, or under, articles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

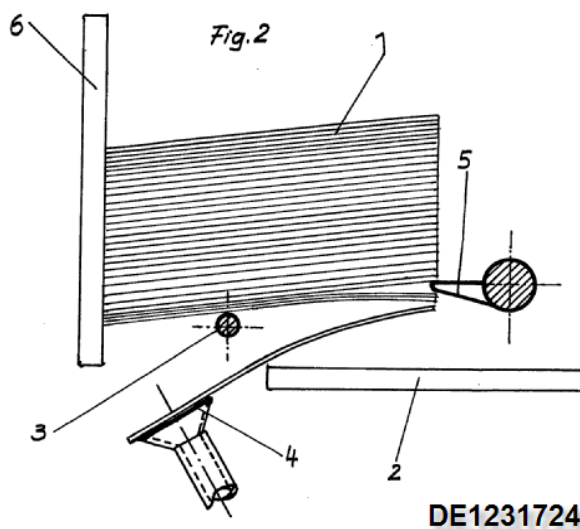
**B65H 3/50**

Elements, e.g. fingers, plates, rollers, inserted or traversed between articles to be separated and remainder of the pile

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 3/5207

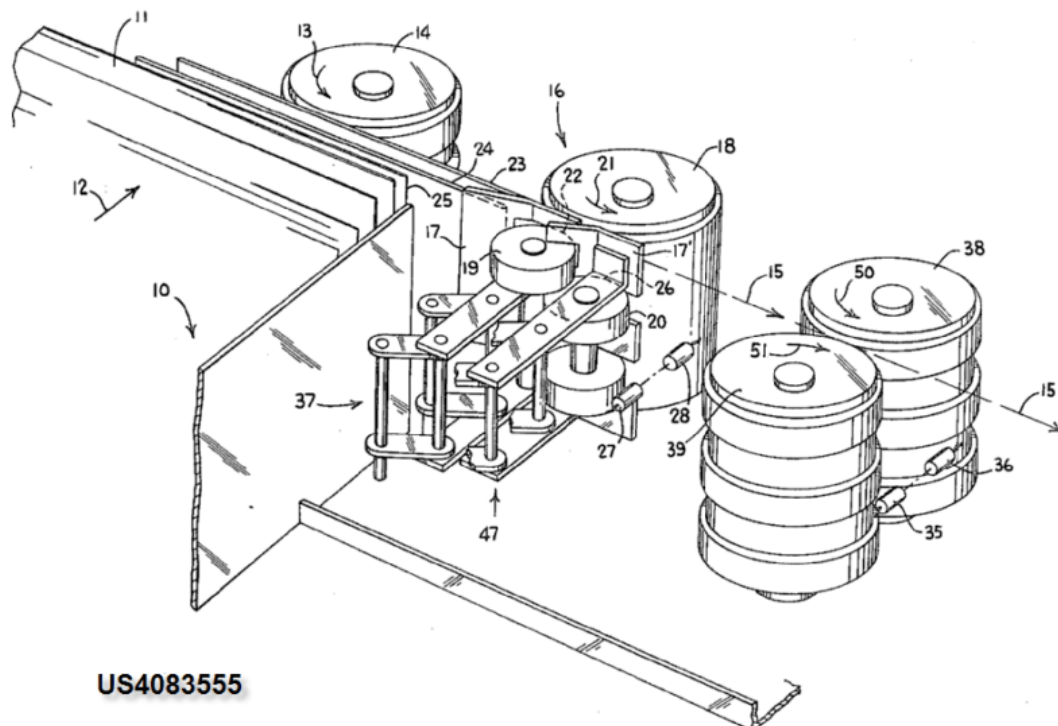
{Non-driven retainers, e.g. movable retainers being moved by the motion of the article}

Definition statement

This place covers:

Arrangements which induce friction to articles by passive elements i.e. elements which are not driven by any power sources, neither externally nor internally with respect to the elements.

Illustrative example of subject matter classified in this group:

**Special rules of classification**

When the articles are standing on the edge (i.e. vertically stacked) the separation is done neither from the top nor from the bottom but from the side: This should be classified here.

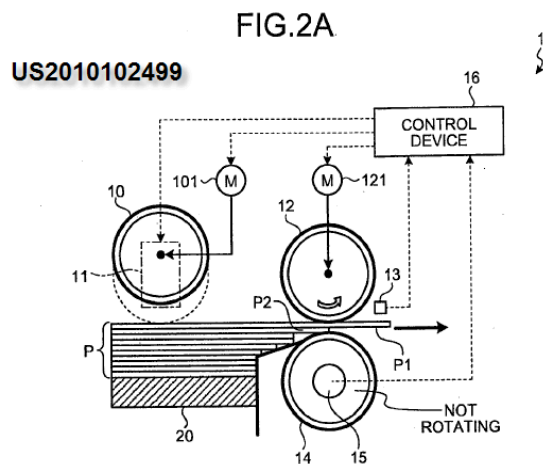
B65H 3/5215

{the retainers positioned under articles separated from the top of the pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 3/5223**

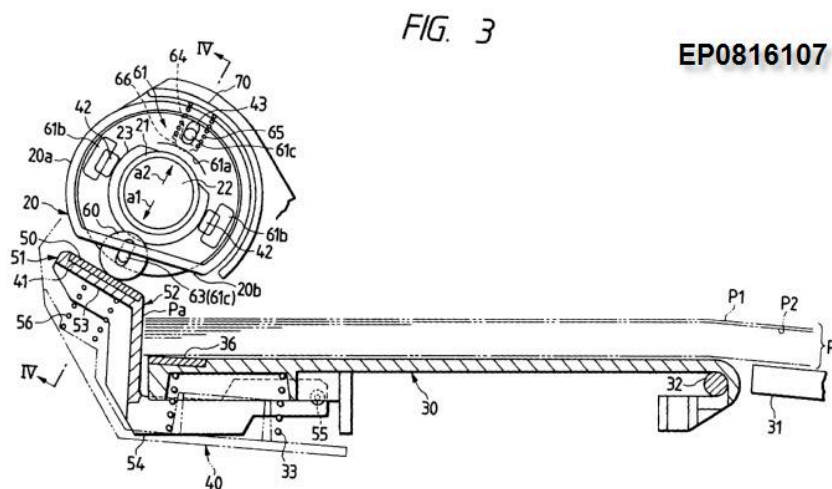
{Retainers of the pad-type, e.g. friction pads}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(see friction pad 50)



B65H 3/523

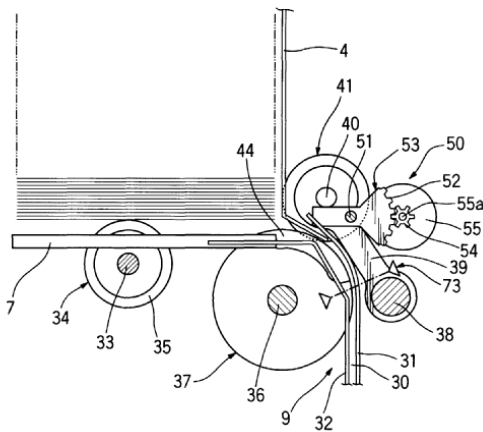
{the retainers positioned over articles separated from the bottom of the pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

FIG. 3
EP0933732

**B65H 3/5238**

{Retainers of the pad-type, e.g. friction pads}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(see friction pad 40)

B65H 3/5246

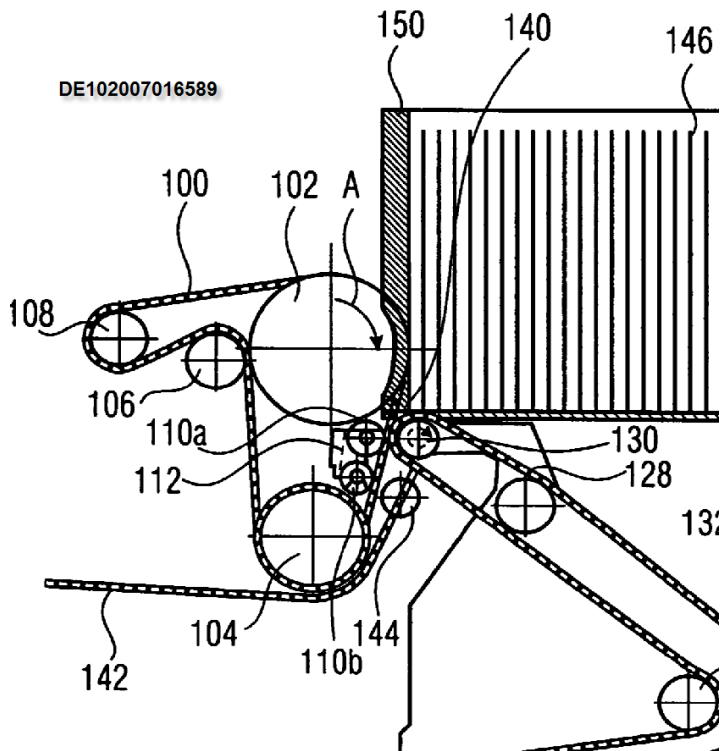
{Driven retainers, i.e. the motion thereof being provided by a dedicated drive}

Definition statement

This place covers:

Arrangements which induce friction to articles by active elements i.e. elements which are driven by power sources either externally or internally with respect to the elements

Illustrative example of subject matter classified in this group:



Special rules of classification

When the articles are standing on the edge (i.e. vertically stacked) the separation is done neither from the top nor from the bottom but from the side: This should be classified here.

B65H 3/5253

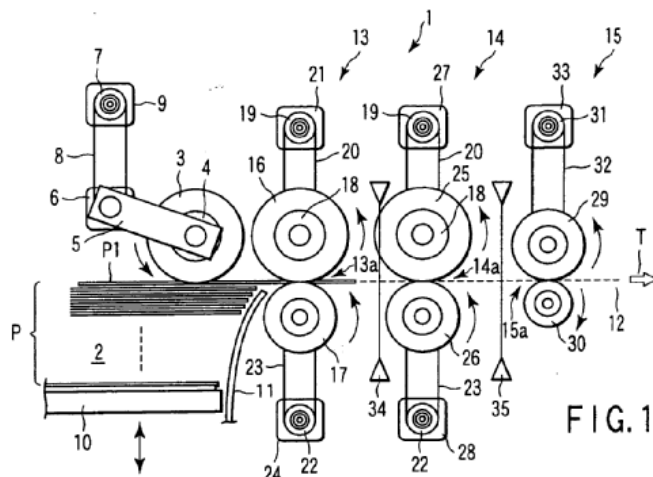
{the retainers positioned under articles separated from the top of the pile}

Special rules of classification

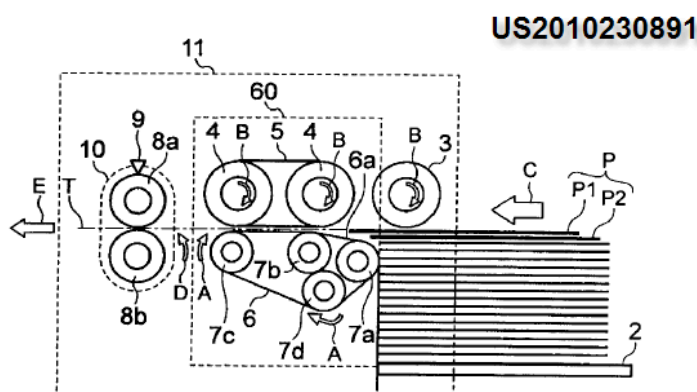
This group should be used only for subject-matter not being covered by any of its sub-groups.

B65H 3/5261**{Retainers of the roller type, e.g. rollers}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**EP1512649****B65H 3/5269****{Retainers of the belt type, e.g. belts}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**Fig. 4**

B65H 3/5276

{the retainers positioned over articles separated from the bottom of the pile}

Special rules of classification

This group should be used only for subject-matter not being covered by any of its sub-groups.

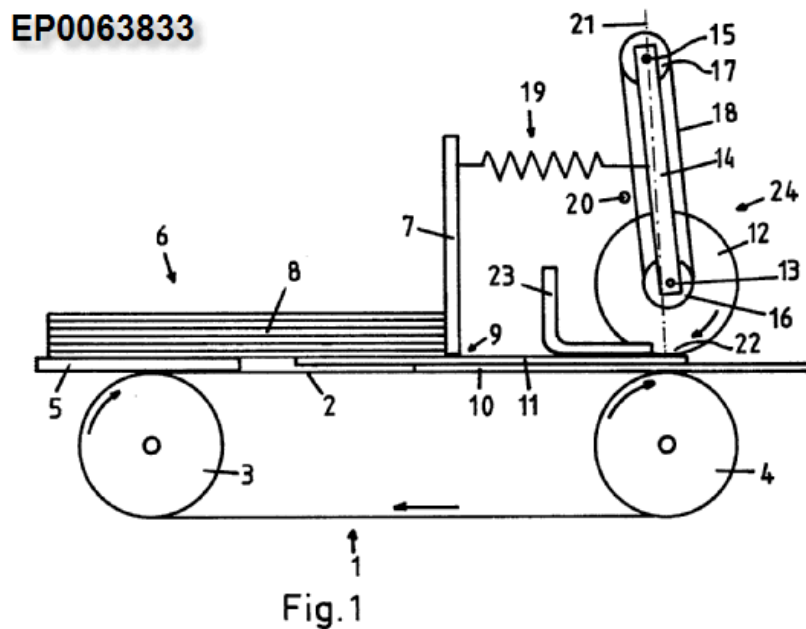
B65H 3/5284

{Retainers of the roller type, e.g. rollers}

Definition statement

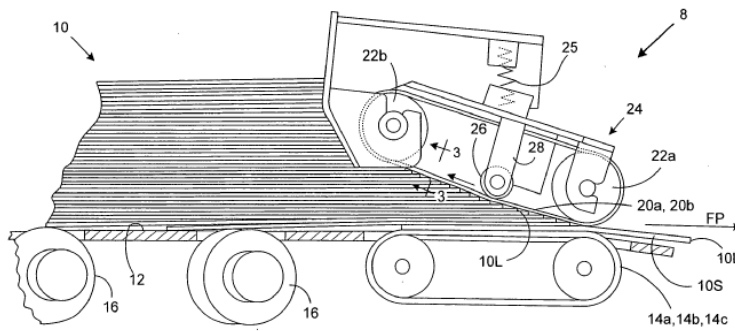
This place covers:

Illustrative example of subject matter classified in this group:

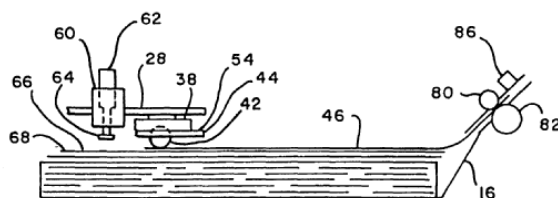
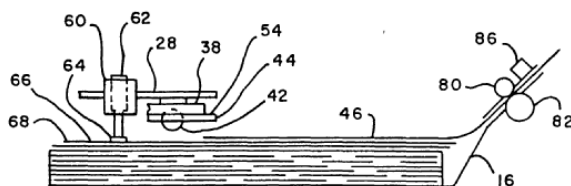


B65H 3/5292**{Retainers of the belt type, e.g. belts}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**EP1918231****FIG. 1****B65H 3/54****Pressing or holding devices****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**FIG. 3****FIG. 4****EP0825141**

B65H 3/56

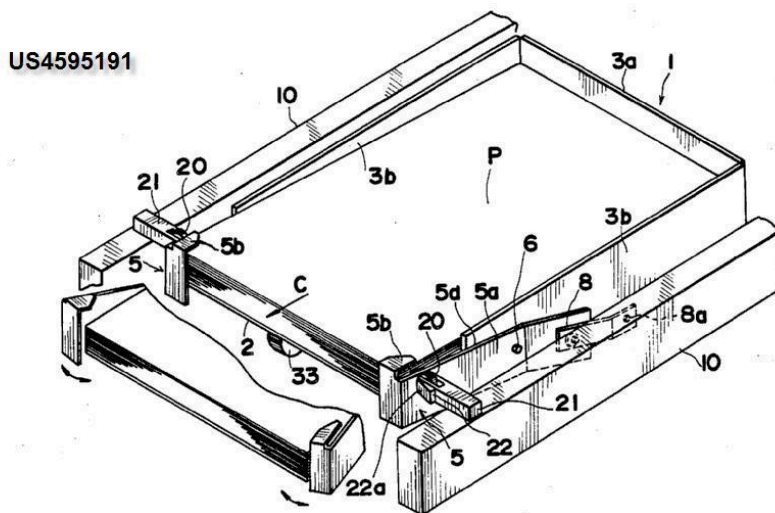
Elements, e.g. scrapers, fingers, needles, brushes, acting on separated article or on edge of the pile {(B65H 3/52 takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(see retainers 5b)

**References****Limiting references**

This place does not cover:

Friction retainers acting on under or rear side of article being separated
--

B65H 3/52

B65H 3/58

Articles spiked, threaded, cemented, or gummed together, to prevent double feed, e.g. piles with gummed edges

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

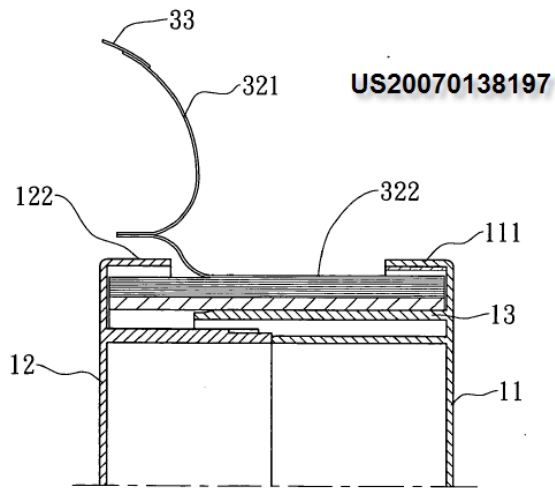
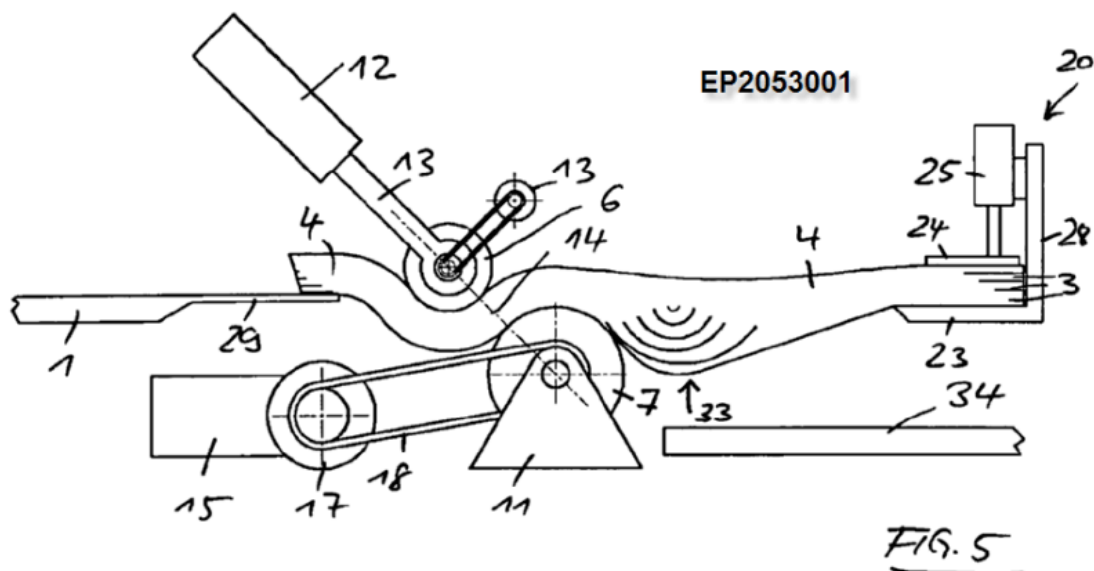
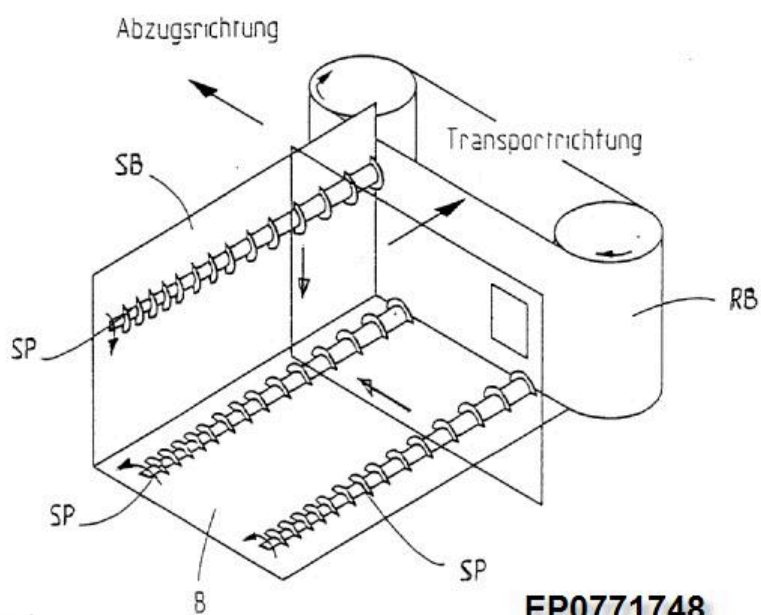


FIG. 6

B65H 3/60**Loosening articles in piles****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:



B65H 3/62

by swinging, agitating, or knocking the pile

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

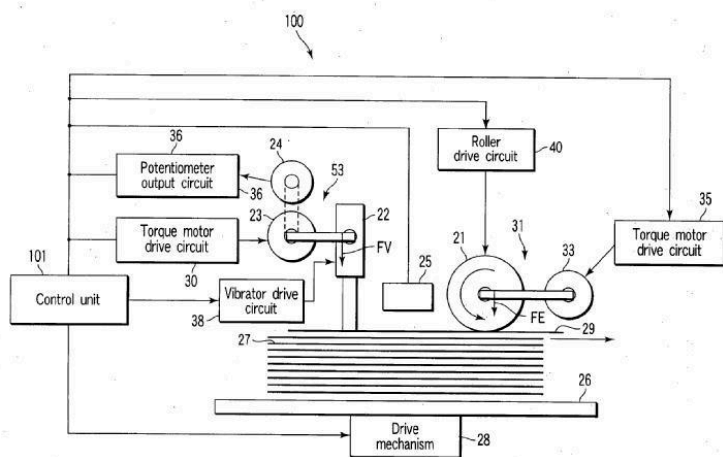
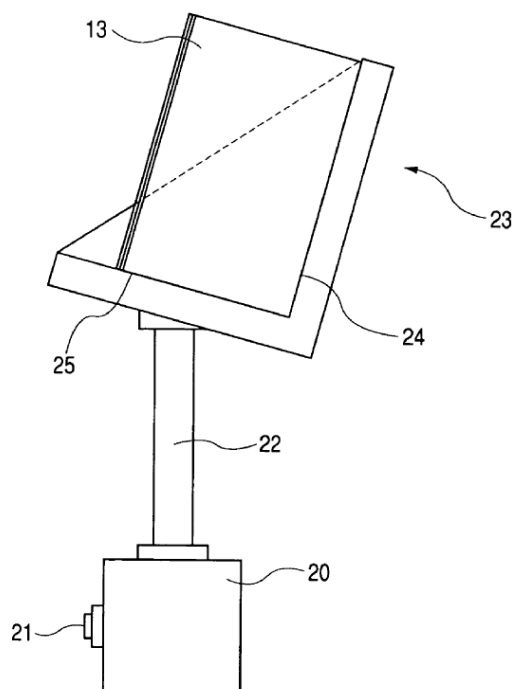


FIG. 3

EP1860045

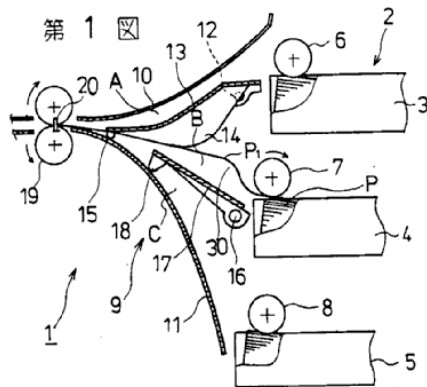
US2004051232



Definition statement

Article guide 13 is movable during separation

JP60258039



Special rules of classification

For specifying details about article guides additionally classify in subgroups of [B65H 2404/50](#), [B65H 2404/60](#) and/or [B65H 2404/70](#).

B65H 3/68

immovable in operation

Definition statement

This place covers:

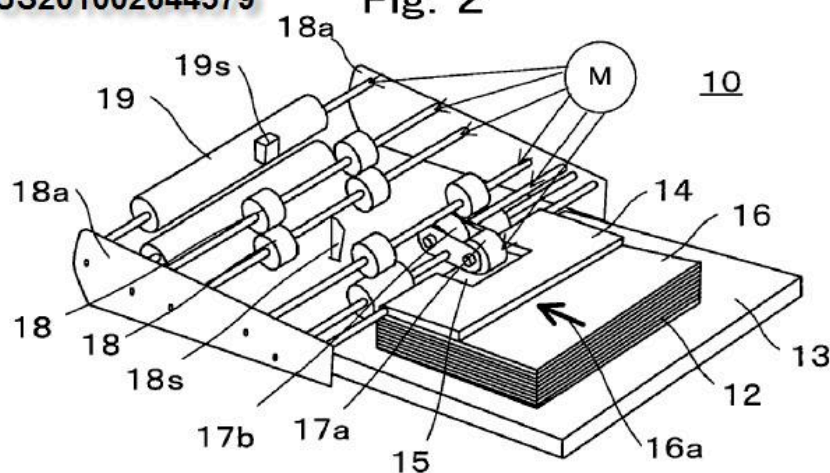
Arrangements which guide the article during separation, i.e. when the article is not completely free from the pile jet.

Illustrative example of subject matter classified in this group:

(article guide 14)

US201002644579

Fig. 2



B65H 5/00

Feeding articles separated from piles; Feeding articles to machines ({[B65H 9/00](#) takes precedence; } identical mechanisms or parts for delivering or advancing articles from machines [B65H 29/00](#); recirculating articles [B65H 85/00](#) {, [G03B 27/6257](#)})

Definition statement

This place covers:

Arrangements for feeding articles separated from piles to machines, for example single or continuous streams of articles.

Relationships with other classification places

For arrangements concerning delivering or advancing articles from machines as well as to machines additionally classify in [B65H 29/00](#) and subgroups.

Transferring material between transport devices additionally classify in [B65H 2301/447](#) and subgroups combined with an [B65H 2220/00](#) symbol (see [B65H](#) header).

References

Limiting references

This place does not cover:

Registering, e.g. orientating, articles; Devices therefor	B65H 9/00
Arrangements exclusively for delivering or advancing articles from machines	B65H 29/00
Recirculating articles	B65H 85/00

Special rules of classification

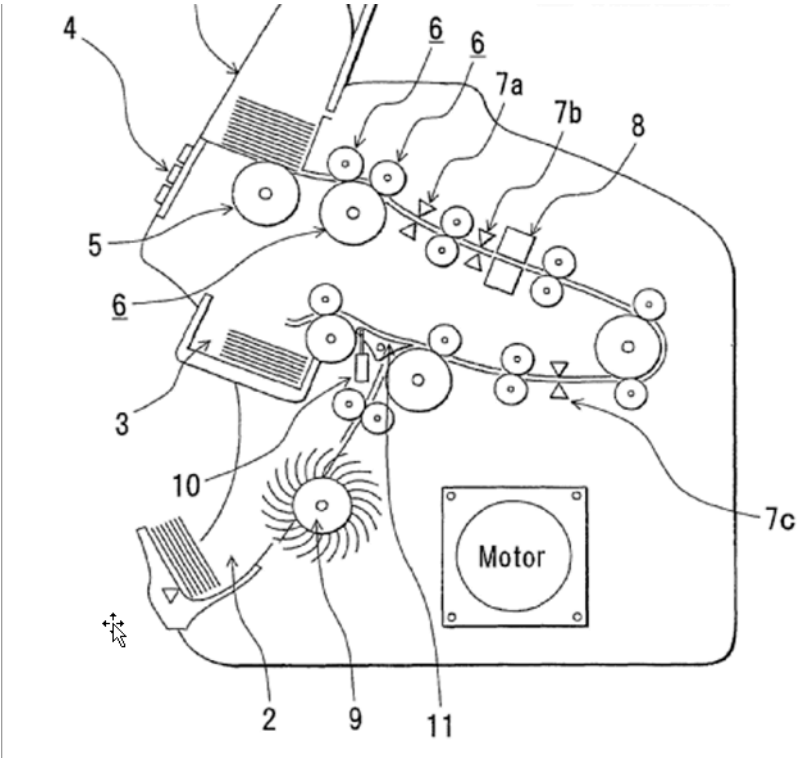
This main group should be used only for subject-matter not being covered by any of its sub-groups.

B65H 5/002

{Adaptations of counting devices}

Definition statement

This place covers:
Special arrangements related to article counting devices, such as banknote counting machines.



References

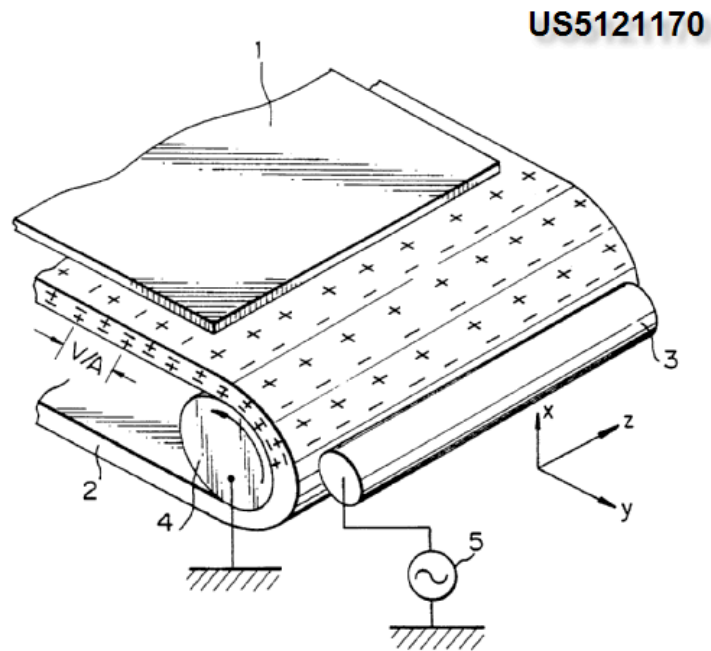
Informative references

Attention is drawn to the following places, which may be of interest for search:

Adaptations of counting devices directed to feeding of articles from machine	B65H 29/001
--	-----------------------------

B65H 5/004**{using electrostatic force}****Definition statement***This place covers:*

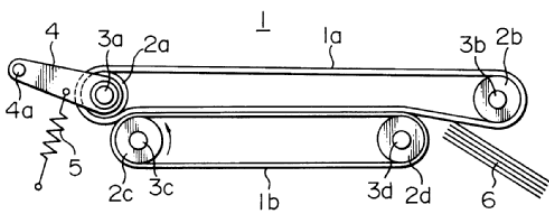
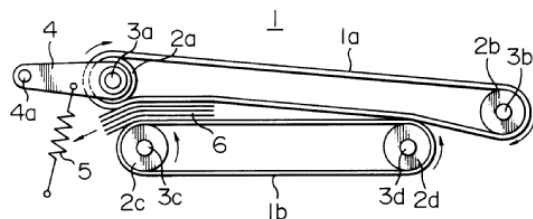
Arrangements that use electrostatic forces (e.g. electro statically charged belts) to feed articles



separated from piles.

B65H 5/006**{Feeding stacks of articles to machines}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

EP0535543**F I G. 1****F I G. 2****Relationships with other classification places**Handling piles, sets or stacks of articles additionally classify in [B65H 2301/422](#) and subgroups.**B65H 5/008****{using vibrations}****Definition statement***This place covers:*

Arrangements that use vibration forces (e.g. sound waves) to feed articles separated from piles.

B65H 5/02

by belts or chains {, e.g. between belts or chains (by combinations of endless conveyors and grippers [B65H 5/085](#); by suction belts [B65H 5/224](#))}

References

Limiting references

This place does not cover:

Arrangement which can be identified as either a belt or a chain.

Combinations of endless conveyors and grippers	B65H 5/085
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Printers	B41J 11/007
Copy machine (Handling original)	G03G 15/60
Copy machine (Handling copy sheet)	G03G 15/65
Handling banknotes	G07D 11/10

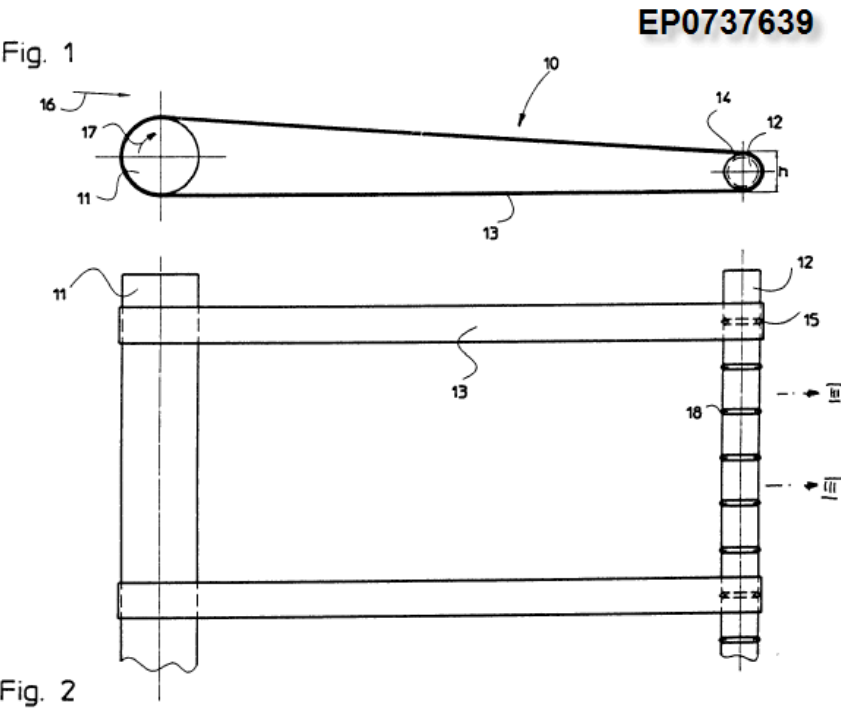
B65H 5/021

{by belts}

Definition statement

This place covers:

Arrangements using an endless belt wherein the transport force is created only by friction.



Relationships with other classification places

For details of construction and/or arrangement of belts additionally classify in subgroups of [B65H 2404/20](#).

In particular, auxiliary handling means on the surface of the belts additionally classify in subgroups of [B65H 2404/23](#).

References

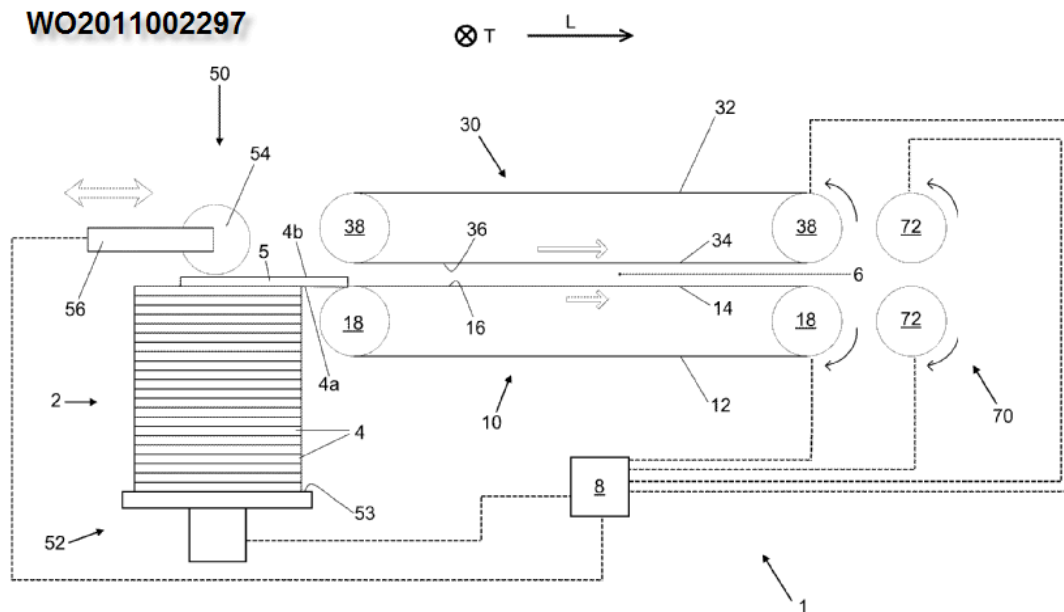
Limiting references

This place does not cover:

Perforated belts in which suction is used to enhance adherence of the article on the belt	B65H 5/224
Belts for transporting sheets through electrographic units	G03G 15/65

B65H 5/023**{between a pair of belts forming a transport nip}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

WO2011002297**FIG. 1**

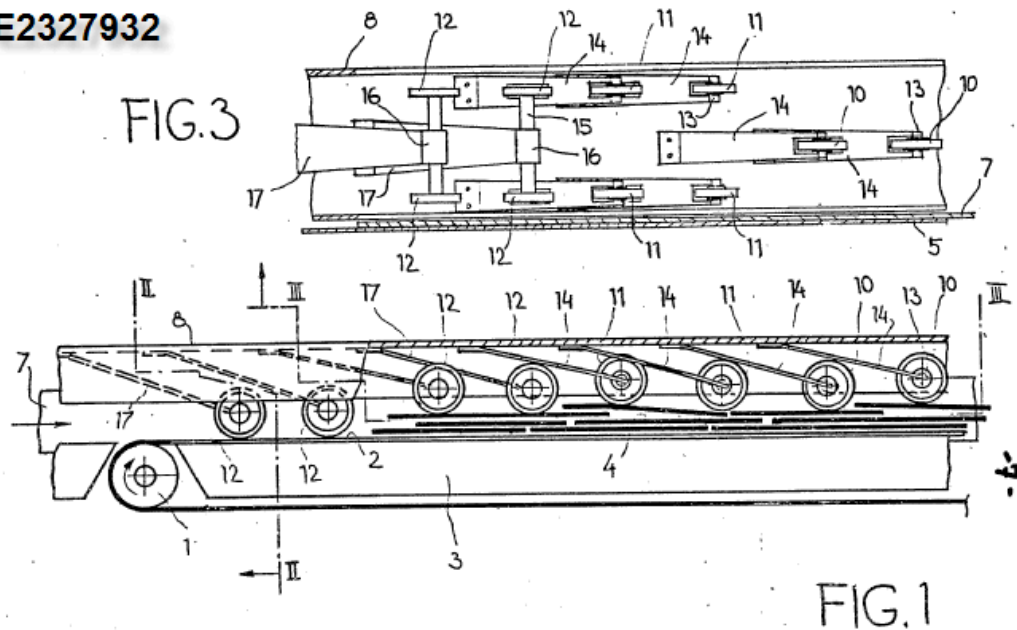
B65H 5/025

{between belts and rotary means, e.g. rollers, drums, cylinders or balls, forming a transport nip}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

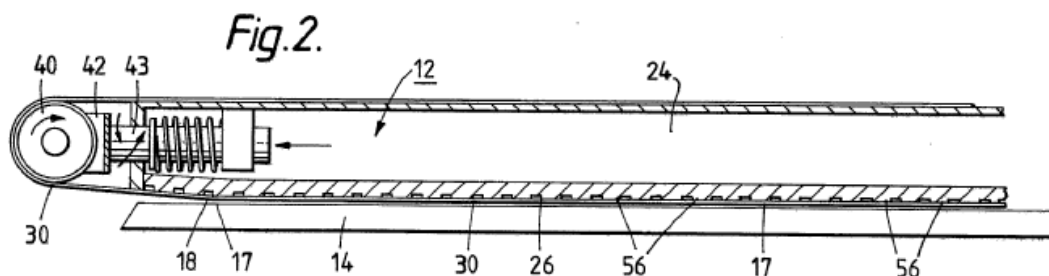
DE2327932**B65H 5/026**

{between belts and stationary pressing, supporting or guiding elements forming a transport nip}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**EP0324545**

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements of belts facing a transport surface, e.g. contact glass in copy machine	B65H 2404/268
--	-------------------------------

B65H 5/028

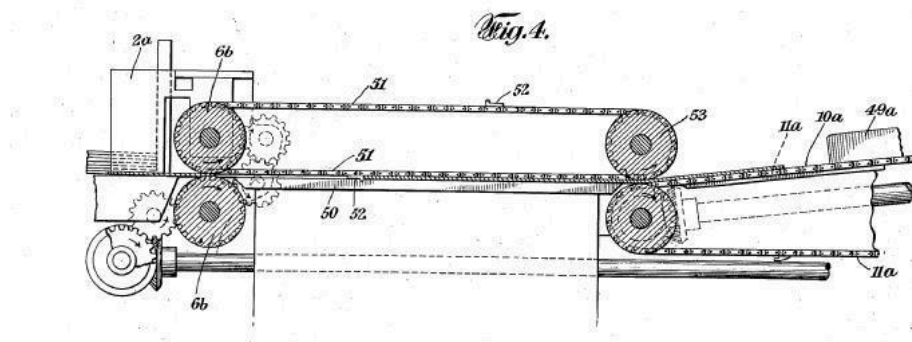
{by chains}

Definition statement

This place covers:

Conveying means which consist of interlinked elements.

US2079668



Relationships with other classification places

For details of construction and/or arrangement of chains additionally classify in [B65H 2404/30](#) and subgroups.

B65H 5/04

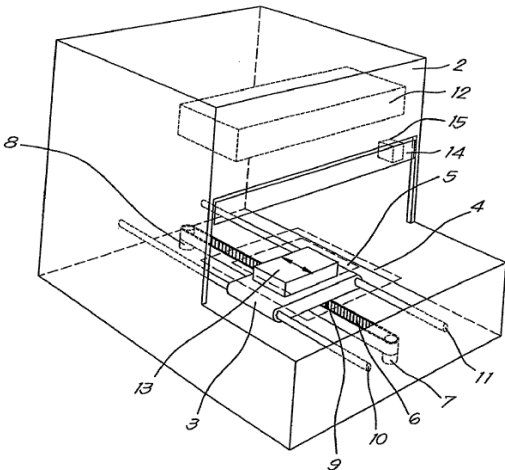
by movable tables or carriages (rotary tables [B65H 5/18](#) {; suction gripper or gripper tables [B65H 5/10](#)})

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

WO2011017781



References

Limiting references

This place does not cover:

Suction grippers or gripper tables	B65H 5/10
Rotary tables	B65H 5/18

B65H 5/06

by rollers {or balls, e.g. between rollers (transport by suction rollers [B65H 5/226](#))}

Definition statement

This place covers:

Arrangements using rollers wherein the transport force is created only by friction.

References

Limiting references

This place does not cover:

Suction rollers	B65H 5/226
-----------------	----------------------------

Special rules of classification

Special construction of feed or guide rollers and surfaces thereof should be classified in [B65H 27/00](#) together with an additional symbol from [B65H 2404/10](#) and subgroups.

B65H 5/062

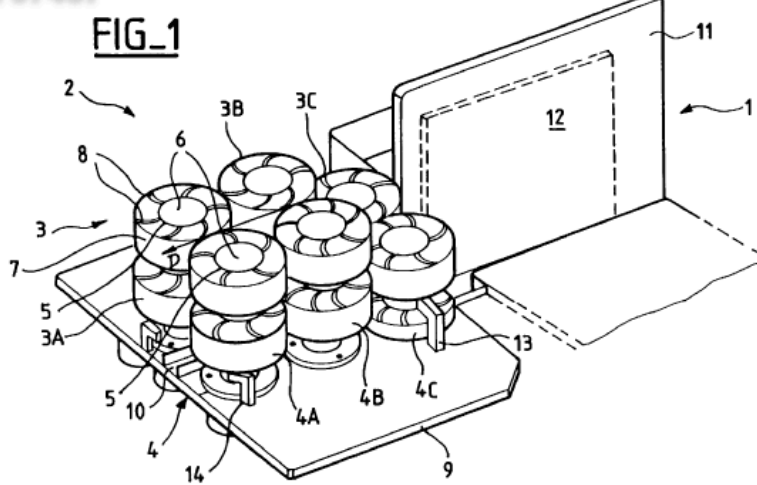
{between rollers or balls}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

FR2797437



B65H 5/064

{the axes of the rollers being perpendicular to the plane of the articles}

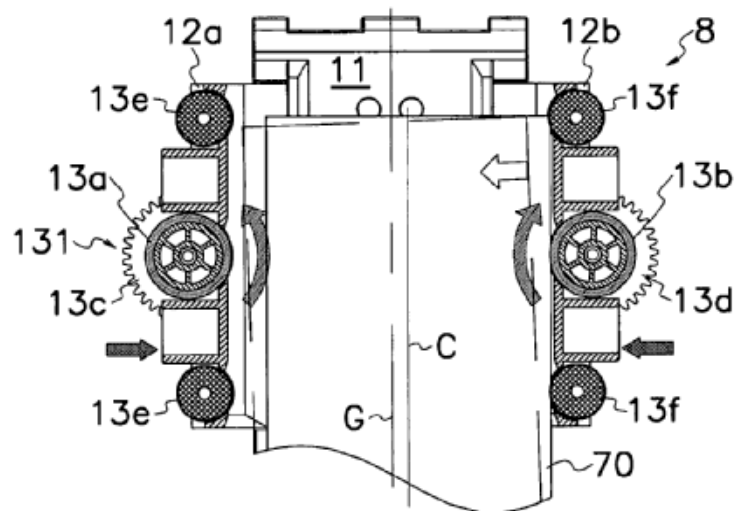
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

FIG. 21

EP2256073



B65H 5/066

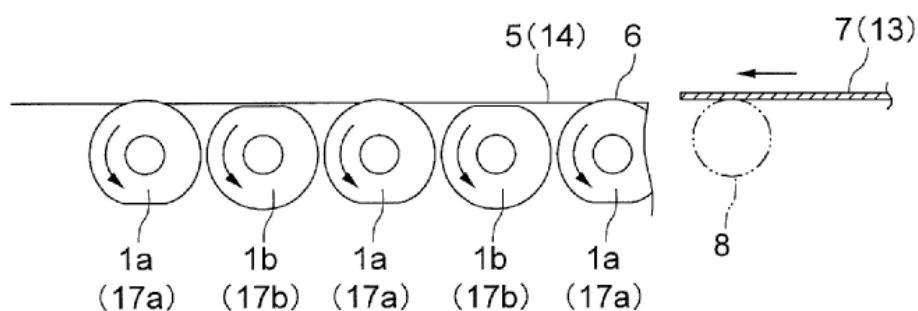
{the articles resting on rollers or balls}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

WO2008041533



B65H 5/068

{between one or more rollers or balls and stationary pressing, supporting or guiding elements}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

WO0249945

FIG.1

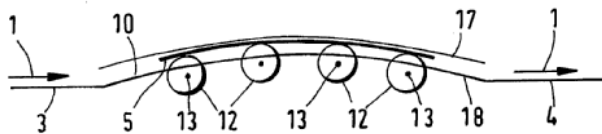
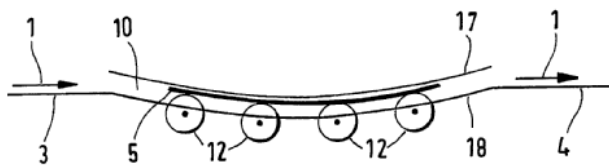


FIG.2

**Relationships with other classification places**

For specifying details about stationary pressing, supporting or guiding elements additionally classify in subgroups of [B65H 2404/50](#) and/or [B65H 2404/60](#).

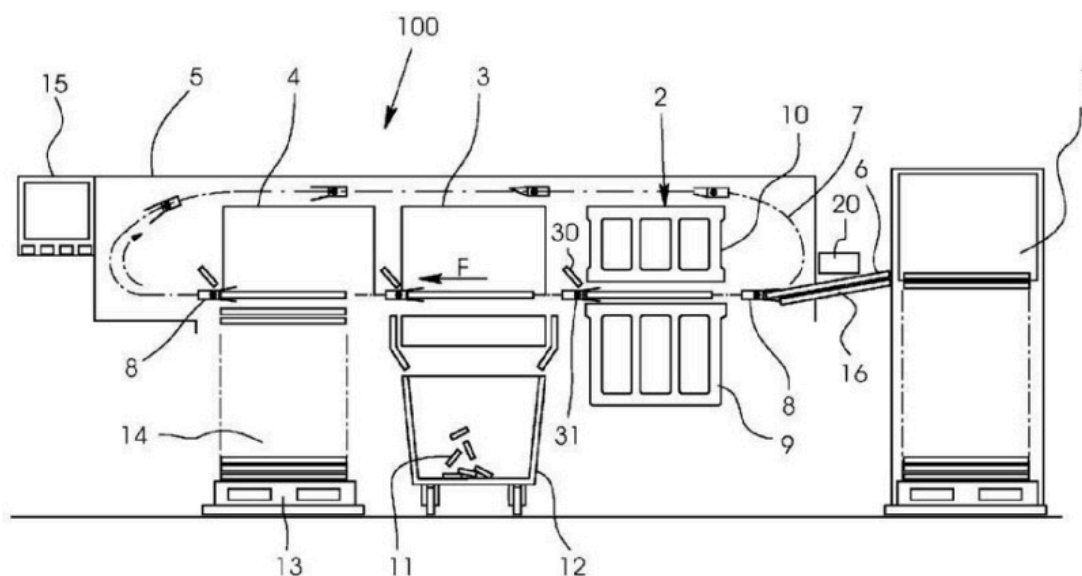
B65H 5/08

by grippers, e.g. suction grippers

Definition statement

This place covers:

Arrangements using grippers to transport the article separated from the pile.



EP1882566

Fig. 1

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Grippers, e.g. suction or magnetic	B65G 17/323
------------------------------------	-----------------------------

Special rules of classification

This group should be used only for subject-matter not being covered by any of its sub-groups.

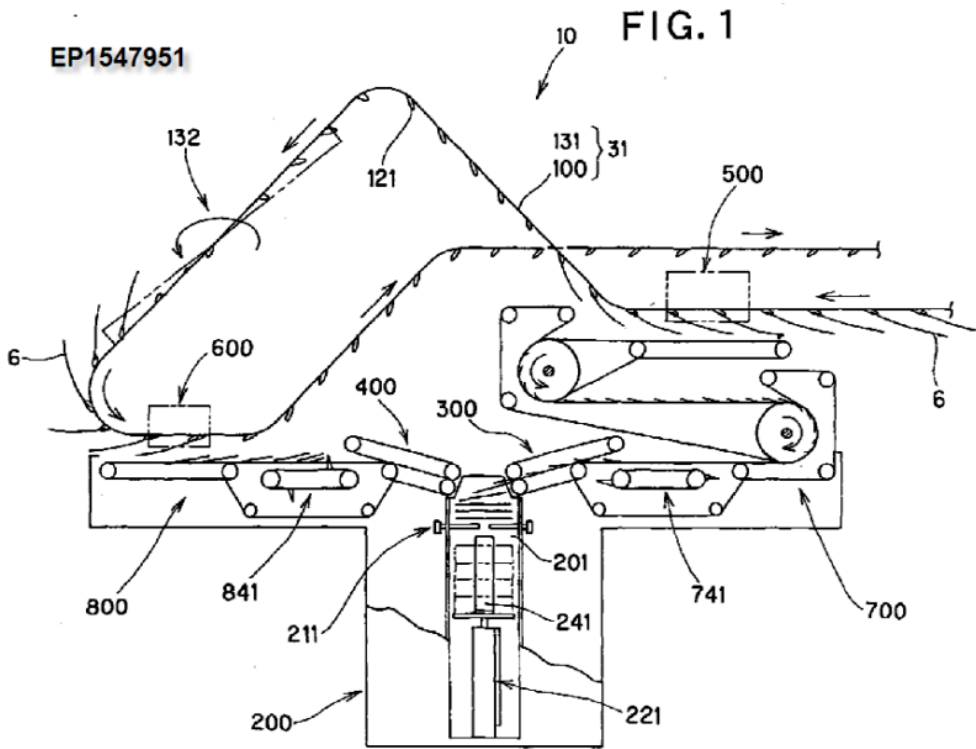
B65H 5/085

{by combinations of endless conveyors and grippers (suction belts
[B65H 5/224](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Grippers carried by chains or bands	B65H 2301/44712
General conveyors with grippers carried by endless conveyors	B65G 47/842

B65H 5/10

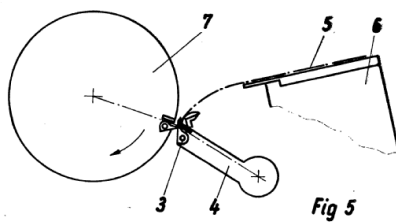
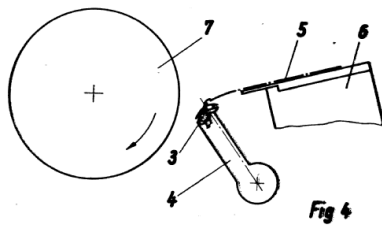
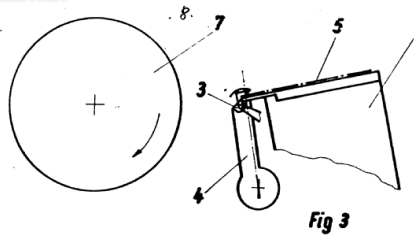
Reciprocating or oscillating grippers {, e.g. suction or gripper tables}

Definition statement

This place covers:

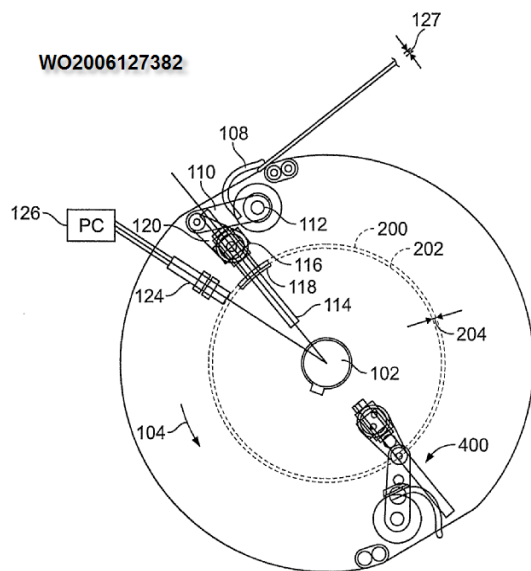
Illustrative example of subject matter classified in this group:

DE3231921



B65H 5/12**Revolving grippers, e.g. mounted on arms, frames or cylinders****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**FIG. 2****References****Limiting references***This place does not cover:*

Reversing sheets inside printing machines, e.g. perfecting roller/machine	B41F 21/106
---	-----------------------------

B65H 5/14**Details of grippers; Actuating-mechanisms therefor****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

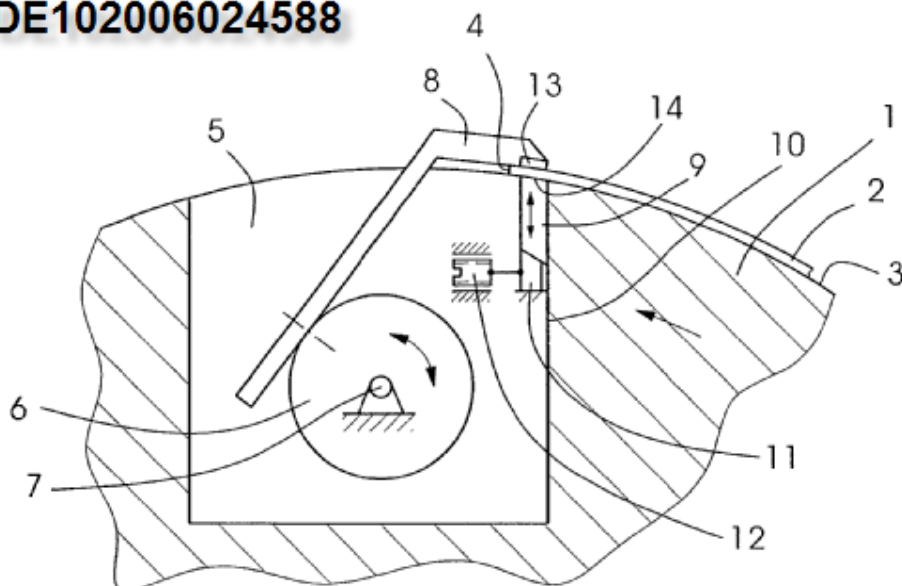
DE102006024588

Fig.1

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Manipulators with gripper heads	B25J 15/08
---------------------------------	----------------------------

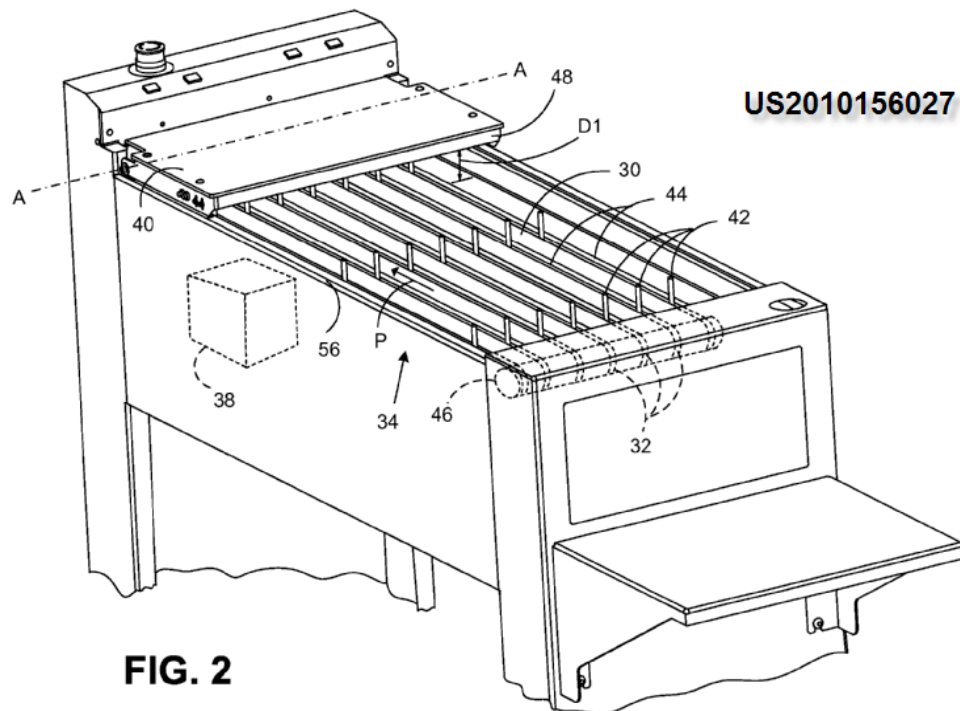
B65H 5/16

by pusher, needles, friction, or like devices adapted to feed single articles along a surface or table

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Auxiliary handling means on the surface of the belts	B65H 2404/23
--	------------------------------

B65H 5/18

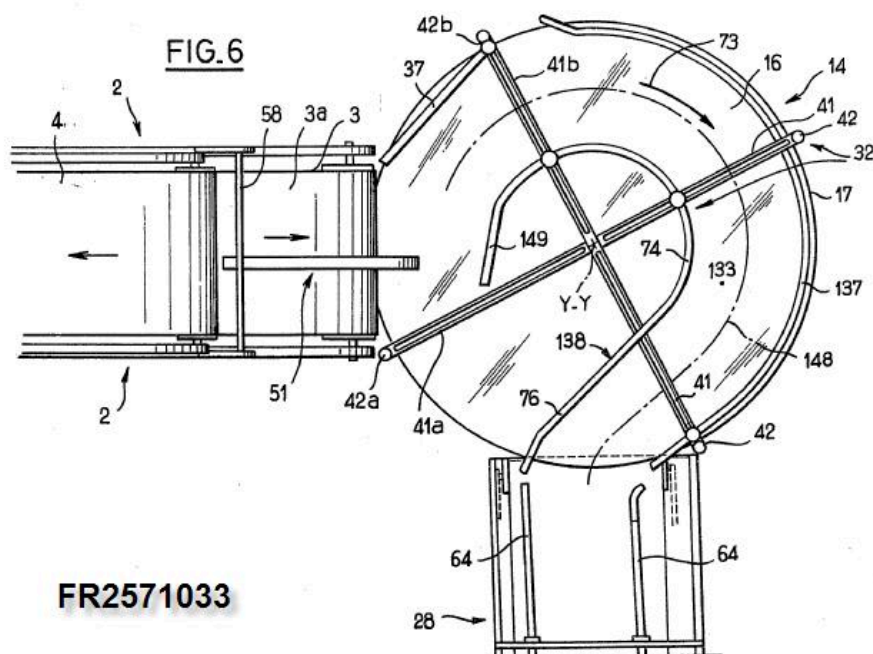
by rotary dials or tables

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(top view)



B65H 5/22

by air-blast or suction device (suction grippers [B65H 5/08](#))

References

Limiting references

This place does not cover:

Suction grippers	B65H 5/08
------------------	---------------------------

B65H 5/222

{by suction devices}

Special rules of classification

This group should be used only for subject-matter not being covered by any of its sub-groups.

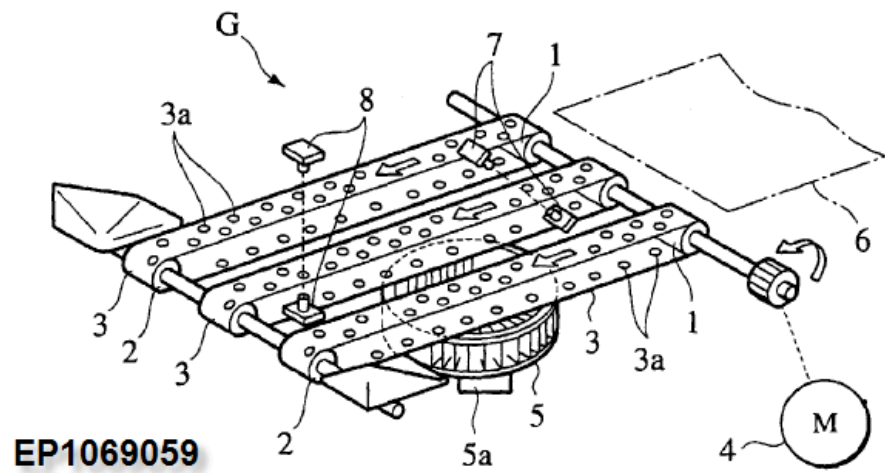
B65H 5/224

{by suction belts ([B65H 11/005](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

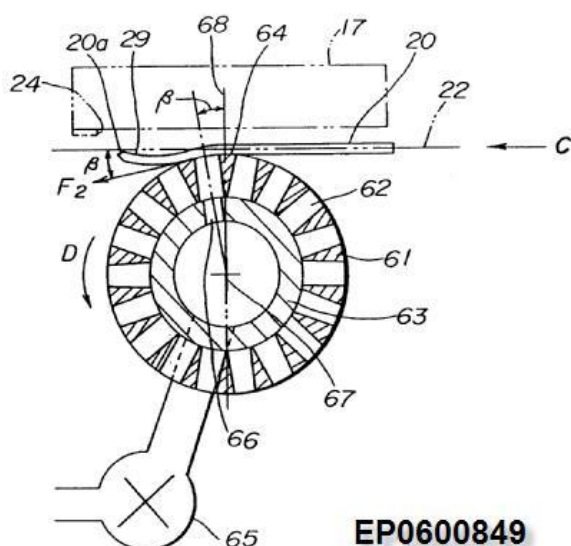
Limiting references

This place does not cover:

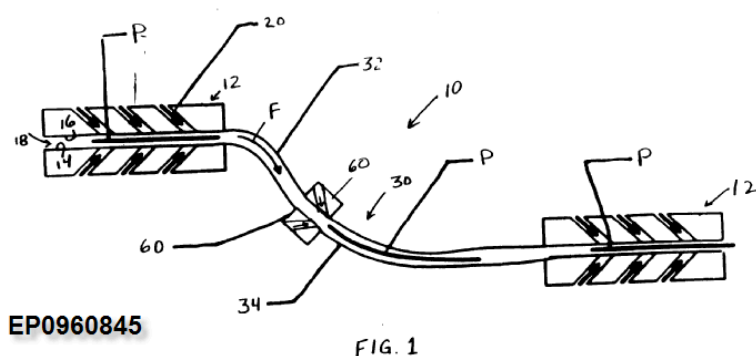
Feed tables incorporating suction belts	B65H 11/005
---	-----------------------------

B65H 5/226**{by suction rollers}****Definition statement***This place covers:*

Rollers wherein the suction is generated by a vacuum inside the roller.

**B65H 5/228****{by air-blast devices}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Directly conveying articles by flowing gases

[B65G 51/02](#)

B65H 5/24

{Feeding articles in overlapping streams, i.e. by separation of articles from a pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

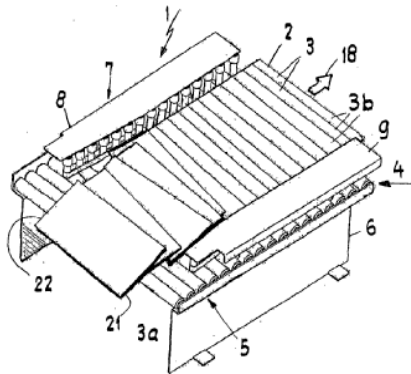


Fig. 2 EP1505026

References

Limiting references

This place does not cover:

If the overlapping stream is not formed exclusively by separation of articles from a pile then this group and subgroups take precedence.	B65H 29/66
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Overlapped conveying (FTCLA)	3F053/GB00
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B65H 5/26

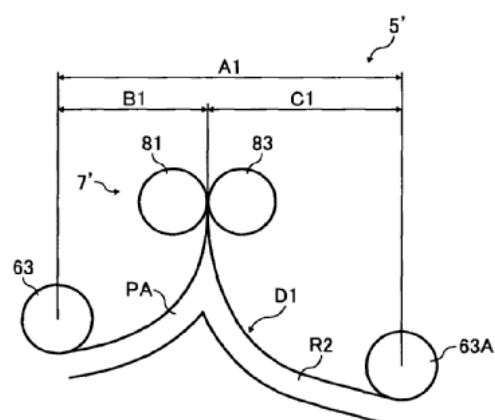
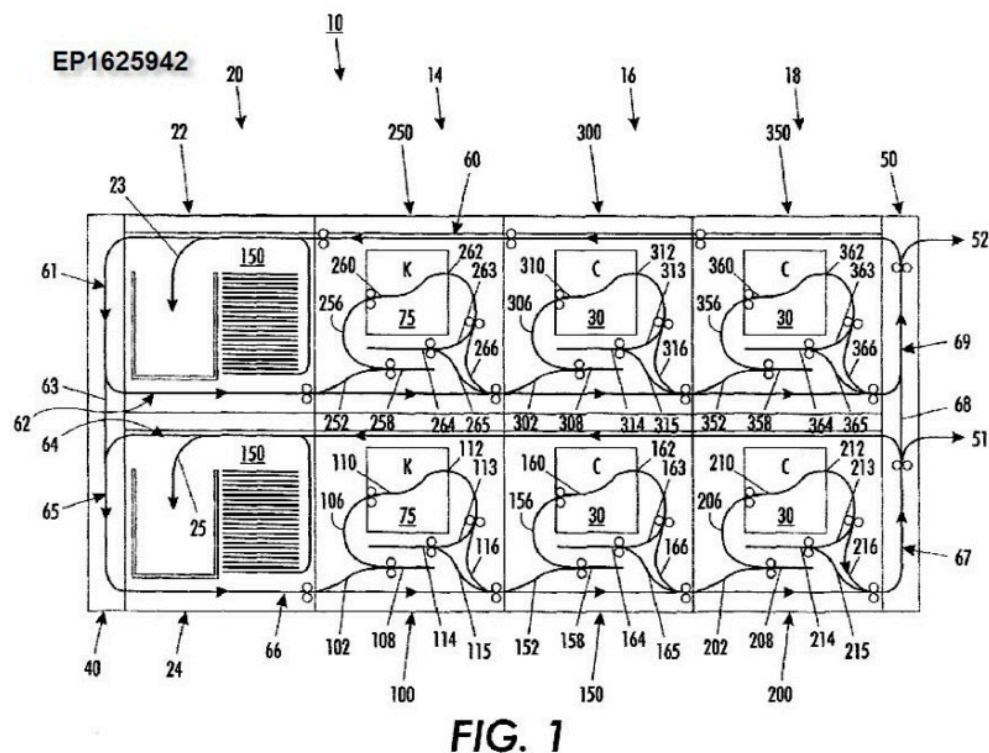
Duplicate, alternate, selective, or coacting feeds

Definition statement

This place covers:

Arrangements in which more than one path or route of transport is selectable either to the same or to different destinations

Illustrative examples of subject matter classified in this group:



EP1961683

References

Limiting references

This place does not cover:

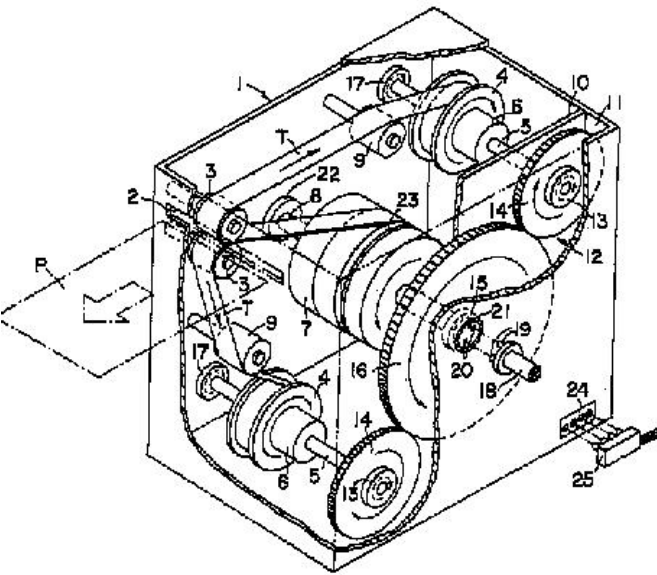
Combinations of piling and depiling operations from and o the same stack	B65H 83/02
Recirculating articles	B65H 85/00

B65H 5/28

Feeding articles stored in rolled or folded bands

Definition statement

This place covers:
Specific details or aspects concerning feeding the stored articles from the store.



Relationships with other classification places

For details about the winding and unwinding means additionally classify in subgroups of [B65H 2301/419](#).

References

Limiting references

This place does not cover:

Particular details or aspects concerning feeding of articles to be stored in rolled or folded bands, as well as details about the storing arrangement as such	B65H 29/006
---	-----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Articles wound together with a single belt	B65H 2301/4191
Articles wound together between two belts facing each other	B65H 2301/41912
Note containers	G07D 11/12
Relevant UCLA	242/528

B65H 5/30

Opening devices for folded sheets or signatures

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

For opening signatures	B42B 9/02
Relevant UCLA	270/52.23, 270/52.24, 270/52.25

Special rules of classification

This group should be used only for subject-matter not being covered by any of its sub-groups.

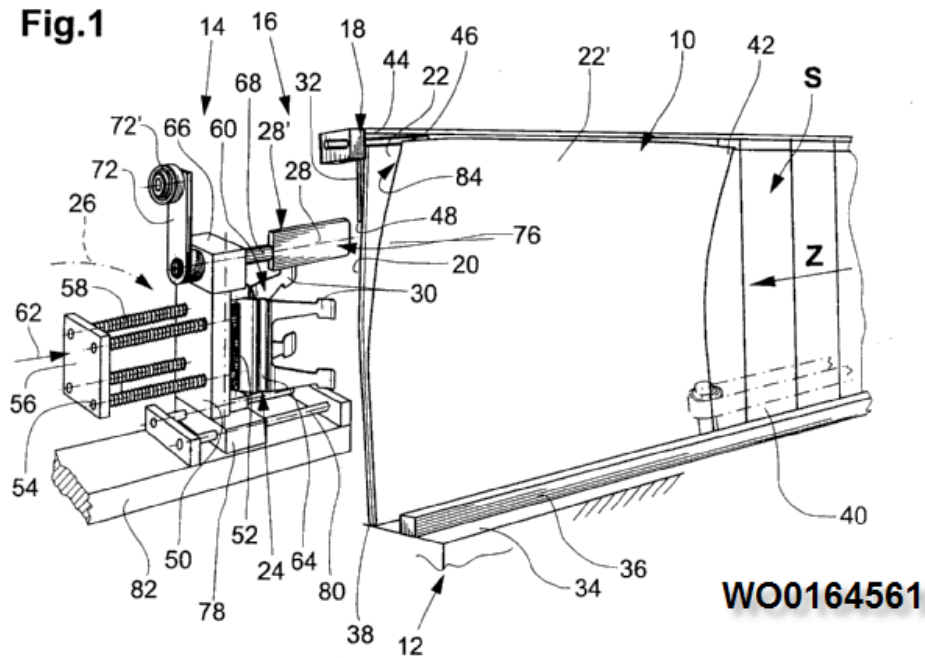
B65H 5/301

{comprising blade-like means inserted between the parts to be opened}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



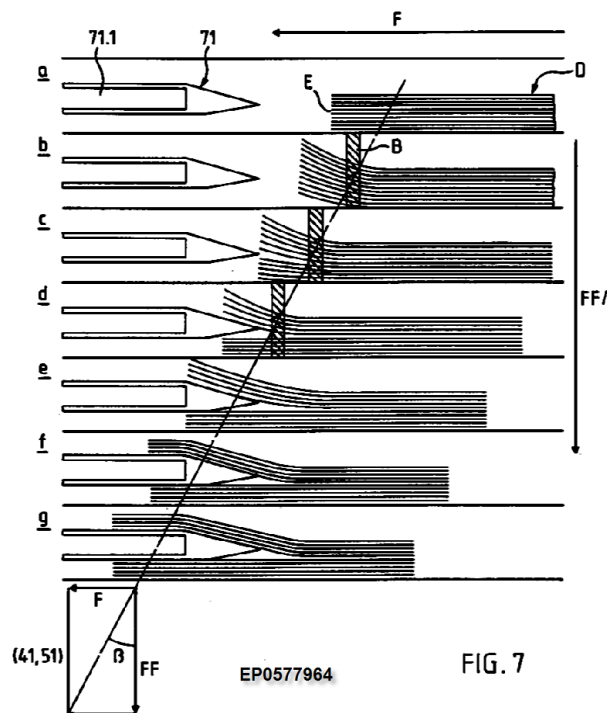
B65H 5/302

{the blade-like means being stationary}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



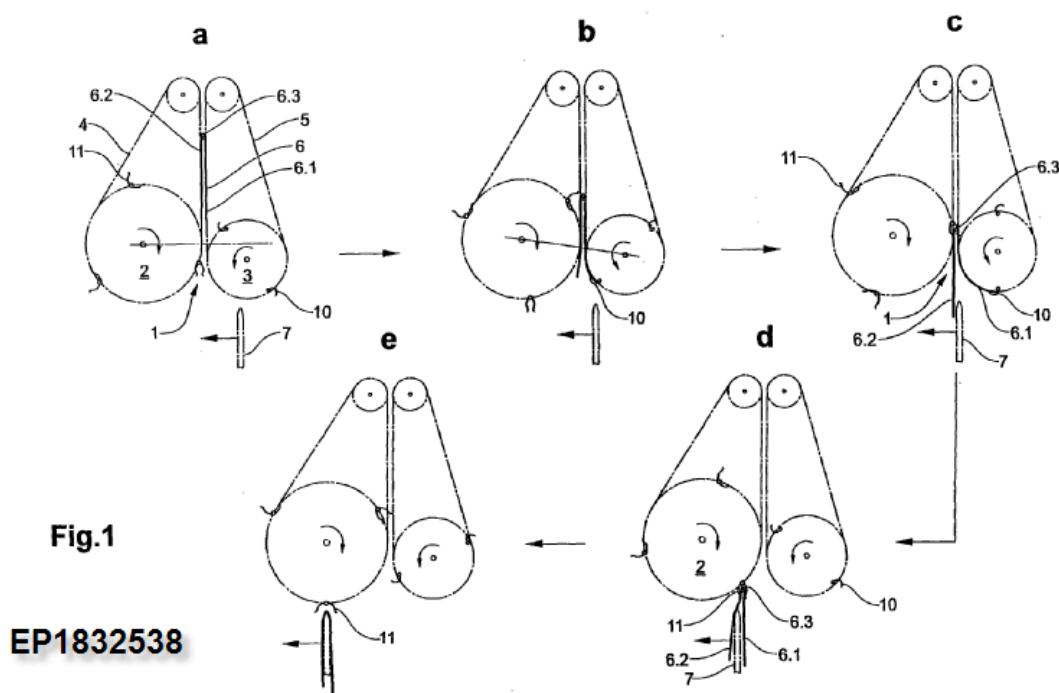
B65H 5/303

{comprising movable endless means for opening the folded sheets ([B65H 5/308](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Limiting references**

This place does not cover:

Folded sheets or signatures travelling in hanging position	B65H 5/308
--	----------------------------

B65H 5/305

{comprising rotary means for opening the folded sheets ([B65H 5/308](#) takes precedence)}

Definition statement

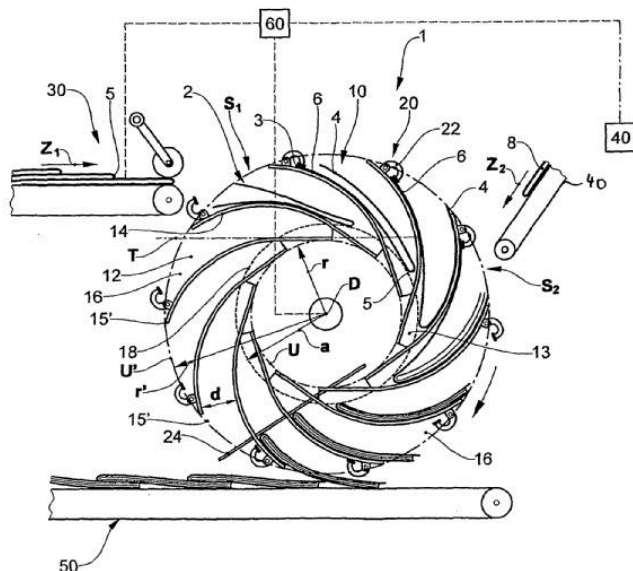
This place covers:

Illustrative example of subject matter classified in this group:

(opening folded sheets 5)

Fig.1

WO2009149571



References

Limiting references

This place does not cover:

Folded sheets or signatures travelling in hanging position	B65H 5/308
--	----------------------------

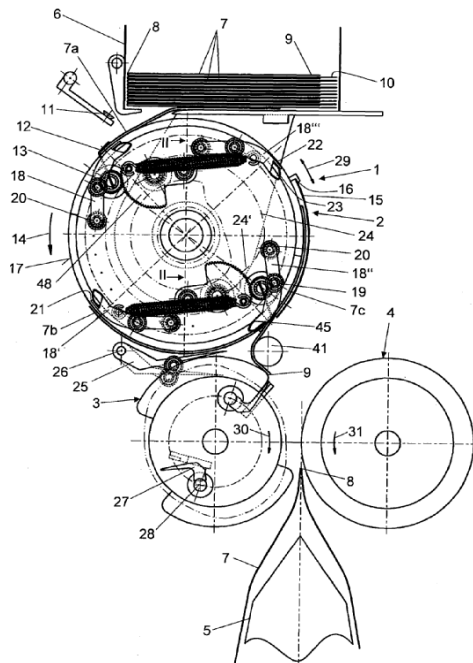
B65H 5/306

{two opposite rotary means, only one of them having gripping means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



EP2100837

FIG. 1

B65H 5/307

{two opposite rotary means, both having gripping means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(gripping means 54,56)

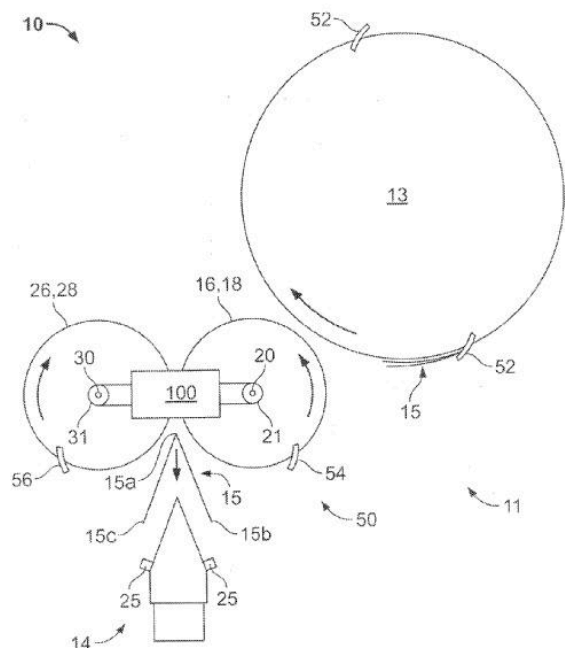


FIG. 2 EP2354063

B65H 5/308

{the folded sheets or signatures travelling in hanging position}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

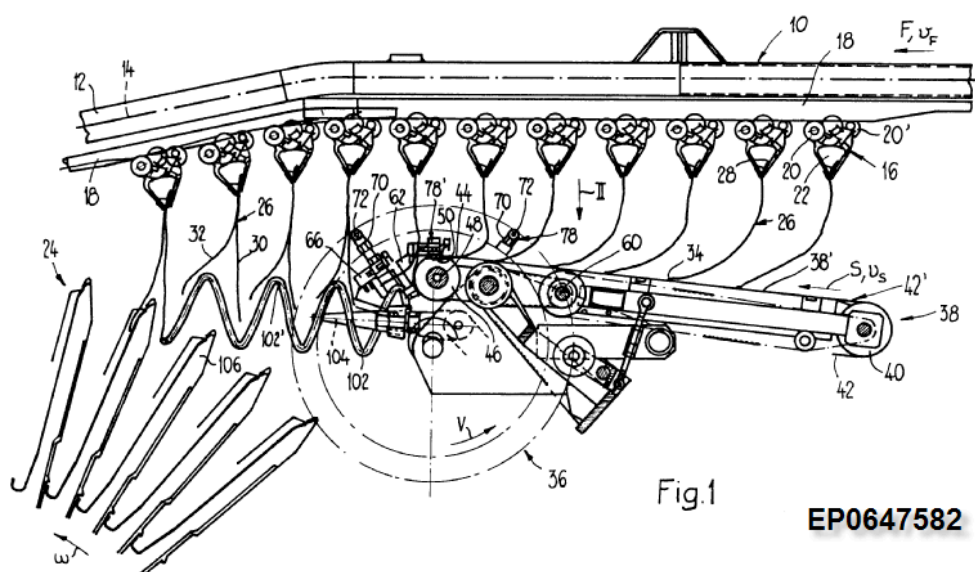


Fig.1

EP0647582

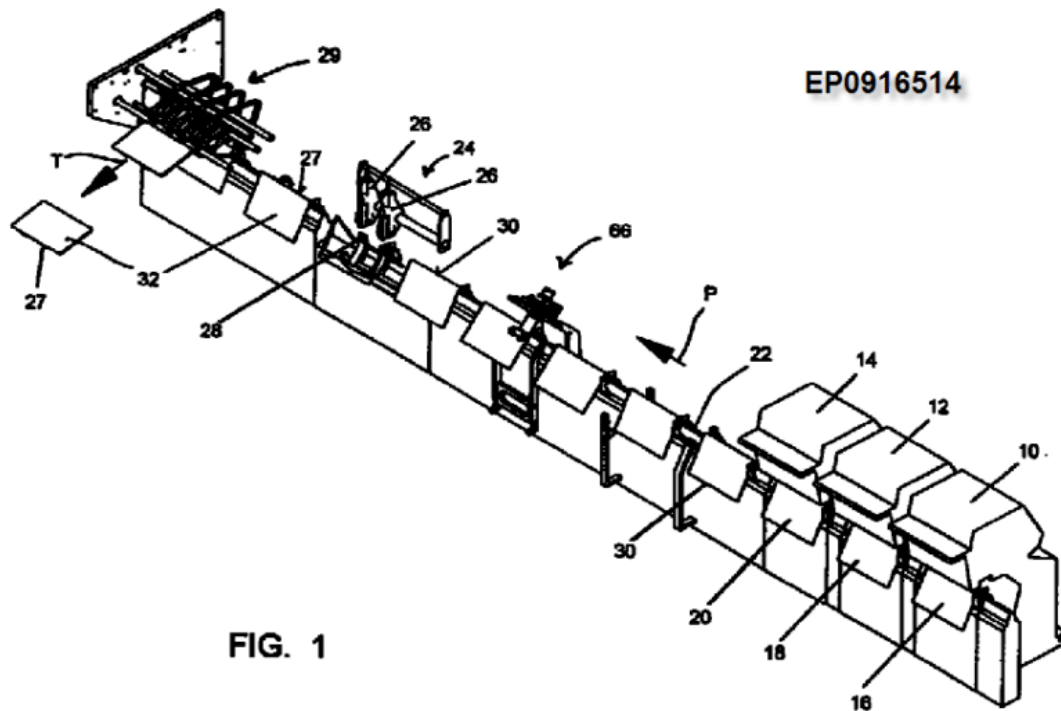
B65H 5/32

Saddle-like members over which partially-unfolded sheets or signatures are fed to signature-gathering, stitching, or like machines

Definition statement

This place covers:

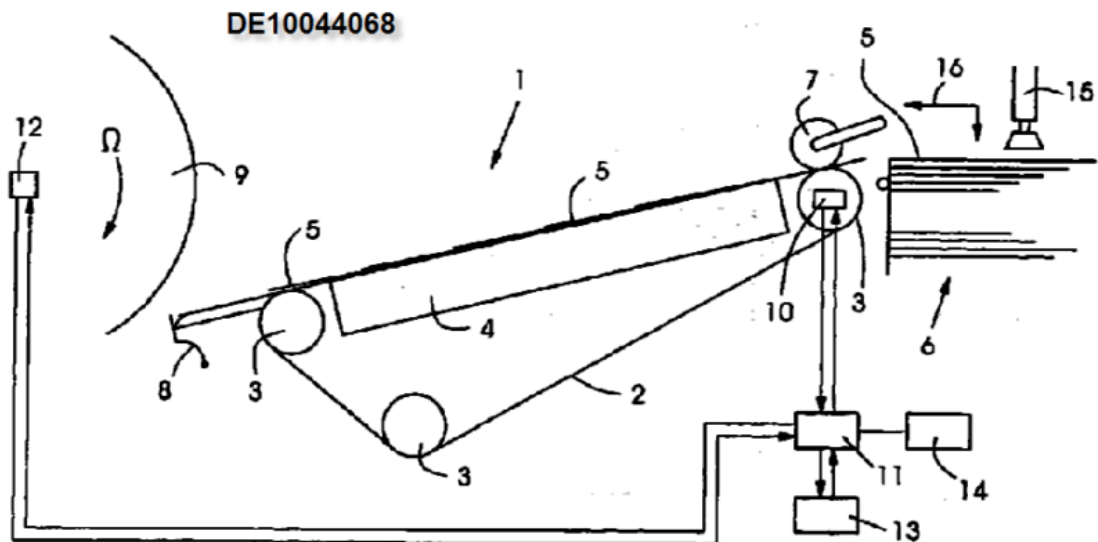
Illustrative example of subject matter classified in this group:



B65H 5/34**Varying the phase of feed relative to the receiving machine****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

**Special rules of classification**

Specific control aspects should additionally be classified in subgroups of [B65H 7/00](#).

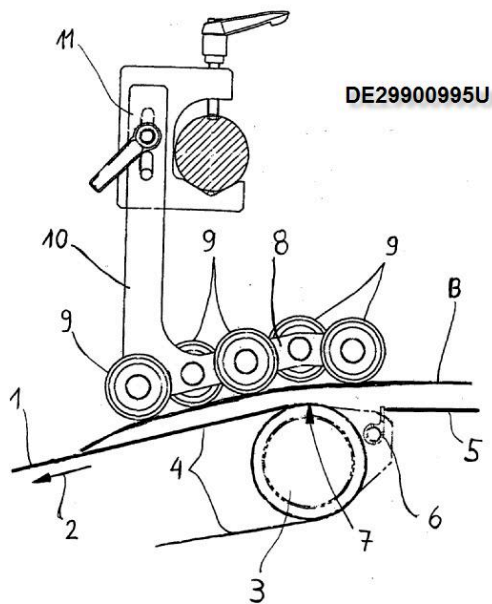
B65H 5/36**Article guides or smoothers, e.g. movable in operation****Definition statement**

This place covers:

Arrangements which guide the article during transport. The article is completely free from the pile.

Definition statement

Illustrative example of subject matter classified in this group:



Relationships with other classification places

For specifying details about article guides additionally classify in subgroups of [B65H 2404/50](#), [B65H 2404/60](#) and/or [B65H 2404/70](#).

B65H 5/38

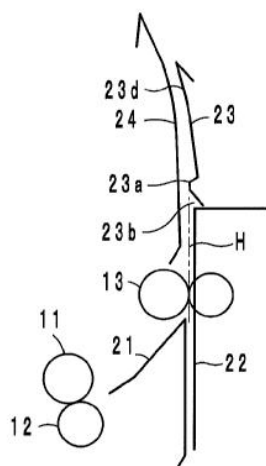
immovable in operation

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

(cf. guide plate 23)



US2010327521

References

Limiting references

This place does not cover:

For stationary guides or smoothers for delivering or advancing articles from machines	B65H 29/52
---	----------------------------

B65H 7/00

Controlling article feeding, separating, pile-advancing, or associated apparatus, to take account of incorrect feeding, absence of articles, or presence of faulty articles

Definition statement

This place covers:

Aspects related to controlling the handling of articles before they arrive to a particular process, such as pile-advancement, picking articles from piles, article feeding and separation, and apparatuses associated with such acts, to take account of incorrect feeding of articles, incorrect absence of articles, or presence of faulty articles

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Aspects related to controlling the handling of articles after the articles have been subjected to a particular process	B65H 43/00
--	----------------------------

Special rules of classification

Because the sensing nowadays in the majority of cases is realized through photoelectric sensors, the majority of documents would have to be classified in [B65H 7/14](#) if the IPC precedence notes were followed. In order to rationalize, classification the IPC note "[B65H 7/14](#) takes precedence" is ignored.

The rules followed are the following:

Documents are first classified according to which part of the article or to which situation the feelers or detectors respond. If the sensor works with a photoelectrical element and the structural build-up of the sensor is particularly emphasized, then the document is classified in [B65H 7/14](#) as well.

Additionally, codes from [B65H 2511/00](#), [B65H 2513/00](#), [B65H 2515/00](#), [B65H 2519/00](#), [B65H 2551/00](#), [B65H 2553/00](#), combined with at least the indicators [B65H 2220/01](#), [B65H 2220/02](#), [B65H 2220/03](#), [B65H 2220/04](#) should be given to further specify the control aspects.

The codes [B65H 2511/00](#), [B65H 2513/00](#), [B65H 2515/00](#), [B65H 2519/00](#), [B65H 2551/00](#), [B65H 2553/00](#), combined with indicators from the [B65H 2220/00](#) series can be given without a symbol from the [B65H 7/00](#) series if the control aspect is only a secondary aspect.

If the document discloses a device and/or method for controlling in which the reaction, e.g. the control output is emphasized, then the document should be further classified in one of the groups [B65H 7/16](#), [B65H 7/18](#), [B65H 7/20](#).

Examples:

- (I) A document disclosing a device and/or method for controlling responsive to double feed, and emphasizing the structure of the photoelectrical sensor which has elements which contact the articles while sensing, should be classified in: [B65H 7/12](#) and [B65H 7/14](#).
- If the elements which contact the articles are particularly specified (for example rotating levers), a further [B65H](#) symbol ([B65H 2553/61](#): Mechanical means, e.g. contact arms) should be given.
- (II) A document disclosing a device and/or method for controlling responsive to double feed, and emphasizing the structure of the photoelectrical sensor which does not contact the actual articles while sensing, should be classified in: [B65H 7/125](#) and [B65H 7/14](#).
- (III) A document disclosing a device and/or method for controlling responsive to a wrong distance between articles successively separated from a pile of article, monitoring said distance by checking the time intervals ([B65H 2513/52](#)) between the passing of the front edges of the articles ([B65H 2701/1311](#)) (sensed by a light sensor not further specified), and responding by changing the rotational speed of the separator ([B65H 2513/11](#)), should be classified in:
 - [B65H 7/02](#) and
 - [B65H 2701/1311](#), [B65H 2220/01](#)
 - [B65H 2513/52](#), [B65H 2220/03](#)
 - [-B65H 2513/11](#), [B65H 2220/02](#)
- If the change of the rotational speed of the separator, or means to do so are particularly emphasized, then the class [B65H 7/18](#) should be given additionally.
- (IV) A pile is advanced/moved in function of an absence of articles:
 - [B65H 7/04](#) and
 - [B65H 2511/515](#), [B65H 2220/01](#)
 - [B65H 2513/40](#), [B65H 2220/02](#).
- (V) The position of the separation end of the pile is controlled in function of the thickness of the articles:
 - [B65H 7/02](#) and
 - [B65H 2511/13](#), [B65H 2220/01](#)
 - [B65H 2511/20](#), [B65H 2220/02](#).

B65H 7/14

by photoelectric feelers or detectors

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Instruments using optical measuring means	G01B 9/00
Measuring arrangements characterised by the use of optical means	G01B 11/00

B65H 7/20

Controlling associated apparatus

Definition statement

This place covers:

The group covers for example the concept that the handling conditions (for example the feeding speed) before a process influence or determine the conditions or settings of the process it self (for example the starting time).

Definition statement

The group also covers subject-matter which emphasizes the particular interface means applied or functioning between the handling action (for example feeding) and the process. Such interface means could be for example communication means between the feeding controller and process controller, or user interfaces like information input or displaying means linked to the feeding controller.

Special rules of classification

Interface means should be indicated by giving a code from [B65H 2551/00](#) or [B65H 2557/00](#)

B65H 9/00**Registering, e.g. orientating, articles; Devices therefor****Definition statement**

This place covers:

Aspects related to correcting the orientation and/or position of the articles before they arrive to a particular process.

References**Limiting references**

This place does not cover:

Correcting orientation and/or position of articles when coming from a process	B65H 29/00 , B65H 31/00
Combined with	B65H 2301/331 , B65H 2301/361
Devices intimately associated with inserting documents into envelopes:	B43M 3/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Printer, registering devices	B41J 13/26
Printers, Front lays, stops, or gauges	B41J 13/28
Printers, Side lays or gauges	B41J 13/30
Printers, Means for positioning sheets in two directions under one control, e.g. for format control or orthogonal sheet positioning	B41J 13/32
Apparatus for electrographic processes, feeding path after the copy sheet separation and up to the transfer point, e.g. registering; deskewing; correct timing of sheet feeding to the transfer point	G03G 15/6558
Apparatus for electrographic processes, registration devices:	G03G 2215/00405
Aligning cards	G06K 13/063

B65H 9/002

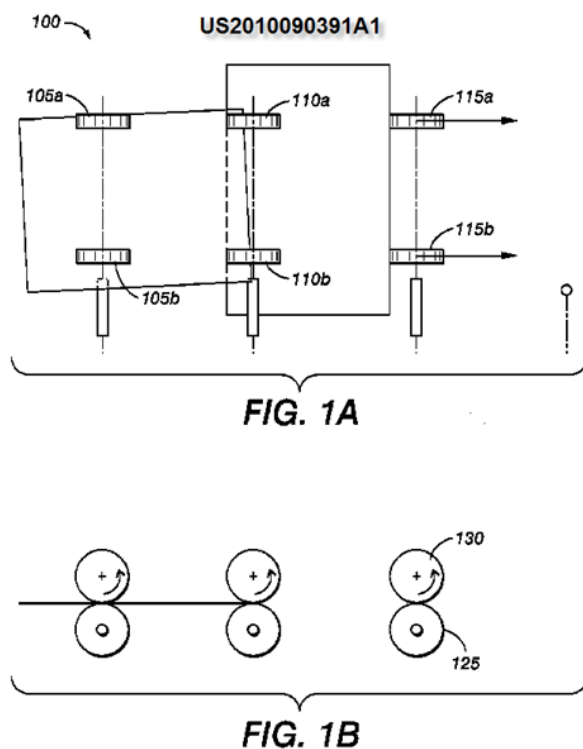
{changing orientation of sheet by only controlling movement of the forwarding means, i.e. without the use of stop or register wall}

Definition statement

This place covers:

Arrangements which corrects the orientations of the sheets, i.e. deskews the sheets, only by controlling the relative speed of the forwarding means without abutting the edges of the sheets against stops or register walls

Illustrative example of subject matter classified in this group:

**Special rules of classification**

If the subject-matter also relates to an additional movement which moves the article in a second direction perpendicular to the first movement, this should be indicated by using the appropriate [B65H](#) symbol. For example, if the first change of orientation is done by counter rotating two independent roller pairs ([B65H 9/002](#)) and the second change of movement is done by moving the rollers parallel to their shafts, then the symbol [B65H 2404/1424](#) should be given additionally, see for example US2009033029A1.

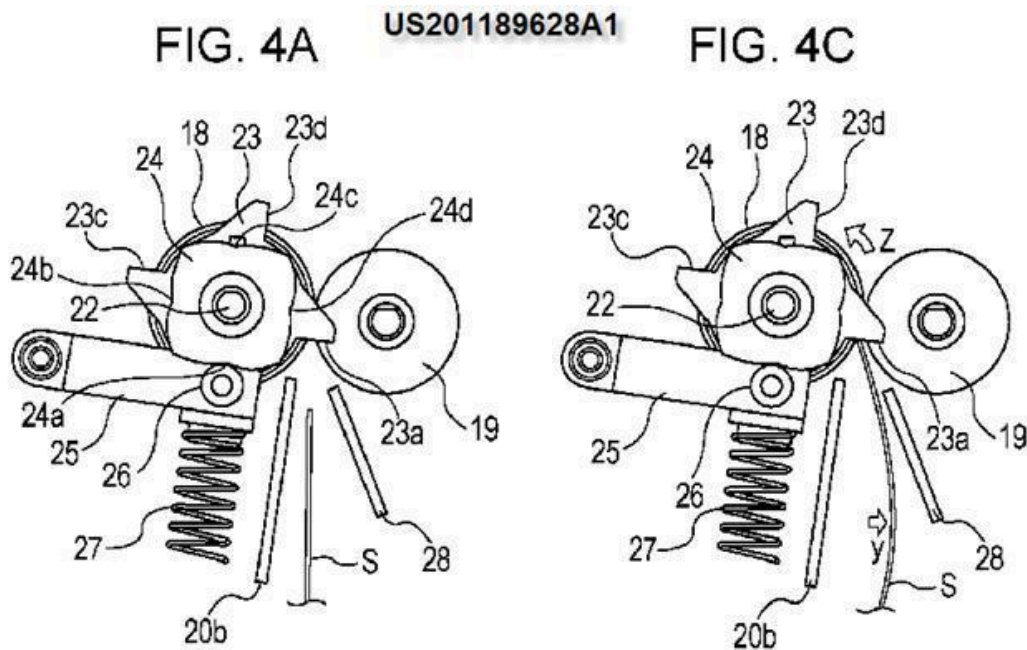
B65H 9/004

{Deskewing sheet by abutting against a stop, i.e. producing a buckling of the sheet}

Definition statement

This place covers:

The concept that the deskewing effect is caused by a significant buckling of the article

**References****Limiting references**

This place does not cover:

The article is moved into a stationary registered position, but not buckled	B65H 9/10
---	---------------------------

Special rules of classification

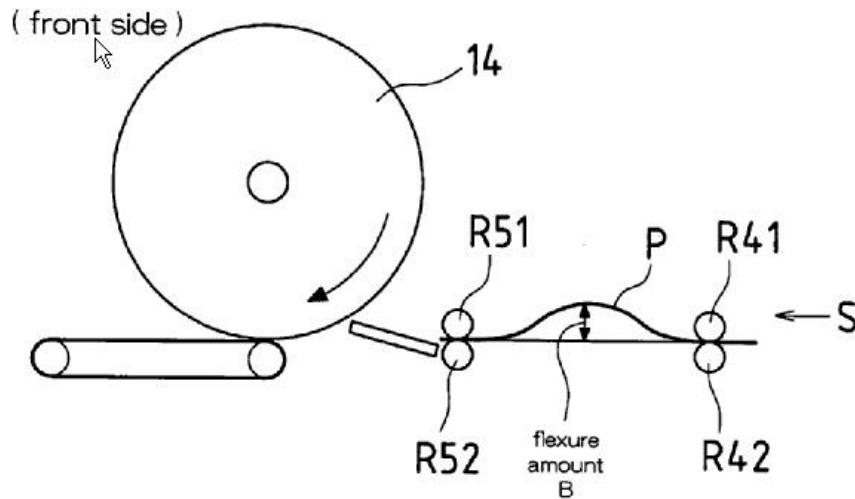
If a movable stop is important in connection with the buckling of the article then also classify in [B65H 9/06](#)

B65H 9/006

{the stop being formed by forwarding means in stand-by}

Definition statement

This place covers:

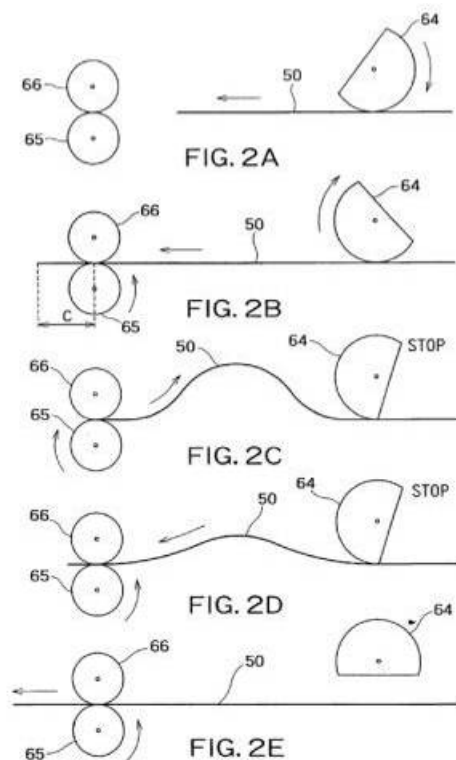
**B65H 9/008**

{the stop being formed by reversing the forwarding means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



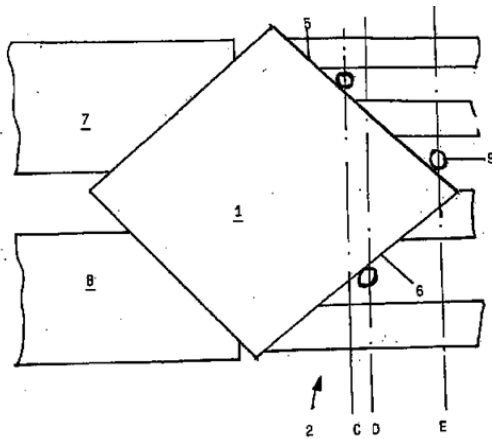
B65H 9/04

Fixed or adjustable stops or gauges (gauge pins [B65H 9/02](#))

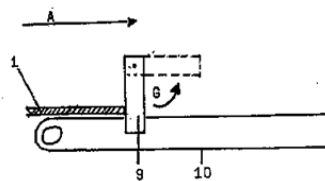
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



DE102007027945
A1



Special rules of classification

Adjustable guides on supports which do not perform a registering or orientation action on an article but merely define a certain space for the stack according to the size should be classified as follows:

Adjustable in both length and width direction of the article by the operator:

- [B65H 2511/10](#), [B65H 2220/01](#)
- [B65H 2511/20](#), [B65H 2220/04](#)

Adjustable in width direction of the article by the operator:

- [B65H 2511/12](#), [B65H 2220/01](#)
- [B65H 2511/22](#), [B65H 2220/04](#)

B65H 9/06

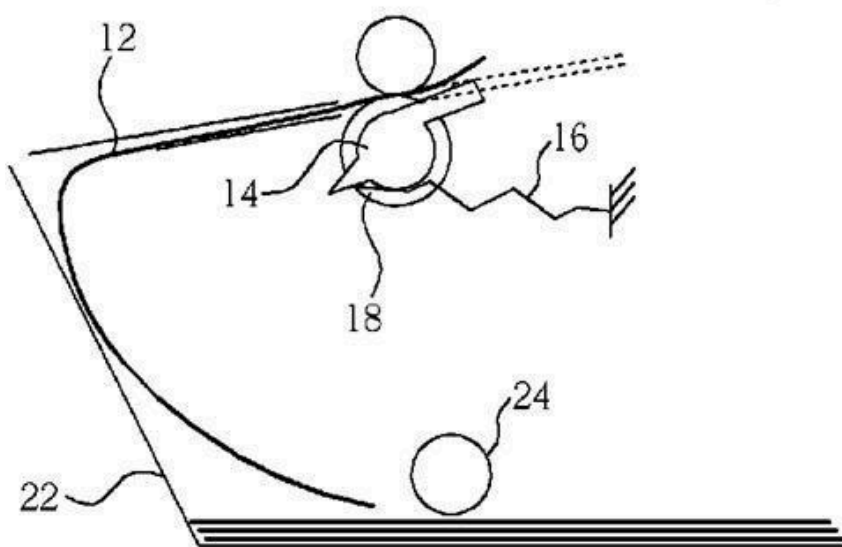
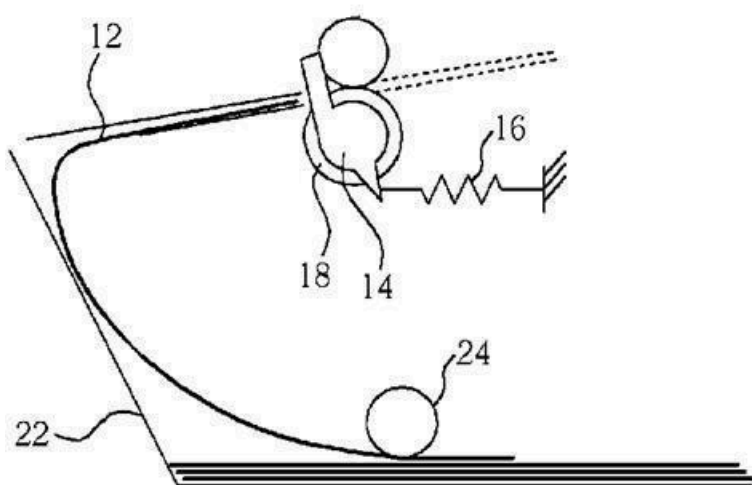
Movable stops or gauges, e.g. rising and falling front stops {(B65H 11/007 takes precedence)}

Definition statement

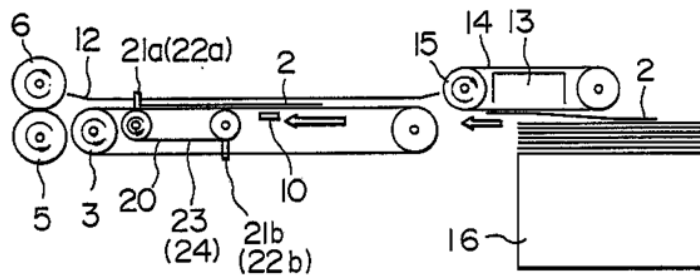
This place covers:

Illustrative examples of subject matter classified in this group:

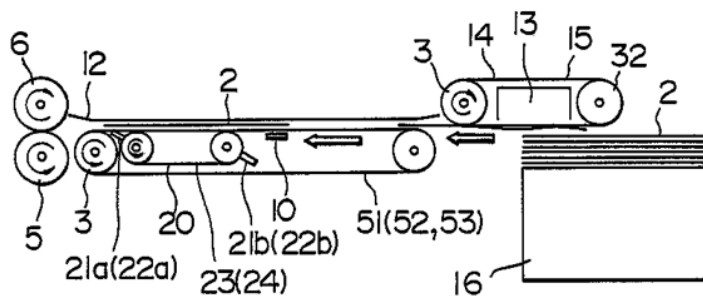
US2008143045A1



Definition statement



EP0356864A2



References

Limiting references

This place does not cover:

Feed tables with front stop arrangements	B65H 11/007
--	-----------------------------

Special rules of classification

If the stops produce a buckling of the articles specifically used for deskewing then also classify in [B65H 9/004](#)

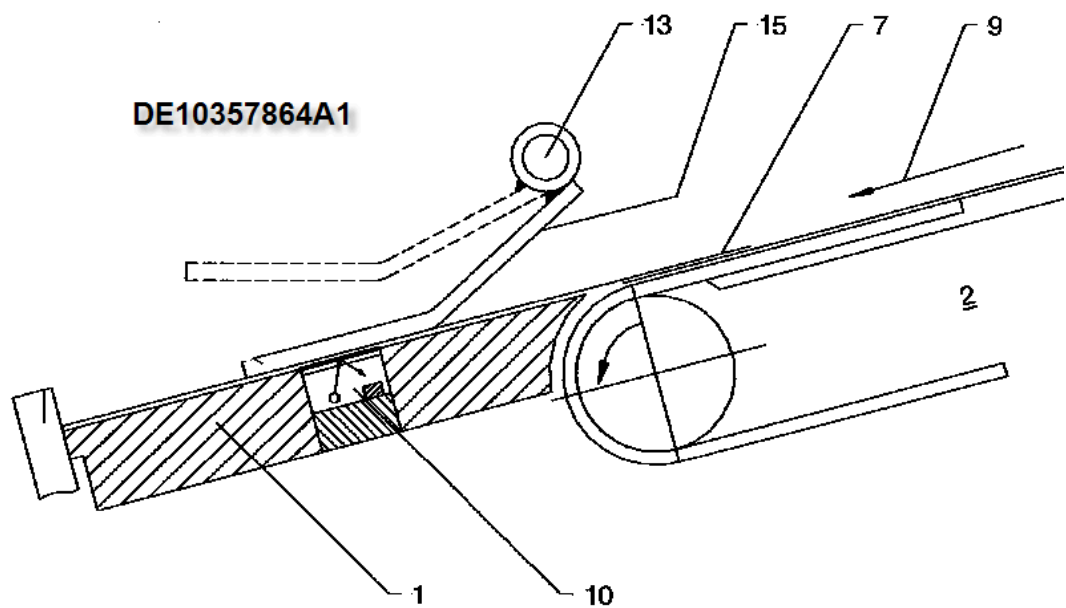
B65H 9/08

Holding devices, e.g. finger, needle, suction, for retaining articles in registered position

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 9/10

Pusher and like movable registers; Pusher or gripper devices which move articles into registered position

Definition statement

This place covers:

Means which moves the article into stationary registered positions. e.g. which move the article into a stationary position against a stop or register wall. The stop can be a physical stop or wall, but can also be a virtual stop, for example formed by an array of sensors.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Registering laterally against a side register while the article is forwarded in principal direction	B65H 9/16
---	---------------------------

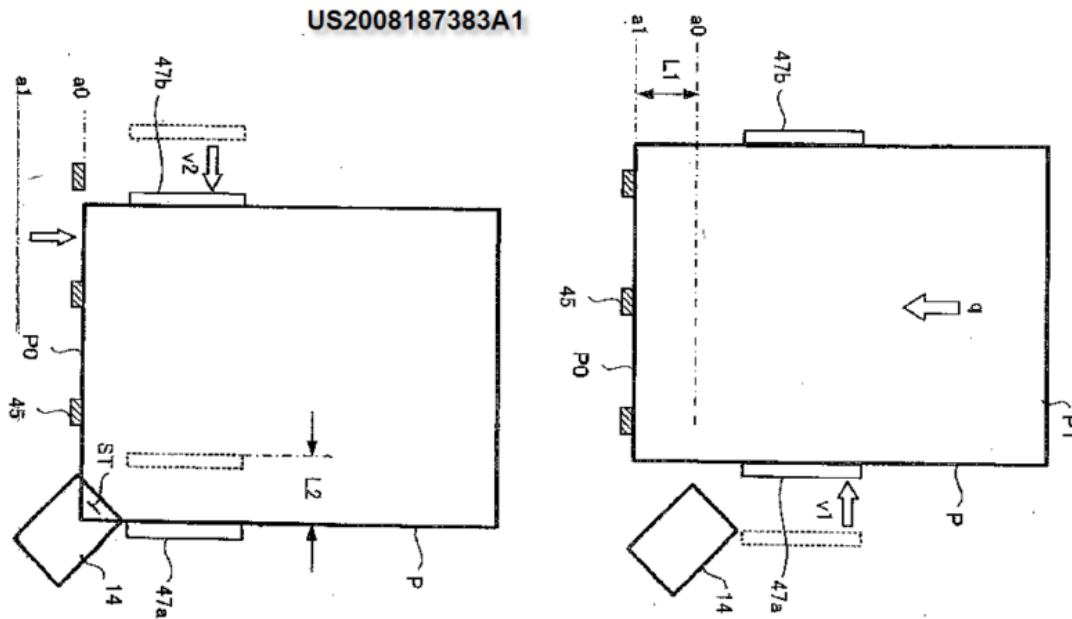
B65H 9/101

{acting on the edge of the article}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



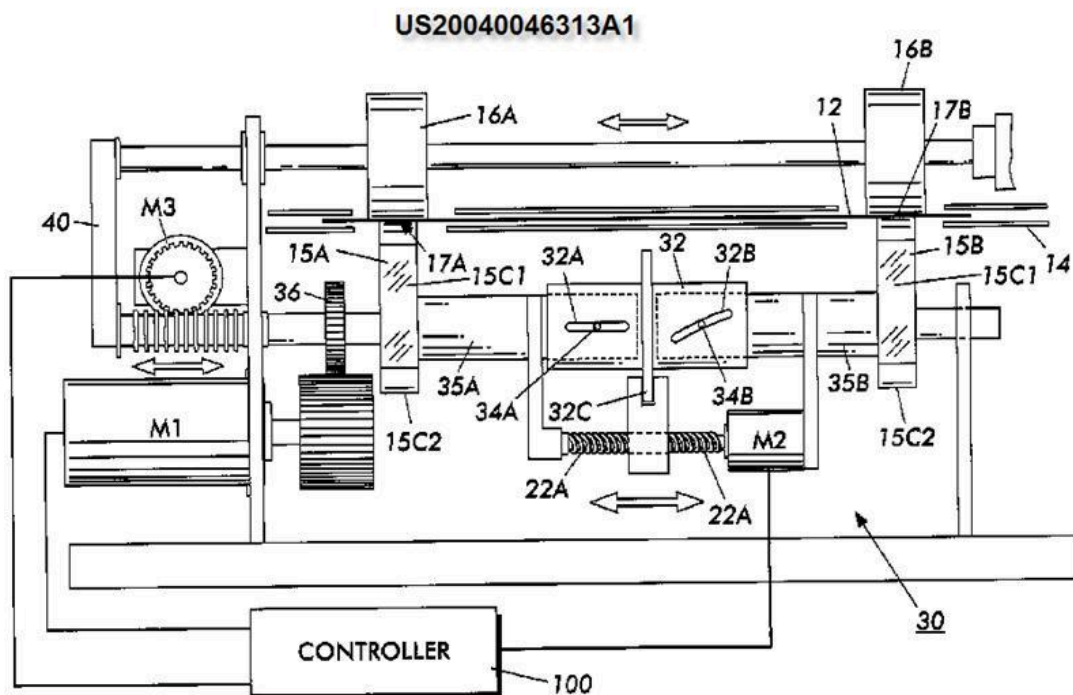
B65H 9/103

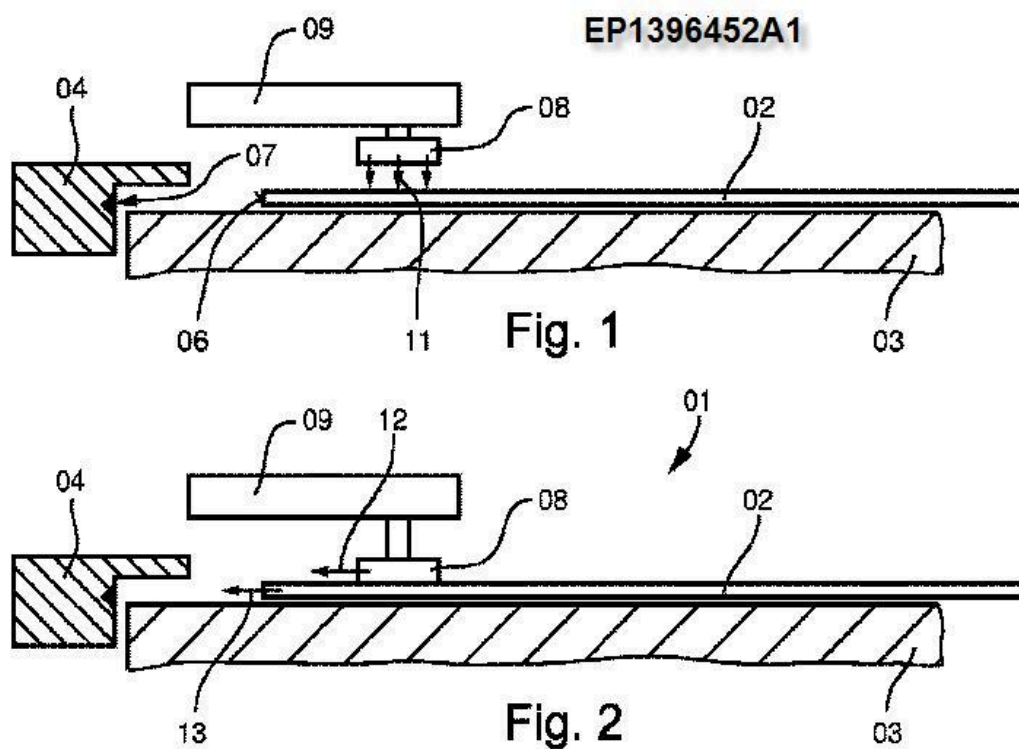
{acting by friction or suction on the article for pushing or pulling it into registered position, e.g. against a stop}

Definition statement

This place covers:

Acting by friction is typically done by applying friction pads (see EP1396452, pad (08)), but the group also covers the concept of pinching the article between stopped rollers and moving these parallel to their shaft (see US20040046313).





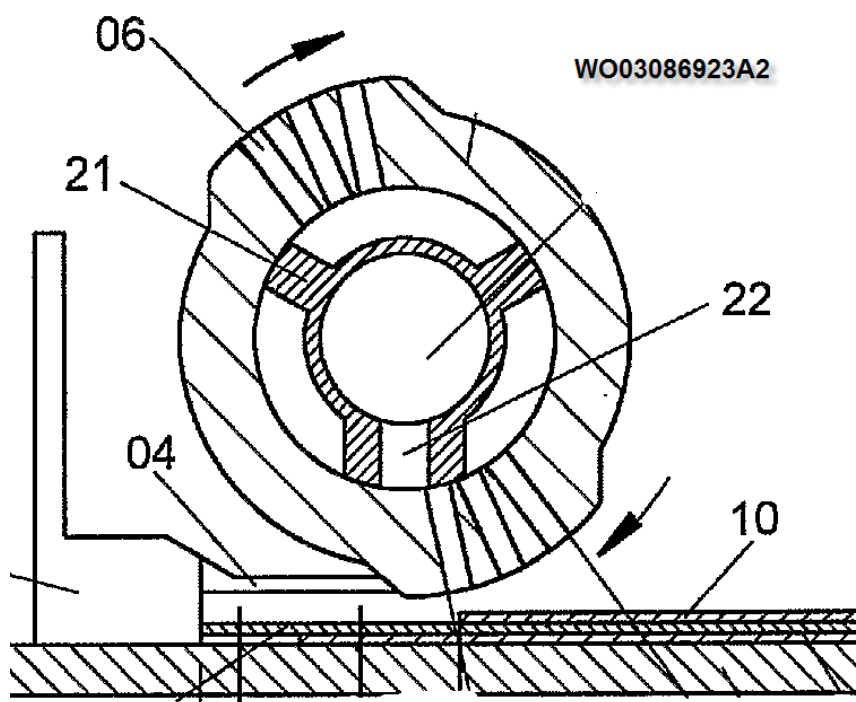
B65H 9/105

{using suction means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



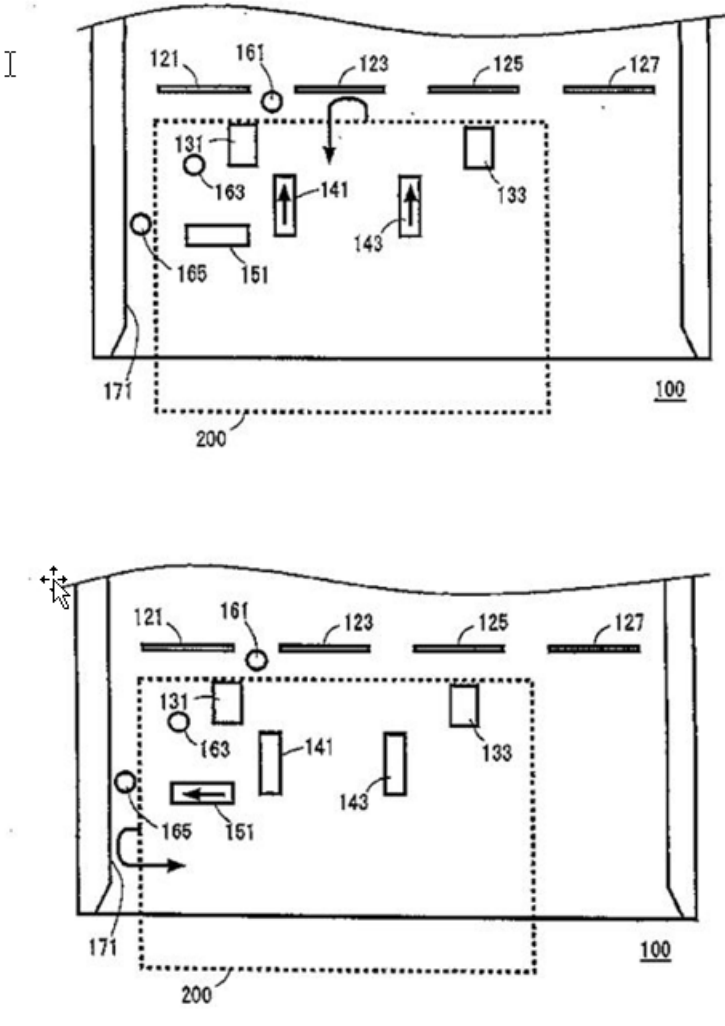
B65H 9/106

{using rotary driven elements as part acting on the article ([B65H 9/105](#) takes precedence; registering laterally while article is forwarded in principal direction [B65H 9/16](#))}

Definition statement

This place covers:

"Using rotary driven elements" limits the coverage of this group to arrangements wherein the movement is provided by actually driven elements, like rotating rollers or belts (rollers (141,143,151)).



References

Limiting references

This place does not cover:

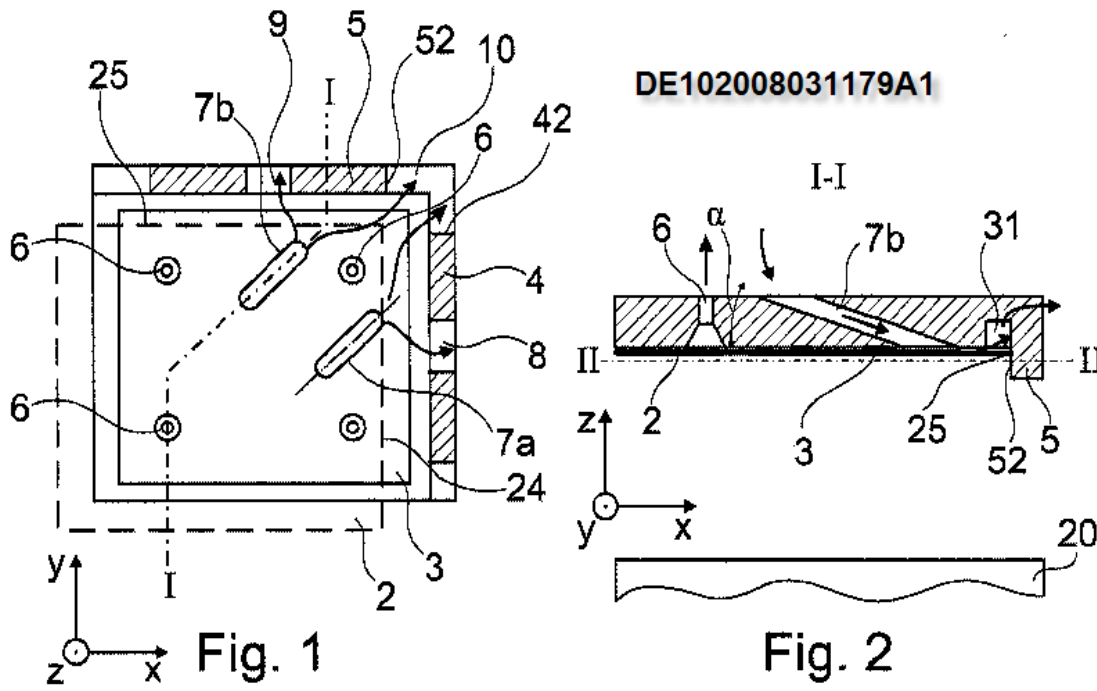
A non-rotating roller pair which is pinching the article and then being moved for pulling the article against a stop	B65H 9/103
Rotating suction rollers	B65H 9/105

B65H 9/108

{acting by air blast}

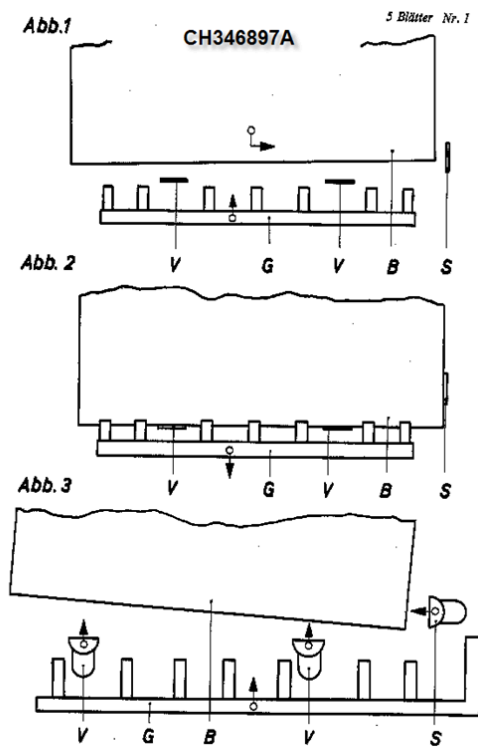
Definition statement*This place covers:*

Illustrative example of subject matter classified in this group:



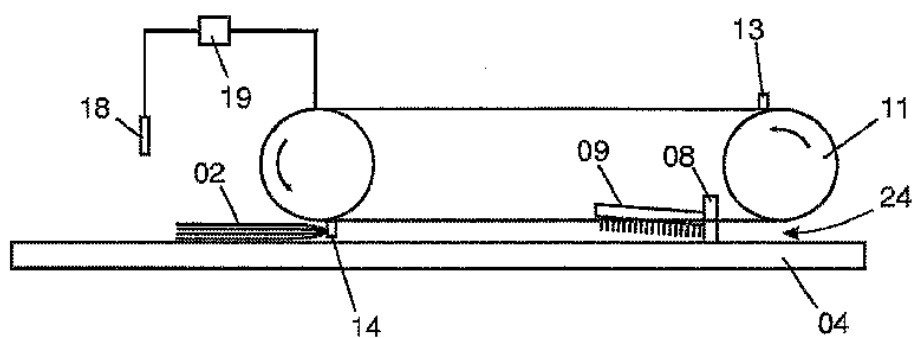
B65H 9/12**carried by article grippers****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

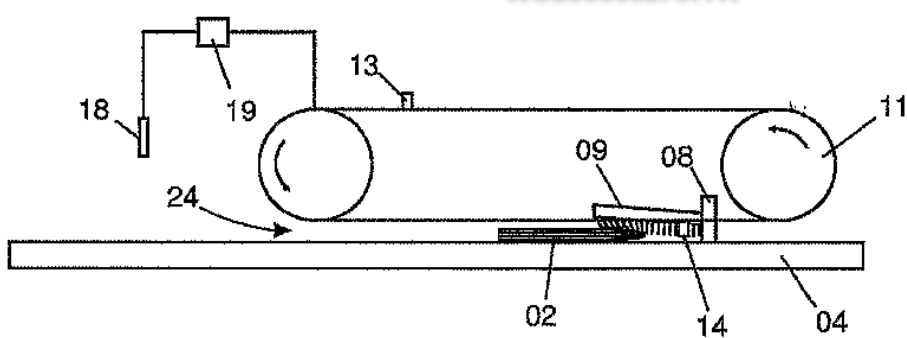
**B65H 9/14****Retarding or controlling the forward movement of articles as they approach stops****Definition statement***This place covers:*

Mechanical arrangements for controlling the forward movement of articles as they approach stops

Illustrative example of subject matter classified in this group:



WO2005082757A1

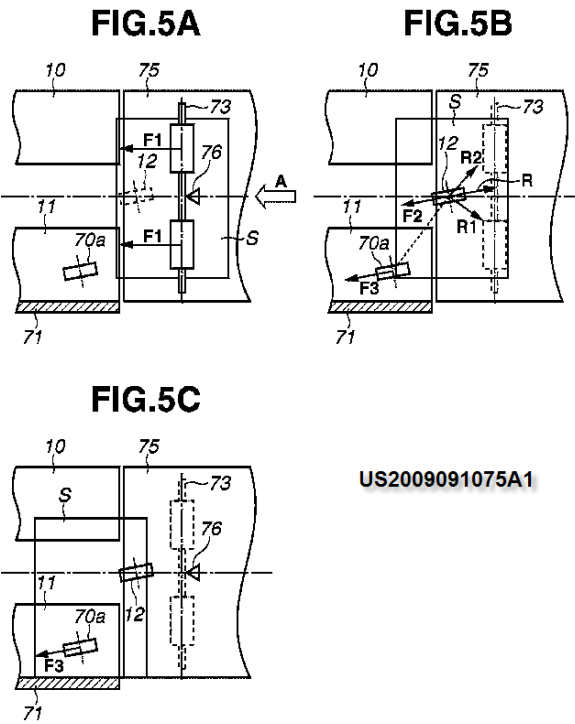


B65H 9/16

Inclined tape, roller, or like article-forwarding side registers

Definition statement

This place covers:
Registering laterally against a side register while the article is forwarded in principal direction. i.e. no front stops, the forward motion continues.



References

Informative references

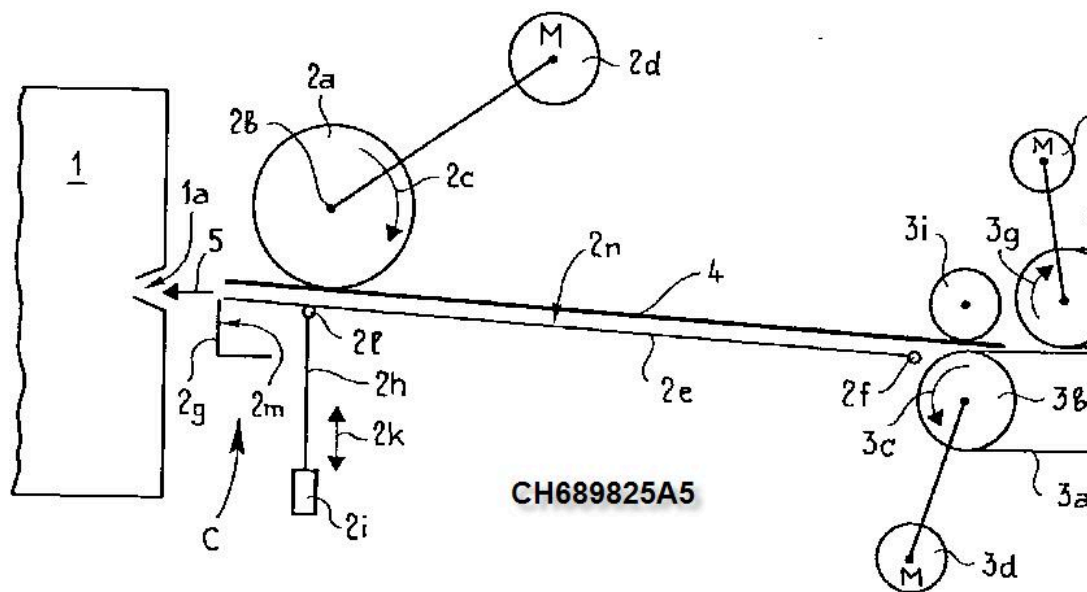
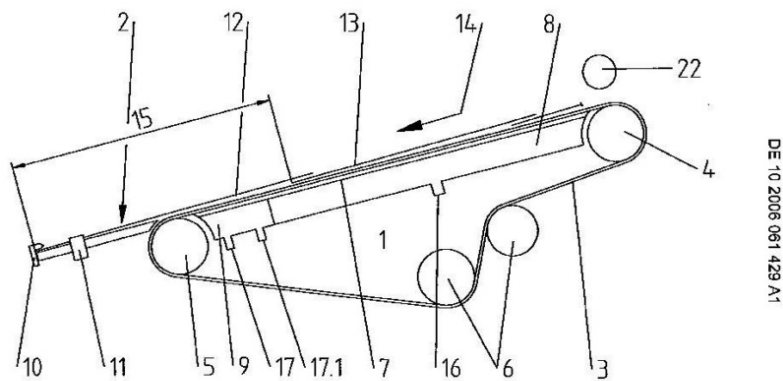
Attention is drawn to the following places, which may be of interest for search:

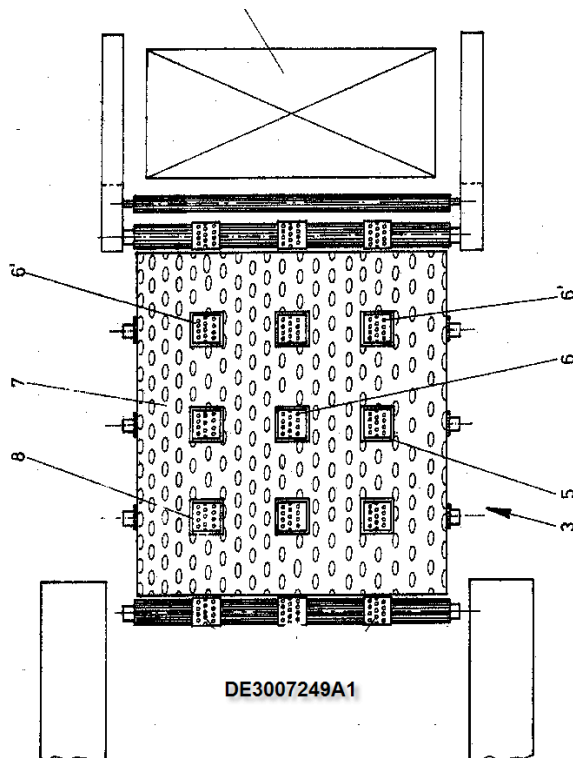
Registering laterally against a side register while the article is forwarded in principal direction against a front register wall or stop	B65H 9/10
---	---------------------------

B65H 11/00**Feed tables****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:





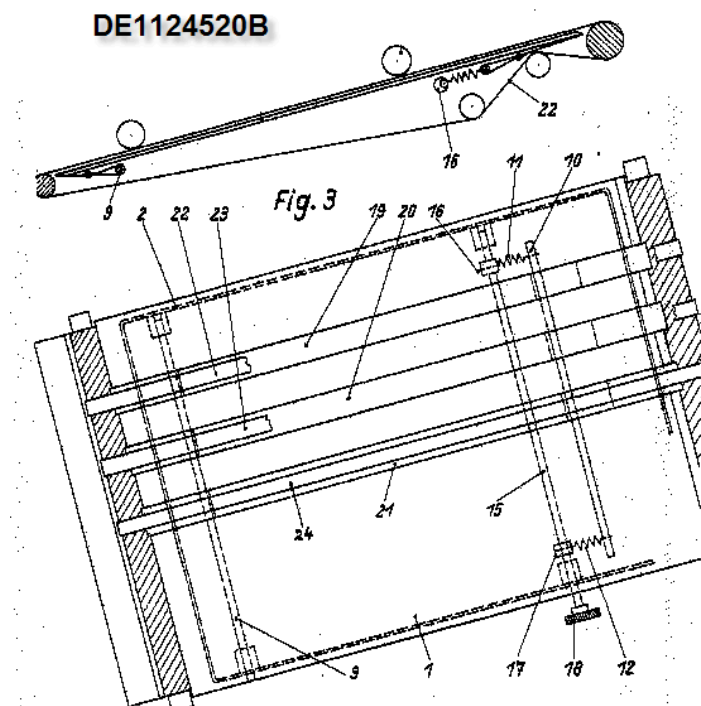
B65H 11/002

{incorporating transport belts}

Definition statement

This place covers:

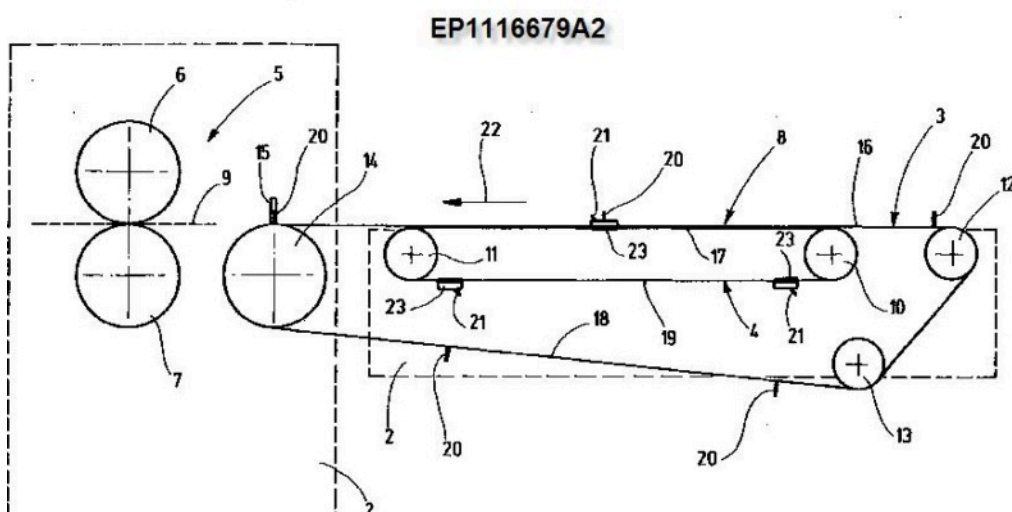
Illustrative example of subject matter classified in this group:



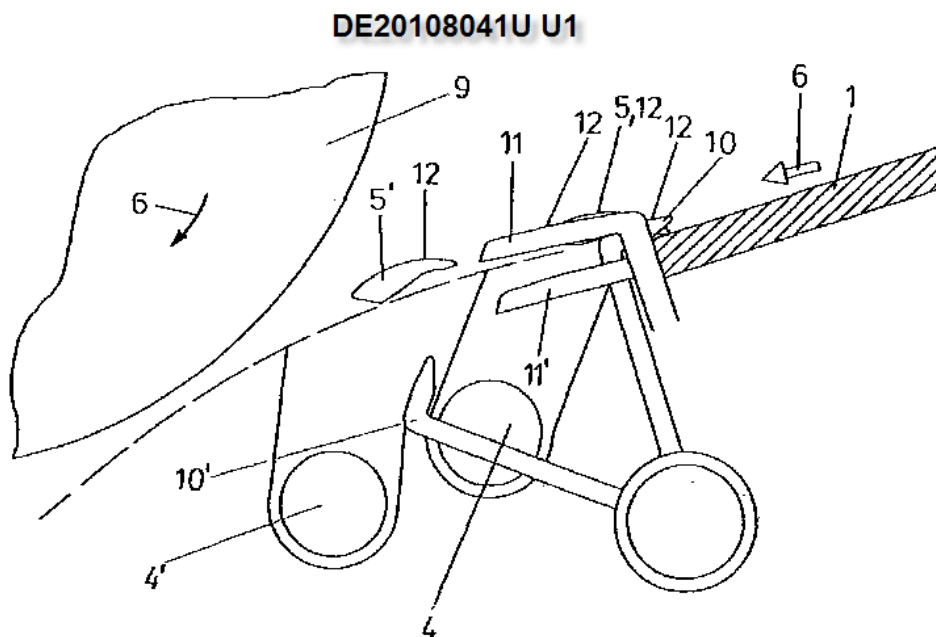
B65H 11/007**{with front stop arrangements}****Definition statement***This place covers:*

See the stop elements (20) in illustrative example 1, elements (10,10') in illustrative example 2, and elements (69) in illustrative example 3 shown below:

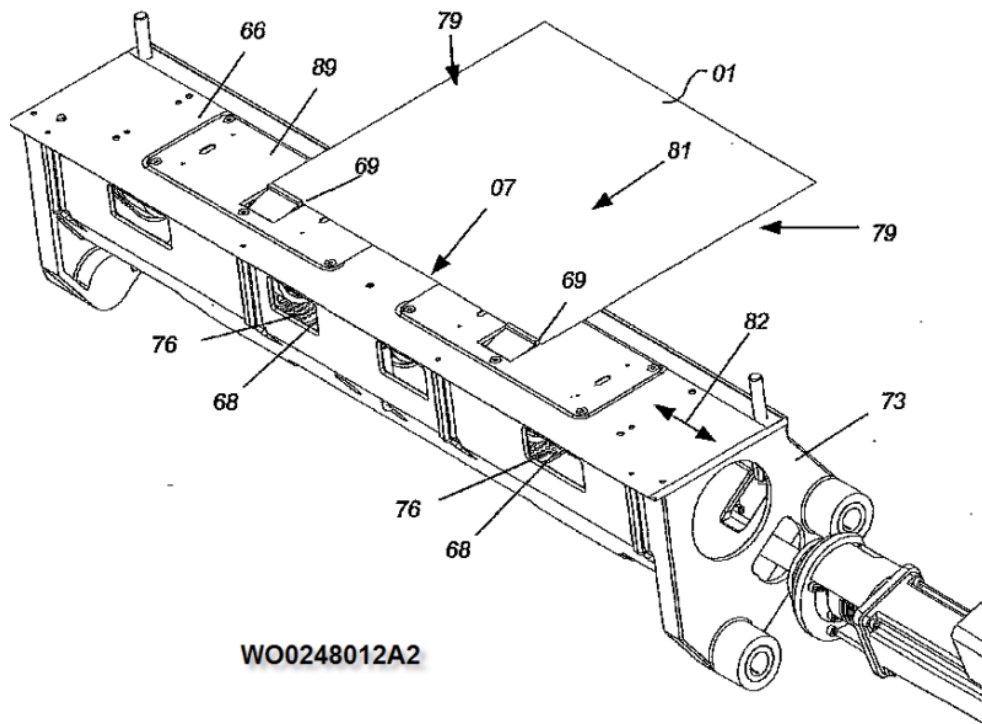
Illustrative example 1:



Illustrative example 2:



Illustrative example 3:



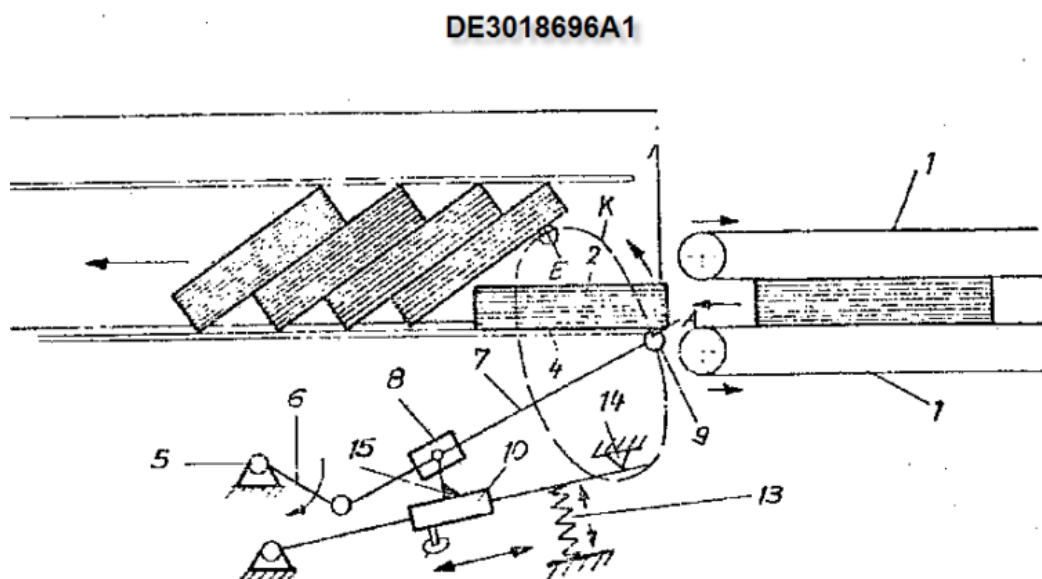
B65H 13/00

Lifting the ends of piles to facilitate the formation of overlapped piles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



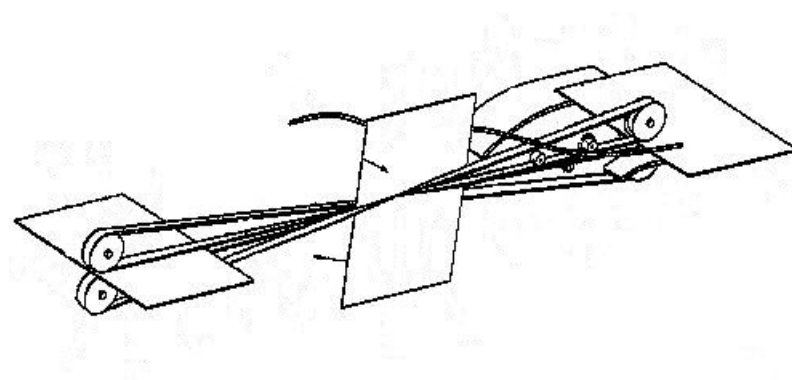
B65H 15/00

Overturning articles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Star wheel type devices	B65H 29/40
If the overturning is a mere consequence of refeeding the article back to the work-station in order to process the other side	B65H 85/00
Overturning/reversing sheets inside rotary printing machines, e.g. perfecting rollers/machines	B41F 21/106

Special rules of classification

To be classified together with relevant symbols from [B65H 2301/332](#) - [B65H 2301/3332](#), in particular [B65H 2301/3321](#) - [B65H 2301/33216](#) and [B65H 2301/3322](#) - [B65H 2301/33224](#).

B65H 16/00

Unwinding, paying-out webs {(reel-to-reel type web winding and unwinding mechanisms [B65H 18/103](#), [B65H 18/145](#))}

Definition statement

This place covers:

Unwinding processes or operations for a depleting the web continuously and mechanisms therefor.

References

Limiting references

This place does not cover:

Reel-to-reel type web winding and unwinding mechanisms	B65H 18/103 , B65H 18/145
--	--

Informative references

Attention is drawn to the following places, which may be of interest for search:

Uncoilers of wound sheet metal web material	B21C 47/00
Devices or arrangements of selective printing mechanisms, e.g. ink-jet printers, thermal printers	B41J 1/00

Special rules of classification

For expandable mandrels, chucks, e.g. for securing or releasing cores, holders or packages add
[B65H 75/242](#)

B65H 16/005

{Dispensers, i.e. machines for unwinding only parts of web roll}

References

Application-oriented references

Examples of places where the subject matter of this place is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Toilet paper dispensers	A47K 10/32
Containers or packages with special means for dispensing contents	B65D 83/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

For constructional details of cores, supports or holders for wound material	B65H 75/02
---	----------------------------

B65H 16/02

Supporting web roll

Definition statement

This place covers:

Support mechanisms for continuous unwinding systems.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Machines unwinding only parts of web roll, i.e. dispensers	B65H 16/005
--	-----------------------------

Special rules of classification

For further aspects of supporting web roll, e.g. constructional details, [B65H 2301/413](#) and lower.

B65H 16/021

{Multiple web roll supports}

Definition statement

This place covers:

Unwinding unit presenting multiple web roll supports on several web roll holders, e.g. separate magazines, or presenting multiple web roll supports on a single web roll holder, e.g. coaxially aligned web rolls;

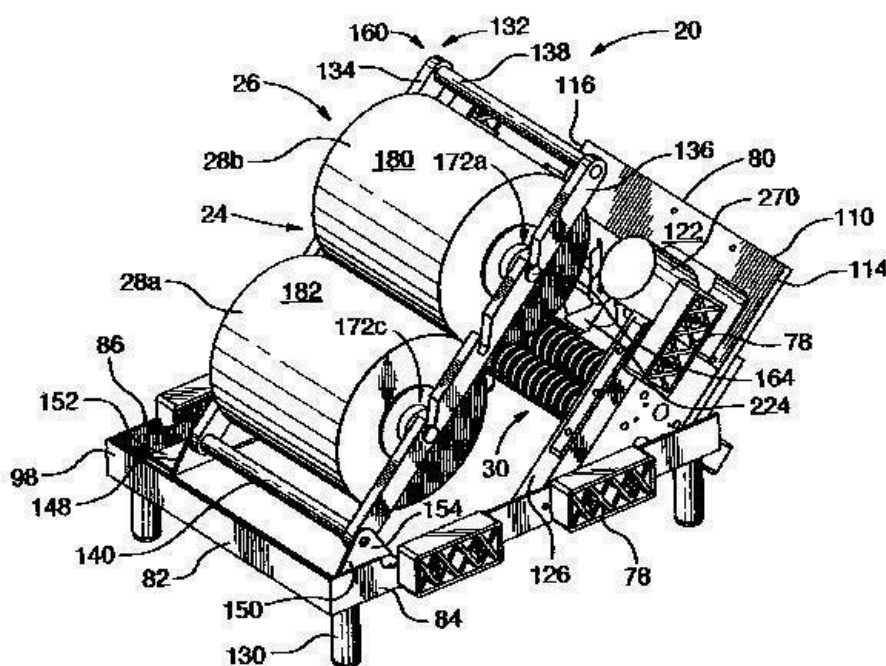
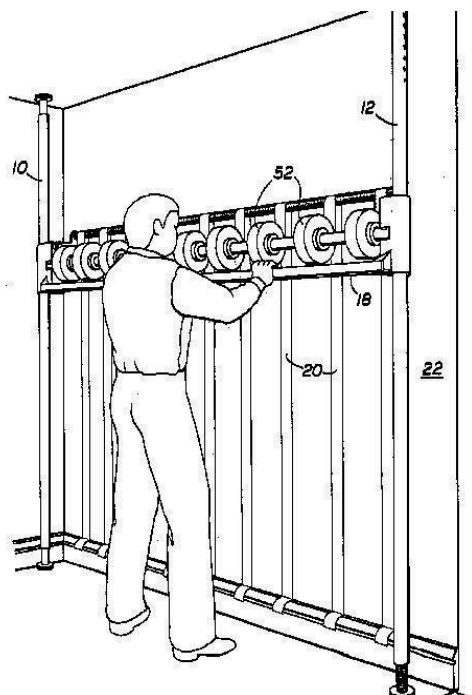


FIG.3



Special rules of classification

For additional details of multiple web roll supports add [B65H 2301/4139](#) or lower.

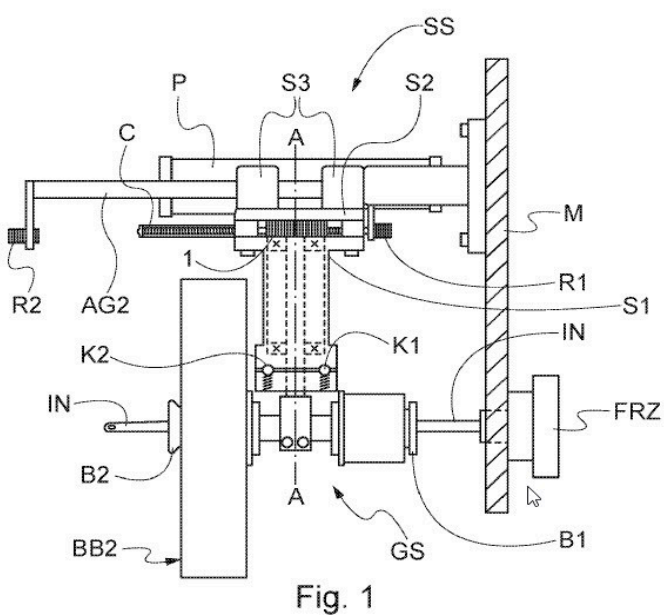
B65H 16/023

{rotatable}

Definition statement

This place covers:

The support or holder being rotatable



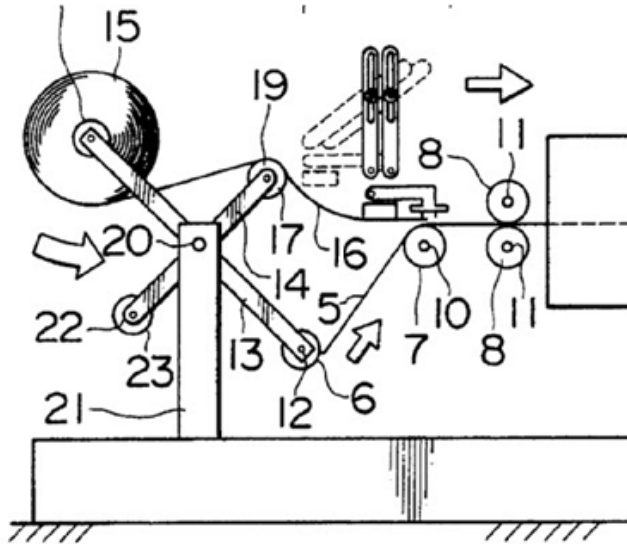
B65H 16/024

{Turrets}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

For unwinding	B65H 19/1868
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Special rules of classification

The [B65H 2408/241](#) - [B65H 2408/24156](#) Indexing Codes are obligatory and applied to documents in [B65H 16/024](#).

B65H 16/028

{on its outer circumference (**B65H 16/08** takes precedence))

Definition statement

This place covers:

Web supports in contact with web periphery.

References

Limiting references

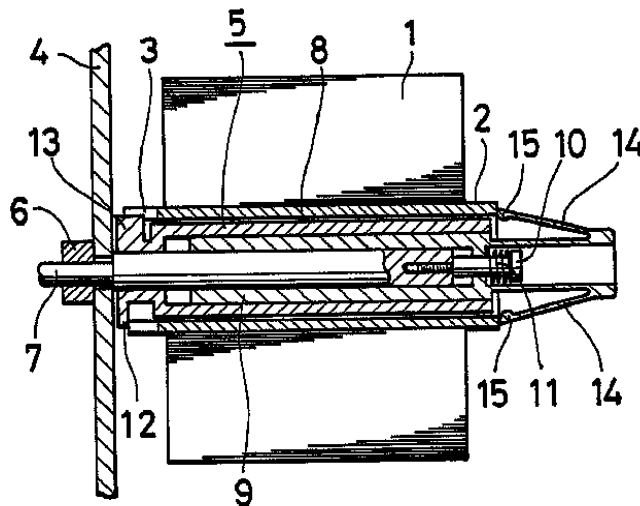
This place does not cover:

Parallel rollers type	B65H 16/08
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B65H 16/04**cantilever type****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

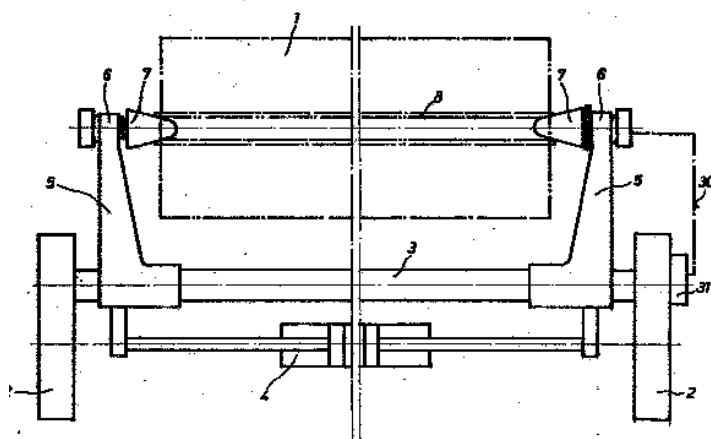
**Special rules of classification**

For additional details of cantilever supports see [B65H 2301/4132](#) or lower.

B65H 16/06**both-ends type****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

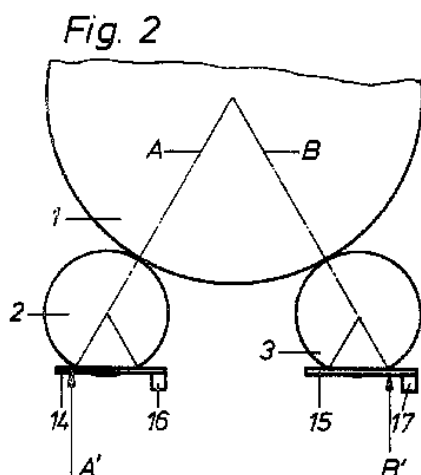
**Special rules of classification**

For additional details of both-end supports [B65H 2301/4134](#) or lower.

B65H 16/08**parallel rollers type****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 16/10****Arrangements for effecting positive rotation of web roll****Definition statement**

This place covers:

Power mechanism used for the rotation of the web-roll.

B65H 18/00**Winding webs****Definition statement**

This place covers:

Winding or rewinding of webs in a continuous process.

References**Limiting references**

This place does not cover:

Winding mechanisms in combination with a change of web roll	B65H 19/00
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Special rules of classification

- For others aspects of web winding processes add [B65H 2301/414](#) or lower;
- For auxiliary processes performed during winding [B65H 2301/50](#);
- For winding in combination with measuring a length, e.g. inspecting devices, add [B65H 2511/11](#);

- For winding in combination with slitted webs, add systematically [B65H 2301/4148](#);

B65H 18/02

Supporting web roll

Definition statement

This place covers:

Support arrangement for continuous winding units.

References

Limiting references

This place does not cover:

For winding support arrangements whereby the central support is removed after winding, e.g. a mandrel of a turret winder	B65H 19/2292
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Special rules of classification

For details related to the core itself add [B65H 75/02](#) and lower.

B65H 18/021

{Multiple web roll supports}

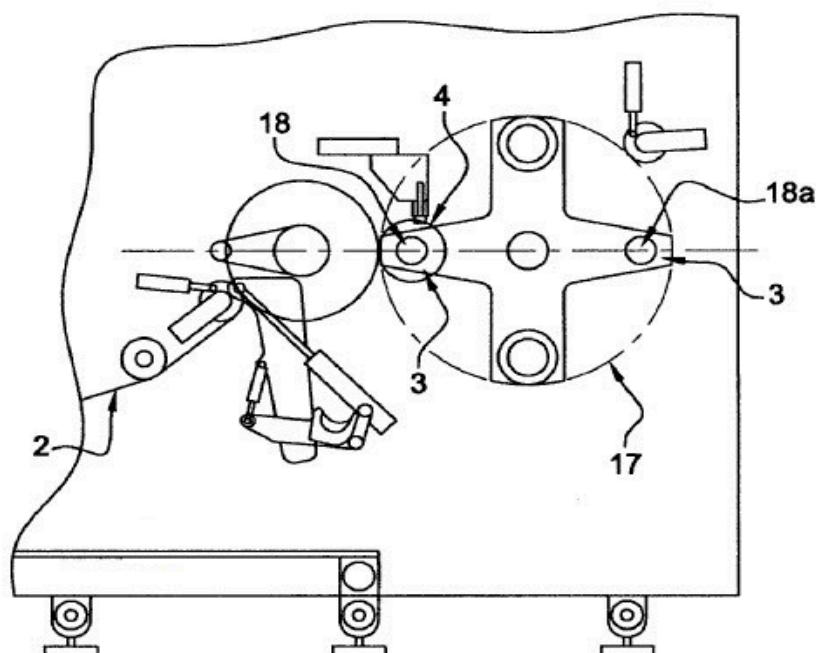
Special rules of classification

For slitter-rewinder in which winding takes place on two or more shafts add [B65H 2301/41486](#).

For additional details of multiple web roll support add [B65H 2301/4139](#) or lower.

B65H 18/0212**{Turrets}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

For winding	B65H 19/2215 , B65H 19/2223
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Special rules of classification

The [B65H 2408/231](#) - [B65H 2408/23157](#) Indexing Codes are obligatory and applied to documents in [B65H 18/0212](#).

B65H 18/023**{on its outer circumference}****Definition statement***This place covers:*

Web supports in contact with web periphery.

B65H 18/025

{Parallel rollers type}

Definition statement

This place covers:
Parallel rollers supporting the web in a tangential or nip contact.

References

Limiting references

This place does not cover:

Parallel rollers with a web winding mechanism	B65H 18/20
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B65H 18/026

{Cantilever type}

Special rules of classification

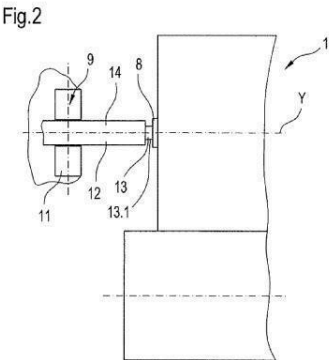
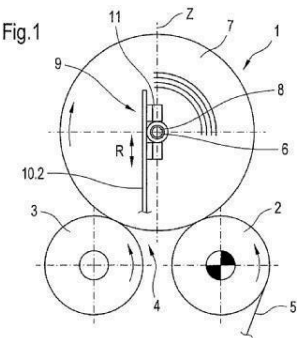
For additional details of cantilever supports see [B65H 2301/4132](#) or lower.

B65H 18/028

{Both ends type}

Definition statement

This place covers:
Supports of both end type.



Special rules of classification

For additional details of both-end supports [B65H 2301/4134](#) or lower.

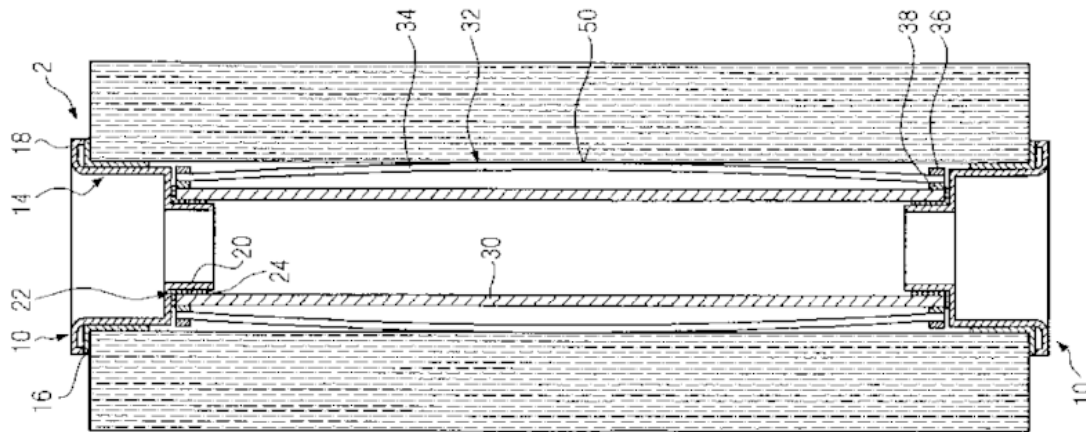
B65H 18/04

Interior-supporting

Definition statement

This place covers:

Web supports with an axial connexion body holding the web.



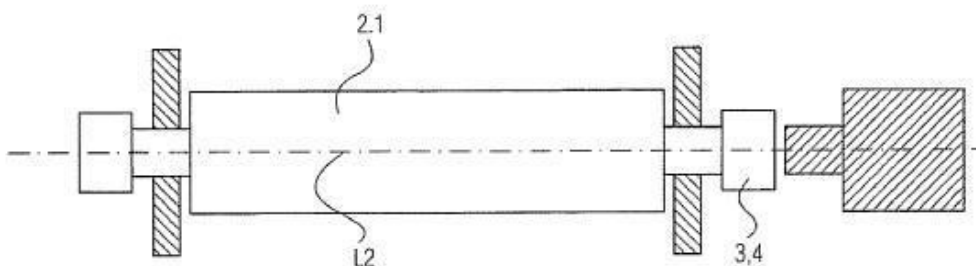
B65H 18/06

Lateral-supporting

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Articulated bearing	F16D 1/0811
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B65H 18/08**Web-winding mechanisms****References****Limiting references**

This place does not cover:

Coreless winding systems	B65H 19/2276
Changing the web roll in winding systems whereby the core or mandrel is removed after winding	B65H 19/2292

Special rules of classification

For details about the type of power transmission or driving means used [B65H 2403/00](#).

B65H 18/10**Mechanisms in which power is applied to web-roll spindle****References****Limiting references**

This place does not cover:

Articulated bearing	F16D 1/0811
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B65H 18/103**{Reel-to-reel type web winding and unwinding mechanisms}****Definition statement**

This place covers:

Arrangement associating an unwinding mechanism and a winding mechanism whereby a source roll is unwinded while the depleted web is rewinded on a target roll, e.g. cassette apparatus

B65H 18/106**{for several juxtaposed strips}****Special rules of classification**

For slitting and winding on two or more shafts simultaneously add [B65H 2301/41486](#) or lower

B65H 18/12**to effect step-by-step advancement of web****Definition statement**

This place covers:

Winding mechanism for a stepwise web advancement in intervals

B65H 18/14

Mechanisms in which power is applied to web roll, e.g. to effect continuous advancement of web

Definition statement

This place covers:

Winding mechanism applying a driving power by contact with a web roll surface, e.g. driving belt

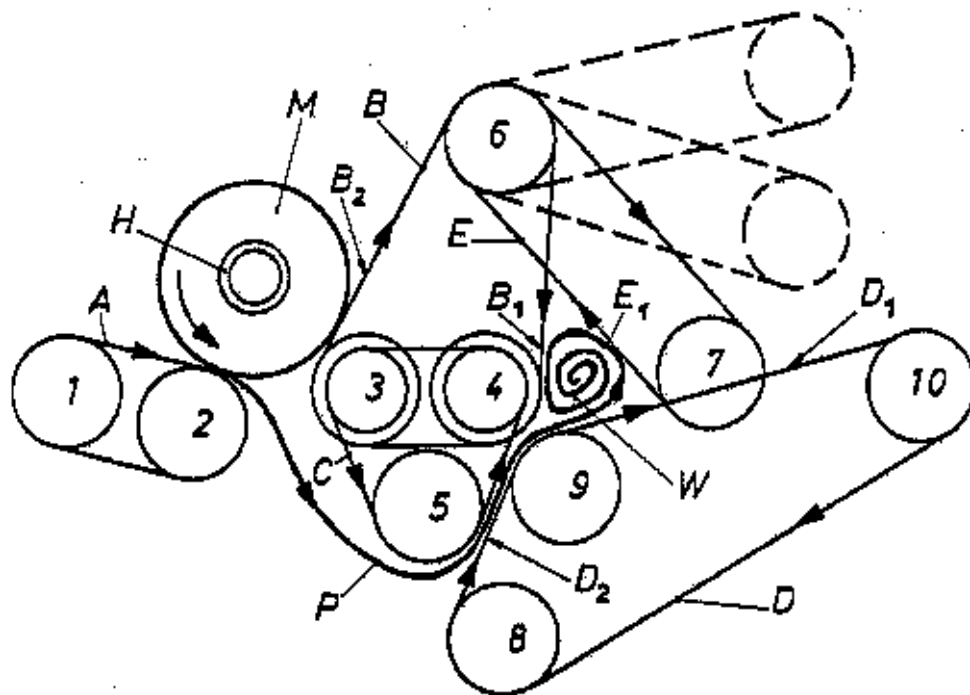
B65H 18/145

{Reel-to-reel type web winding and unwinding mechanisms}

Definition statement

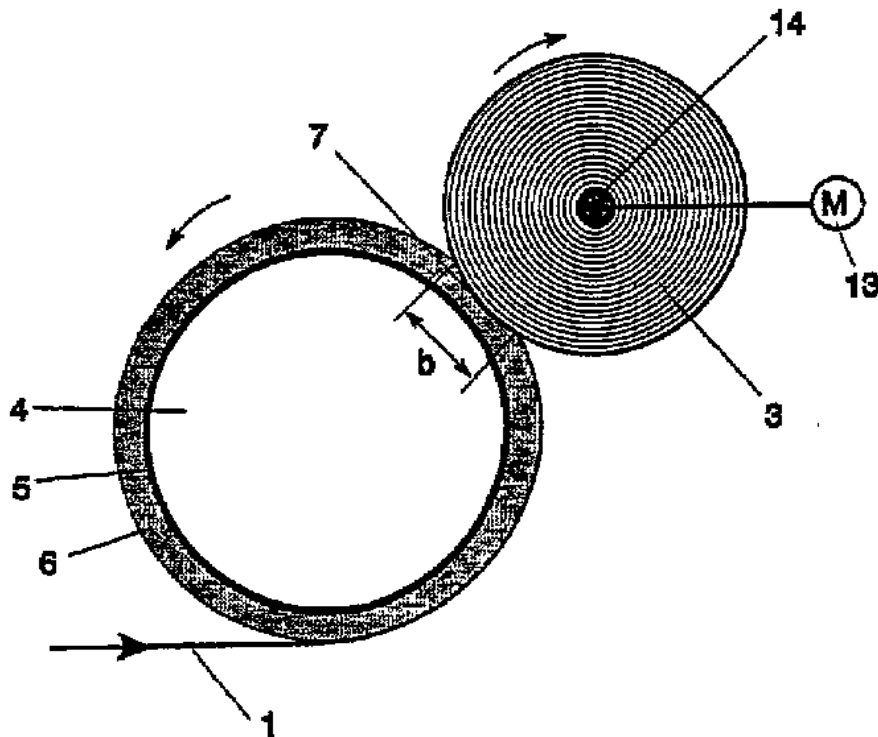
This place covers:

Illustrative example of subject matter classified in this group:



B65H 18/16**by friction roller****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

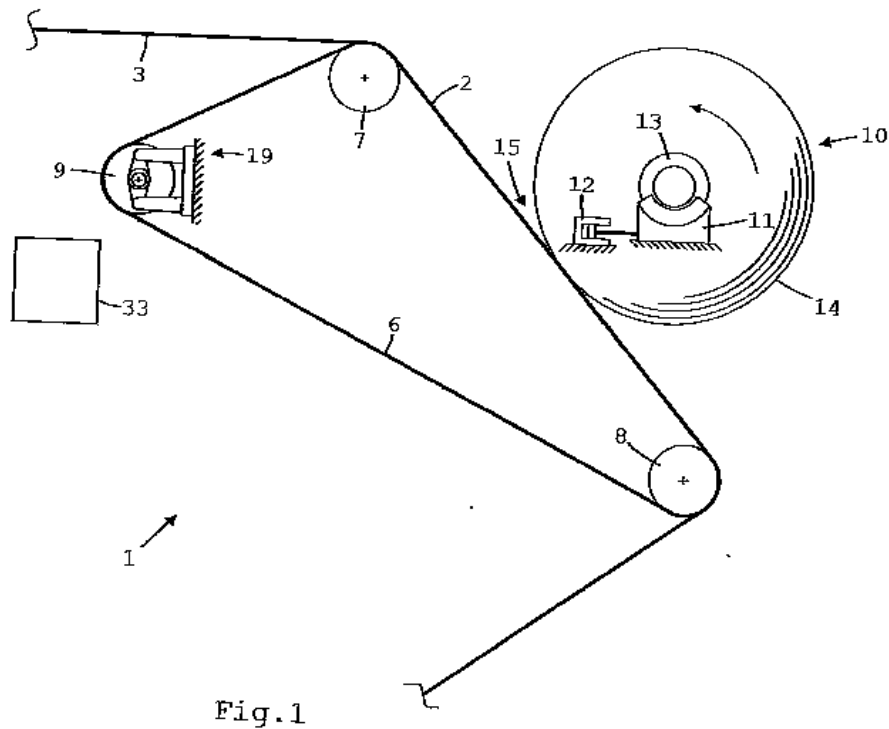
**Special rules of classification**For step-by-step advancement mechanisms add [B65H 2301/4493](#).**B65H 18/18****to effect step-by-step advancement of web****Definition statement***This place covers:*

Winding mechanism for a stepwise web advancement in intervals.

B65H 18/20**the web roll being supported on two parallel rollers at least one of which is driven****Special rules of classification**For constructional details of a rider roll [B65H 2404/43](#) and lower.

B65H 18/22**by friction band****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**Special rules of classification**For step-by-step advancement mechanisms add [B65H 2301/4493](#).**B65H 18/26****Mechanisms for controlling contact pressure on winding-web package, e.g. for regulating the quantity of air between web layers****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

By means of indirect measurement or calculation	B65H 2511/14 , B65H 2220/03
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Special rules of classificationFor constructional details of a rider roll add [B65H 2404/43](#) or lower.

B65H 18/28

Wound package of webs

Definition statement

This place covers:

Properties of wound package of webs, e.g. bonding the outermost web trailing end to the web roll independently from a web roll change.

References

Limiting references

This place does not cover:

Starting a new winding cycle by attaching or wrapping the innermost leading end of the roll to the new core or mandrel	B65H 19/28
Finishing a winding cycle by bounding the outermost trailing end to the web roll	B65H 19/29

Special rules of classification

For properties of handled webs in wound packages add [B65H 2701/184](#) or lower;

For properties of storage means, e.g. special core properties, add [B65H 2701/50](#) or lower;

For blocking outer layers add [B65H 2301/41441](#) or lower;

For web delivery apparatus incorporating devices for performing specified auxiliary operations add [B65H 37/002](#) or lower

B65H 19/00

Changing the web roll

Definition statement

This place covers:

Winding or unwinding operations dealing with changing the web roll.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

For web splicing operations not linked to a web roll change	B65H 21/00
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B65H 19/105

{Opening of web rolls; Removing damaged outer layers; Detecting the leading end of a closed web roll}

Definition statement

This place covers:

Preliminary operations dealing with the external surface or leading edge of a wound web roll taking place before the unwinding starts.

Special rules of classification

For further details related to the opening of web rolls add [B65H 2301/4604](#) or lower.

B65H 19/123

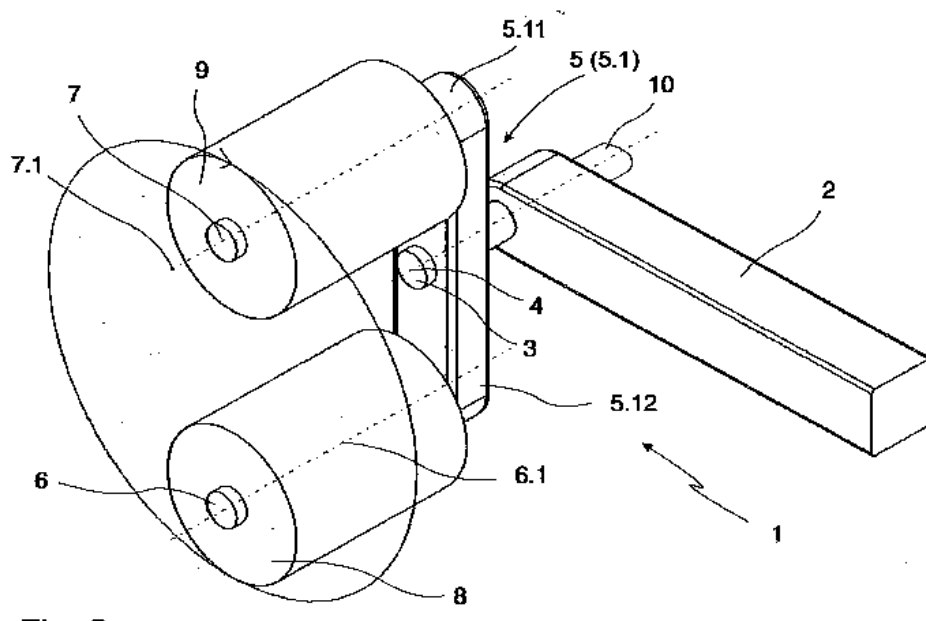
{with cantilever supporting arrangements}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

This arrangement provides two cantilever supports (6,7) for two rolls (8,9)



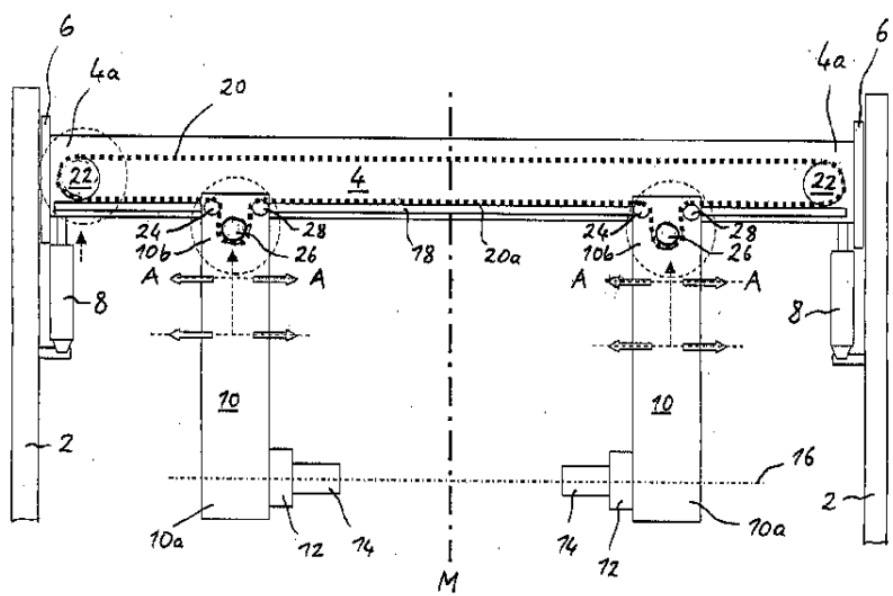
B65H 19/126

{with both-ends supporting arrangements}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 19/14

Accumulating surplus web for advancing to machine while changing the web roll

References

Limiting references

This place does not cover:

During a change of web roll and in connection with winding operations	B65H 19/24
With mechanisms for advancing webs from or to the inside of web rolls	B65H 20/26
In general, i.e. for accumulating surplus of web without a change of web roll	B65H 20/30
Devices for temporarily storing filamentary material during forwarding of filamentary material, e.g. for buffer storage	B65H 51/20
Easily-flexible work, e.g. wire, sheet metal bands	B21B 41/00
Manufacture of metal sheets, metal wire, metal rods, metal tubes by drawing	B21C 49/00

B65H 19/18

Attaching, e.g. pasting, the replacement web to the expiring web {(adhesive arrangements on leading end of replacement web, tabs and adhesive tapes for splicing [B65H 19/102](#))}

Definition statement

This place covers:

Splicing of a replacement web with an expiring web.

References**Limiting references**

This place does not cover:

Adhesive arrangements on leading end of replacement web, tabs and adhesive tapes for splicing	B65H 19/102
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Special rules of classification

For additional features related to splicing processes [B65H 2301/46](#) and to splicing machines or units [B65H 2408/22](#).

B65H 19/1805

{Flying splicing, i.e. the expiring web moving during splicing contact}

Definition statement

This place covers:

The operation of attachment is taking place on a moving expiring web.

B65H 19/1842

{standing splicing, i.e. the expiring web being stationary during splicing contact}

Definition statement

This place covers:

The operation of attachment is taking place on a stationary expiring web.

Special rules of classification

For constructional details of accumulators add [B65H 2408/21](#) or lower.

B65H 19/1857

{Support arrangement of web rolls}

Definition statement

This place covers:

Specific web support arrangement used for splicing webs.

B65H 19/1868**{The roll support being of the turret type}****Special rules of classification**

The [B65H 2408/241](#) - [B65H 2408/24156](#) and [B65H 2408/231](#) - [B65H 2408/23157](#) Indexing Codes are obligatory and applied to documents in [B65H 19/1868](#).

B65H 19/20**Cutting-off the expiring web****Definition statement**

This place covers:

Details about cutting-off, i.e. separating, the expiring web in combination with a web roll change, including a splicing operation.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Cutting-off the tail of an expiring web after a splicing operation	B65H 2301/46152
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Special rules of classification

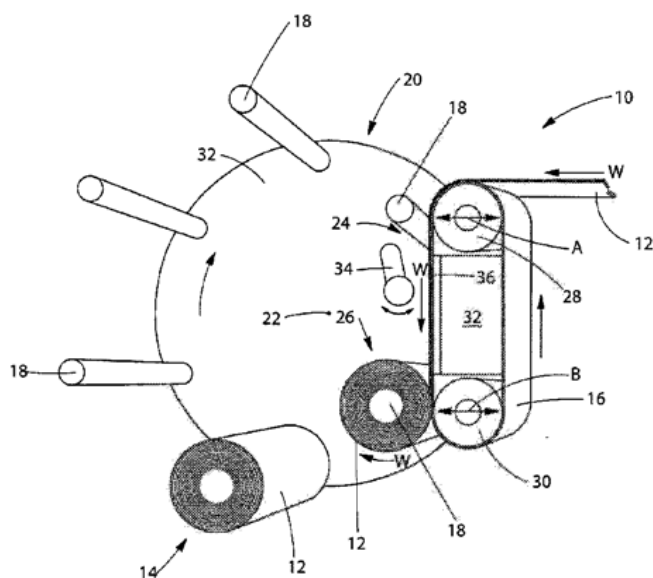
For cutting expiring webs in combination with splicing operations add [B65H 2301/4617](#) or lower.

B65H 19/2215**{Turret-type with two roll supports}****Special rules of classification**

The [B65H 2408/231](#) - [B65H 2408/23157](#) Indexing Codes are obligatory and applied to documents in [B65H 19/2215](#).

B65H 19/2223**{Turret-type with more than two roll supports}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**Special rules of classification**

The [B65H 2408/231](#) - [B65H 2408/23157](#) Indexing Codes are obligatory and applied to documents in [B65H 19/2223](#).

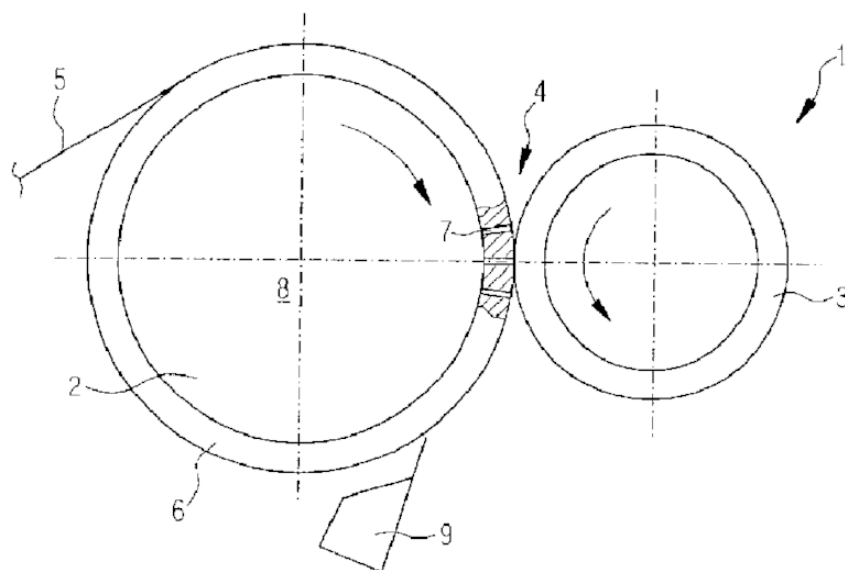
B65H 19/2238

{The web roll being driven by a winding mechanism of the nip or tangential drive type ([B65H 19/2276](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Limiting references**

This place does not cover:

The web roll being driven by a winding mechanism of the coreless type	B65H 19/2276
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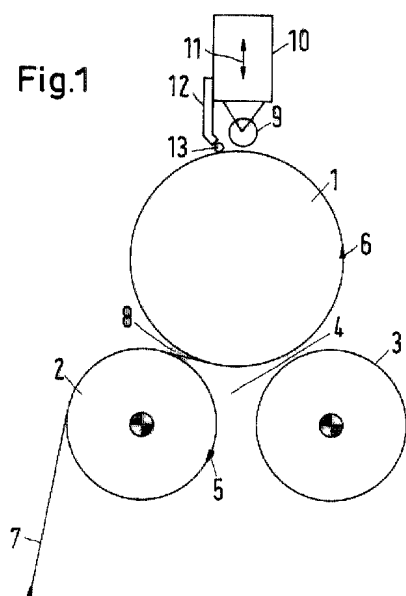
B65H 19/2246

{and the roll being supported on two rollers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



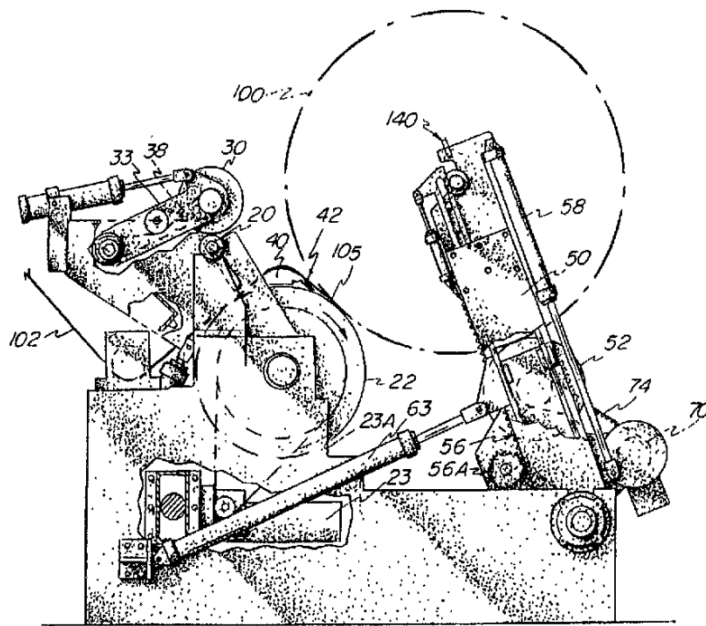
B65H 19/2253

{and the roll being displaced during the winding operation}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

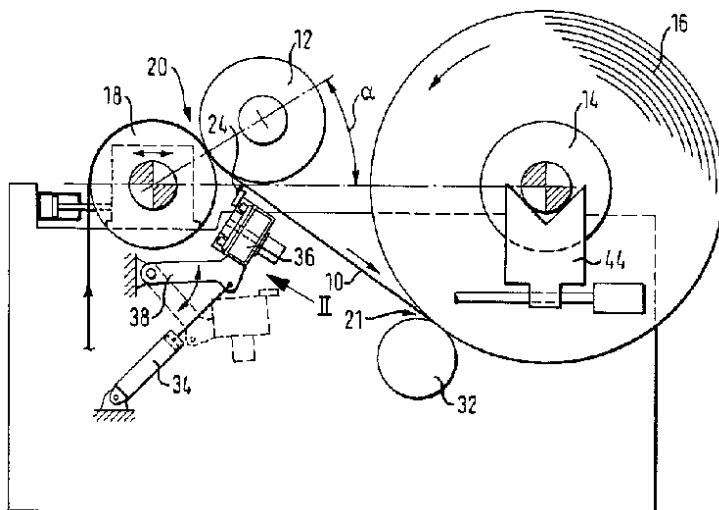
**B65H 19/2261**

{Pope-roller}

Definition statement

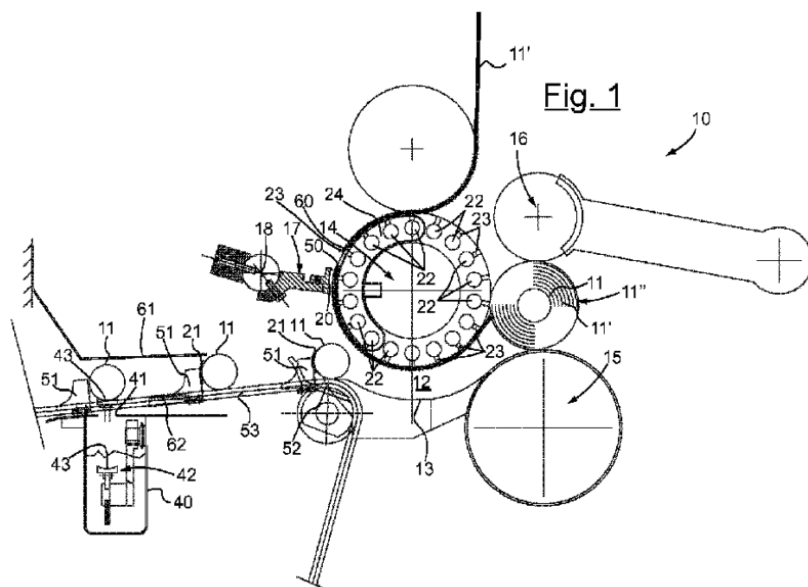
This place covers:

Illustrative example of subject matter classified in this group:



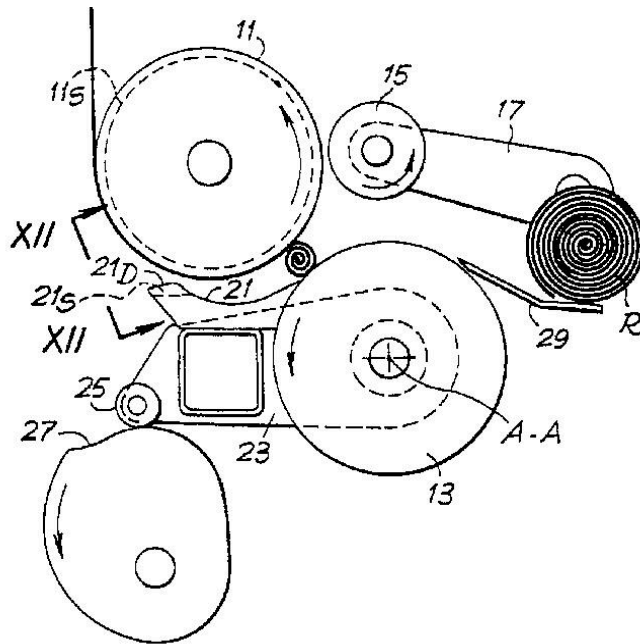
B65H 19/2269**{Cradle}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 19/2276**{The web roll being driven by a winding mechanism of the coreless type}****Definition statement***This place covers:*

Winding without pre-formed cores, i.e. without a core (coreless) or a core being formed with the winding process (in-line core winding), e.g. winding of logs.

**Special rules of classification**

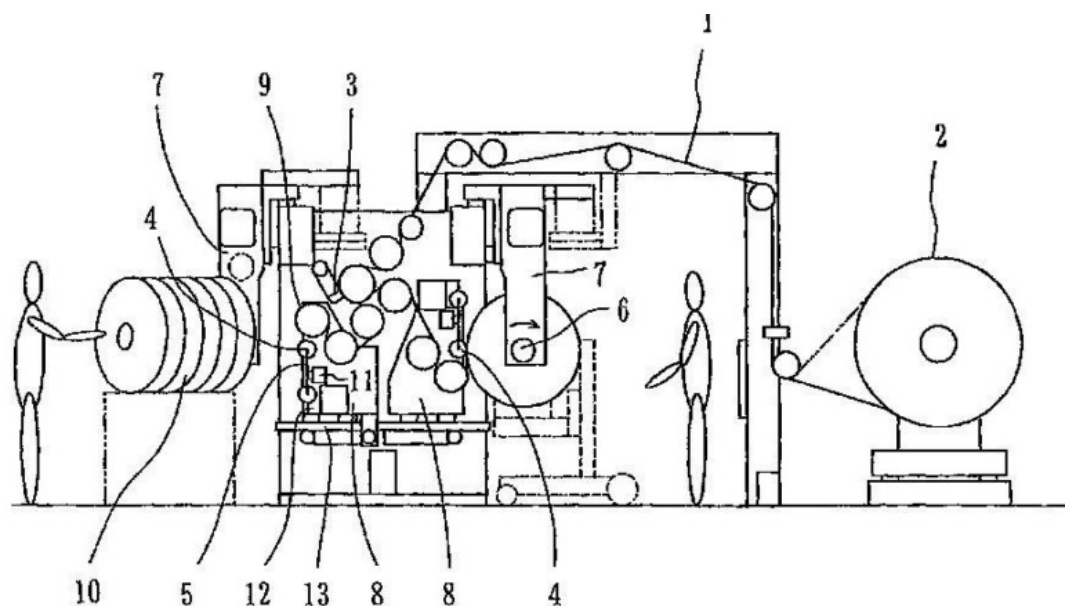
For winding a core in-line with the web (wound core made out of sheet material) add [B65H 2301/414325](#).

For further details on core or mandrel discharge or removal add [B65H 2301/4185](#) or lower.

B65H 19/2284**{Simultaneous winding at several stations, e.g. slitter-rewinders}****Definition statement***This place covers:*

- Aspects related to the change of web roll in combination with the simultaneous winding at several stations, e.g. web roll discharge or transport at the end of winding in a slitter-winder.
- The simultaneous winding at several stations, e.g. slitter-rewinders

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Aspects exclusively related to the rewinding process after slitting	B65H 18/00
Slitting	B65H 2301/4148
Winder slitter	B26D 2007/0075

B65H 19/2292

{Removing cores or mandrels from web roll after winding}

Definition statement

This place covers:

Attaching and winding the web around a support element before removing it axially after winding; the roll remaining without any central element,

e.g. removing a mandrel after a coreless winding or removing a mandrel and a core after winding with a core.

References

Limiting references

This place does not cover:

For expansible mandrels	B65H 75/242
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Roll support type, e.g. cradle, turret or bed-winder	B65H 18/00 , B65H 19/00
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Removing roll/core from shaft/mandrel, e.g. by compressed air	B65H 2301/41446
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Special rules of classification

For further details on core or mandrel discharge or removal add [B65H 2301/4185](#) and lower.

This class does not include winding of rolls whereby a core remains after winding, e.g. turret winder with cores

B65H 19/24

Accumulating surplus delivered web while changing the web roll

References

Limiting references

This place does not cover:

During a change of web roll and in connection with unwinding operations	B65H 19/14
With mechanisms for advancing webs from or to the inside of web rolls	B65H 20/26
In general	B65H 20/30
Devices for temporarily storing filamentary material during forwarding, e.g. for buffer storage	B65H 51/20
Easily-flexible work, e.g. wire, sheet metal bands	B21B 41/00
Manufacture of metal sheets, metal wire, metal rods, metal tubes by drawing	B21C 49/00

B65H 19/26

Cutting-off the web running to the wound web roll

Definition statement

This place covers:

Separating the web running to the wound web roll to finish the winding of the active roll and transfer the web to the next empty core

B65H 19/262

{using a thin or filamentary material which is wound on the new roll}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Definition statement

Web changing operations using a thin or filamentary material as tearing element, e.g. a double adhesive tape to tear-off the running web and to guide the leading end of the new web on a new core.

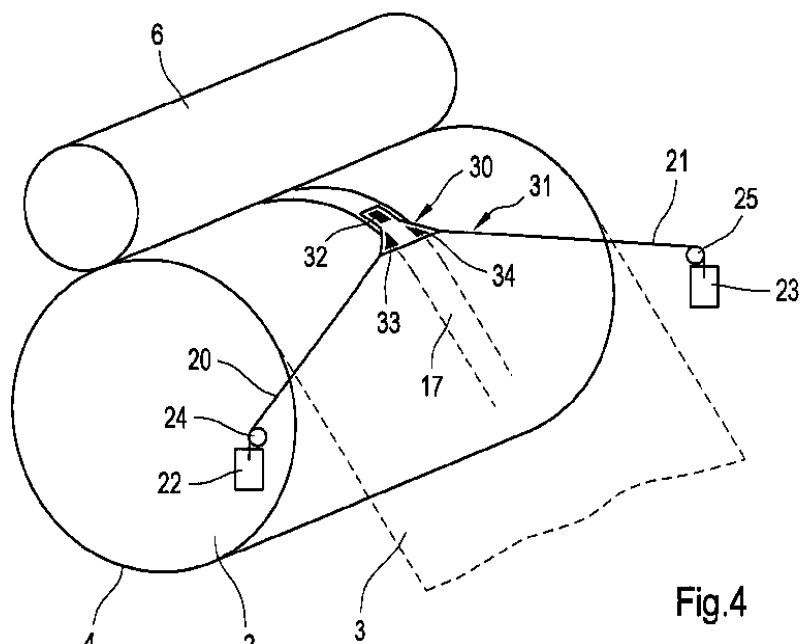


Fig.4

B65H 19/265

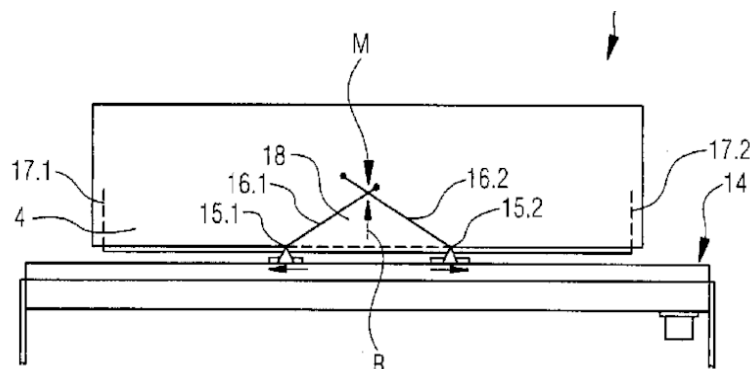
{using a cutting member moving linearly in a plane parallel to the surface of the web and along a direction crossing the web}

Definition statement

This place covers:

A cutting process whereby a mechanical cutting element is penetrating the web and cutting the web by moving the cutting element linearly in a plane parallel to the surface of the web and along a direction crossing the web

Illustrative example of subject matter classified in this group:



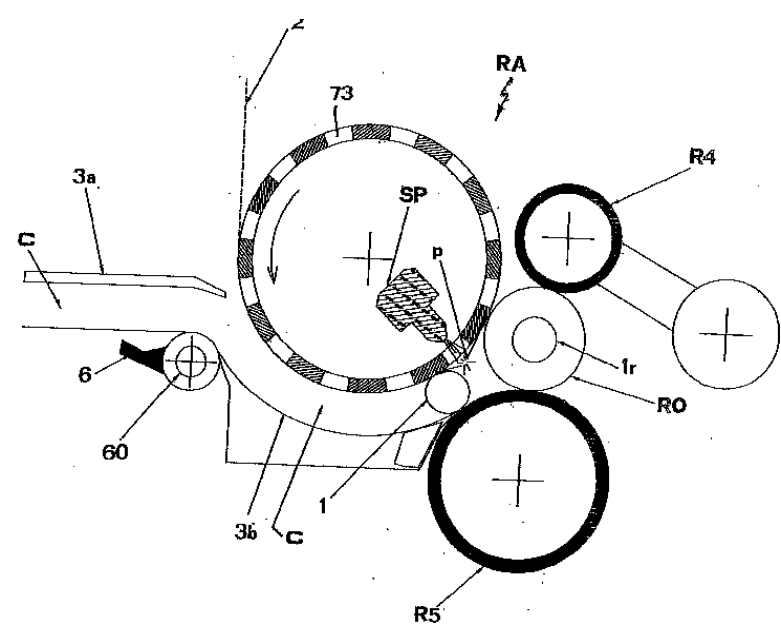
B65H 19/267

{by tearing or bursting}

Definition statement

This place covers:

I.e. any cutting process on a running web that is not using a mechanical cutting element penetrating the web in order to tear or burst the web, it includes e.g. tearing against a fixed edge, tearing by longitudinal forces, air or water cutting e.g. a jet of compressed air



B65H 19/28

Attaching the leading end of the web to the replacement web-roll core or spindle (cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material [B65H 75/28](#))

References

Limiting references

This place does not cover:

Cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material	B65H 75/28
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Further splicing details	B65H 2301/46
Preparing leading edge for splicing	B65H 2301/4606
The kind of splicing means used, e.g. glue,	B65H 2301/463

B65H 19/29

Securing the trailing end of the wound web to the web roll (cores, formers, supports or holders, e.g. reels, with arrangements for securing ends of material [B65H 75/28](#))

Special rules of classification

For further aspects see additionally [B65H 2301/41441](#) or lower.

B65H 19/30

Lifting, transporting, or removing the web roll; Inserting core

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

For finishing the winding process in combination with blocking the outer layers	B65H 2301/41441
For further actions taking place after winding process	B65H 2301/41445

B65H 19/305

{Inserting core}

References**Limiting references**

This place does not cover:

For filamentary materials [B65H 67/0405](#) and lower.

B65H 20/00

Advancing webs

Definition statement

This place covers:

Constructional aspects of driving systems for the advancement of webs and units dealing with the advancement of webs, e.g. temporary storage of webs in accumulators.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

By advancing mechanisms using web-gripping means	B65H 20/16
Manufacture of metal sheets, i.e. profiles or tubes B21C , e.g. feeding or guiding devices in winding-up, coiling or winding-off devices	B21C 47/34
Devices for temporarily accumulating material	B21C 49/00

Working or processing of sheet metal or metal tube B21D : e.g. advancing work by means of one or more of pairs of rollers for feeding sheet or strip material	B21D 43/09
Shaping or joining of plastics, shaping of substances in a plastic state: e.g. of plates or sheets	B29C 55/02
Printing machines or presses: for conveying or guiding webs through, e.g. threading,	B41F 13/02
Packaging articles or materials B65B : e.g. feeding webs from rolls by grippers	B65B 41/14
Calenders or accessories for paper-making machines: devices for threading a web tail	D21G 9/0063
Apparatus for electrographic processes which relate to the handling of copy material	G03G 15/65

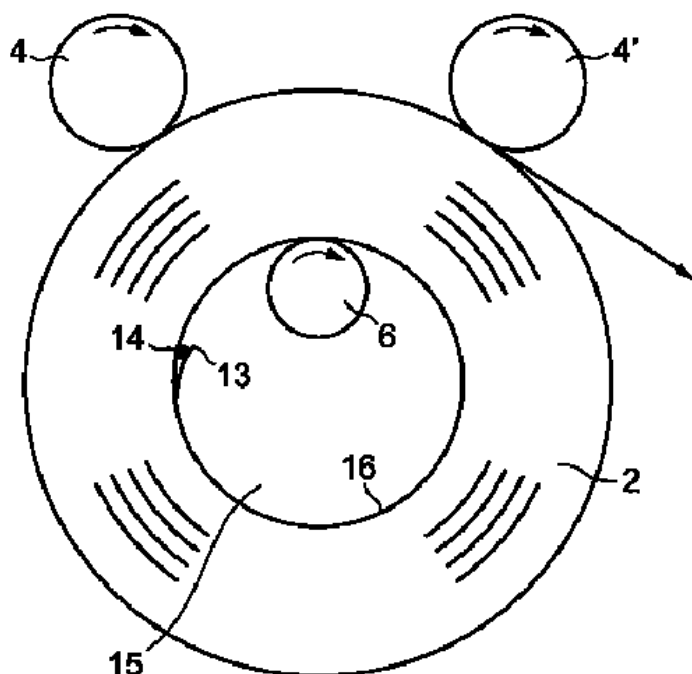
B65H 20/26

Mechanisms for advancing webs to or from the inside of web rolls

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Accumulating surplus web for advancing to machine while changing the web roll in unwinding mechanisms or in connection with unwinding operations	B65H 19/14
Accumulating surplus delivered web while changing the web roll in winding mechanisms or in connection with winding operations	B65H 19/24
Advancing webs, arrangements for accumulating surplus web	B65H 20/30
Devices for temporarily storing filamentary material during forwarding	B65H 51/20
Guiding, conveying, or accumulating easily-flexible work	B21B 41/00
Devices for temporarily accumulating material	B21C 49/00

Special rules of classification

See for coil type accumulator in FICLA [B65H 19/14](#) or [B65H 20/30](#).

B65H 20/30

Arrangements for accumulating surplus web (while changing the web roll [B65H 19/14](#), [B65H 19/24](#))

References

Limiting references

This place does not cover:

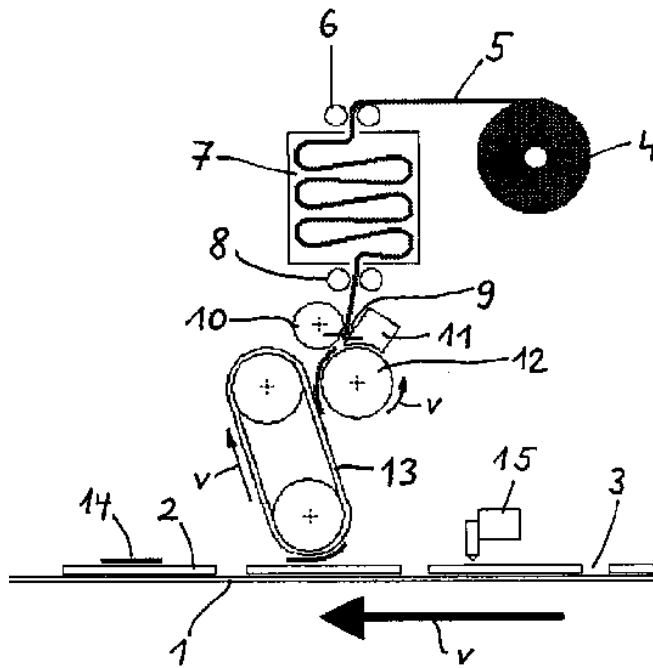
During a change of web roll and in connection with unwinding operation	B65H 19/14
During a change of web roll and in connection with winding operations	B65H 19/24
With mechanisms for advancing webs from or to the inside of web rolls	B65H 20/26
Devices for temporarily storing filamentary material during forwarding, e.g. for buffer storage	B65H 51/20
For easily-flexible work, e.g. wire, sheet metal bands	B21B 41/00
For manufacture of metal sheets, metal wire, metal rods, metal tubes by drawing	B21C 49/00

Special rules of classification

(04-97) see for coil type accumulator in FICLA [B65H 19/14](#) or [B65H 20/30](#).

B65H 20/32**by making loops****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



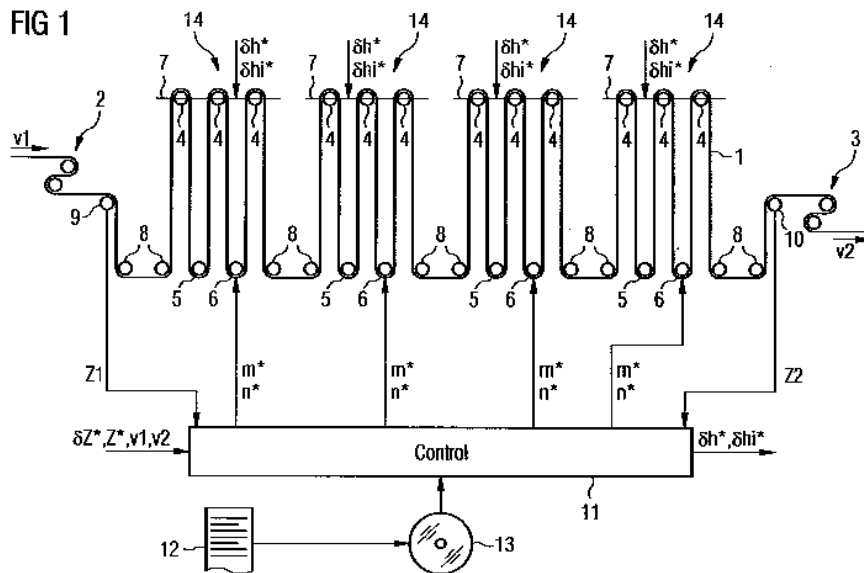
B65H 20/34

with rollers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 20/36

having means to optionally advance the web either in one longitudinal direction or in the opposite longitudinal direction

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bidirectional powered handling device	B65H 2403/942
---------------------------------------	-------------------------------

B65H 21/00

Apparatus for splicing webs (during web-roll changing [B65H 19/00](#))

References

Limiting references

This place does not cover:

When the splicing takes place during web-roll change	B65H 19/00
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Further splicing aspects	B65H 2301/46
--------------------------	------------------------------

B65H 21/02**for premarked, e.g. preprinted, webs****Definition statement***This place covers:*

Splicing units whereby a mark or print on the web triggers the splicing operations.

B65H 26/00**Warning or safety devices, e.g. automatic fault detectors, stop-motions, for web-advancing mechanisms (safety devices in general [F16P](#); investigating chemical or physical properties of materials in general [G01N](#); indicating devices in general [G08B](#))****Definition statement***This place covers:*

Warning or safety devices, e.g. sensors, triggering an action or a signal.

References**Limiting references***This place does not cover:*

For safety devices in general	F16P 1/00 - F16P 7/00
For signalling or calling systems, order telegraphs, alarm systems	G08B 1/00 - G08B 31/00

Informative references*Attention is drawn to the following places, which may be of interest for search:*

For indicating, counting, warning, control, or safety device in printing machine or presses	B41F 33/00
By the use of optical means, i.e. using infrared, visible, or ultraviolet light	G01N 21/00
By specific methods not covered by the preceding groups	G01N 33/00

B65H 26/02**responsive to presence of irregularities in running webs****Definition statement***This place covers:*

Detecting systems inspecting irregularities in running webs, e.g. faults.

B65H 26/025**{responsive to web breakage}****Definition statement***This place covers:*

Detecting systems responsive to web breakage, e.g. detecting the positions of periodically recurring patterns, tension control systems.

References**Informative references***Attention is drawn to the following places, which may be of interest for search:*

For web breakage in printing machines or presses	B41F 33/18
--	----------------------------

B65H 26/04**for variation in tension****Definition statement***This place covers:*

Detecting systems responsive to variations in tension, e.g. tension measuring rolls.

B65H 26/06**responsive to predetermined lengths of webs****Definition statement***This place covers:*

Signal or action triggered by a predetermined length of web.

B65H 26/08**responsive to a predetermined diameter****Definition statement***This place covers:*

Signal or action triggered by a predetermined diameter.

References**Informative references***Attention is drawn to the following places, which may be of interest for search:*

By means of indirect measurement or calculation	B65H 2511/14 , B65H 2220/03
---	--

B65H 27/00

Special constructions, e.g. surface features, of feed or guide rollers for webs (rollers in general [F16C 13/00](#))

Definition statement

This place covers:

Construction aspects of feed or guide rollers and surfaces thereof, e.g. characterized by materials, surface structure, driving means,

use of fluid, roller pair construction.

References

Limiting references

This place does not cover:

Rollers in general	F16C 13/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Tentering rollers	B65H 23/02
Metal sheets or profiles: e.g. winding-up, coiling, winding-off several parallel metal bands	B21C 47/006
Feeding or guiding devices	B21C 47/34
Printing machines or rotary presses conveying or guiding webs	B41F 13/02
Printing machines or rotary presses cylinders	B41F 13/08
Typewriters, selective printing mechanisms (e.g. ink-jet printer, thermal printer)	B41J 13/02
Transport or storage device, e.g. conveyors for loading or tipping, shop conveyors, pneumatic tube conveyors	B65G 39/02
Treating textile materials by liquids, gases, vapours characterized by the use of fluid:	D06B 23/02
Textile fabrics: e.g. rollers for stretching, tentering or spreading textile fabrics	D06C 3/06
Rollers for calendering, pressing, ironing, glossing or glazing textile fabrics	D06C 15/08
Paper-making machine: e.g. guiding rolls in wet end of machines	D21F 1/40
Pressure rollers in press section (wet presses)	D21F 3/08
In calenders and accessories for paper-making machines: controlled deflection rolls with compensation means using fluid pressure	D21G 1/022
Apparatus for electrographic processes which relate to the handling of copy material	G03G 15/65

Special rules of classification

For further details concerning, e.g.

Materials used and their properties [B65H 2401/00](#);

Roller(s) [B65H 2404/10](#);

Shaft, cylinders, drums, spindles [B65H 2404/40](#);

Surface of the elements in contact with the material forwarded or guided [B65H 2404/50](#);

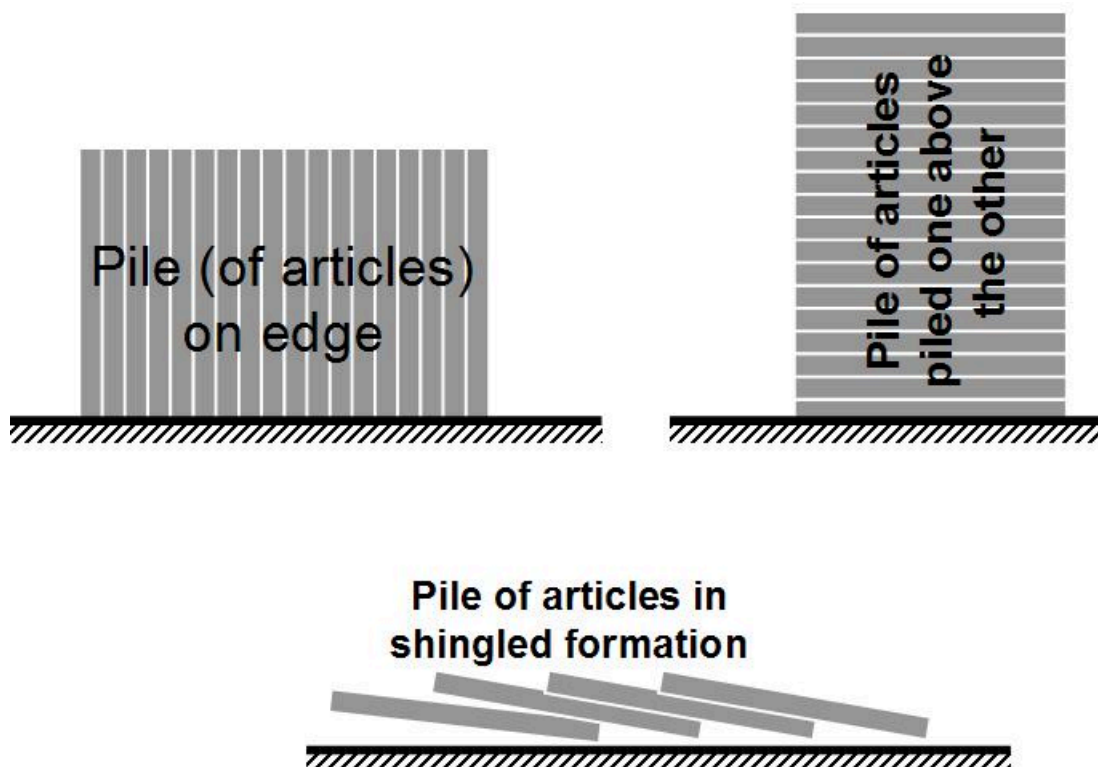
Means using fluid [B65H 2406/00](#)

B65H 29/00

Delivering or advancing articles from machines; Advancing articles to or into piles

Special rules of classification

This main group should be used only for subject matter (i.e. delivering or advancing articles from machines, advancing articles to or into piles) not being covered by any of its subgroups.



Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Belt	band, tape.
Chain	a row of article handling elements, each interlinked with the adjacent one.

B65H 29/001

{Adaptations of counting devices (to feeding of articles to machines
[B65H 5/002](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Adaptations of counting devices directed to feeding of articles to machine:	B65H 5/002
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B65H 29/003

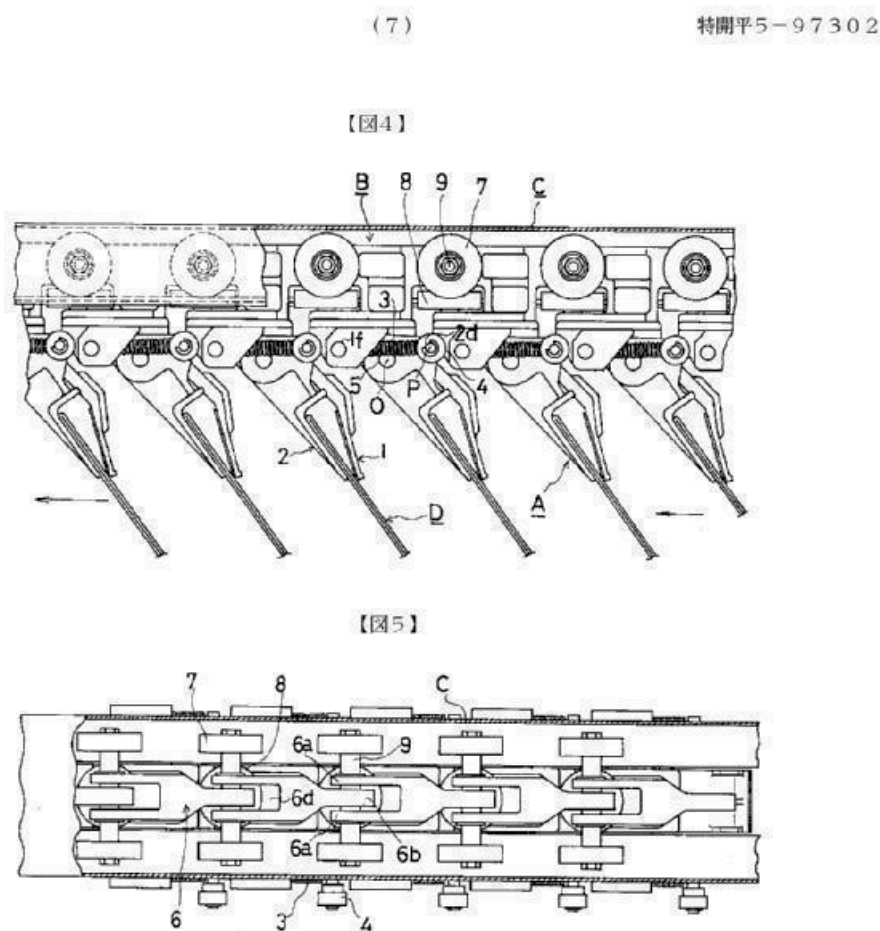
{by grippers ([B65H 29/02](#) takes precedence)}

Definition statement

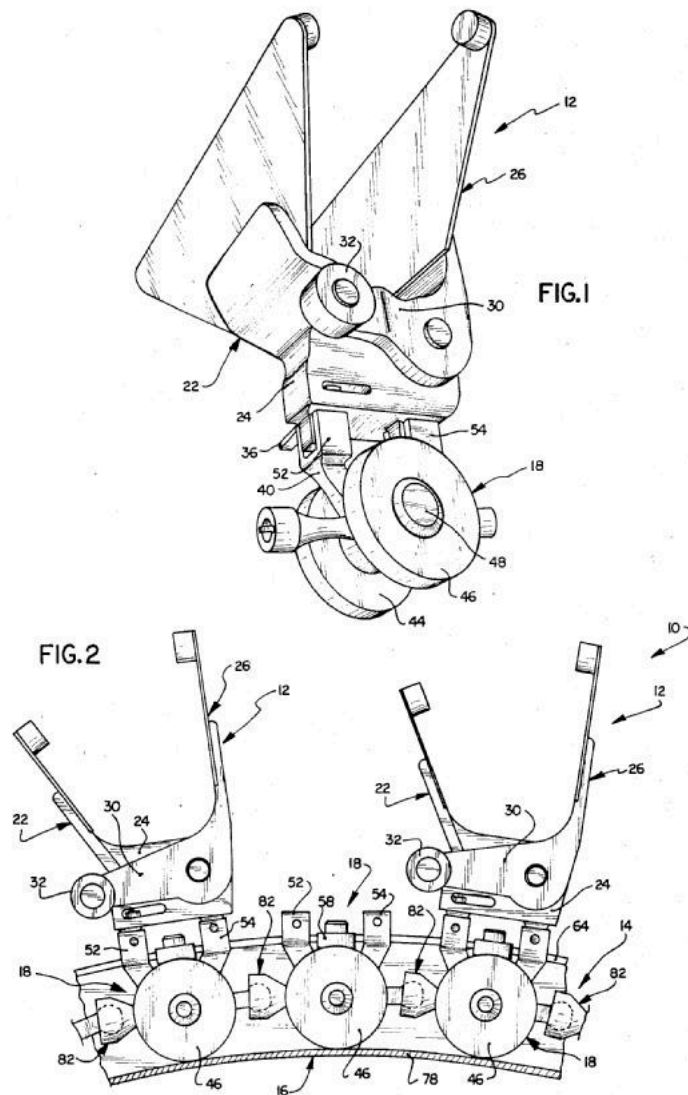
This place covers:

Delivering or advancing articles from machines, to piles or into piles by grippers engaging the articles at least somewhere else than at their leading edge, or somewhere that cannot be considered to be their leading edge, e.g. at the articles side, i.e. lateral edge, or e.g. at the hanging articles upper edge, or e.g. at the standing articles lower edge, or e.g. at the articles center or trailing edge.

Illustrative example of subject matter classified in this group:



U.S. Patent Jan. 27, 1987 Sheet 1 of 4 4,638,906



References

Limiting references

This place does not cover:

by chains or bands having mechanical grippers engaging the side edges of articles

[B65H 29/02](#)

B65H 29/005

{by chains or bands having mechanical grippers engaging the side edges of articles, e.g. newspaper conveyors}

Definition statement

This place covers:

Delivering or advancing articles from machines, to piles or into piles by chains or bands carrying mechanical grippers engaging (relative to the conveying direction) the side edges of the articles.

Illustrative example of subject matter classified in this group:

Fig.1.

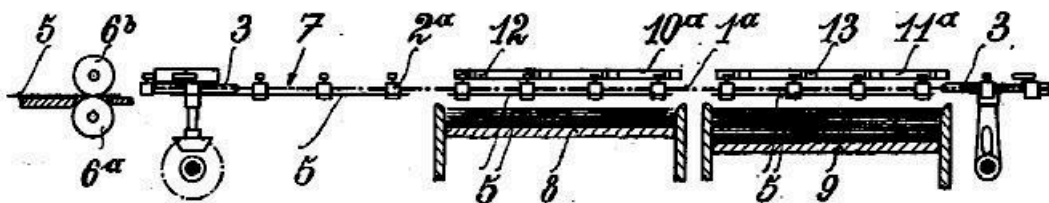
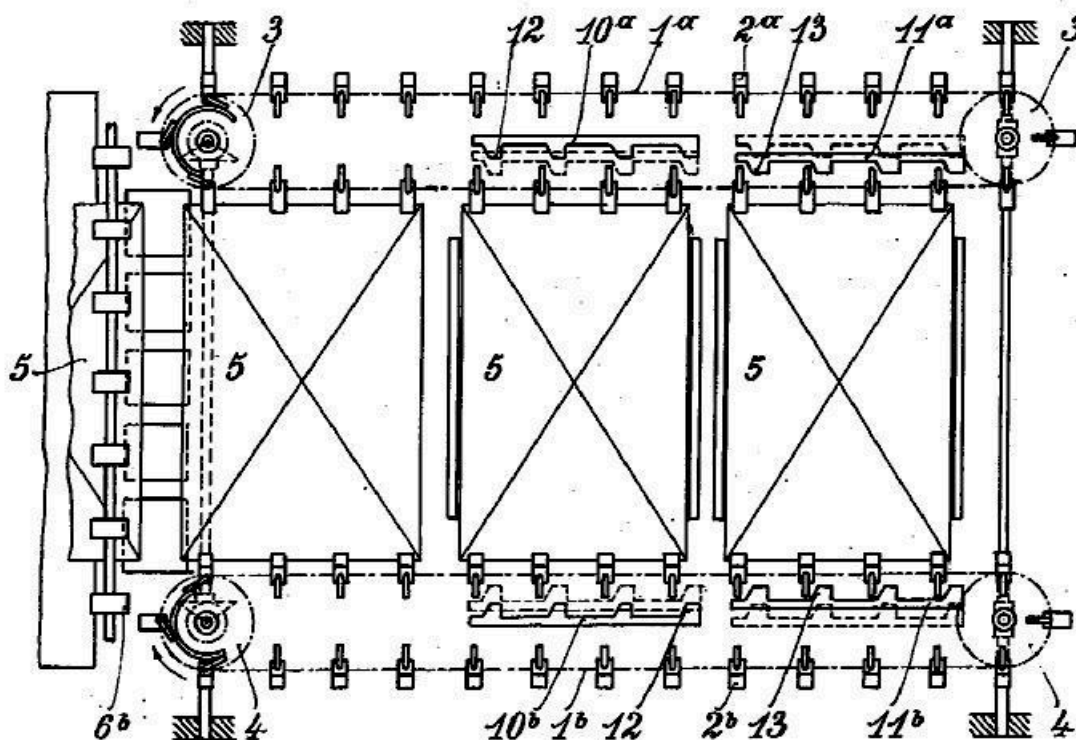


Fig.2.



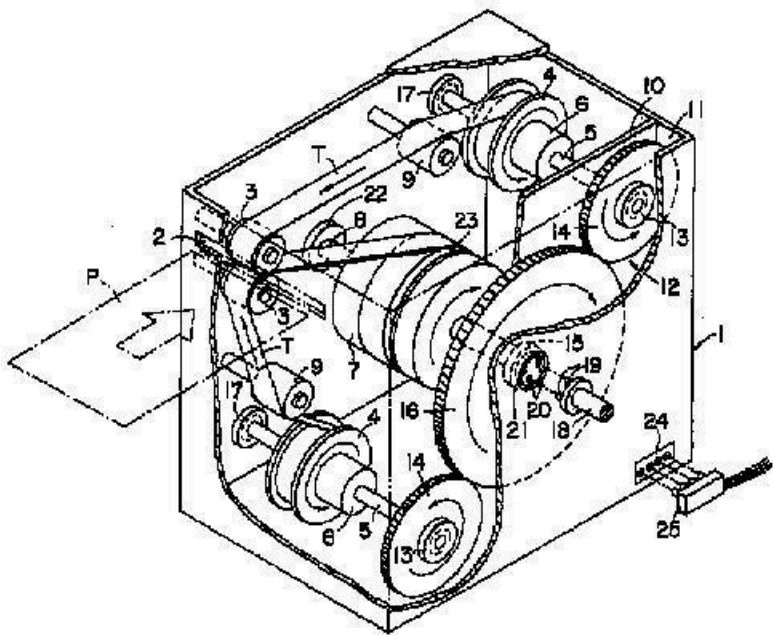
B65H 29/006

{Winding articles into rolls}

Definition statement

This place covers:
Particular details about delivering articles to be stored to or into the store, as well as about the store as such.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Feeding articles from rolls	B65H 5/28
Piling by collecting, e.g. piling, on the periphery of a cylinder	B65H 29/51
Wrapping banknotes around drum	G07D 9/00 , 405C/FI
Reels taking-up banknotes	G07D 9/00 , 405C/FI

Special rules of classification

Particular details or aspects about feeding the stored articles from the store: [B65H 5/28](#)

The use of the following Indexing Codes is mandatory:

[B65H 2301/4191](#): articles wound together with a single belt

[B65H 2301/41912](#): articles wound together between two belts facing each other

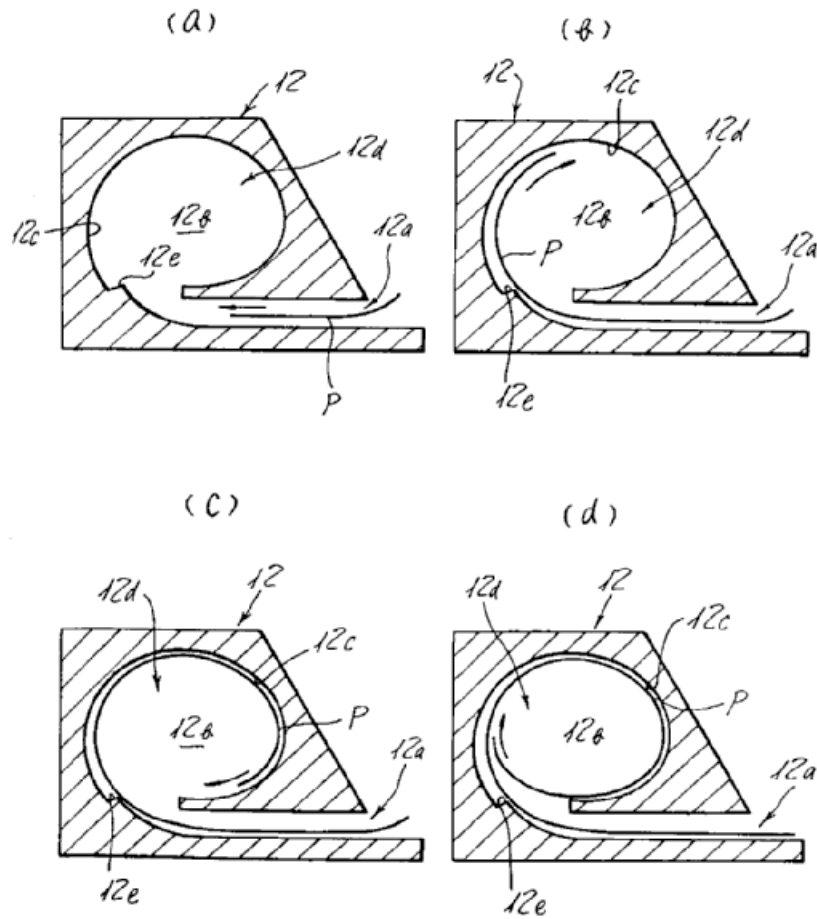
B65H 29/008

{Winding single articles into single rolls}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sheet holders, retainers, movable guides, or stationary guides: for the sheet output section	B41J 13/106/EC
Piling by warping sheet	3F054/BA13/FT
Storage of roll-like sheet	3F054/BA15/FT

B65H 29/02**by mechanical grippers engaging the leading edge only of the articles****Definition statement***This place covers:*

Delivering or advancing articles from machines, to piles or into piles by mechanical grippers engaging (relative to the conveying direction) the leading edge only of the articles.

References**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Delivering or advancing articles from machines, to piles or into piles by grippers engaging the articles at least somewhere that relative to the conveying direction cannot be considered to be the leading edge	B65H 29/003
--	-----------------------------

Special rules of classification

This group should be used only for subject matter (i.e. delivering or advancing articles from machines, to piles or into piles by mechanical grippers engaging relative to the conveying direction the leading edge only of the articles) not being covered by any of its lower subgroups.

B65H 29/04**the grippers being carried by endless chains or bands****Special rules of classification**

This group should be used only for subject matter (i.e. delivering or advancing articles from machines, to piles or into piles by mechanical grippers engaging relative to the conveying direction the leading edge only of the articles, wherein the grippers are carried by endless chains or bands) not being covered by any of its lower subgroups.

B65H 29/041

{and introducing into a pile (slowing-down from grippers [B65H 29/683](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

WO 91/08844

PCT/US90/07403

5 / 5

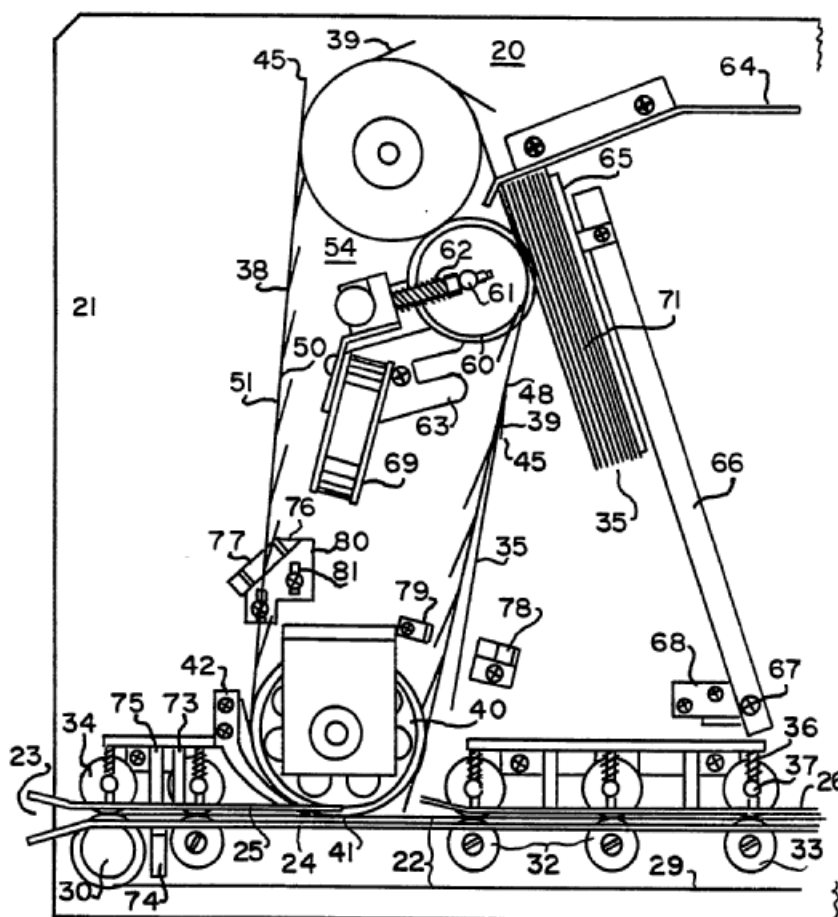


FIG. 8V

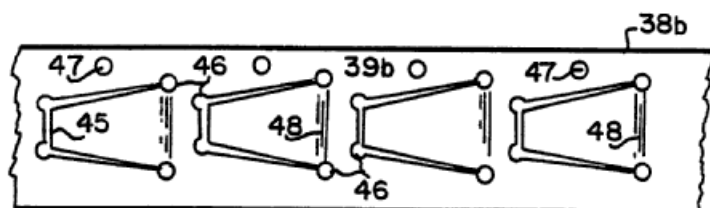


FIG. 6

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Slowing down from (gripper) chain delivery	B65H 29/683
--	-----------------------------

B65H 29/042

{Intermediate conveyors, e.g. transferring devices}

Definition statement

This place covers:

Advancing articles between handling or process stations of a machine, by mechanical grippers being carried by endless chains or bands, and engaging (relative to the conveying direction) the leading edge only of the articles.

B65H 29/044

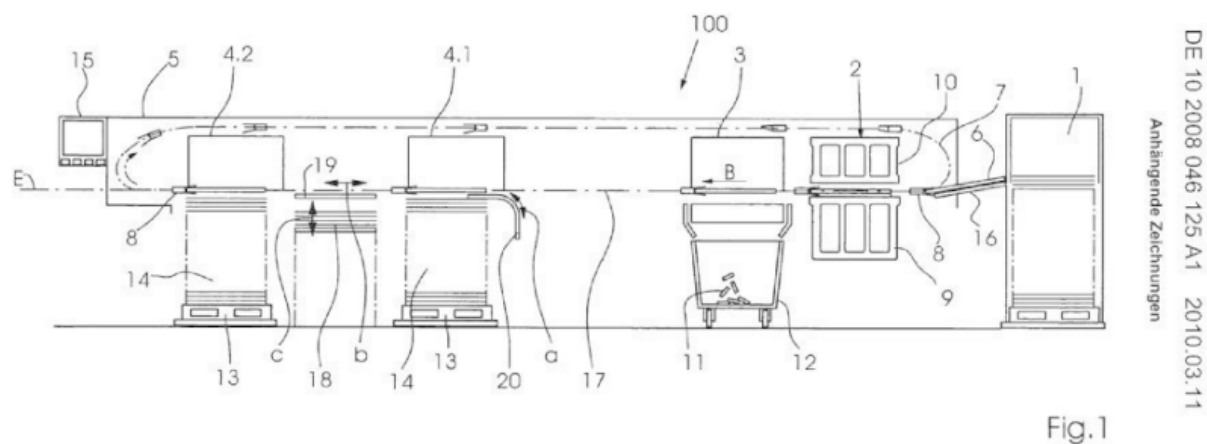
{conveying through a machine}

Definition statement

This place covers:

Advancing articles through (a) handling or process station(s) of a machine, by mechanical grippers being carried by endless chains or bands, and engaging (relative to the conveying direction) the leading edge only of the articles.

Illustrative example of subject matter classified in this group:



B65H 29/045

{Details of grippers}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Feeding articles separated from piles or feeding articles to machines, by grippers	B65H 5/14
--	---------------------------

B65H 29/06

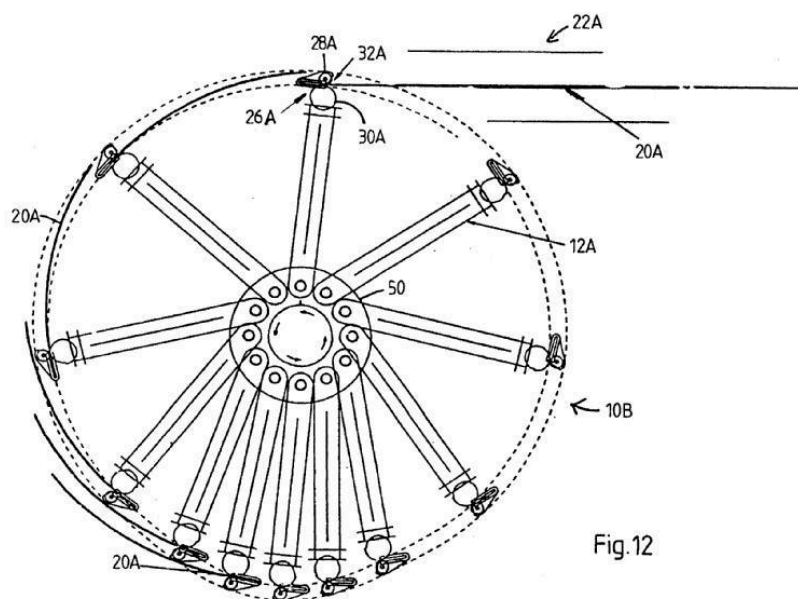
the grippers being carried by rotating members

Definition statement

This place covers:

Delivering or advancing articles from machines, to piles or into piles by grippers being carried by rotating members, e.g. arms or cylinders.

Illustrative example of subject matter classified in this group:



J.S. Patent

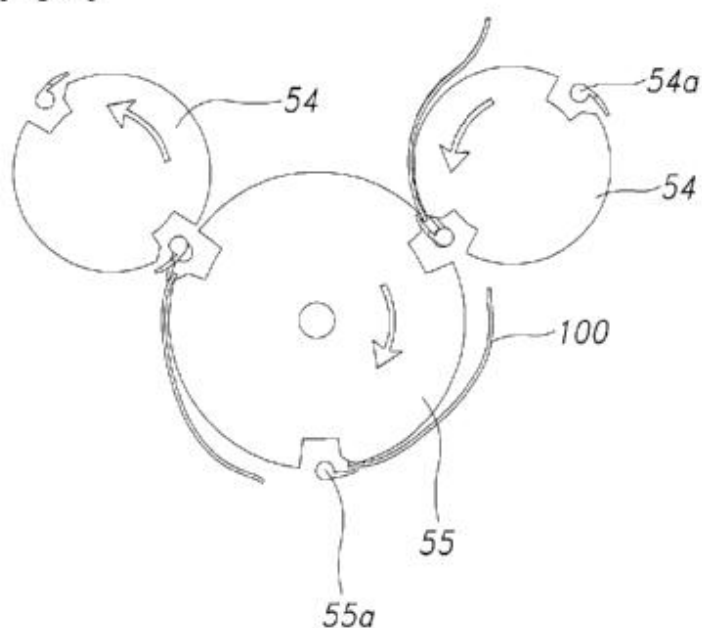
Sep. 26, 1995

Sheet 12 of 12

5,452,886

WO 2010/008184

[Fig. 3]



References

Limiting references

This place does not cover:

Transfer drums comprising grippers	B41F 21/10
------------------------------------	----------------------------

Special rules of classification

Feeding articles separated from piles or feeding articles to machines, by grippers: [B65H 5/14](#)

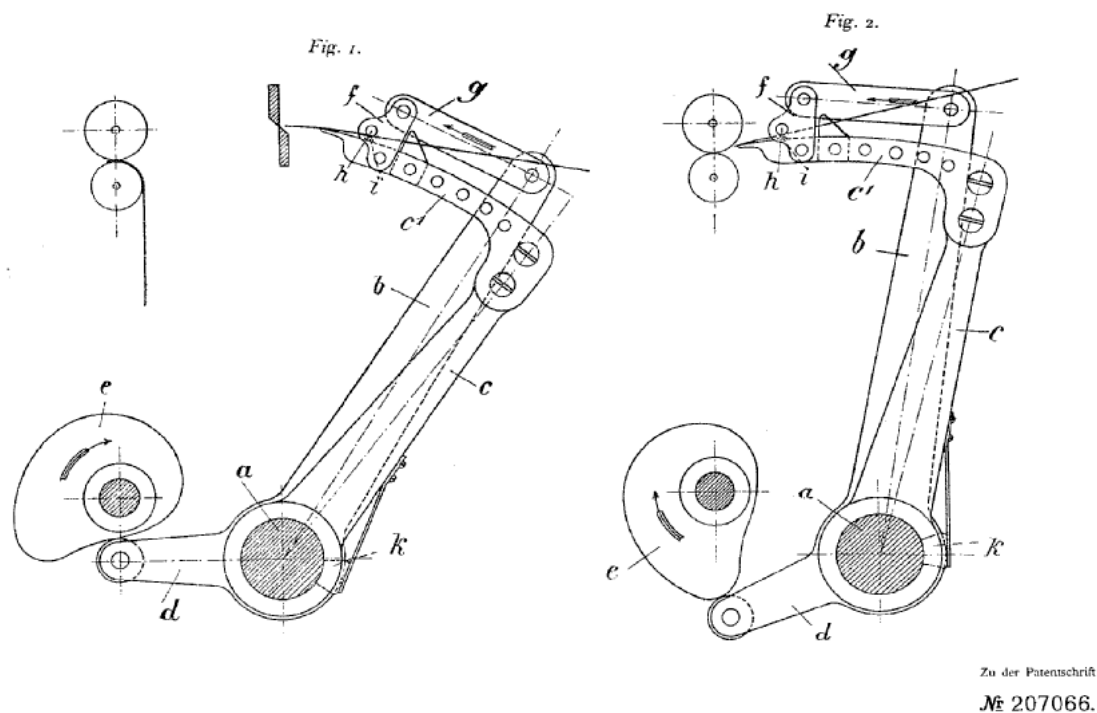
B65H 29/08

the grippers being oscillated in arcuate paths

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Special rules of classification

Feeding articles separated from piles or feeding articles to machines, by grippers	B65H 5/14
--	---------------------------

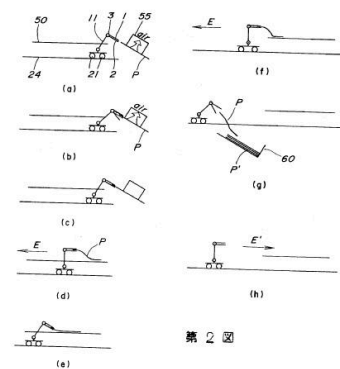
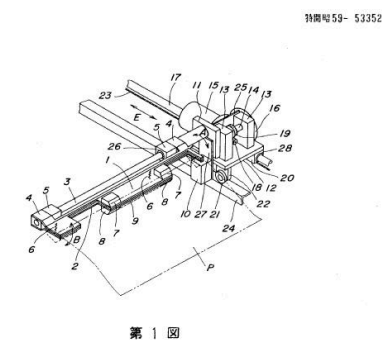
B65H 29/10

the grippers being reciprocated in rectilinear paths

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**Special rules of classification**

Feeding articles separated from piles or feeding articles to machines, by grippers, details thereof:
[B65H 5/14](#)

B65H 29/12

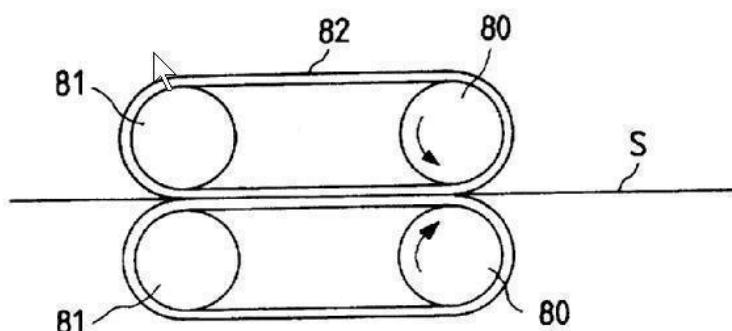
by means of the nip between two, or between two sets of, moving tapes or bands {or rollers}

Definition statement

This place covers:

Delivering or advancing articles from machines, to piles or into piles, by means of the nip between two, or between two sets of, moving tapes or bands or rollers.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

sandwiching with belt and belt	3F049/DA02/Ft .
sandwiching by belt and roller	3F049/DA04/Ft
by oscillating conveyors	B65H29/60&E/FI
by moving a portion of belt	B65H29/60&H/FI

Special rules of classification

This group should be used only for subject-matter (i.e. delivering or advancing articles from machines, to piles or into piles, by means of the nip between two, or between two sets of, moving tapes or bands or rollers) not being covered by any of its lower sub-groups.

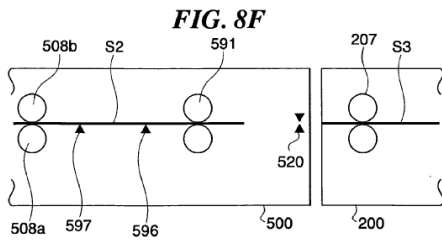
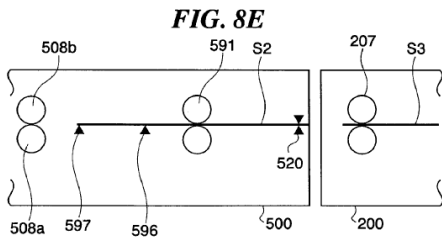
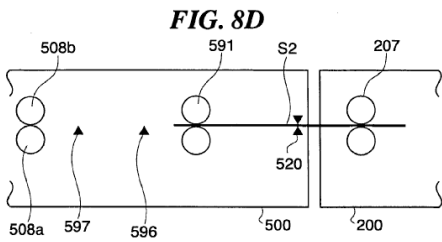
B65H 29/125

{between two sets of rollers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sandwiching by roller and roller	3F049/DA12
----------------------------------	------------

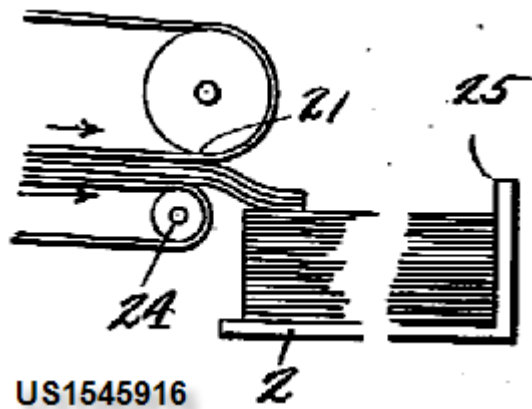
B65H 29/14

and introducing into a pile

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

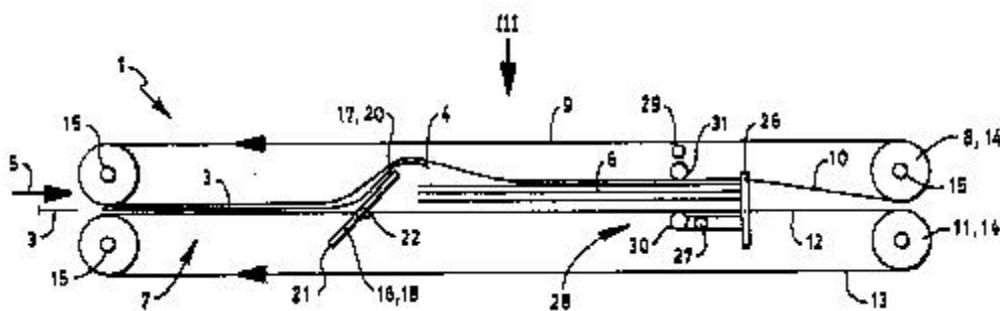
**B65H 29/145**

{the pile being formed between the two, or between the two sets of, tapes or bands or rollers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



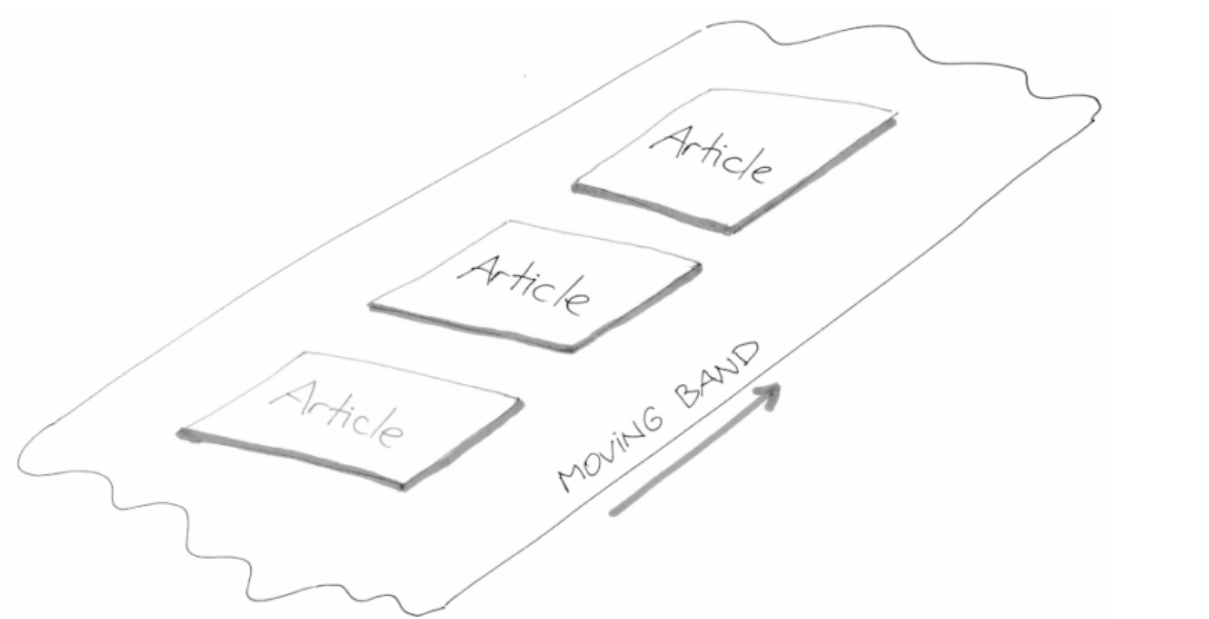
B65H 29/16

by contact of one face only with moving tapes, bands, or chains {(with suction belts [B65H 29/242](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering or advancing articles from machines, to piles or into piles, by means of suction belts	B65H 29/242
---	-----------------------------

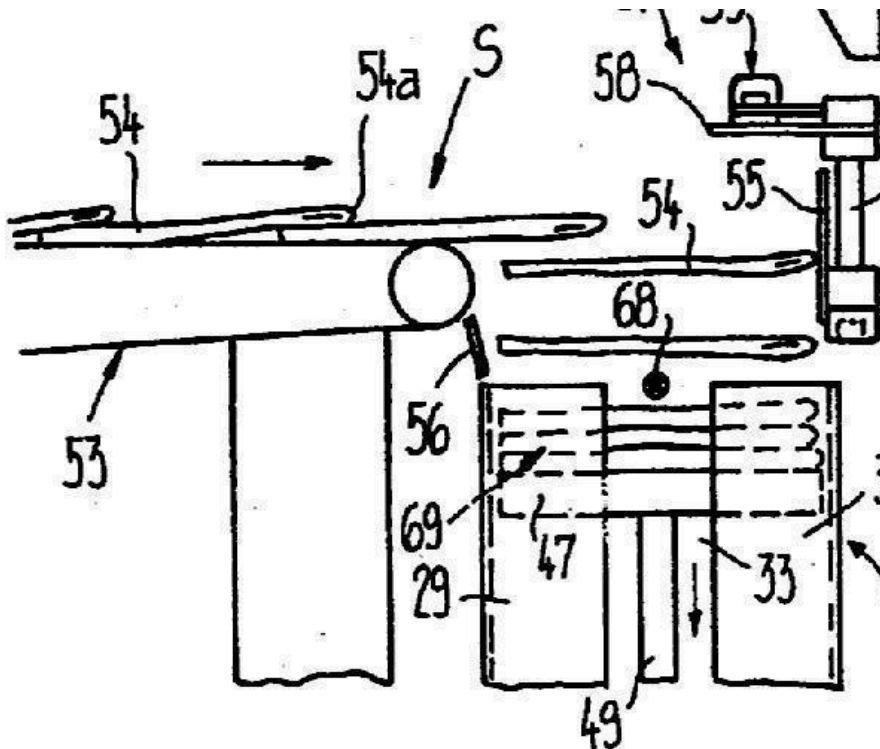
B65H 29/18

and introducing into a pile

Definition statement

This place covers:

example: introducing articles into a pile from above the pile, see US4432685A



example: introducing articles into a pile from below the pile

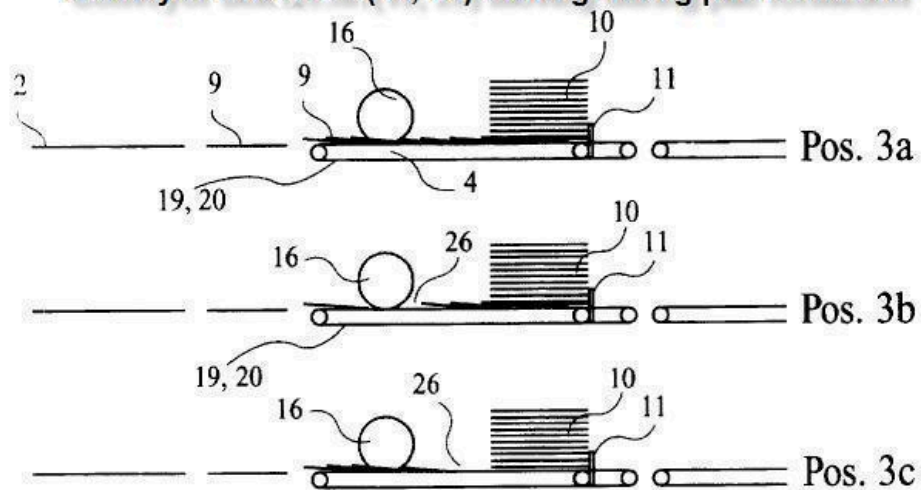
U.S. Patent

Jan. 6, 1998

Sheet 3 of 3

5,704,604

Conveyor belt ref.nr.(19, 20) moving during pile formation



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering or advancing articles into piles by suction bands or belts	B65H 29/242
Advancing the articles to or into piles by dropping the articles from tapes or bands rolled from under the articles	B65H 29/36

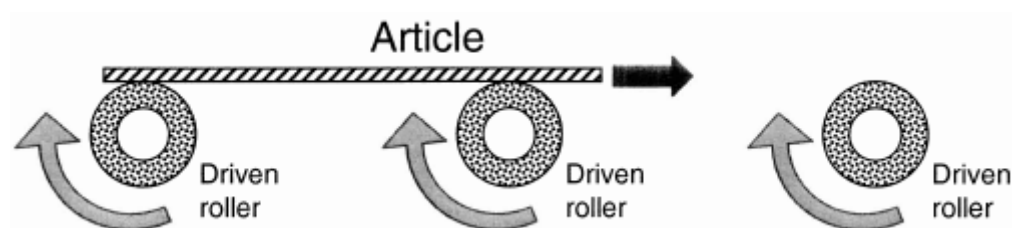
B65H 29/20

by contact with rotating friction members, e.g. rollers, brushes, or cylinders
{(with suction rollers [B65H 29/243](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering or advancing articles from machines, to or into piles by suction rollers	B65H 29/243
---	-----------------------------

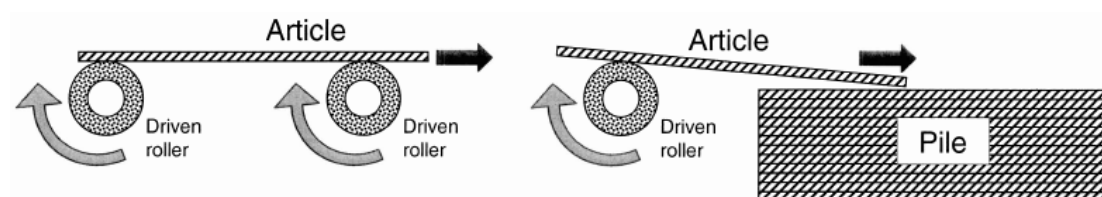
B65H 29/22

and introducing into a pile

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering or advancing articles into piles by suction rollers	B65H 29/243
Advancing the articles to or into piles by dropping the articles from rollers rolled from under the articles	B65H 29/36

B65H 29/24

by air blast or suction apparatus ({[B65H 5/22](#) takes precedence; } dropping articles from suction carriers [B65H 29/32](#) {; pneumatic brakes [B65H 29/686](#)})

References

Limiting references

This place does not cover:

Delivering or advancing articles from machines by contact with rotating friction members and introducing into a pile	B65H 5/22
--	---------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering or advancing articles from machines, to piles or into piles, by dropping the articles from pneumatic, e.g. suction, carriers	B65H 29/32
Pneumatic brakes	B65H 29/686

Special rules of classification

This group should be used only for subject-matter (i.e. delivering or advancing articles from machines, to piles or into piles, by air blast or suction apparatus) not being covered by any of its lower sub-groups.

B65H 29/241

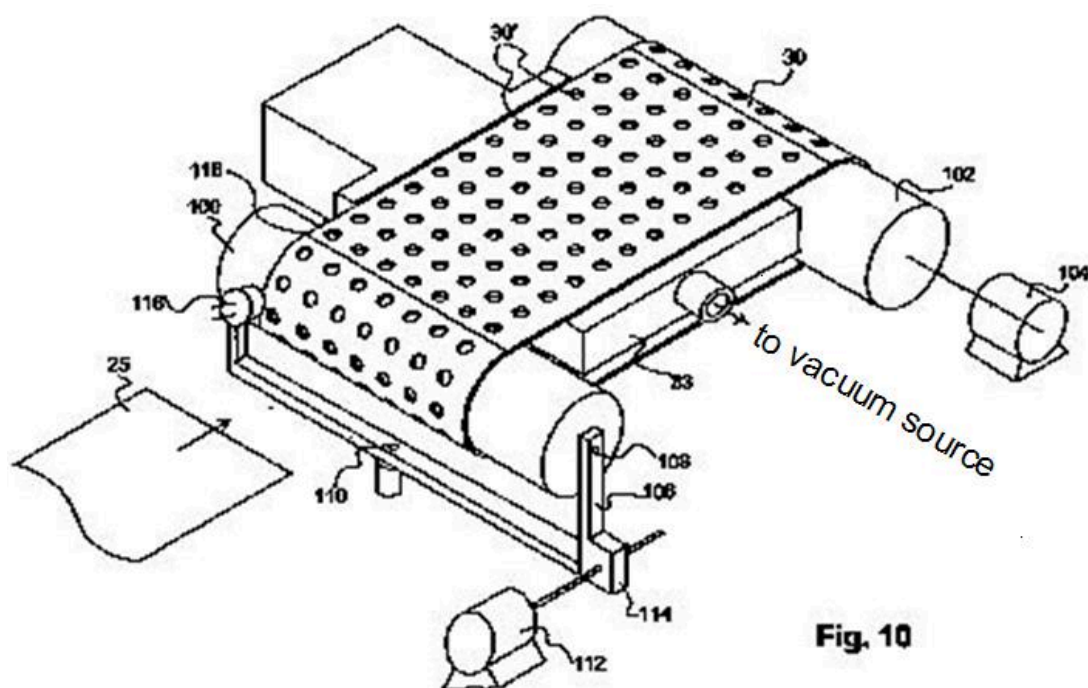
{Suction devices}

Special rules of classification

This group should be used only for subject-matter (i.e. delivering or advancing articles from machines, to piles or into piles, by suction devices) not being covered by any of its lower sub-groups.

B65H 29/242**{Suction bands or belts}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**Fig. 10**

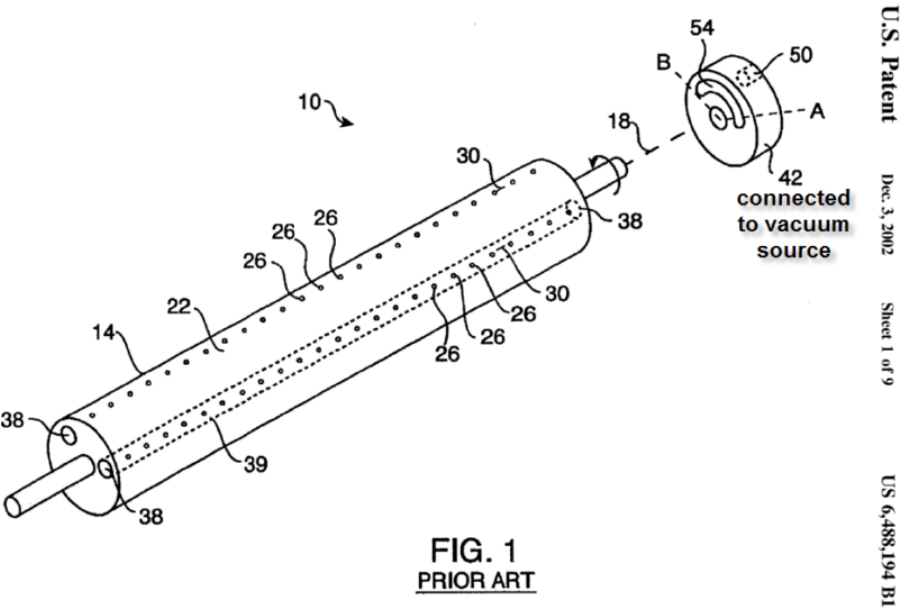
B65H 29/243

{Suction rollers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 29/245

{Air blast devices}

Special rules of classification

This group should be used only for subject-matter (i.e.delivering or advancing articles from machines, to piles or into piles,by air blast devices)not being covered by any of its lower sub-groups.

B65H 29/248

{with coanda effect (separating from a stack [B65H 3/14](#))}

References

Limiting references

This place does not cover:

Separating articles from piles using partial blasts producing partial vacuum	B65H 3/14
--	---------------------------

B65H 29/26

by dropping {the articles}

Definition statement

This place covers:

Delivering or advancing articles from machines, to piles or into piles,by dropping the articles.

Special rules of classification

This group should be used only for subject-matter (i.e.delivering or advancing articles from machines, to piles or into piles, by dropping the articles)not being covered by any of its lower sub-groups.

B65H 29/28

from mechanical grippers (grippers engaging the leading edge only)

B65H 29/02)

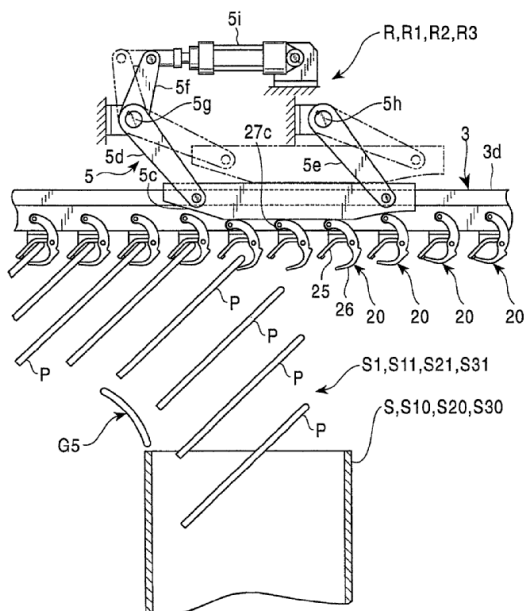
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Patent Application Publication May 23, 2002 Sheet 9 of 13 US 2002/0060410 A1

FIG. 9



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering or advancing articles from machines, to piles or into piles by grippers engaging an edge of the articles that relative to the conveying direction can not be considered to be the leading edge, e.g. rail guided gripping means, like so called "gripper chains" or "greiferketten", i.e. endless chains or bands carrying mechanical grippers engaging e.g. the upper edge of at least partially hanging articles, or the lowest edge of standing articles	B65H 29/003
Delivering or advancing articles from machines, to piles or into piles, by mechanical grippers engaging the leading edge only of the articles	B65H 29/02

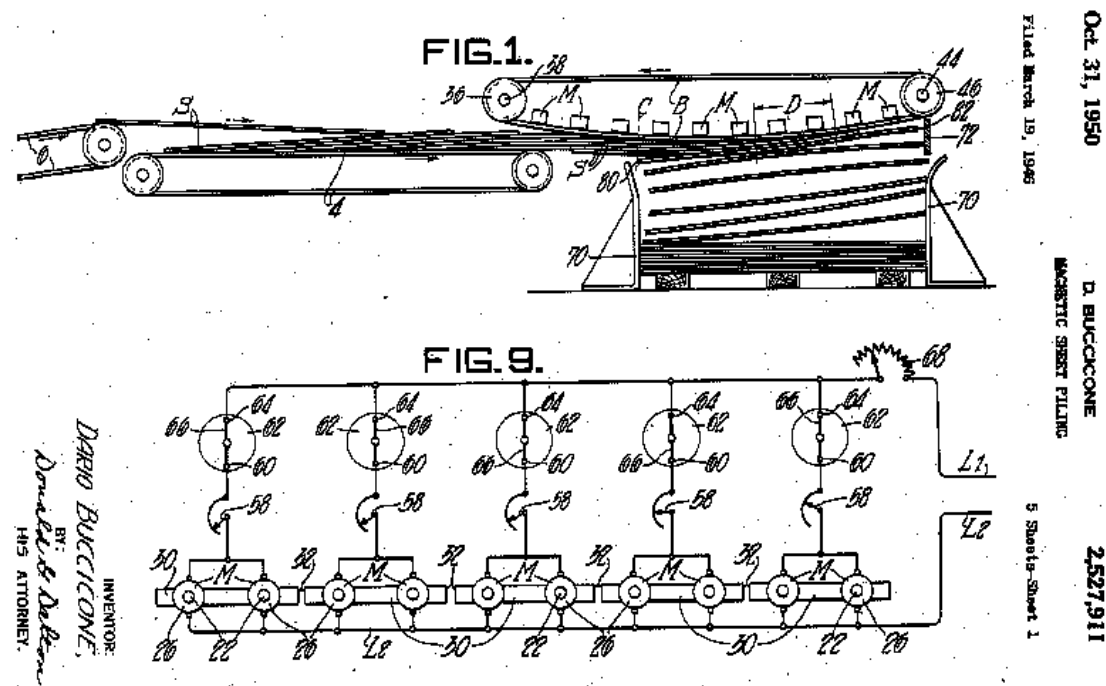
B65H 29/30

from magnetic holders

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



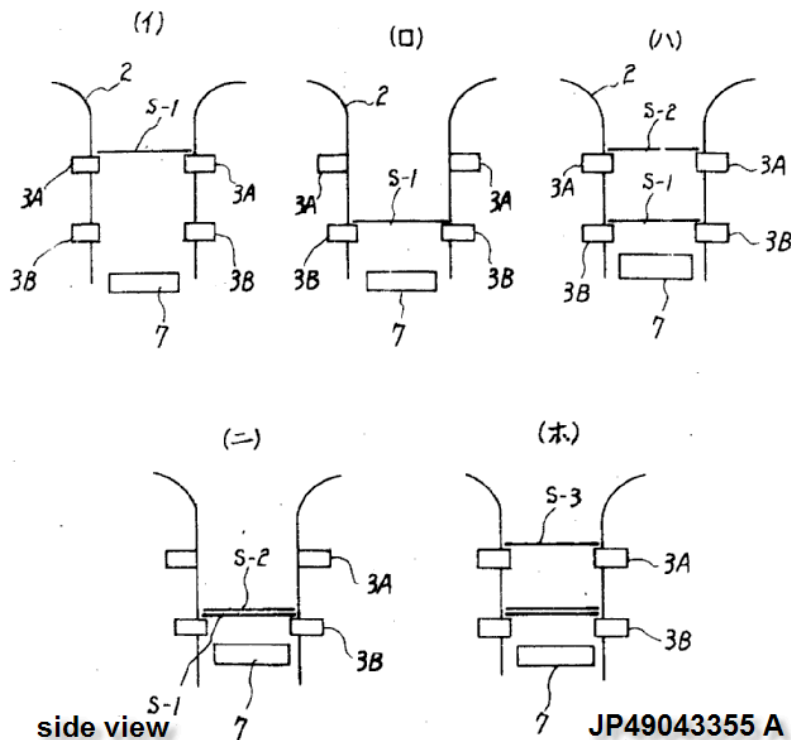
B65H 29/34

from supports slid from under the articles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



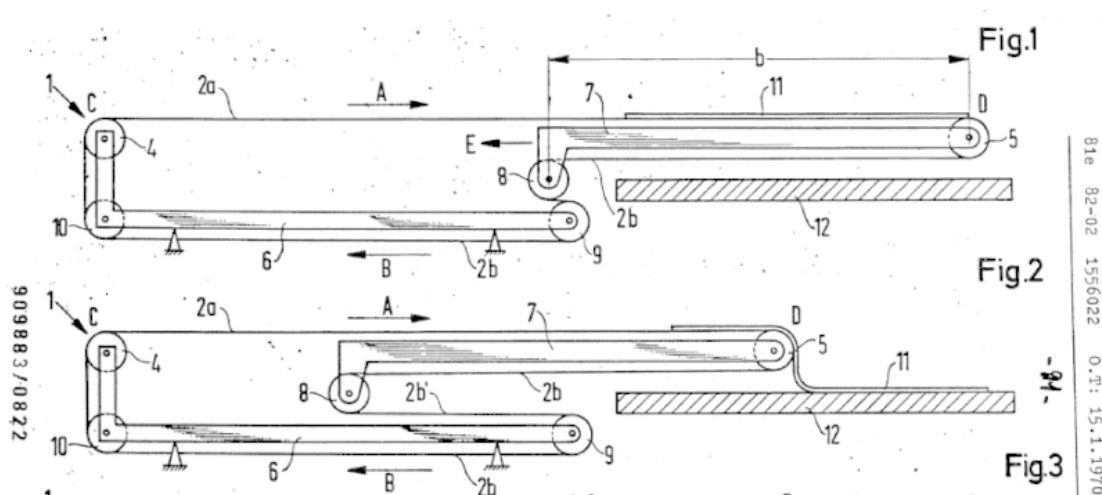
B65H 29/36

from tapes, bands, or rollers rolled from under the articles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



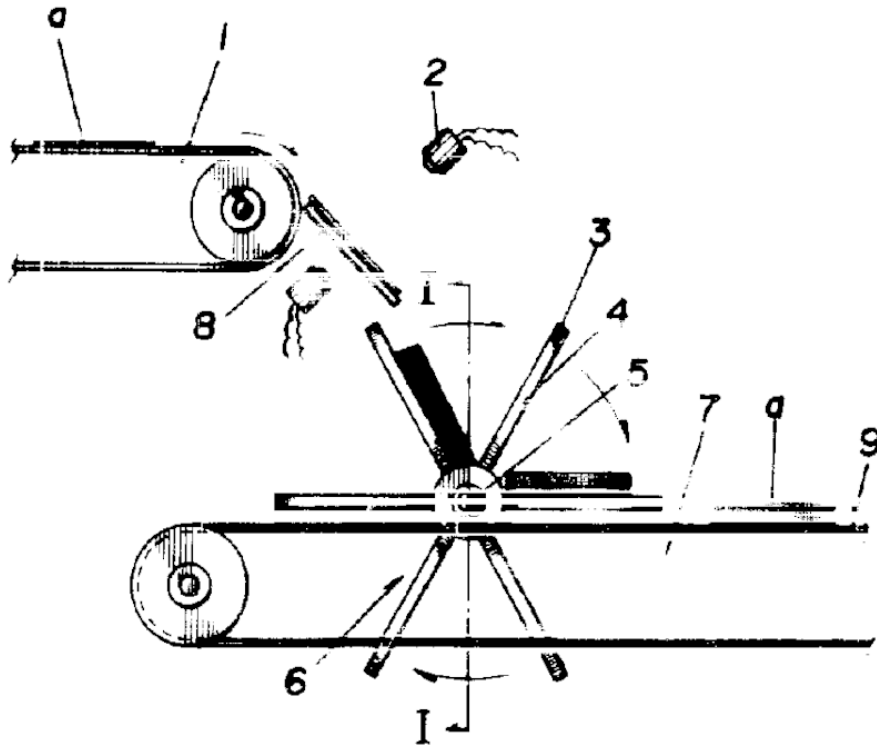
B65H 29/38

by movable piling or advancing arms, frames, plates, or like members with which the articles are maintained in face contact

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**Special rules of classification**

This group should be used only for subject-matter (i.e. delivering or advancing articles from machines, to piles or into piles, by movable piling or advancing arms, frames, plates or like members with which the articles are maintained in face contact) not being covered by any of its lower sub-groups.

B65H 29/40

Members rotated about an axis perpendicular to direction of article movement, e.g. star-wheels formed by S-shaped members

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

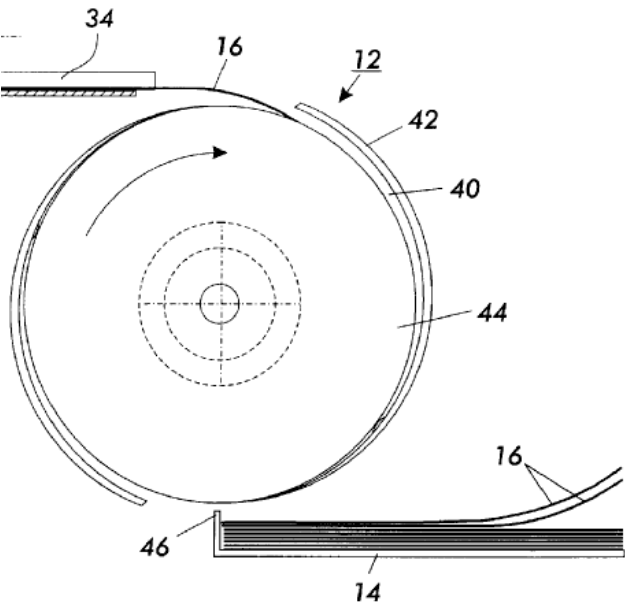


FIG. 2

nt Oct. 17, 2000 Sheet 2 of 2 US 6,131,900

B65H 29/42

Members rotated about an axis parallel to direction of article movement, e.g. helices

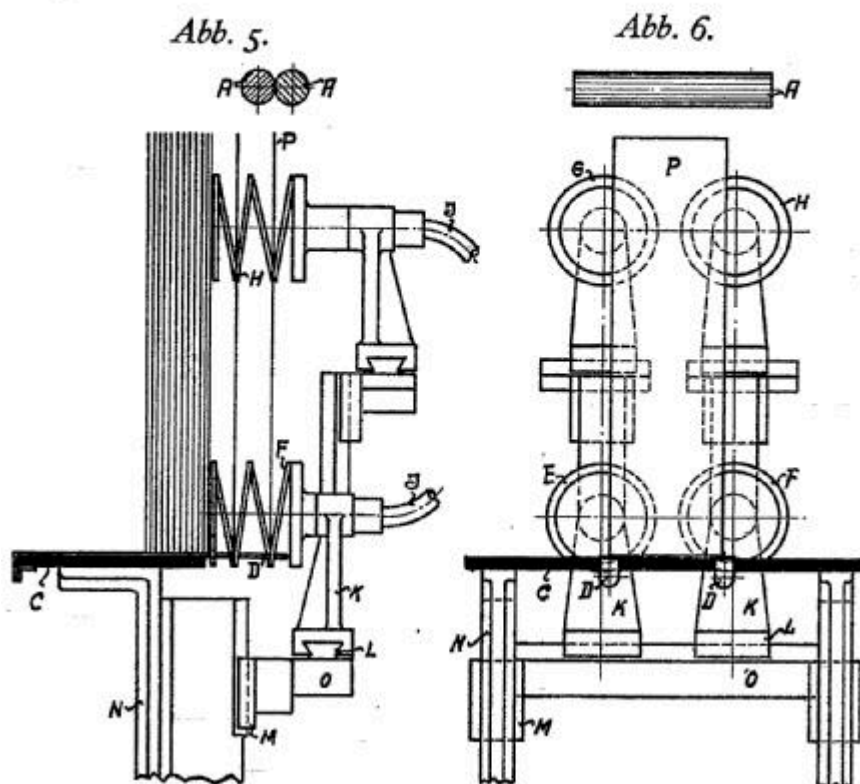
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

see helices E, F, G, H

Zu der Patentschrift **452477**
Kl. 54b Gr. 1



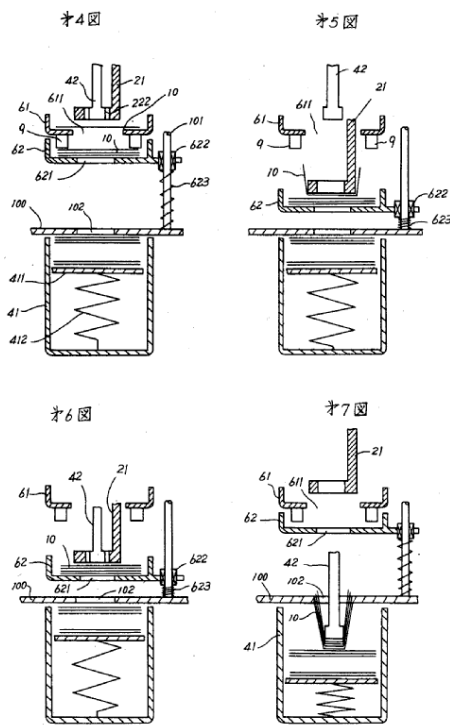
B65H 29/46

Members reciprocated in rectilinear path

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



特開昭53-127792

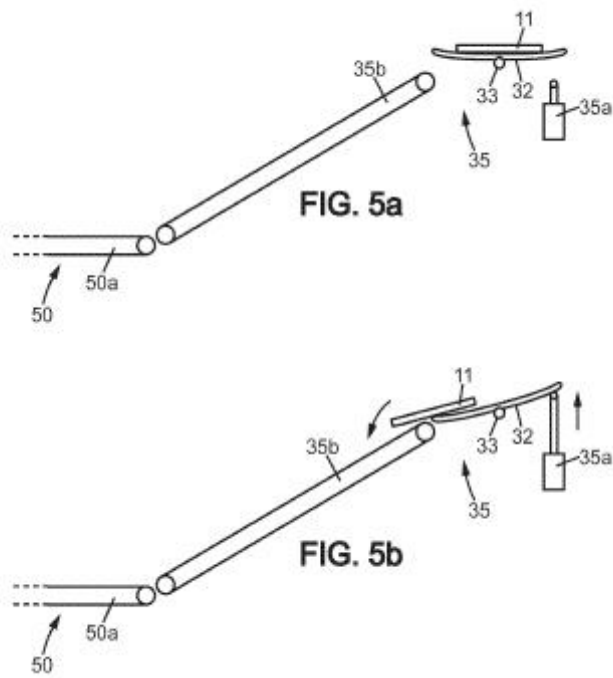
B65H 29/48

by tables arranged to be tilted to cause sliding of articles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



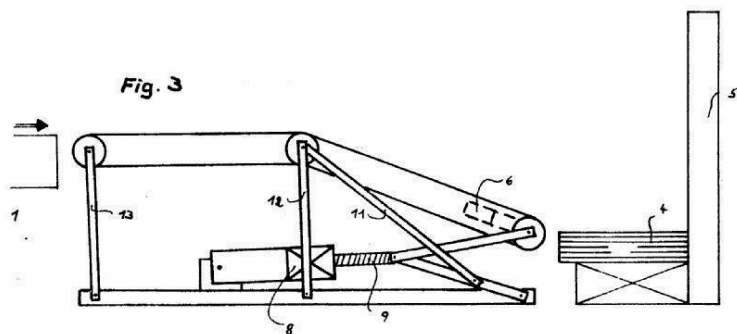
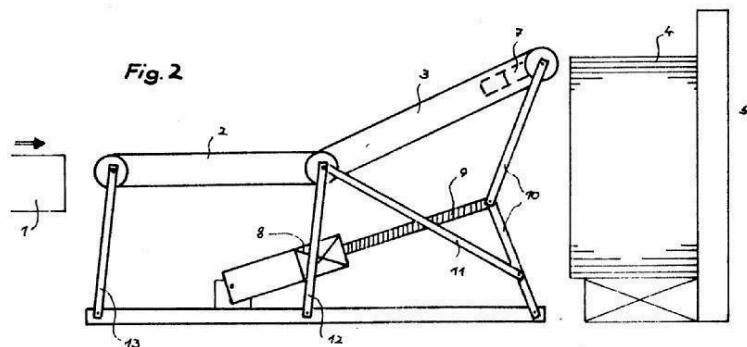
B65H 29/50

Piling apparatus of which the discharge point moves in accordance with the height to the pile

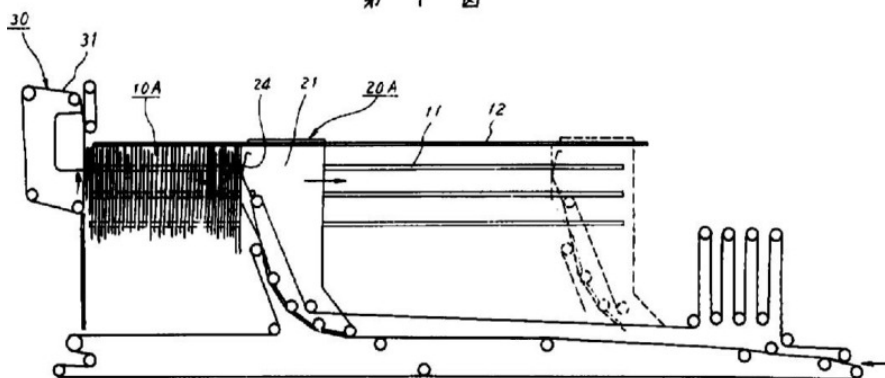
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



第 1 圖



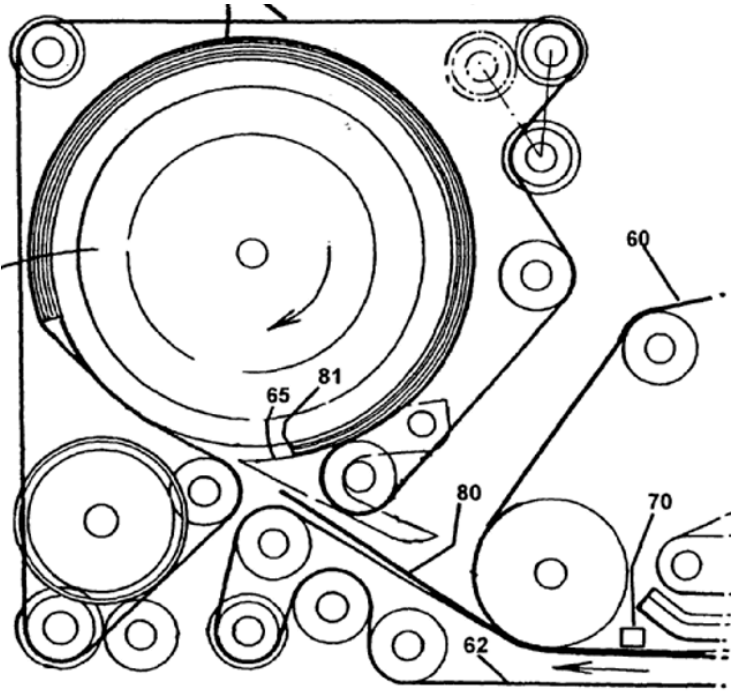
B65H 29/51

piling by collecting on the periphery of cylinders

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

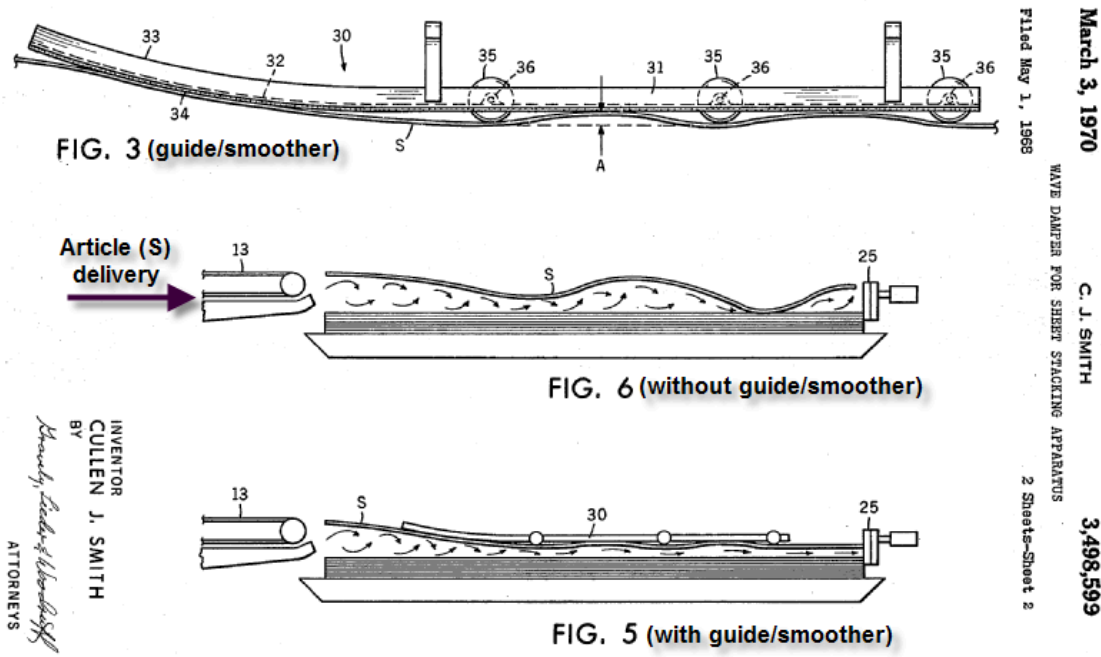
Rotary folders	B65H 45/16
Moving, guiding handled material by means in contact with opposite faces of handled material	B65H 2301/4431
Storing banknotes	G07D 11/12

B65H 29/52

Stationary guides or smoothers

Definition statement

This place covers:

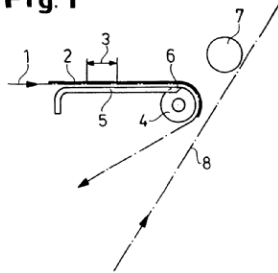
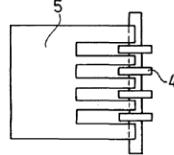


B65H 29/54**Article strippers, e.g. for stripping from advancing elements****Definition statement***This place covers:*

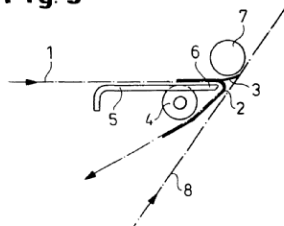
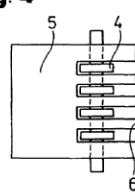
Illustrative example of subject matter classified in this group:

ZEICHNUNGEN SEITE 1

Nummer: DE 198 35 991 A1
 Int. Cl. 7: B 31 D 1/02
 Offenlegungstag: 17. Februar 2000

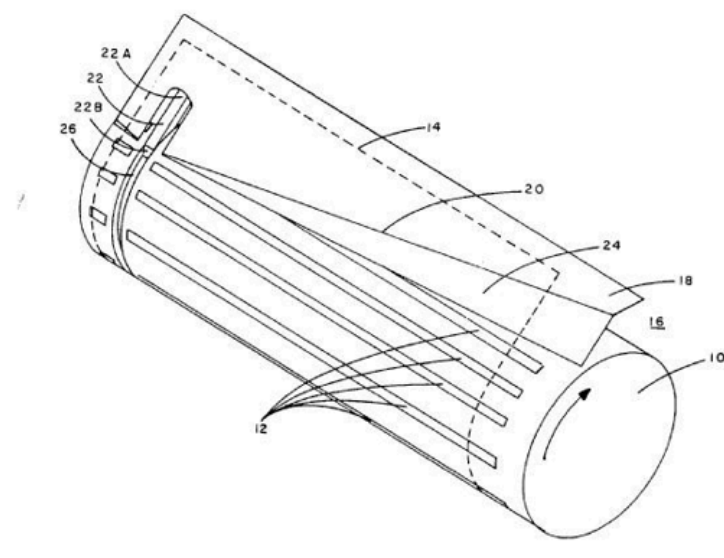
Fig. 1**Fig. 2**

Article (3) gets
stripped from
substrate (2)

Fig. 3**Fig. 4****B65H 29/56****for stripping from elements or machines {(for electrographic machines [G03G](#))}****Definition statement***This place covers:*

Article strippers for removing from elements or machines, e.g. removing sheets from printing cylinders.

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Removing a copy sheet from a xerographic drum, band or plate	G03G 15/6532
--	------------------------------

B65H 29/58

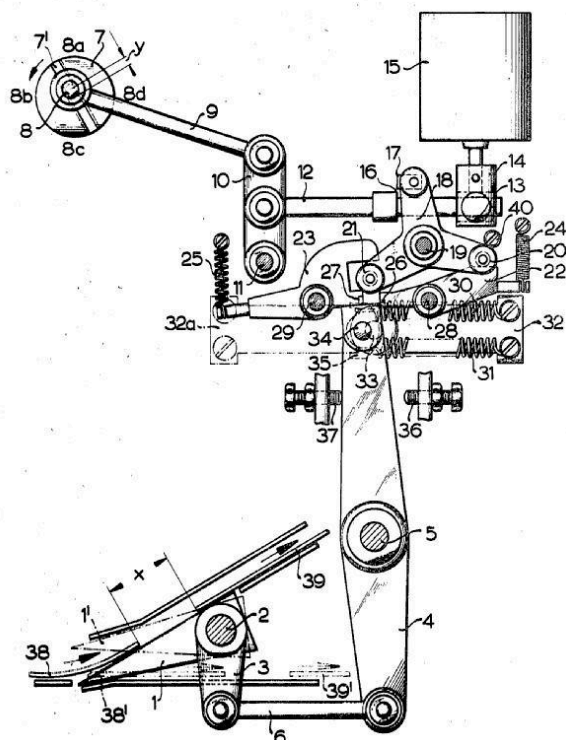
Article switches or diverters

Definition statement

This place covers:

Constructional details of article switches or diverters, e.g. shape, material, actuation means.

Illustrative example of subject matter classified in this group:



References

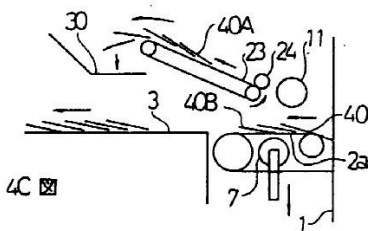
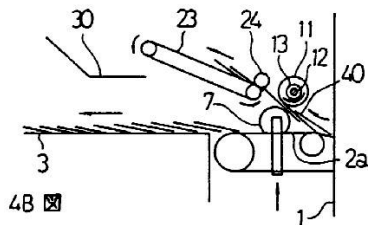
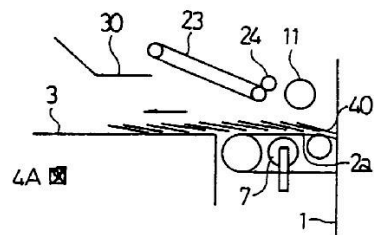
Informative references

Attention is drawn to the following places, which may be of interest for search:

Duplicate, alternate, selective or coacting feeds	B65H 5/26:
Diverting sheets at a section where at least two sheet conveying paths converge, e.g. by a movable switching guide that blocks access to one conveying path and guides the sheet to another path, e.g. when a sheet conveying direction is reversed after printing on the front of the sheet has been finished and the sheet is guided to a sheet turning path for printing on the back]	B41J 13/009

B65H 29/585**{taking samples from the main stream}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



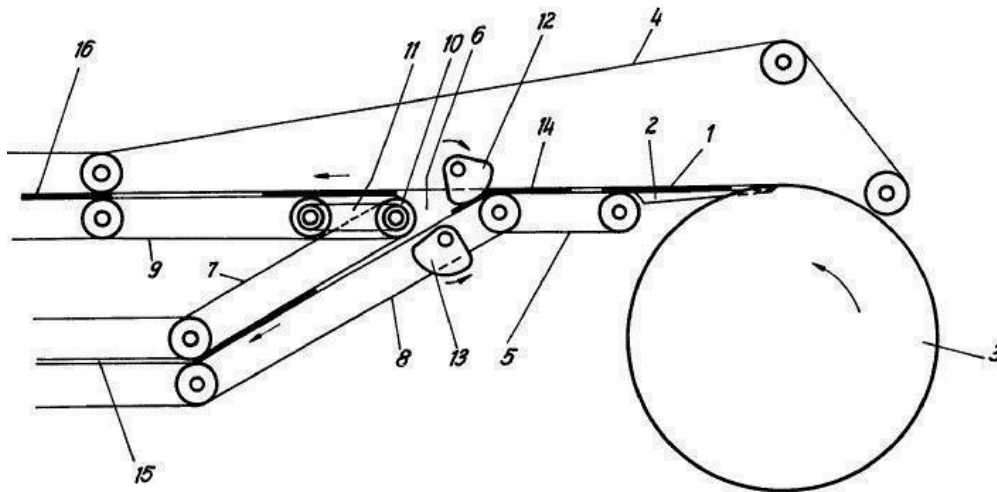
B65H 29/60

diverting the stream into alternative paths (**B65H 29/62** takes precedence)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



This sub-group also covers particularities of paths, like paths arrangement or coordination, in terms of

IBM[®] Technical Disclosure Bulletin Vol. 18 No. 7 December 1975

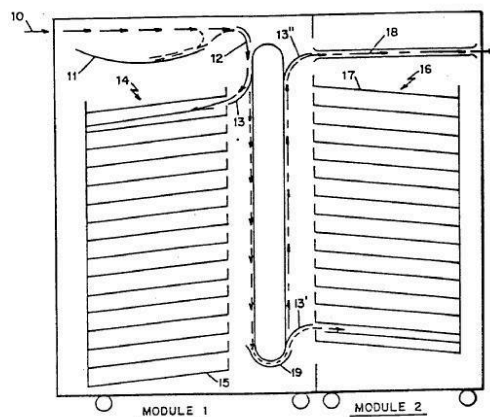
XP 002031328

G03g¹⁵/00g.

TWO-MODULE COLLATOR

M. D. Avritt

P.D. 12-1475
P. 2071-2072 = 2
B65H²⁹/50
B65H35/11



This two-module collator is serviced by one movable sheet deflector which steps counterclockwise down one module and then up the other module, deflecting sheets into the bins of each module.

Copy sheets exit a copier, not shown, while traveling along path 10.

switching or diverting a stream of articles.

References

Limiting references

This place does not cover:

diverting faulty articles from the main streams (control devices detecting faulty articles	B65H 29/62
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Construcional details per se of article switches or diverters	B65H 29/58
---	----------------------------

B65H 29/62

diverting faulty articles from the main streams (control devices detecting faulty articles [B65H 43/04](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Use of control, checking, or safety devices, e.g. automatic devices comprising an element for sensing a variable, namely detecting, or responding to, presence of faulty articles	B65H 43/04
---	----------------------------

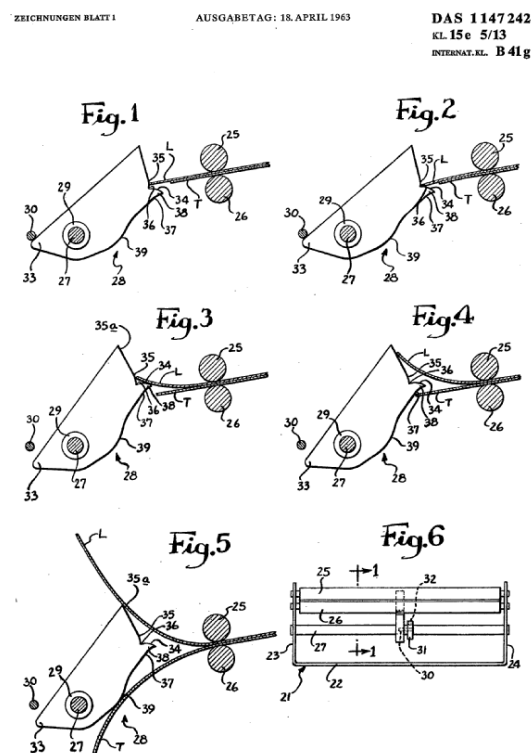
B65H 29/64

directing the components of composite articles into separate paths

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 29/66**

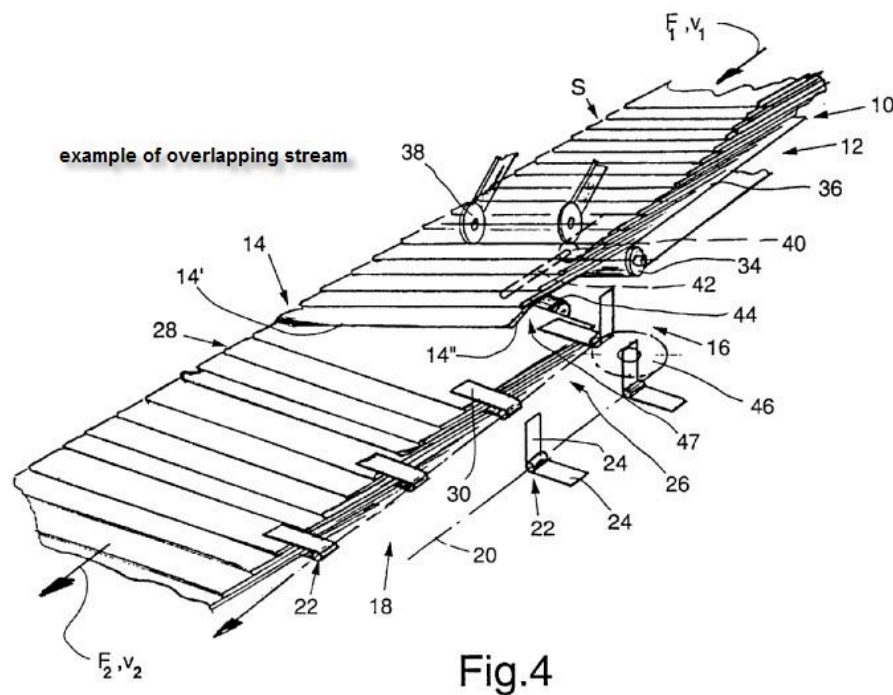
Advancing articles in overlapping streams

Definition statement

This place covers:

Advancing articles in shingled formation.

Illustrative example of subject matter classified in this group:



U.S. Patent May 18, 2004 Sheet 2 of 6 US 6,736,391 B1

Special rules of classification

This main-group should be used only for subject-matter (i.e. advancing articles in overlapping streams) not being covered by any of its lower sub-groups.

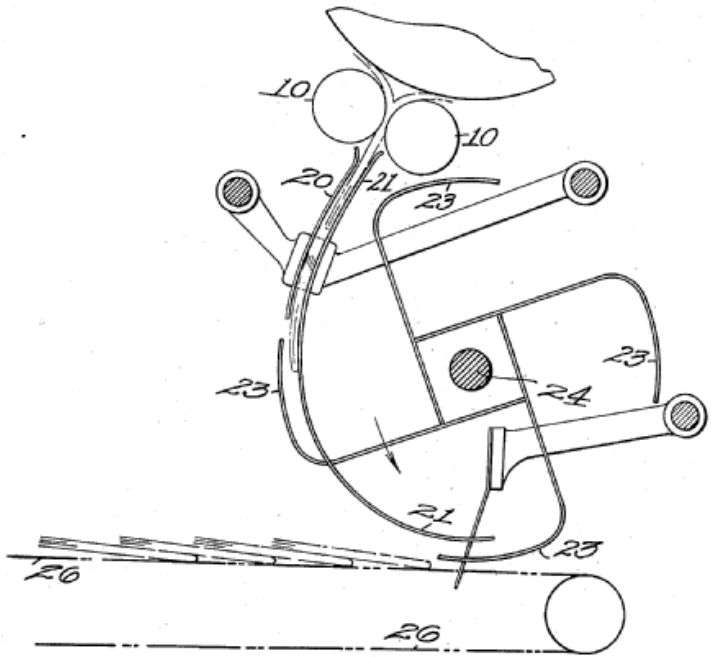
B65H 29/6609

{forming an overlapping stream (by separation of articles from a pile
B65H 5/24)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



1,363,030.

H. A. W. WOOD AND A. E. FAY,
APPARATUS FOR DELIVERING FOLDED SHEETS.
APPLICATION FILED JUNE 17, 1918.
Patented Dec. 21, 1920.

References

Limiting references

This place does not cover:

by separation of articles from a pile	B65H 5/24
---------------------------------------	-----------

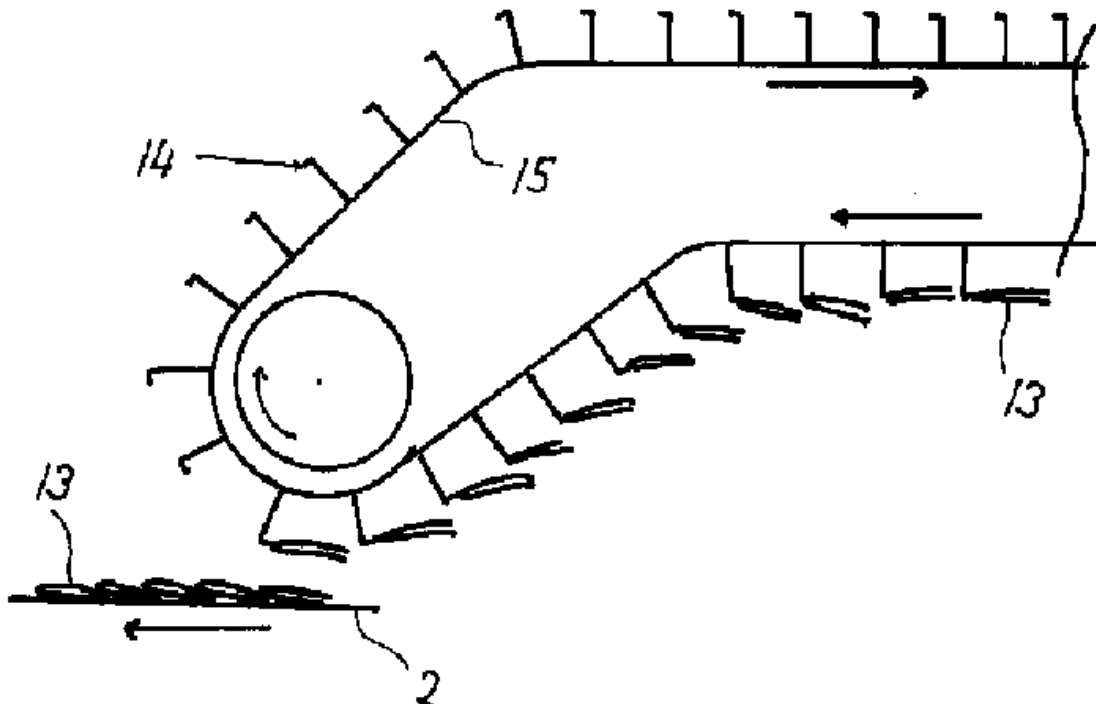
B65H 29/6618

{upon transfer from a first conveyor to a second conveyor advancing at slower speed}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**Special rules of classification**

This group should be used only for subject-matter (i.e. forming an overlapping stream upon transfer from a first conveyor to a second conveyor advancing at slower speed) not being covered by any of its lower sub-groups.

B65H 29/6627

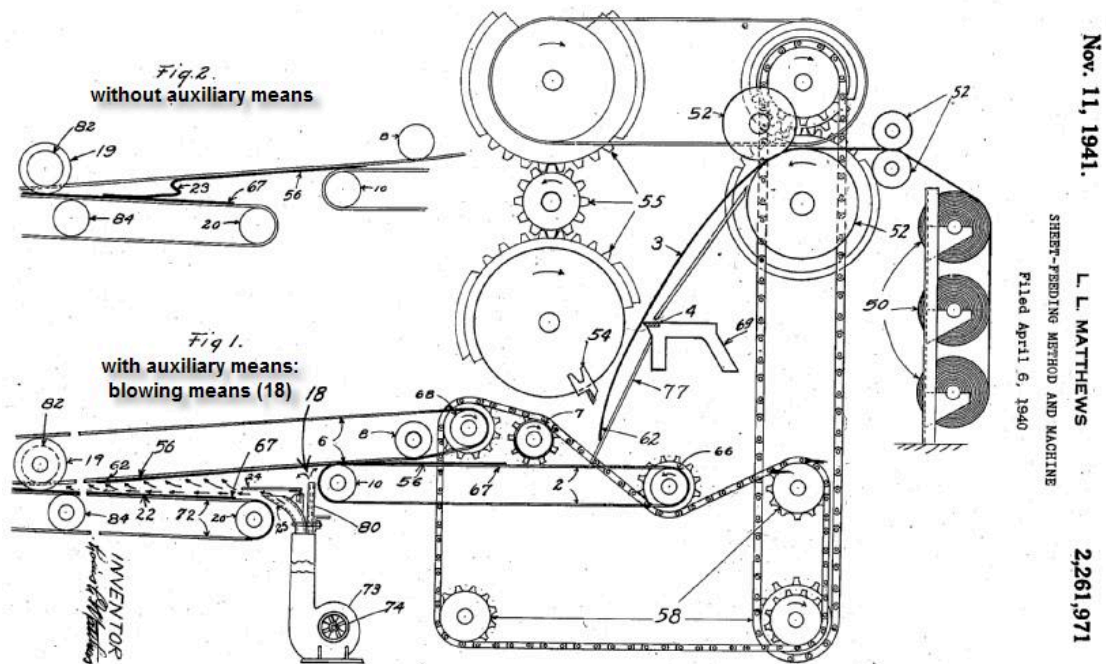
{in combination with auxiliary means for overlapping articles}

Definition statement

This place covers:

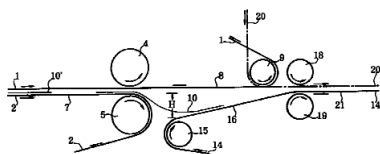
Auxiliary means facilitating the formation of a proper overlap between two articles.

Illustrative example of subject matter classified in this group:

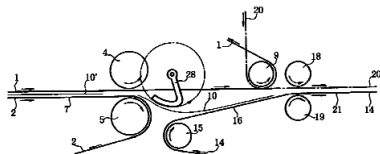


(5) 特開平5-238589

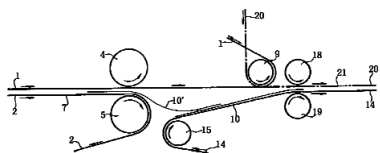
【図2】



【図3】



【図4】



【図5】



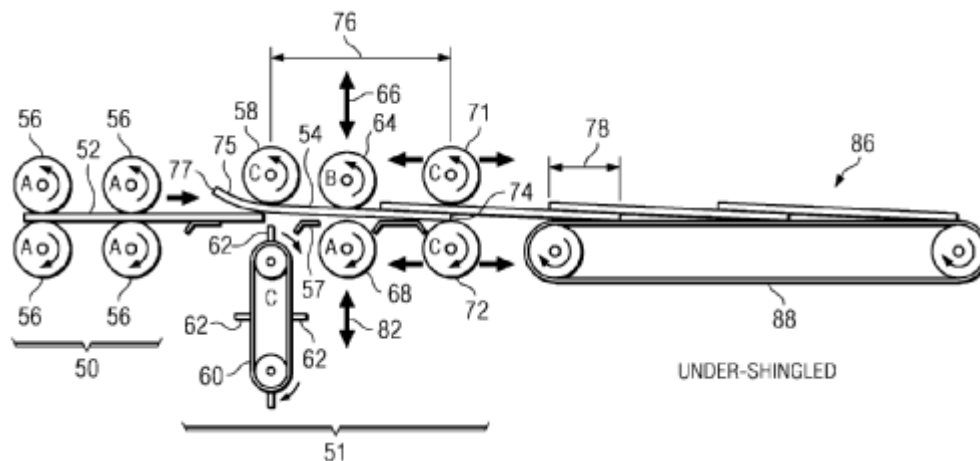
B65H 29/6636

{in combination with auxiliary means for underlapping articles}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 29/6645**

{buffering an overlapping stream of articles (winding articles into rolls
[B65H 29/006](#))}

Definition statement

This place covers:

Buffering of a stream of articles in shingled formation, e.g. for compensating a downstream speed reduction.

Definition statement

Illustrative example of subject matter classified in this group:

U.S. Patent

Apr. 17, 1984

4,443,287

Fig.1

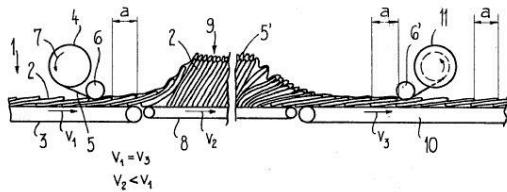
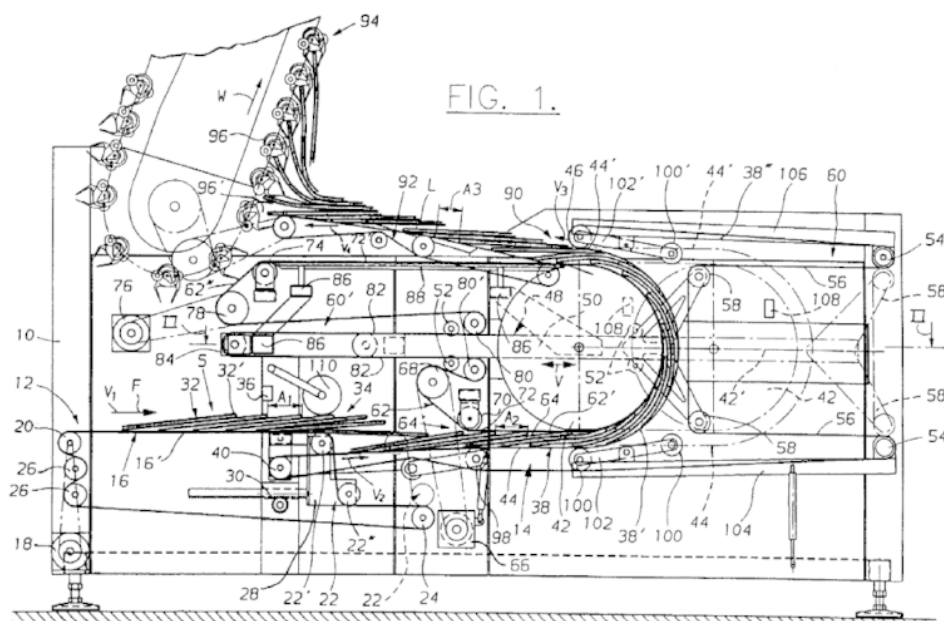
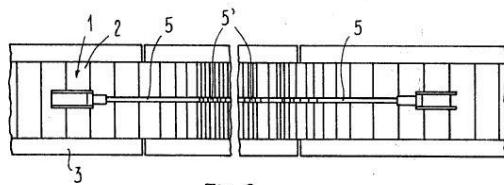


Fig. 2



U.S. Patent

Mar. 3, 1998

Sheet 1 of 5

5,722,655

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Widing articles, e.g. in shingled formation, into rolls	B65H 29/006
---	-----------------------------

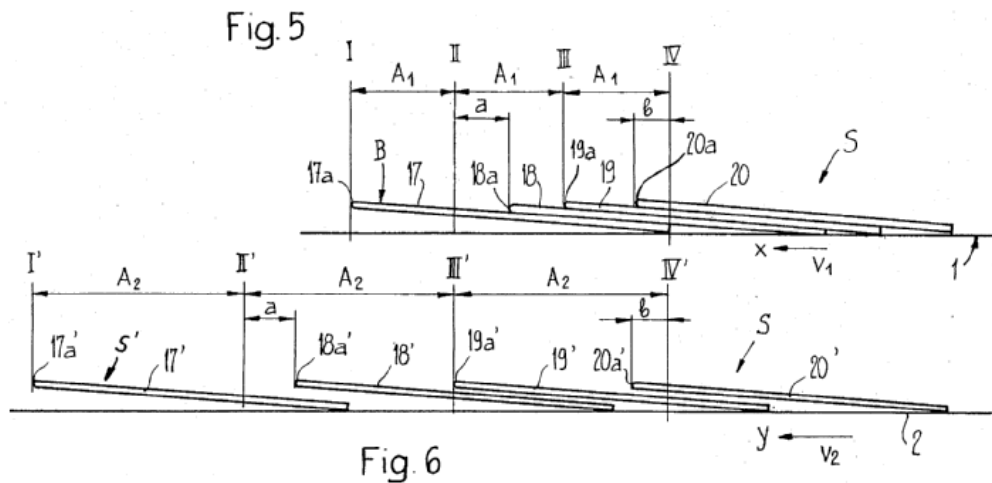
B65H 29/6654

{changing the overlapping figure}

Definition statement*This place covers:*

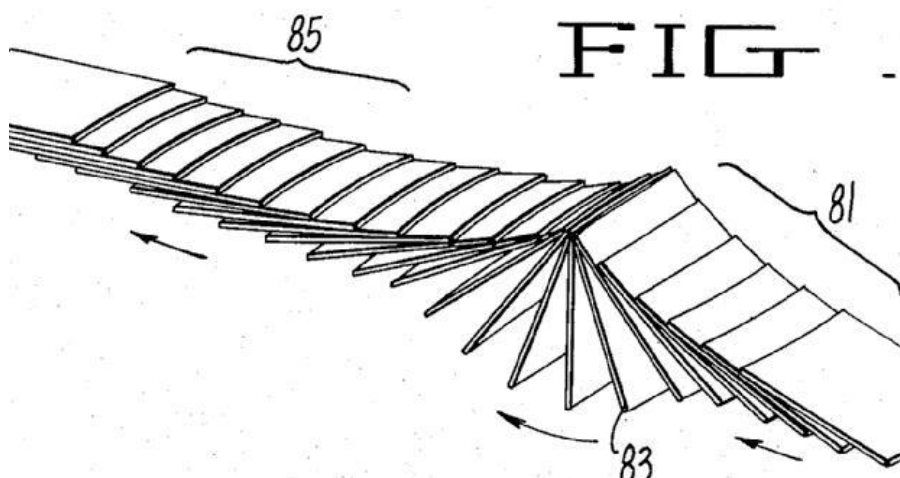
Changing the overlapping figure, e.g. changing the amount of overlap.

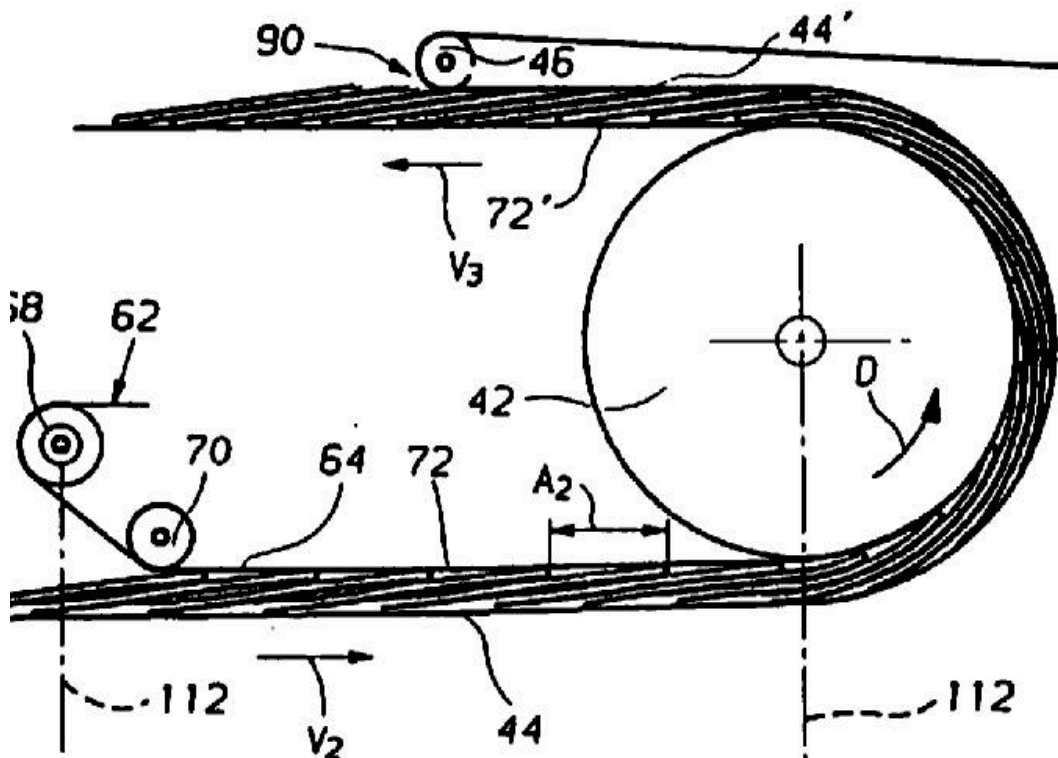
Illustrative example of subject matter classified in this group:

**B65H 29/6663**{reversing the overlapping figure (round stack feeder [B65H 1/225](#))}**Definition statement***This place covers:*

Reversing the overlapping figure from overlapping figure to underlapping figure, or viceversa.

Illustrative example of subject matter classified in this group:





References

Limiting references

This place does not cover:

Round stack feeders	B65H 1/225
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B65H 29/6672

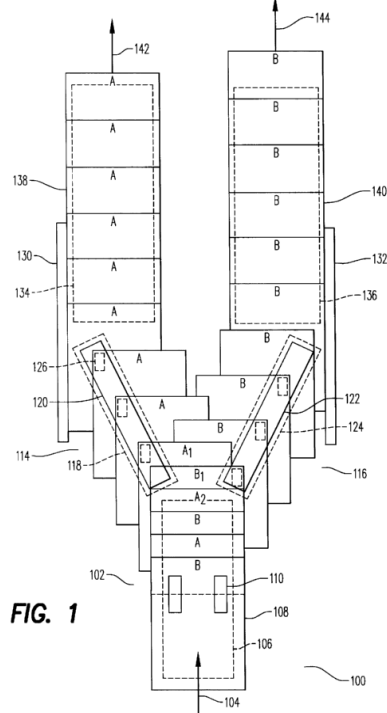
{dividing an overlapping stream into two or more streams; (articles switches or diverters [B65H 29/58](#))}

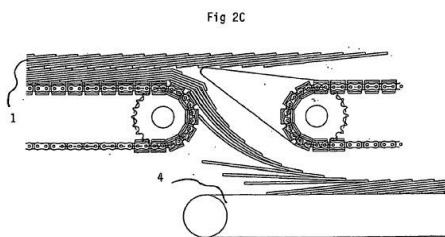
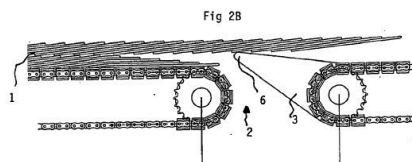
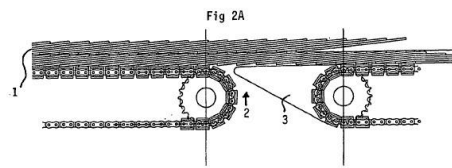
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

U.S. Patent Dec. 5, 2000 Sheet 1 of 4 6,155,562





References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Constructional details of article switches or diverters	B65H 29/58
---	----------------------------

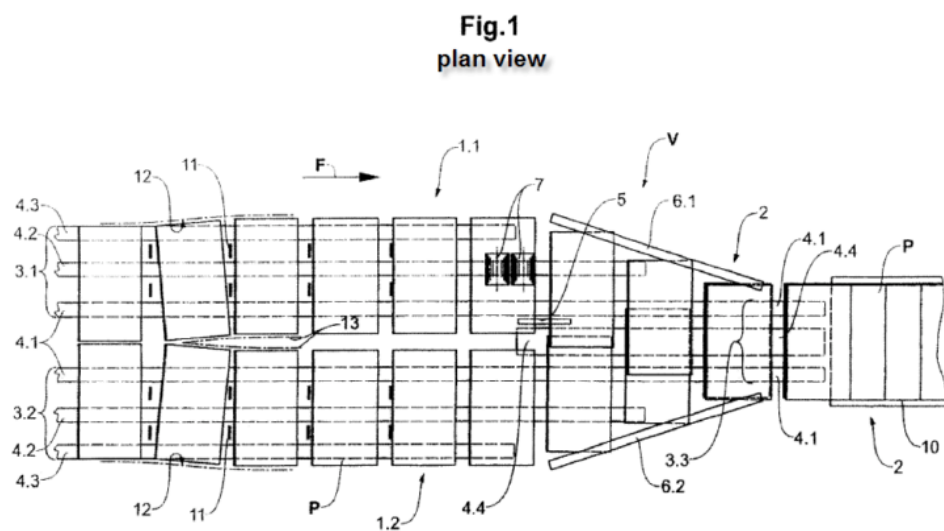
B65H 29/6681

{merging two or more streams into an overlapping stream}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 29/669

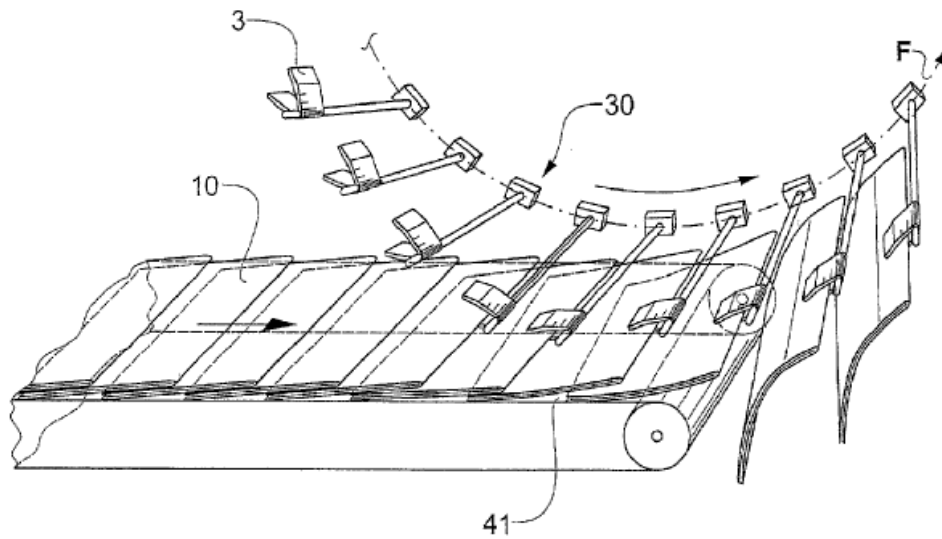
{ending an overlapping stream}

Definition statement

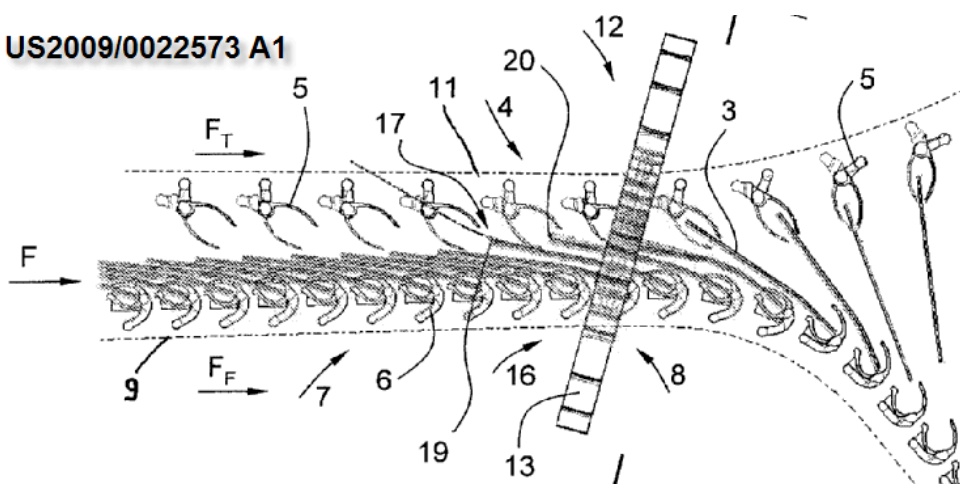
This place covers:

Illustrative example of subject matter classified in this group:

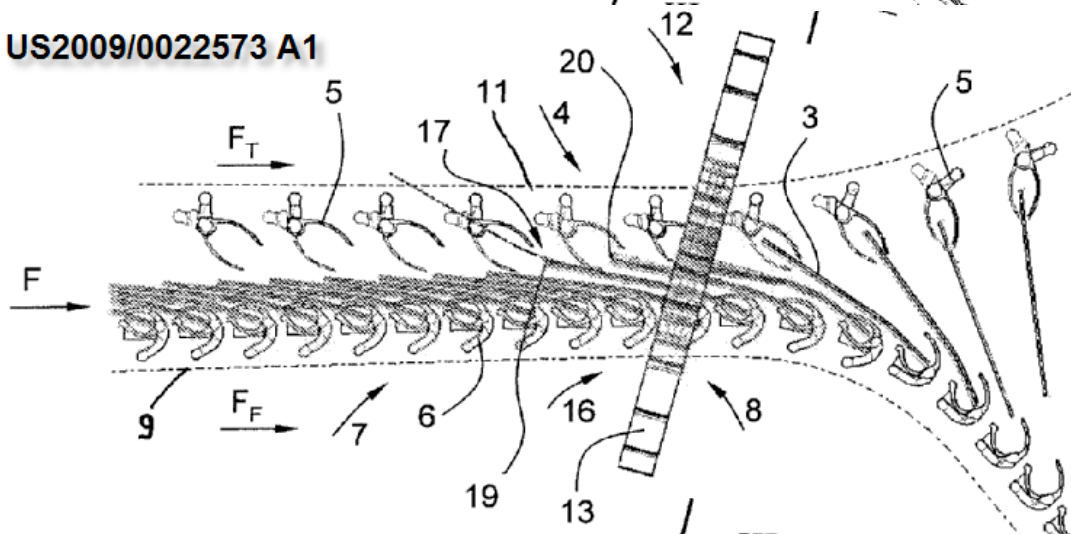
Fig.9



US2009/0022573 A1



US2009/0022573 A1



B65H 29/68**Reducing the speed of articles as they advance****Definition statement**

This place covers:

Arrangements for reducing the speed of articles as they advance.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Deceleration	3F053/GA00/Ft
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Special rules of classification

This main-group should be used only for subject-matter (i.e. reducing the speed of articles as they advance) not being covered by any of its lower sub-groups.

B65H 29/683

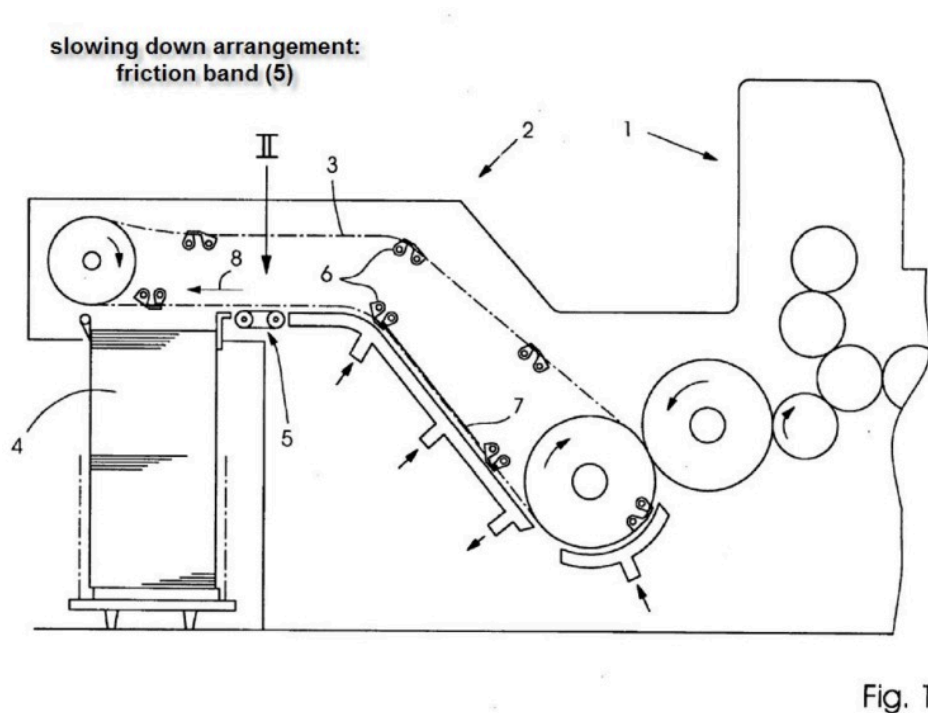
{Slowing-down from chain delivery ([B65H 29/686](#) takes precedence)}

Definition statement

This place covers:

In particular arrangements for decelerating sheets in a "Bogenausleger" of a rotary printing machine, just before their piling.

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Reducing the speed of articles as they advance	B65H 29/686
--	-----------------------------

B65H 29/686

{Pneumatic brakes}

Definition statement

This place covers:

Pneumatic means for reducing the speed of articles as they advance, e.g. suction rollers or belts making friction contact with the face of sheets, thus decelerating them from chain delivery just before being piled at a "Bogenausleger" of a rotary printing machine.

References

Informative references

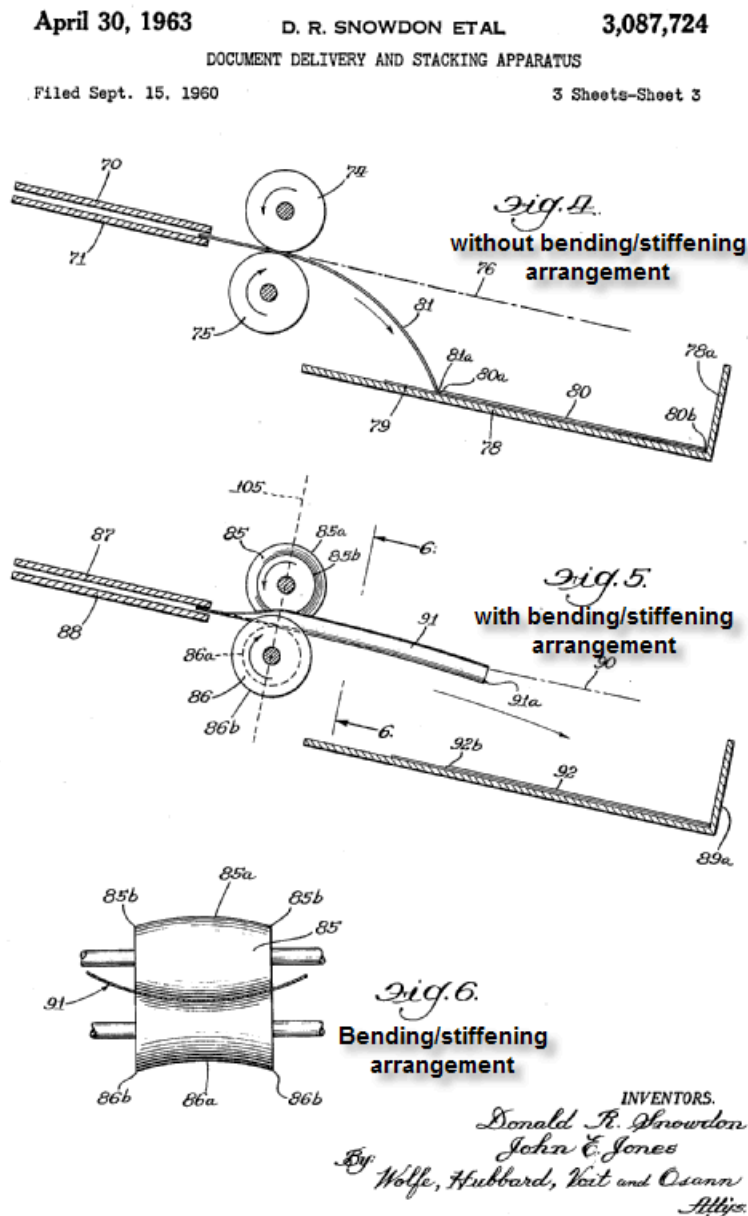
Attention is drawn to the following places, which may be of interest for search:

(Deceleration) utilising suction force by air	3F053/GA07/FT
Suction belts, chains	3F053/GA08/FT
Suction rollers, pulleys	3F053/GA09/FT
Suction plates	3F053/GA10/FT

B65H 29/70**Article bending or stiffening arrangements****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 31/00****Pile receivers (carriers used for associating, collating or gathering articles
[B65H 39/00](#))****Definition statement**

This place covers:

Pile receivers.

References

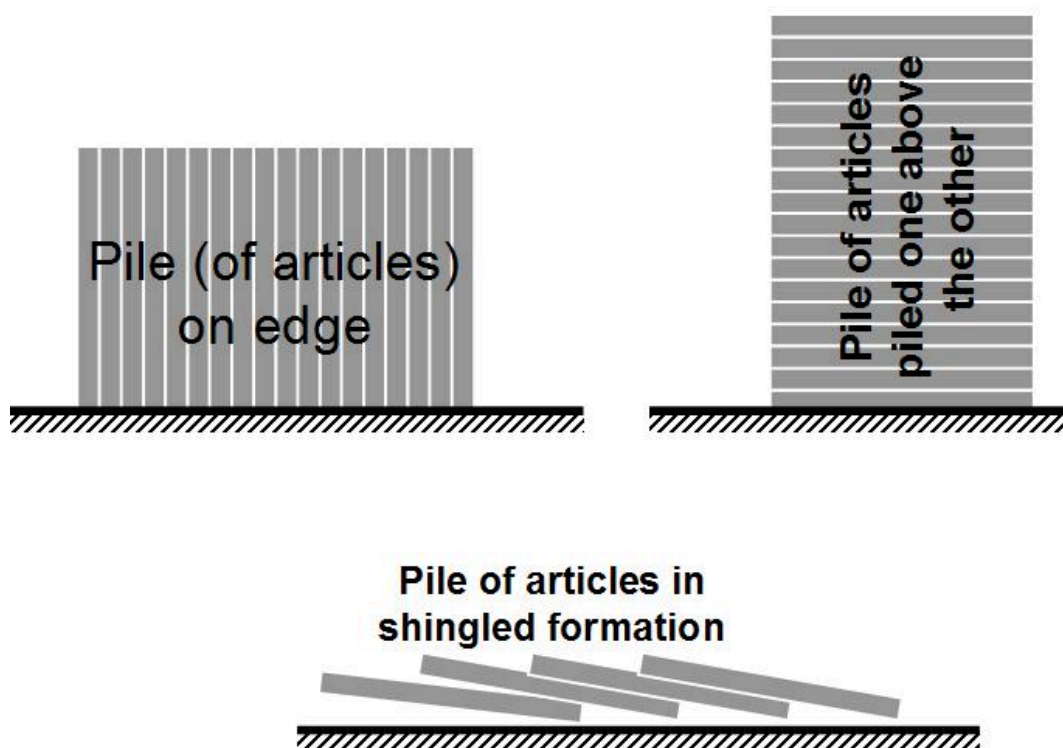
Informative references

Attention is drawn to the following places, which may be of interest for search:

Pile receivers intimately associated with supports or magazines for piles from which articles are to be separated	B65H 1/00
Carriers used for associating, collating, or gathering articles	B65H 39/00
Combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling	B65H 83/00

Special rules of classification

This main-group should be used only for pile receivers not being covered by any of its lower sub-groups.



Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Belt	band, tape
Chain	a row of article handling elements, each interlinked with the adjacent one

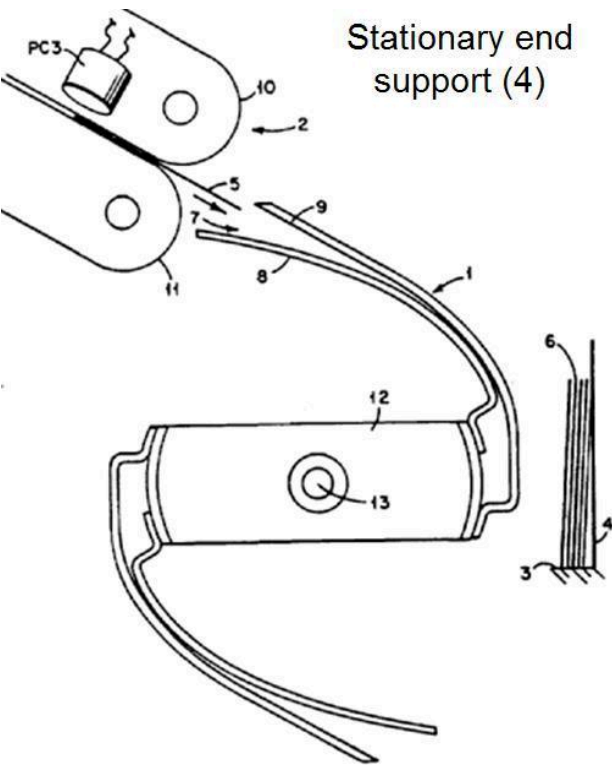
B65H 31/02

with stationary end support against which pile accumulates

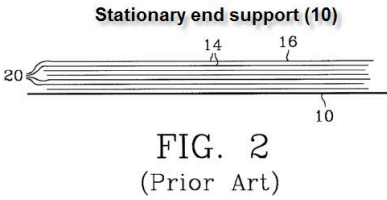
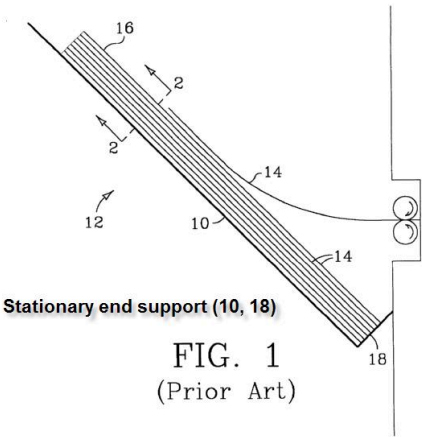
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Patent Application Publication Sep. 26, 2002 Sheet 1 of 12 US 2002/0135121 A1



B65H 31/04

with movable end support arranged to recede as pile accumulates

Definition statement

This place covers:

Pile receiver with movable end support arranged to recede as pile accumulates, the articles being piled e.g. in shingled formation.

Special rules of classification

This group should be used only for subject-matter (i.e. pile receivers with movable end support arranged to recede as pile accumulates) not being covered by any of its lower sub-groups.

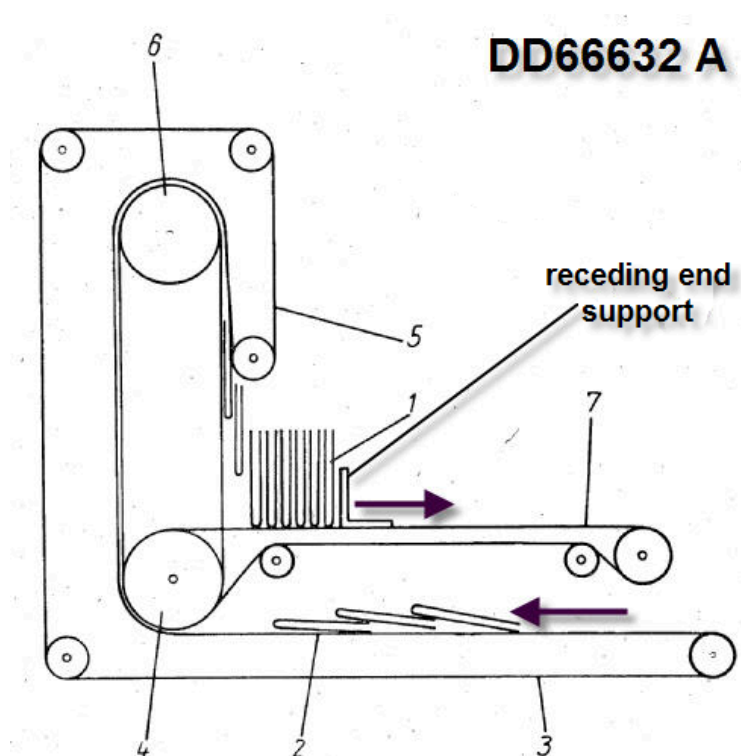
B65H 31/06

the articles being piled on edge

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



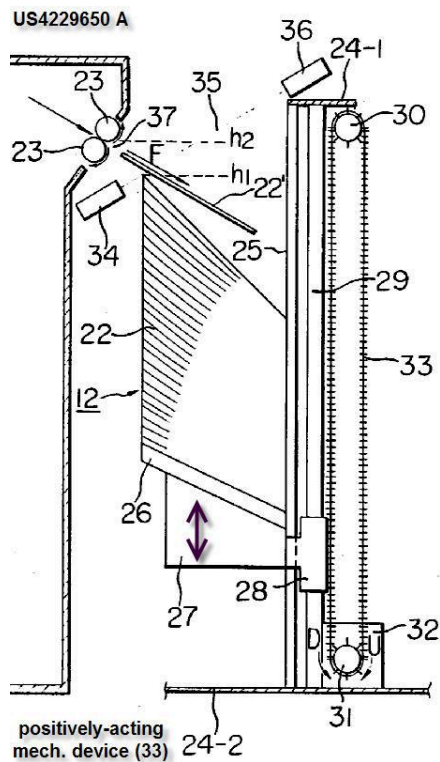
B65H 31/10

and applied at the top of the pile

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 31/12**

Devices relieving the weight of the pile or permitting or effecting movement of the pile end support during piling

Special rules of classification

This group should be used only for subject-matter (i.e. devices relieving the weight of the pile or permitting or effecting movement of the pile end support during piling) not being covered by any of its lower sub-groups.

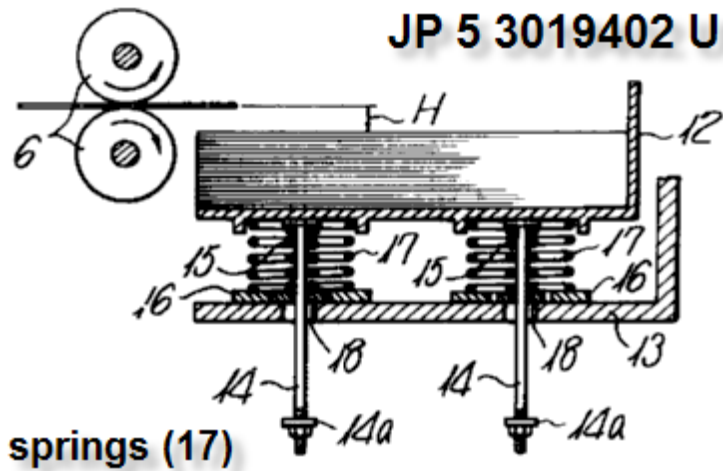
B65H 31/14

Springs (fluid springs [B65H 31/16](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Springs, e.g. mechanical springs.

References

Limiting references

This place does not cover:

Fluid pressure devices, e.g. fluid springs	B65H 31/16
--	----------------------------

B65H 31/16

Fluid-pressure devices

Definition statement

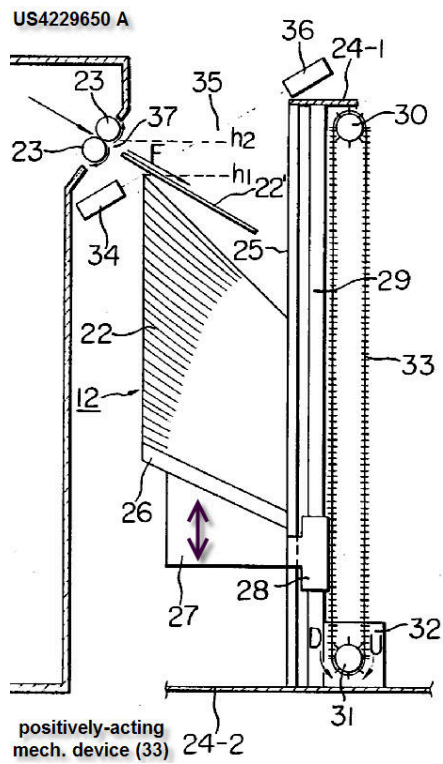
This place covers:

Fluid-pressure devices, like fluid springs.

B65H 31/18**Positively-acting mechanical devices****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



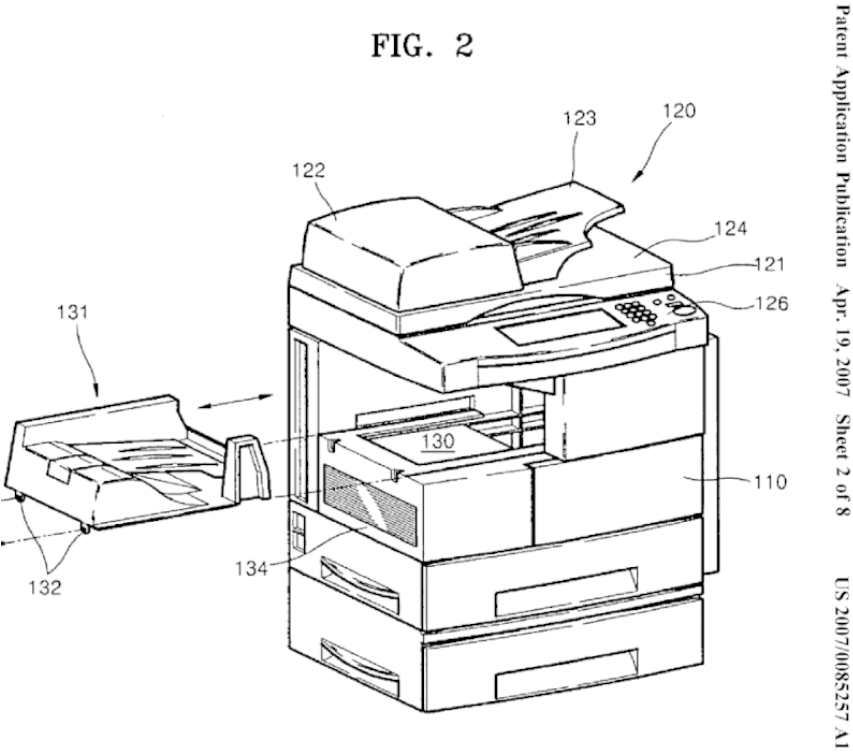
B65H 31/22

removable or interchangeable

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 31/24

multiple or compartmented, e.d. for alternate, programmed, or selective filling

References

Informative references

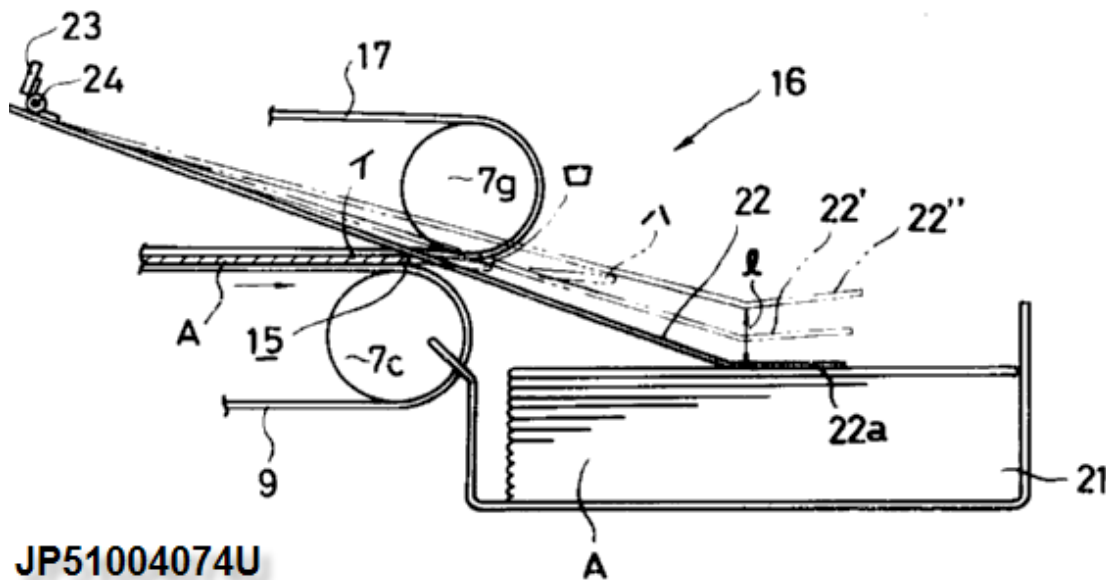
Attention is drawn to the following places, which may be of interest for search:

Forming counted batches by diverting batches to separate receivers:	B65H 33/14
Forming counted batches by depositing articles in batches on moving supports:	B65H 33/16
Pile receiver: Forming counted batches Multiple receivers	3F054/BF00/FT, 3F107/CD+

B65H 31/26**Auxiliary devices for retaining articles in the pile****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



JP51004074U

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

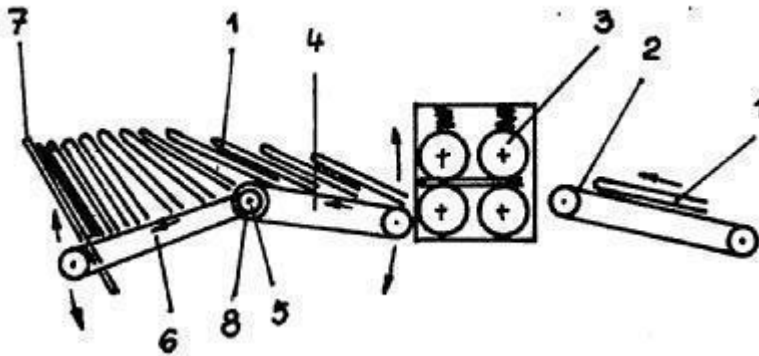
Maintaining pile , preventing collapse of cargo piles	3F054/BG00/FT
---	---------------

B65H 31/28**Bands, chains, or like moving receivers (for articles piled on edge [B65H 31/06](#))****Definition statement**

This place covers:

Pile receivers being conveying bands, chains or the like, that move during piling in order to enable the piling of articles thereon.

Illustrative example of subject matter classified in this group:



Patent Application Publication Jun. 17, 2010 Sheet 6 of 9 US 2010/0148416 A1

Example without end support against which pile of articles accumulates

FIG. 6a

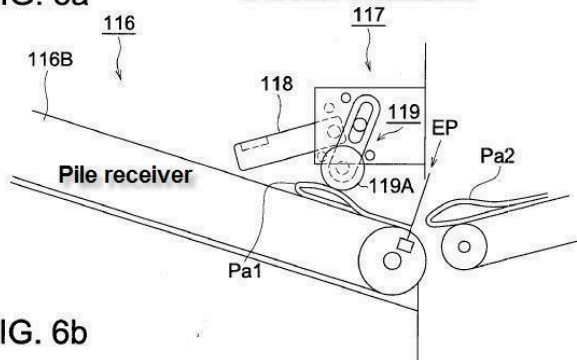
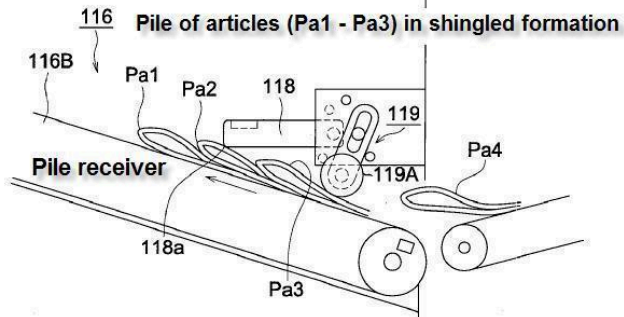


FIG. 6b



References

Limiting references

This place does not cover:

Delivering or advancing articles from machines; Advancing articles to or into piles by means of the nip between two, or between two sets of, moving tapes or bands the pile being formed between the two, or between the two sets of, tapes or bands or rollers]	B65H 29/145
Delivering or advancing articles from machines; Advancing articles to or into piles by contact of one face only with moving tapes, bands, or chains and introducing into a pile	B65H 29/18
Pile receivers with movable end support arranged to recede as pile accumulates the articles being piled on edge	B65H 31/06

Informative references

Attention is drawn to the following places, which may be of interest for search:

Delivering, advancing completed piles by moving a belt supporting the lowermost article of the pile:	B65H 31/3054
Forming counted batches in stream of articles by depositing articles in batches on moving supports:	B65H 33/16

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Chain	a row of article handling elements, each interlinked with the adjacent one.
-------	---

B65H 31/30

Arrangements for removing completed piles (bands, chains, or like moving receivers [B65H 31/28](#))

Definition statement

This place covers:

Arrangements for delivering, advancing completed piles.

Special rules of classification

This main-group should be used only for arrangements for delivering or advancing completed piles not being covered by any of its lower sub-groups.

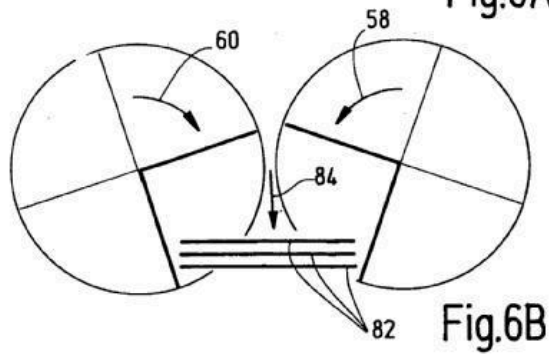
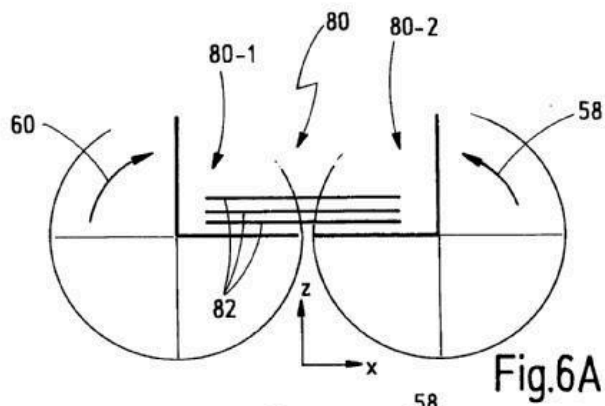
B65H 31/3018

{from opposite part-support elements, e.g. operated simultaneously}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Example, side view

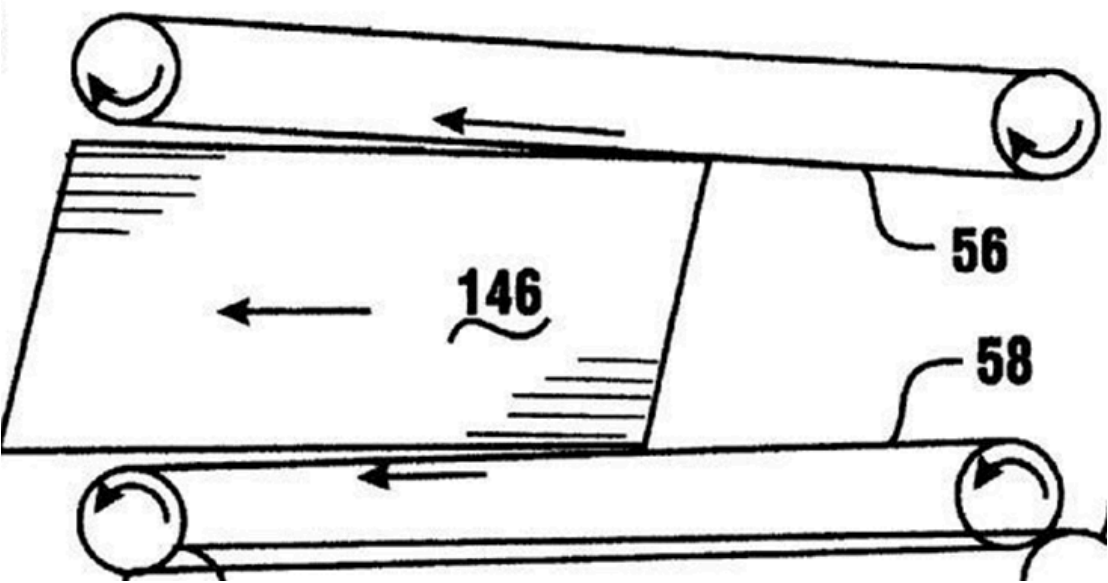
B65H 31/3027

{by the nip between moving belts or rollers (pile being formed between belts or rollers [B65H 29/145](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Introducing articles into piles, by means of the nip between two, or between two sets of, moving tapes or bands, the pile being formed between the two, or between the two sets of, tapes or bands:	B65H 29/145
---	-----------------------------

B65H 31/3036

{by gripping the pile}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Overturning piles:	B65H 15/02
Stacker cranes:	B65G 1/0407

B65H 31/3045

{on the outermost articles of the pile for clamping the pile}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

WO 2011/036157

PCT/EP2010/063927

Example of gripping a pile of articles on edge

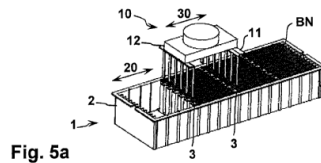


Fig. 5a

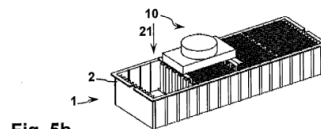


Fig. 5b

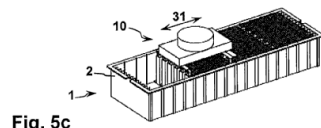


Fig. 5c

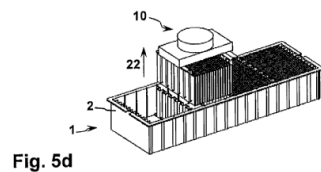


Fig. 5d

B65H 31/3054

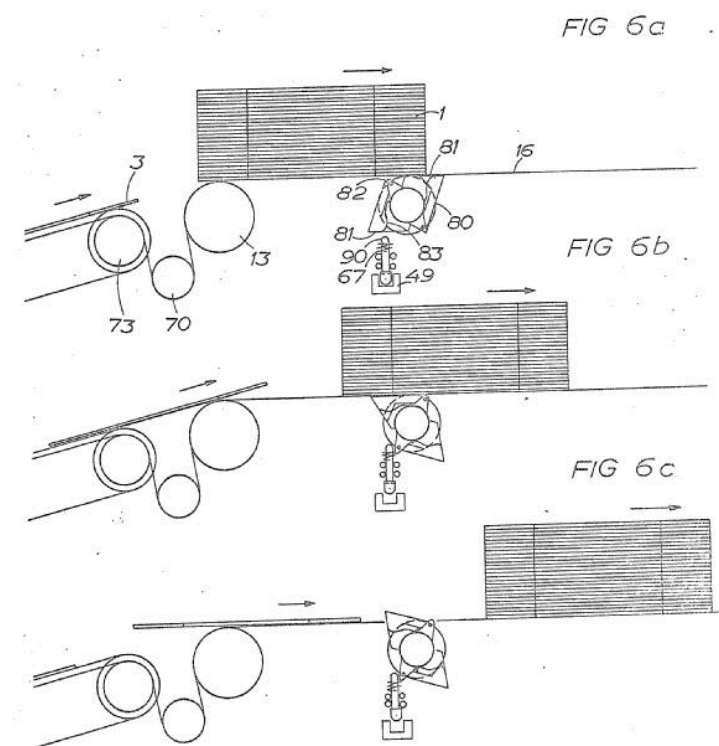
{by moving the surface supporting the lowermost article of the pile, e.g. by using belts or rollers}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

NL287910A



B65H 31/3063

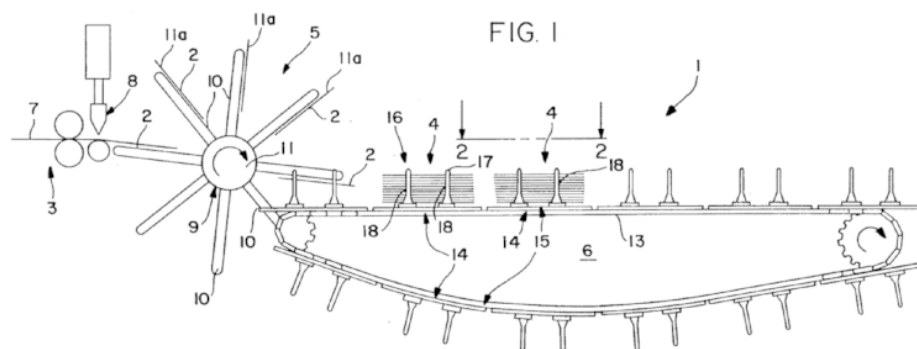
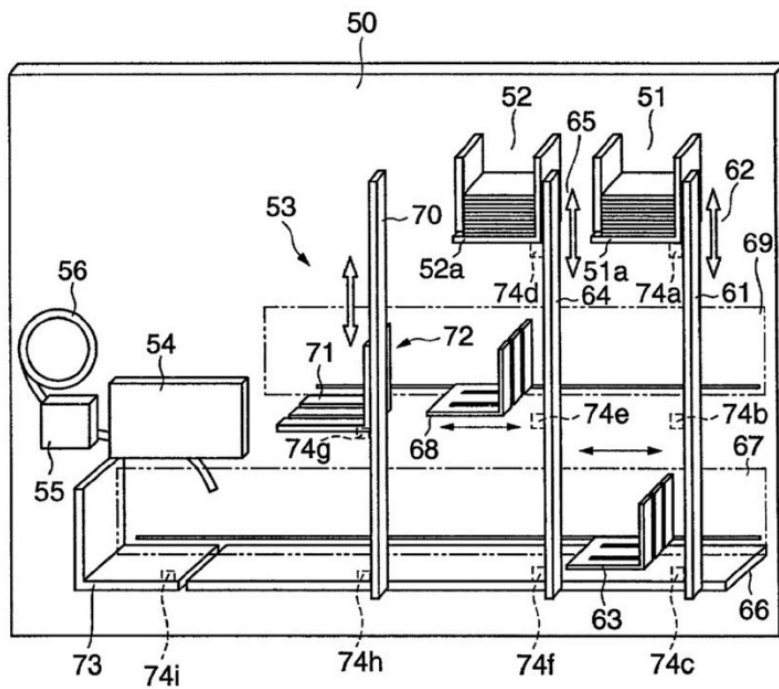
{by special supports like carriages, containers, trays, compartments, plates or bars, e.g. moved in a closed loop}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Patent Application Publication Oct. 24, 2002 Sheet 3 of 15 US 2002/0153290 A1



U.S. Patent

Dec. 24, 1991

Sheet 1 of 2

5,074,735

B65H 31/3081

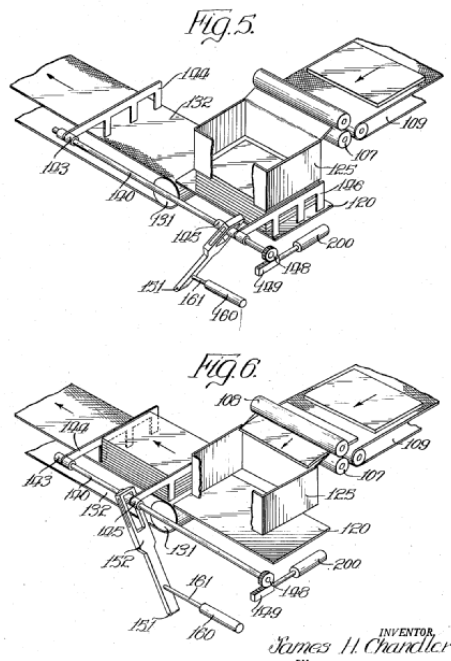
{by acting on edge of the pile for moving it along a surface, e.g. by pushing}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

March 16, 1954 J. H. CHANDLER 2,672,079
ARTICLE HANDLING AND STACKING MACHINE
Filed Feb. 25, 1950 5 Sheets-Sheet 4

**B65H 31/32**

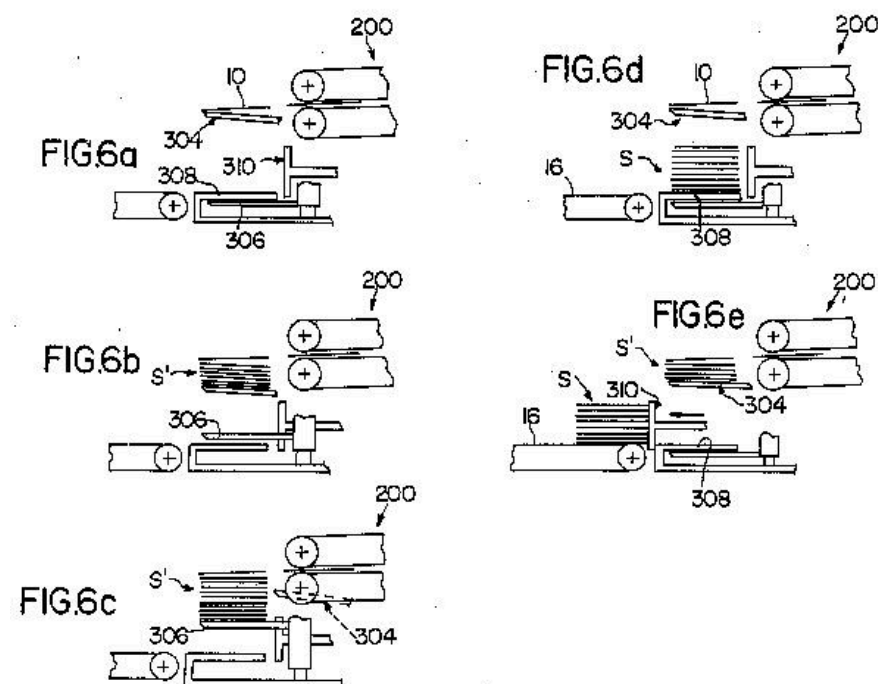
Auxiliary devices for receiving articles during removal of a completed pile

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Auxiliary device = element with reference sign 304



B65H 31/34

Apparatus for squaring-up piled articles

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Matching	3F054/BH00/FT
Registration of pile	3F343/HE+/FT

Special rules of classification

This main-group should be used only for subject-matter (i.e. apparatus for squaring-up piled articles) not being covered by any of its lower sub-groups

B65H 31/36

Auxiliary devices for contacting each article with a front stop as it is piled

Definition statement

This place covers:

Auxiliary devices for contacting each article with a front stop as it is piled, typically arrangements bringing each article as it is piled into registration against stopping means.

Illustrative example of subject matter classified in this group:

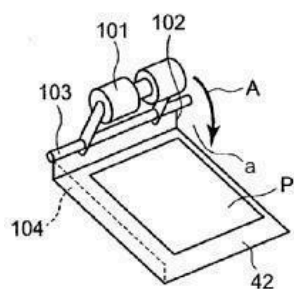


FIG. 7A

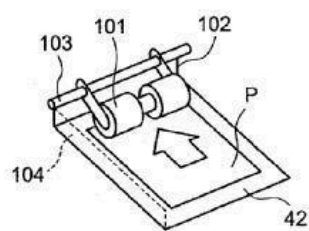


FIG. 7B

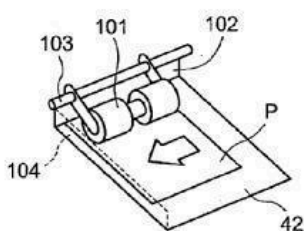


FIG. 7C

B65H 31/38

Apparatus for vibrating or knocking the pile during piling

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

low vibrating articles	3f054/bh11/Ft
------------------------	---------------

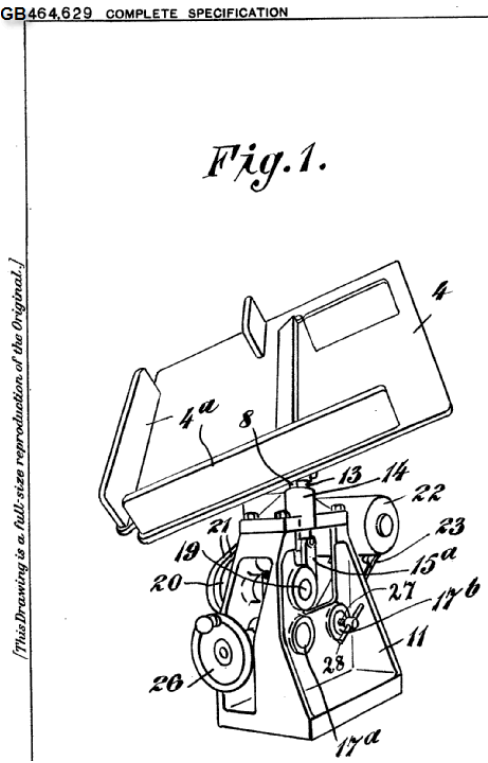
B65H 31/40

Separate receivers, troughs, and like apparatus for knocking-up completed piles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 33/00

Forming counted batches in delivery pile or stream of articles

Definition statement

This place covers:

Forming counted batches of a determined number of articles in delivery pile or stream of articles.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling	B65H 83/00
Forming of counted batches (FTCLA)	3F107/FT

Special rules of classification

This main-group should be used only for subject-matter (i.e. forming counted batches in delivery pile or stream of articles) not being covered by any of its lower sub-groups.

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Batch	Typically an articles pile, or certain determined articles of a group
-------	---

B65H 33/04

by inserting marker slips in pile or stream

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

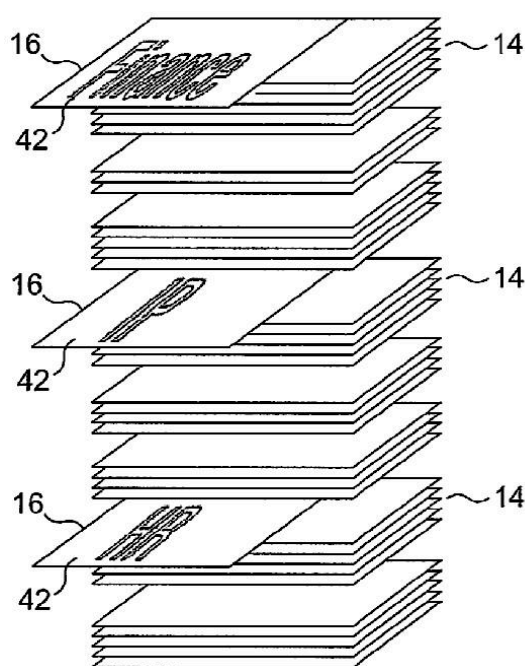


FIG. 3

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Placing job divider sheet between sets of sheets	G03G 15/655
Placing job divider sheet	G03G 2215/00894
Insertion of dividing members	3F107/CA+ (Japanese)

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Marker slip	Identification means to delimit a batch
-------------	---

B65H 33/06**by displacing articles to define batches****Special rules of classification**

This group should be used only for subject-matter (i.e. forming counted batches in delivery pile or stream of articles by displacing articles to define batches) not being covered by any of its lower sub-groups.

B65H 33/08**Displacing whole batches, e.g. forming stepped piles****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:

FR828477 A *Fig. 3.*

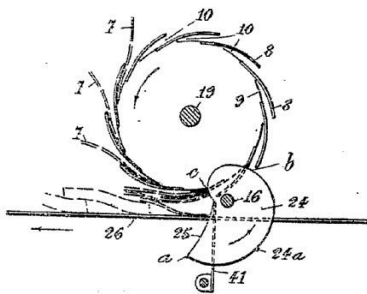
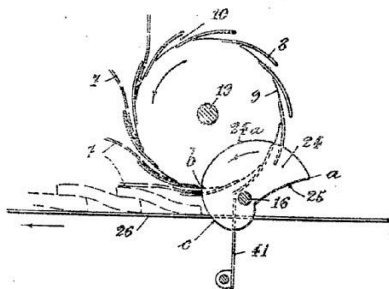
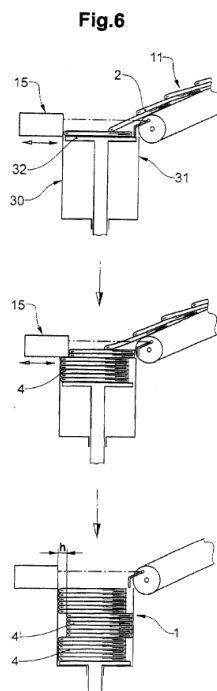


Fig. 4.





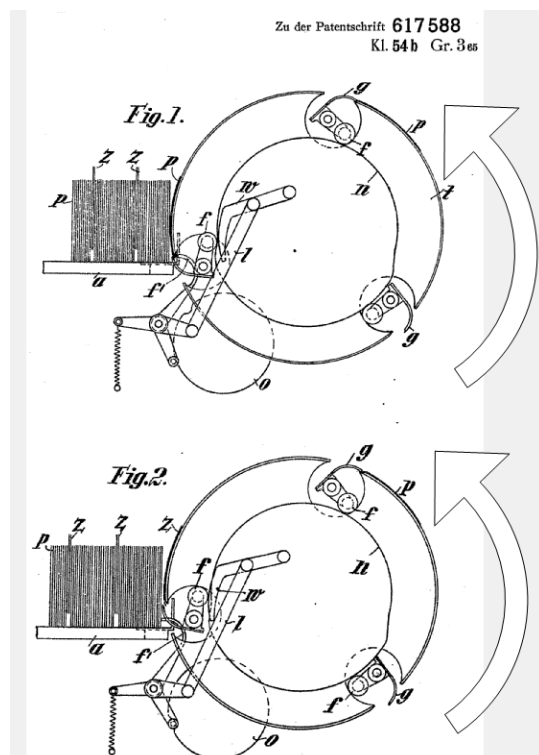
B65H 33/10

Displacing the end articles of a batch

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



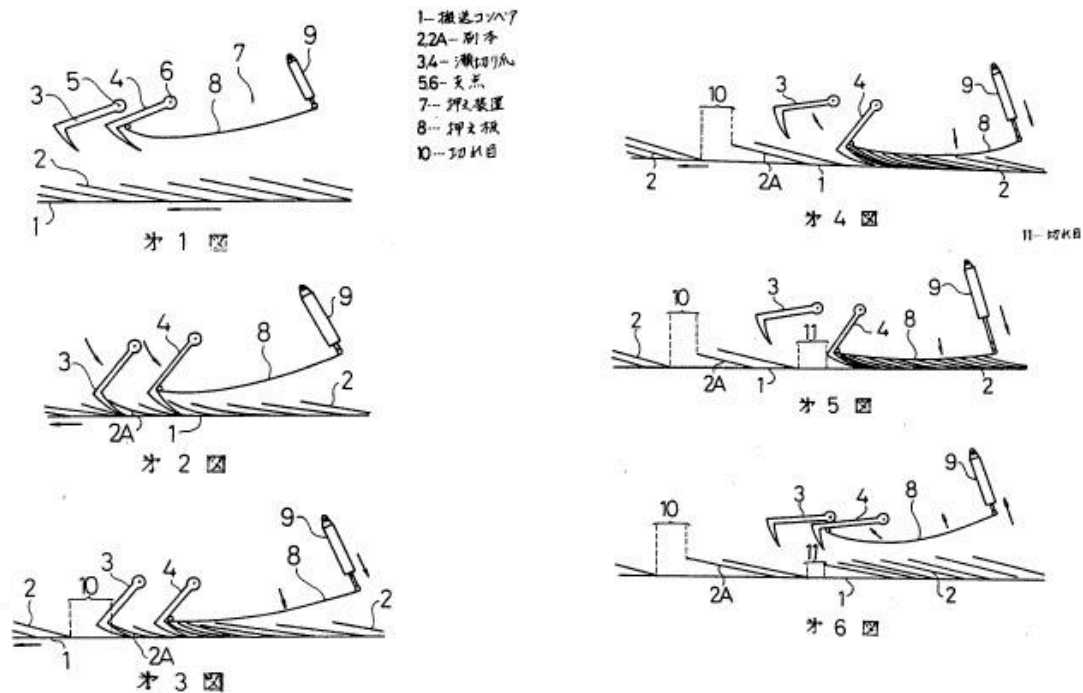
B65H 33/12

by creating gaps in the stream

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Creating gaps in the stream	3F107/CC+ (Japanese)
-----------------------------	----------------------

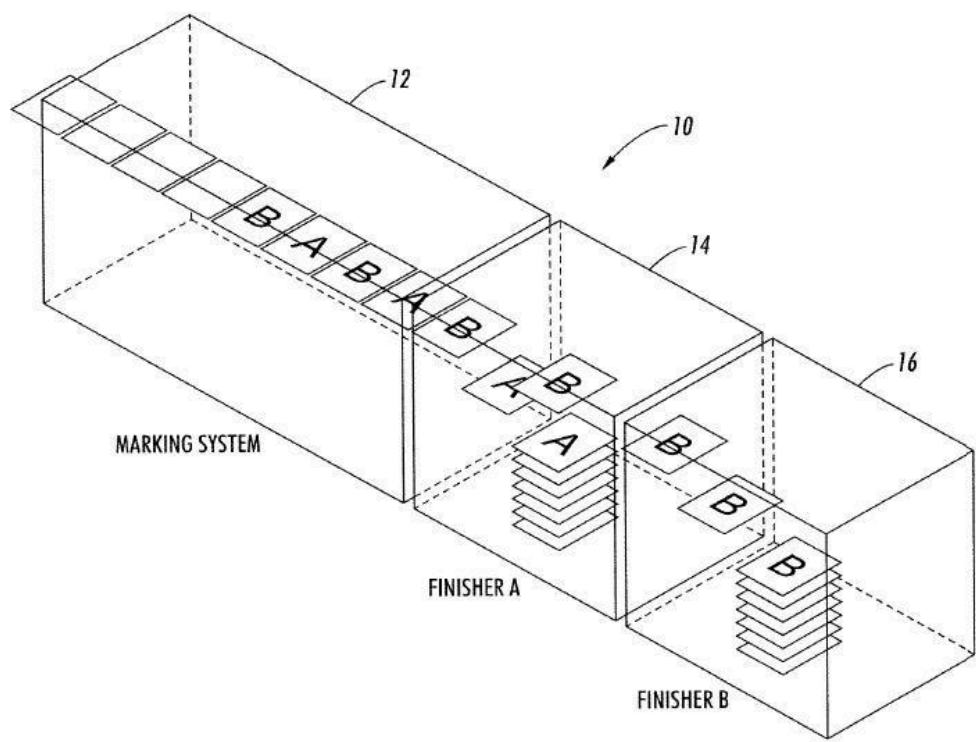
B65H 33/14

by diverting batches to separate receivers {(B65H 33/16 takes precedence; article switches or diverters B65H 29/58)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Forming counted batches in delivery pile or stream of articles by depositing articles in batches on moving supports	B65H 33/16
---	----------------------------

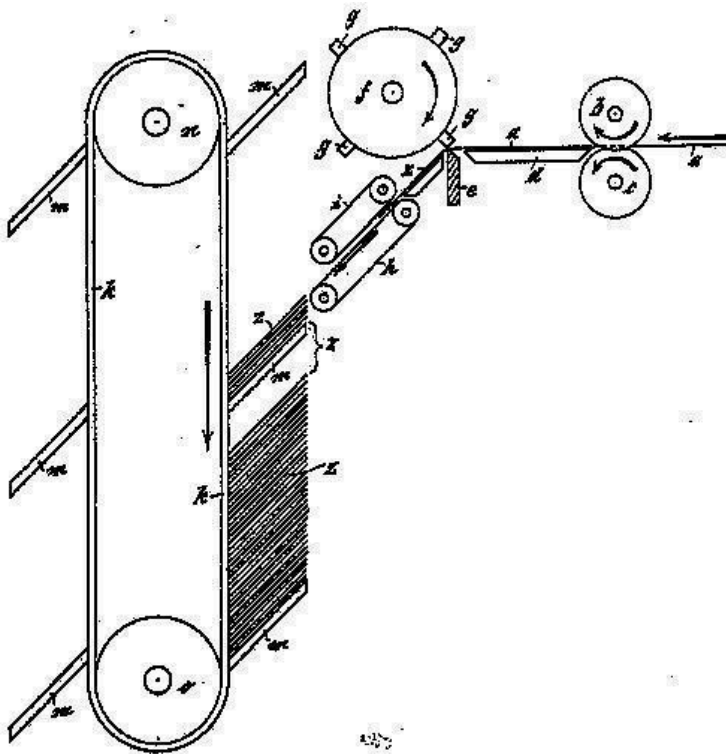
Informative references

Attention is drawn to the following places, which may be of interest for search:

Constructional details of article switches or diverters	B65H 29/58
---	----------------------------

B65H 33/16**by depositing articles in batches on moving supports****Definition statement***This place covers:*

Forming counted batches in stream of articles by depositing articles in batches on moving supports.

**Special rules of classification**

If batches are piles: for nature of supports, or for removing batches from their supports, see [B65H 31/30](#) and lower.

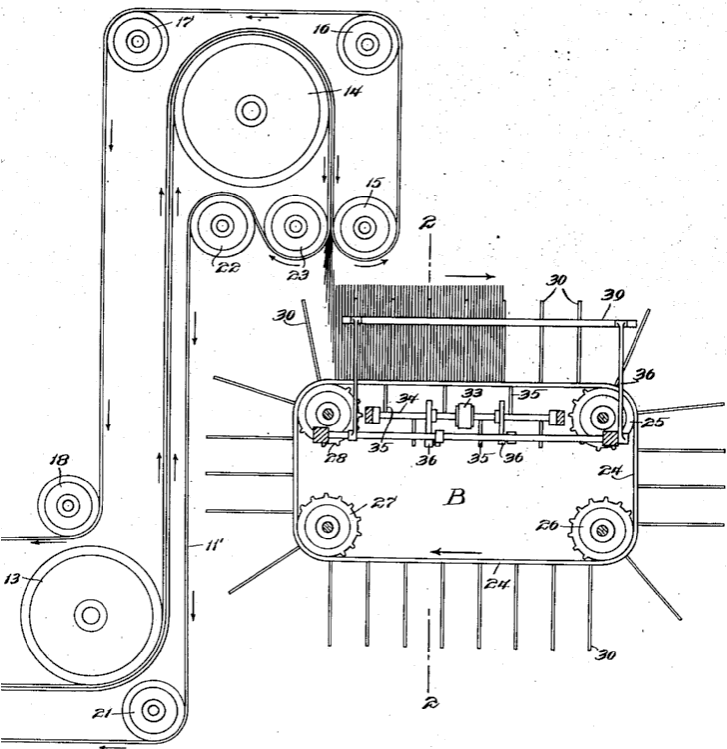
B65H 33/18

with separators between adjacent batches

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Pile receiver; multiple receivers (FTCLA)	3F054/BF00
Forming counted batches; multiple receivers (FTCLA)	3F107/CD+

B65H 35/00

Delivering articles from cutting or line-perforating machines; Article or web delivery apparatus incorporating cutting or line-perforating devices, e.g. adhesive tape dispensers (cutting or perforating machines or devices in general [B26D](#), [B26F](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Severing by means other than cutting; Tearing per se	B26F 3/00 ; B26F 3/02
--	---

Feeding of wrapping material	B65B 41/00
Dispensing single sheets from a stack held together with temporary adhesive	B65D 83/08 , B65C 11/00 , B42D 5/003
Placing of tape onto a semi-conductor or wafer	H01L 21/67132

Special rules of classification

References [B26D](#), [B26F](#) are non-limiting in the subgroup [B65H 35/00](#). CPC will be updated/corrected once this inconsistency is resolved in IPC.

B65H 35/0006

{Article or web delivery apparatus incorporating cutting or line-perforating devices}

Definition statement

This place covers:

E.g. wall-mounted dispensers of film, foil or tape.

References

Limiting references

This place does not cover:

Wall-mounted dispensers of paper towels	A47K 10/32
---	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Foil dispensers also in	B65D 83/0805 , B65D 85/672
-------------------------	---

B65H 35/0013

{and applying the article or the web by adhesive to a surface ([B65H 35/002](#) takes precedence)}

References

Limiting references

This place does not cover:

Hand-held or table apparatus	B65H 35/002
------------------------------	-----------------------------

B65H 35/002**{Hand-held or table apparatus ([B65H 35/006](#) takes precedence)}****References****Limiting references***This place does not cover:*

Article or web delivery apparatus incorporating cutting or line-perforating devices with means for delivering a predetermined length of tape	B65H 35/006
--	-----------------------------

B65H 35/0026**{for delivering pressure-sensitive adhesive tape}****References****Limiting references***This place does not cover:*

Application of wallpaper	B44C 7/02 , B44C 7/06
Label dispensers	B65C 11/00

B65H 35/0033**{and affixing it to a surface ([B65H 35/004](#) takes precedence)}****References****Limiting references***This place does not cover:*

Simultaneously with a second roll	B65H 35/004
-----------------------------------	-----------------------------

Informative references*Attention is drawn to the following places, which may be of interest for search:*

Closing of boxes	B65B 51/067
------------------	-----------------------------

B65H 35/004**{simultaneously with a second roll, e.g. masking tape}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Masking elements e.g. strips of tape or sheets	B05B 12/24
--	----------------------------

B65H 35/0046

{with means for moistening or coating the articles or webs, or applying adhesive thereto}

References**Limiting references**

This place does not cover:

Applying mud to drywall tape	E04F 21/00
------------------------------	----------------------------

B65H 35/0086

{using movable cutting elements}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Cutting with movable elements	B26D 1/045 , B26D 1/065 , B26D 1/105 , B26D 1/345
-------------------------------	--

B65H 35/10

from or with devices for breaking partially-cut or perforated webs, e.g. bursters

References**Limiting references**

This place does not cover:

Machines for issuing tickets from a strip	G07B 3/02
---	---------------------------

B65H 37/00

Article or web delivery apparatus incorporating devices for performing specified auxiliary operations (incorporating cutting or line-perforating devices [B65H 35/00](#))

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Folding of thin sheet-like materials, special discharging devices, and others (FTCLA)	3F108
---	-------

B65H 37/002

{Web delivery apparatus, the web serving as support for articles, material or another web}

References**Limiting references**

This place does not cover:

Tools for inserting weather strips	B25B 27/0092
------------------------------------	------------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Temporary attachment of articles	B42F 5/00
Processes for producing a decorative affect comprising an adhesive layer	B44C 1/105

B65H 37/005

{Hand-held apparatus}

Definition statement

This place covers:

E.g. door sash jigs

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Adhesive-tape dispensers (FICLA)	B65H35/07
Dispensing wound dressing e.g. plasters, bandages	A61F 15/002
Door sash jigs also found in	B60J 10/30 , B23P 19/047
Label dispensing	B65C 11/004

B65H 37/007

{Applicators for applying coatings, e.g. correction, colour or adhesive coatings}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Erasing devices	B43L 19/00
-----------------	----------------------------

B65H 37/04

for securing together articles or webs, e.g. by adhesive, stitching or stapling (adhering replacement to expiring web during change of web roll [B65H 19/18](#))

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Attaching sheets, webs or strips	B31F 5/00
Machines for collating and permanent attaching sheets	B42C 1/12

Special rules of classification

Stapler arrangements [B65H 2408/12](#).

B65H 39/00

Associating, collating, or gathering articles or webs (combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling [B65H 83/00](#); machines for both collating or gathering and permanently attaching together sheets or signatures [B42C 1/00](#))

References**Limiting references**

This place does not cover:

Combinations of piling and depiling operations, of interest apart from the single operation of piling or depiling	B65H 83/00
Machines for both collating or gathering and permanently attaching together sheets or signatures	B42C 1/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rotary presses, namely collecting	B41F 13/64
-----------------------------------	----------------------------

B65H 39/02

Associating, collating or gathering articles from several sources

Special rules of classification

This group should be used only for subject matter (i.e. associating, collating or gathering articles from several sources) not being covered by any of its lower subgroups.

B65H 39/04

from piles

Special rules of classification

This group should be used only for subject matter (i.e. associating, collating or gathering articles from several piles) not being covered by any of its lower subgroups.

B65H 39/042

the piles being disposed in superposed carriers

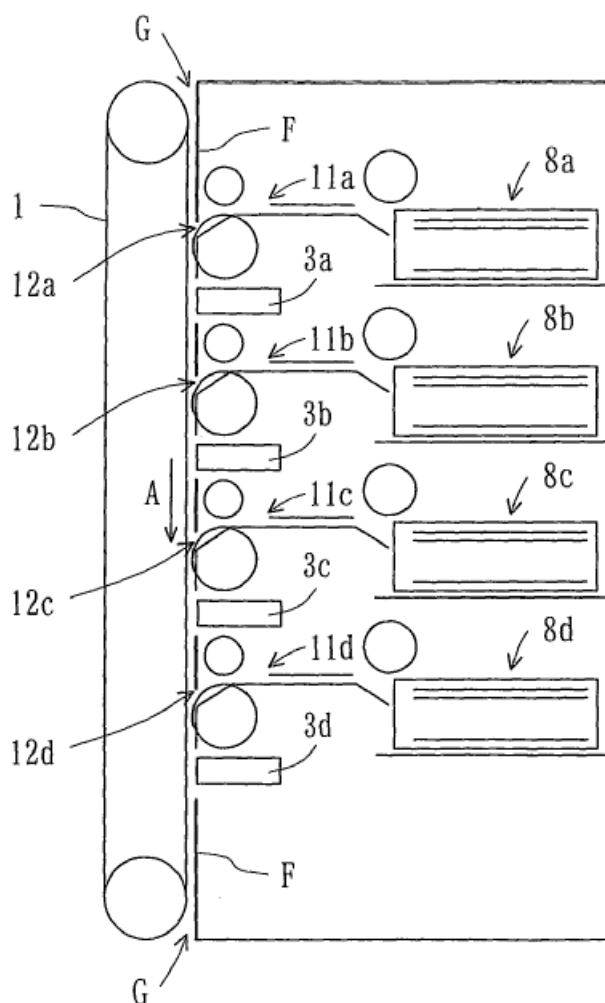
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

EP 1 584 589 A1

Fig. 1



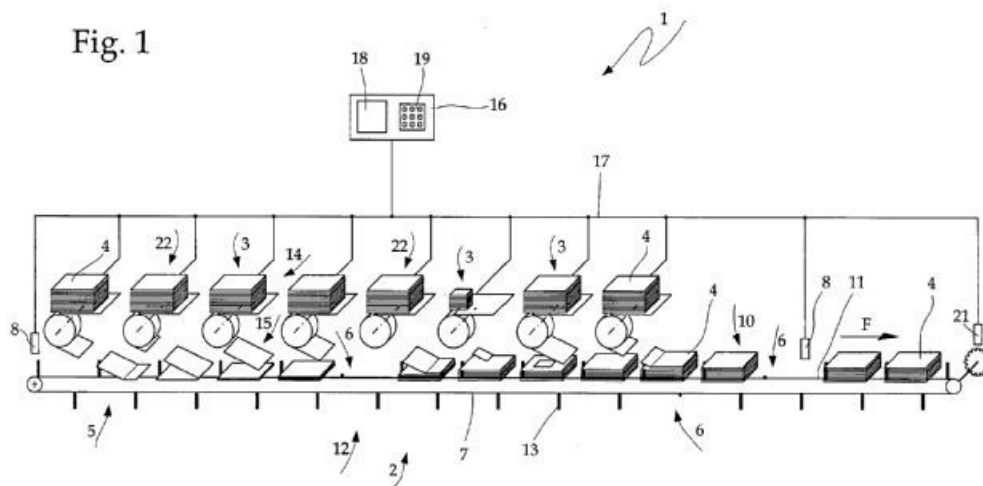
B65H 39/043

the piles being disposed in juxtaposed carriers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 39/05

by collecting in superposed carriers

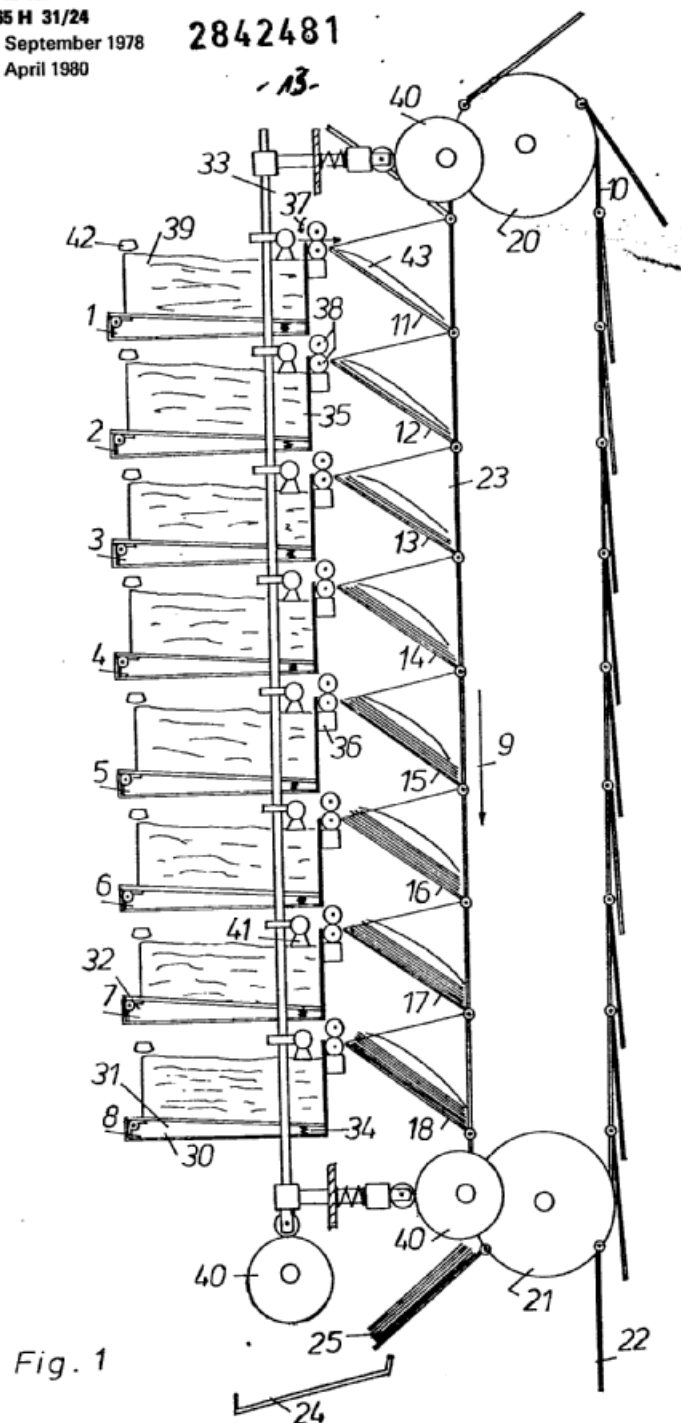
Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

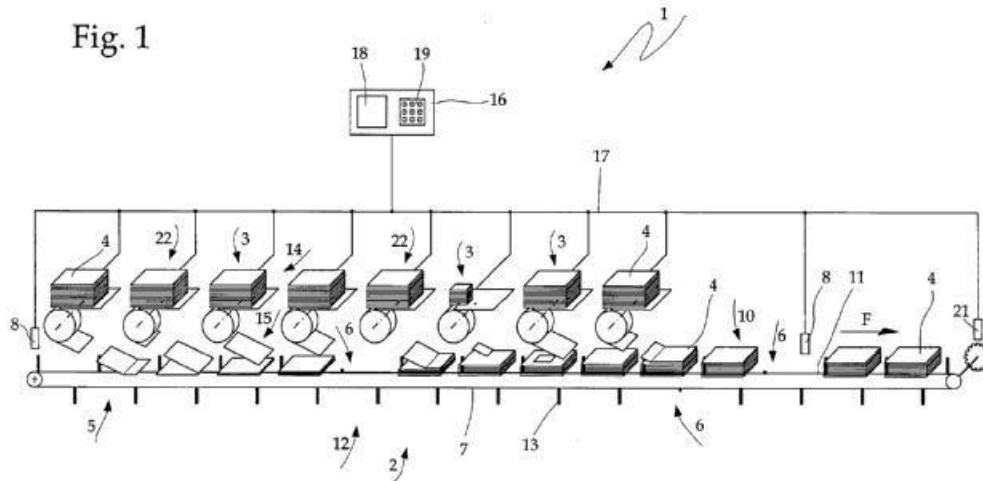
28 42 481
B 65 H 31/24
29. September 1978
10. April 1980

2842481



B65H 39/055**by collecting in juxtaposed carriers****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 39/06****from delivery streams****Special rules of classification**

This group should be used only for subject matter (i.e. associating, collating or gathering articles from several delivery streams) not being covered by any of its lower subgroups.

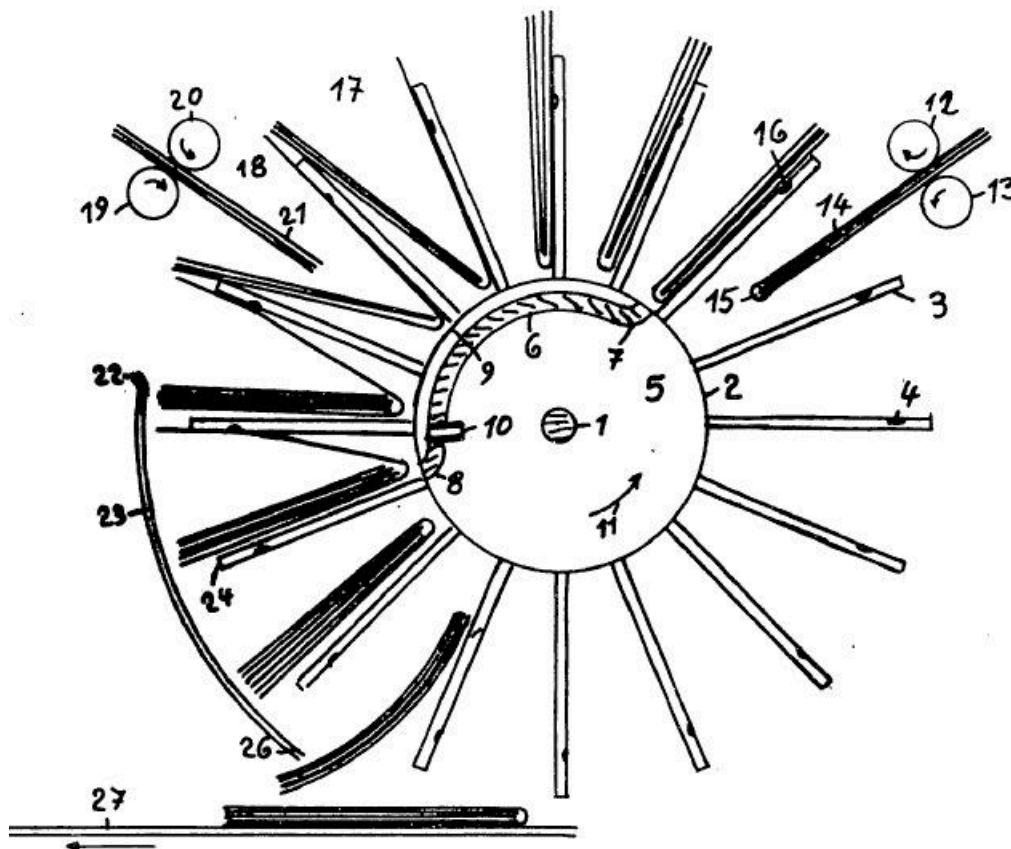
B65H 39/065

by collecting in rotary carriers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**Relationships with other classification places**

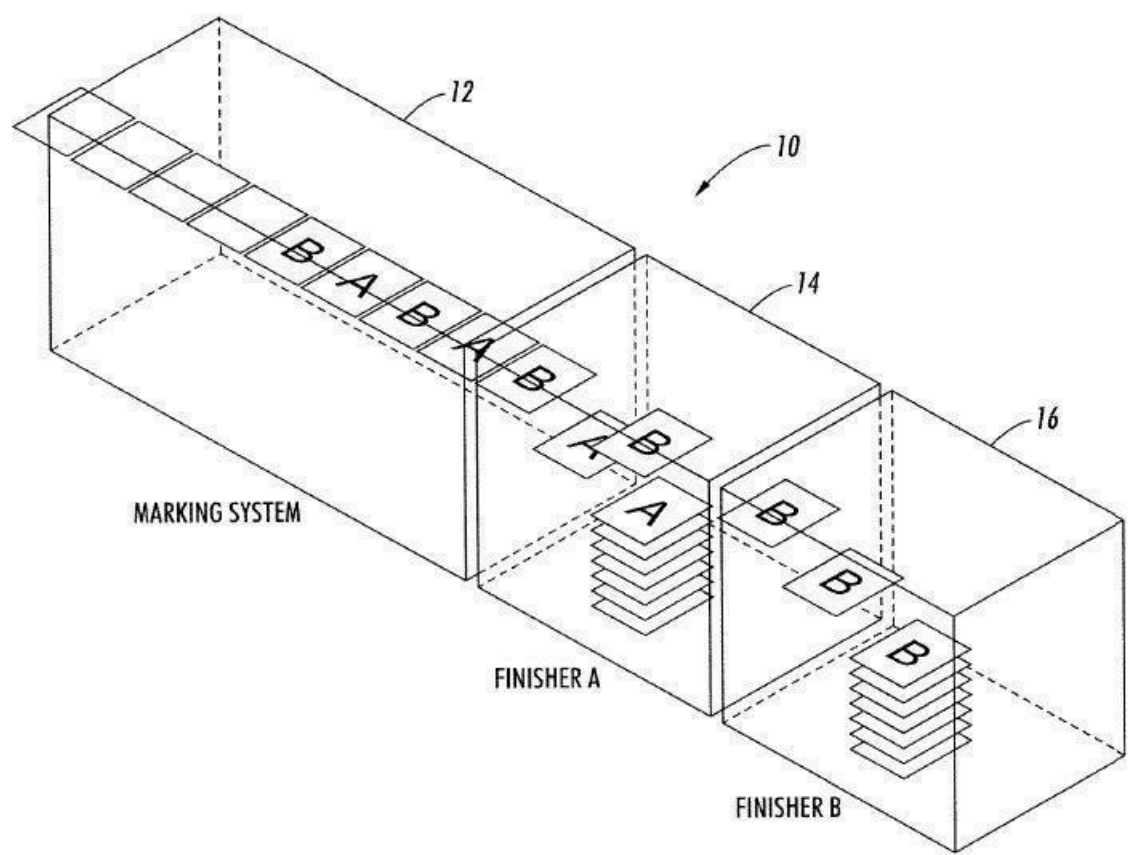
for rotary carriers as starwheel, also allocate [B65H 29/40/EC](#)

B65H 39/10

Associating articles from a single source, to form, e.g. a writing-pad
{(laminating [B32B 37/00](#), [B32B 38/00](#))}

Definition statement

This place covers:
Associating articles from a single source to form e.g. a writing-pad.
Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Methods or apparatus for laminating	B32B 37/00
Machines for both collating or gathering and permanently attaching together the sheets or signatures	B42C 1/12

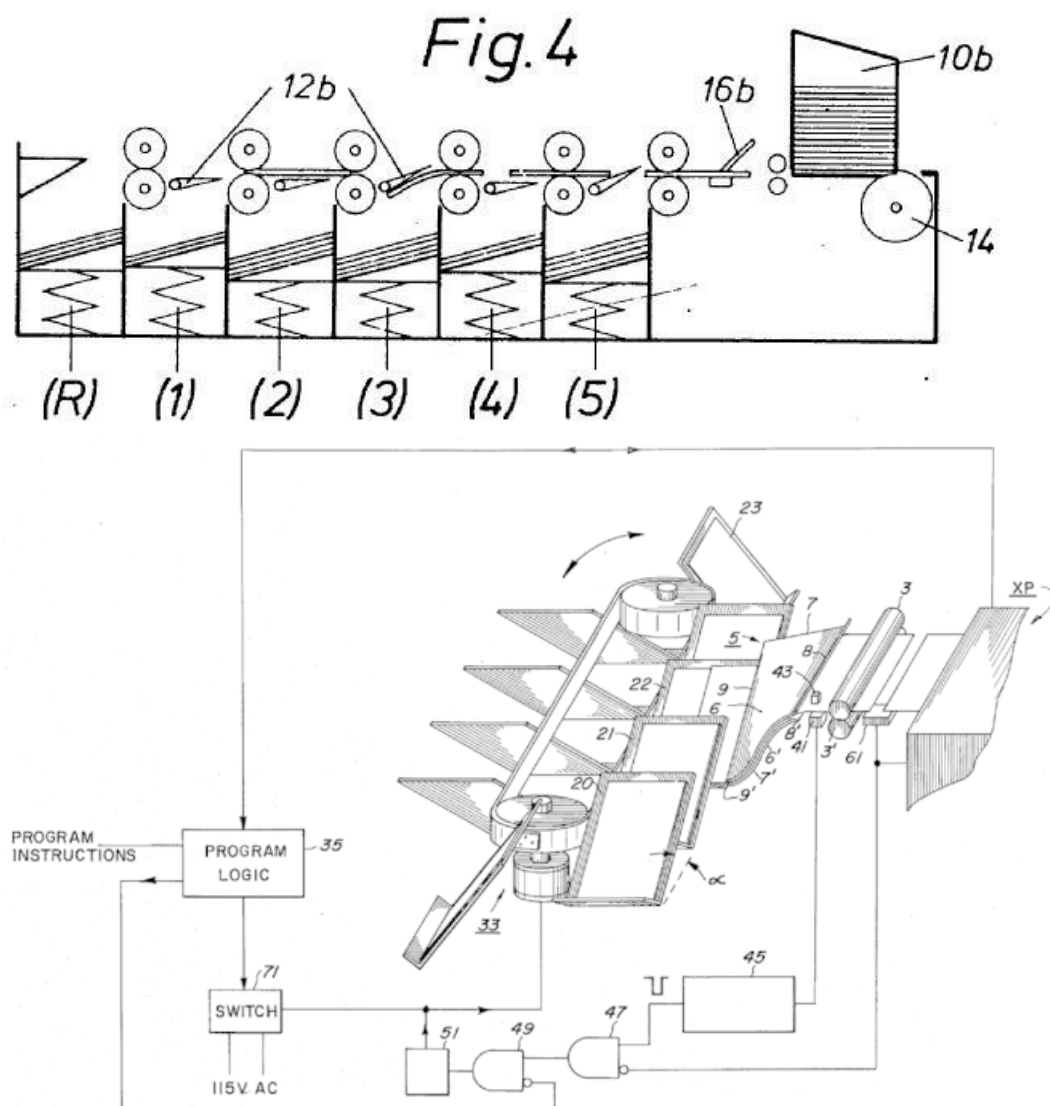
Special rules of classification

This group should be used only for subject matter (i.e. associating, collating or gathering articles from a single source, e.g. to form a writing-pad) not being covered by any of its lower subgroups.

B65H 39/115**in juxtaposed carriers****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



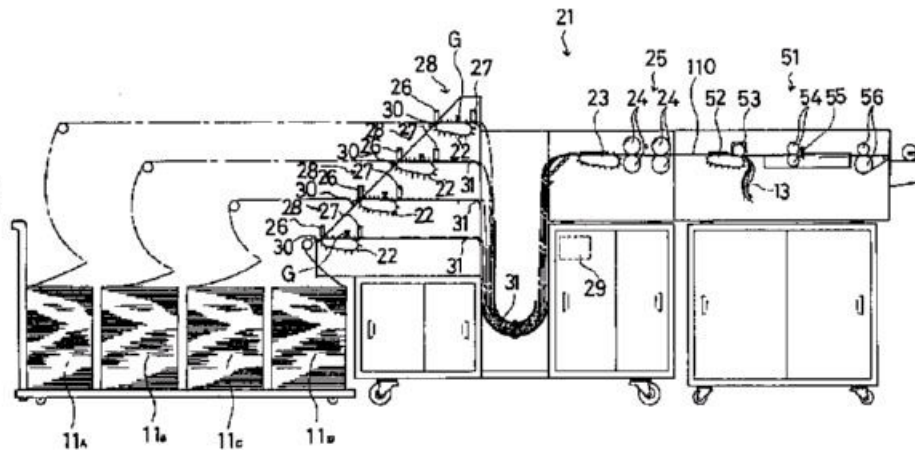
U.S. Patent Oct. 21, 1975

3,913,467

B65H 39/16**Associating two or more webs****Definition statement**

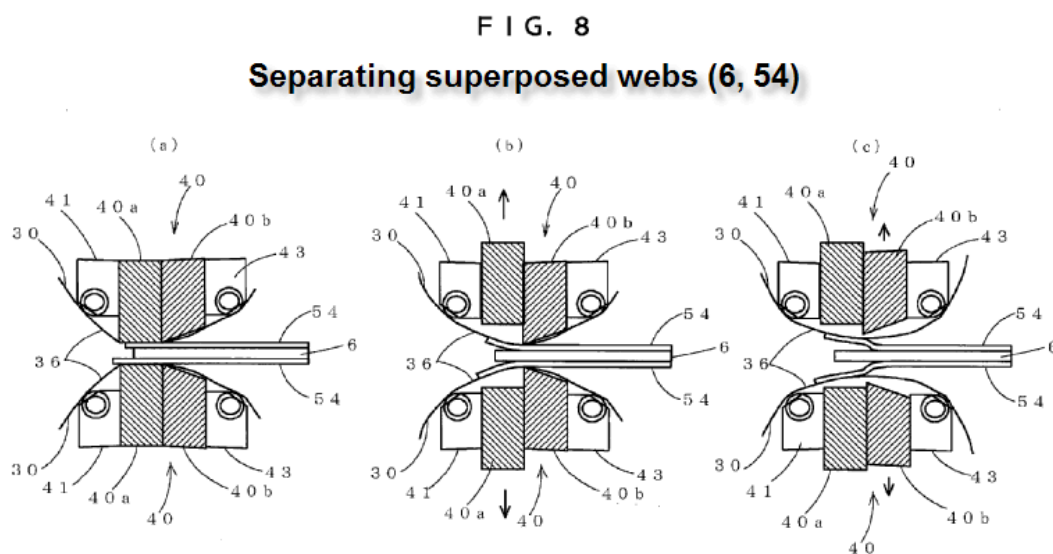
This place covers:

Illustrative example of subject matter classified in this group:

**B65H 41/00****Machines for separating superposed webs****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Treatment of layered products, namely delaminating	B32B 43/006
--	-----------------------------

B65H 43/00

Use of control, checking, or safety devices, e.g. automatic devices comprising an element for sensing a variable

Definition statement

This place covers:

Aspects related to controlling the handling of articles after these have been subjected to a particular process, e.g.:

the concept that the handling conditions (for example the articles delivery speed) after a process influence or determine the conditions or settings of the process itself (for example the stopping time).

The sub-group also covers subject-matter which emphasizes the particular interface means applied or functioning between the process and the handling (for example delivery of articles) action; such interface means could be for example communication means between the delivery controller and process controller, or user interfaces like information input or displaying means linked to the delivery controller.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Aspects related to controlling the handling of articles before they arrive to a particular process	B65H 7/00
Aspects related to controlling the handling of webs	B65H 23/00 , B65H 26/00

Special rules of classification

Because the sensing nowadays in the majority of cases is realized through photoelectric sensors, the majority of documents would have to be classified in [B65H 43/08](#) if the IPC precedence notes were followed. In order to rationalize classification, the IPC note "[B65H 43/08](#) takes precedence" is ignored.

The rules followed are the following:

Documents are first classified according to which part of the article or to which situation the feelers or detectors respond. If the sensor works with a photoelectrical element and the structural build-up of the sensor is particularly emphasized, then the document is classified in [B65H 43/08](#) as well.

Additionally, codes from [B65H 5/00](#), as well as the indicators [B65H 2220/00](#) (see Special Rules for Classification within [B65H](#), Note 1, directed to the [B65H](#) indexing scheme) should be given to further specify the control aspects.

Examples:

- A document disclosing a device and/or method for controlling responsive to completion of a pile, and emphasizing the structure of the photoelectrical sensor having elements which contact the pile while sensing, should be classified in: [B65H 43/06](#) and [B65H 43/08](#).

- If the elements contacting the articles are particularly specified (for example rotating levers), a further [B65H](#) code ([B65H 2553/61](#): Mechanical means, e.g. contact arms) should be given.
- A document disclosing a device and/or method for controlling responsive to completion of pile, and emphasizing the structure of the photoelectrical sensor which does not contact the actual pile while sensing, should be classified in: [B65H 43/06](#) and [B65H 43/08](#).
- A document disclosing a device and/or method for controlling responsive to a wrong distance between articles in a stream of articles, monitoring said distance by checking the time intervals ([B65H 2513/52](#)) between the passing of the front edges of the articles. ([B65H 2511/514](#); [B65H 2701/1311](#)) (sensed by a detector not being further specified), and responding by changing the delivery speed ([B65H 2513/10](#)), should be classified in: [B65H 43/00](#) and [B65H 2701/1311](#), [B65H 2220/01](#), [B65H 2513/52](#), [B65H 2220/03](#), [B65H 2513/10](#), [B65H 2220/02](#). If the detector is a photoelectric device, then [B65H 43/08](#) should be given additionally.
- A pile support is advanced/moved in function of an absence of articles on it: [B65H 43/02](#) and [B65H 2511/515](#), [B65H 2220/01](#) and [B65H 2513/40](#), [B65H 2220/02](#), [B65H 2220/11](#).
- Adjustment of nip between rollers as a response of thickness detection of articles being faulty due to wrinkles: [B65H 43/04](#) and [B65H 2511/13](#), [B65H 2220/01](#) and [B65H 2511/224](#), [B65H 2220/02](#), [B65H 2220/11](#).

B65H 43/02

detecting, or responding to, absence of articles ([B65H 43/08](#) takes precedence)

References

Limiting references

This place does not cover:

Photoelectric devices	B65H 43/08
-----------------------	----------------------------

B65H 43/04

detecting, or responding to, presence of faulty articles ([B65H 43/08](#) takes precedence; diverting faulty articles from main streams [B65H 29/62](#))

References

Limiting references

This place does not cover:

Photoelectric devices	B65H 43/08
-----------------------	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Article switches or diverters for diverting faulty articles from the main stream	B65H 29/62
--	----------------------------

B65H 43/06

detecting, or responding to, completion of pile ([B65H 43/08](#) takes precedence)

References**Limiting references**

This place does not cover:

Photoelectric devices	B65H 43/08
-----------------------	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Full amount (i.e., pile completed) as target parameter	3F048/BA04 (Japanese)
--	-----------------------

B65H 45/00

Folding thin material (specially adapted for the manufacture or treatment of particular products, see appropriate subclasses, e.g. [D06F 89/00](#))

References**Limiting references**

This place does not cover:

Plastic bags or sacks	B31B 70/26
Airbags	B60R 21/16

Informative references

Attention is drawn to the following places, which may be of interest for search:

Folding of webs for diapers	A61F 13/15682 , A61F 13/15747
Forming fold lines by pressing or scoring	B29C 53/06

B65H 45/04

Folding sheets

References**Limiting references**

This place does not cover:

Maps	G09B 29/04
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B65H 45/06**Folding webs ([B65H 20/28](#) takes precedence)****References****Limiting references***This place does not cover:*

Mechanisms for delivering webs in superposed folds and refeeding them from the lower end of the folded assemblies	B65H 20/28
---	----------------------------

B65H 45/08**longitudinally****Definition statement***This place covers:*

Includes longitudinal interfolding of webs.

References**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Longitudinal folding in a rotary printing press	B41F 13/58
---	----------------------------

B65H 45/103**by a carriage which reciprocates above the laying station****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Laying of fleece-like material	D01G 25/00
--------------------------------	----------------------------

B65H 45/12**Folding articles or webs with application of pressure to define or form crease lines ([B65H 20/28](#) takes precedence; pleating, kilting or goffering textile fabrics [D06J](#))****References****Limiting references***This place does not cover:*

Mechanisms for delivering webs in superposed folds and refeeding them from the lower end of the folded assemblies	B65H 20/28
---	----------------------------

B65H 45/16**Rotary folders****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Folding bandages or dressings	A61F 13/15747
-------------------------------	-------------------------------

B65H 45/161**{Flying tuck folders}****Definition statement**

This place covers:

Also known as Hypocycloidal folders.

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Revolving pivotal folding blade (UCLA)	270/50
Planetary blade (UCLA)	493/431

B65H 45/18**Oscillating or reciprocating blade folders (carried on rotary members
[B65H 45/16](#))****Special rules of classification**

With pressing of spine of folded material [B65H 2701/13212](#)

B65H 45/20**Zig-zag folders {([B65H 45/228](#) takes precedence)}****References****Limiting references**

This place does not cover:

Longitudinal folders	B65H 45/228
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B65H 45/22

Longitudinal folders, i.e. for folding moving sheet material parallel to the direction of movement

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

In a rotary printing press	B41F 13/56 , B41F 13/58
----------------------------	---

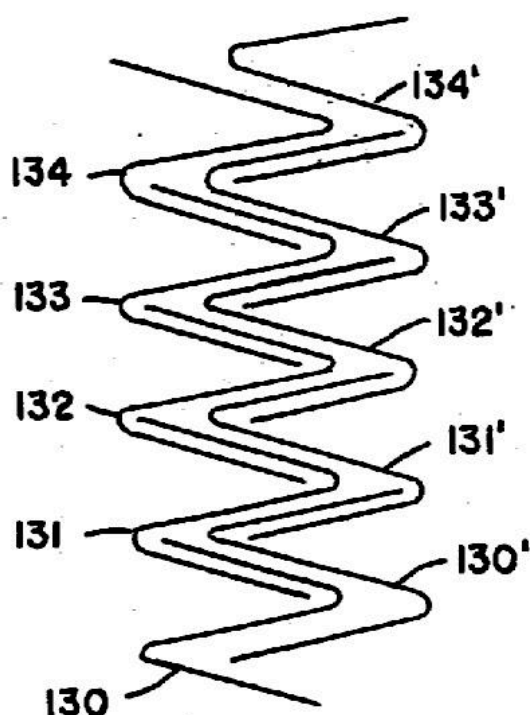
B65H 45/24

Interfolding sheets, e.g. cigarette or toilet papers

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Limiting references**

This place does not cover:

Dispensing from interfolded stacks	A47K 10/42
Containers for interfolded stacks	B65D 83/0894

B65H 47/00

Unfolding thin limp material ([B65H 20/28](#) takes precedence; opening devices for sheets or signatures [B65H 5/30](#))

References**Limiting references**

This place does not cover:

Mechanisms for delivering webs in superposed folds and refeeding them from the lower end of the folded assemblies	B65H 20/28
---	----------------------------

B65H 49/00

Unwinding or paying-out filamentary material; Supporting, storing or transporting packages from which filamentary material is to be withdrawn or paid-out (winding [B65H 54/00](#); bobbins, tubes or other cores for packages [B65H 75/00](#))

References**Limiting references**

This place does not cover:

Unwinding webs	B65H 16/00
Winding	B65H 54/00
Flyer unwinding	B65H 57/20
Bobbins, tubes or other cores for packages	B65H 75/00
Storing and repeatedly paying-out and restoring lengths of material	B65H 75/34

Informative references

Attention is drawn to the following places, which may be of interest for search:

Wire spool supports for plants	A01G 9/126
Twine cutter with holder (shop accessories)	A47F 13/045
Unwinding or uncoiling metal wire or band	B21C 47/16
Containers, packaging elements or packages specially adapted for coils of wire, rope, or hose	B65D 85/04
Containers, packaging elements or packages specially adapted for other web or tape-like material	B65D 85/67
Supports for supply packages in twisting machines	D01H 1/18
Holders or supports for packages in knitting machines	D04B 15/40
Spool carriers in braiding or lacing machines	D04C 3/14
Bearing supports for supply bobbins or reels in rope or cable making machines	D07B 7/06
Unwinding wire in missiles	F42B 15/00

B65H 49/02**Methods or apparatus in which packages do not rotate****Definition statement**

This place covers:

General methods or apparatuses for unwinding filamentary material from a non-rotating package not provided for in subgroups.

B65H 49/04**Package-supporting devices****Definition statement**

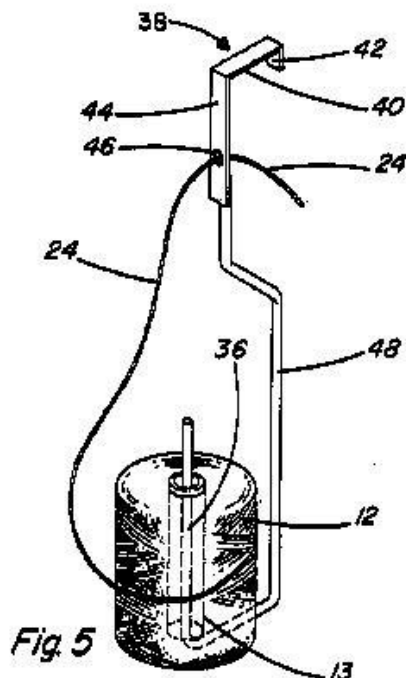
This place covers:

Supports for non-rotating packages not provided for in subgroups.

B65H 49/06**for a single operative package****Definition statement**

This place covers:

Supports for holding a single operative non-rotating package



References

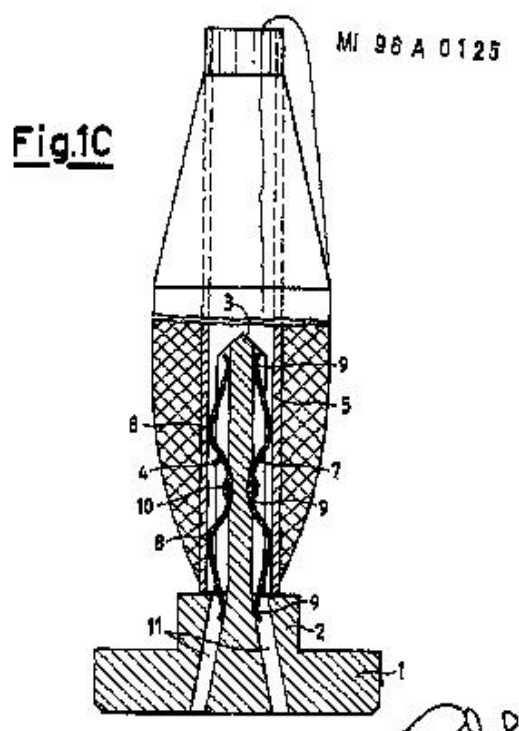
Limiting references

This place does not cover:

Securing the non-rotating package to the support for unwinding	B65H 49/36
Expandable spindles in general	B65H 75/242

Special rules of classification

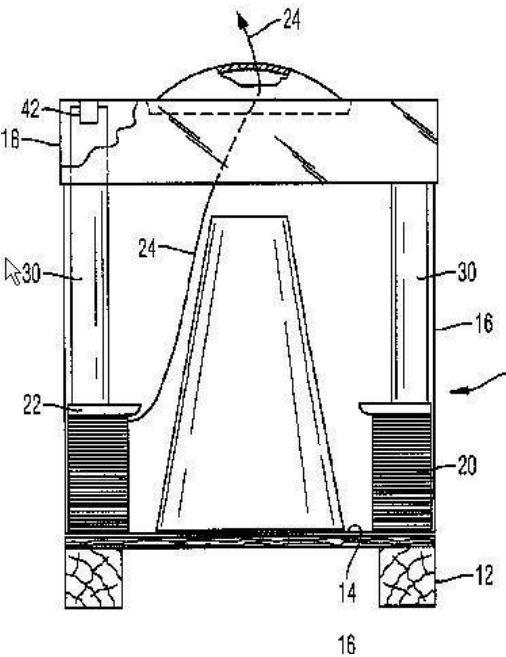
Also contains transport caddies which are generally not only used for transporting cops ([B65H 67/06](#)) but also for supporting the cops in the unwinding position:



B65H 49/08
enclosing the package

Definition statement

This place covers:
Containers (with or without supportive core) for unwinding filamentary material, e.g. welding wire:



References

Limiting references

This place does not cover:

Guides for assisting paying-out	B65H 57/00
Rings on top of package	B65H 57/18
Devices acting on material leaving the package for adjusting or controlling tension	B65H 59/06
Storing in cans or receptacles	B65H 75/16

Informative references

Attention is drawn to the following places, which may be of interest for search:

Dereeling means for electrodes in arc welding	B23K 9/1333
Containers, packaging elements or packages specially adapted for coils of wire, rope, or hose	B65D 85/04
Containers for unwinding yarn packages for knitting or crochet	D04B 3/06

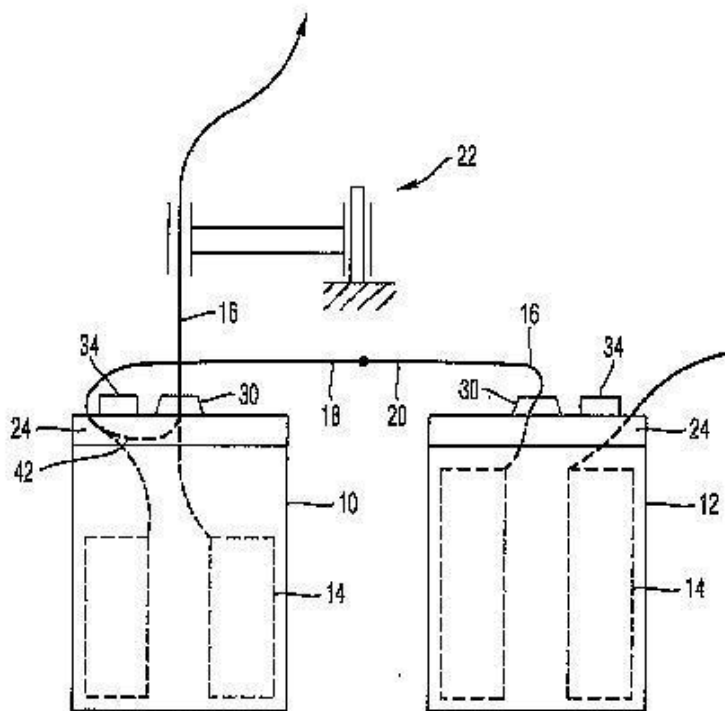
B65H 49/10

for one operative package and one or more reserve packages

Definition statement

This place covers:

With changing operative position when switching to the reserve package



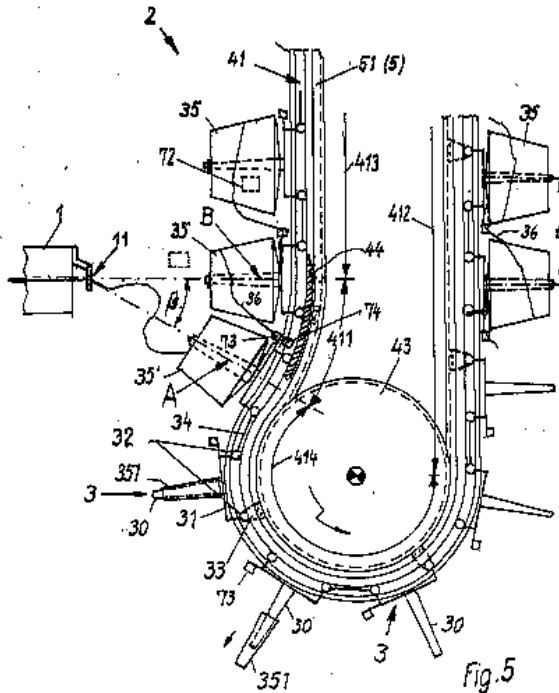
B65H 49/12

the reserve packages being mounted to permit manual or automatic transfer to operating position

Definition statement

This place covers:

With a mechanism to transfer the reserve packages to the operating position

**B65H 49/14**

for several operative packages

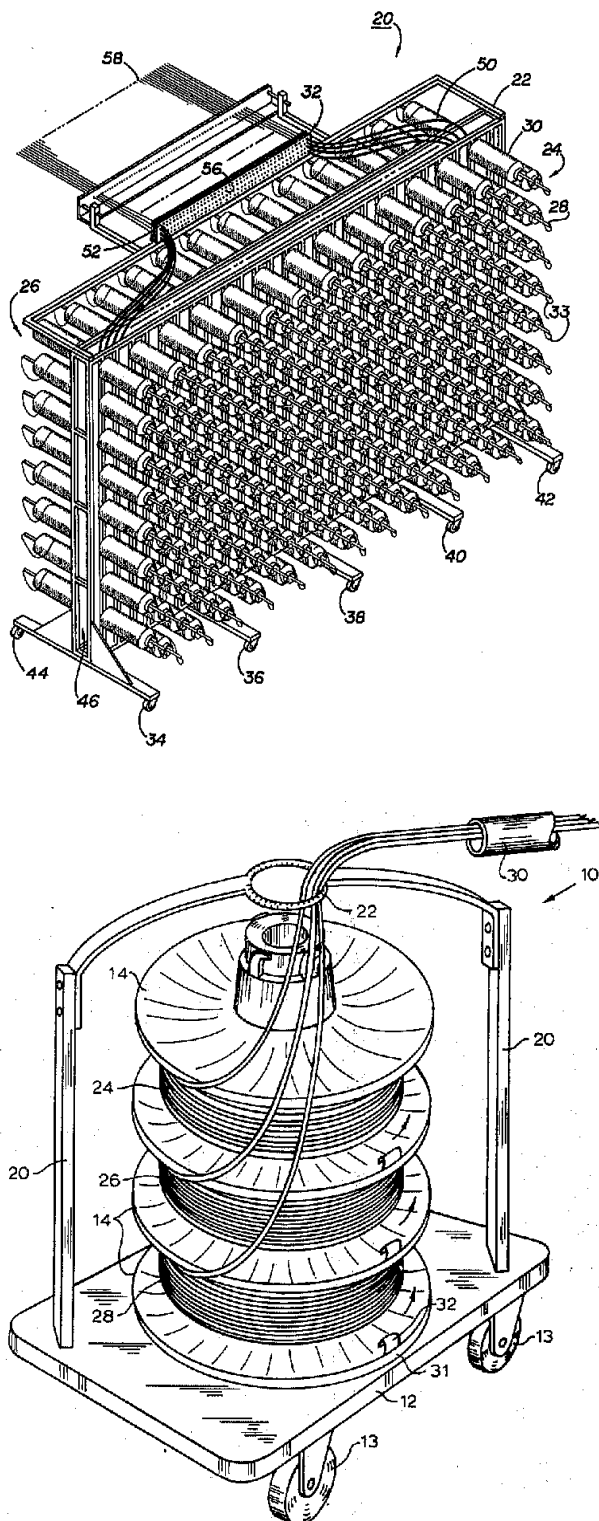
Special rules of classification

This class is not used. Use [B65H 49/16](#).

B65H 49/16**Stands or frameworks****Definition statement**

This place covers:

Stands or frameworks for several operative non-rotating packages, e.g. creels



References

Limiting references

This place does not cover:

Stands or frameworks for rotating packages	B65H 49/32
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Creels	D02H 1/00
Frames or assemblies of two or more reels in knitting machines	D04B 15/42

B65H 49/18

Methods or apparatus in which packages rotate (supports or holders, for storing and repeatedly paying-out and rewinding lengths of material provided for particular purposes [B65H 75/34](#))

Definition statement

This place covers:

General methods or apparatuses for unwinding filamentary material from a rotating package not provided for in subgroups, e.g. methods or devices for aligned or orderly unwinding e.g. with pivoting or axially movable reel

References

Limiting references

This place does not cover:

Supports or holders, for repeatedly paying-out and rewinding length of material provided for particular purpose	B65H 75/34
---	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Flyers or other guides for assisting paying out	B65H 57/00
---	----------------------------

B65H 49/20

Package-supporting devices

Definition statement

This place covers:

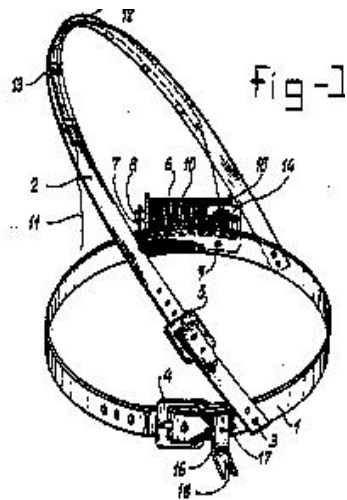
Supports for rotating packages not provided for in subgroups

B65H 49/205

{Hand-held or portable dispensers}

Definition statement

This place covers:
Small, hand-held or belt supported dispensers, e.g. for dispensing binding wire or string.



References

Informative references

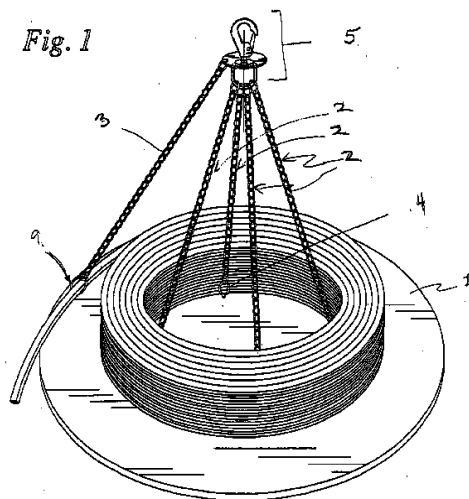
Attention is drawn to the following places, which may be of interest for search:

Fly tying devices	A01K 97/26
Containers or dispensers for dental floss	A61C 15/043

B65H 49/22**Overhead suspension devices****Definition statement**

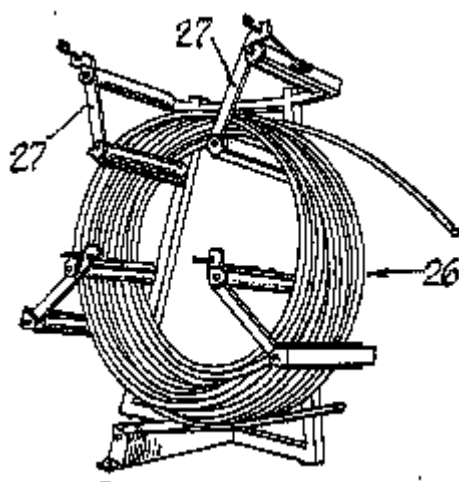
This place covers:

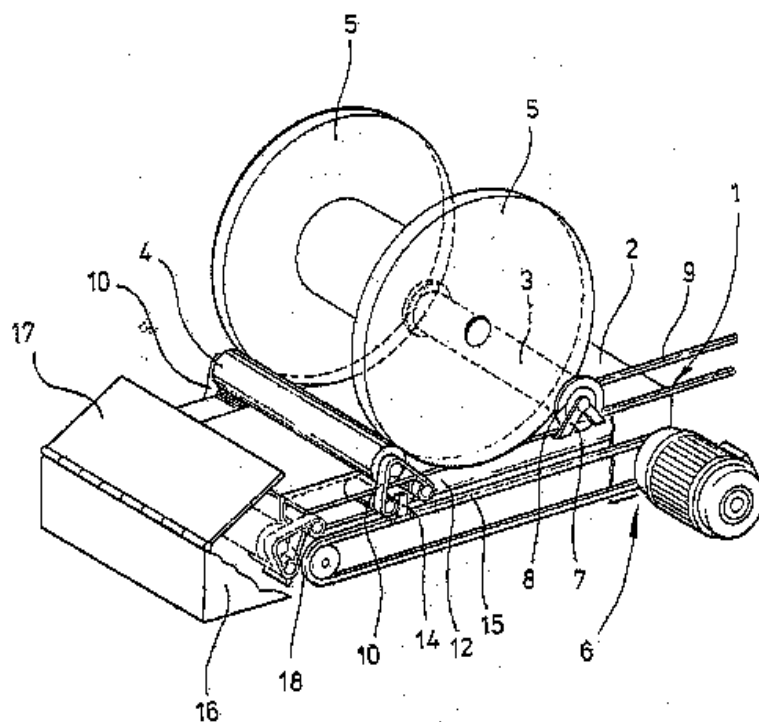
Illustrative example of subject matter classified in this group:

**B65H 49/24****Rollers****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:





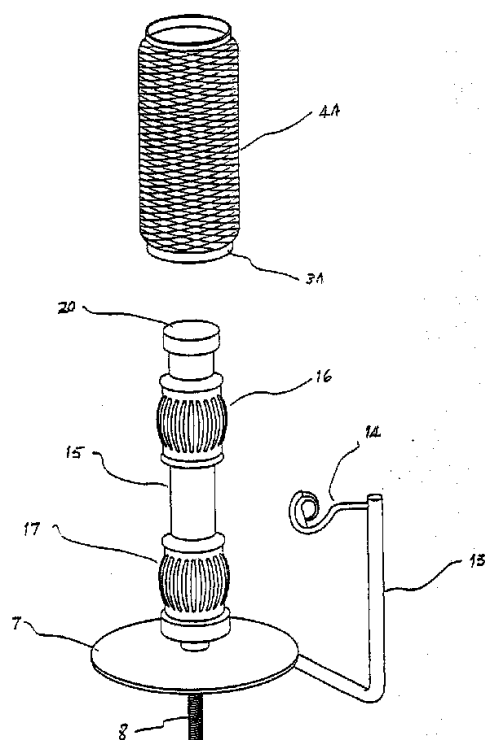
B65H 49/26

Axial shafts or spigots

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

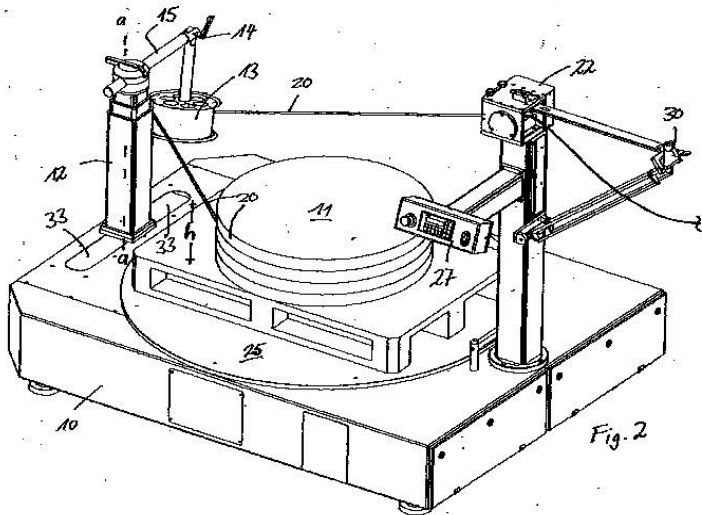


B65H 49/28

Turntables {, i.e. package resting on a table (having also means for clamping the package [B65H 49/30](#))}

Definition statement

This place covers:
Packages resting on a rotating table.



References

Limiting references

This place does not cover:

Swifts or skein holders	B65H 49/30
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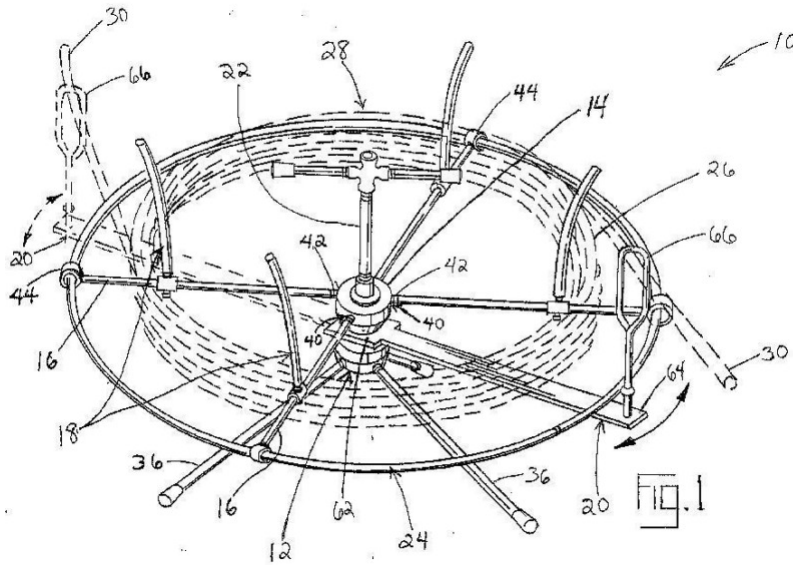
B65H 49/30

Swifts or skein holders

Definition statement

This place covers:

Rotating (e.g. around a horizontal or vertical axis) holders for unwinding packages provided as coreless coils.



B65H 49/305

{with axially adjustable or removable elements for retaining the package}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

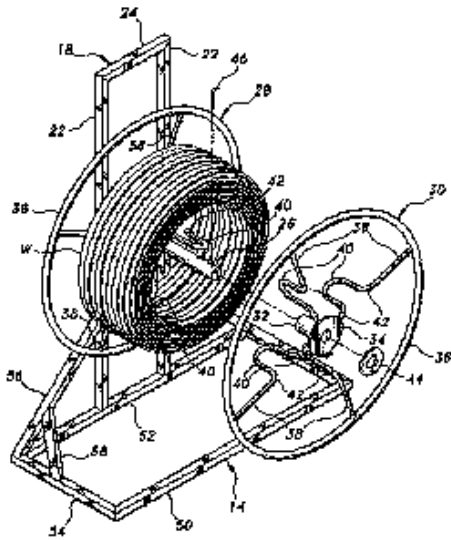


FIG. 2

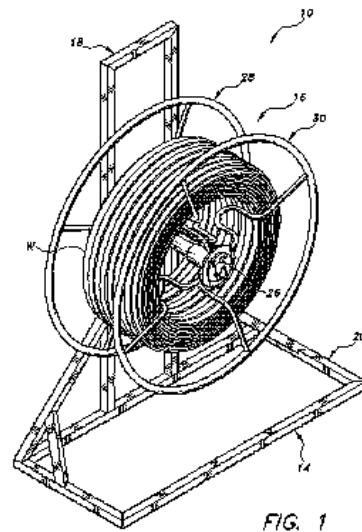


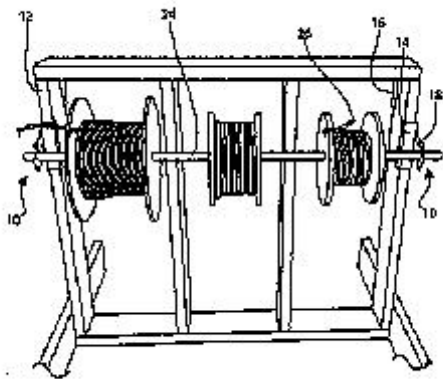
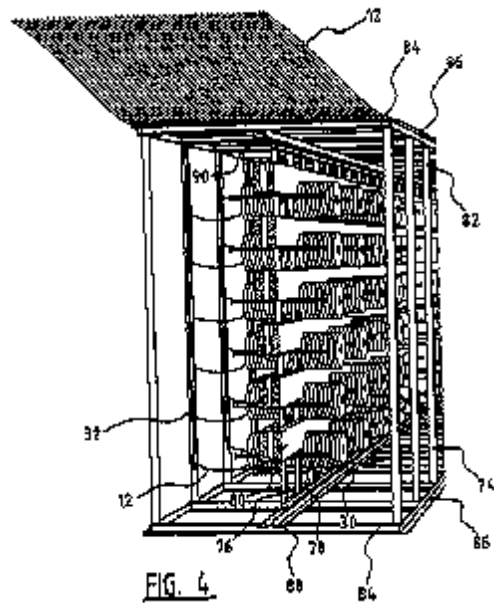
FIG. 1

B65H 49/32

Stands or frameworks

Definition statement

This place covers:
Details with regard to the stand or framework supporting the package(s).



References

Limiting references

This place does not cover:

Stands or frameworks for non-rotating packages	B65H 49/16
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Racks	A47B 43/00 - A47B 57/00
Show stands or shelves for flexible long articles in rolls	A47F 7/005
Show stands or shelves for carpets, wallpaper or fabrics in rolls	A47F 7/175

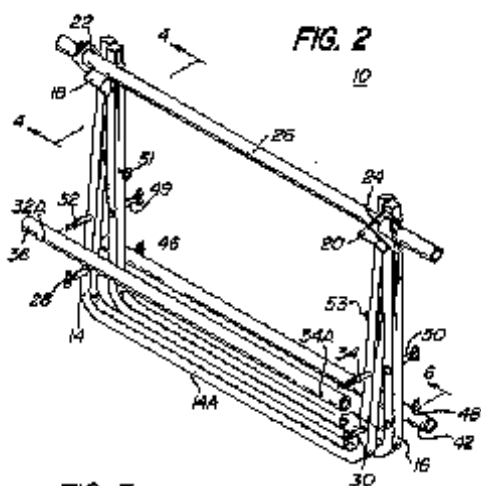
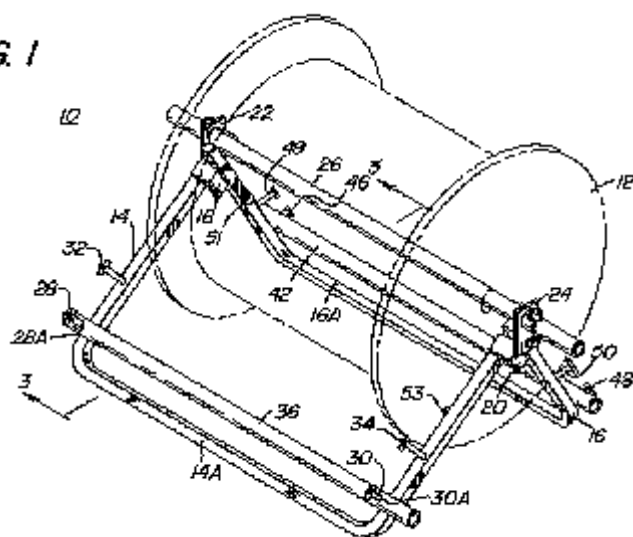
B65H 49/321

{characterised by features enabling their folding or dismantling}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

**FIG. 1**

B65H 49/322

{Enclosing boxes with supporting means for the package or reel during unwinding}

Definition statement

This place covers:

E.g. cassettes to be used in machinery, or cardboard boxes with a rotating reel

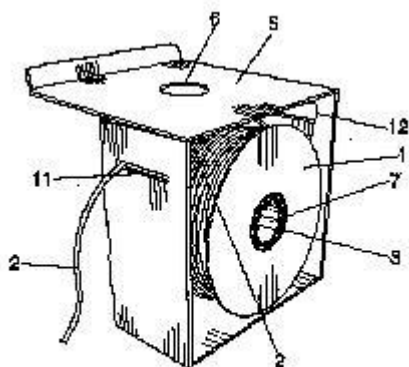


FIG. 4

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Containers, packaging elements or packages specially adapted for coils of wire, rope, or hose	B65D 85/04
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B65H 49/324

{Constructional details}

Special rules of classification

Not used, use either subgroups or [B65H 49/32](#).

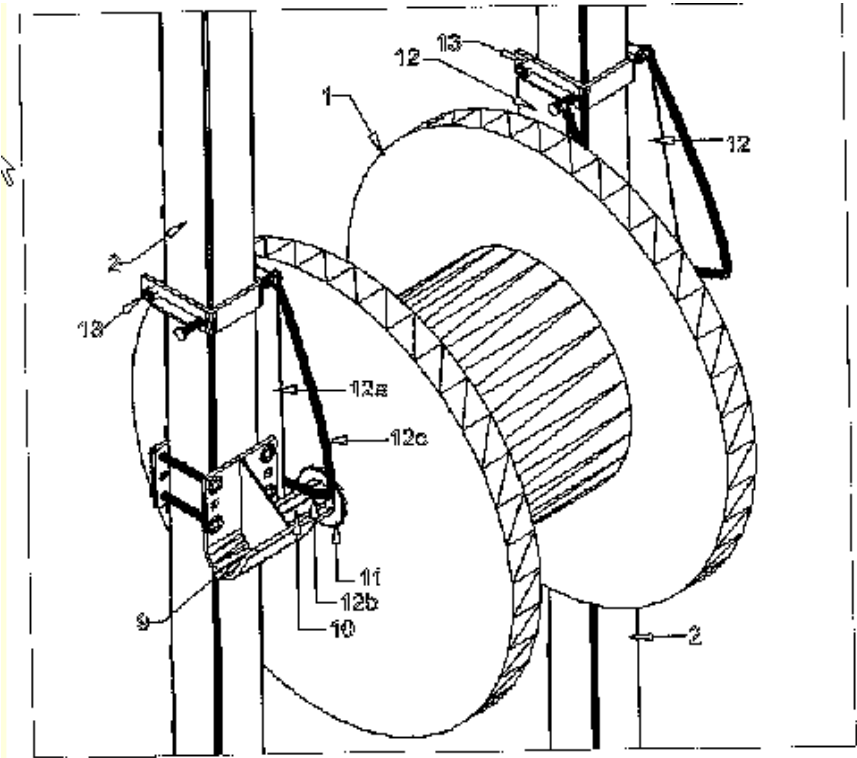
B65H 49/325

{Arrangements or adaptations for supporting the shafts, e.g. saddle type shaft bearings}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Slot arrangements e.g. saddle bearings for web rolls	B65H 2301/41306
Dispensers for paper towels or toilet paper	A47K 10/32

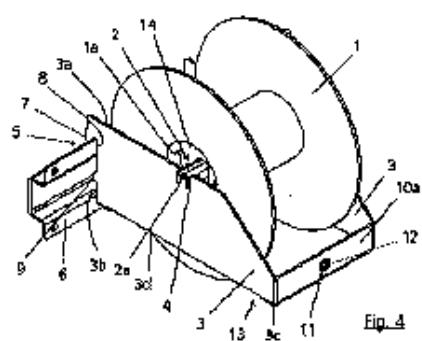
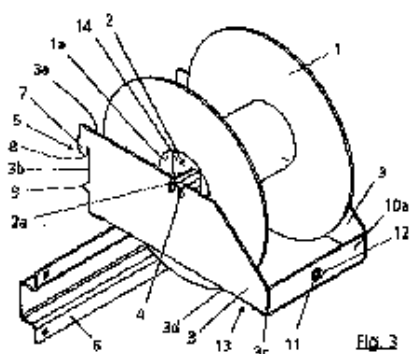
B65H 49/327

{Arrangements or adaptations for attachment to a wall, a post or the like}

Definition statement

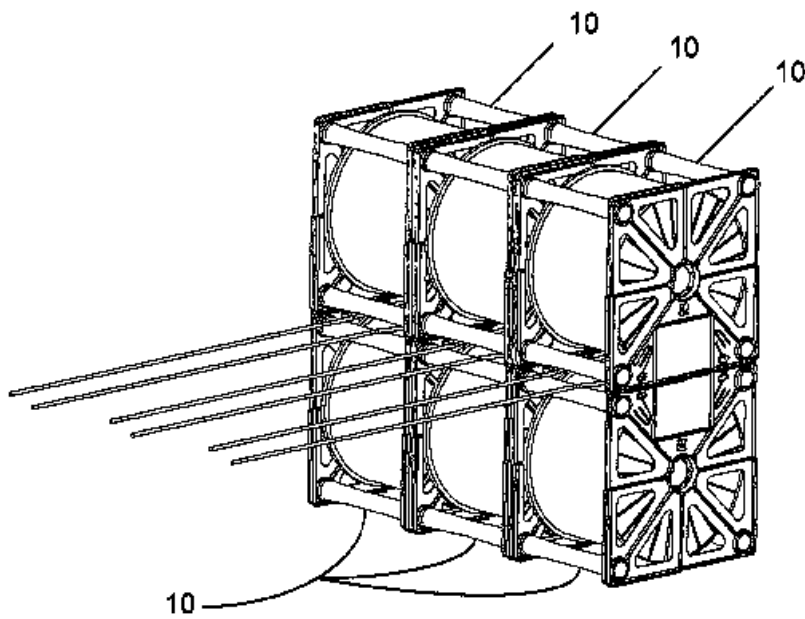
This place covers:

Illustrative example of subject matter classified in this group:



B65H 49/328**{Arrangements or adaptations for stacking}****Definition statement***This place covers:*

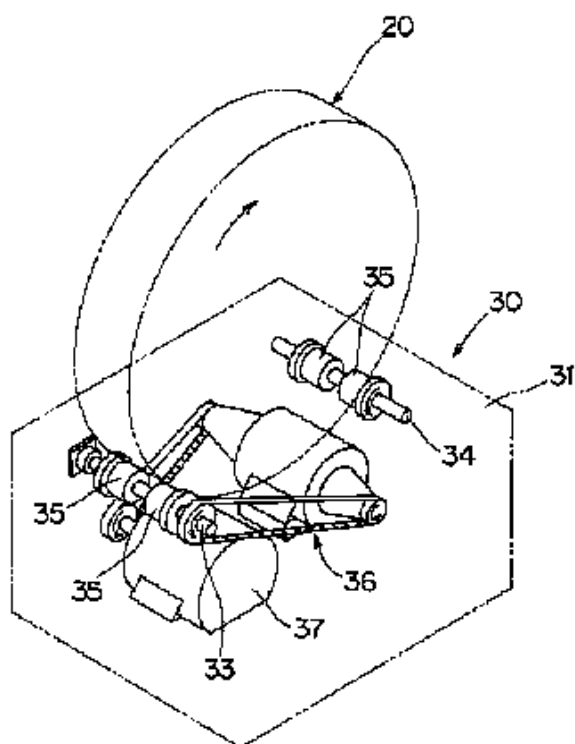
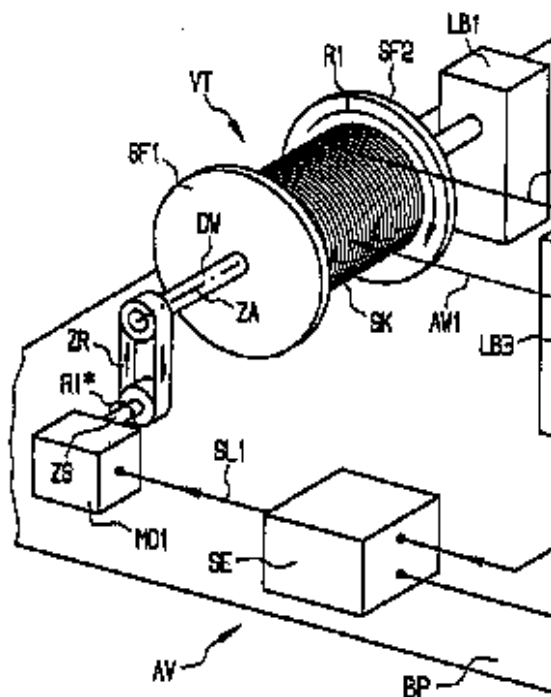
Illustrative example of subject matter classified in this group:



B65H 49/34**Arrangements for effecting positive rotation of packages****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Loop control while feeding stock to a tool	B21D 43/022
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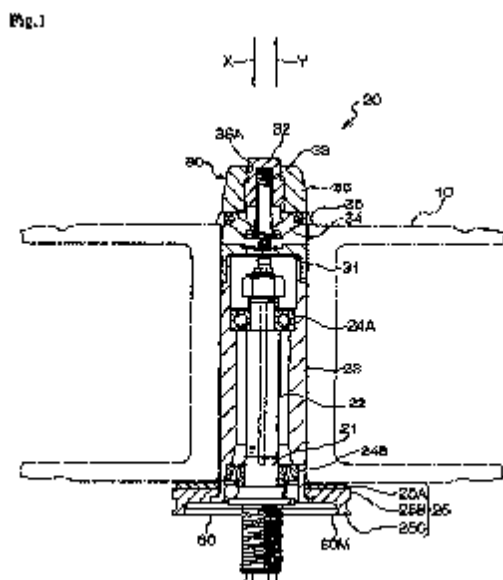
B65H 49/36

Securing packages to supporting devices (replacing or removing cores, receptacles, or completed packages at paying-out, winding, or depositing stations [B65H 67/00](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Replacing or removing cores, receptacles or completed packages at paying-out, winding or depositing stations	B65H 67/00
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Securing cores or formers for winding filamentary material	B65H 54/543
Securing material to cores or formers	B65H 65/00

Expansible spindles, mandrels or chucks, e.g. for securing or releasing cores, holders or packages for filamentary or web-like material	B65H 75/242
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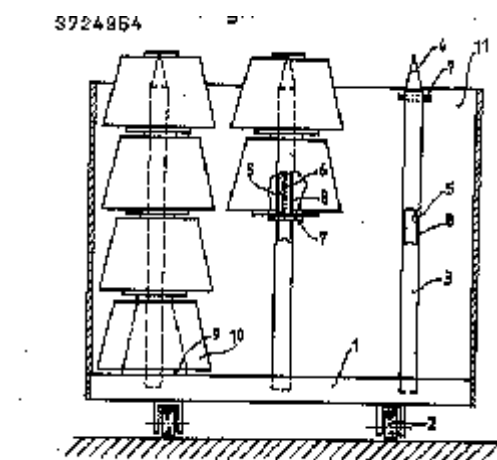
B65H 49/38

Skips, cages, racks, or containers, adapted solely for the transport or storage of bobbins, cops, or the like

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Vehicles for transporting reel units	B60P 3/035
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B65H 51/00

Forwarding filamentary material (stretch-spinning methods [D01D 5/12](#); drawing or drafting rovings or the like [D01H 5/00](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Feeding devices for metal wire or band	B21C 47/34
Feeding wire in wire-working machines	B21F 23/00
Devices for feeding saw wire	B23D 57/0061
Solder feeding devices	B23K 3/06
Means for feeding electrodes	B23K 9/133

Apparatus or processes specially adapted for manufacturing, assembling, maintaining, or repairing of line connectors or current connectors or for joining electric conductors of trolley lines	B60M 1/28 , H01R 43/00
Stretch-spinning methods	D01D 5/12
Drawing or drafting rovings or the like	D01H 5/00
Devices for feeding threads to the needles in knitting	D04B 15/38
Apparatus or processes specially adapted for manufacturing, assembling, maintaining, or repairing of line connectors or current connectors or for joining electric conductors (joining cables)	H02G 1/14 , H01R 43/00

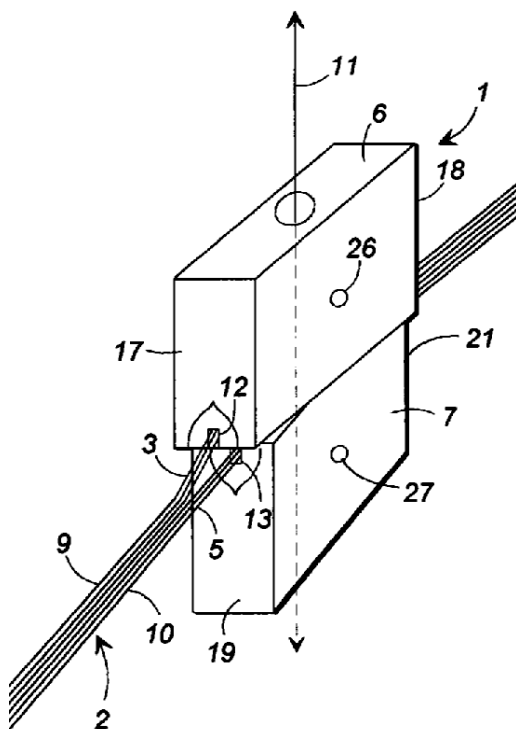
B65H 51/005

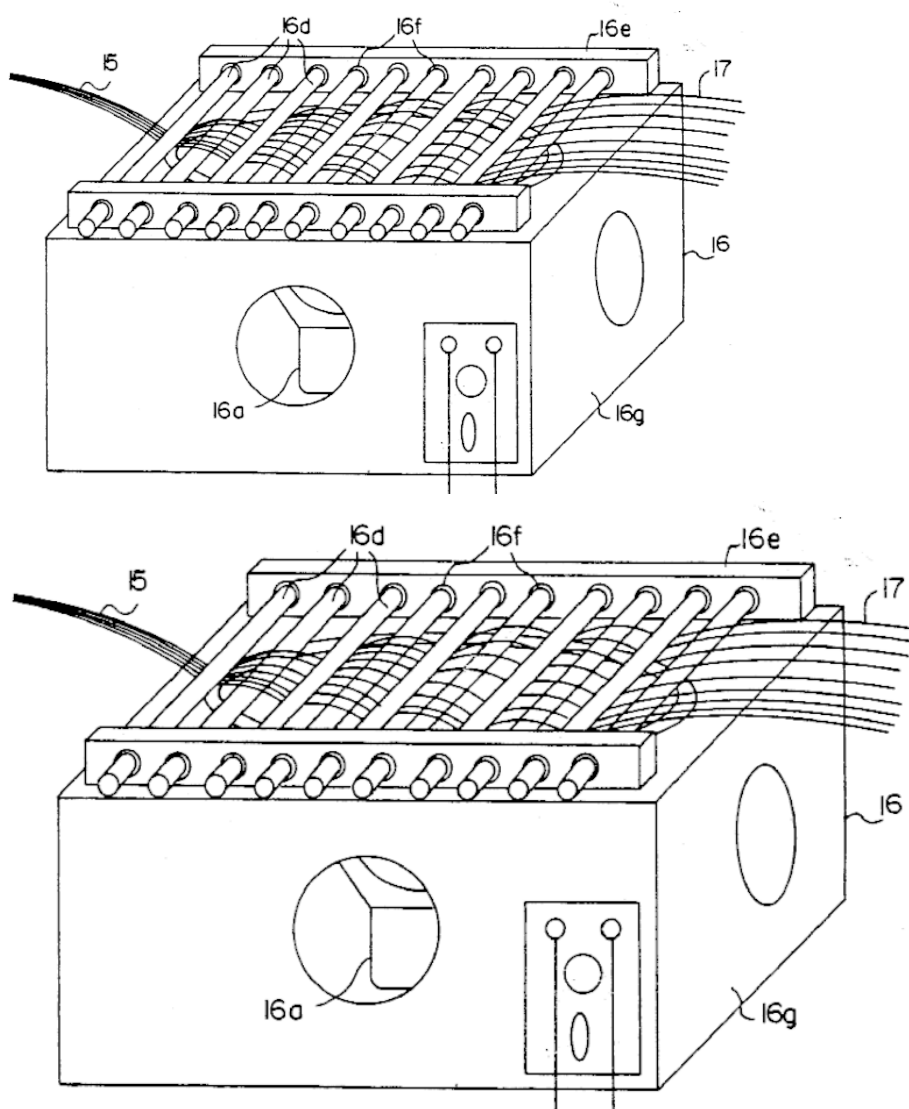
Separating a bundle of forwarding filamentary materials into a plurality of groups

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





References

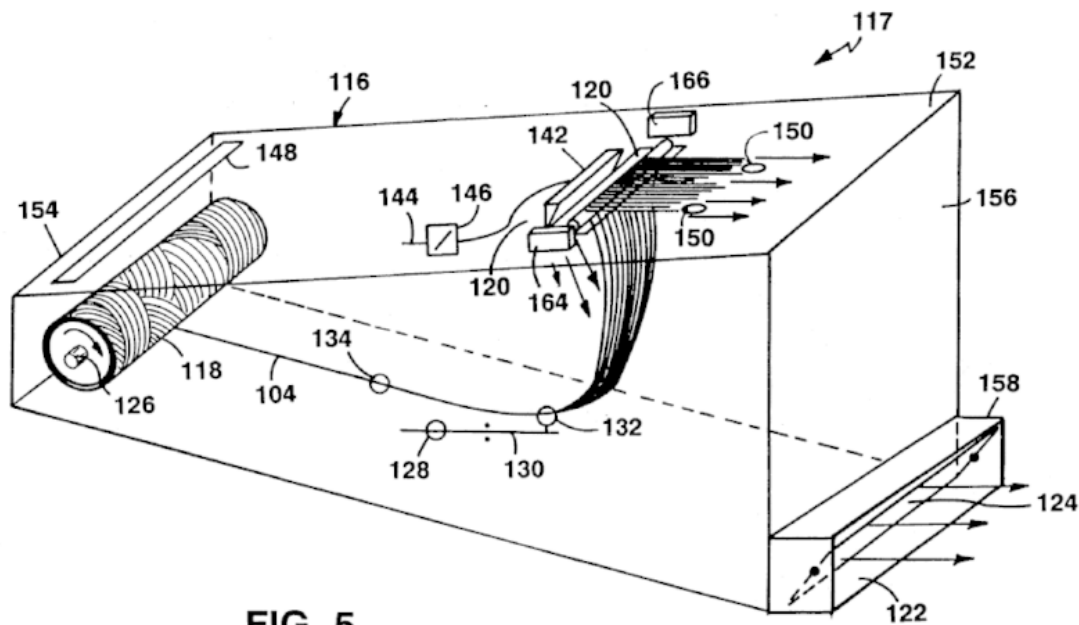
Informative references

Attention is drawn to the following places, which may be of interest for search:

Thread sheets, e.g. sheets of parallel yarns or wires	B65H 2701/38
Opening bundles to space the threads or filaments	D01D 11/02
Separating or spreading	D02J 1/18

B65H 51/01**by means of static electricity****Definition statement***This place covers:*

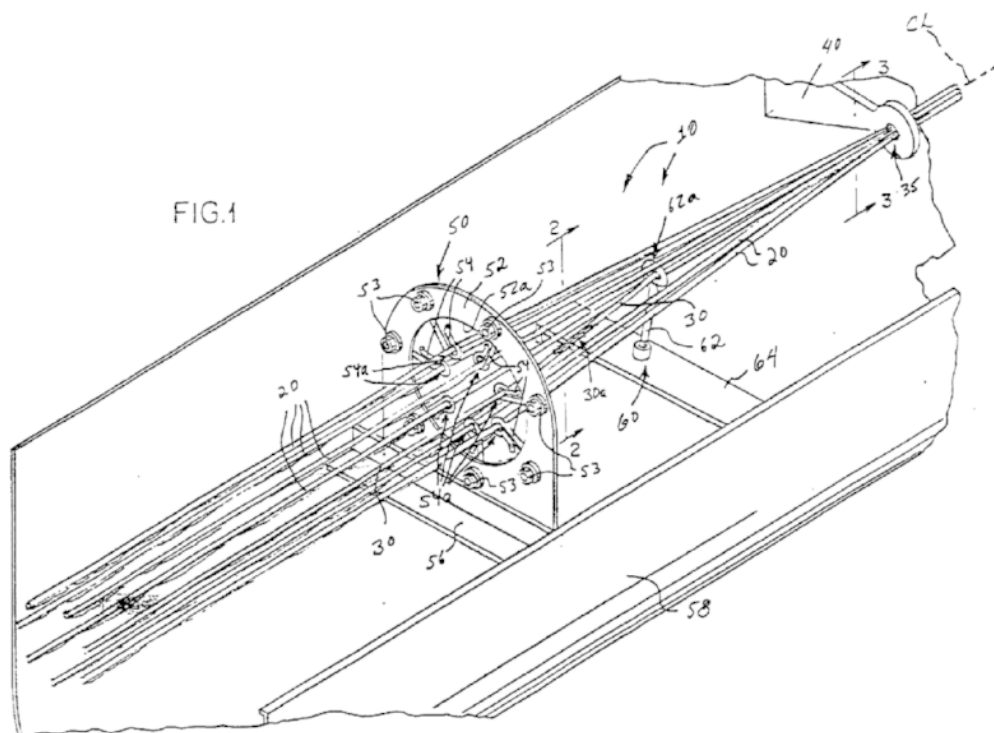
Illustrative example of subject matter classified in this group:



B65H 51/015**Gathering a plurality of forwarding filamentary materials into a bundle****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

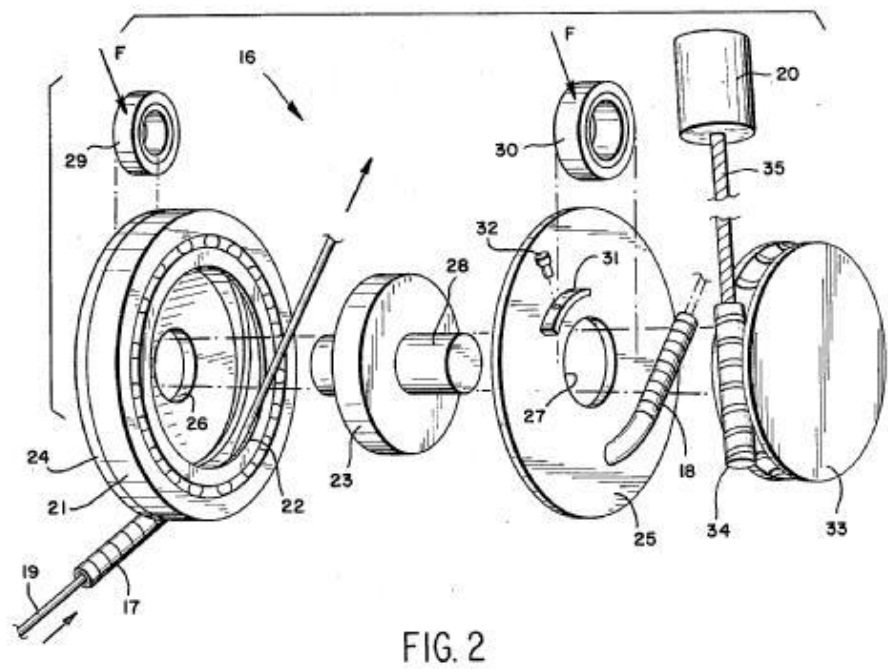
Thread sheets, e.g. sheets of parallel yarns or wires	B65H 2701/38
---	------------------------------

B65H 51/02

Rotary devices, e.g. with helical forwarding surfaces (devices for temporarily storing filamentary material during forwarding [B65H 51/20](#); driven rotary devices for controlling tension [B65H 59/18](#))

Definition statement

This place covers:
E.g. guiding surface on the inside of the forwarding element.



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for temporarily storing filamentary material during forwarding	B65H 51/20
Driven rotary devices for controlling tension	B65H 59/18

B65H 51/04

Rollers, pulleys, capstans, or intermeshing rotary elements

References

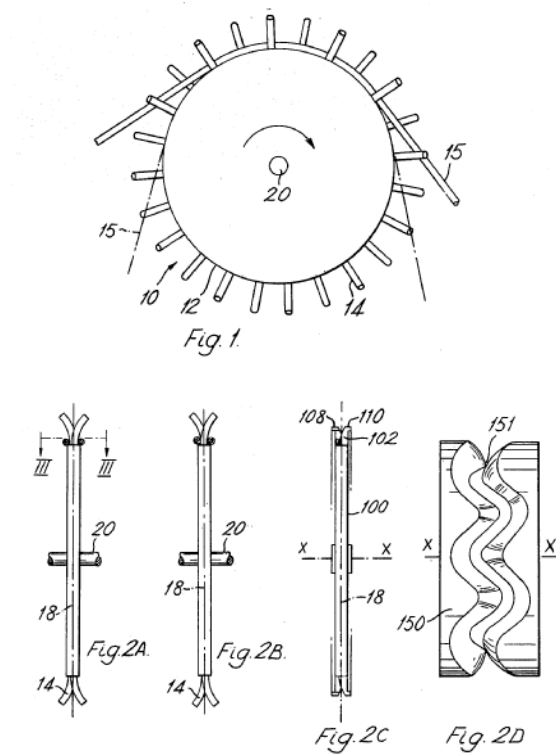
Limiting references

This place does not cover:

Guides as pulleys, rollers or rotary bars (not driven)	B65H 57/14
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B65H 51/06**arranged to operate singly****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



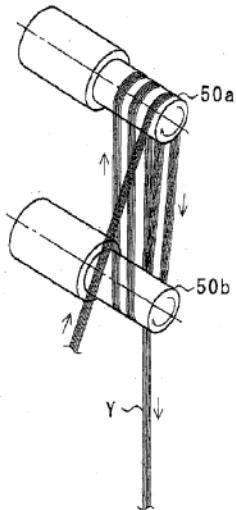
B65H 51/08

arranged to operate in groups or in co-operation with other elements

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



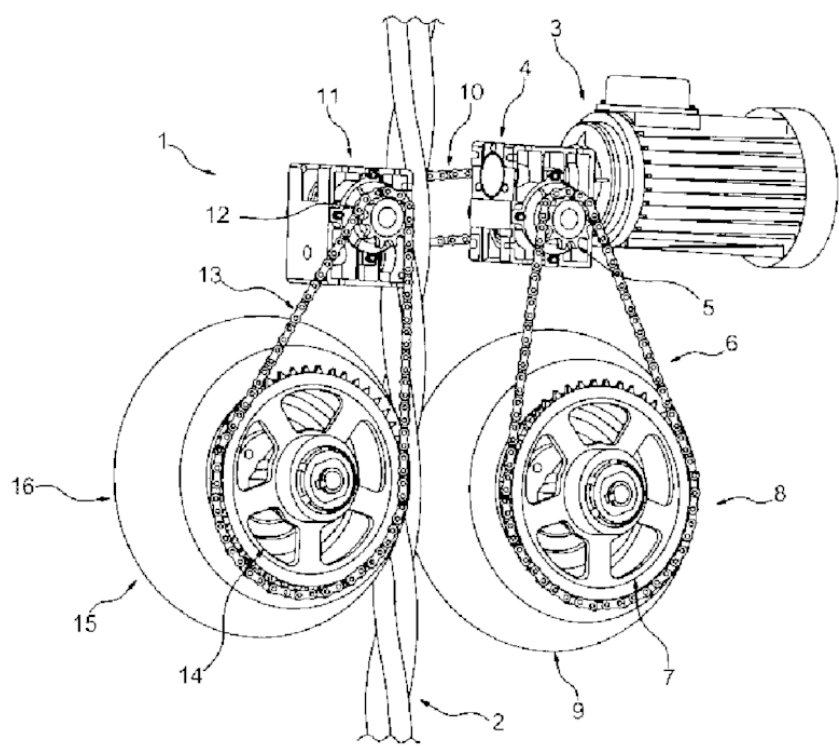
B65H 51/10

with opposed coacting surfaces, e.g. providing nips

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

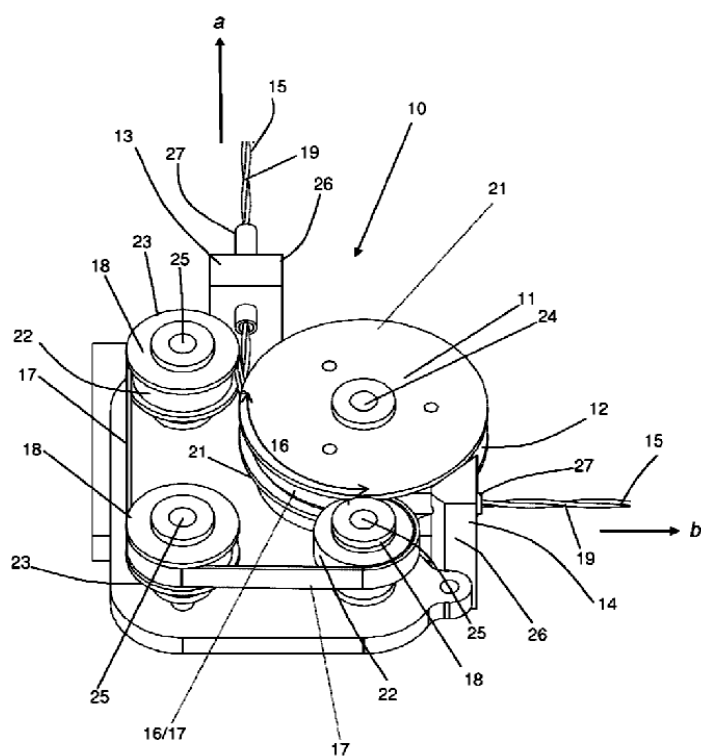
Informative references

Attention is drawn to the following places, which may be of interest for search:

Adjusting or controlling tension in filamentary material by braked elements rotated by material	B65H 59/16
Adjusting or controlling tension in filamentary material by co-operating surfaces mounted for relative movement and arranged to apply pressure to material	B65H 59/22

B65H 51/105**{one of which is an endless belt}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



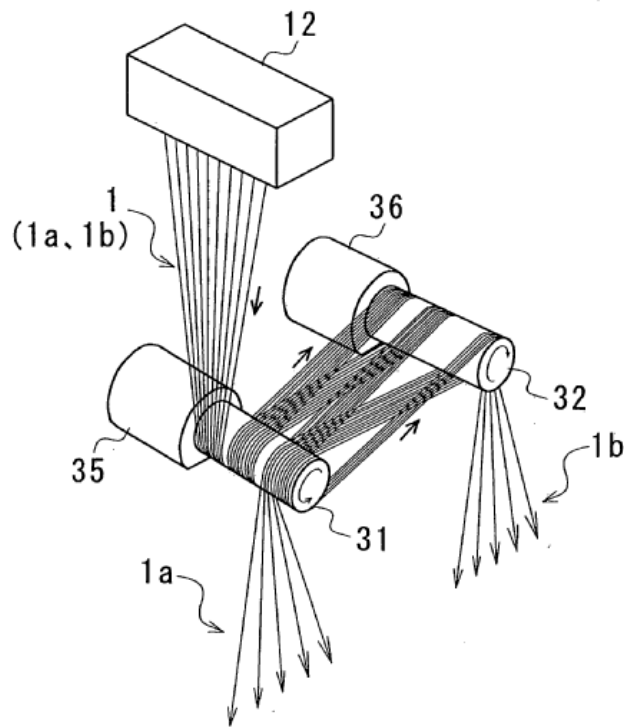
B65H 51/12

in spaced relation to provide a series of independent forwarding surfaces around which material is passed or wound

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

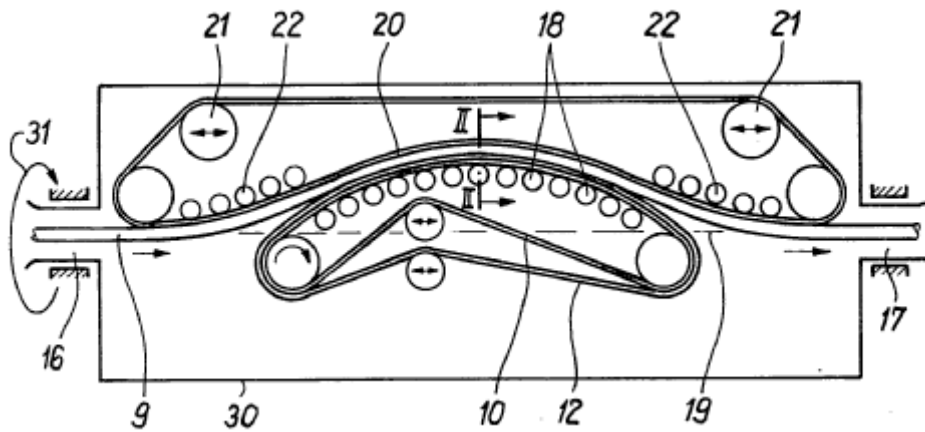
Attention is drawn to the following places, which may be of interest for search:

Stretching or tensioning, shrinking or relaxing, e.g. by use of overfeed and underfeed apparatus	D02J 1/225
Heating or cooling the yarn, thread, cord, rope or the like by contact with at least one rotating roll	D02J 13/005

B65H 51/14**Aprons, endless belts, lattices, or like driven elements****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



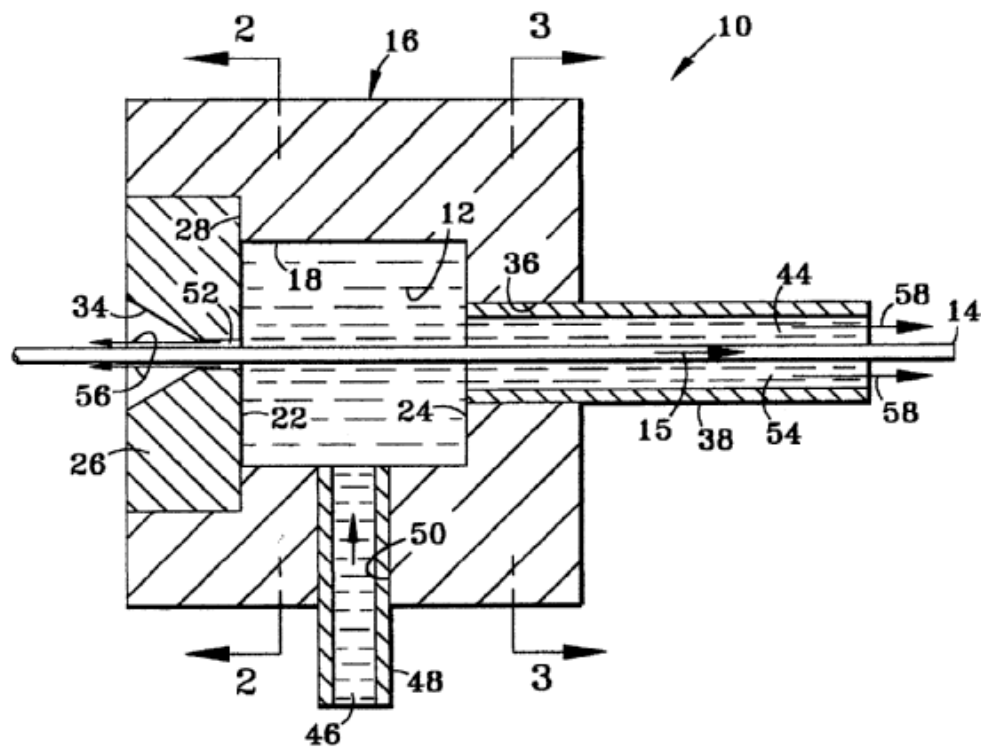
B65H 51/16

Devices for entraining material by flow of liquids or gases, e.g. air-blast devices (blowing slag wool in molten state [C03B 37/06](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

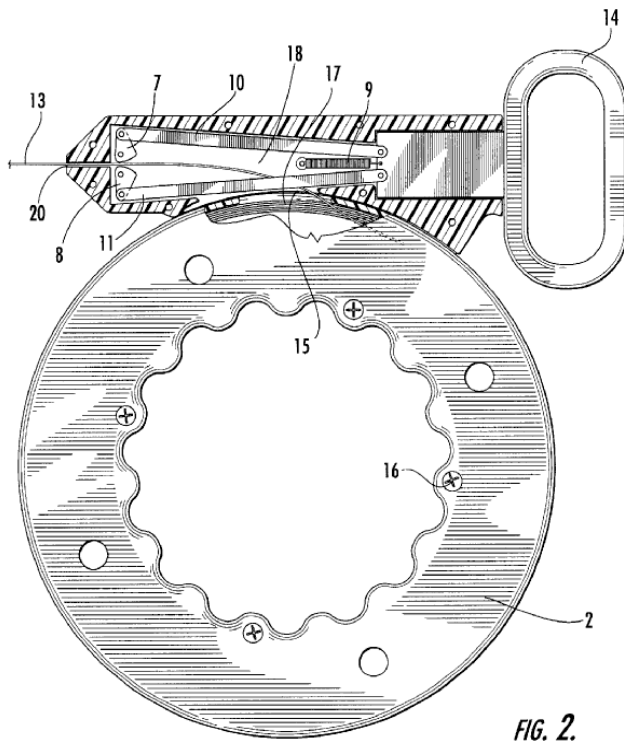
Attention is drawn to the following places, which may be of interest for search:

Blowing slag wool in molten state	C03B 37/06
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B65H 51/18**Gripping devices with linear motion****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



B65H 51/20

Devices for temporarily storing filamentary material during forwarding, e.g. for buffer storage

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

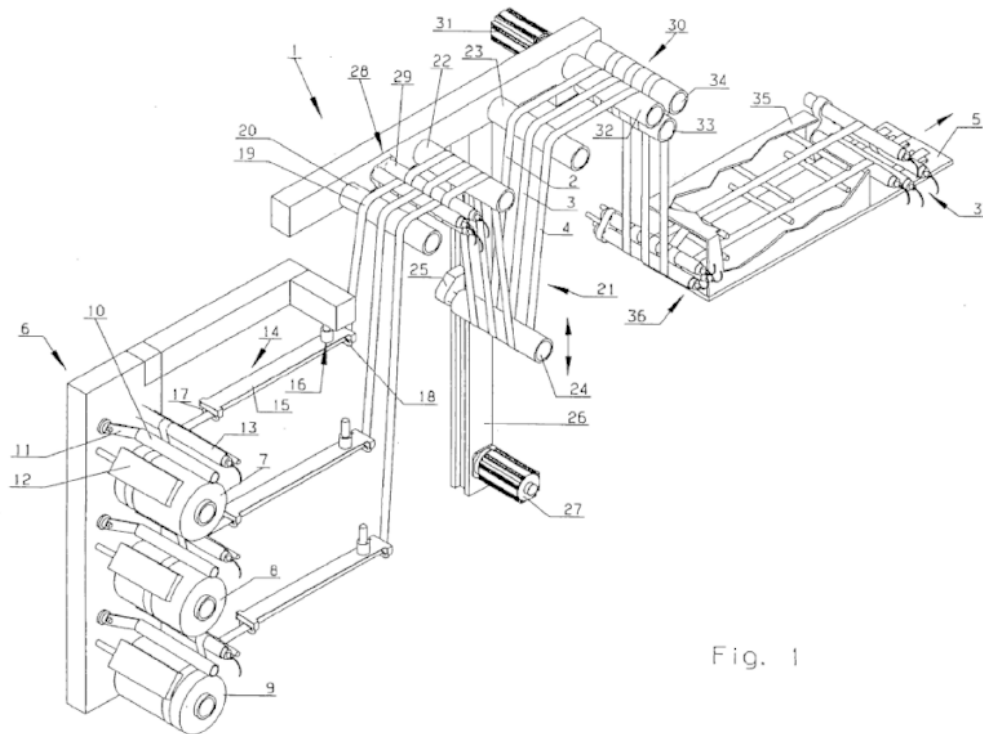
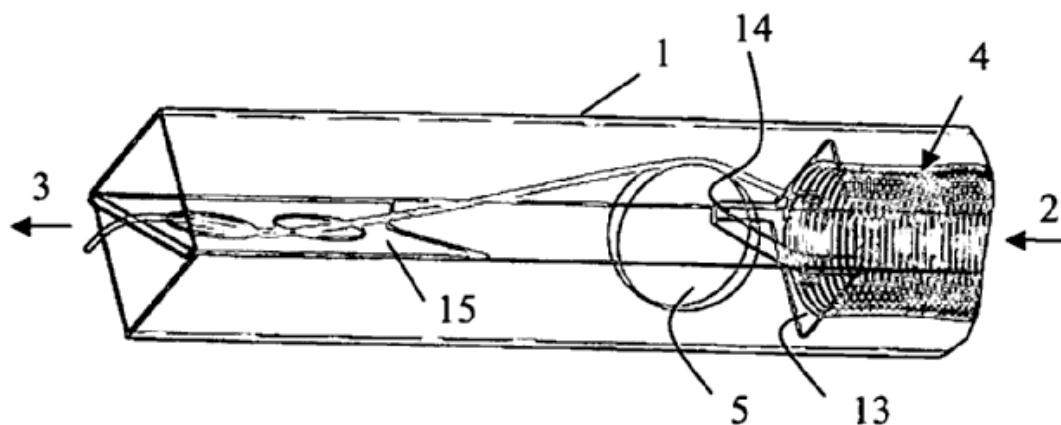


Fig. 1

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Devices for temporarily accumulating metal wire or band

[B21C 49/00](#)

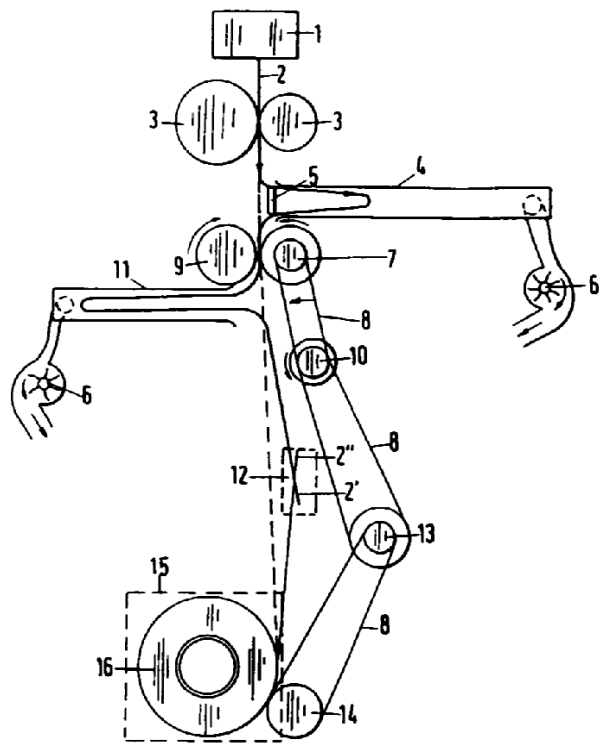
B65H 51/205

{by means of a fluid}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

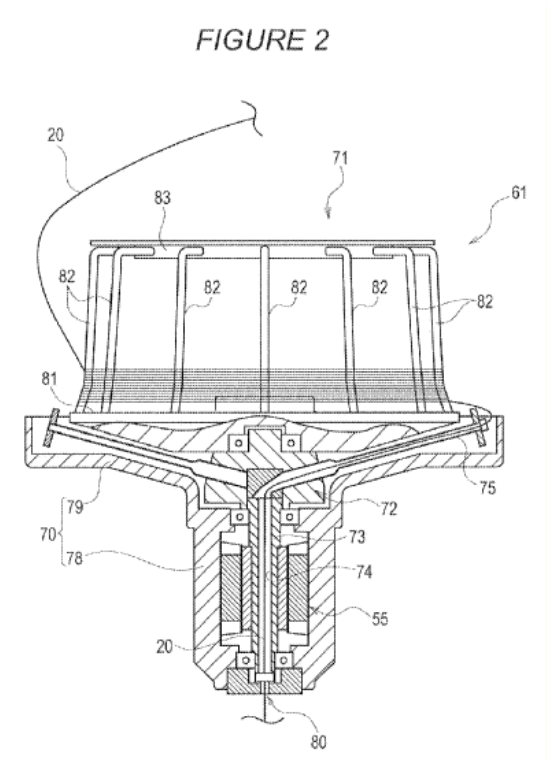
Adjusting or controlling tension in filamentary material, by devices acting on running material and not associated with supply or take-up devices, the material being subjected to the action of a fluid	B65H 59/105
Regulating tension by devices acting on running yarn and not associated with supply or take-up devices	D01H 13/104
Device for measuring and temporary storing the weft	D03D 47/36
Thread-feeding devices	D04B 15/48

B65H 51/22

Reels or cages, e.g. cylindrical, with storing and forwarding surfaces provided by rollers or bars {(measuring and temporary storing the weft in looms [D03D 47/36](#); thread feeding devices for weft knitting machines [D04B 15/48](#))}

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:



Relationships with other classification places

Temporary storage associated with textile machines other than weaving or knitting machines can be found by crossing the group with the subclass of the other textile field e.g. with [D05B](#), [D05C](#) or [D01H](#).

References

Limiting references

This place does not cover:

Measuring and cutting the weft. Devices for measuring and temporary storing the weft	D03D 47/36
Thread-feeding devices in knitting	D04B 15/48

Informative references

Attention is drawn to the following places, which may be of interest for search:

Regulating tension by devices acting on running and not associated with supply or take-up devices in twisting or spinning	D01H 13/104
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B65H 51/24

with interdigitating bars

Definition statement

This place covers:
Not used for classification.

References

Limiting references

This place does not cover:

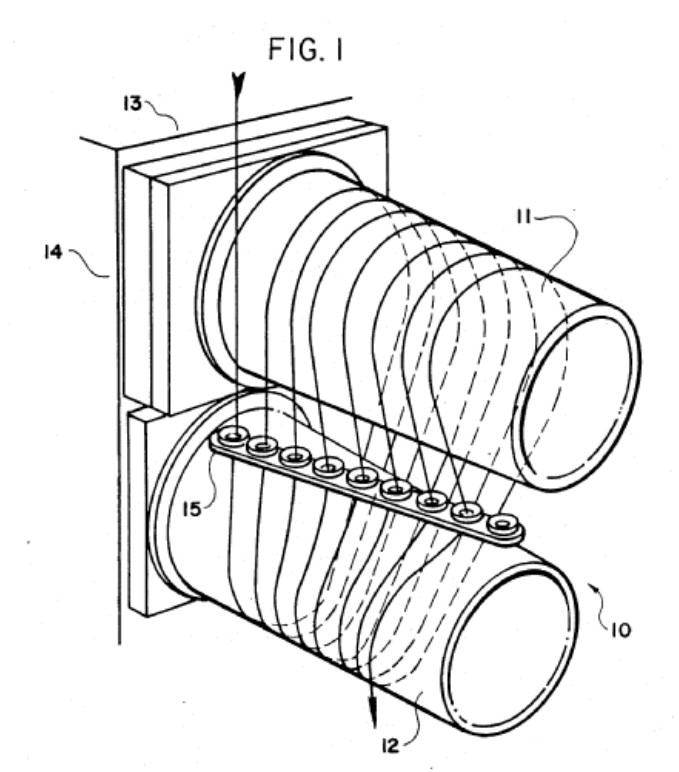
In weaving	D03D 47/36
In Knitting	D04B 15/48

B65H 51/26

Rollers or bars mounted askew to facilitate movement of filamentary material along them, e.g. pairs of canted rollers

Definition statement

This place covers:
Illustrative example of subject matter classified in this group:



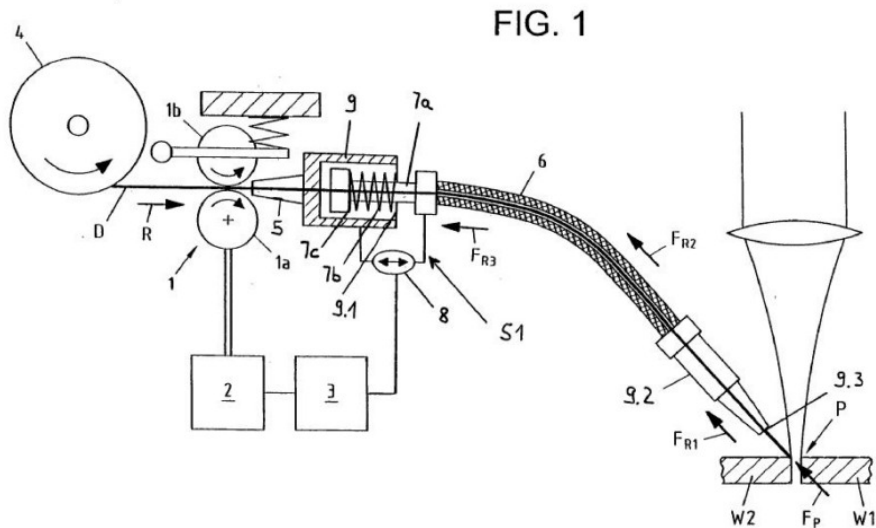
B65H 51/30

Devices controlling the forwarding speed to synchronise with supply, treatment, or take-up apparatus ([B65H 59/10](#), [B65H 59/38](#) take precedence)

Definition statement

This place covers:

E.g. stopping unwinding when take-up stops, or control of welding wire speed (see figure).



Relationships with other classification places

Thread feeding or tensioning arrangement.

References

Limiting references

This place does not cover:

Adjusting or controlling tension in filamentary material by devices acting on running material	B65H 59/10
Adjusting or controlling tension in filamentary material by regulating speed of driving mechanism of unwinding, paying-out, forwarding, winding or depositing devices	B65H 59/38
Positive yarn feeders in knitting	D04B 15/48
Thread feeding or tensioning arrangements in embroidering	D05C 15/18

Informative references

Attention is drawn to the following places, which may be of interest for search:

Adjusting or controlling tension in filamentary material by regulating delivery of material from supply package	B65H 59/02
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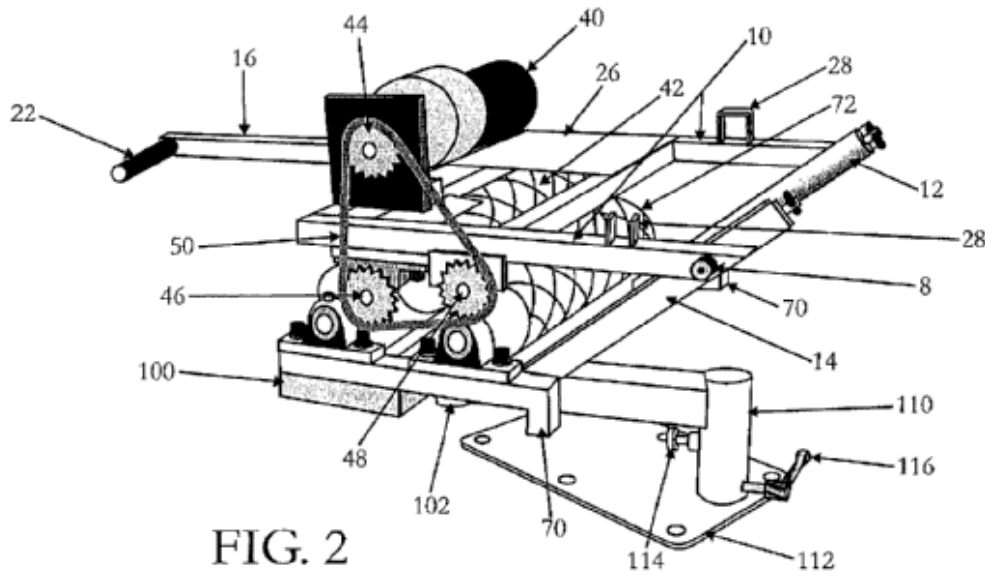
B65H 51/32

Supporting or driving arrangements for forwarding devices

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/00

Winding, coiling, or depositing filamentary material (cores, formers, holders, cans or receptacles [B65H 75/02](#))

Definition statement

This place covers:

In particular devices and processes also classified in other parts of [B65H](#) and including winding of yarns not provided in subgroups.

Relationships with other classification places

Continuous winding on two or more winding heads in succession

[B65H 67/044](#)

References

Limiting references

This place does not cover:

Winding webs	B65H 18/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Cores, formers, holders, cans or receptacles	B65H 75/02
Winding or coiling up metal wire or band	B21C 47/02
Slubbing-winding apparatus	D01G 15/62
Lap- or sliver-winding devices	D01G 27/00
Winding finished rope or cable in cable or rope making	D07B 7/10

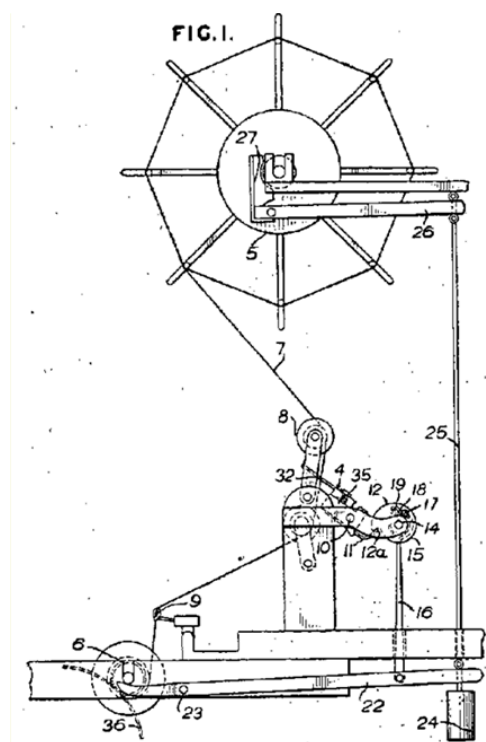
B65H 54/023

{Hank to spool winders}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



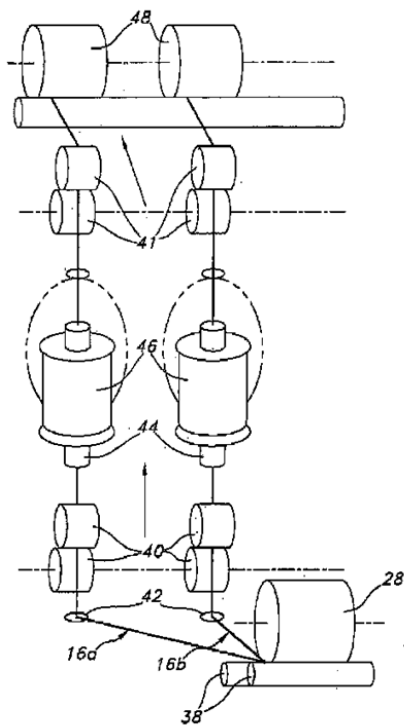
B65H 54/026

{Doubling winders, i.e. for winding two or more parallel yarns on a bobbin, e.g. in preparation for twisting or weaving}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/04

for making packages with closely-wound convolutions

Special rules of classification

Only used if not classified in: Arrangements for aligned winding: [B65H 54/2848](#)

B65H 54/06

for making cross-wound packages

References

Limiting references

This place does not cover:

Traversing devices	B65H 54/28
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B65H 54/08**Precision winding arrangements****References****Limiting references**

This place does not cover:

Preventing ribbon winding in a precision winding apparatus	B65H 54/381
--	-----------------------------

B65H 54/10

for making packages of specified shapes or on specified types of bobbins, tubes, cores, or formers

Definition statement

This place covers:

Winding packages not provided for in subgroups.

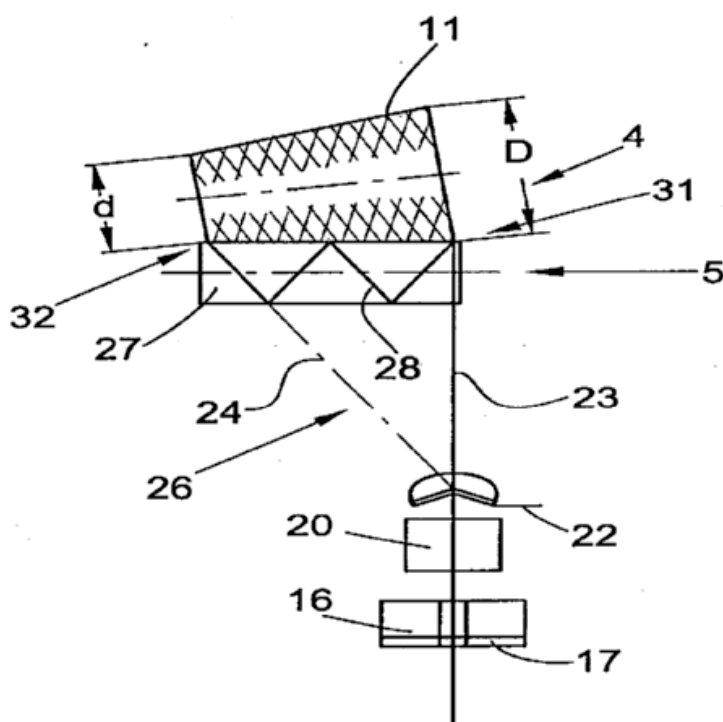
B65H 54/103

{forming frusto-conical packages or forming packages on frusto-conical bobbins, tubes, cores or formers}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



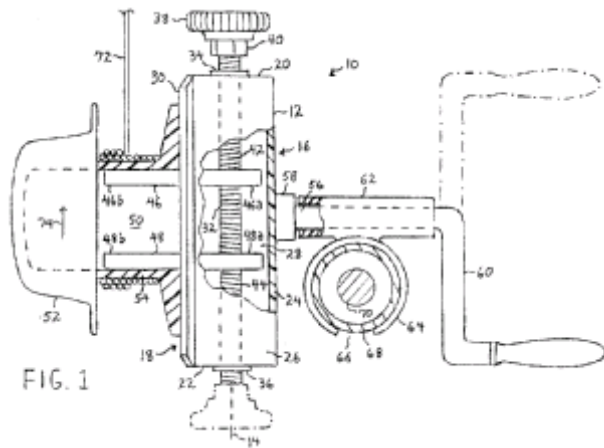


Definition statement

Illustrative examples of subject matter classified in this group:



Definition statement



References

Limiting references

This place does not cover:

Cores, formers, supports or holders for wound material hand-held during use

[B65H 75/406](#)

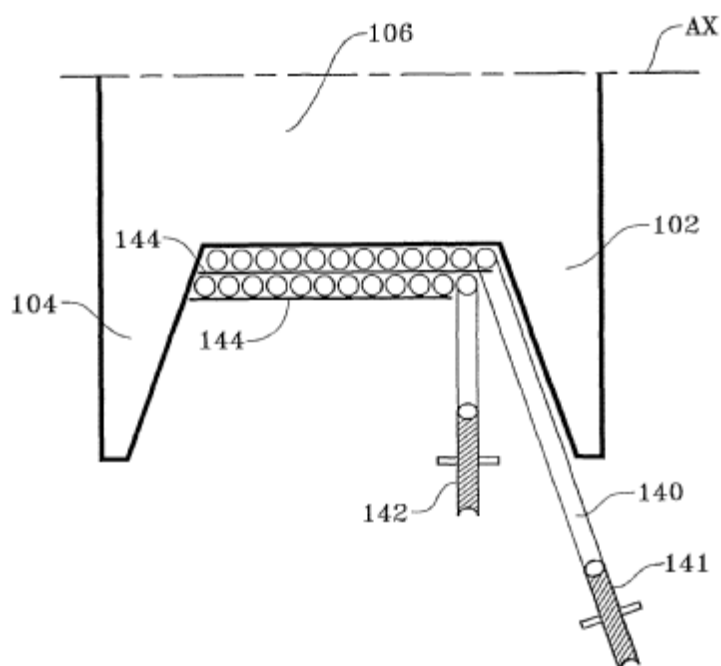
B65H 54/12

on flanged bobbins or spools ([B65H 54/20](#) takes precedence)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Winding forming multiple packages	B65H 54/20
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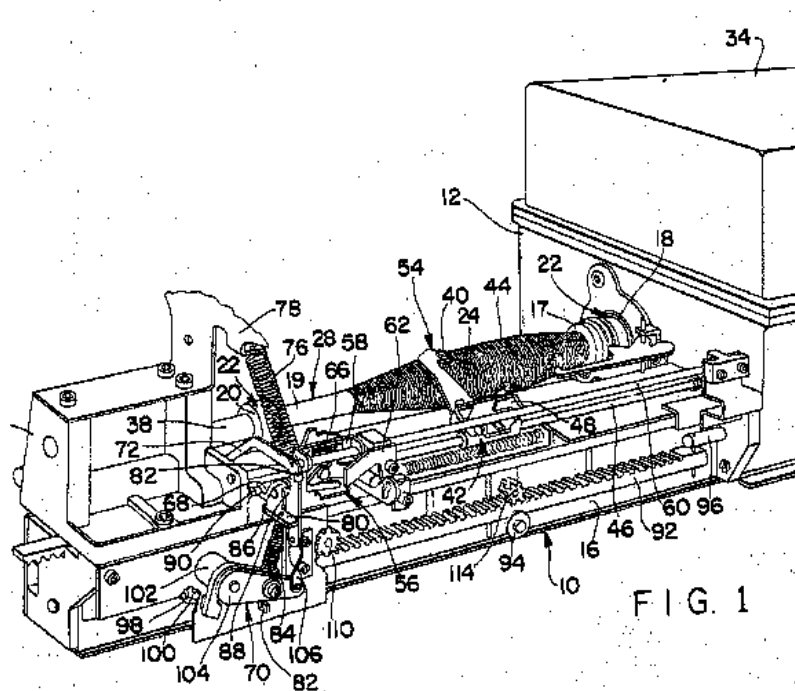
B65H 54/14

on tubes, cores, or formers having generally parallel sides, e.g. cops or packages to be loaded into loom shuttles

Definition statement

This place covers:

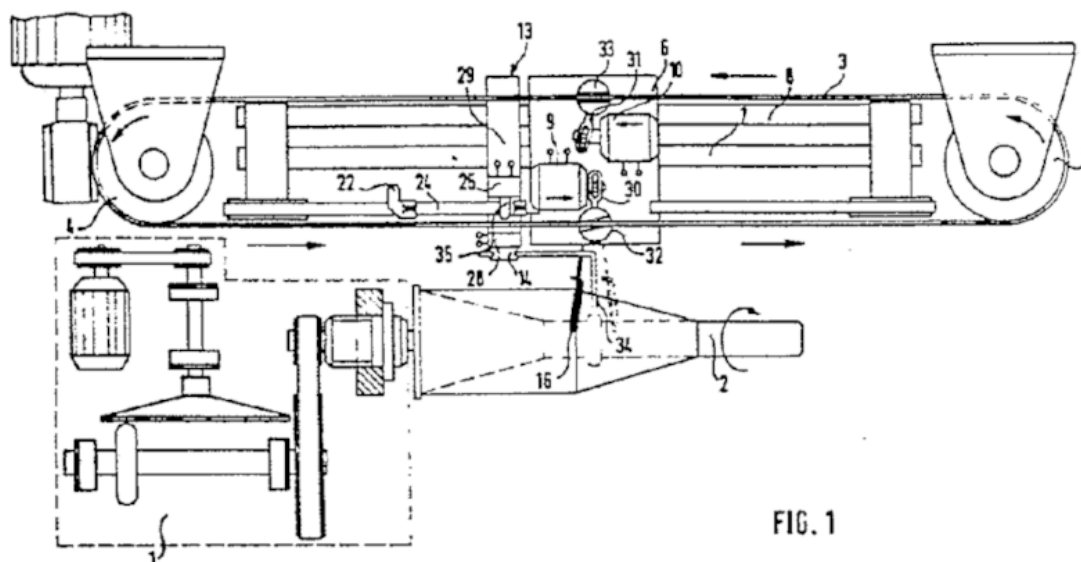
Illustrative example of subject matter classified in this group:



B65H 54/16**forming bottle bobbin packages****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



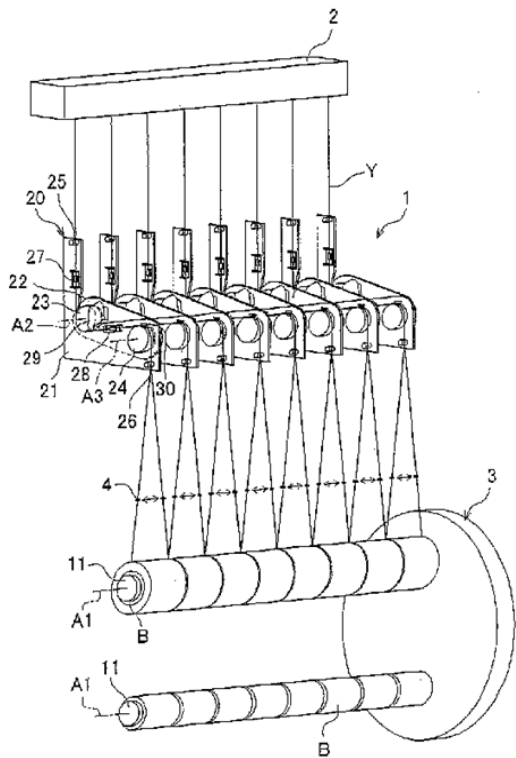
B65H 54/20

forming multiple packages

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Traversing devices with a plurality of guides for winding on a plurality of bobbins	B65H 54/2881
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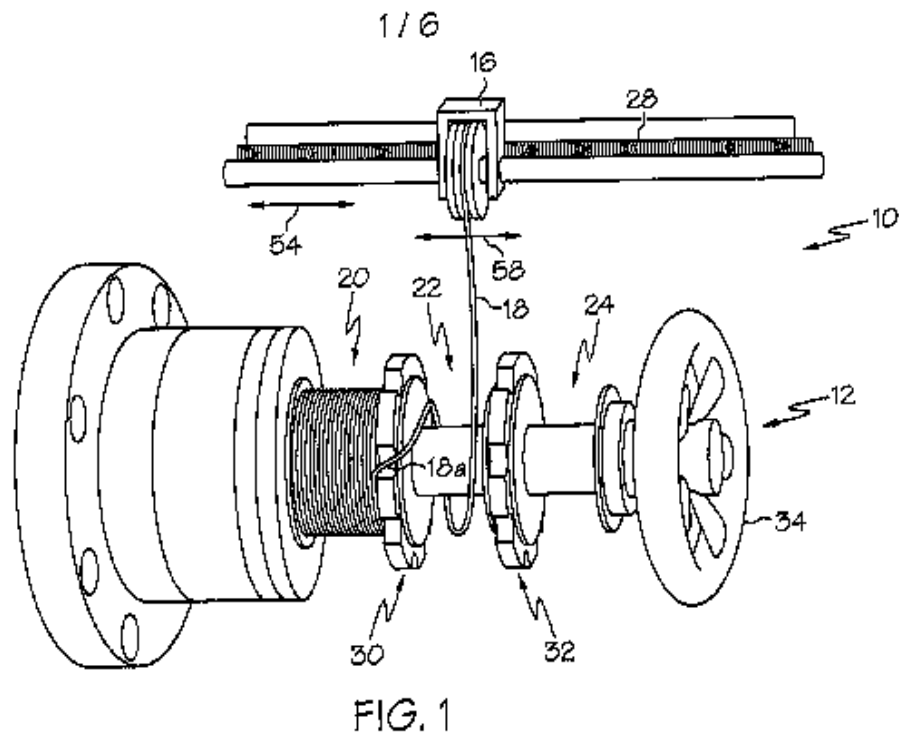
B65H 54/205

{the winding material being continuously transferred from one bobbin to the adjacent one}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



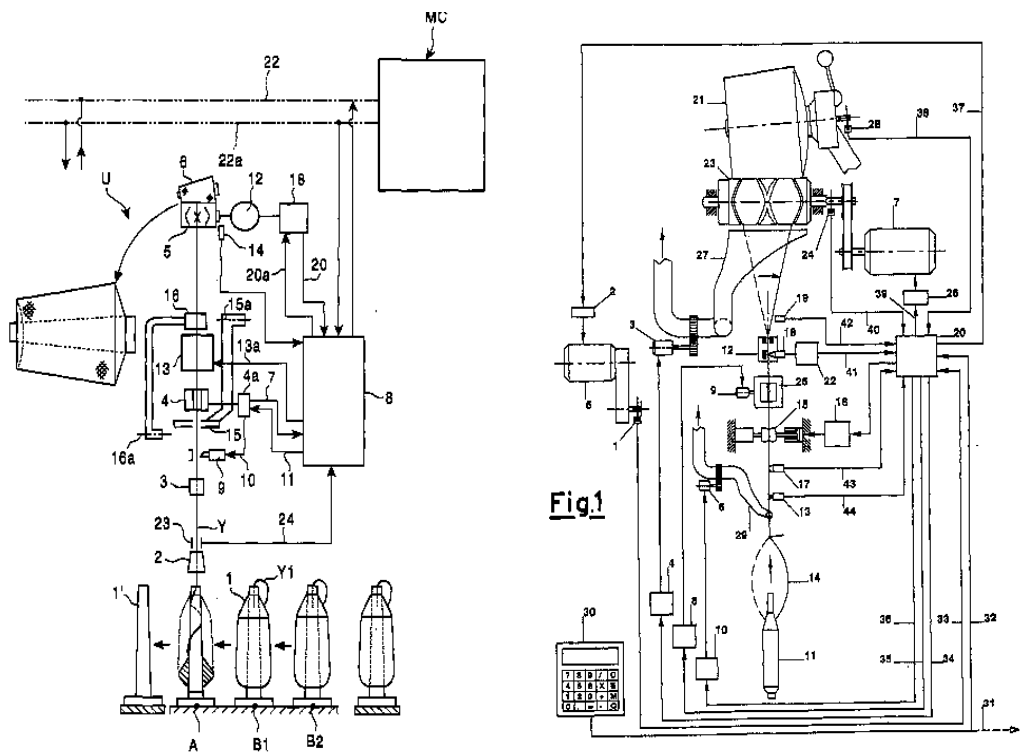
B65H 54/22

Automatic winding machines, i.e. machines with servicing units for automatically performing end-finding, interconnecting of successive lengths of material, controlling and fault-detecting of the running material and replacing or removing of full or empty cores

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for removing completed take-up packages and/or replacing by cores, formers, or empty receptacles at winding or depositing stations; Transferring material between adjacent full and empty take-up elements	B65H 67/04
Other common constructional features, details of accessories (spinning)	D01H 13/00

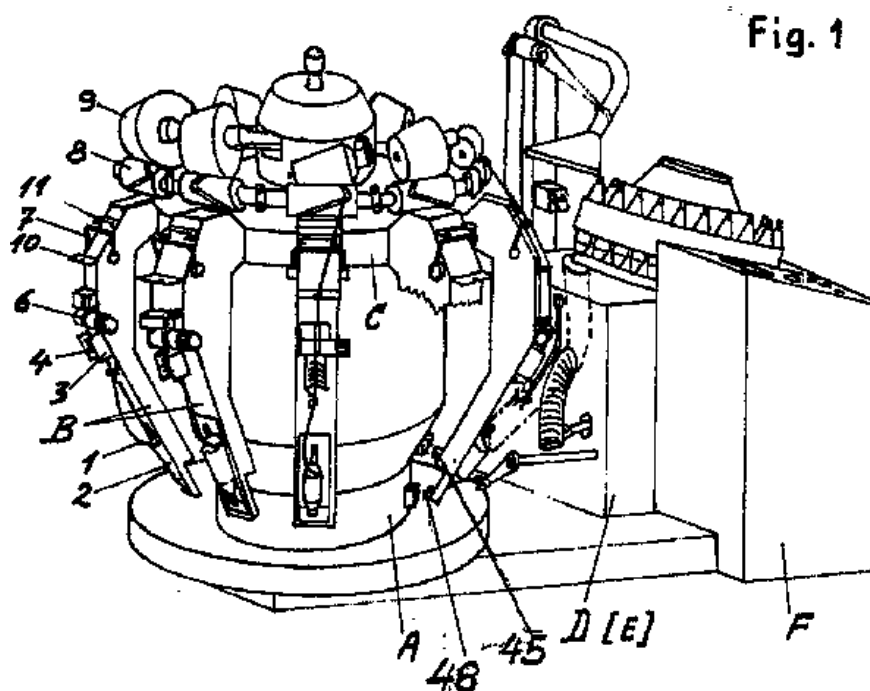
B65H 54/24

having a plurality of winding units moving along an endless path past one or more fixed servicing units

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



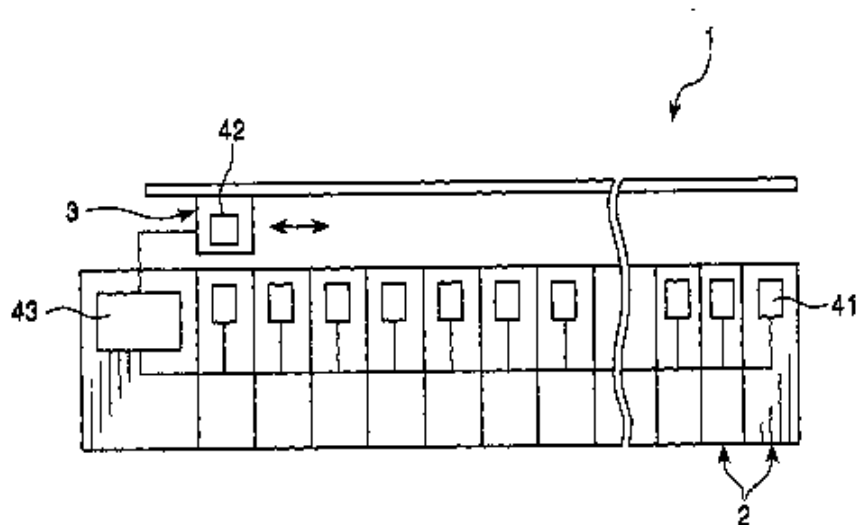
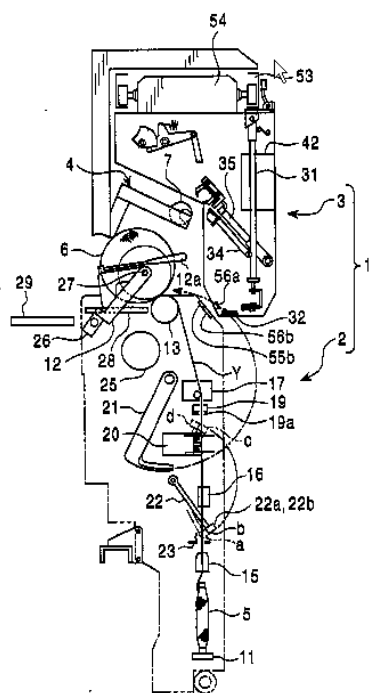
B65H 54/26

having one or more servicing units moving along a plurality of fixed winding units

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

In spinning machines	D01H 15/013 , D01H 13/145 , D01H 9/005 , D01H 13/005 , D01H 9/10
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B65H 54/28

Traversing devices; Package-shaping arrangements (arrangements for preventing ribbon winding [B65H 54/38](#); grooved, slotted, or split drums for driving of packages [B65H 54/46](#))

References

Limiting references

This place does not cover:

Guiding of cables in winches and capstans	B66D 1/38
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Informative references

Attention is drawn to the following places, which may be of interest for search:

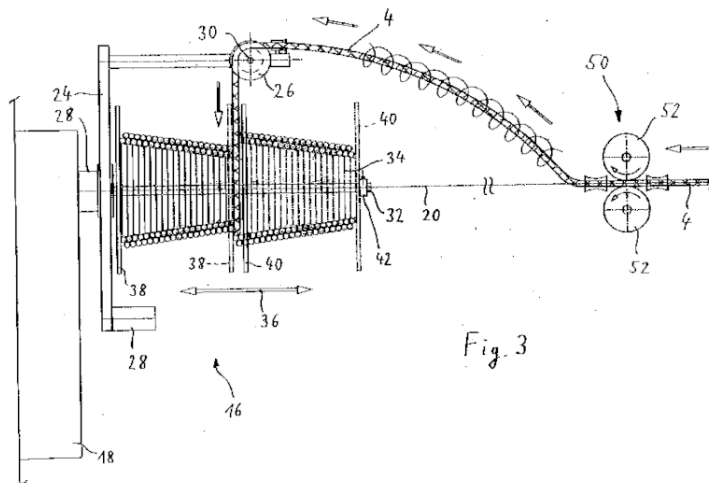
Arrangements for preventing ribbon winding	B65H 54/38
Grooved, slotted or split drums for driving of packages	B65H 54/46
Package-shaping arrangement in spinning	D01H 1/36
Traversing arrangements	D01H 13/06

Special rules of classification

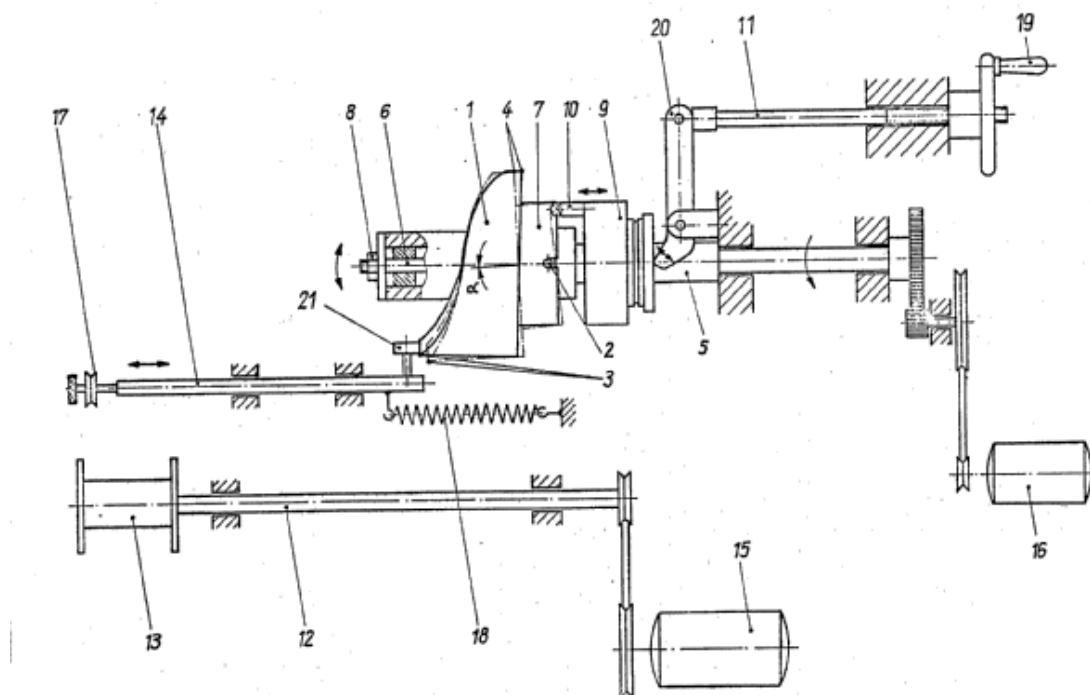
Guides per se or arrangements for mounting the guide on the traversing mechanism: [B65H 57/006](#).

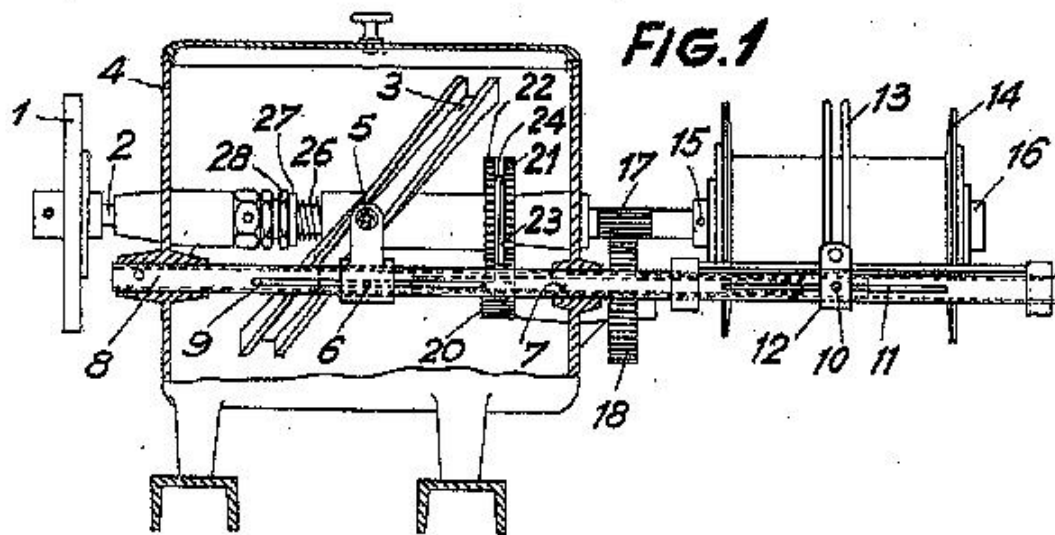
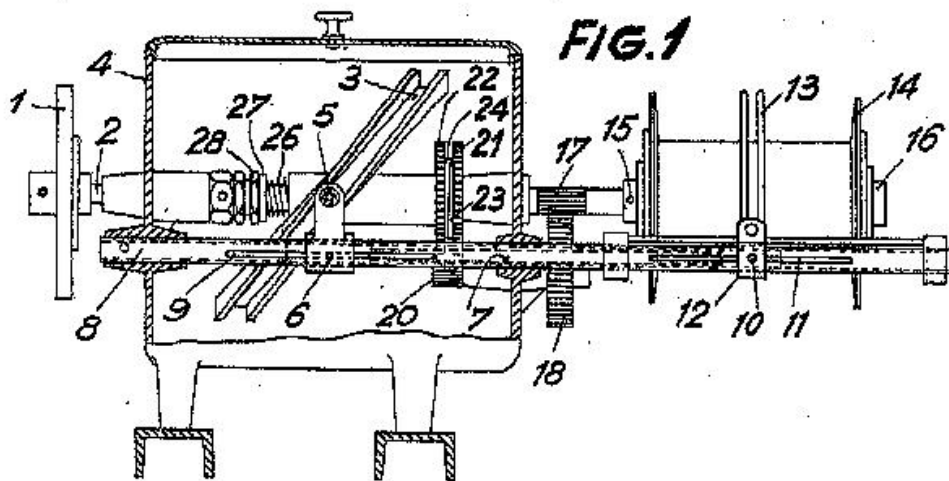
B65H 54/2803**{with a transversely moving package}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 54/2806****{Traversing devices driven by cam}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:





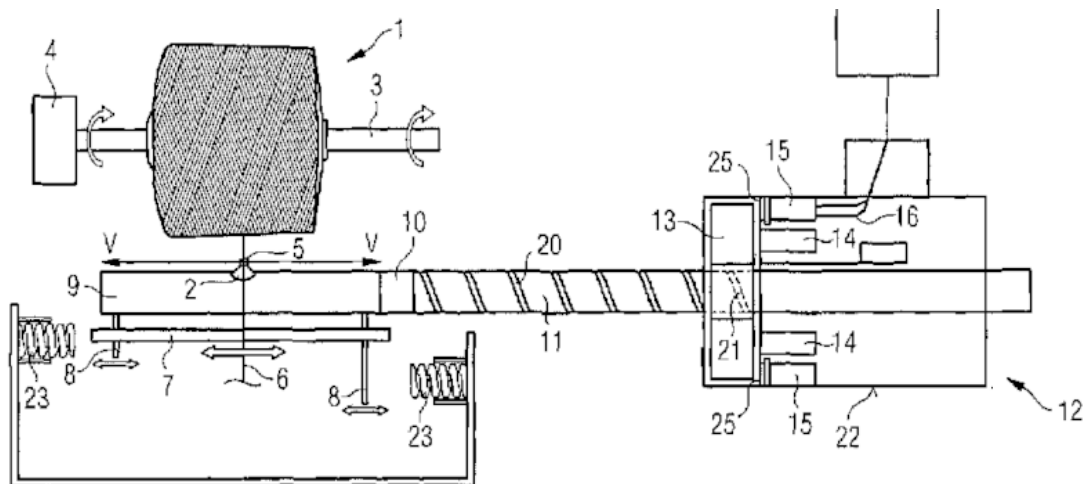
B65H 54/2809

{rotating grooved cam (driving split drums [B65H 54/50](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Driving split drums	B65H 54/50
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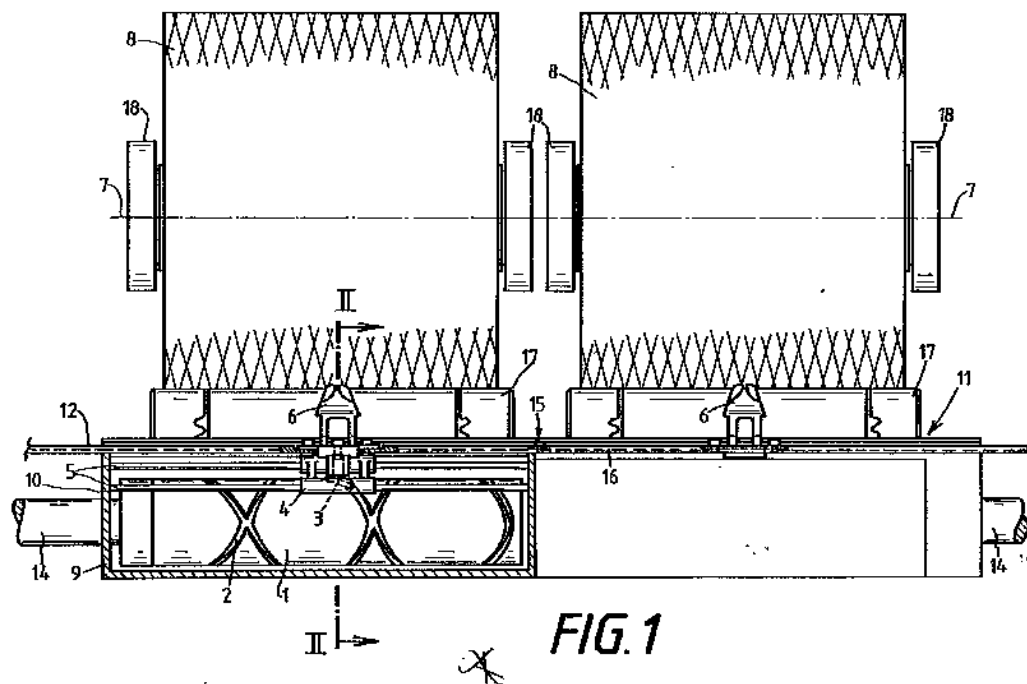
B65H 54/2812

{with a traversing guide running in the groove}

Definition statement

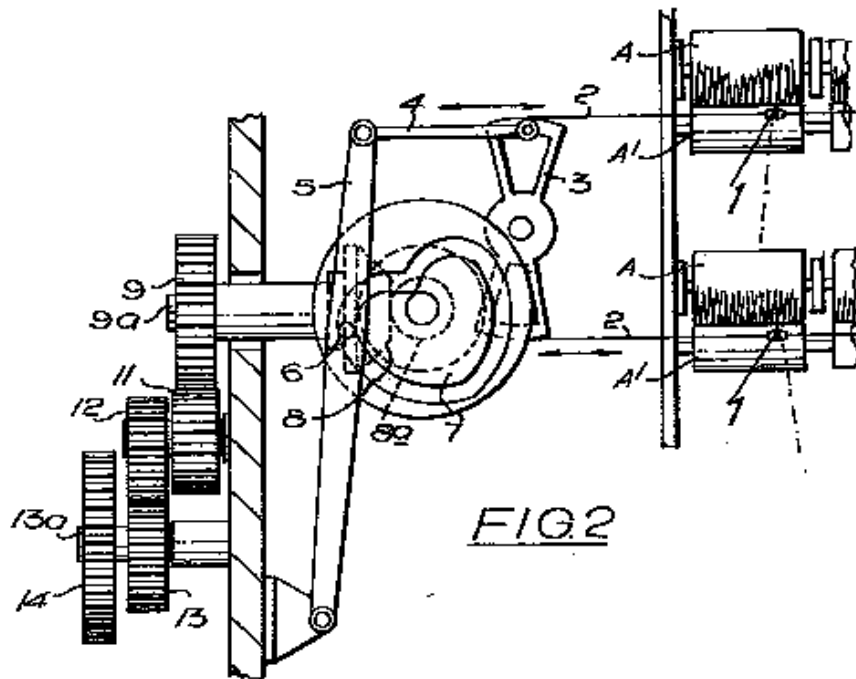
This place covers:

Illustrative example of subject matter classified in this group:



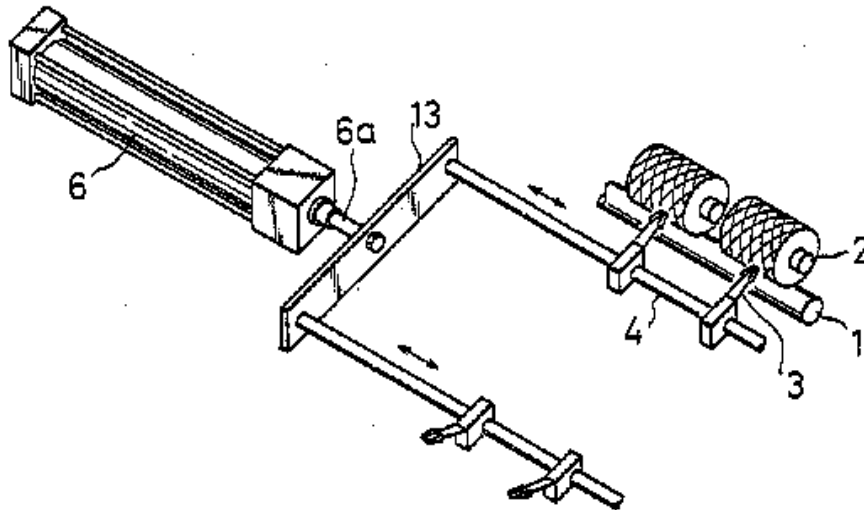
B65H 54/2815**{heart-shaped cam}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 54/2818**{Traversing devices driven by rod}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



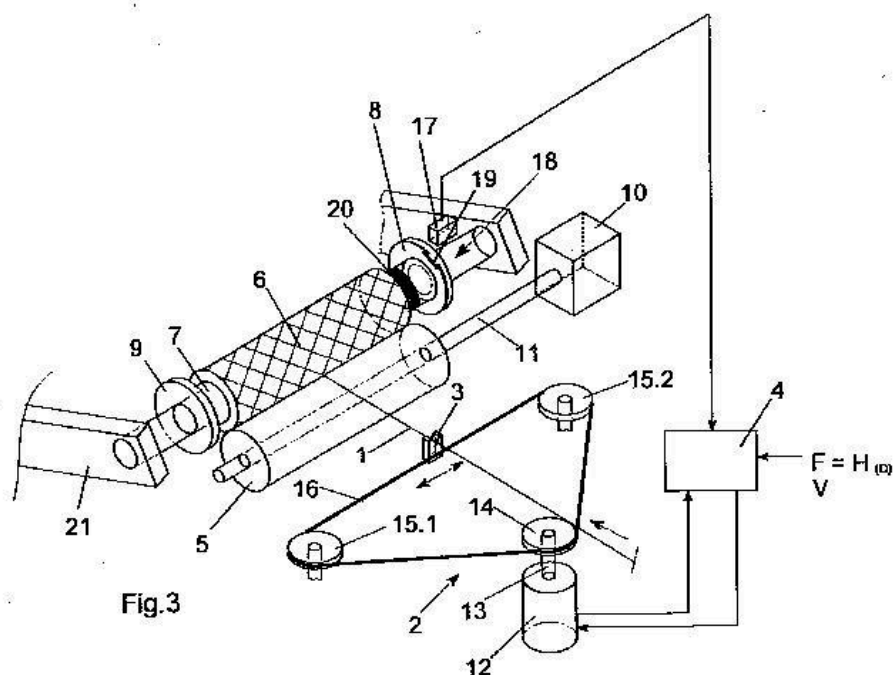
B65H 54/2821

{Traversing devices driven by belts or chains ([B65H 54/2836](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Limiting references**

This place does not cover:

Traversing devices with a rotating guide for traversing the yarn	B65H 54/2836
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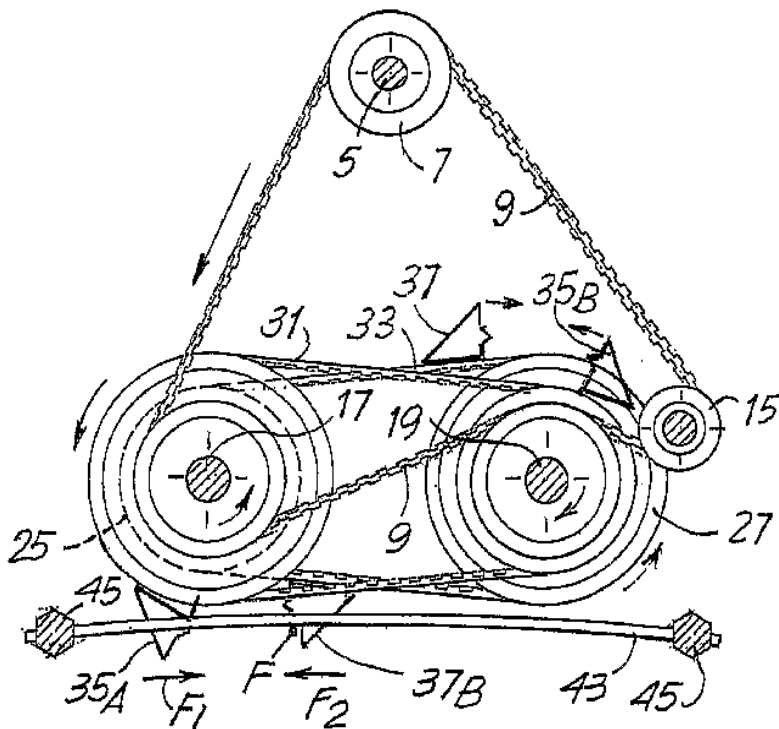
B65H 54/2824

{with at least two traversing guides travelling in opposite directions}

Definition statement

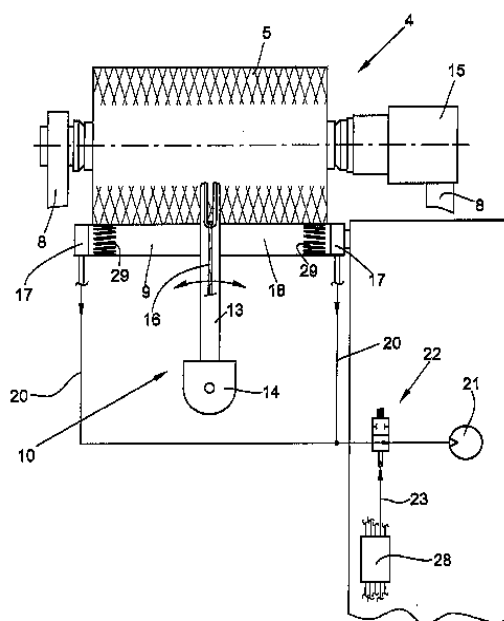
This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/2827**{Traversing devices with a pivotally mounted guide arm}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



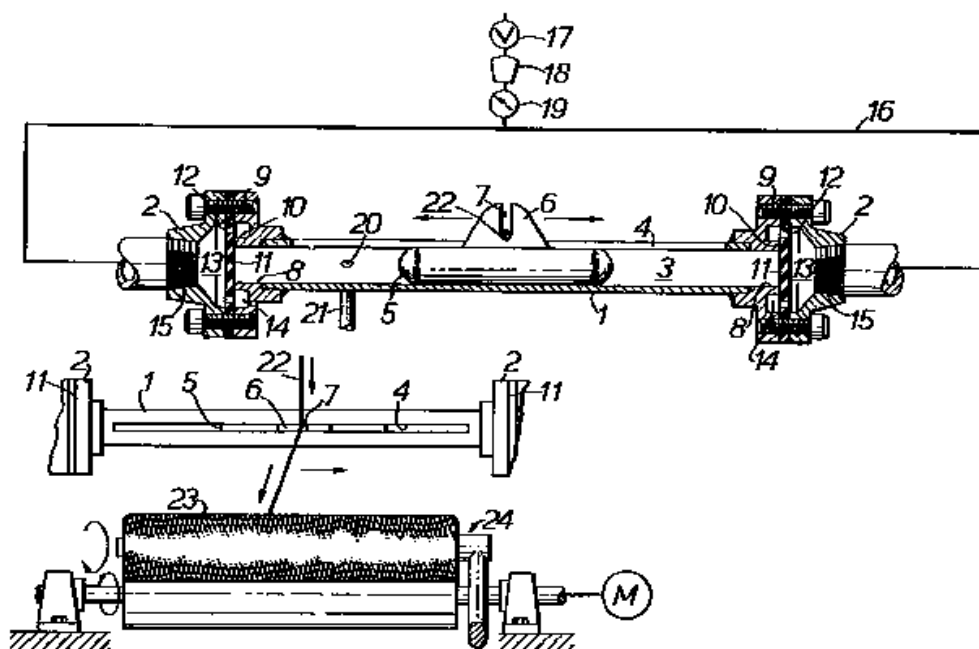
B65H 54/283

{Traversing devices driven by pneumatic or hydraulic means}

Definition statement

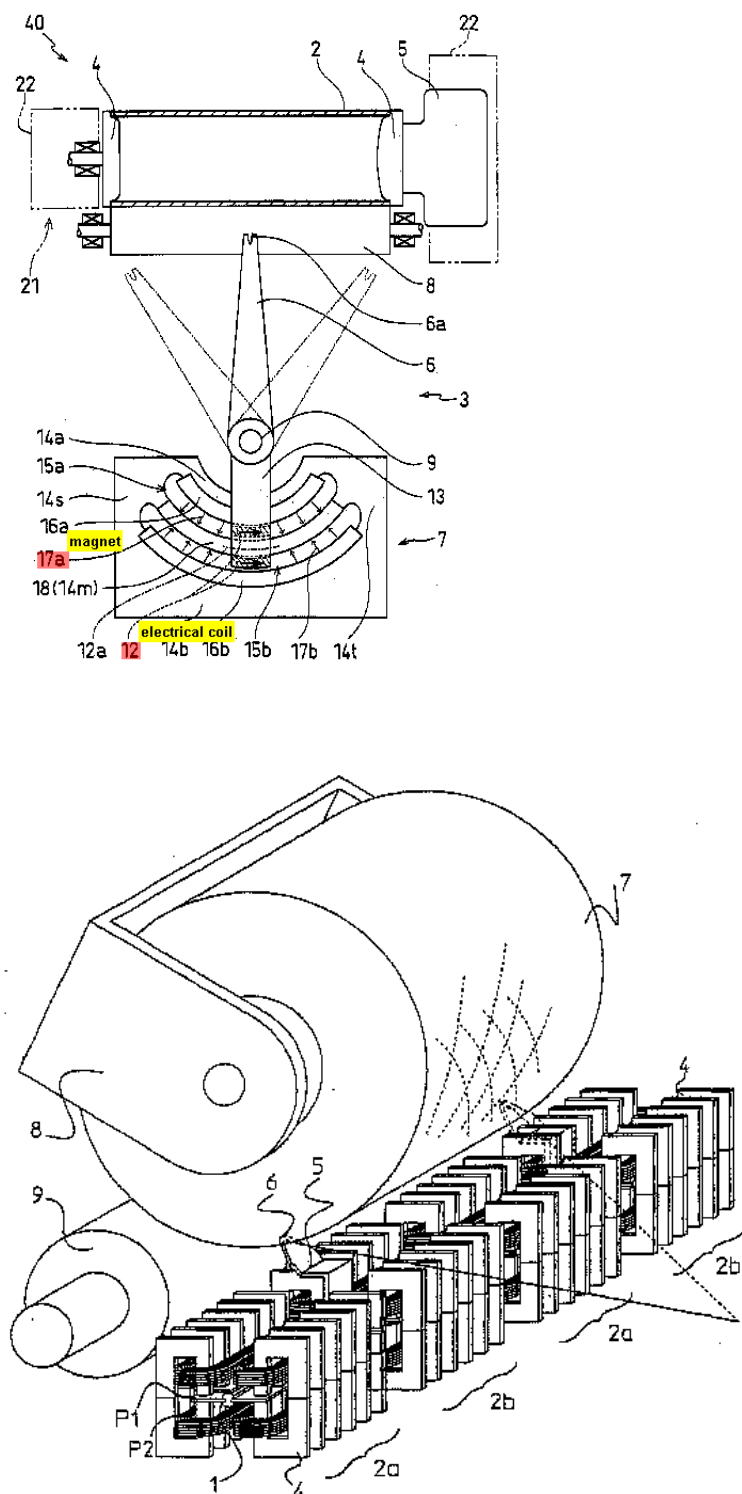
This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/2833**{Traversing devices driven by electromagnetic means}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Motors with reciprocating magnets	H02K 33/00
Propulsion systems in which a rigid body is moved along a path due to a magnetic field	H02K 41/00

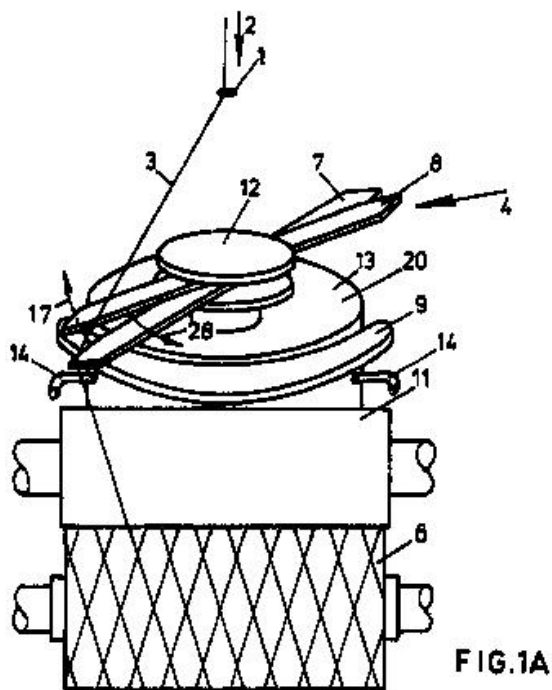
B65H 54/2836

{with a rotating guide for traversing the yarn}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Special rules of classification

Multiple guides attached to one or more endless belts or chains wherein the yarn is transferred between the guides: [B65H 54/2821](#).

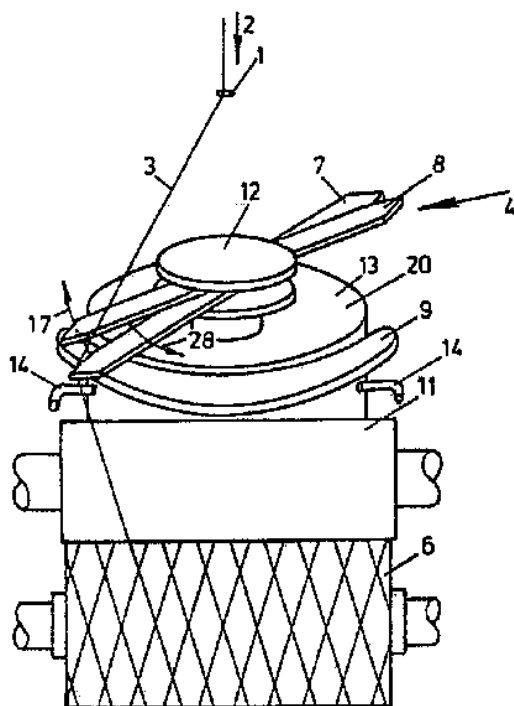
B65H 54/2839

{counter rotating guides, e.g. wings}

Definition statement

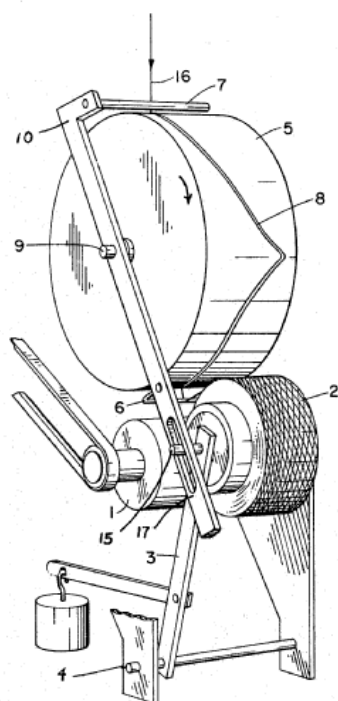
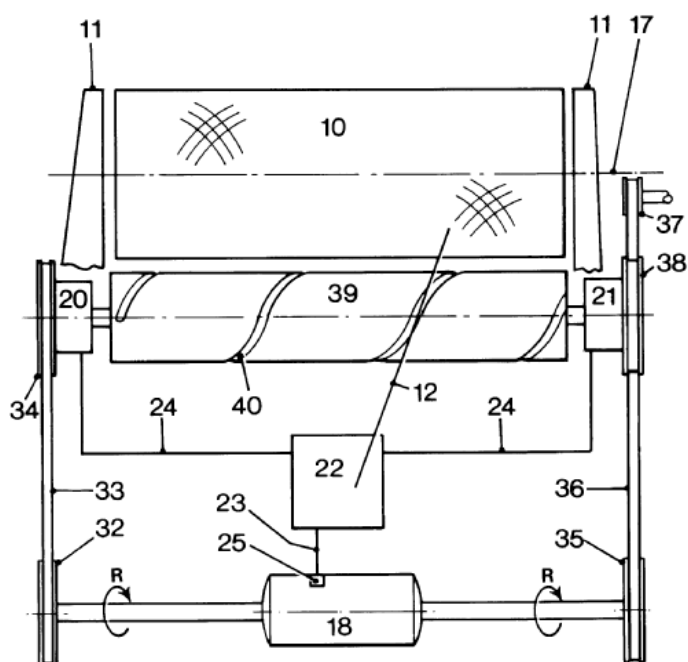
This place covers:

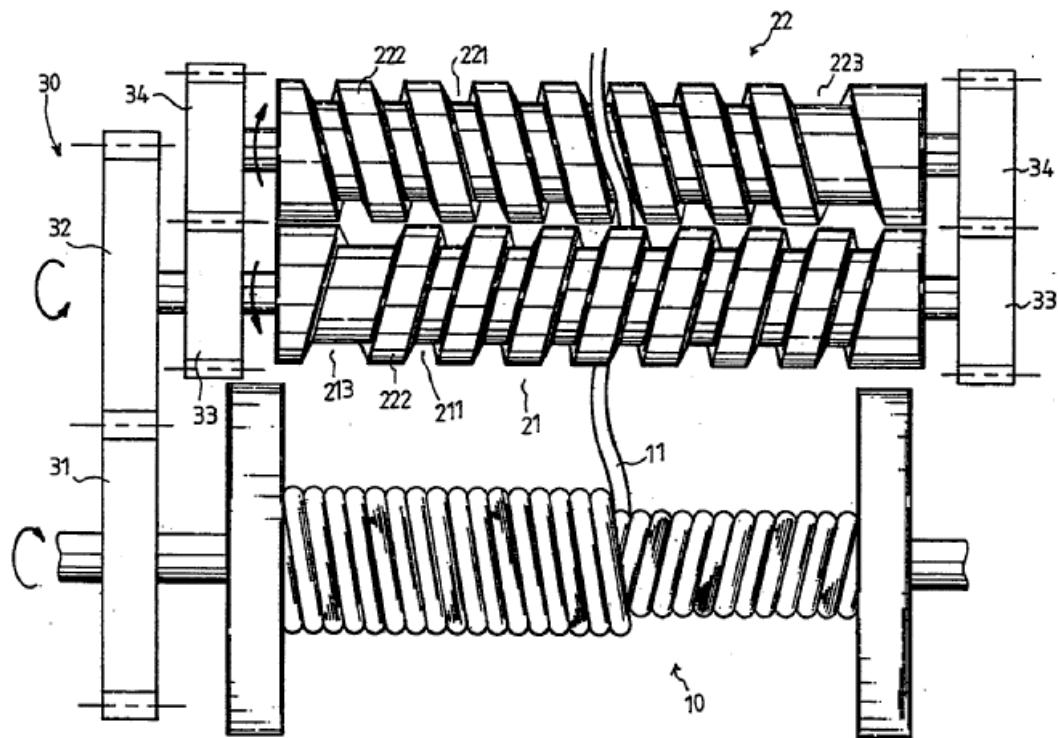
Illustrative example of subject matter classified in this group:



B65H 54/2842**{grooved, slotted, or split drums}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:





References

Limiting references

This place does not cover:

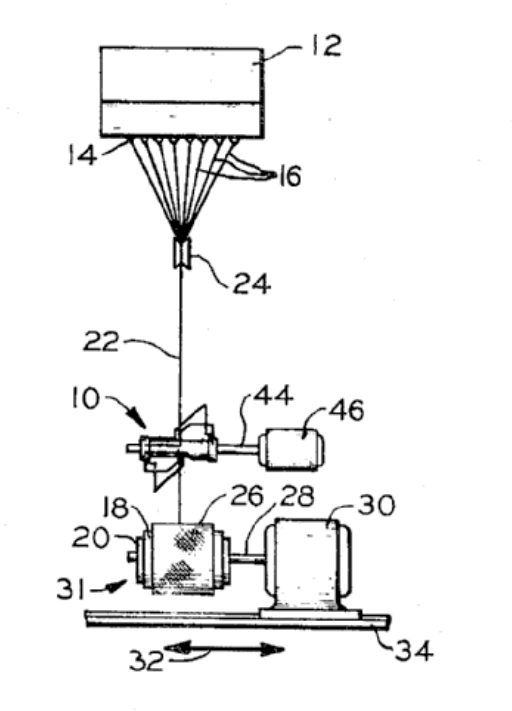
Package drive drums	B65H 54/46
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B65H 54/2845

{"screw" type Owens Fiberglas}

Definition statement

This place covers:
Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fiberglass strands	B65H 2701/312
Manufacture or treatment of flakes, fibres, or filaments from softened glass, minerals, or slags	C03B 37/00

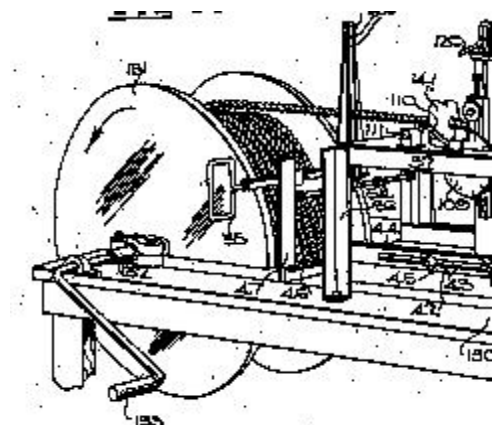
B65H 54/2848

{Arrangements for aligned winding (reels with grooves or grooved elements for aligned winding [B65H 75/265](#))}

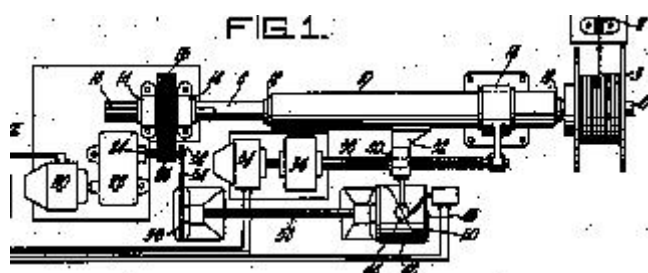
Definition statement

This place covers:
For example:

- Manually operated devices



- Devices where the traversing movement follows a pattern



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Reels with grooves or grooved elements for aligned winding
--

B65H 75/265

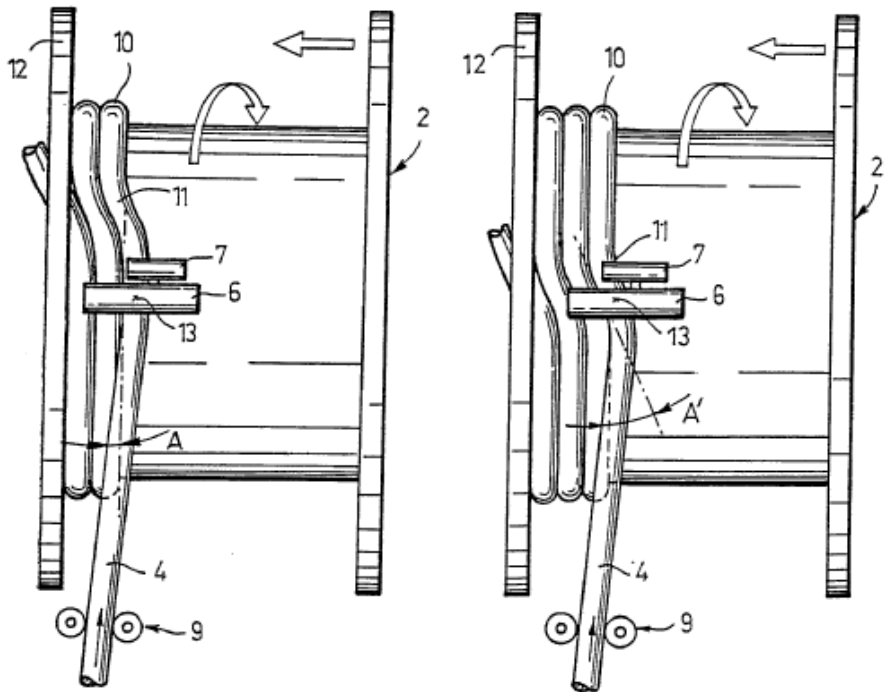
B65H 54/2851

{by pressing the material being wound against the drum, flange or already wound material, e.g. by fingers or rollers; guides moved by the already wound material ([B65H 54/2869](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

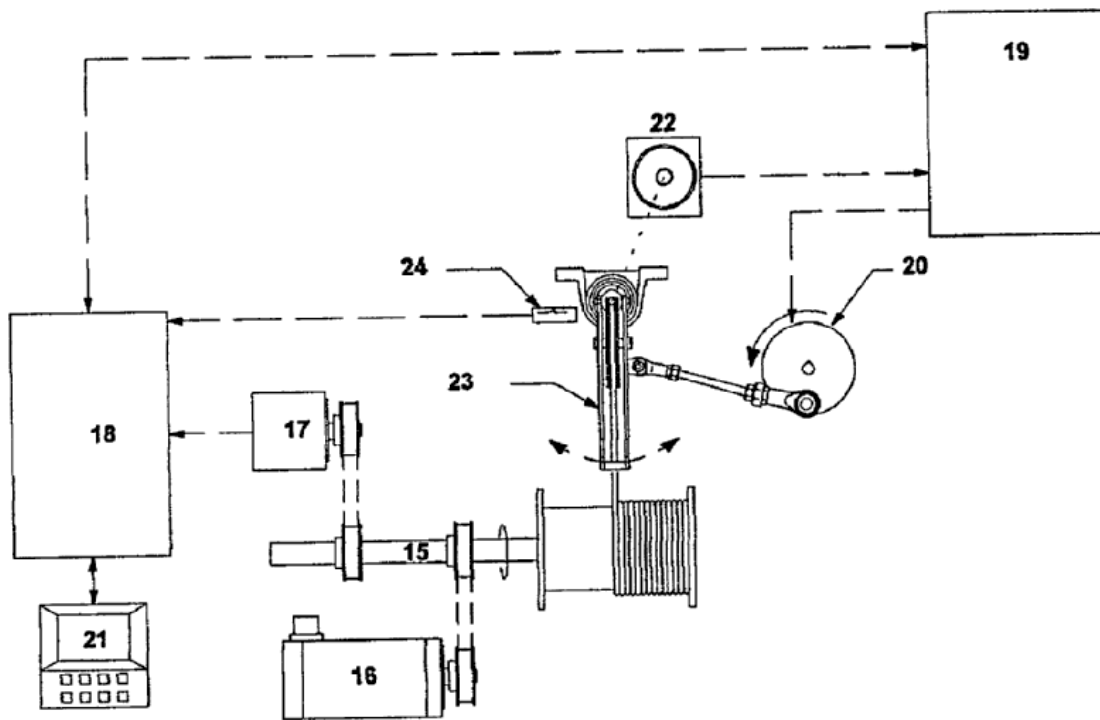
Limiting references

This place does not cover:

Control of the rotating speed of the reel or the traversing speed for aligned winding	B65H 54/2869
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B65H 54/2854**{Detection or control of aligned winding or reversal}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



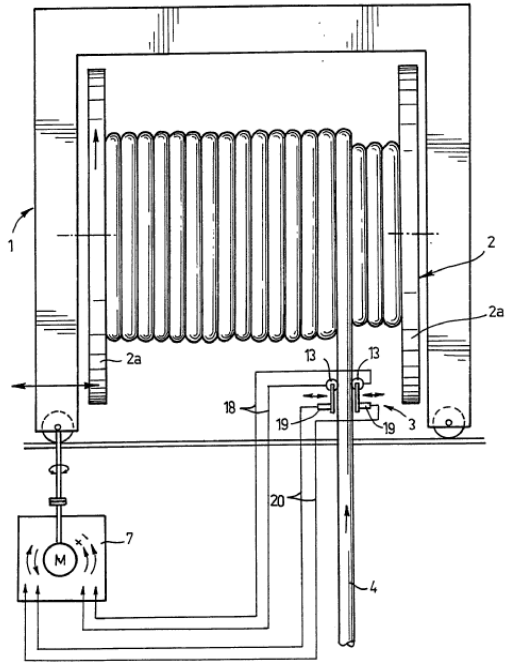
B65H 54/2857

{Reversal control}

Definition statement

This place covers:

E.g. reversal determined by the position or thickness of the material or its distance to the flange e.g. calculated by a microprocessor.



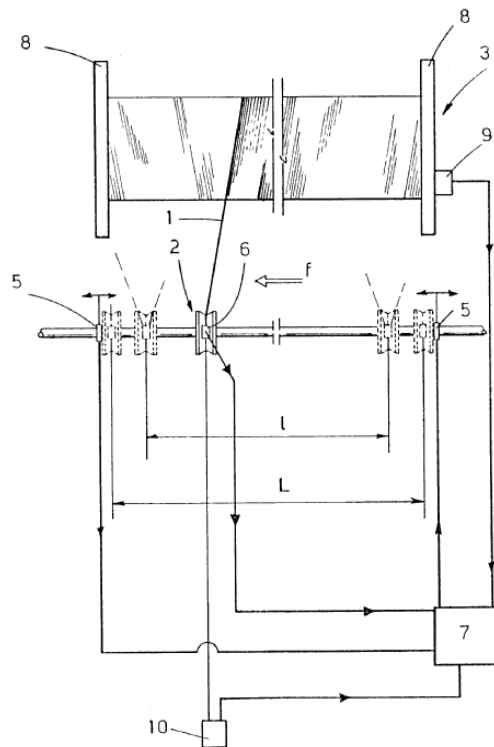
B65H 54/2866

{by detection of position, or distance made of the traverser}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 54/2869**

{Control of the rotating speed of the reel or the traversing speed for aligned winding}

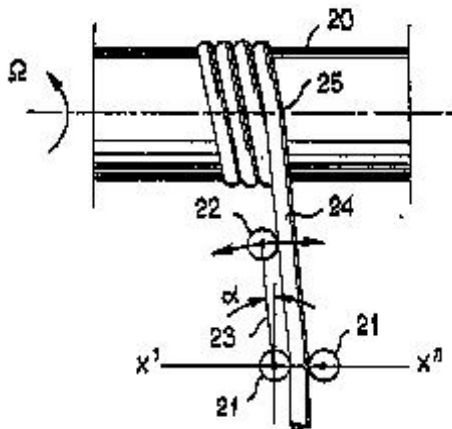
Definition statement

This place covers:

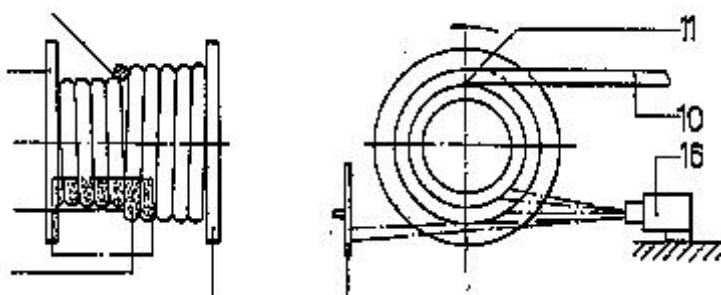
E.g. calculating the traversing speed from the diameter of the material and other parameters relating to the reel.

B65H 54/2872**{by detection of the incidence angle}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 54/2875****{by detecting or following the already wound material, e.g. contour following}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



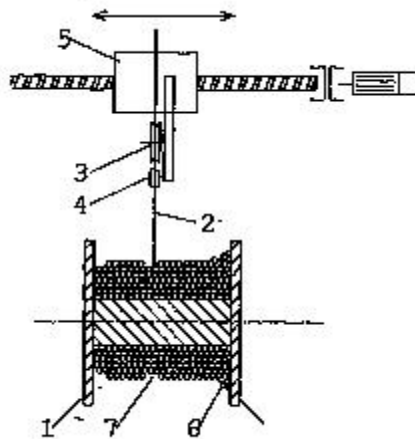
B65H 54/2878

{by detection of incorrect conditions on the wound surface, e.g. material climbing on the next layer, a gap between windings}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Incorrect conditions are often detected from the speed variation of the material.

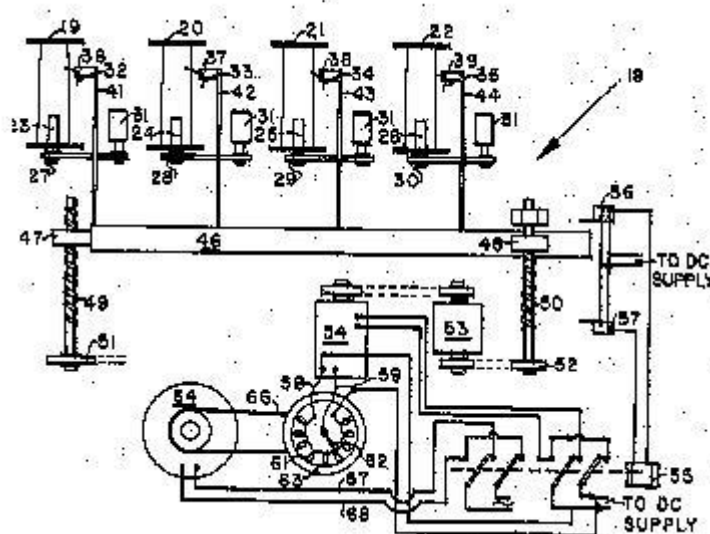
B65H 54/2881

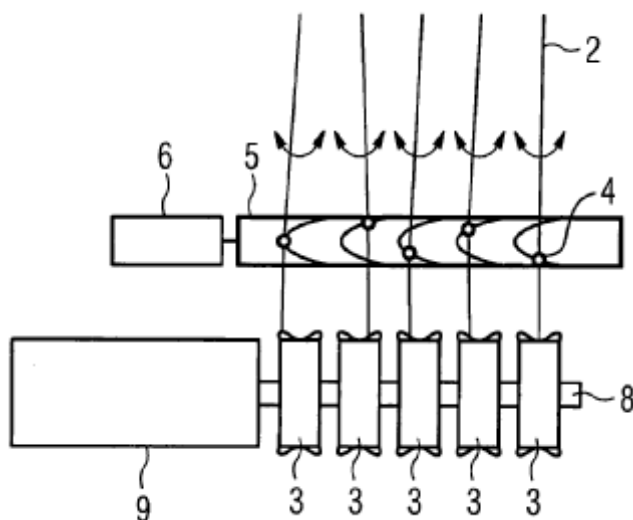
{Traversing devices with a plurality of guides for winding on a plurality of bobbins (forming multiple packages [B65H 54/20](#))}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Winding filamentary material forming multiple packages
--

B65H 54/20

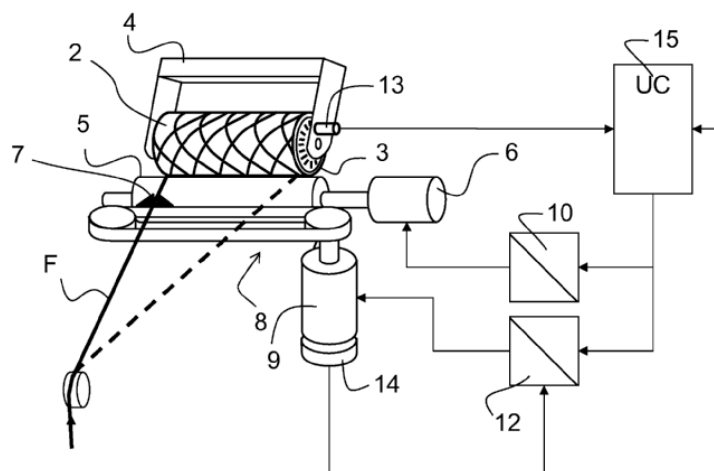
B65H 54/2884

{Microprocessor-controlled traversing devices in so far the control is not special to one of the traversing devices of groups [B65H 54/2803](#) - [B65H 54/325](#) or group [B65H 54/38](#)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



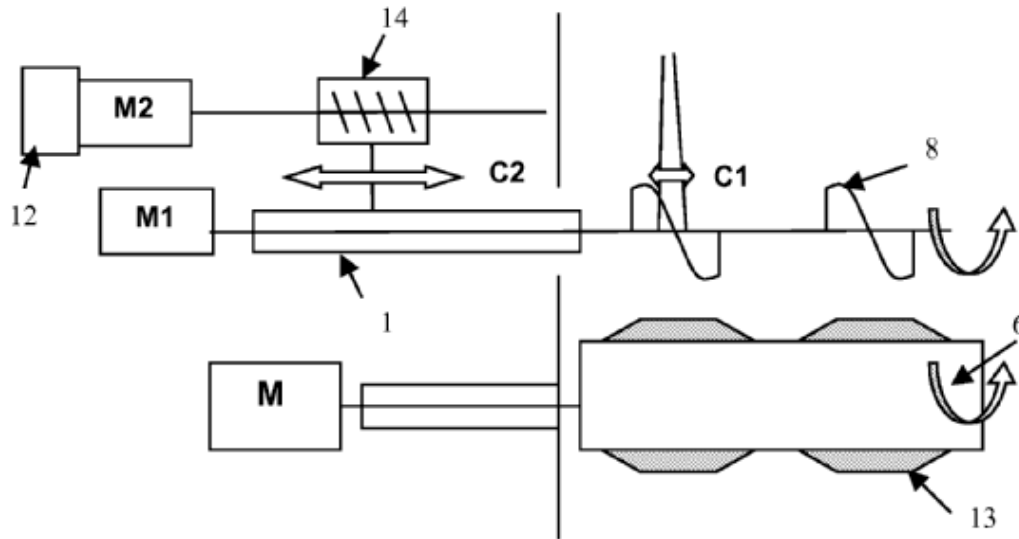
B65H 54/2893

{Superposed traversing, i.e. traversing or other movement superposed on a traversing movement}

Definition statement

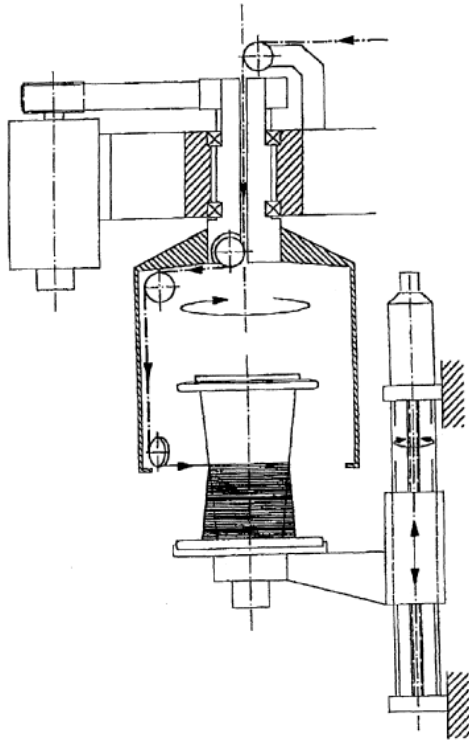
This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/2896**{Flyers}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 54/30****with thread guides reciprocating or oscillating with fixed stroke
{(B65H 54/2803 - B65H 54/2896 take precedence)}****Special rules of classification**

This class is not used any more.

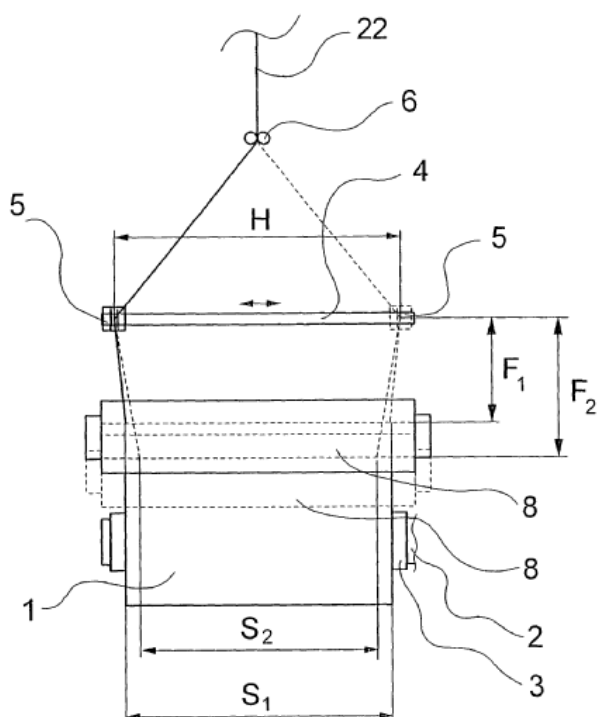
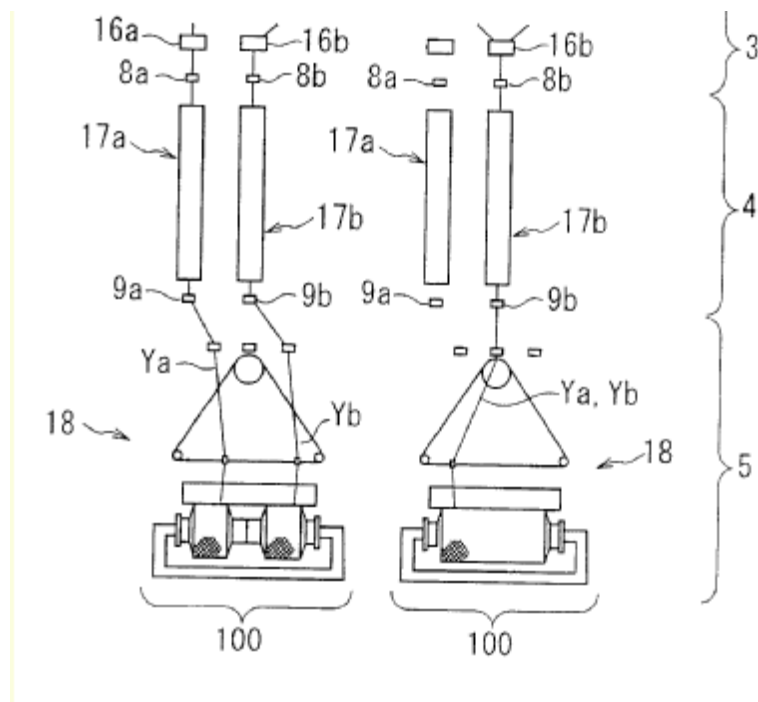
B65H 54/32

with thread guides reciprocating or oscillating with variable stroke

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



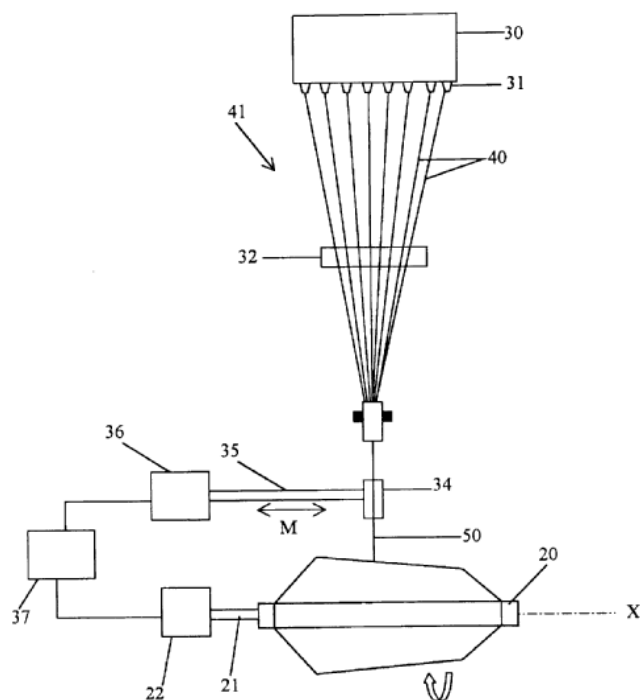
B65H 54/325

{in accordance with growth of the package}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 54/34**

for laying subsidiary winding, e.g. transfer tails

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Winding reserve length in spinning machines	D01H 1/38
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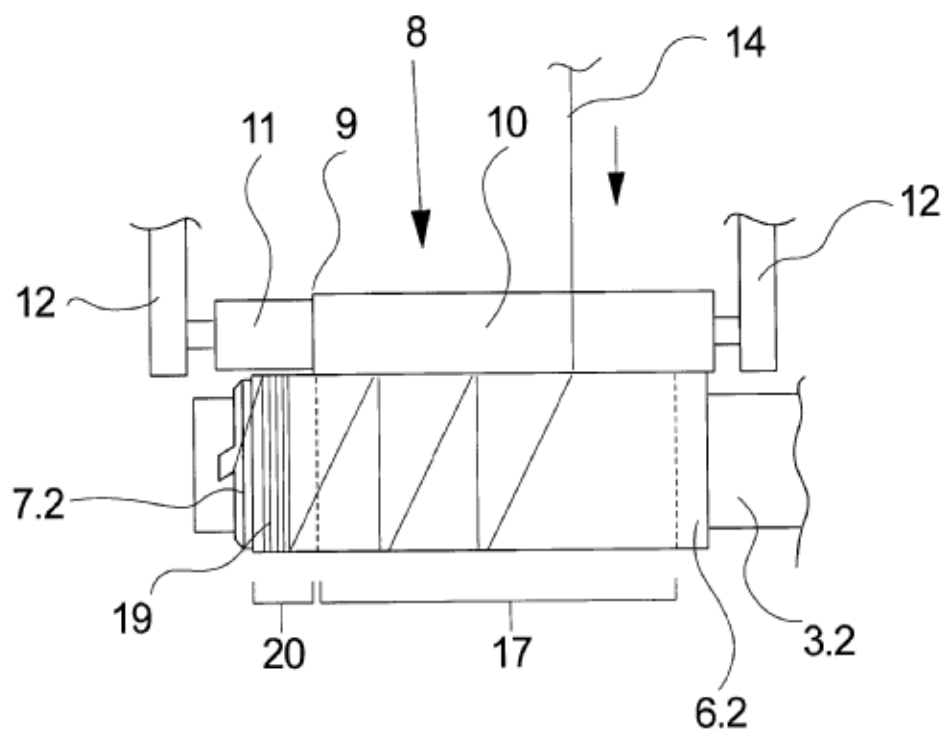
B65H 54/343

{when starting winding on an empty bobbin}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Securing materials to cores or formers	B65H 65/00
--	----------------------------

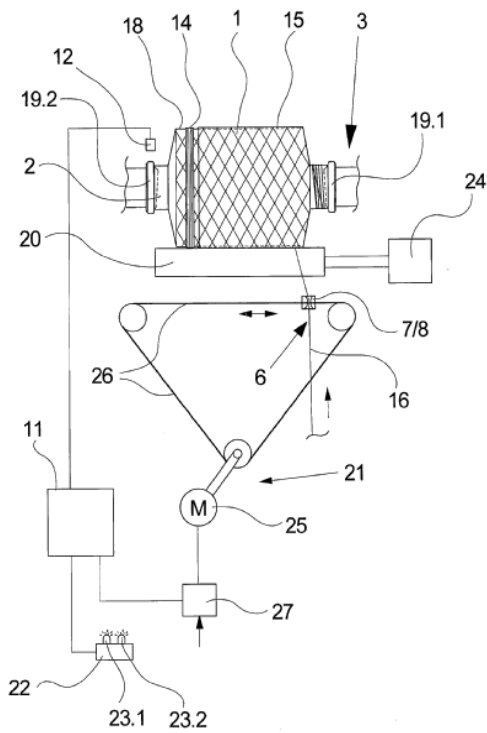
B65H 54/346

{on or outwardly of the fully wound yarn package}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Securing end of yarn in the wound or completed package	B65H 65/005
--	-----------------------------

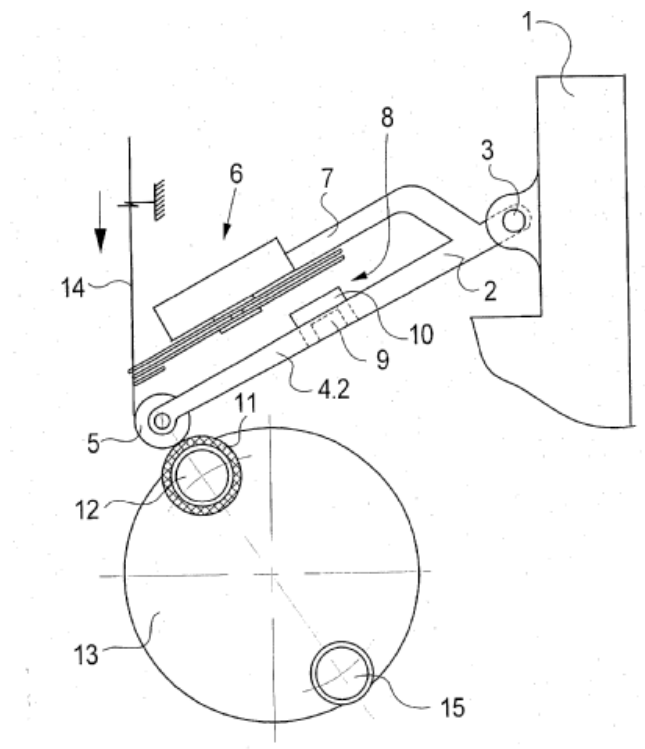
B65H 54/36

Yarn-guide advancing or raising mechanisms, e.g. cop-building arrangements

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



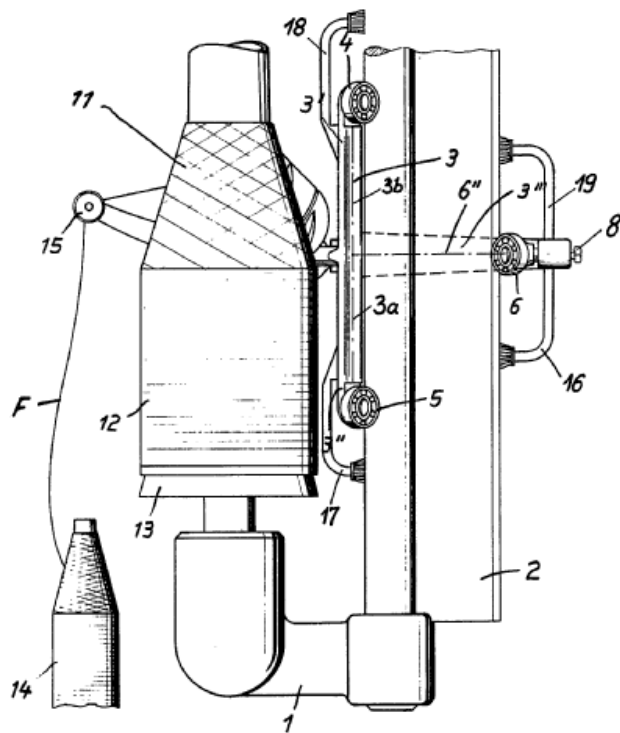
B65H 54/365

{for cops of pirn winding machine ([B65H 54/14](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Winding filamentary material on tubes, cores or formers having generally parallel sides	B65H 54/14
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B65H 54/38

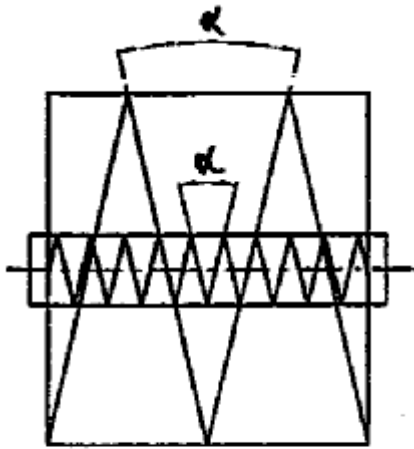
Arrangements for preventing ribbon winding {; Arrangements for preventing irregular edge forming, e.g. edge raising or yarn falling from the edge}

Definition statement

This place covers:

In random winding (constant traversing frequency, constant winding angle, decreasing winding rotational speed, decreasing winding ratio) the winding ratio continuously decreases, thereby causing "mirror windings" at certain winding ratios. Devices and methods for preventing such mirror windings other than by "precision winding" or "stepped precision winding" are classified here. See US5447277

and XP000409312 for an explanation of precision winding, stepped precision winding and random winding.



Random Winding

B65H 54/381

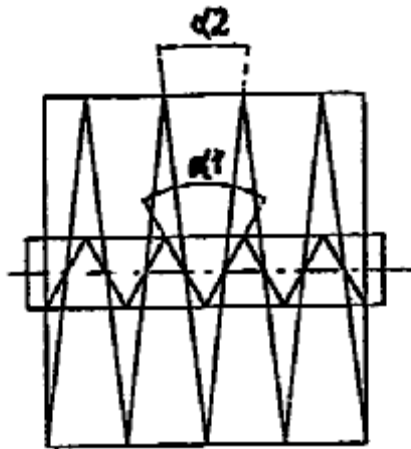
{Preventing ribbon winding in a precision winding apparatus, i.e. with a constant ratio between the rotational speed of the bobbin spindle and the rotational speed of the traversing device driving shaft}

Definition statement

This place covers:

In precision winding the winding ratio (ratio of rotational speed to traversing frequency) is constant. Therefore, since the winding rotational speed decreases with increasing diameter of the package,

the traversing frequency also decreases. The winding angle therefore also decreases with increasing diameter. Since the winding ratio is constant, "mirror windings" at certain winding ratios are avoided.



Precision Winding

B65H 54/383

{in a stepped precision winding apparatus, i.e. with a constant wind ratio in each step}

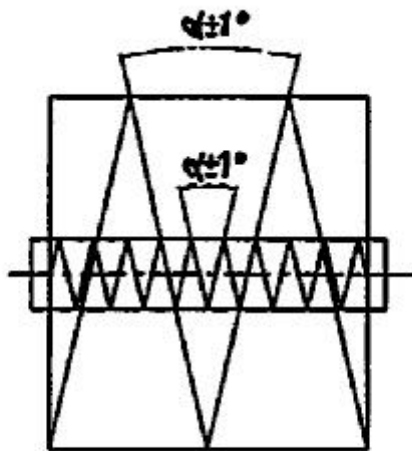
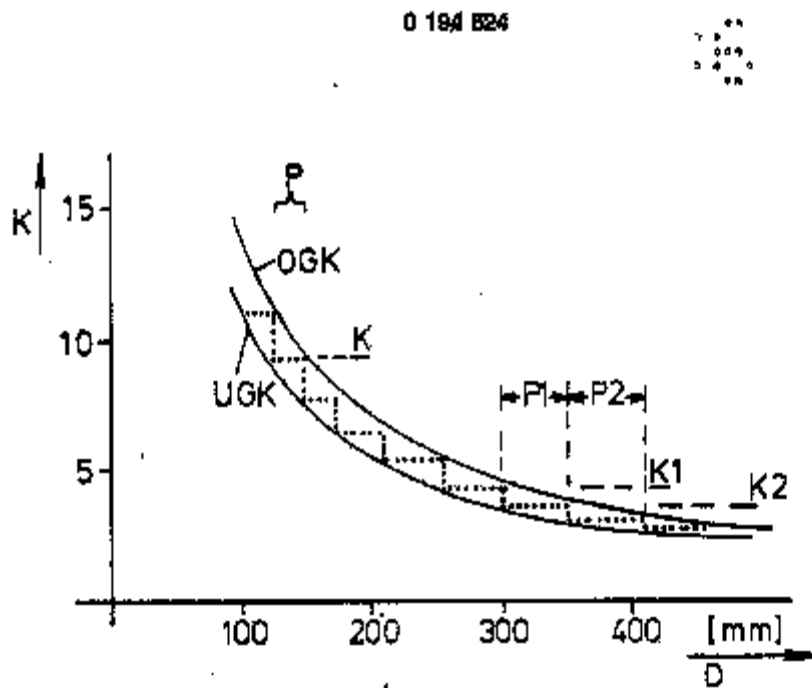
Definition statement

This place covers:

In stepped precision winding the winding ratio K (ratio of rotational speed to traversing frequency) is decreasing stepwise (constant) around a decreasing winding ratio as would be obtained in random

Definition statement

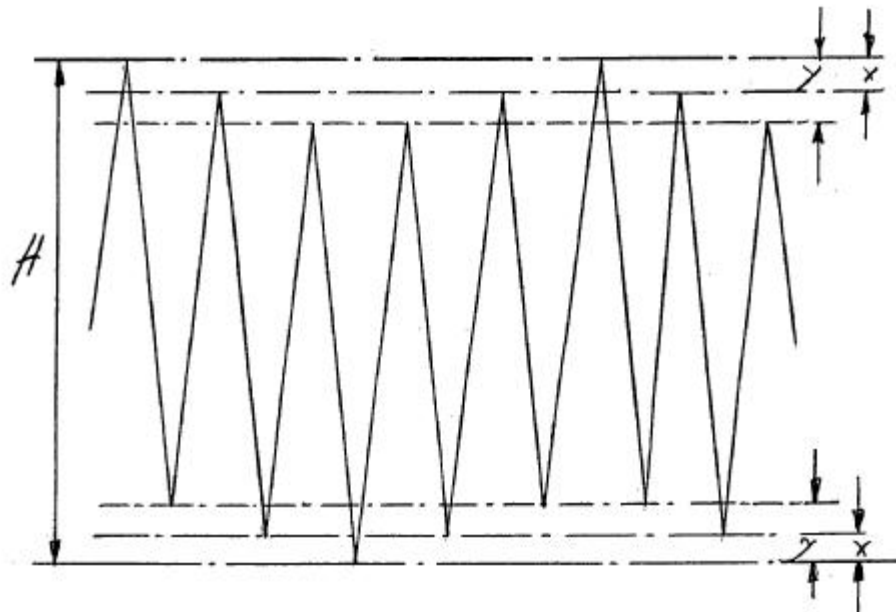
winding to avoid "mirror windings" at certain winding ratios. The winding angle can still be kept constant as in random winding.



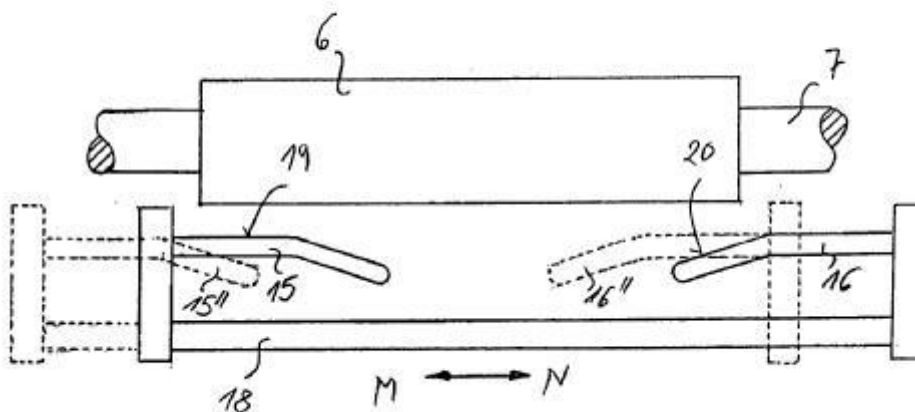
**Stepped Precision
Winding**

B65H 54/385**{Preventing edge raising, e.g. creeping arrangements}****Definition statement***This place covers:*

E.g. oscillating traversing width:



E.g. apparatus providing such oscillations:



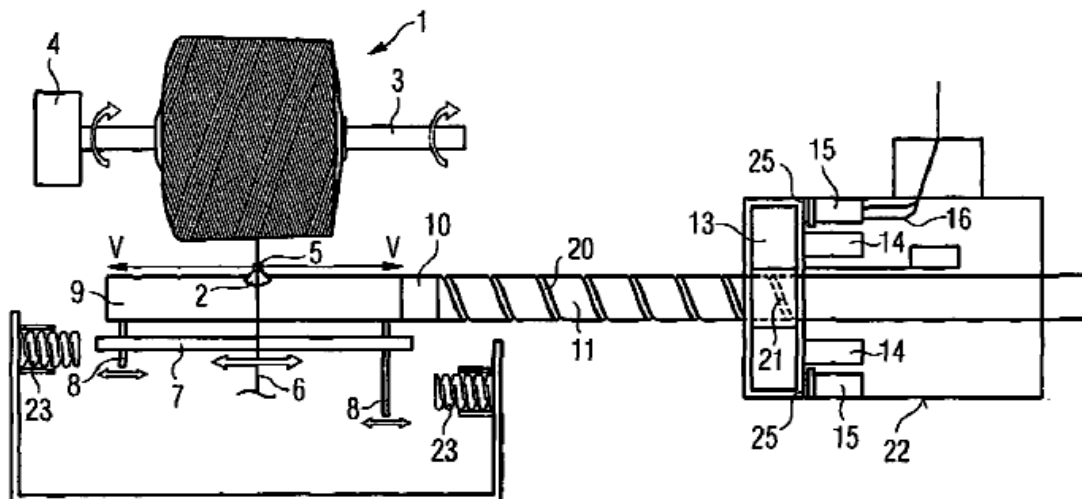
B65H 54/386

{with energy storing means for recovering the kinetic energy at the end of the traversing stroke}

Definition statement

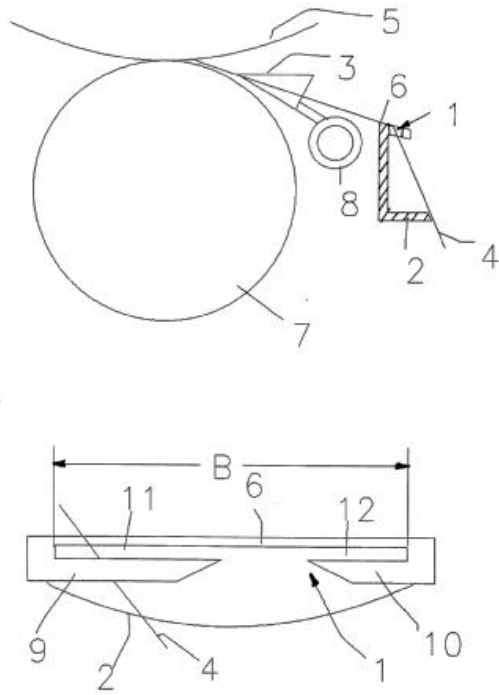
This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/388**{Preventing the yarn from falling off the edge of the package}****Definition statement***This place covers:*

Guides and traversing control.



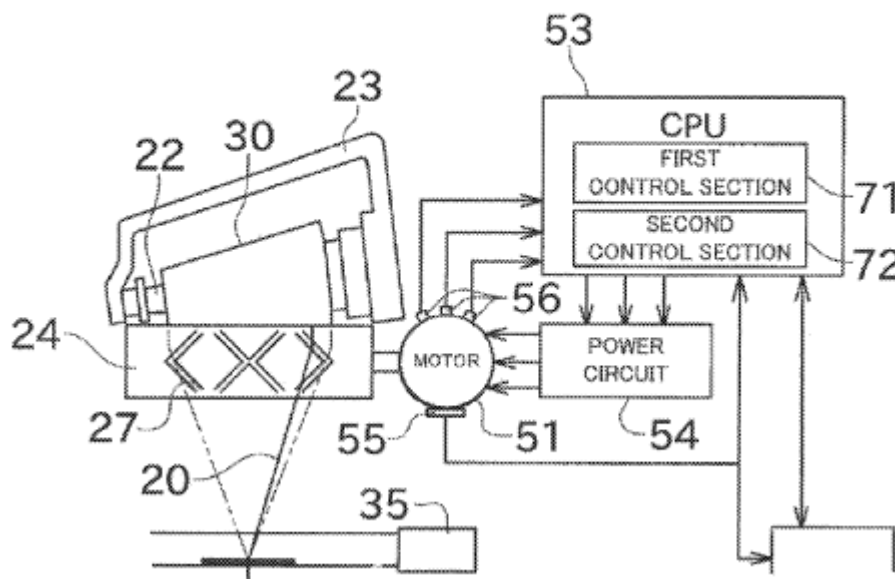
B65H 54/42

in which the package, core, or former is rotated by frictional contact of its periphery with a driving surface

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



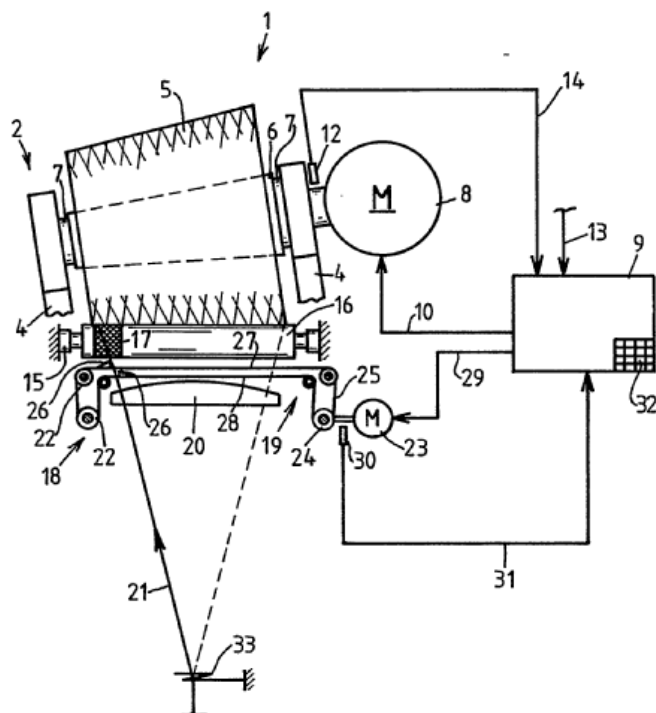
B65H 54/44

in which the package, core, or former is engaged with, or secured to, a driven member rotatable about the axis of the package

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



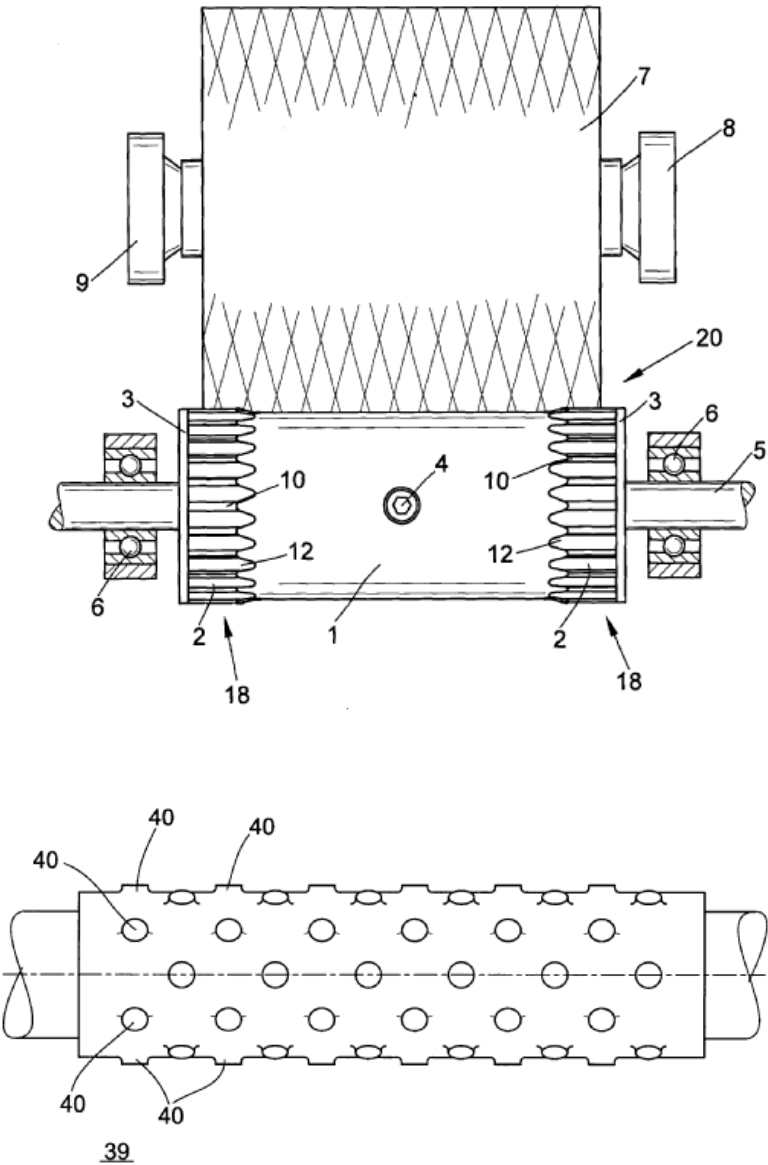
B65H 54/46

Package drive drums

Definition statement

This place covers:

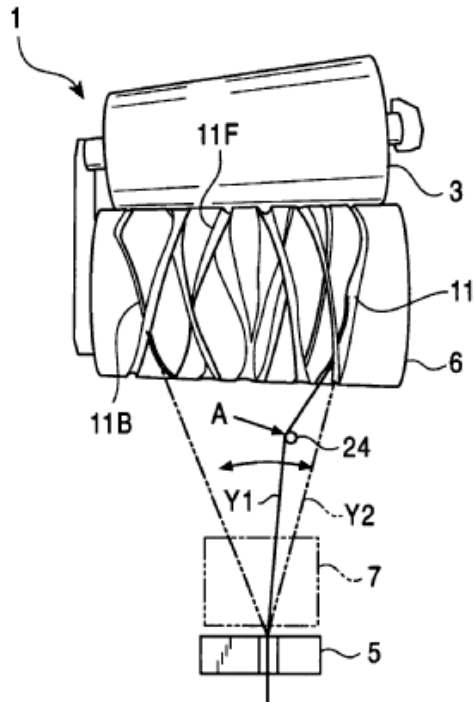
Illustrative examples of subject matter classified in this group:



B65H 54/48**Grooved drums****Definition statement**

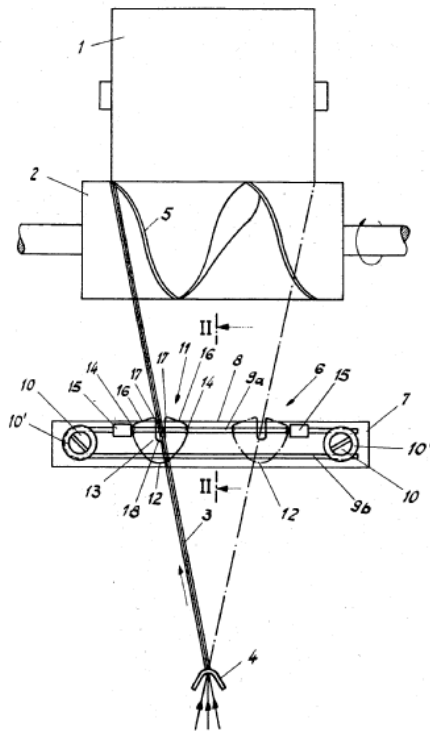
This place covers:

Illustrative example of subject matter classified in this group:



B65H 54/485**{with an auxiliary guide}****Definition statement***This place covers:*

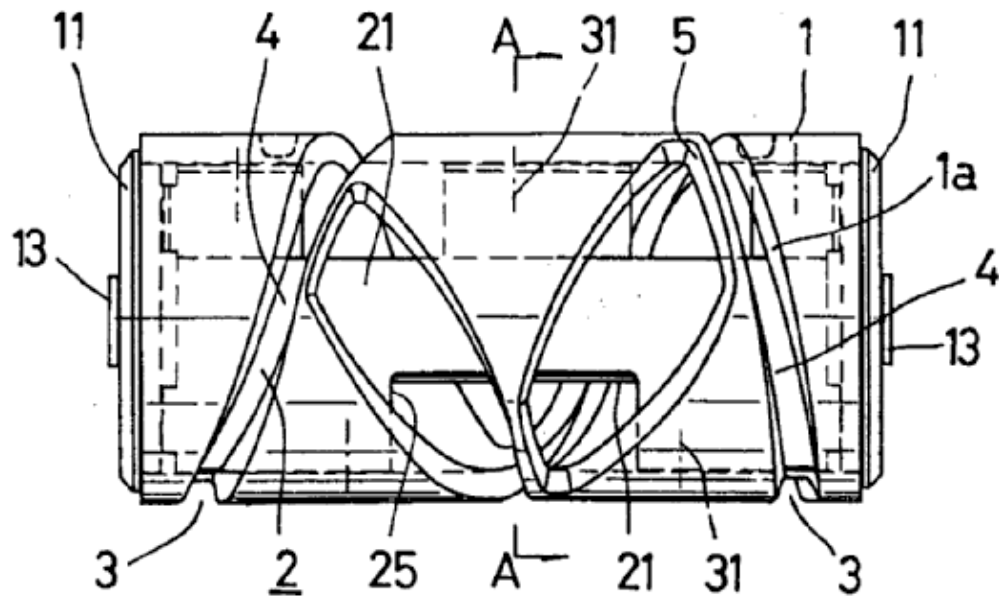
Illustrative example of subject matter classified in this group:



B65H 54/50**Slotted or split drums****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



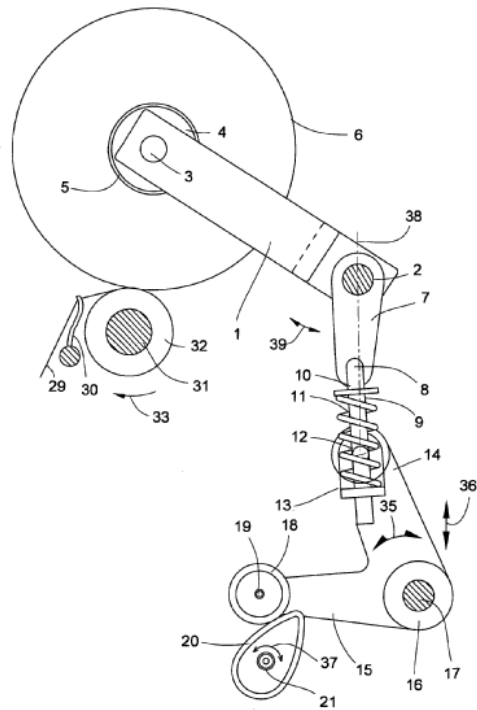
B65H 54/52

Drive contact pressure control, e.g. pressing arrangements

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



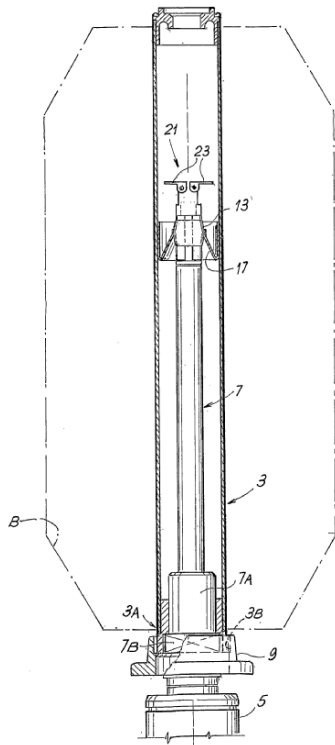
B65H 54/543

{Securing cores or holders to supporting or driving members, e.g. collapsible mandrels}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

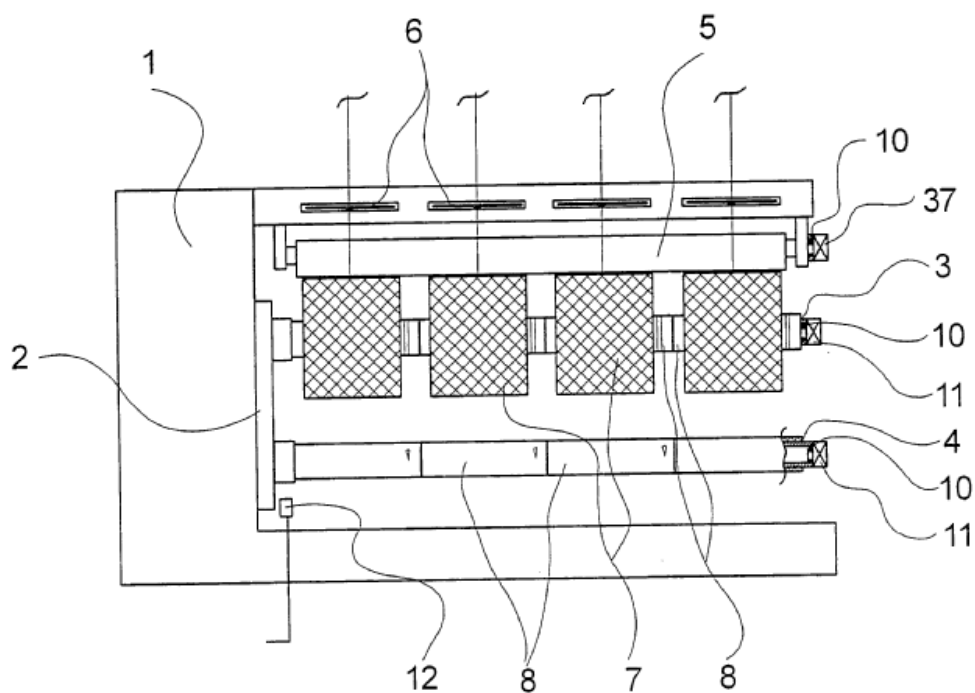
Attention is drawn to the following places, which may be of interest for search:

Securing cores or formers for unwinding filamentary material	B65H 49/36
Expansile spindles, mandrels or chucks, e.g. for securing or releasing cores, holders or packages for filamentary or web-like material	B65H 75/242
Arrangements for coupling bobbins or the like to spindles (Spinning)	D01H 7/16

B65H 54/547**Cantilever supporting arrangements****Definition statement**

This place covers:

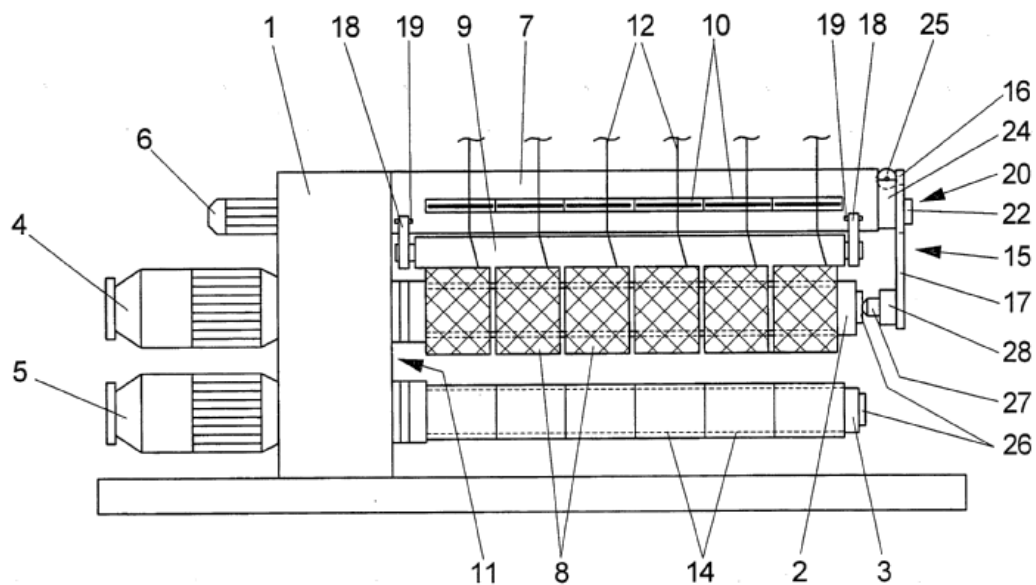
Illustrative example of subject matter classified in this group:



B65H 54/553**Both-ends supporting arrangements****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



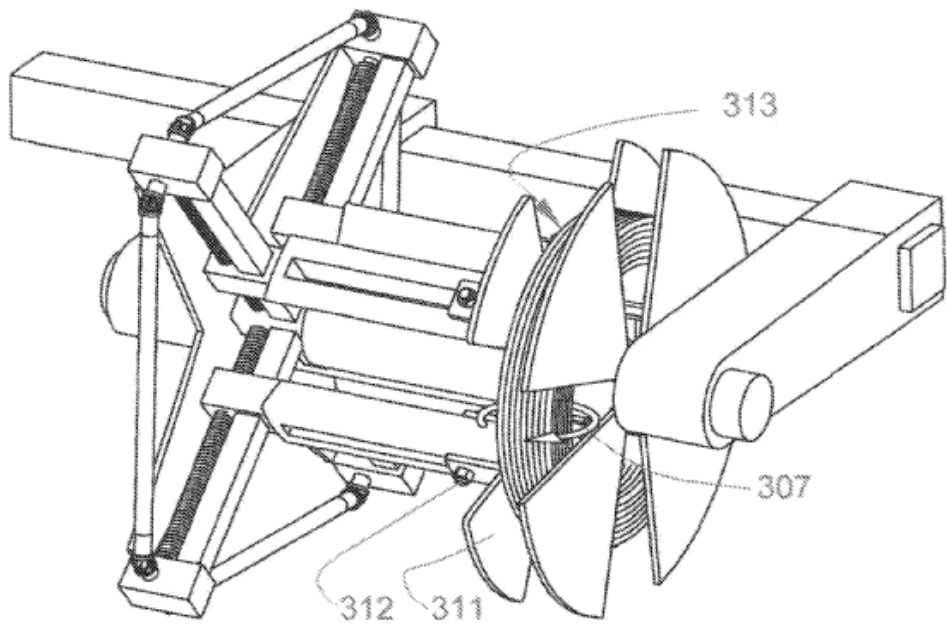
B65H 54/58

Swifts or reels adapted solely for the formation of hanks or skeins ([B65H 49/30](#) takes precedence)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Swifts or skein holders for unwinding filamentary material	B65H 49/30
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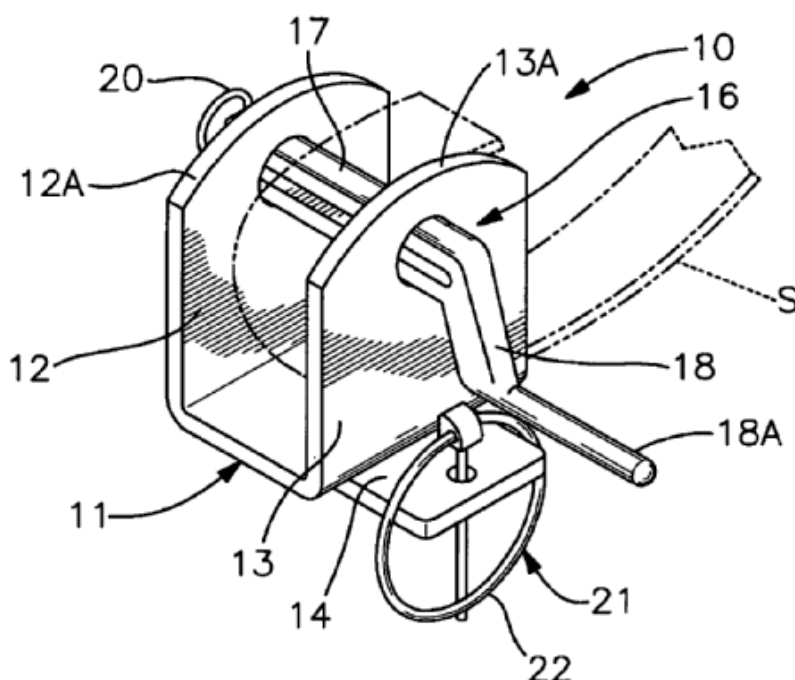
B65H 54/585

{Reels for rolling tape-like material, e.g. flat hose or strap, into flat spiral form;
Means for retaining the roll after removal of the reel}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Winding straps for securing loads	B60P 7/0846
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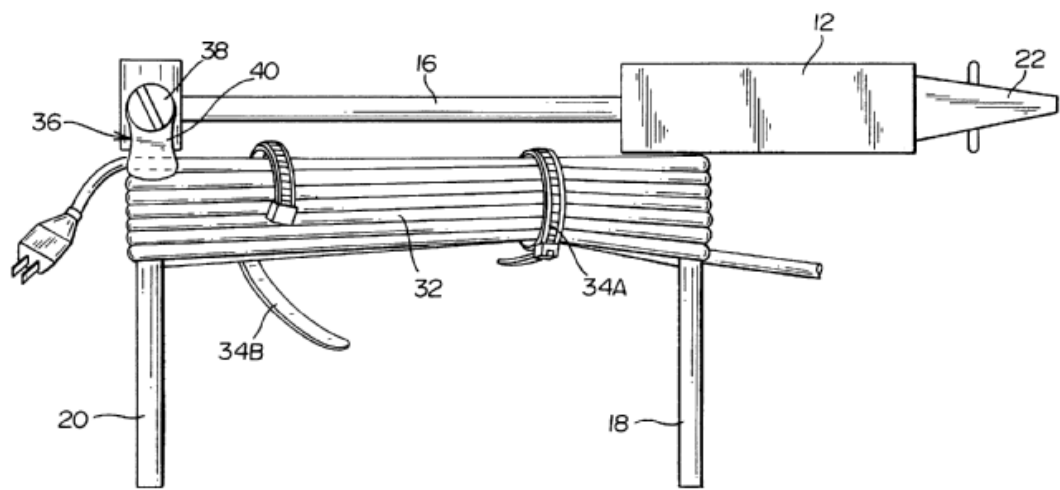
B65H 54/62

Binding of skeins

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bundling particular articles presenting special problems using string, wire, or narrow tape or band; Baling fibrous material, e.g. peat, not otherwise provided for	B65B 27/00
Bundling coils of wire or like annular objects	B65B 27/06

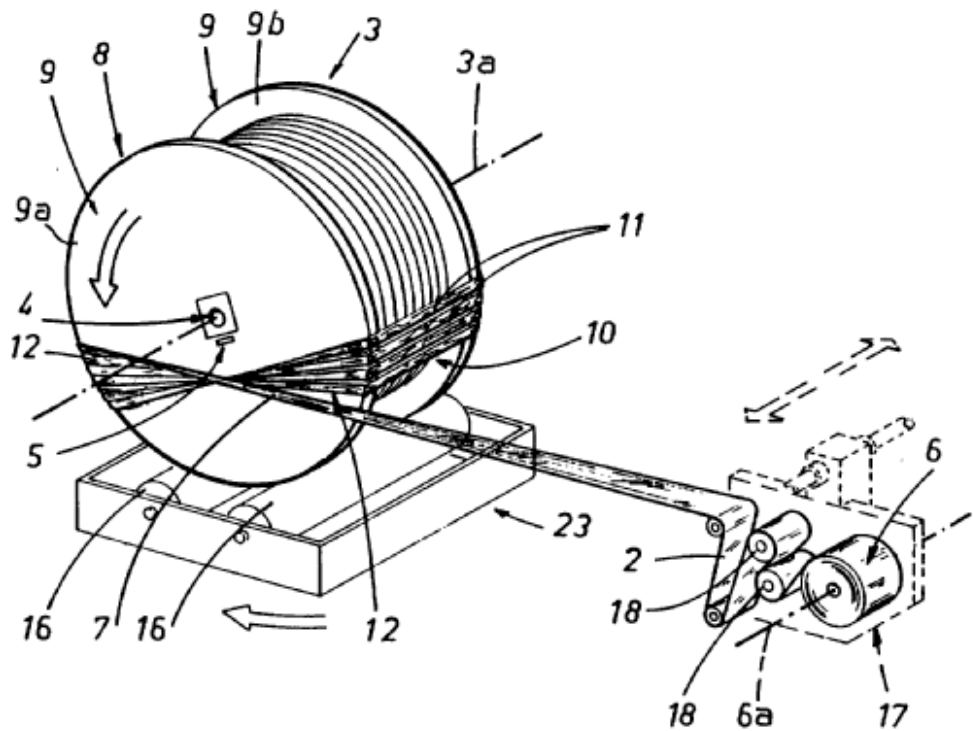
B65H 54/64

Winding of balls; {(forming hollow objects by winding on to fusible or soluble cores, e.g. forming pressure vessels [B29C 53/56](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

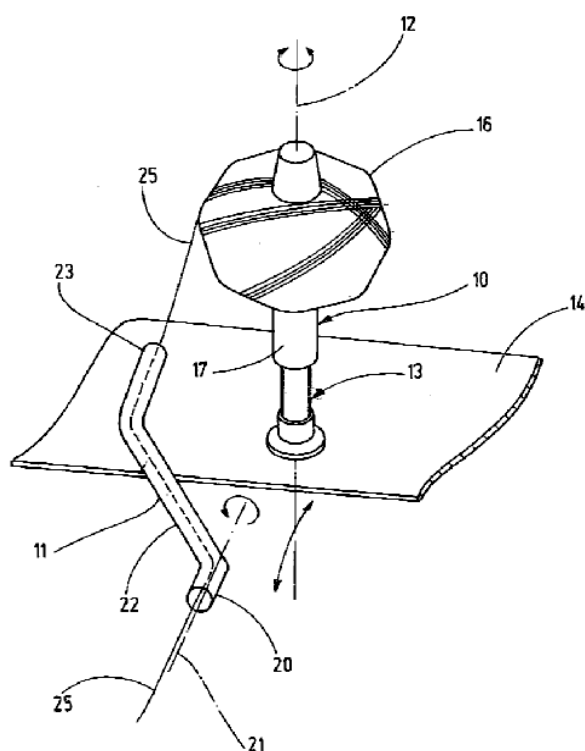
This place does not cover:

Forming hollow objects by winding on to fusible or soluble cores	B29C 53/56
--	----------------------------

B65H 54/66**Winding yarns into balls****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



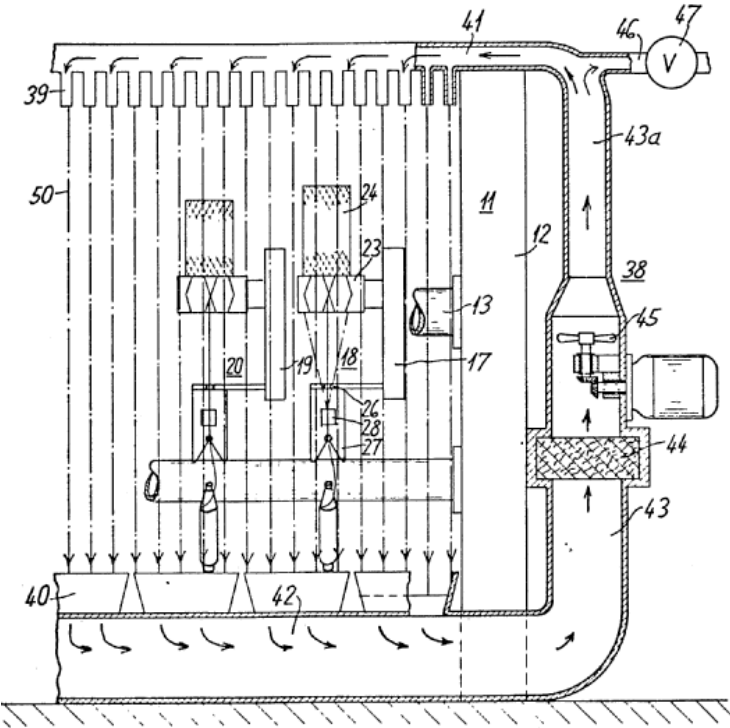
B65H 54/702

{Arrangements for confining or removing dust (for spinning [D01H 11/00](#); cleaning in general [B08B](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cleaning in general	B08B
For spinning	D01H 11/00
For weaving	D03J 1/002
For knitting	D04B 35/32

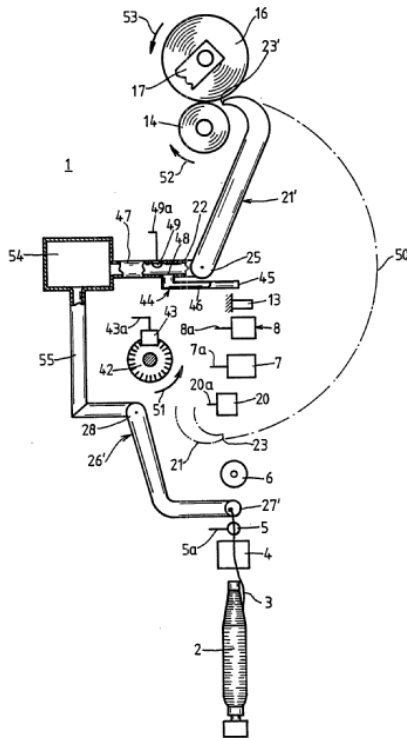
B65H 54/707

{Suction generating system}

Definition statement

This place covers:

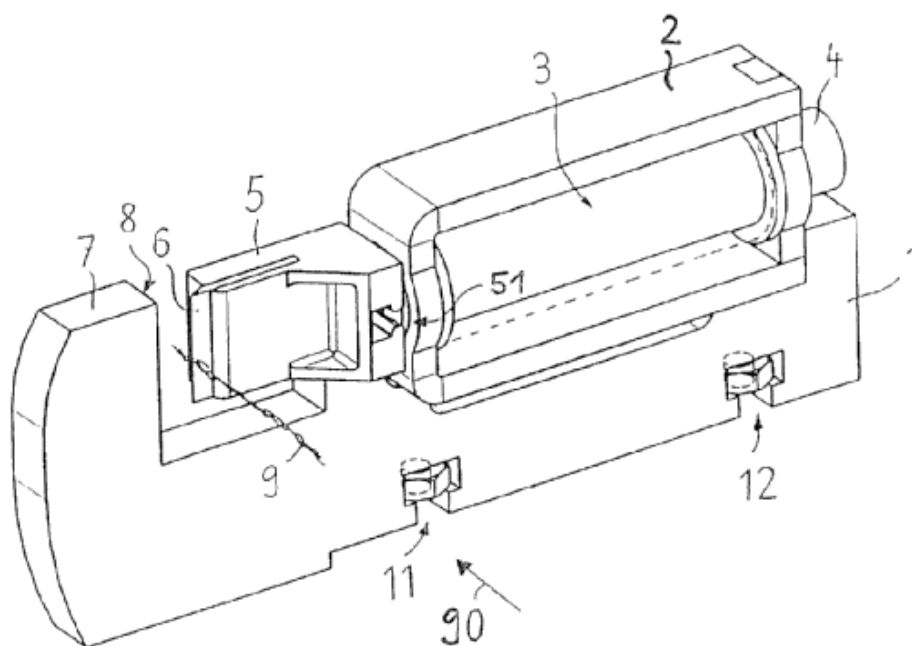
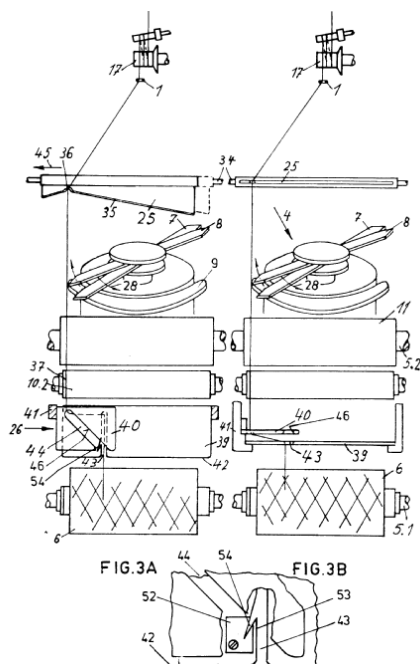
Illustrative example of subject matter classified in this group:



B65H 54/71**Arrangements for severing filamentary materials****Definition statement**

This place covers:

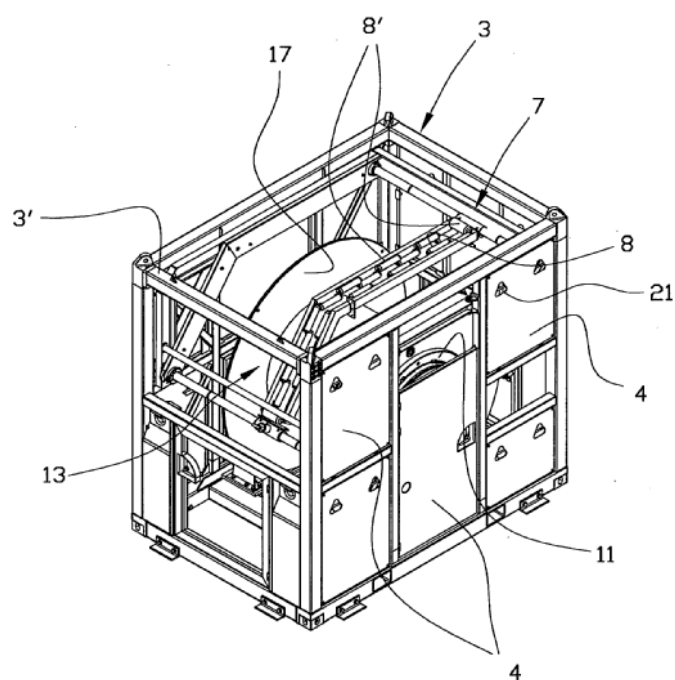
Illustrative examples of subject matter classified in this group:



B65H 54/72**Framework; Casings; Coverings****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



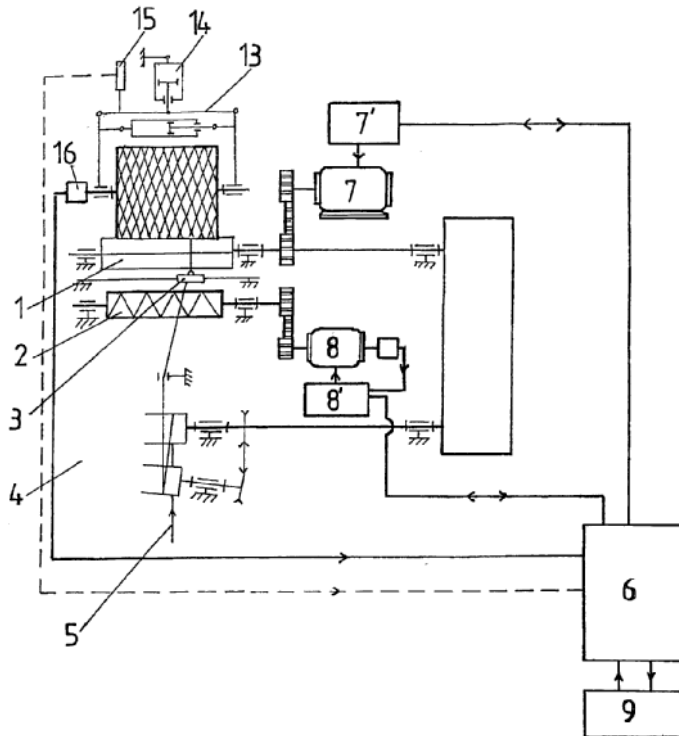
B65H 54/74

Driving arrangements (arrangements for preventing ribbon winding [B65H 54/38](#); arrangements for rotating packages [B65H 54/40](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for preventing ribbon winding	B65H 54/38
Arrangements for rotating packages	B65H 54/40

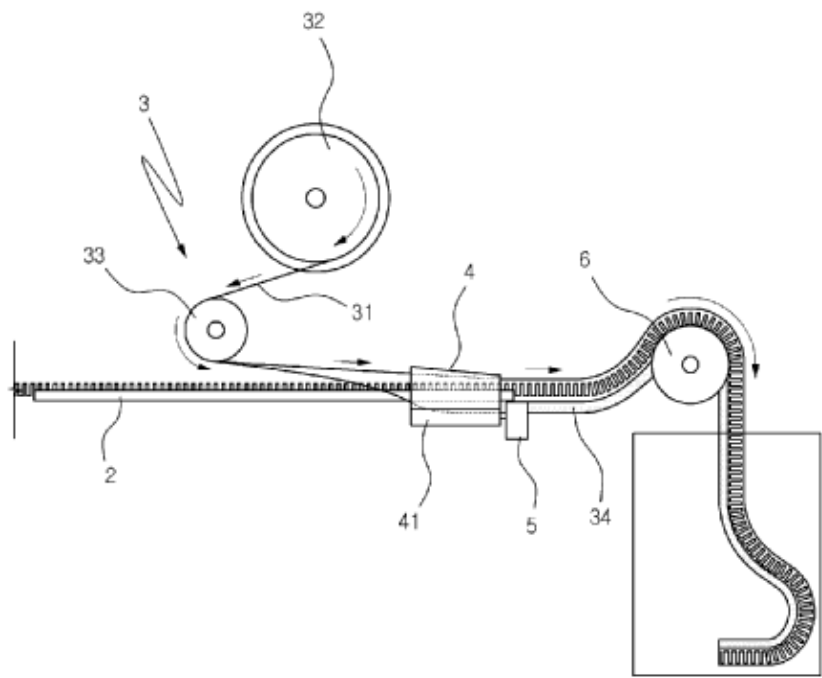
B65H 54/76

Depositing materials in cans or receptacles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Folding webs in combination with laying, forming a zig-zag pile	B65H 45/101
Lap-forming devices in preliminary treatment of fibres	D01G 25/00
Fibres being oriented in non woven fabrics	D04H 1/74

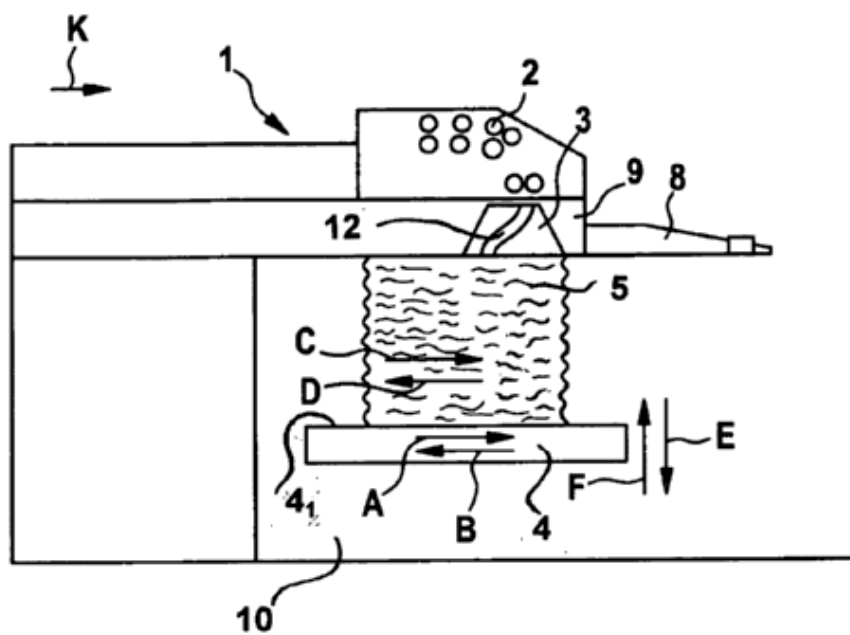
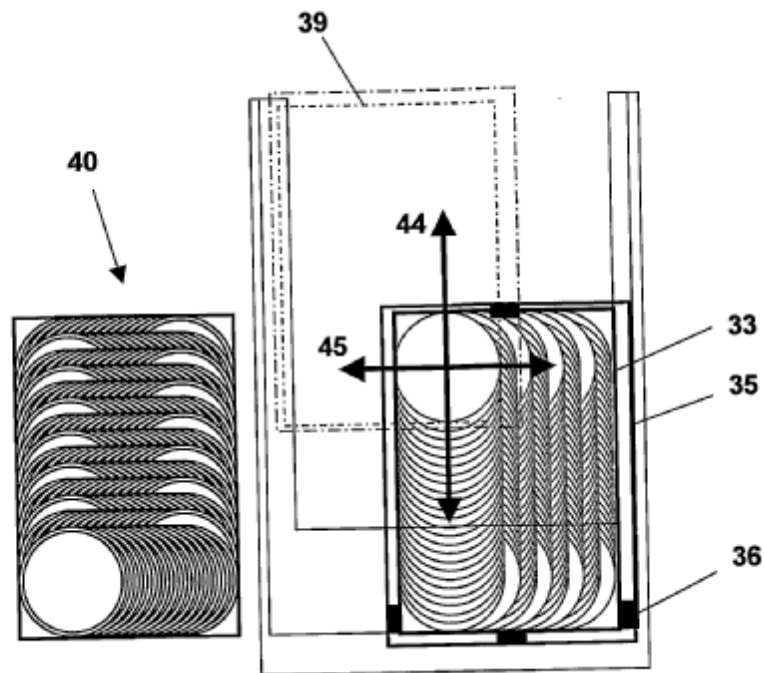
B65H 54/78

Apparatus in which the depositing device or the receptacle is reciprocated

Definition statement

This place covers:

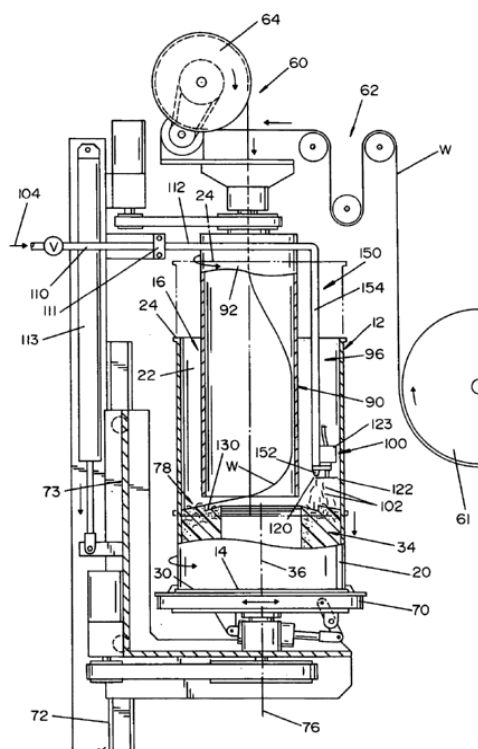
Illustrative examples of subject matter classified in this group:



B65H 54/80**Apparatus in which the depositing device or the receptacle is rotated****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



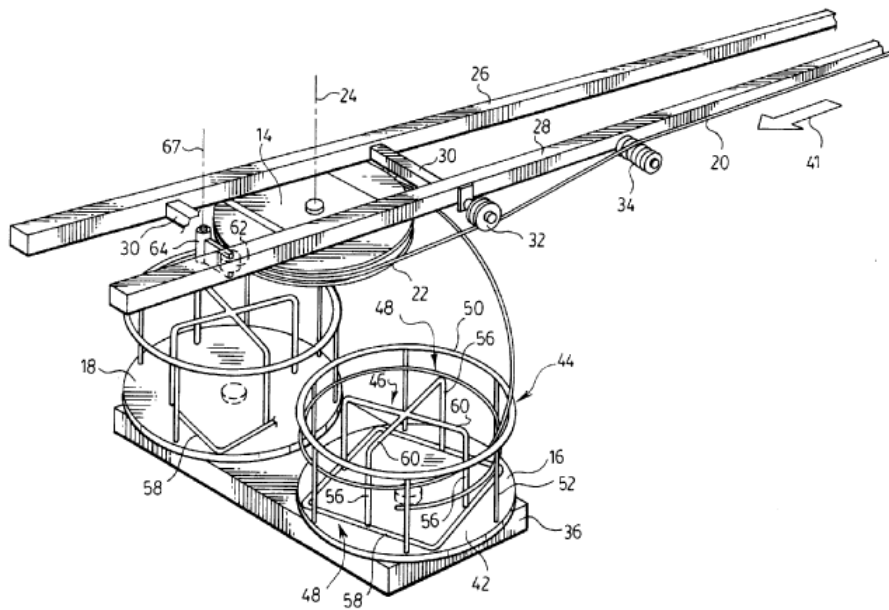
B65H 54/82

and in which coils are formed before deposition

Definition statement

This place covers:

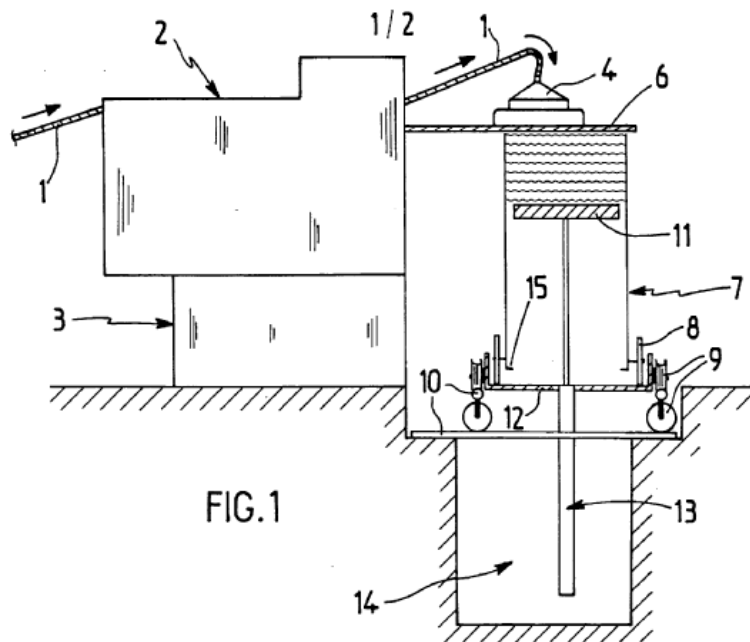
Illustrative example of subject matter classified in this group:



B65H 54/84**Arrangements for compacting materials in receptacles****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



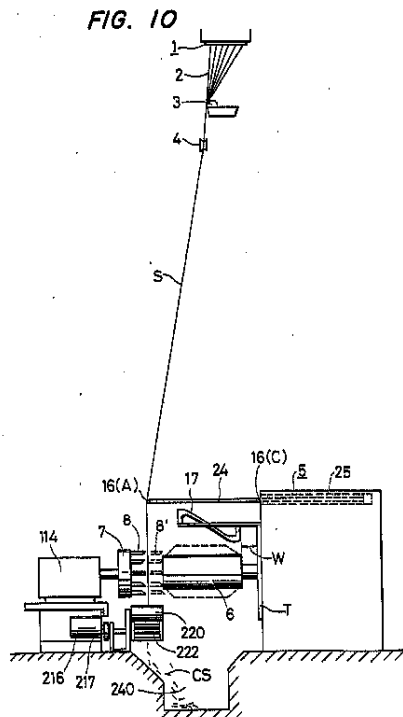
B65H 54/86

Arrangements for taking-up waste material before or after winding or depositing

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



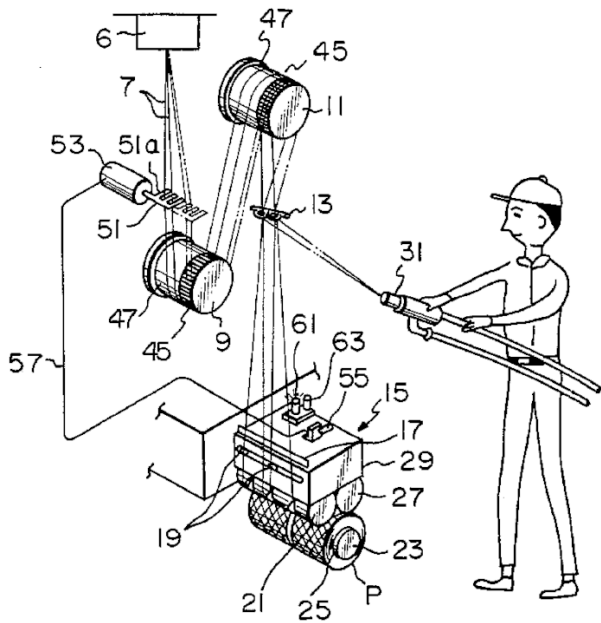
B65H 54/88

by means of pneumatic arrangements, e.g. suction guns

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Automatic end-finding and material interconnection arrangements	B65H 67/08
Threading up and starting the false-twisting machine for producing crimped or curled fibres	D02G 1/0273

B65H 55/00

Wound packages of filamentary material

Definition statement

This place covers:

Wound packages of filamentary material not provided for in subgroups.

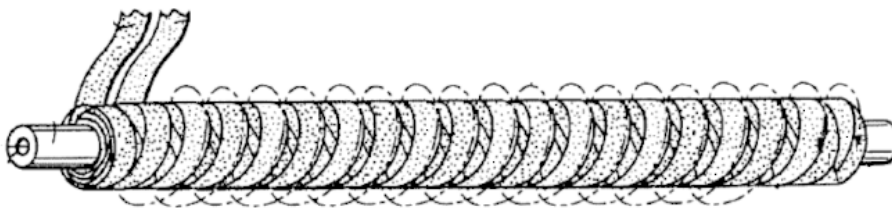
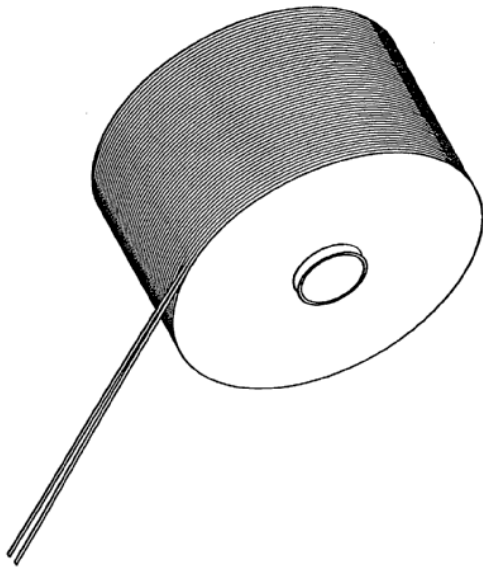
B65H 55/005

{with two or more filaments wound in parallel on the bobbin}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



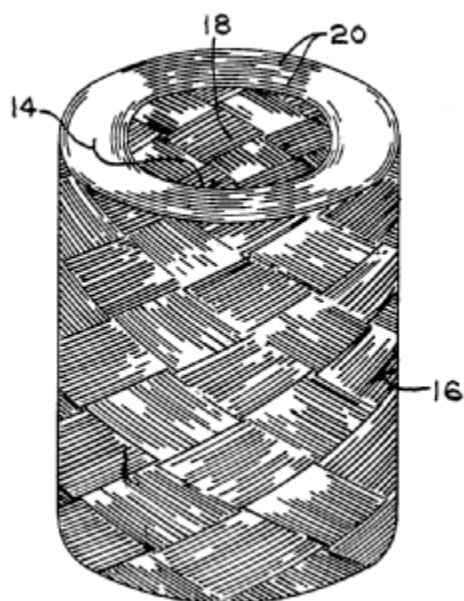
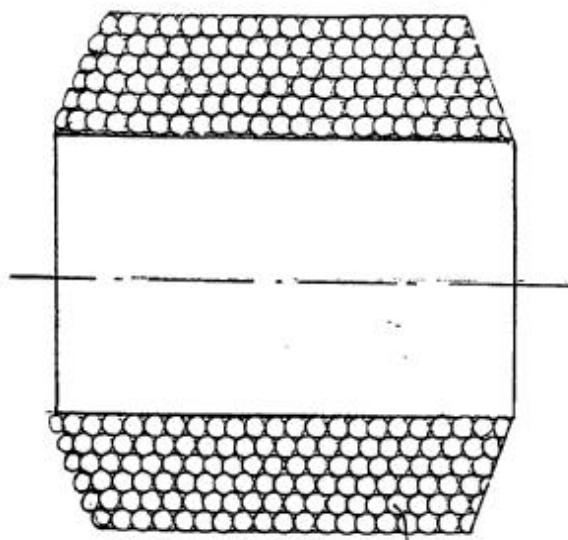
B65H 55/02

Self-supporting packages

Definition statement

This place covers:

Packages without a core.



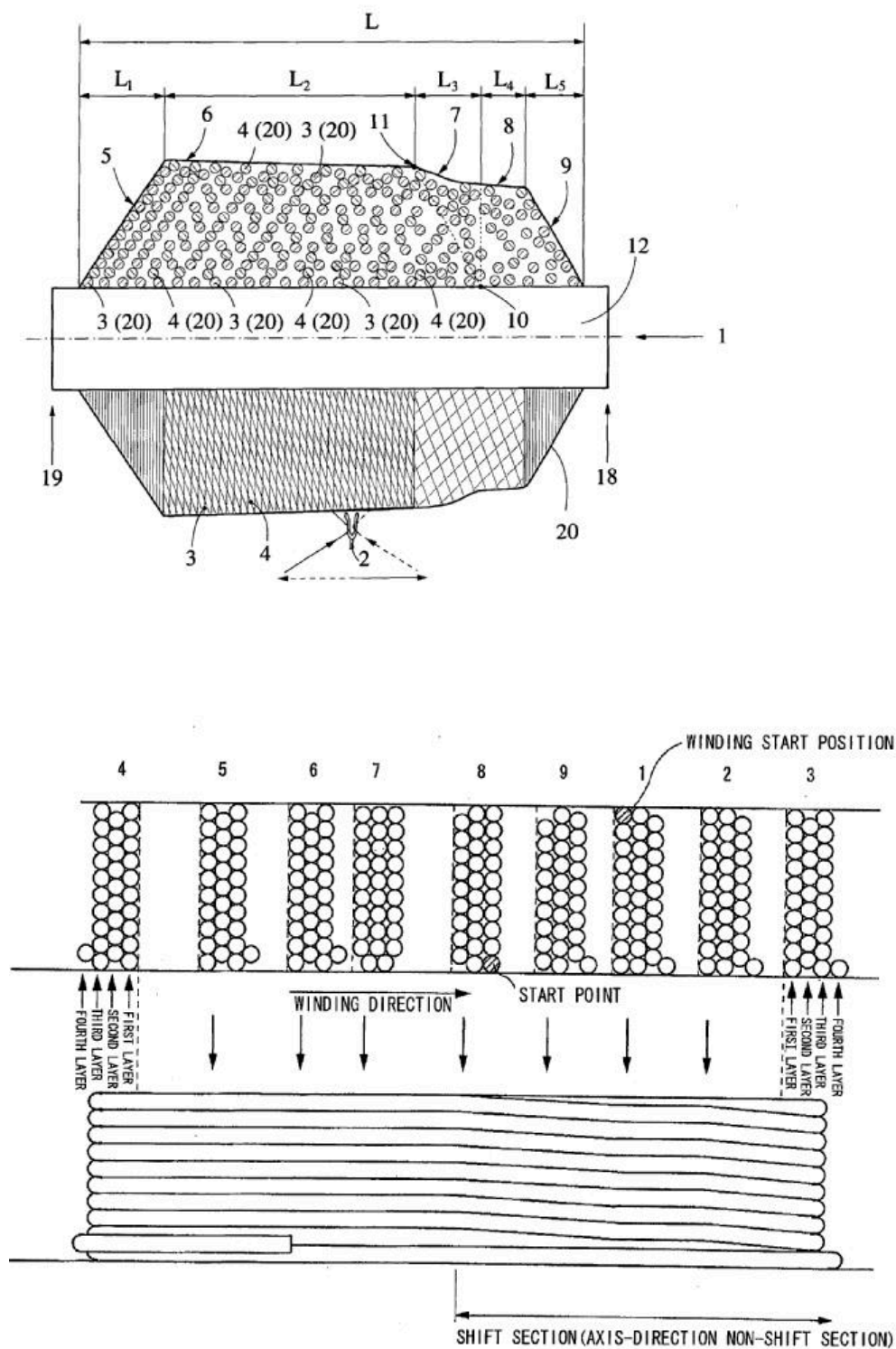
B65H 55/04

characterised by method of winding

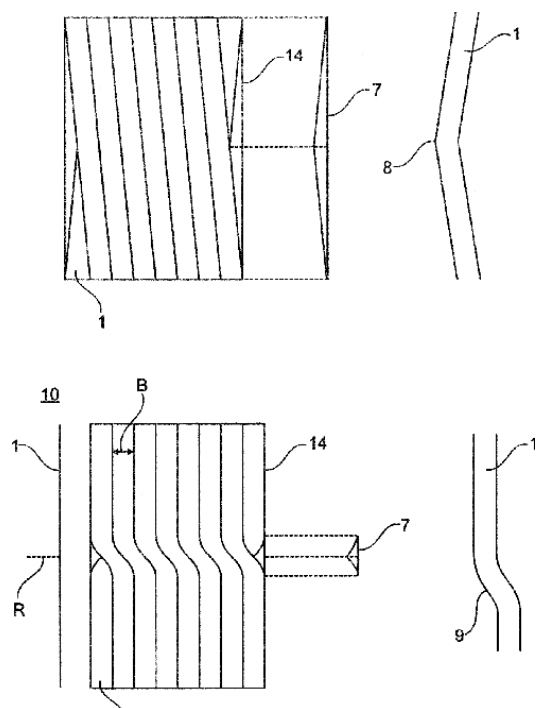
Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



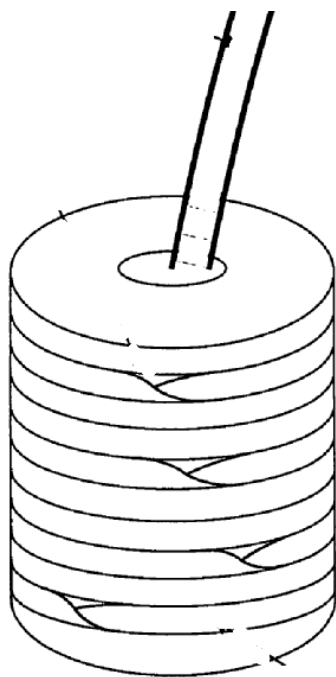
Definition statement

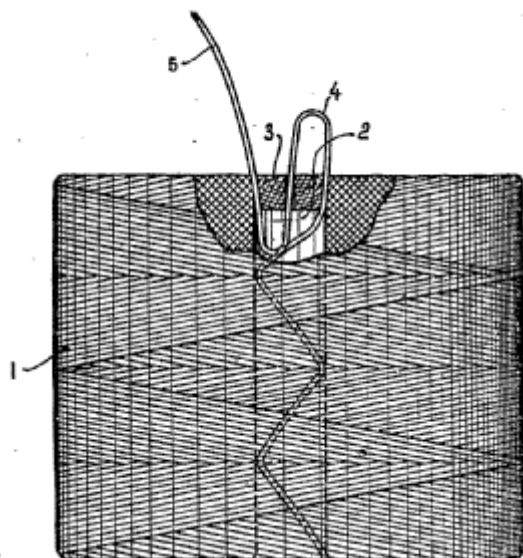
**B65H 55/043**

{the yarn paying off through the centre of the package}

Definition statement*This place covers:*

Illustrative examples of subject matter classified in this group:





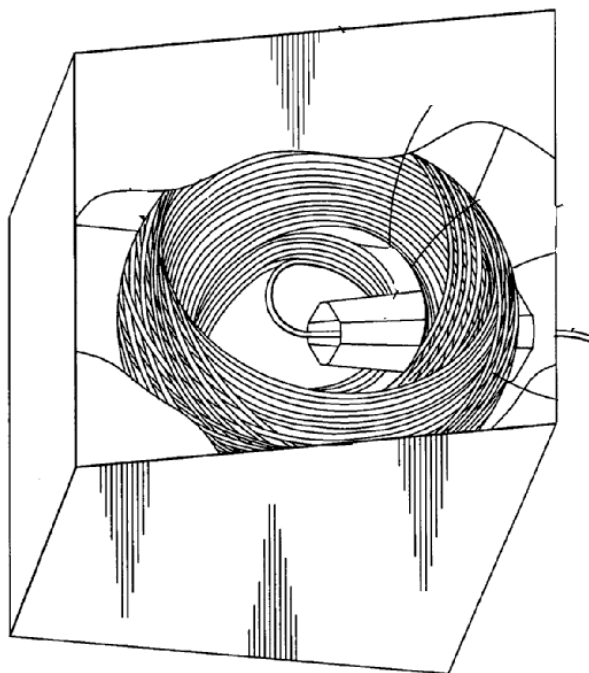
B65H 55/046

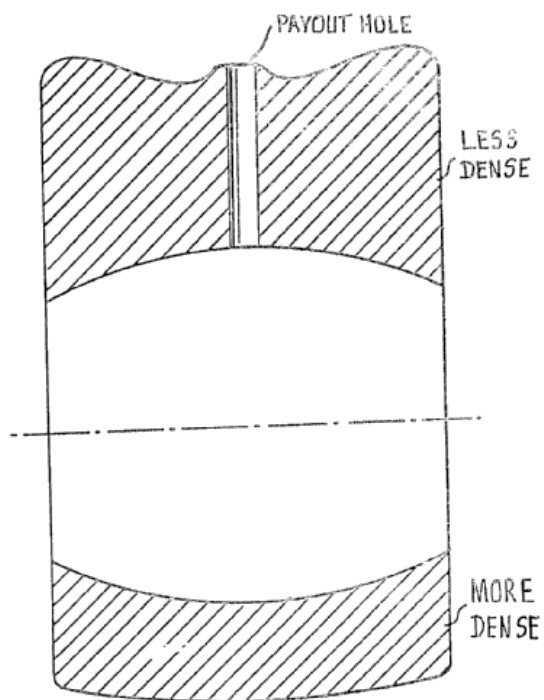
{packages having a radial opening through which the material will pay off}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





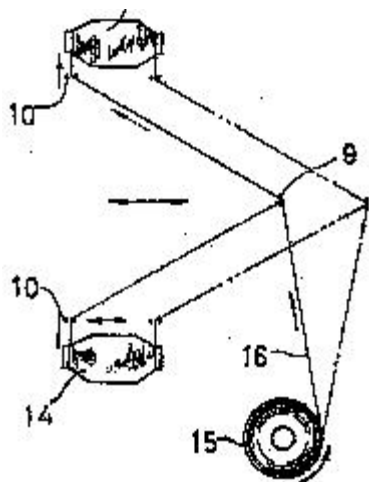
B65H 57/00

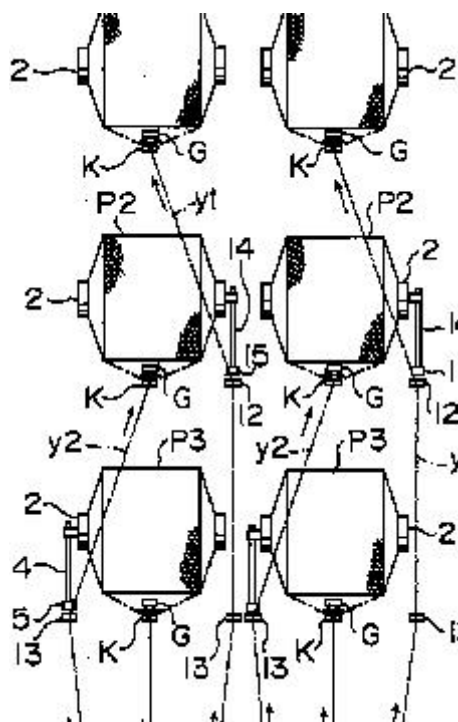
Guides for filamentary materials; Supports therefor

Definition statement

This place covers:

Contains for ex. documents relating to guiding methods e.g. how the yarn is guided between unwinding and winding station.





References

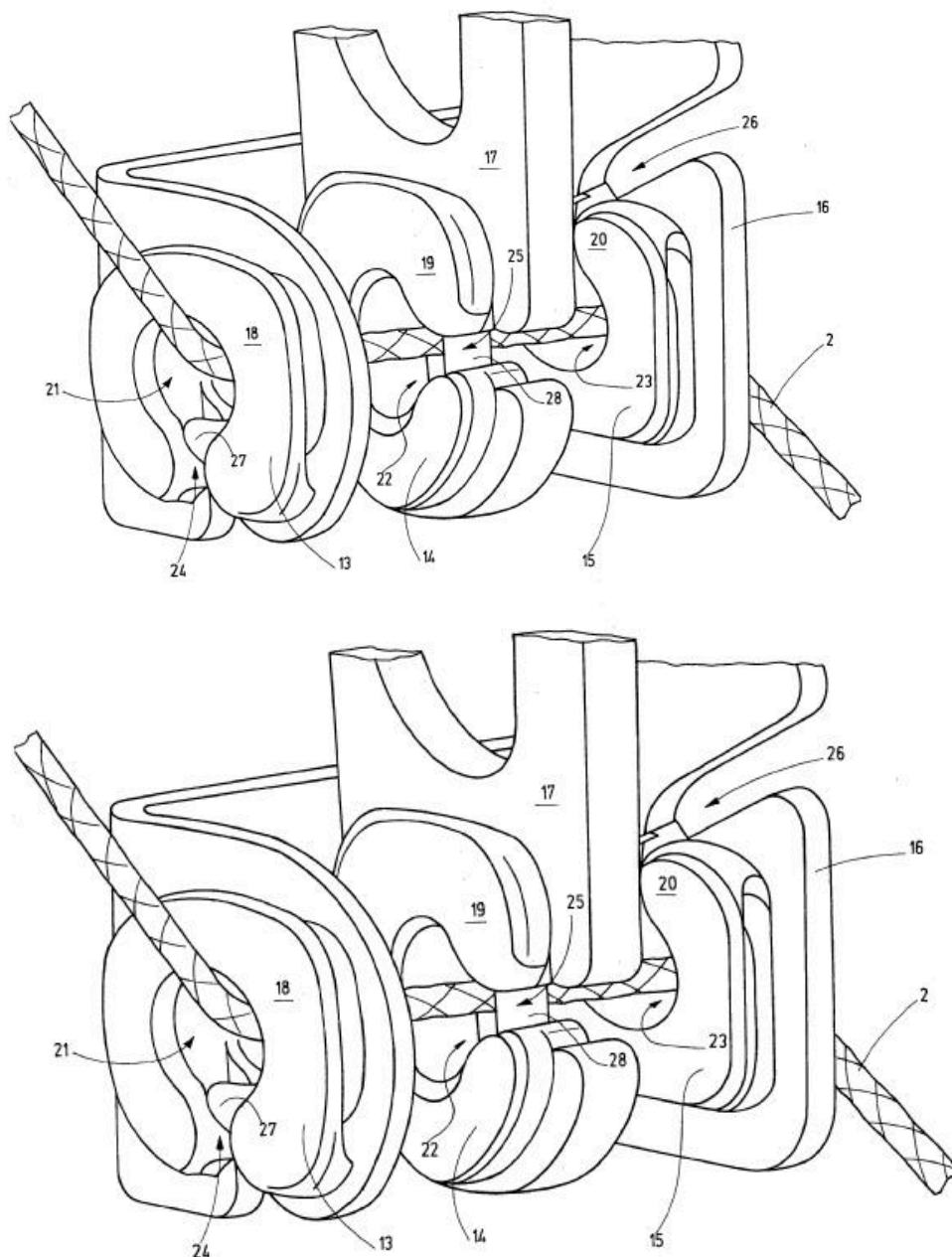
Informative references

Attention is drawn to the following places, which may be of interest for search:

Guides for slivers, rovings or yarns in spinning machines	D01H 13/04
Handling the weft between bulk storage and weft-inserting means in weaving looms	D03D 47/34
Thread guides in weft knitting machines	D04B 15/54
Guides in thread-tensioning arrangements in embroidering machines	D05C 11/08

B65H 57/003**{Arrangements for threading or unthreading the guide}****Definition statement***This place covers:*

Arrangements and methods for threading or unthreading the guide.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

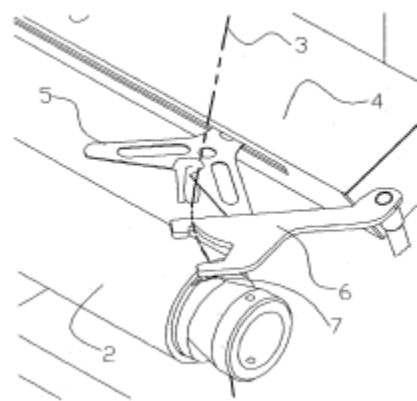
Apparatus for threading warp stop-motion droppers, healds, or reeds	D03J 1/14
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B65H 57/006

{Traversing guides}

Definition statement

This place covers:
Details of the guide of a traversing device.



References

Informative references

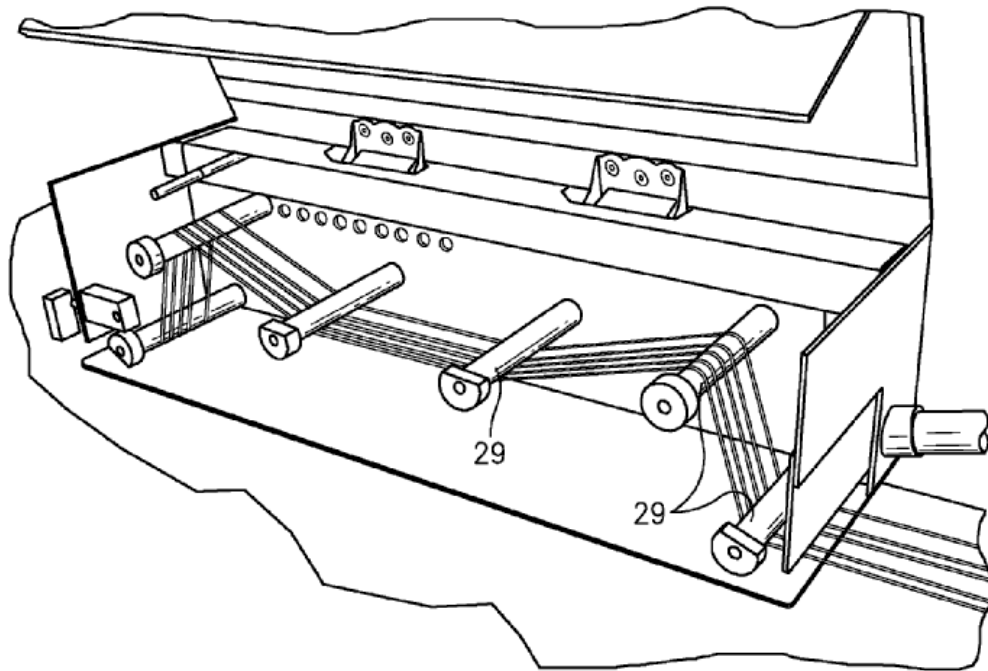
Attention is drawn to the following places, which may be of interest for search:

Traversing devices	B65H 54/28
Traversing arrangements for guides in spinning machines	D01H 13/06

B65H 57/02**Stationary rods or plates****Definition statement**

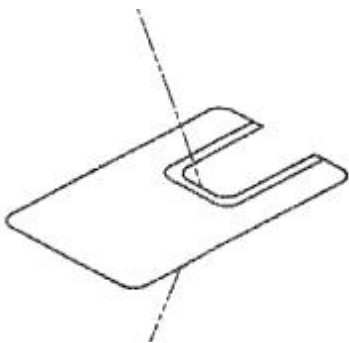
This place covers:

Illustrative example of subject matter classified in this group:

**B65H 57/04****Guiding surfaces within slots or grooves****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:

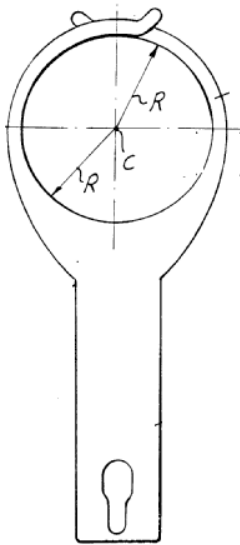




Definition statement

Illustrative examples of subject matter classified in this group:





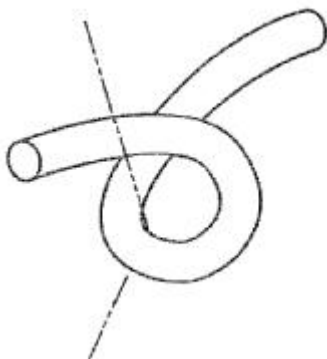
B65H 57/08

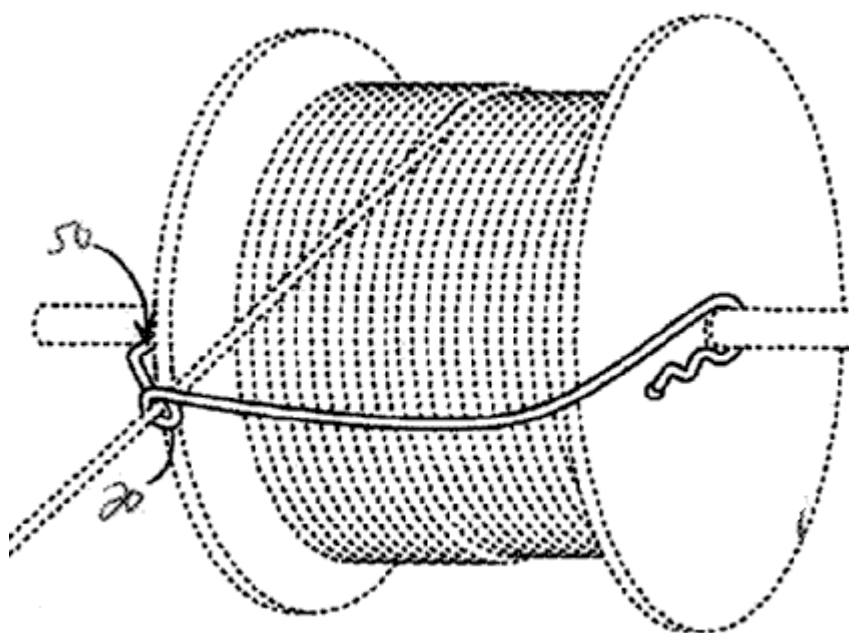
formed of wire or the like

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





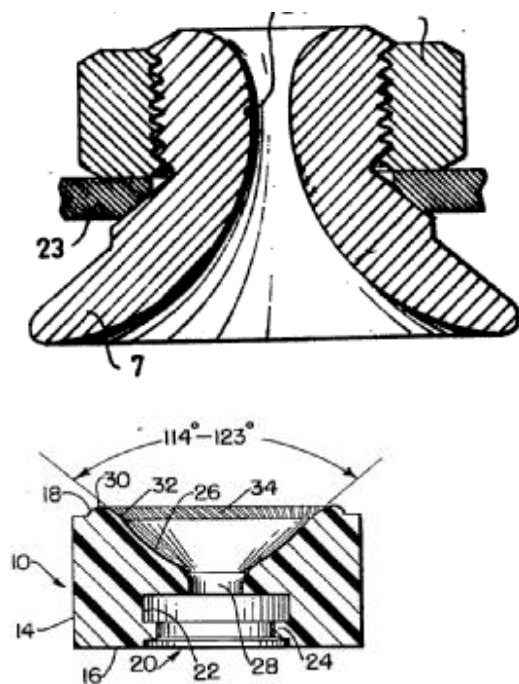
B65H 57/10

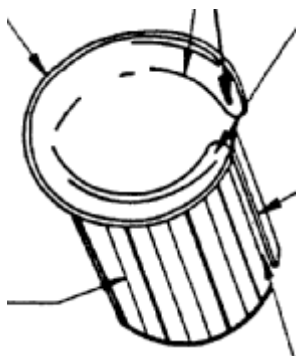
with flared apertures

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





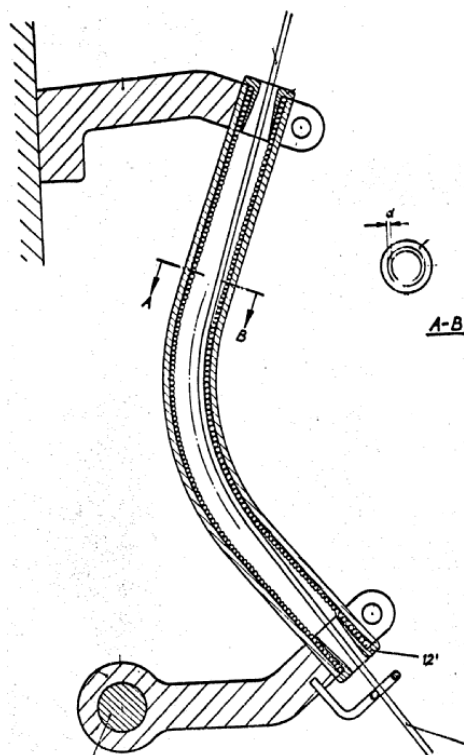
B65H 57/12

Tubes

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

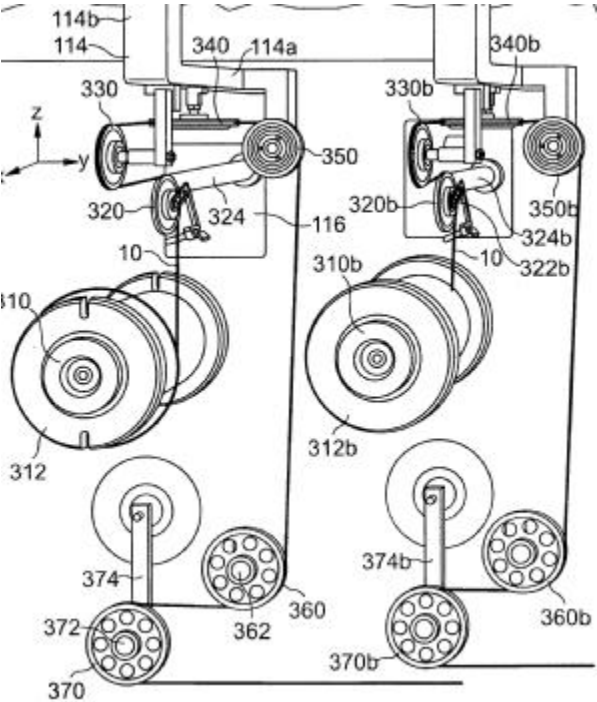
Coiling metal wire by means of a rotating guide tube	B21C 47/143
Guide tubes for slivers, rovings or yarns in spinning machines	D01H 13/045
Laying electric cables through tubing or conduit	H02G 1/08
Installation of electric cables in underground tubes or conduits	H02G 9/06

B65H 57/14

Pulleys, rollers, or rotary bars

Definition statement

This place covers:
Freely rotating pulleys, rollers or rotary bars.



References

Limiting references

This place does not cover:

Driven rollers, pulleys, capstans or intermeshing rotary elements for forwarding filamentary material	B65H 51/04
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Guiding of ropes, cables or chains in winding mechanism	B66D 1/36
Supporting moving filaments during manufacture using rollers with mutually inclined axes	D01D 10/0445
Producing crimped or curled fibers, filaments, yarns or threads by false-twisting	D02G 1/02

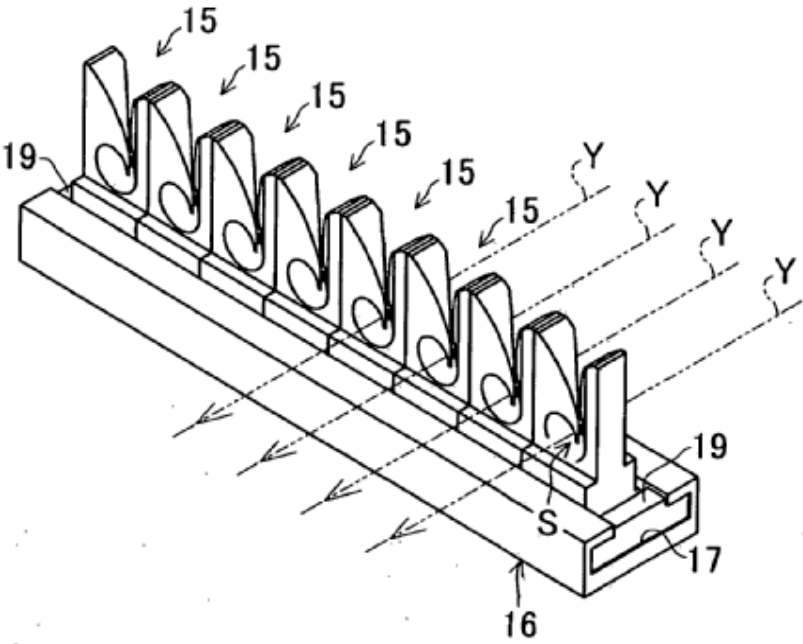
B65H 57/16

formed to maintain a plurality of filaments in spaced relation

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Thread sheet, e.g. sheet of parallel yarns or wires	B65H 2701/38
Physical treatment of artificial filaments, the filaments being maintained parallel	D01D 10/0463
Reeds or combs for determining the spacing of threads in warping or beaming arrangements	D02H 13/16
Guiding means preventing threads from sticking together in textile treating arrangements	D06B 23/06

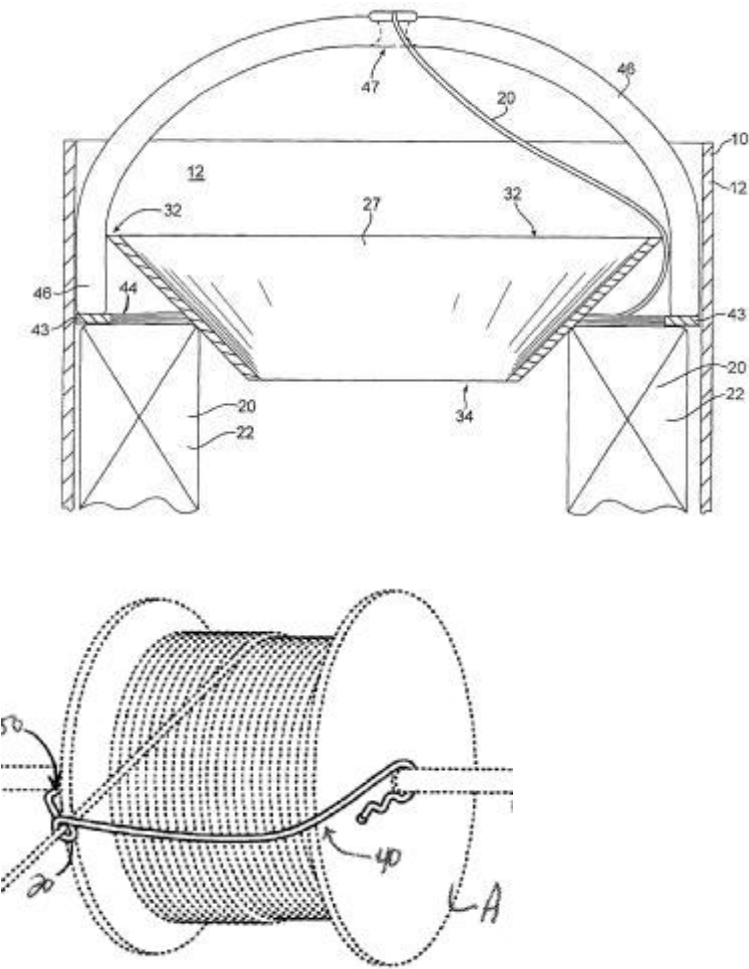
B65H 57/18

mounted to facilitate unwinding of material from packages

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Limiting references

This place does not cover:

Guides for aligned unwinding from rotating bobbins	B65H 57/28
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Tension devices acting on the material leaving the package	B65H 59/06
Dereeling means for welding wire, e.g. retaining plate	B23K 9/1333
Means to facilitate the unwinding of the yarn in twisting	D01H 7/866

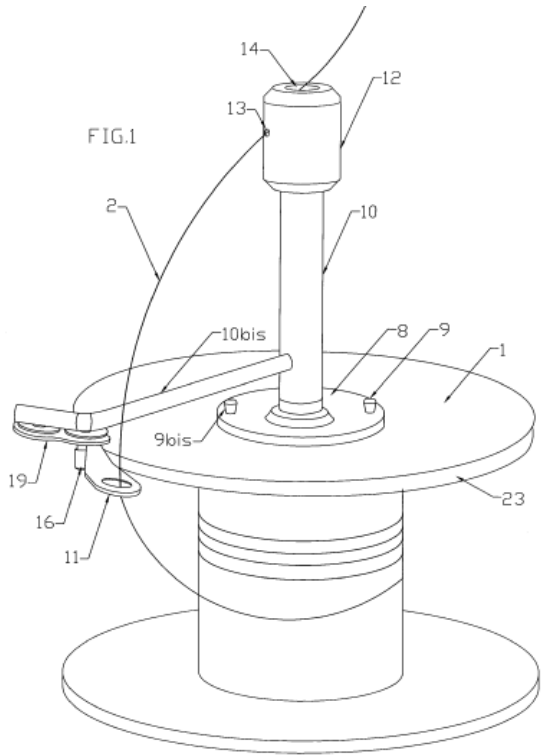
B65H 57/20

Flyers (for inserting twist [D01H](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Axially movable following in alignment the point at which the material leaves the package	B65H 57/28
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Flyers for inserting twist	D01H
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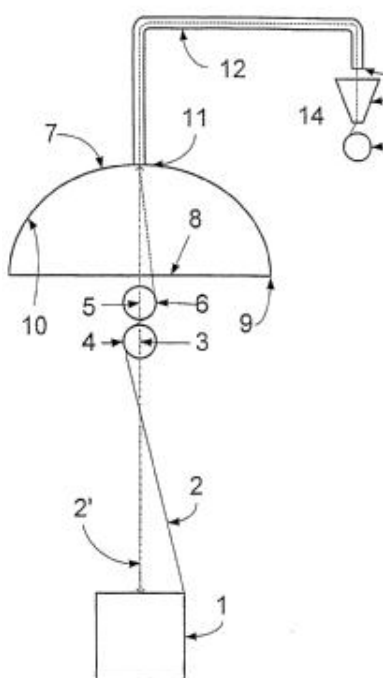
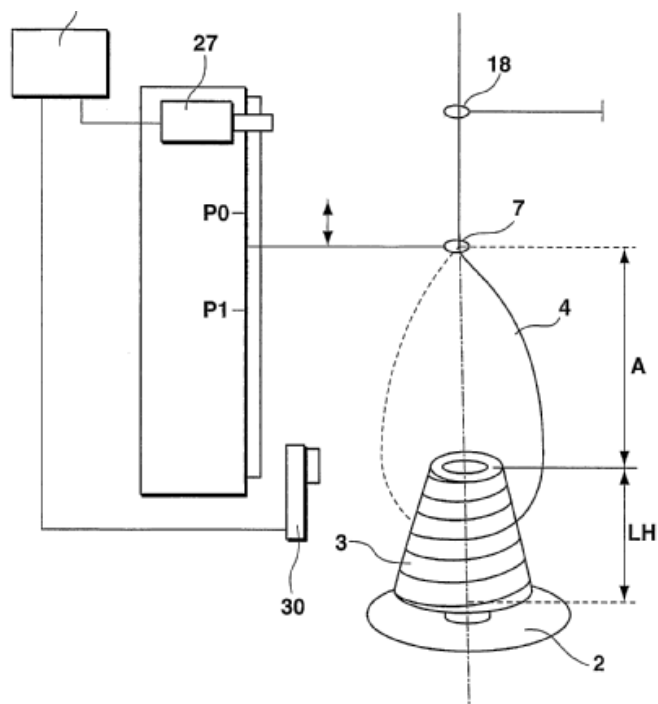
B65H 57/22

adapted to prevent excessive ballooning of material

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Anti-ballooning devices in spinning or twisting machines	D01H 1/42
Arrangements on spinning spindles for suppressing yarn balloons	D01H 7/18
Anti-ballooning devices on spindles for spinning or twisting arrangements	D01H 7/18
Yarn braking means acting on the drum of a weft feeder for a weaving loom	D03D 47/364

B65H 57/26

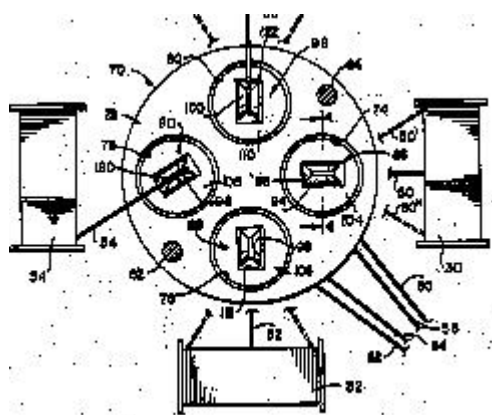
Supports for guides

Definition statement

This place covers:

'Characterised by its support' e.g. swing-over or turn-over supports.

Devices supporting multiple guides.



B65H 57/28

Reciprocating or oscillating guides (traversing devices for winding, coiling, or depositing filamentary material [B65H 54/28](#))

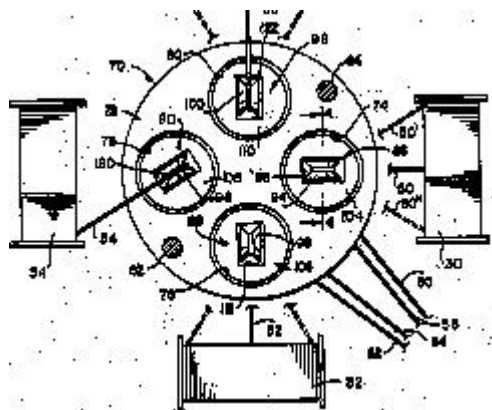
Definition statement

This place covers:

Reciprocating or oscillating other than for [B65H 54/28](#) e.g. guides following the traversing motion of the material leaving the reel.

Definition statement

Contains pivoting or oscillating guides supported by a traversing mechanism but not influencing the traversing (superposed traversing movements [B65H 54/2893](#)).



References

Limiting references

This place does not cover:

Traversing devices for winding, coiling or depositing filamentary material	B65H 54/28
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B65H 59/00

Adjusting or controlling tension in filamentary material, e.g. for preventing snarling; Applications of tension indicators

Definition statement

This place covers:

Methods and devices related to adjusting or controlling tension not provided for in subgroups.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Regulation of tension or speed for winding metal wire or band	B21C 47/003
Devices for tensioning saw wires	B23D 57/0069
Wire-electrode tension control	B23H 7/104
Tension devices in spinning and twisting	D01H 13/10
Tensioning devices in warping, beaming or leasing machines	D02H 13/22
Control of tension in a warp supplied by a creel	D03D 49/16
Tensioning devices in knitting	D04B 15/44 , D04B 27/12 , D04B 27/14
Thread tensioning arrangements in embroidering or tufting	D05C 11/08
Tensioning in making pile fabrics	D05C 15/18
Brakes or tension regulating means in cables, conductors or insulators	H01B 13/0866
Tensioning or braking devices in winding magnets, inductances or transformers	H01F 41/094

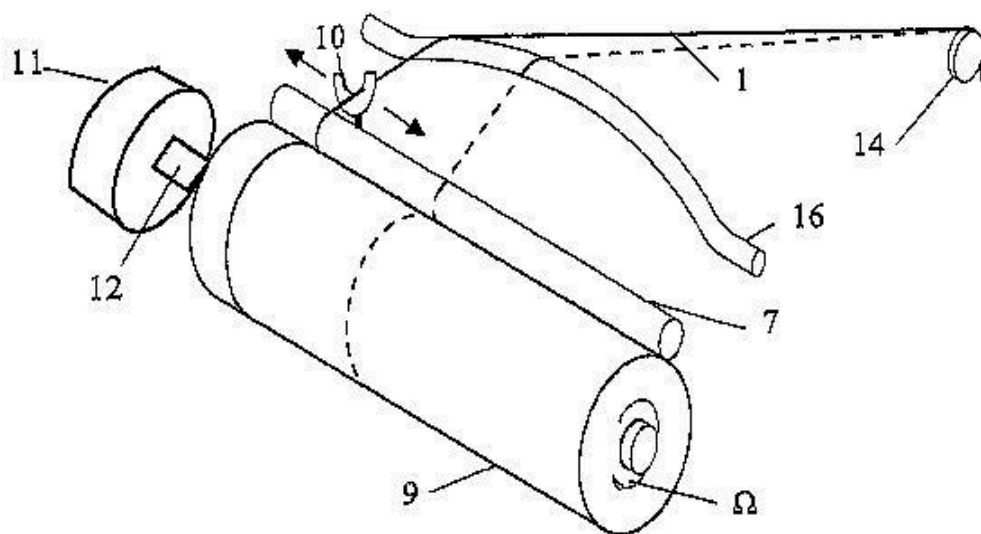
B65H 59/005

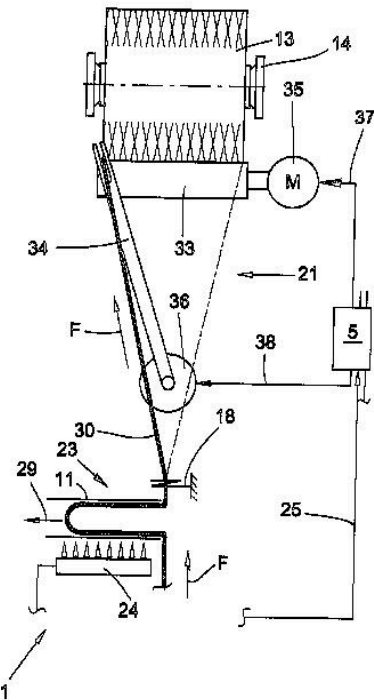
{Means compensating the yarn tension in relation with its moving due to traversing arrangements}

Definition statement

This place covers:

Means which compensate variation in tension due to varying length of the yarn in the traversing triangle, e.g. curved rods, length accumulators or control means for controlling the winding, forwarding or unwinding speed.





References

Informative references

Attention is drawn to the following places, which may be of interest for search:

By controlling speed of the driving mechanism of unwinding, payout or forwarding devices	B65H 59/38
--	----------------------------

B65H 59/02

by regulating delivery of material from supply package (by contact of package with support [B65H 49/02](#); by controlling speed of driving mechanism of unwinding or paying-out devices [B65H 59/38](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

By contact of package with support	B65H 49/02
Controlling the forwarding speed to synchronise with supply, treatment or take-up apparatus	B65H 51/30
By controlling speed of the driving mechanism of unwinding, payout or forwarding devices	B65H 59/38

B65H 59/04

by devices acting on package or support

Definition statement

This place covers:

E.g. devices which induce drag on the package or support by friction, rheological or magnetic effects.

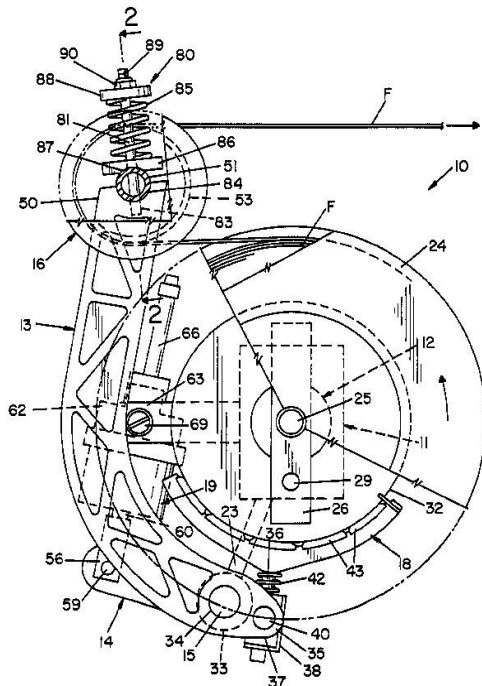
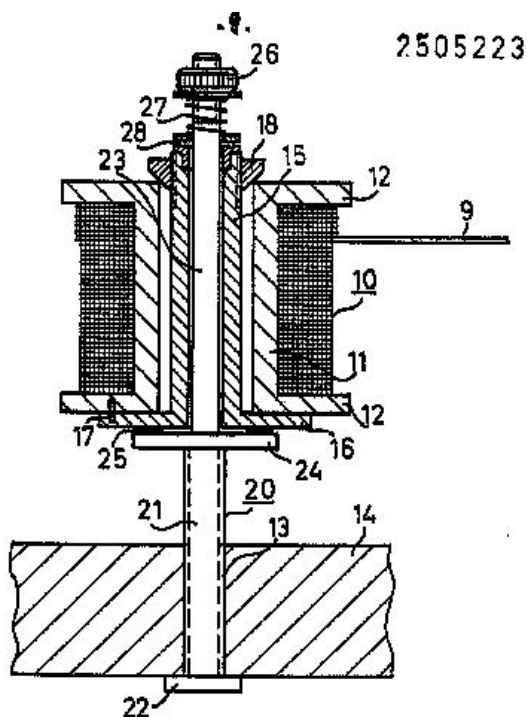


FIG. 1



2505223

References***Informative references***

Attention is drawn to the following places, which may be of interest for search:

Spool carriers in braiding or lacing machines	D04C 3/14
Brakes for supply bobbins or reels in rope or cable making machines	D07B 7/06

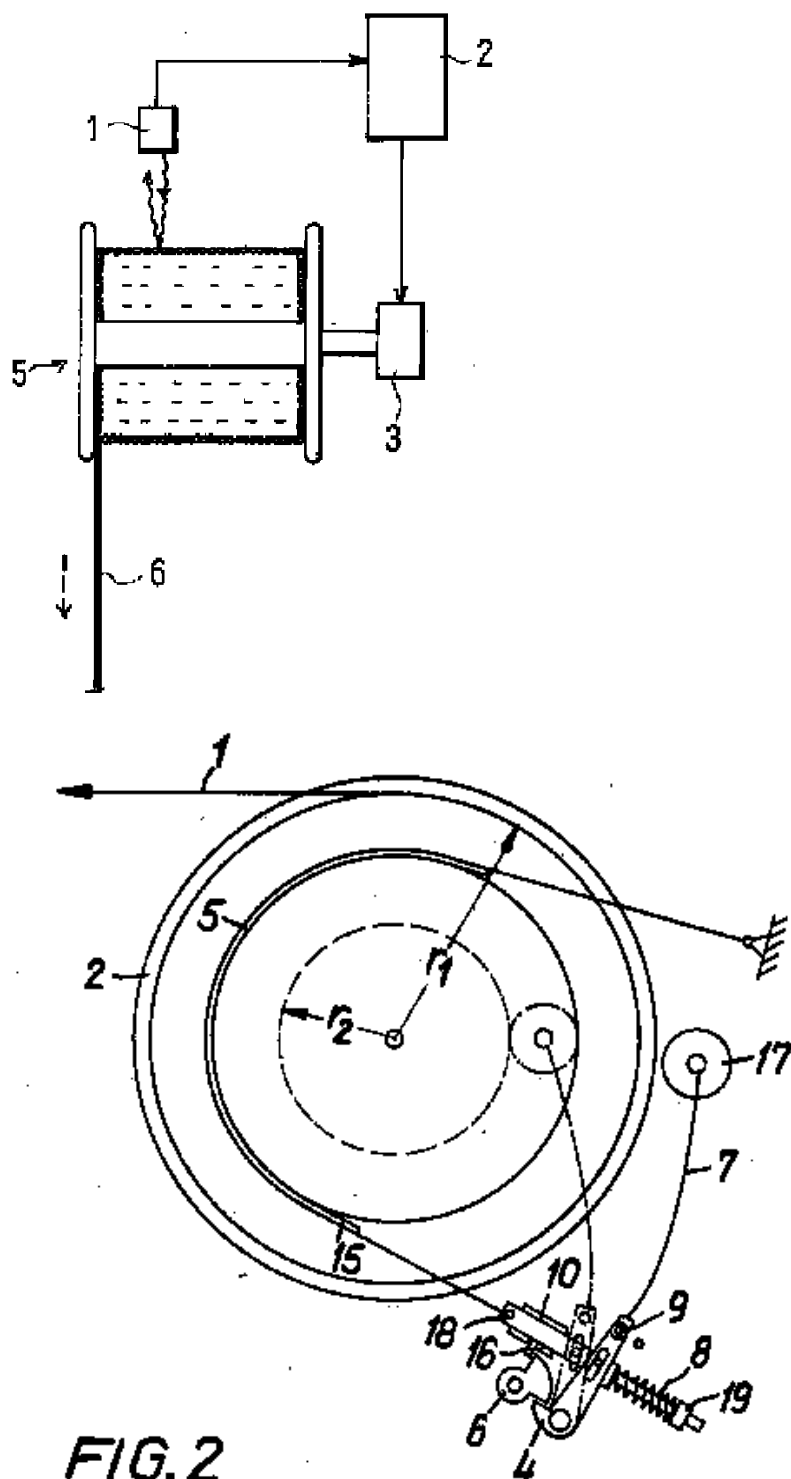
B65H 59/043

{with a braking force varying proportionally to the diameter or the weight of the package being unwound}

Definition statement

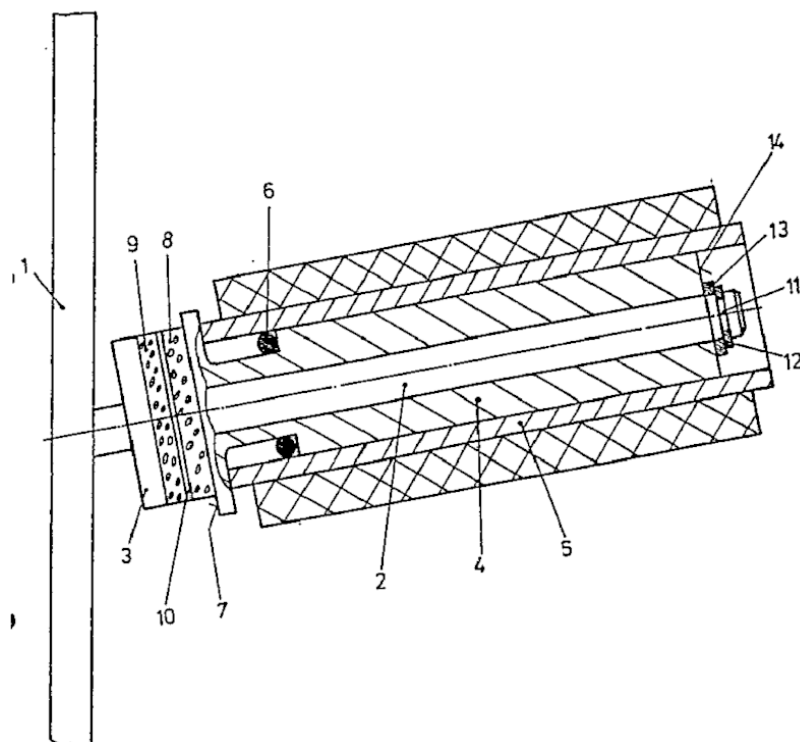
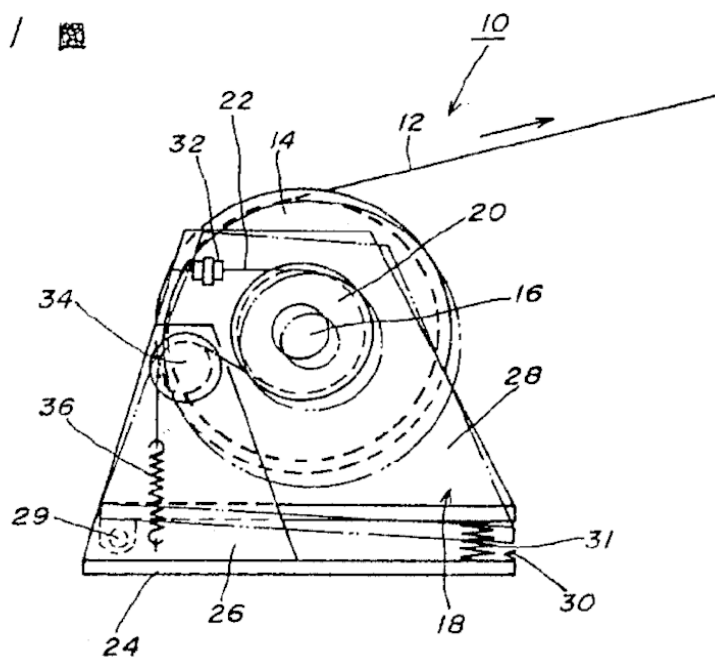
This place covers:

Illustrative examples of subject matter classified in this group:



B65H 59/046**{varying proportionally to the weight only}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:

第 / 圖

B65H 59/06

by devices acting on material leaving the package

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

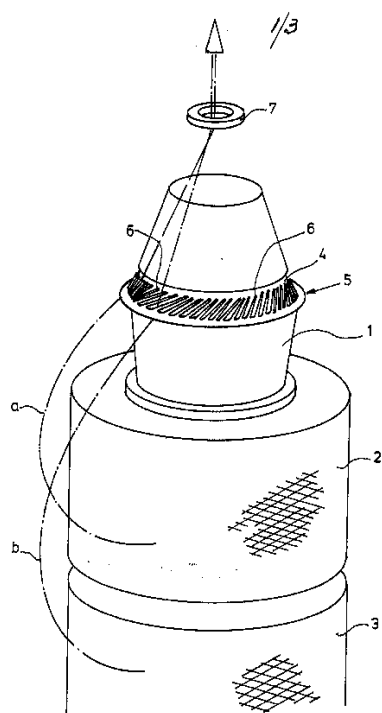
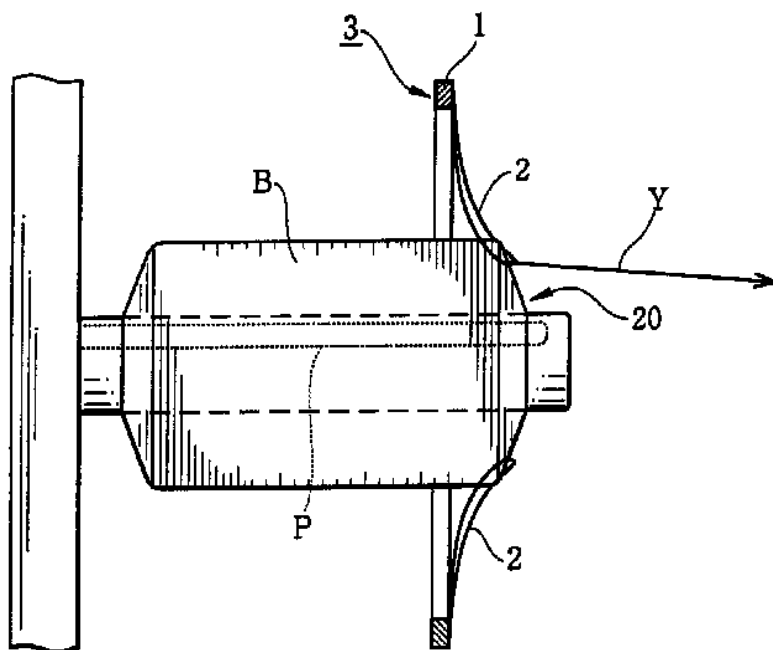


Fig. 1

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Guides mounted to facilitate unwinding of material from packages	B65H 57/18
Means to facilitate the unwinding of the yarn in twisting	D01H 7/866
Yarn braking device acting on a weft feeding drum	D03D 47/364
Yarn braking means acting on the drum in knitting	D04B 15/484

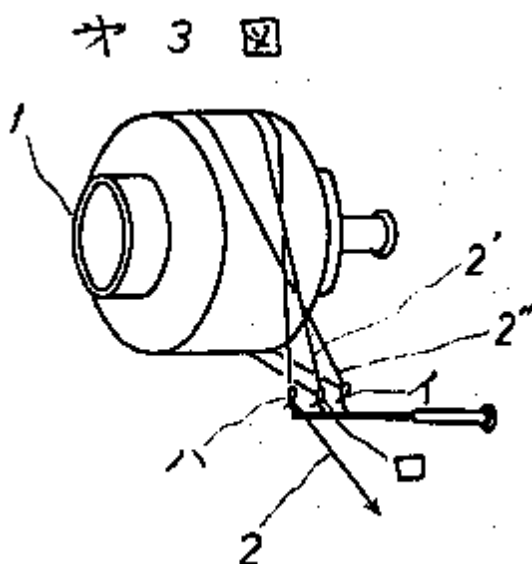
B65H 59/08

by contact of running length of material with supply package

Definition statement

This place covers:

Running length of material is contacting the package, e.g. by wrapping around the package.



B65H 59/10

by devices acting on running material and not associated with supply or take-up devices (by controlling speed of driving mechanism of material-forwarding devices [B65H 59/38](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Tension devices in spinning and twisting acting on the running yarn	D01H 13/106
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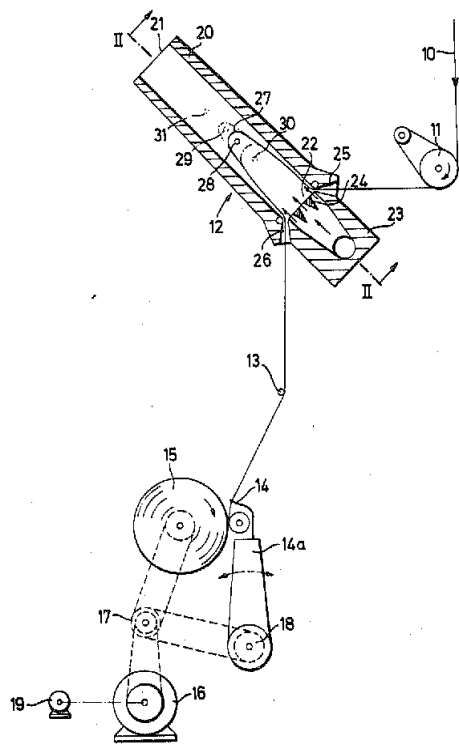
B65H 59/105

{the material being subjected to the action of a fluid}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for temporarily storing filamentary material during forwarding by means of a fluid	B65H 51/205
--	-----------------------------

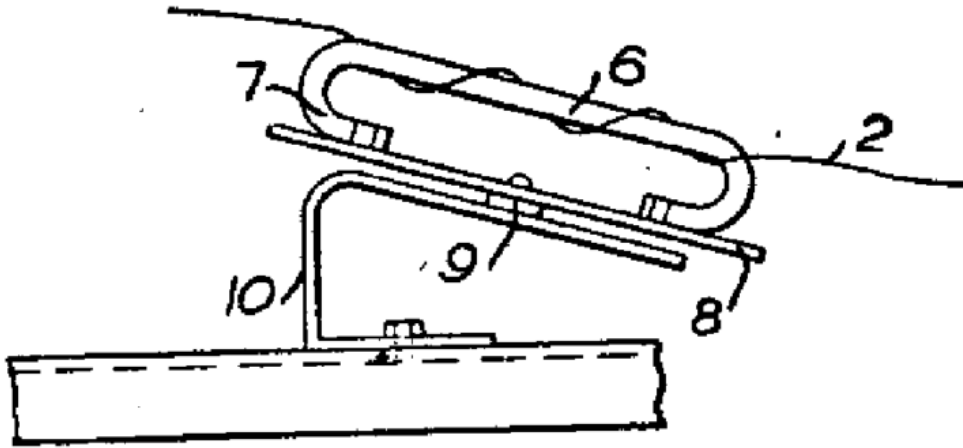
B65H 59/12

Stationary elements arranged to deflect material from straight path

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

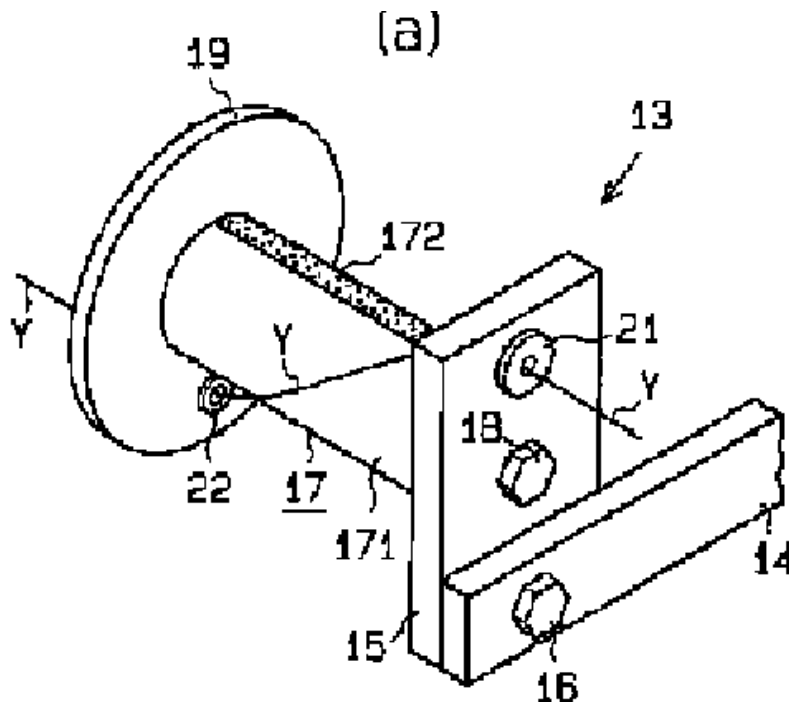
**B65H 59/14**

and provided with surfaces imposing additional retarding forces on material

Definition statement

This place covers:

Additional measures to increase friction on the contact area of deflection.



B65H 59/16

Braked elements rotated by material

Definition statement

This place covers:

Rollers with drag (e.g. magnetic, friction or rheological) driven by the yarn.

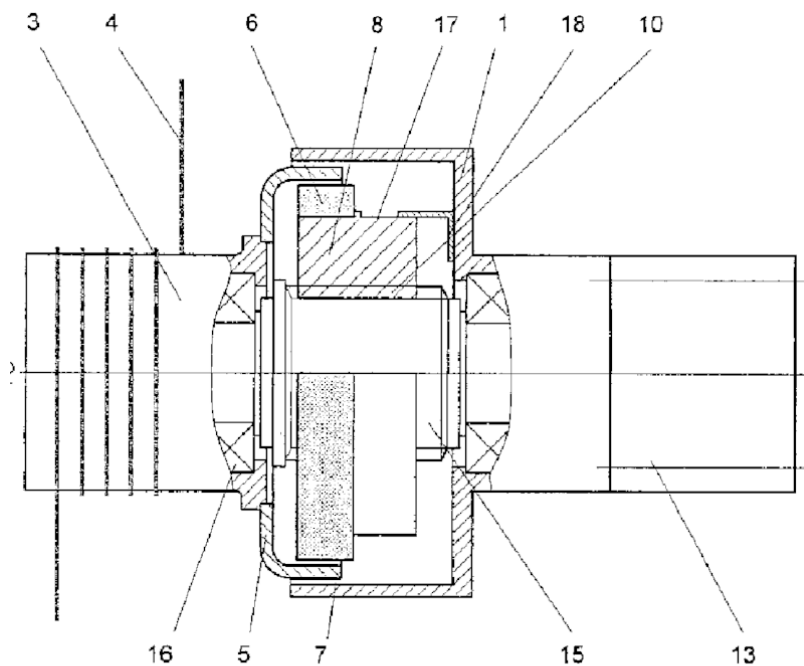


Fig. 2

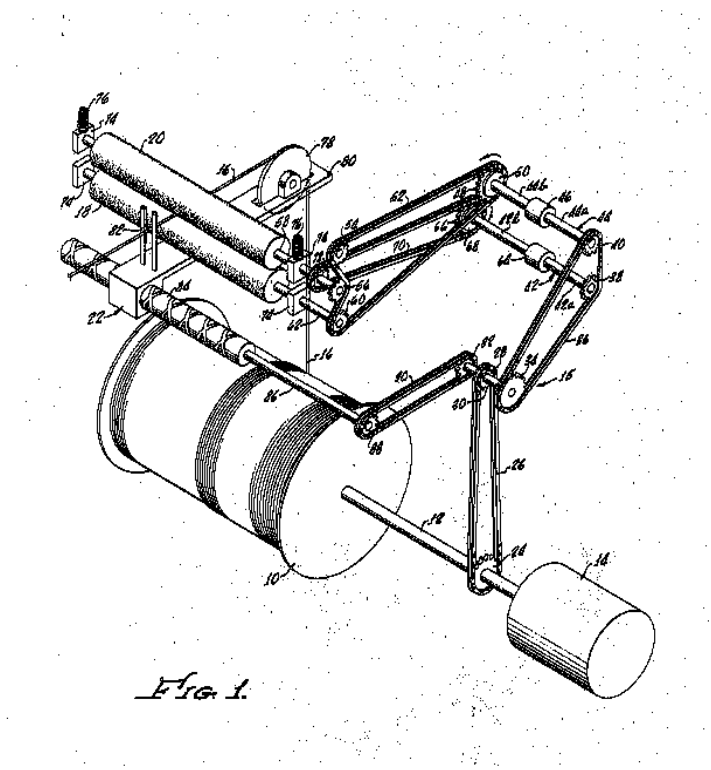
B65H 59/18

Driven rotary elements (material-forwarding devices [B65H 51/00](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Material forwarding devices	B65H 51/00
-----------------------------	----------------------------

B65H 59/20

Co-operating surfaces mounted for relative movement

Definition statement

This place covers:

Co-operating surfaces mounted for relative movement not provided for in subgroups.

B65H 59/22

and arranged to apply pressure to material

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

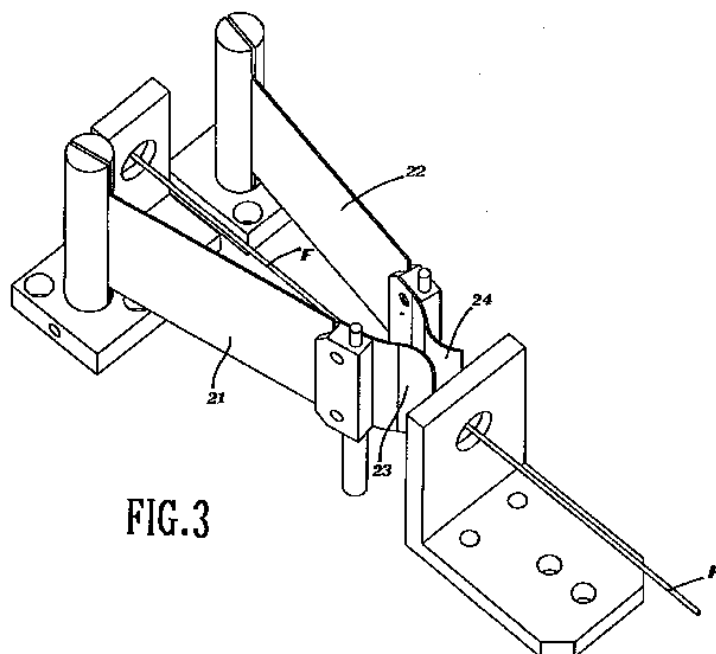


FIG. 3

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

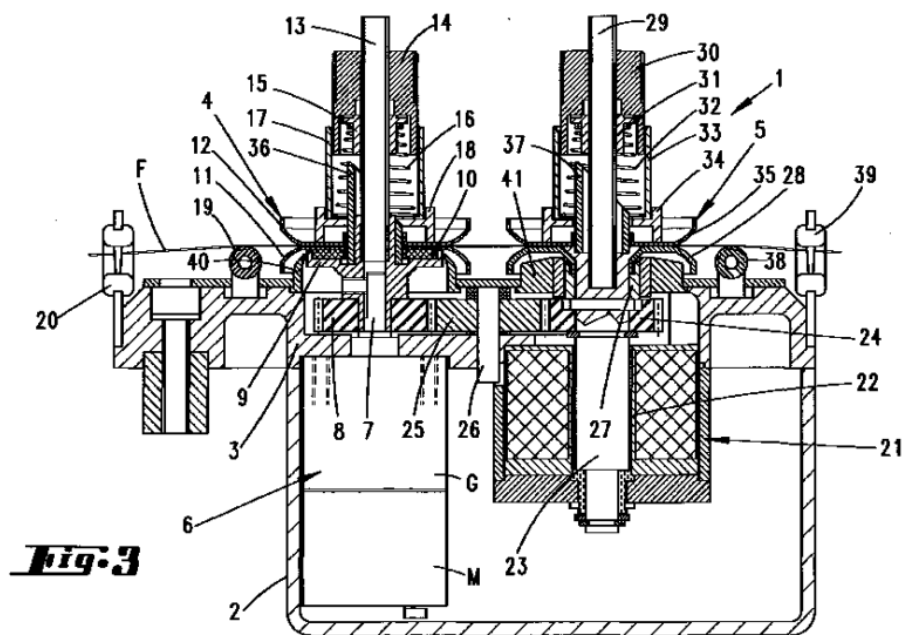
Tensioning devices for double twist spindle	D01H 13/106
---	-----------------------------

B65H 59/225

{Tension discs}

Definition statement*This place covers:*

Illustrative example of subject matter classified in this group:



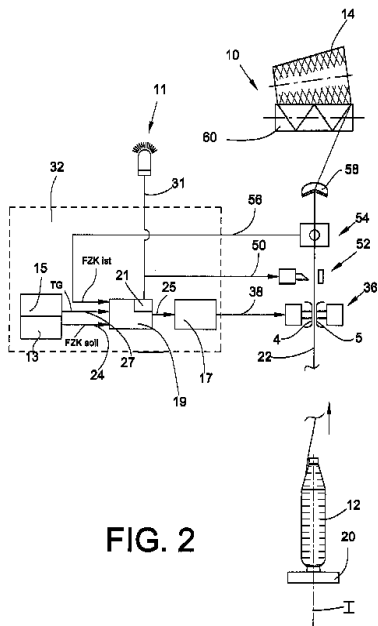
B65H 59/24

Surfaces movable automatically to compensate for variation in tension

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Automatically	Involving active elements such as actuators
---------------	---

B65H 59/26

and arranged to deflect material from straight path

Definition statement

This place covers:

Arranged to deflect material from straight path with surfaces not urged towards or away from each other.

B65H 59/28

the surfaces being urged towards each other

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

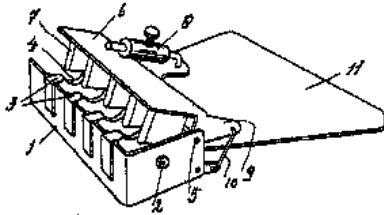


Fig. 1.

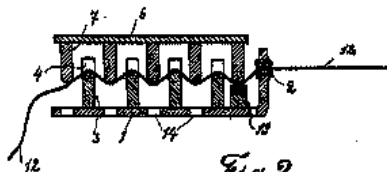


Fig. 2.

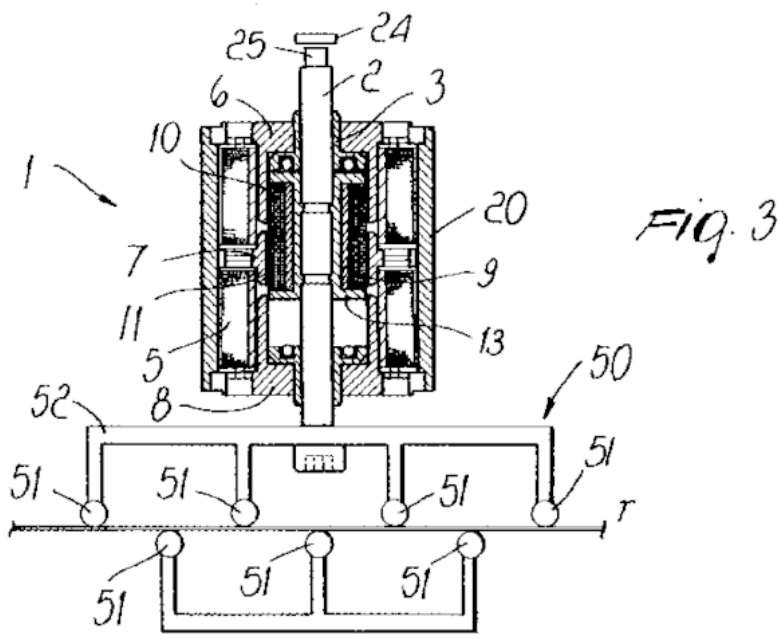
B65H 59/30

Surfaces movable automatically to compensate for variation in tension

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Automatically	Involving active elements such as actuators
---------------	---

B65H 59/32

the surfaces being urged away from each other

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

EP 1 101 851 A1

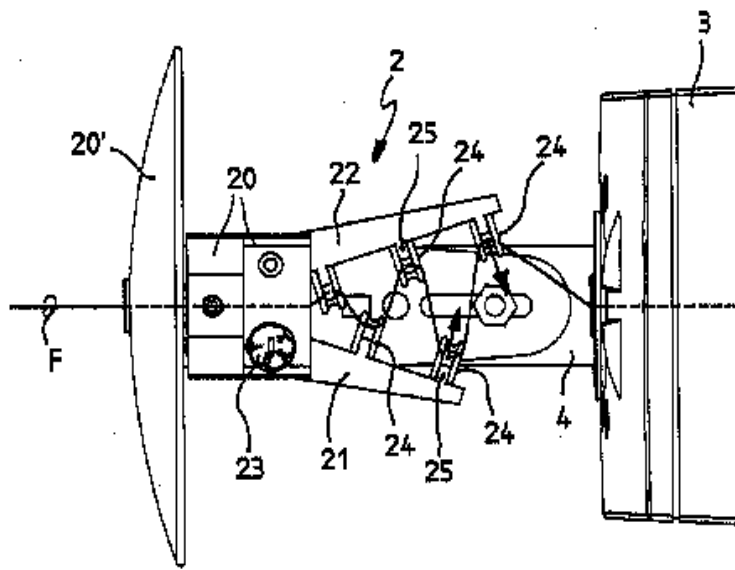


FIG. 2A

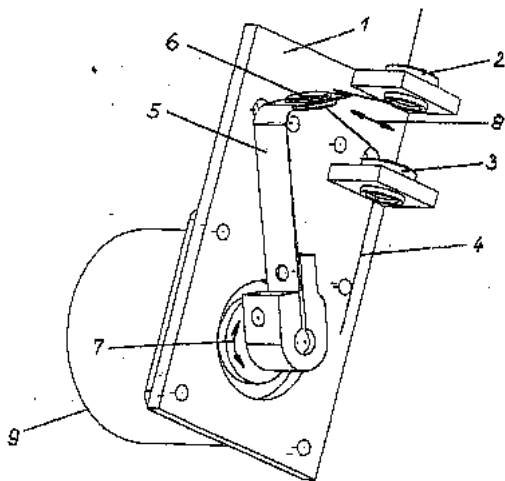
B65H 59/34

Surfaces movable automatically to compensate for variation in tension

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Automatically	Involving active elements such as actuators
---------------	---

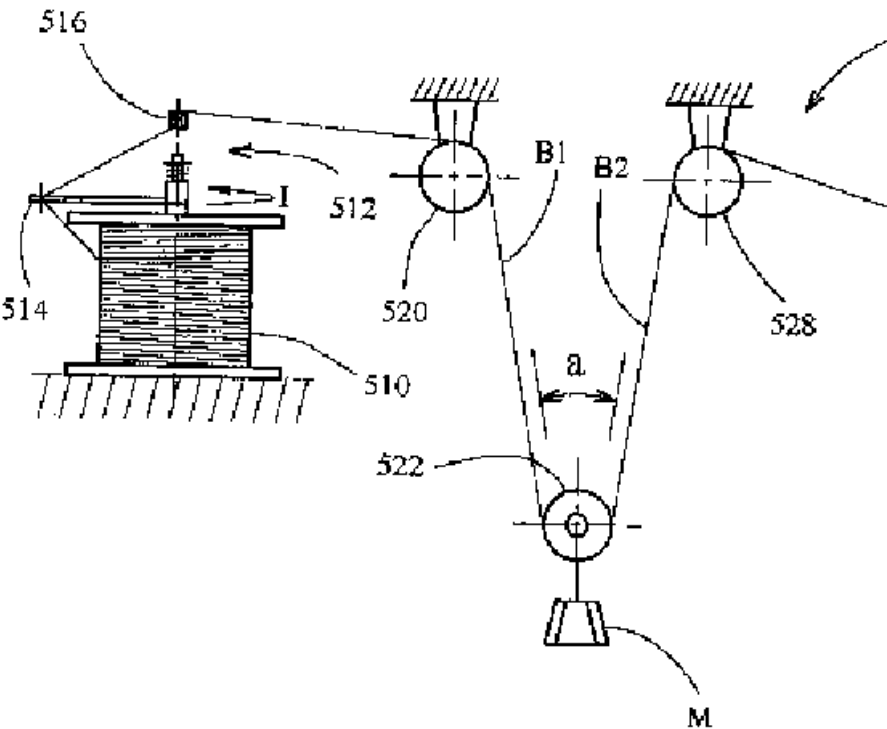
B65H 59/36

Floating elements compensating for irregularities in supply or take-up of material (buffer storage devices [B65H 51/20](#))

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Buffer storage device	B65H 51/20
-----------------------	----------------------------

B65H 59/38

by regulating speed of driving mechanism of unwinding, paying-out, forwarding, winding, or depositing devices, e.g. automatically in response to variations in tension

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Controlling the forwarding speed to synchronise with supply, treatment or take-up apparatus	B65H 51/30
---	----------------------------

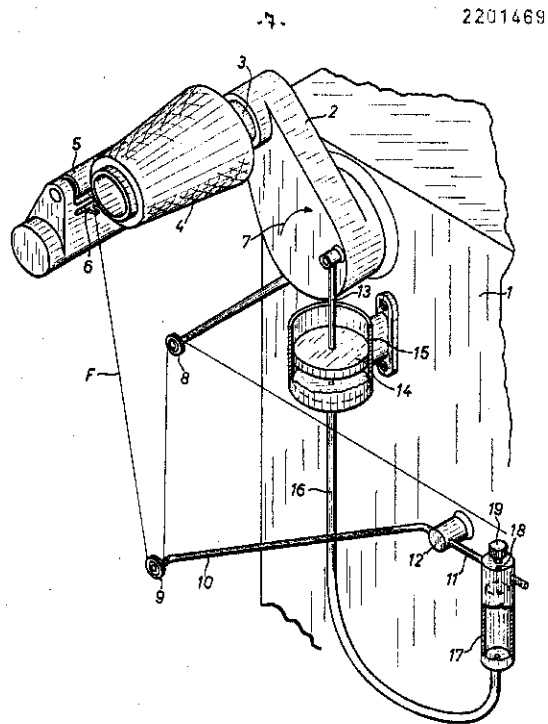
B65H 59/381

{using pneumatic or hydraulic means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



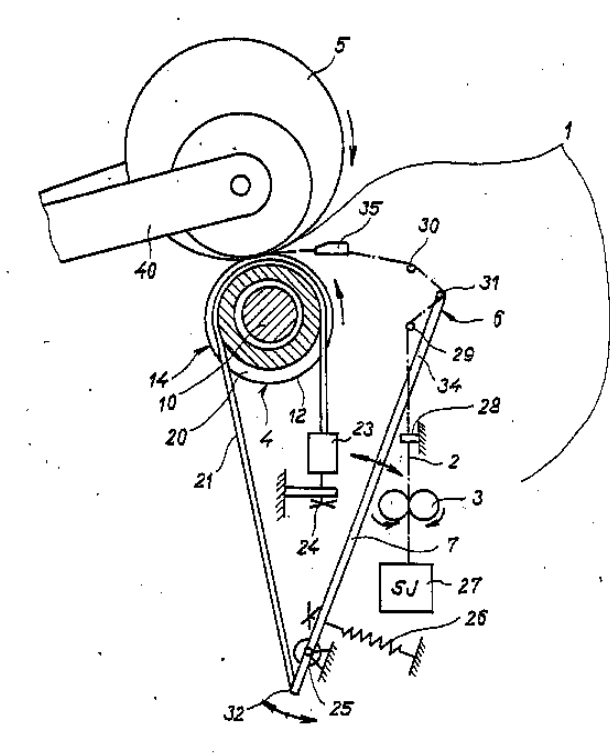
B65H 59/382

{using mechanical means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 59/384

{using electronic means}

Definition statement

This place covers:

Electronic control other than winding, unwinding and forwarding, e.g. traversing speed.

References

Limiting references

This place does not cover:

Loop control in advancing work to the die or other tool	B21D 43/022
---	-----------------------------

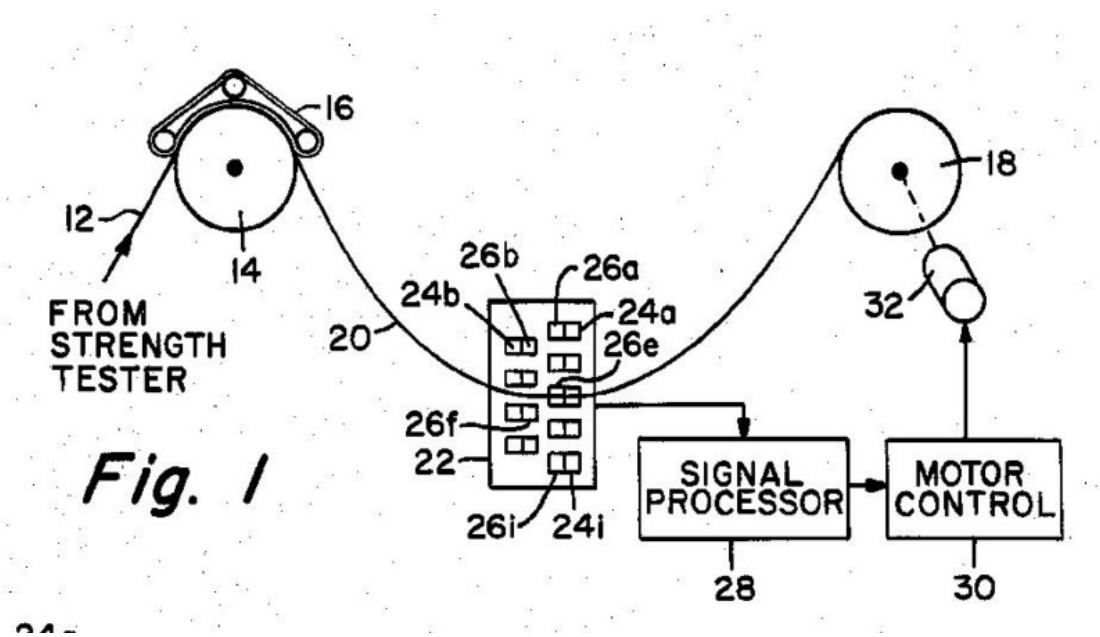
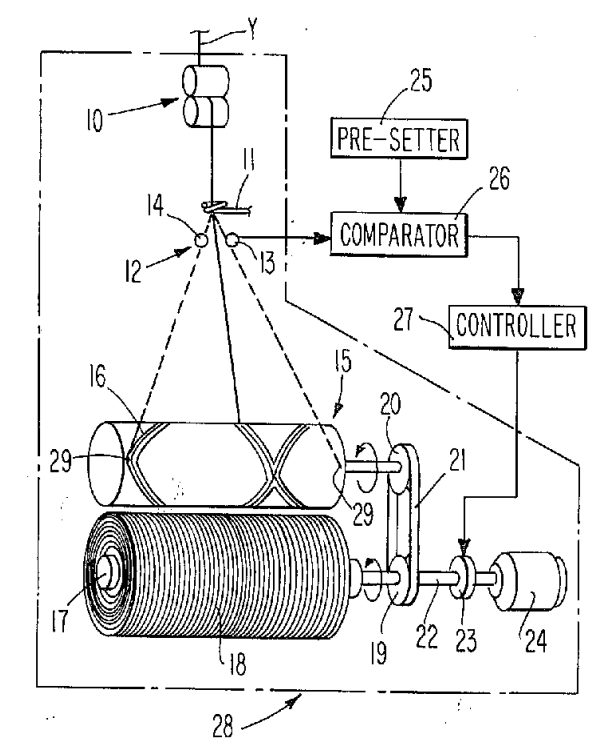
B65H 59/385

{Regulating winding speed}

Definition statement

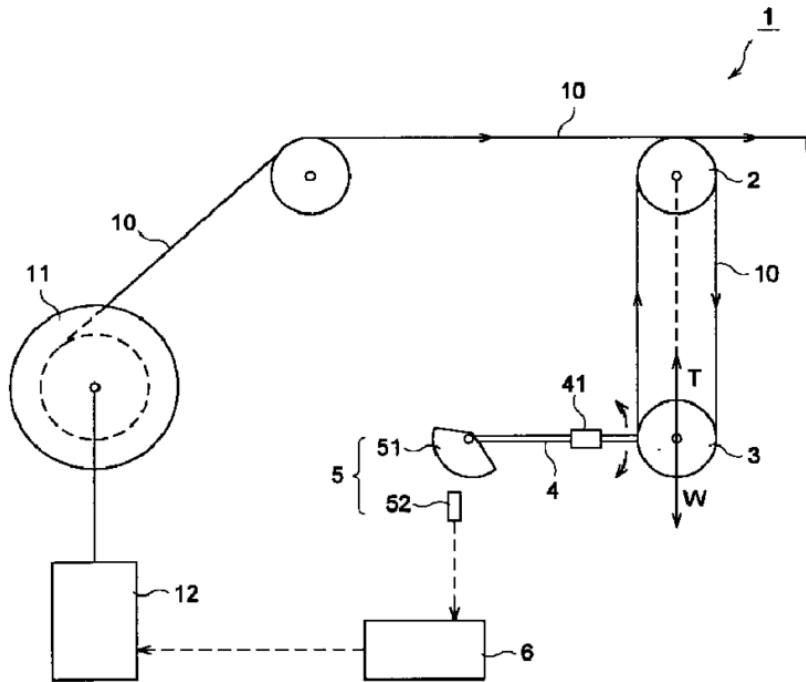
This place covers:

Illustrative examples of subject matter classified in this group:



B65H 59/387**{Regulating unwinding speed}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 59/388

{Regulating forwarding speed}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

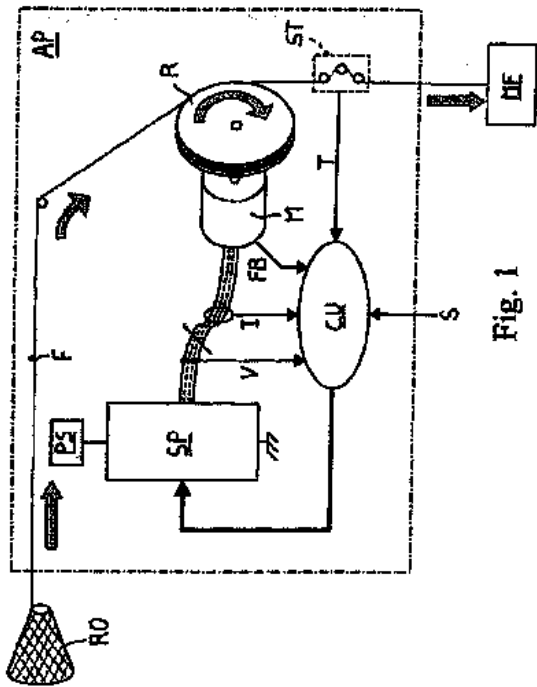


Fig. 1

References

Limiting references

This place does not cover:

Thread-feeding devices in knitting	D04B 15/48
------------------------------------	----------------------------

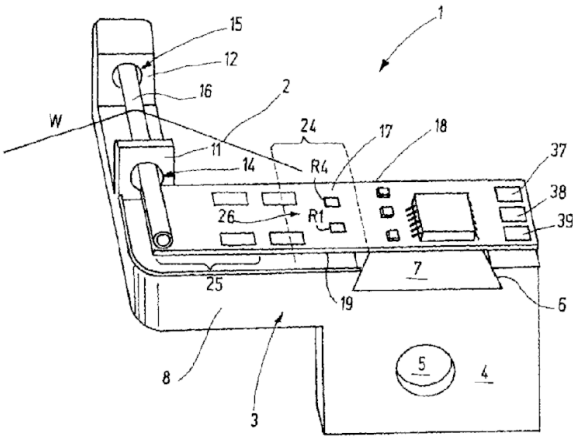
B65H 59/40

Applications of tension indicators

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring tension in ropes, cables, wires, threads or the like	G01L 5/04
--	---------------------------

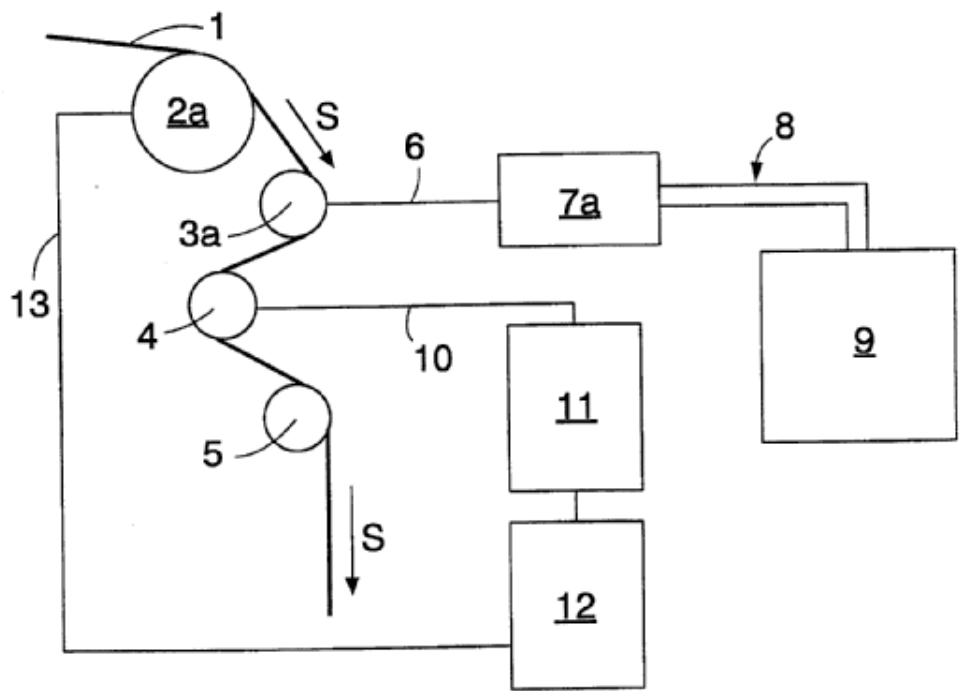
B65H 61/00

**Applications of devices for metering predetermined lengths of running material
(of general application [G01B](#))**

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Counting, measuring, recording or registering devices in spinning machines	D01H 13/32
Measuring length in general	G01B

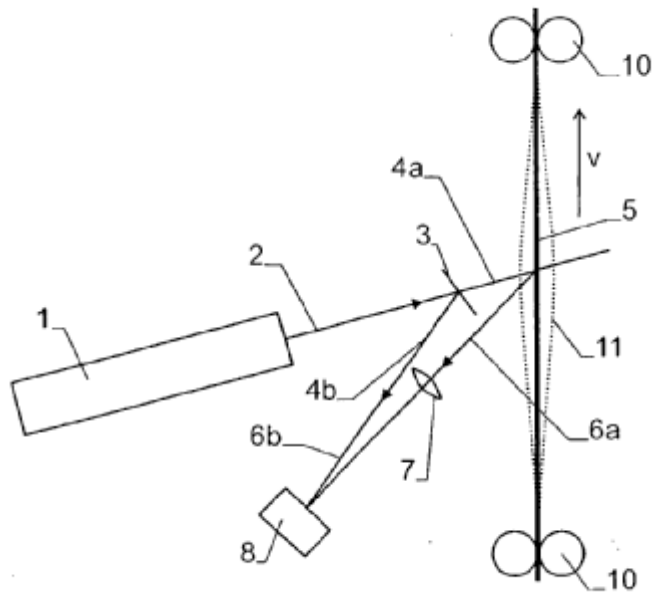
B65H 61/005

{for measuring speed of running yarns}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring linear or angular speed	G01P 3/00
-----------------------------------	---------------------------

B65H 63/00

Warning or safety devices, e.g. automatic fault detectors, stop-motions (safety devices in general [F16P](#); indicating devices in general [G08B](#)){; Quality control of the package}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Warning and safety devices in spinning	D01H 13/14
Warning and safety devices in warping/beaming	D02H 13/02
Warning and safety devices in weaving	D03D 51/18
Warning and safety devices in knitting	D04B 35/10
Safety devices in general	F16P

Measuring optically length, thickness, diameter	G01B 11/00
Investigating presence of flaws or contamination	G01N 21/88
Prediction of the effect of yarn quality on the final textile	G01N 33/36
Indicating devices in general	G08B

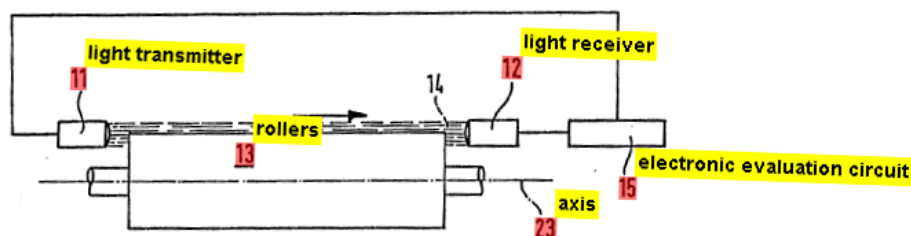
B65H 63/003

{responsive to winding of yarns around rotating cylinders}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



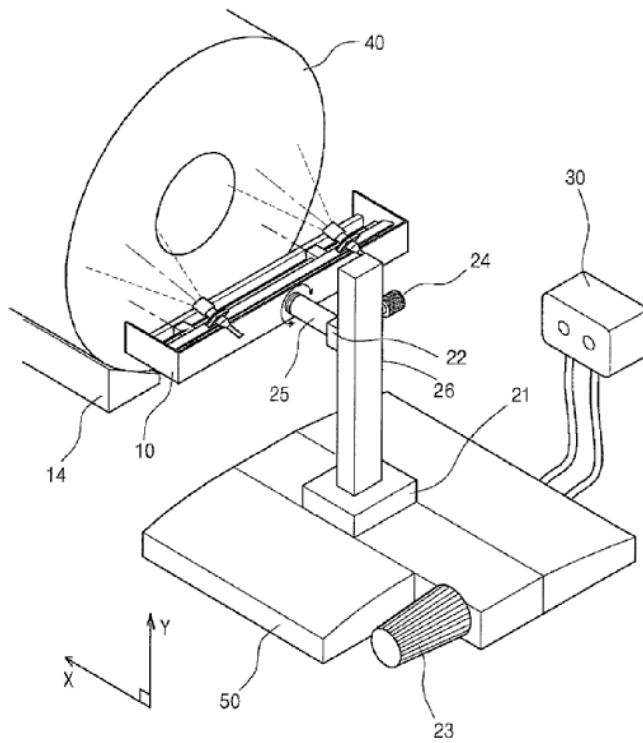
B65H 63/006

{quality control of the package}

Definition statement

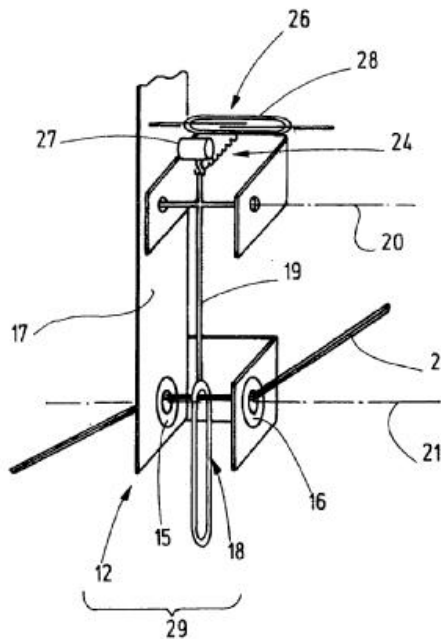
This place covers:

Illustrative example of subject matter classified in this group:



B65H 63/028**characterised by the detecting or sensing element****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



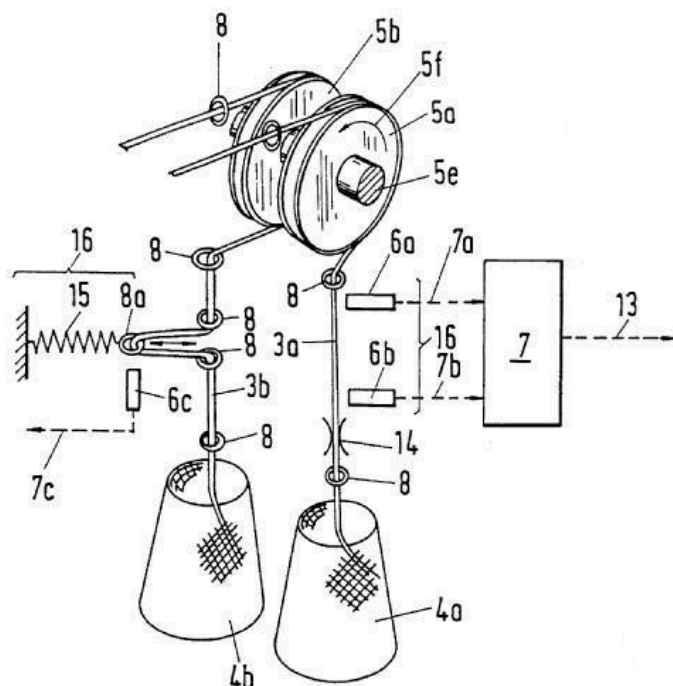
e.g. mechanical.

B65H 63/032**electrical or pneumatic****Definition statement***This place covers:*

Detecting or sensing elements not provided for in subgroups.

B65H 63/0321**{using electronic actuators}****Definition statement***This place covers:*

Also contains the devices using indifferently more than one of the sensing means types provided in subgroups.

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Investigating or analysing materials by specific methods not covered by the preceding groups - filiform textiles
--

G01N 33/365

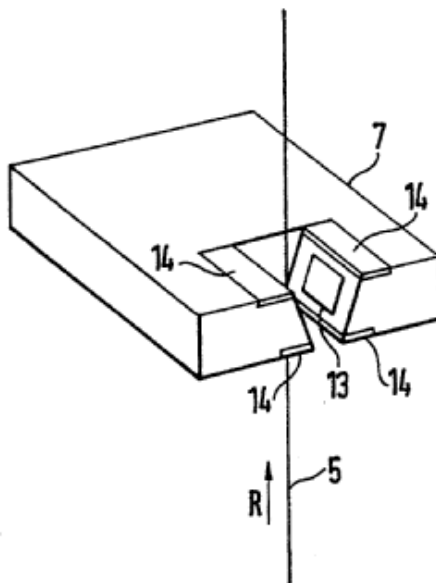
B65H 63/0322

{using capacitor sensing means, i.e. the defect signal is a variation of impedance}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



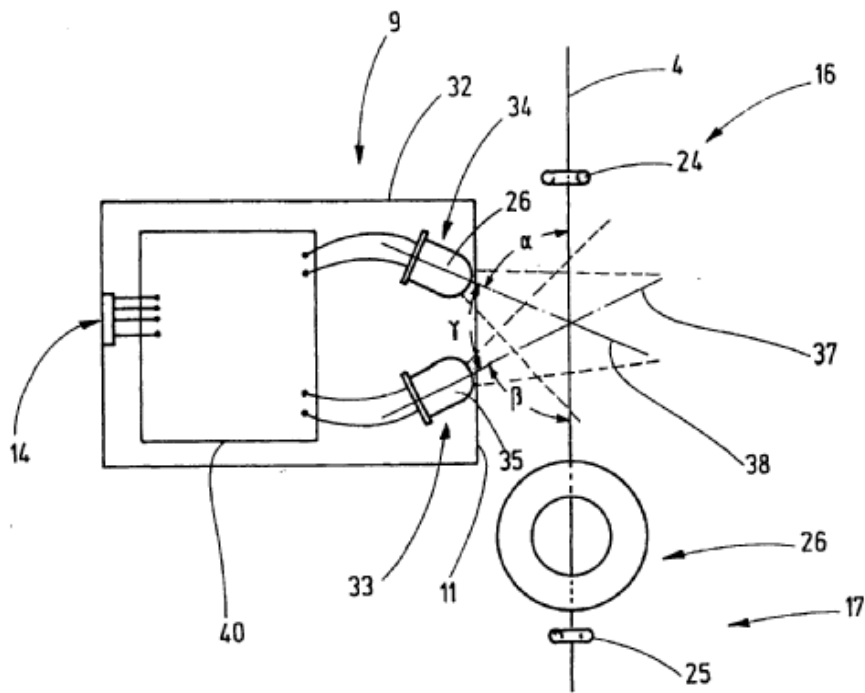
B65H 63/0324

{using photo-electric sensing means, i.e. the defect signal is a variation of light energy}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

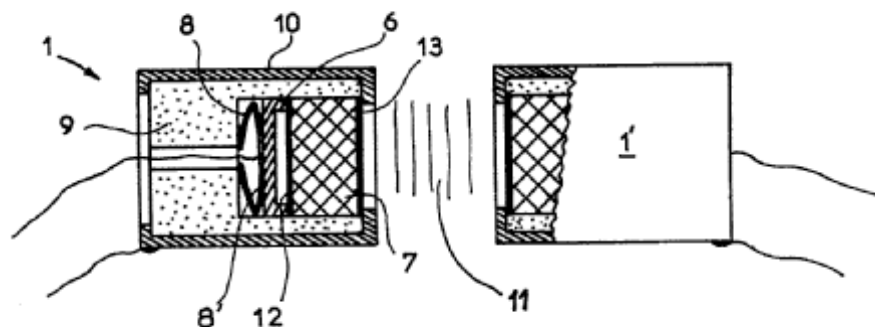
Informative references

Attention is drawn to the following places, which may be of interest for search:

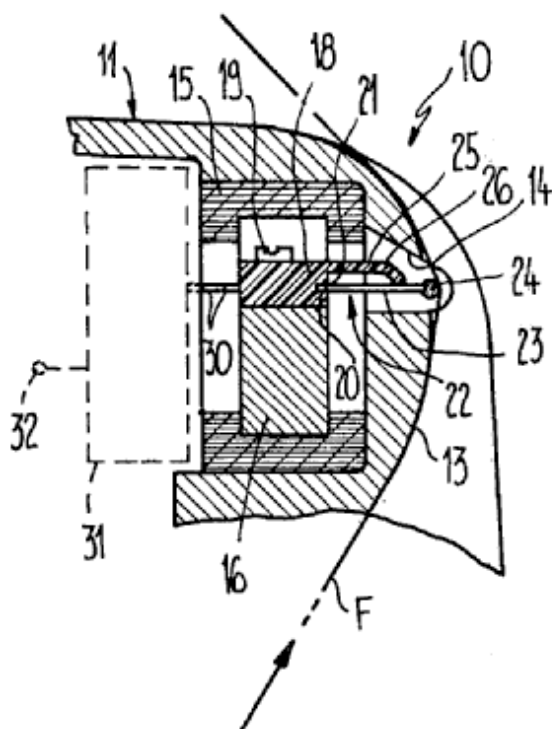
Warning or safety devices responsive to reduction in material tension, failure of supply or breakage of material characterized by photo-electric sensing means	D01H 13/165
Investigating or analysing materials by the use of optical means for non-woven textile material	G01N 21/8915

B65H 63/0325**{using fluid sensing means, e.g. acoustic}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 63/0327****{using piezoelectric sensing means}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



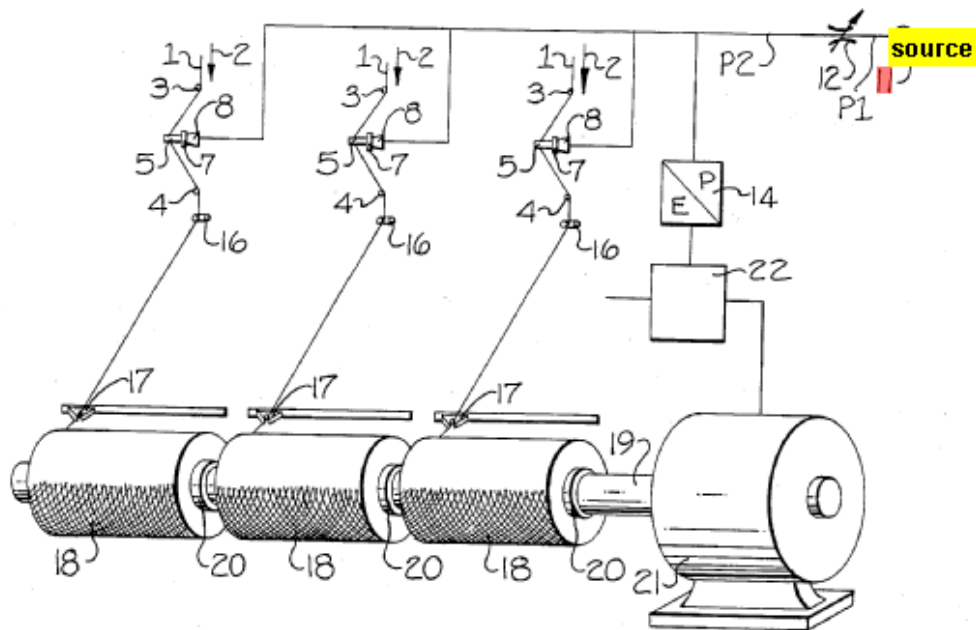
B65H 63/0328

{using pneumatic sensing means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



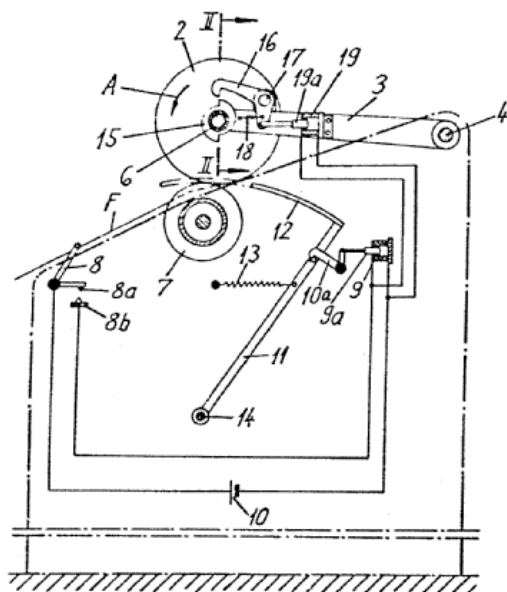
B65H 63/0362

{by a plate separating the package from the driving drum}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



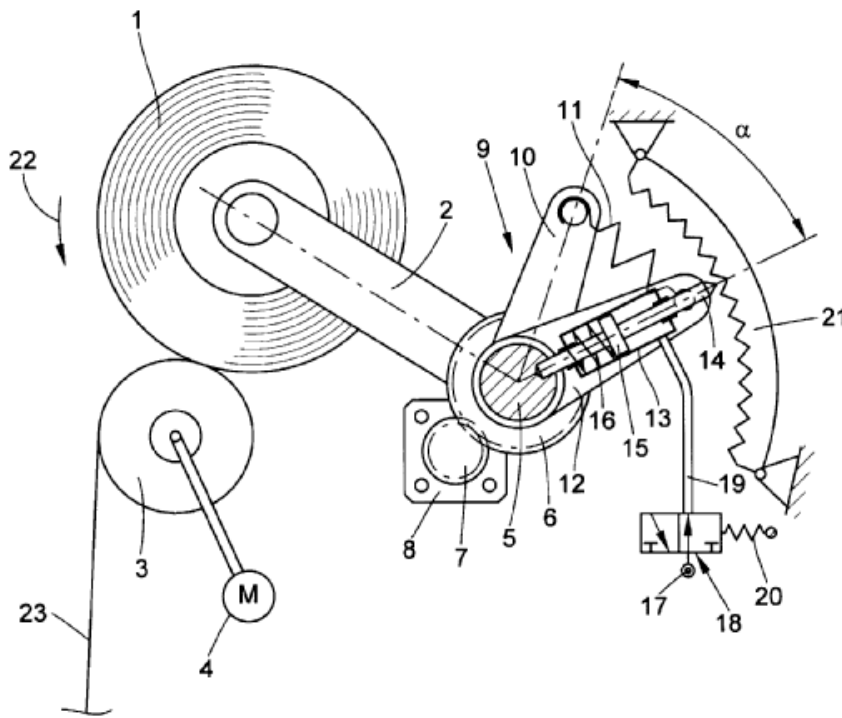
B65H 63/0364

{by lifting or raising the package away from the driving roller}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



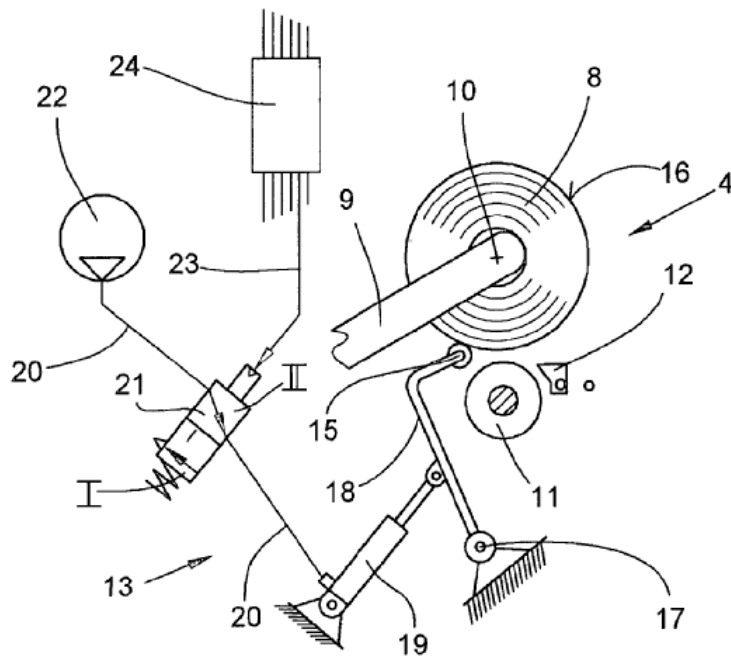
B65H 63/0366

{Braking means for the raised or lifted package}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



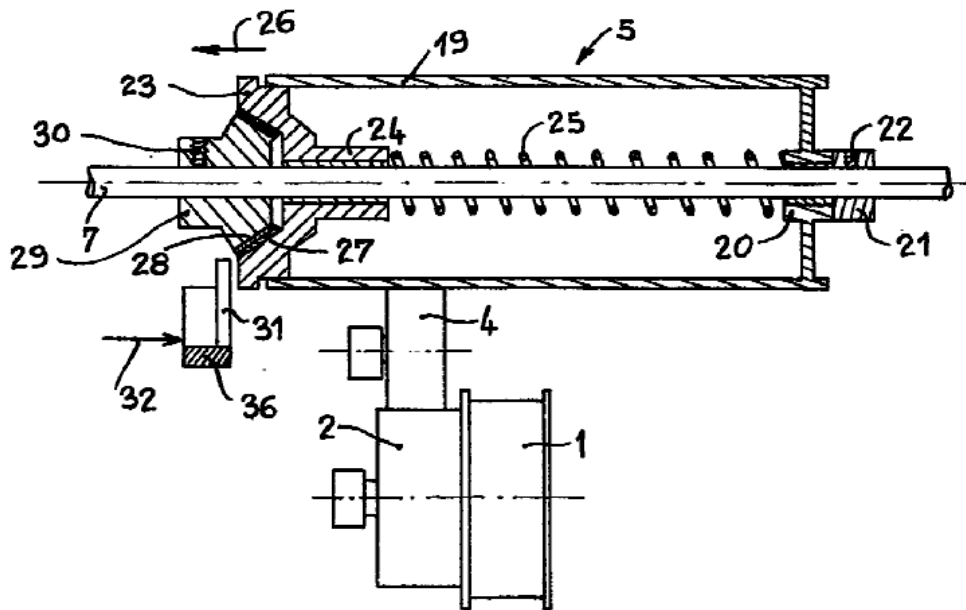
B65H 63/0368

{by clutching or de-clutching the package from its driving means (package secured to a rotary driven member)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 63/06**

responsive to presence of irregularities in running material, e.g. for severing the material at irregularities {; Control of the correct working of the yarn cleaner}

Definition statement

This place covers:

Control processes and apparatuses not provided for in subgroups.

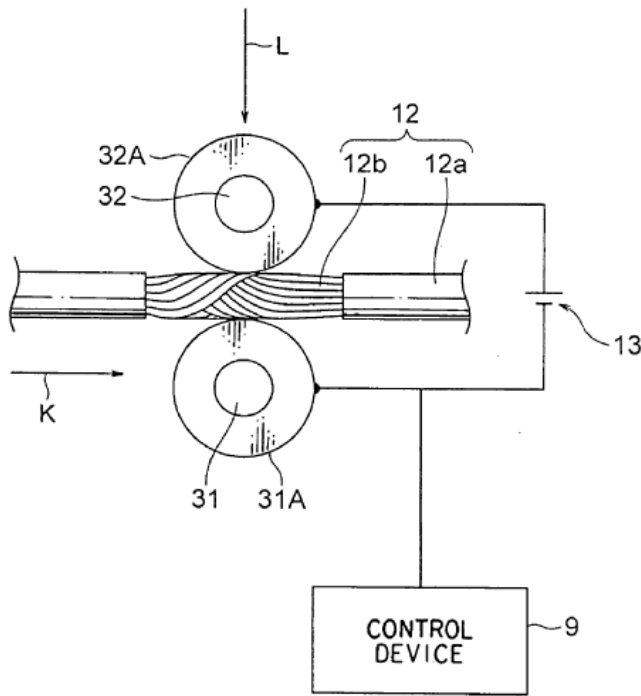
B65H 63/061

{Mechanical slub catcher and detector}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 63/062

{Electronic slub detector}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Warning or safety devices responsive to presence of irregularities in running material	D01H 13/22
Investigating or analysing material by specific methods not covered by the preceding groups for filiform textiles	G01N 33/365

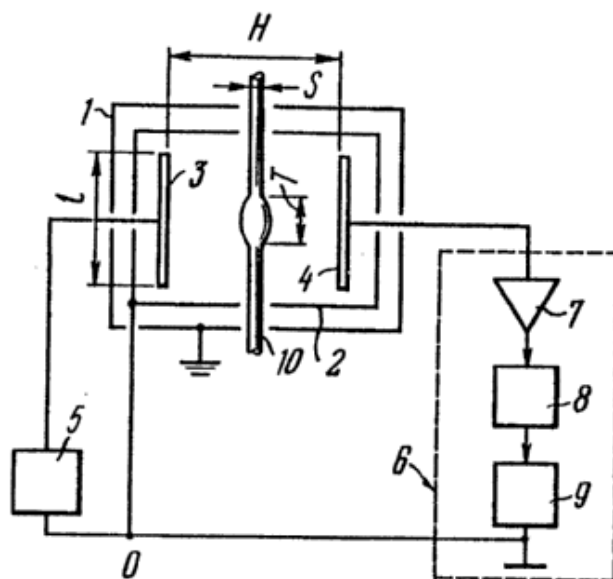
B65H 63/064

{using capacitor sensing means, i.e. the defect signal is a variation of impedance}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



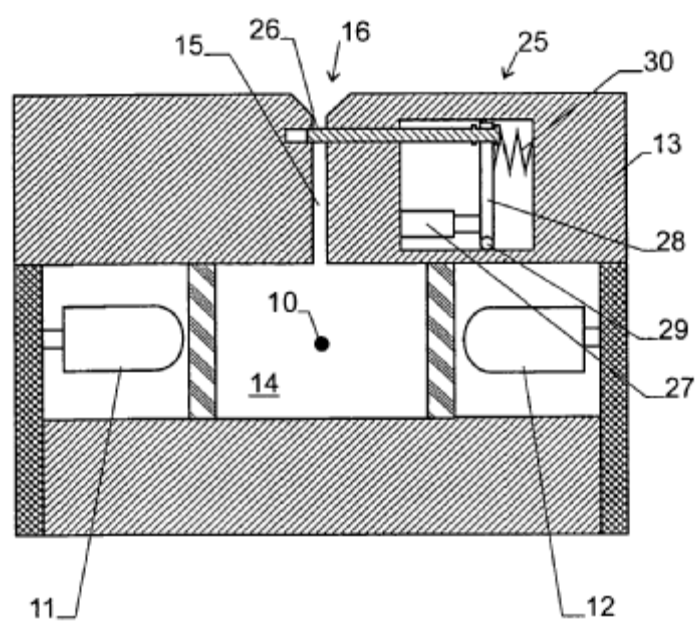
B65H 63/065

{using photo-electric sensing means, i.e. the defect signal is a variation of light energy}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring arrangements characterized by the use of optical means for measuring of diameters of objects while moving using photoelectric detection means	G01B 11/105
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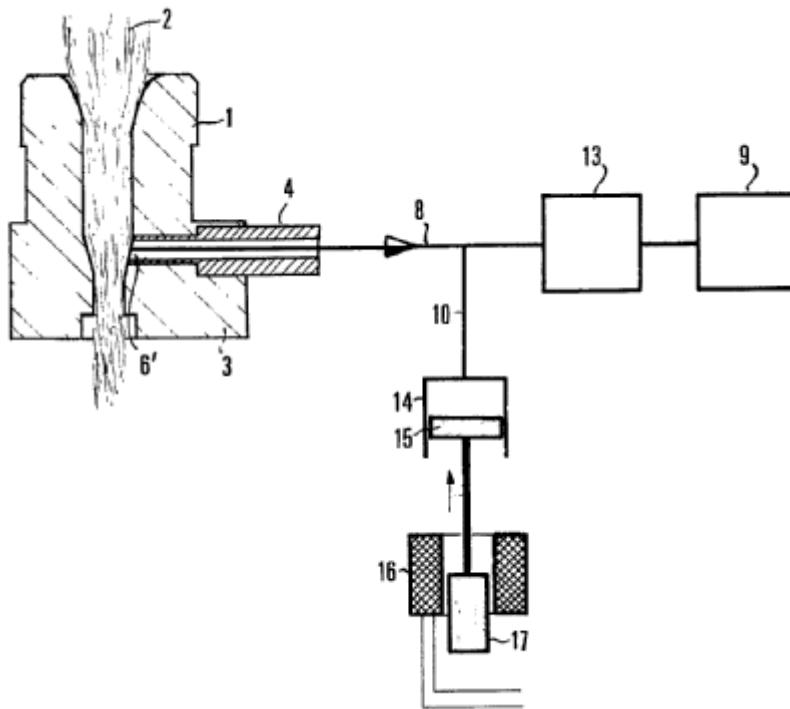
B65H 63/067

{using fluid sensing means, e.g. acoustic}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



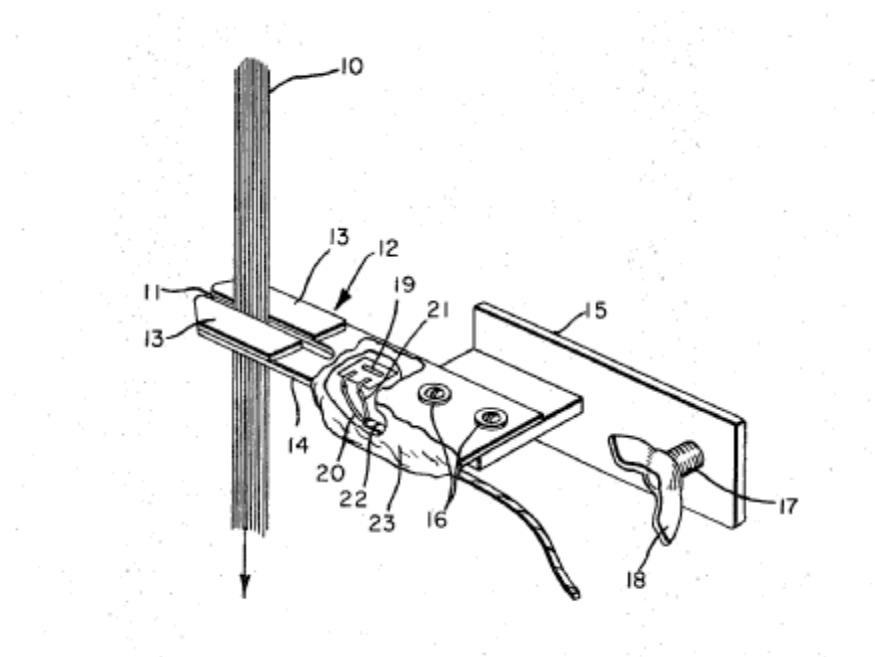
B65H 63/068

{using piezoelectric sensing means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



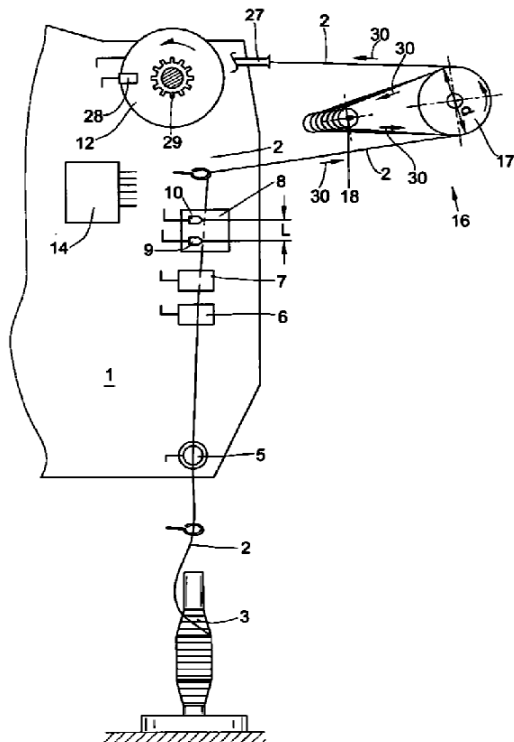
B65H 63/08

responsive to delivery of a measured length of material, completion of winding of a package, or filling of a receptacle

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



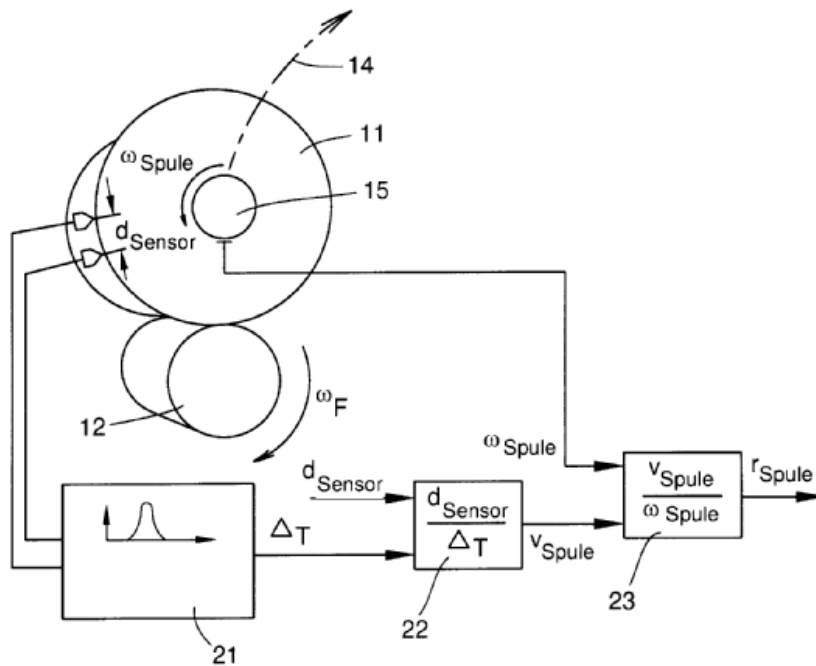
B65H 63/082

{responsive to a predetermined size or diameter of the package}

Definition statement

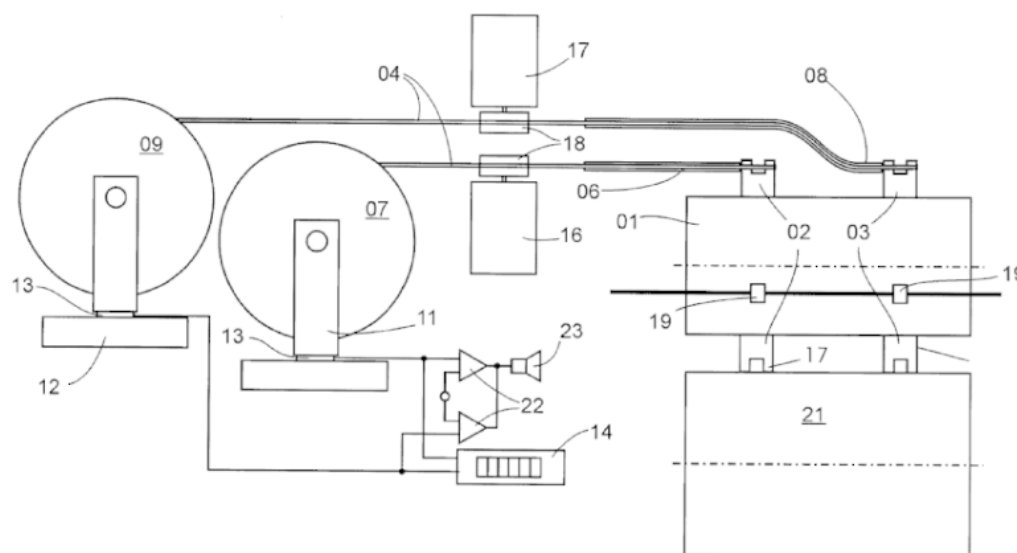
This place covers:

Illustrative example of subject matter classified in this group:



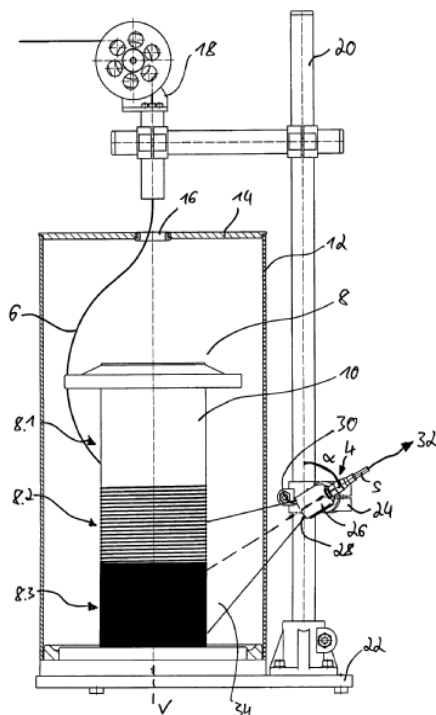
B65H 63/084**{responsive to a predetermined weight of the package}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 63/086**{responsive to completion of unwinding of a package}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



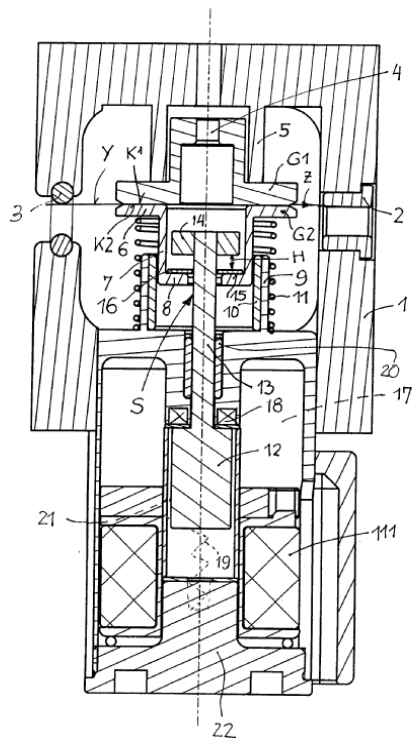
B65H 63/088

{Clamping device (connected with slub-catcher [B65H 63/061](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Connected with slub-catcher	B65H 63/061
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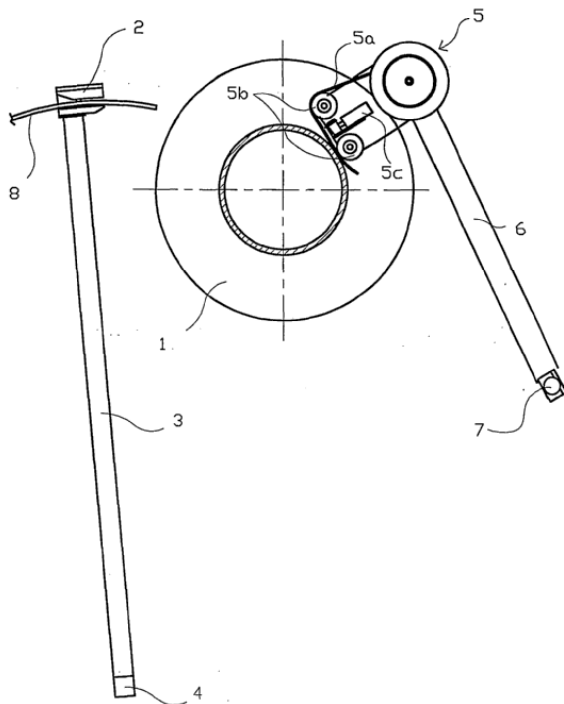
B65H 65/00

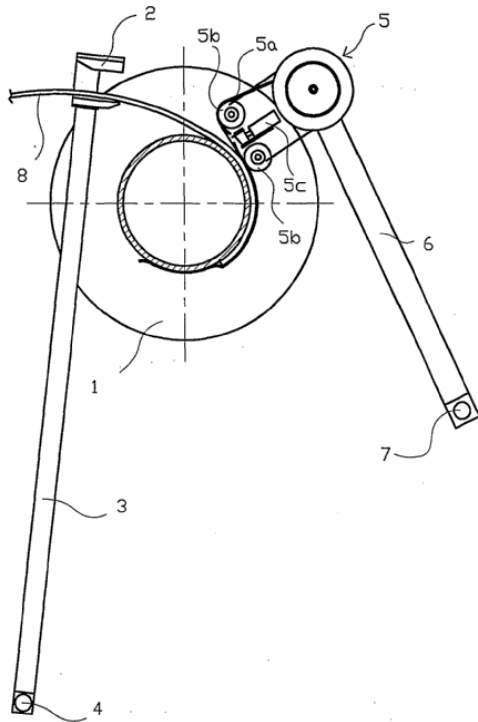
Securing material to cores or formers (arrangements for securing ends of material to cores, formers, supports or holders, e.g. reels, [B65H 75/28](#))

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





References

Limiting references

This place does not cover:

Laying a subsidiary winding, e.g. transfer tails	B65H 54/34
--	----------------------------

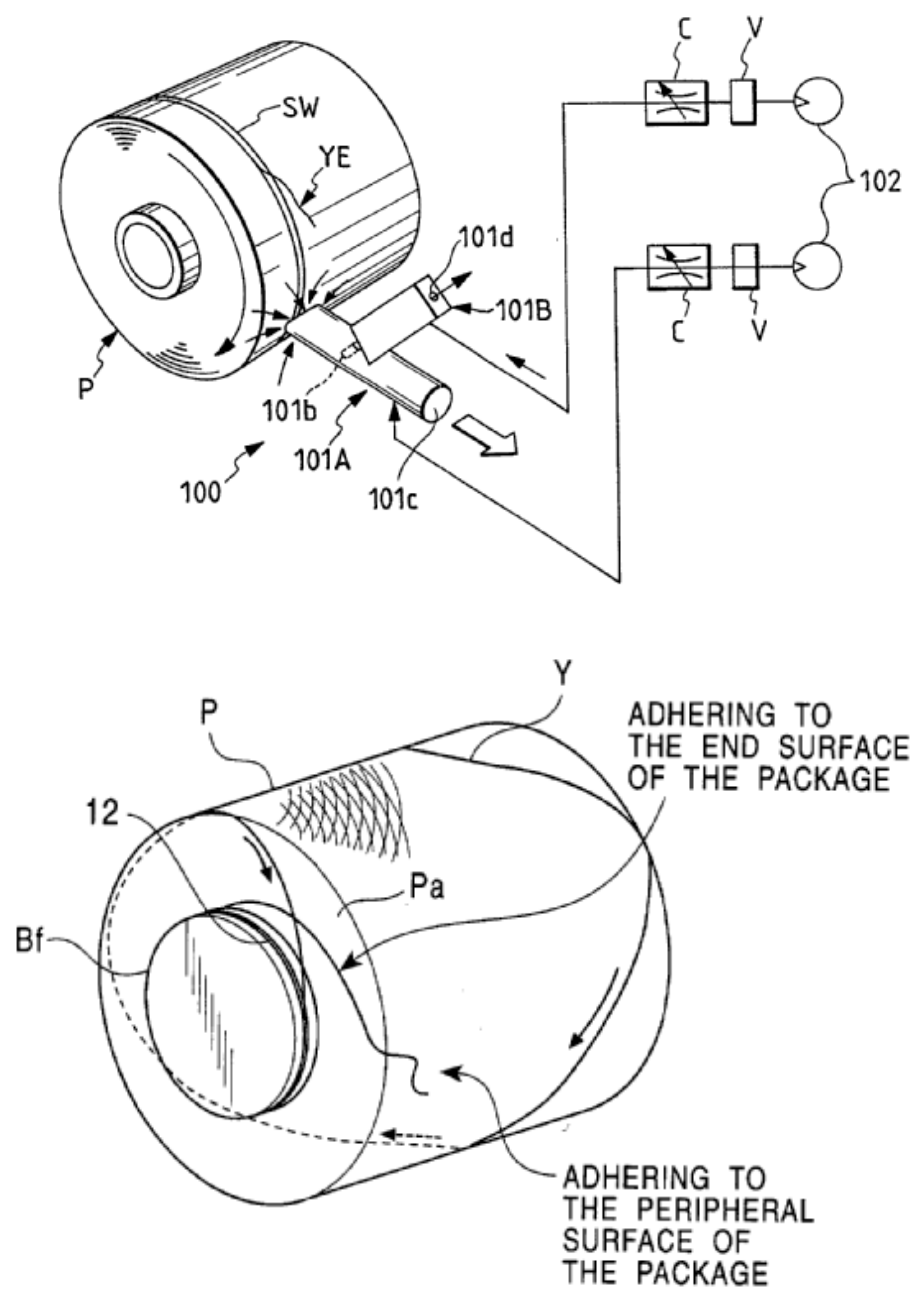
Informative references

Attention is drawn to the following places, which may be of interest for search:

Loading a starter winding on an empty core	B65H 67/0422
Continuous winding apparatus for winding on two or more winding heads in succession	B65H 67/048
Arrangements for securing ends of material to cores, formers, supports or holders, e.g. reels	B65H 75/28
Arrangements for winding reserve lengths of yarn on take-up packages or spindles. e.g. transfer tails in spinning or twisting machines	D01H 1/38

B65H 65/005**{Securing end of yarn in the wound or completed package}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for removing completed packages	B65H 67/0411
--	------------------------------

B65H 67/00

Replacing or removing cores, receptacles, or completed packages at paying-out, winding, or depositing stations

References

Limiting references

This place does not cover:

Changing web rolls	B65H 19/00
Transferring coils to or from winding apparatus in winding or unwinding metal wire or band	B21C 47/24
In carding	D01G 15/46 , D01G 27/04
In spinning and twisting	D01H 9/00

Special rules of classification

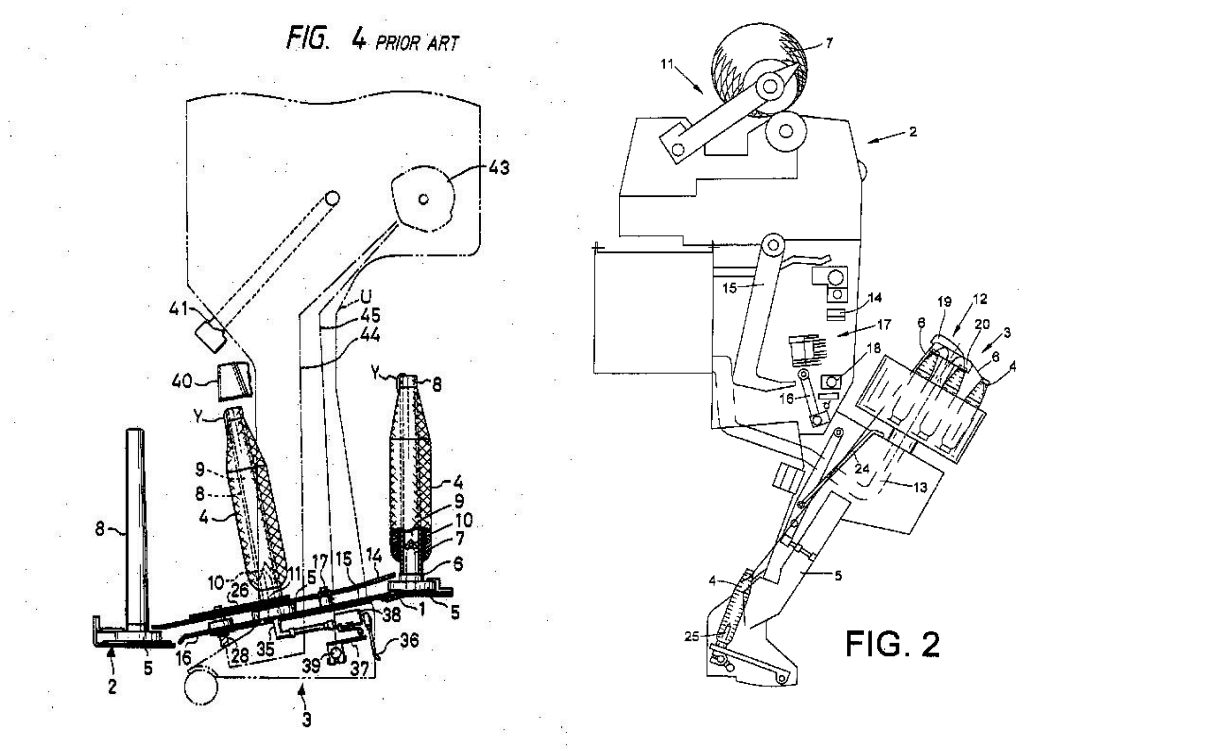
Replacing the cross-wound package in spinning and twisting are classified in [B65H 67/00](#) and subgroups.

B65H 67/02

Arrangements for removing spent cores or receptacles and replacing by supply packages at paying-out stations ({for cans [D01H 9/008](#); arrangement of the service carriage [B65H 54/26](#); } supports for packages [B65H 49/04](#), [B65H 49/20](#))

Definition statement

This place covers:
Illustrative examples of subject matter classified in this group:



Relationships with other classification places

Supply to and transport from the unwinding position [B65H 67/06](#).

References

Limiting references

This place does not cover:

Supports for packages	B65H 49/04 , B65H 49/20
For cans	D01H 9/008

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangement of the service carriage	B65H 54/26
-------------------------------------	----------------------------

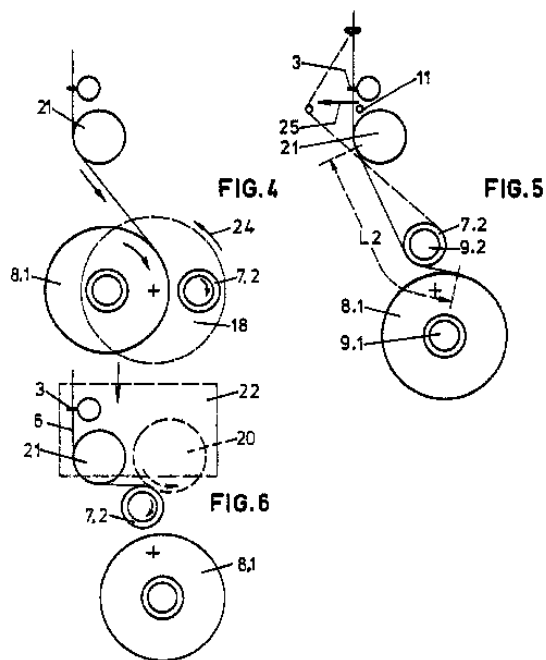
B65H 67/04

Arrangements for removing completed take-up packages and {or} replacing by cores, formers, or empty receptacles at winding or depositing stations;
Transferring material between adjacent full and empty take-up elements
{(arrangement of the service carriage [B65H 54/26](#))}

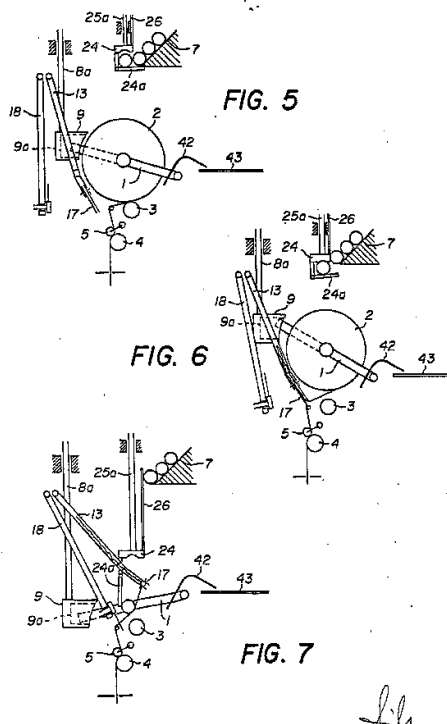
Definition statement

This place covers:

Transferring material between adjacent full and empty take-up elements.



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Relationships with other classification places

Securing material to core or formers: [B65H 65/00](#).

Arrangements for securing ends of material to cores or formers: [B65H 75/28](#).

Continuous winding apparatus for winding on two or more winding heads in succession: [B65H 67/044](#).

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements of the service carriage	B65H 54/26
--------------------------------------	----------------------------

Special rules of classification

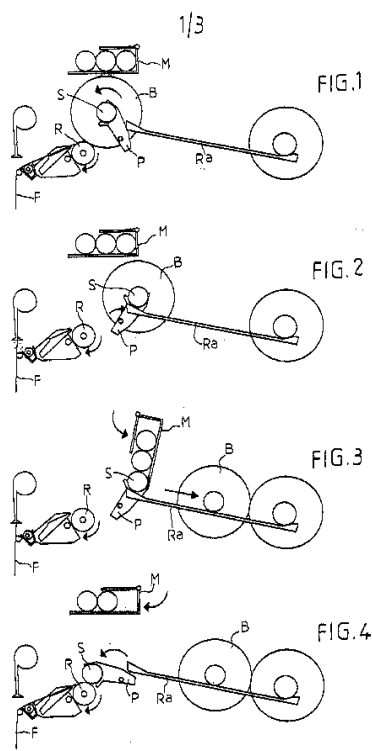
Details with regard to the arrangements for removing the take-up package and/or replacing by cores are classified in [B65H 67/0405](#) and subgroups.

B65H 67/0405

{Arrangements for removing completed take-up packages or for loading an empty core ([B65H 67/044](#) takes precedence)}

Definition statement

This place covers:
Arrangements for removing completed take-up package as well as for loading an empty core.



References

Limiting references

This place does not cover:

Continuous winding apparatus for winding on two or more winding heads in succession	B65H 67/044
---	-----------------------------

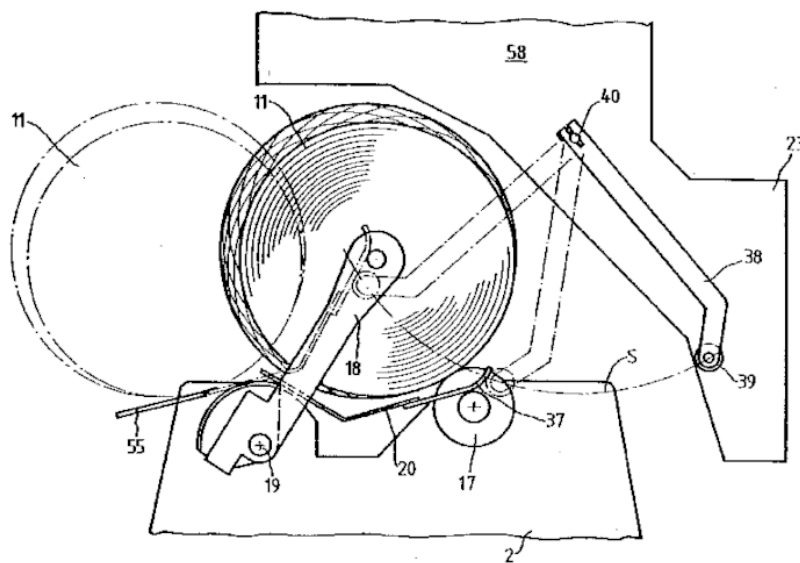
Special rules of classification

Arrangements for only removing completed take-up package are classified in [B65H 67/0411](#).

Arrangements for only loading an empty core are classified in [B65H 67/0417](#).

B65H 67/0411**{for removing completed take-up packages}****Definition statement***This place covers:*

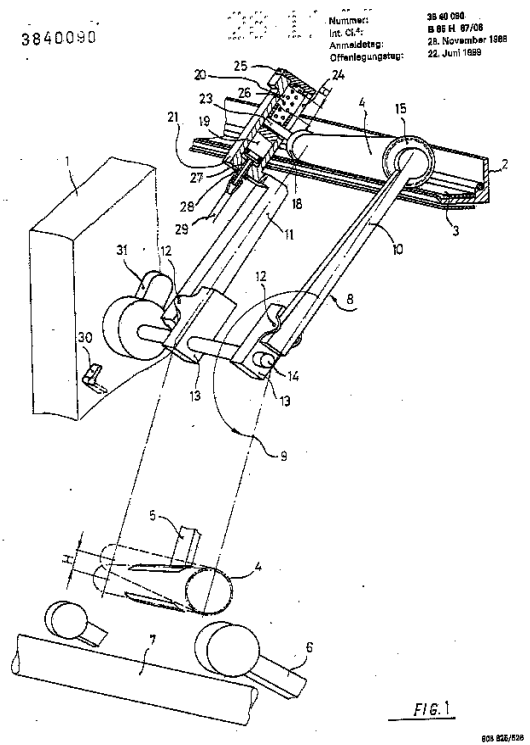
Illustrative example of subject matter classified in this group:

**FIG. 3**

900 0450 0363

B65H 67/0417**{for loading an empty core}****Definition statement***This place covers:*

Loading an empty core at the winding position.

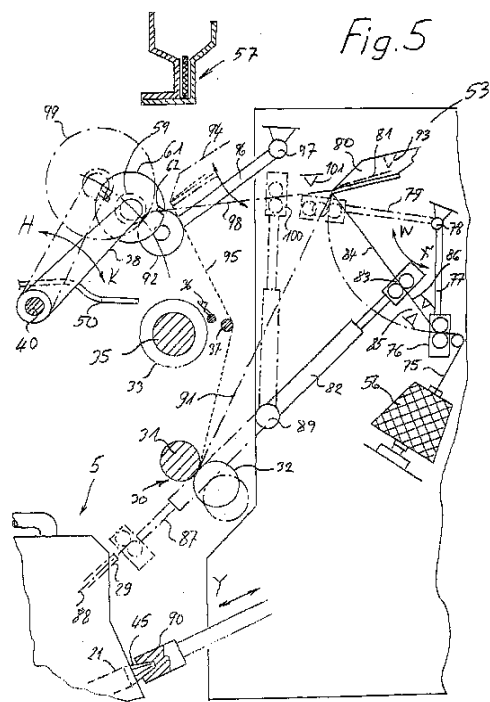


B65H 67/0422

{for loading a starter winding, i.e. a spool core with a small length of yarn wound on it; preparing the starter winding}

Definition statement

This place covers:
E.g. when replacing cross-wound packages in spinning machines, the empty core is provided with a starter winding from an auxiliary bobbin provided on the service carriage in order to piece with the spun yarn.

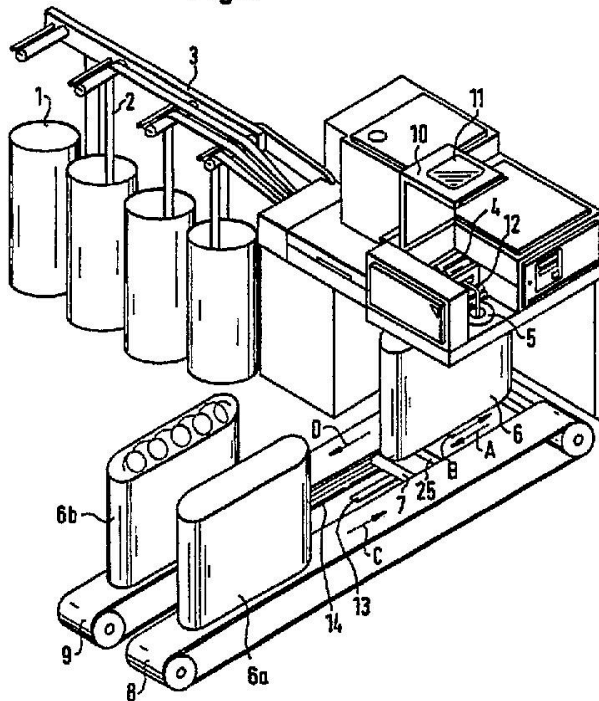


References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Laying subsidiary windings	B65H 54/34
Securing material to cores or formers	B65H 65/00

B65H 67/0428**{for cans, boxes and other receptacles}****Definition statement***This place covers:**e.g. Removing completed (sliver) cans and/or replacing by empty (sliver) cans.***Fig.1**

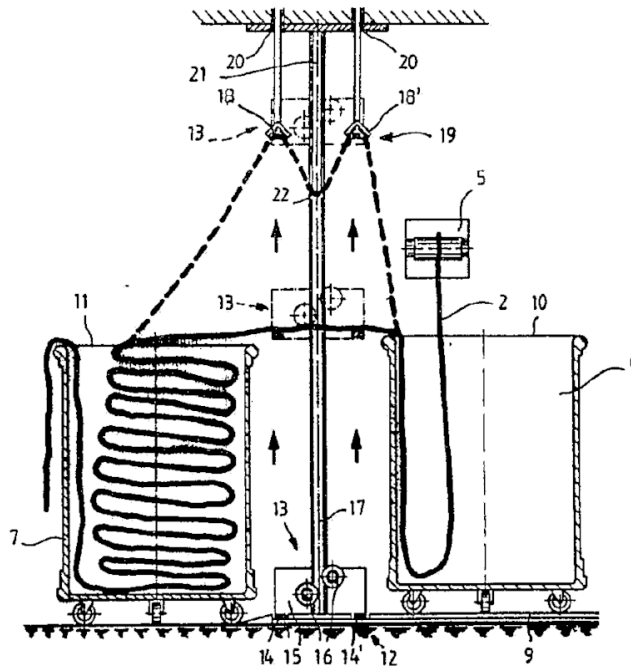
B65H 67/0434

{Transferring material devices between full and empty cans}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 67/044**

Continuous winding apparatus for winding on two or more winding heads in succession

Definition statement

This place covers:

Configurations of two or more winding heads to be wound on in succession, not provided for in subgroups.

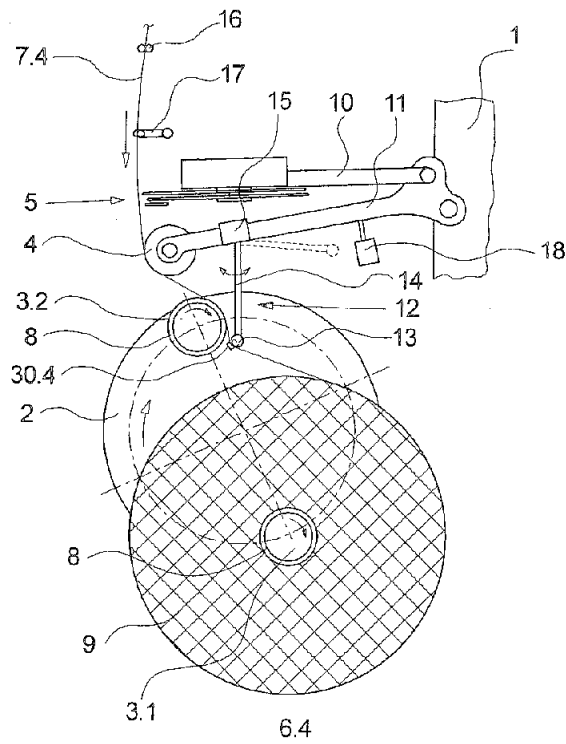
B65H 67/048

having winding heads arranged on rotary capstan head

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



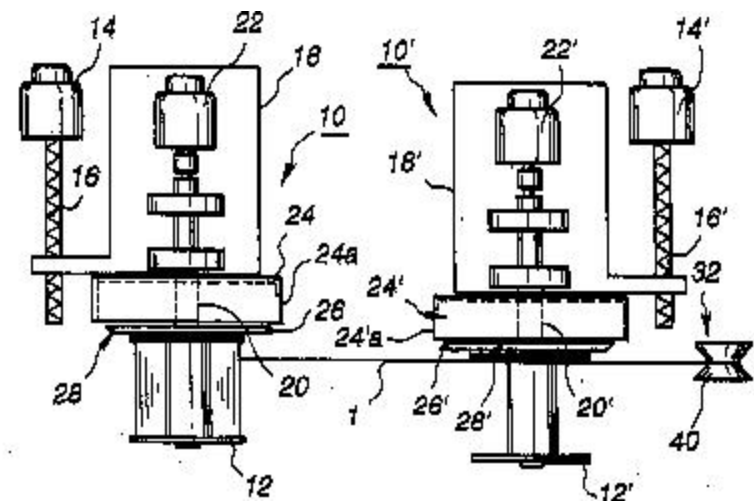
B65H 67/052

having two or more winding heads arranged in parallel to each other

Definition statement

This place covers:

With parallel rotary axis.



References

Limiting references

This place does not cover:

Winding heads arranged parallel to each other and arranged on a rotary capstan head	B65H 67/048
---	-----------------------------

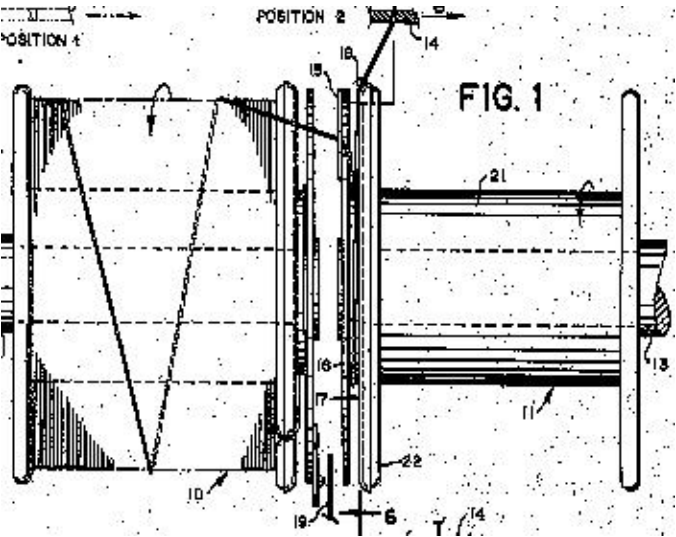
B65H 67/056

having two or more winding heads arranged in series with each other

Definition statement

This place covers:

With in-line rotary axis.



B65H 67/06

Supplying cores, receptacles, or packages to, or transporting from, winding or depositing stations {(between spinning and winding machines [D01H 9/18](#), e.g. transporting cans [D01H 9/185](#))}

Definition statement

This place covers:

Aspects of supplying and transporting cores or packages not provided for in subgroups.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Supplying cores between spinning and winding machines	D01H 9/18
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B65H 67/061

{Orientating devices}

Definition statement

This place covers:

E.g. correctly positioning cops to be placed on the peg.

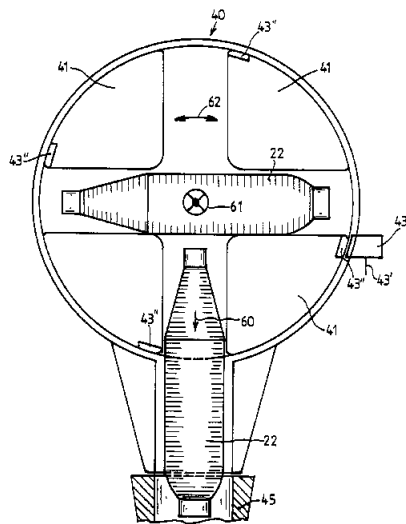
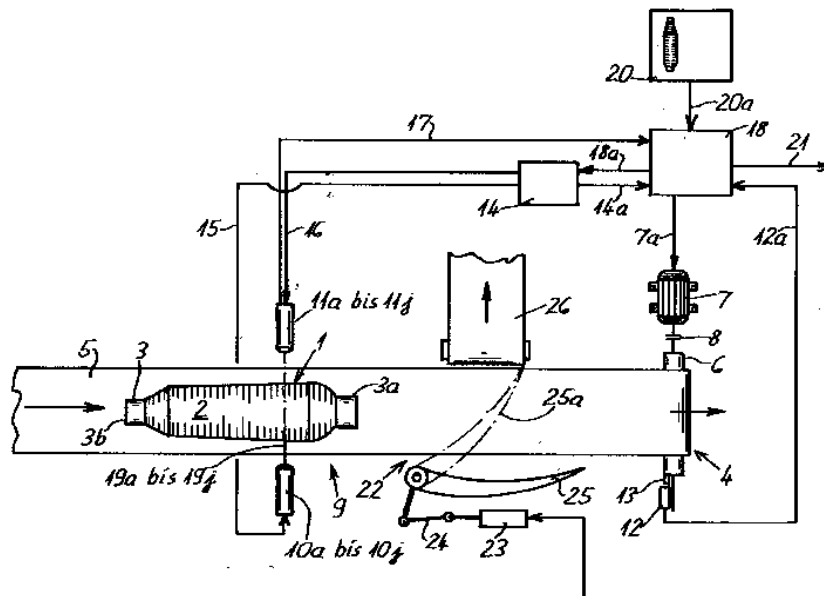


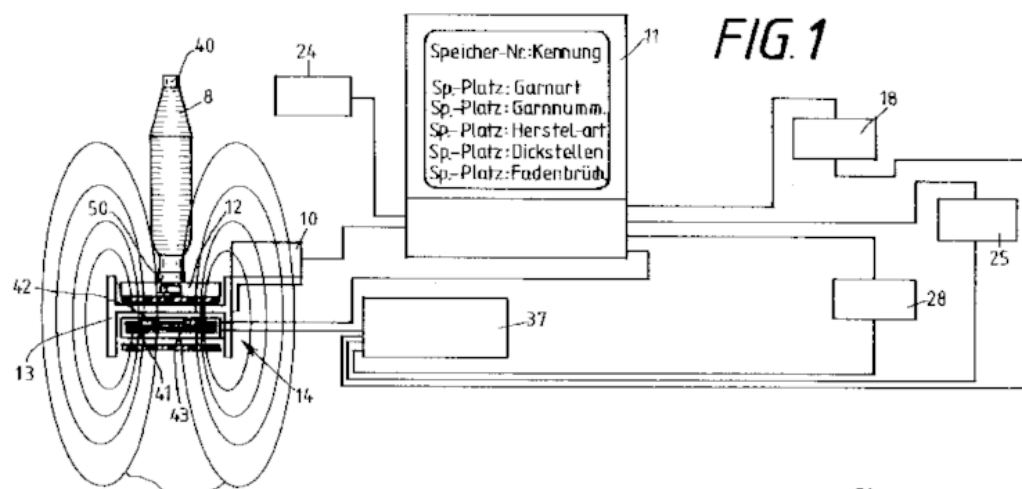
FIG. 3

B65H 67/062**{Sorting devices for full/empty packages}****Definition statement***This place covers:*

Detection of the winding amount on a cops or bobbin and further routing dependent thereon.

**FIG. 5****B65H 67/063****{Marking or identifying devices for packages}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**FIG. 1**

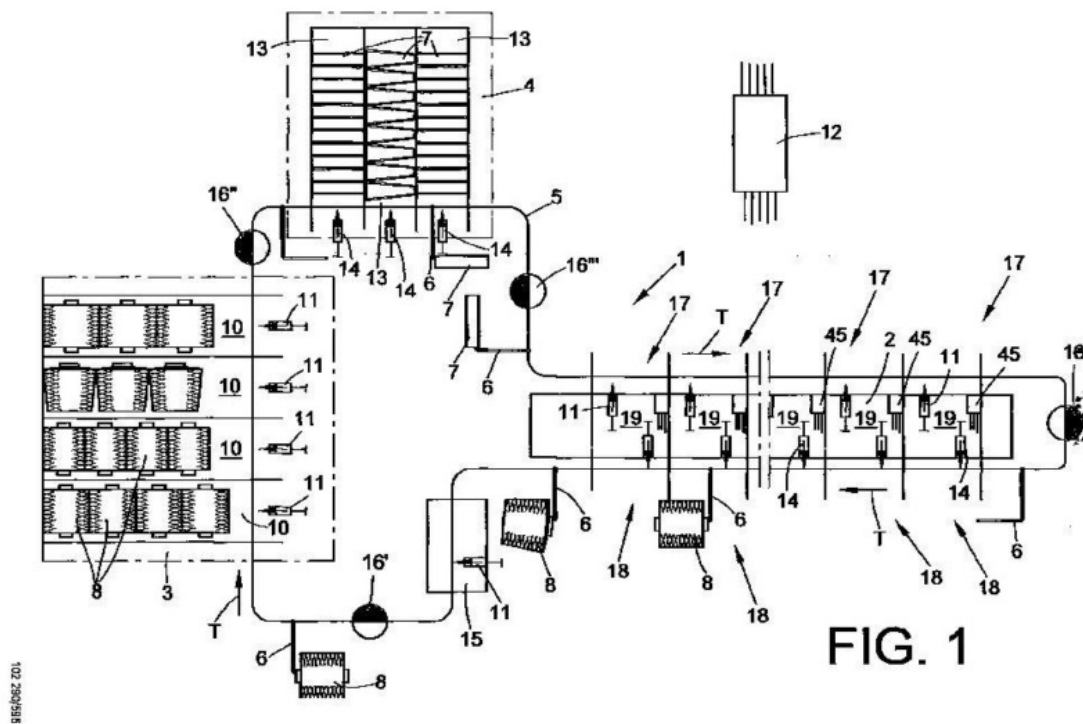
B65H 67/064

{Supplying or transporting cross-wound packages, also combined with transporting the empty core}

Definition statement

This place covers:

Transport of the cross-wound packages after they have been taken from the winding spindle ([B65H 69/04](#)).



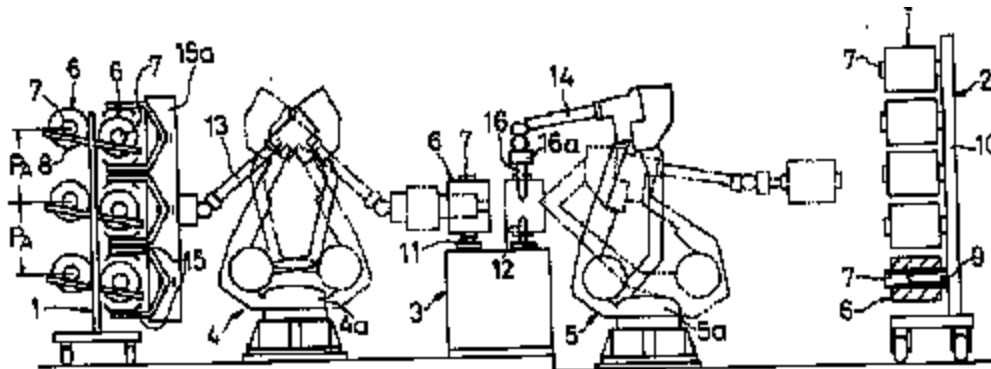
B65H 67/065

{Manipulators with gripping or holding means for transferring the packages from one station to another, e.g. from a conveyor to a creel trolley}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

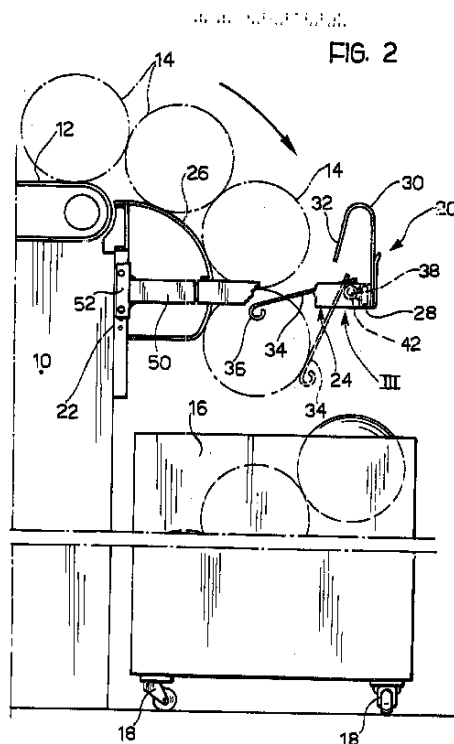
**B65H 67/066**

{Depositing full or empty bobbins into a container or stacking them}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



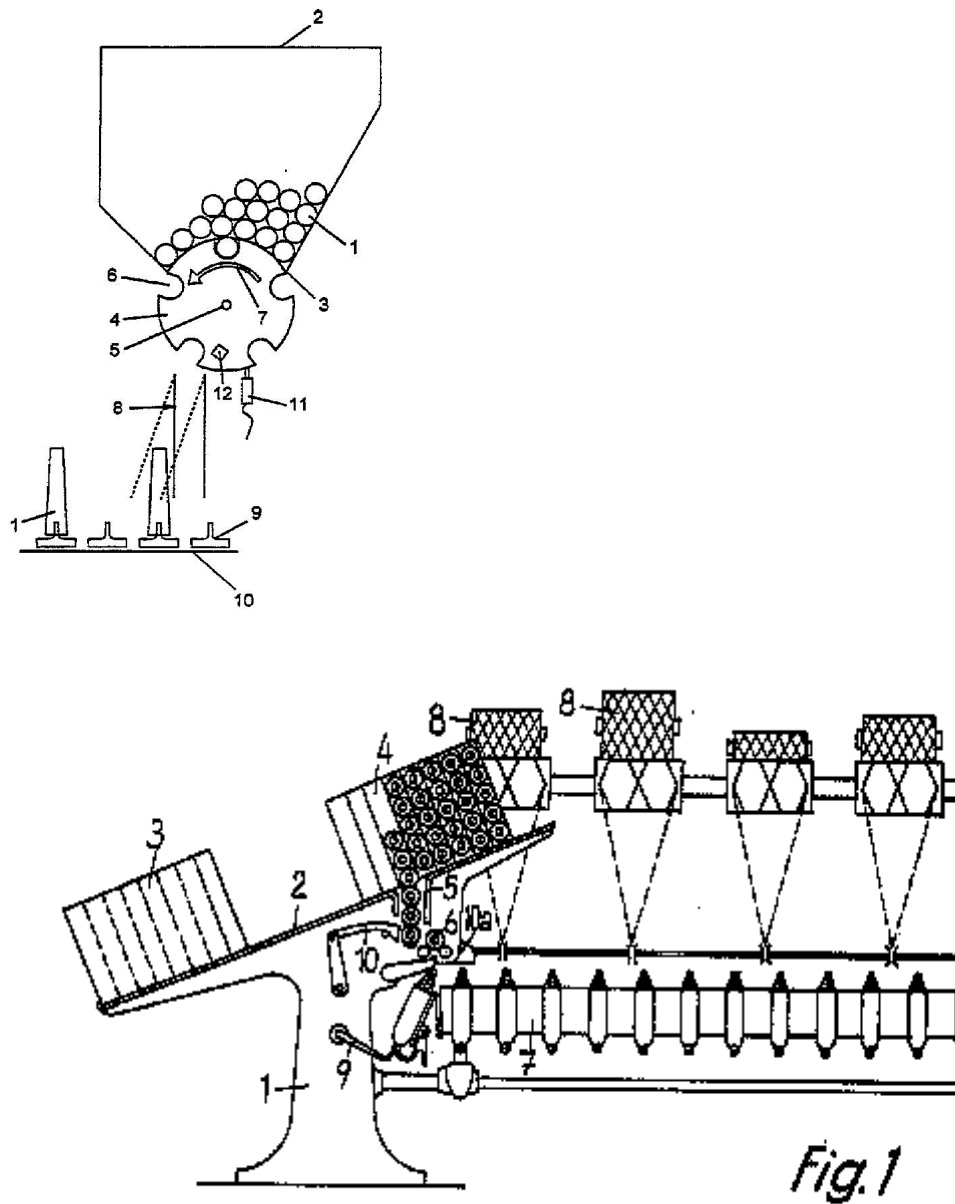
B65H 67/067

{Removing full or empty bobbins from a container or a stack}

Definition statement

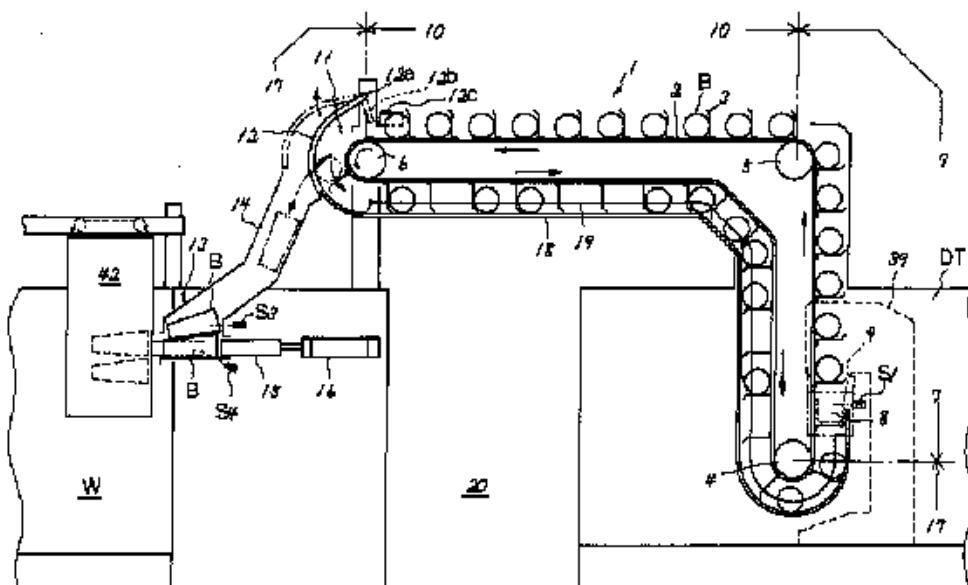
This place covers:

Illustrative examples of subject matter classified in this group:



B65H 67/068**{Supplying or transporting empty cores}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

【 1】

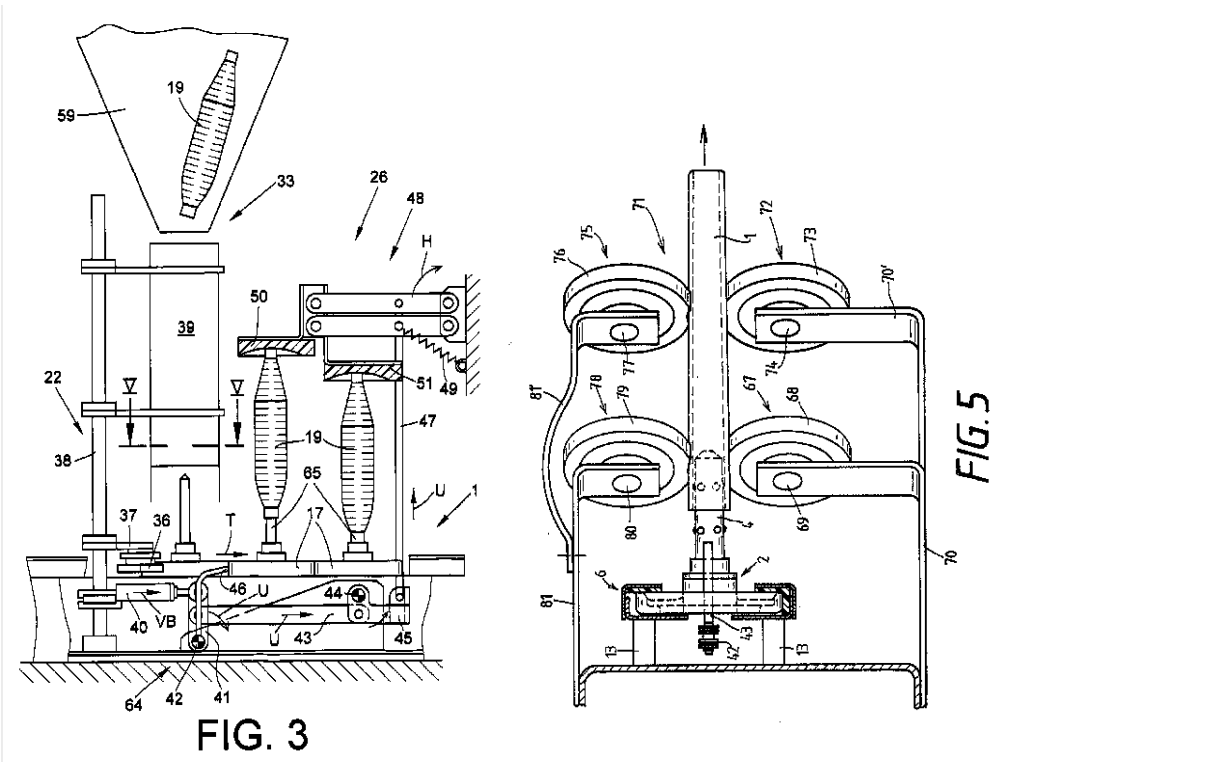
B65H 67/069

{Removing or fixing bobbins or cores from or on the vertical peg of trays, pallets or the pegs of a belt}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Limiting references

This place does not cover:

At the unwinding position	B65H 67/02
---------------------------	----------------------------

B65H 67/08

Automatic end-finding and material-interconnecting arrangements (knot-tying devices [B65H 69/00](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for taking up waste material by means of pneumatic arrangements, e.g. suction guns	B65H 54/88
Knot-tying devices	B65H 69/00
In piecing arrangements for spinning	D01H 15/00

Special rules of classification

Automatic end-finding at the take-up package after interruption of the ringspinning process are classified in [B65H 67/08](#).

Automatic end-finding in combination with material interconnection in machines other than for winding cross-wound packages, e.g. weaving, carding are classified in [B65H 67/08](#).

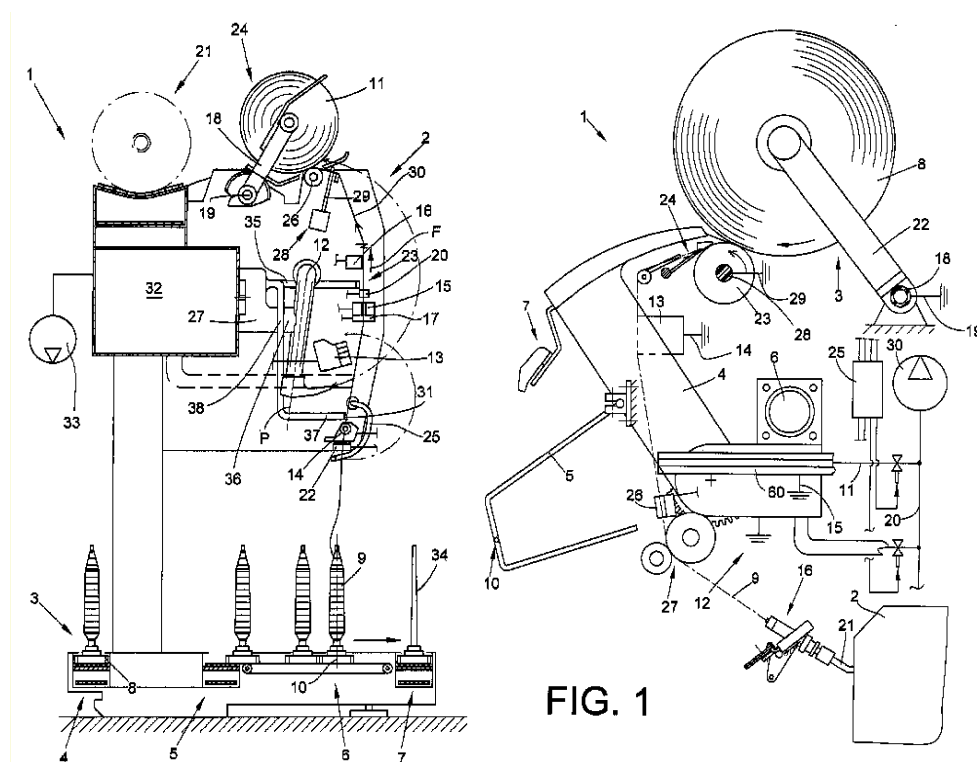
B65H 67/081

{acting after interruption of the winding process, e.g. yarn breakage, yarn cut or package replacement}

Definition statement

This place covers:

Winding process for winding cross wound packages, e.g. in rewinders and open-rotor spinning machines.

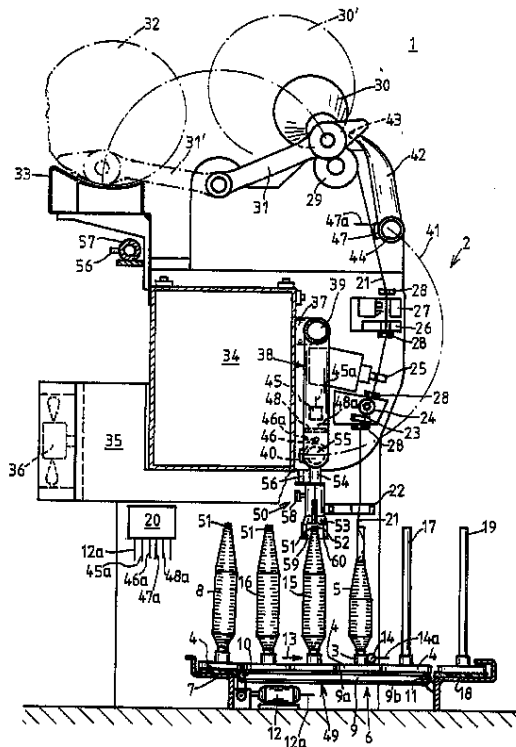


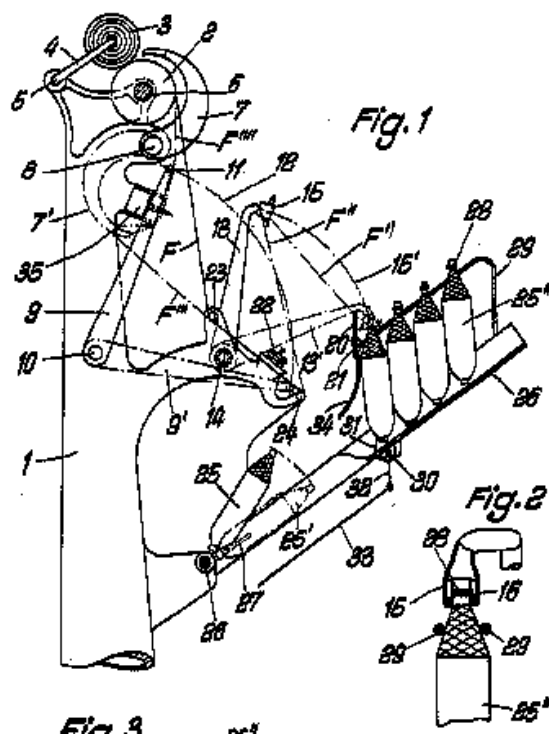
Special rules of classification

[B65H 67/081](#) and subgroups relates only to the winding process of winding cross wound packages, not ring spinning process.

B65H 67/083**{handling the yarn-end of the new supply package}****Definition statement***This place covers:*

Finding the yarn-end at the supply package and connecting it to the yarn-end of the cross-wound package.





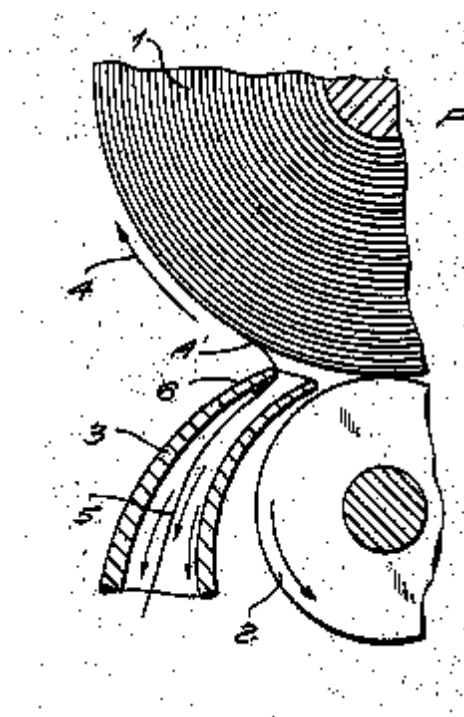
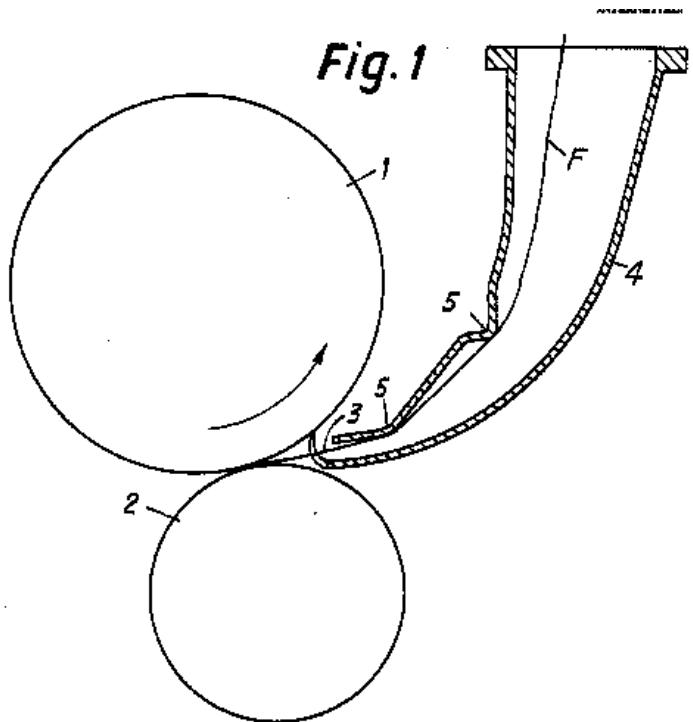
B65H 67/085

{end-finding at the take-up package, e.g. by suction and reverse package rotation}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



Special rules of classification

When the document contains further technical details with regard to handling the yarn taken from the take-up package, also the class [B65H 67/081](#) is given.

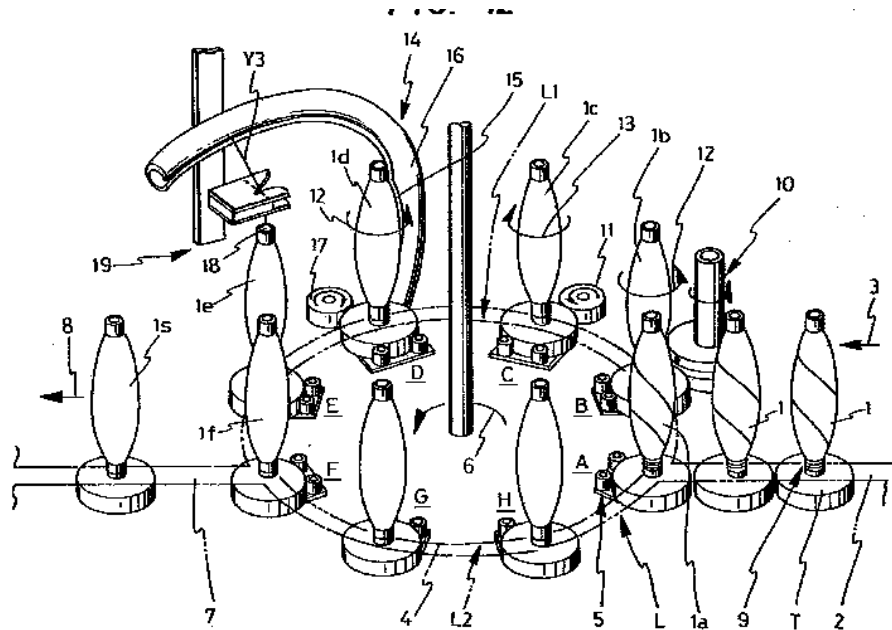
B65H 67/086

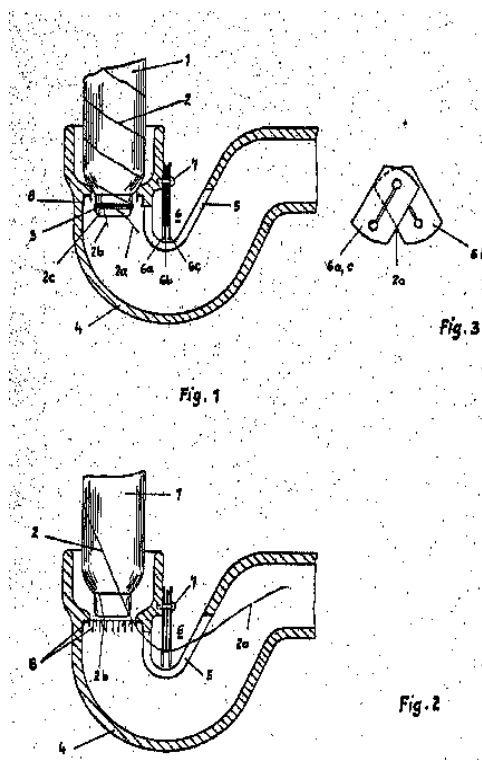
{Preparing supply packages}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:





Relationships with other classification places

The mechanisms for finding the yarn at the supply package in [B65H 67/086](#) and subgroups are similar to the mechanisms for finding the yarn at the supply package in [B65H 67/083](#).

Special rules of classification

Mechanisms for finding the yarn at the supply package at the (re)winding station with means for further handling of the yarn-end and connecting to the cross-wound package are classified in [B65H 67/083](#).

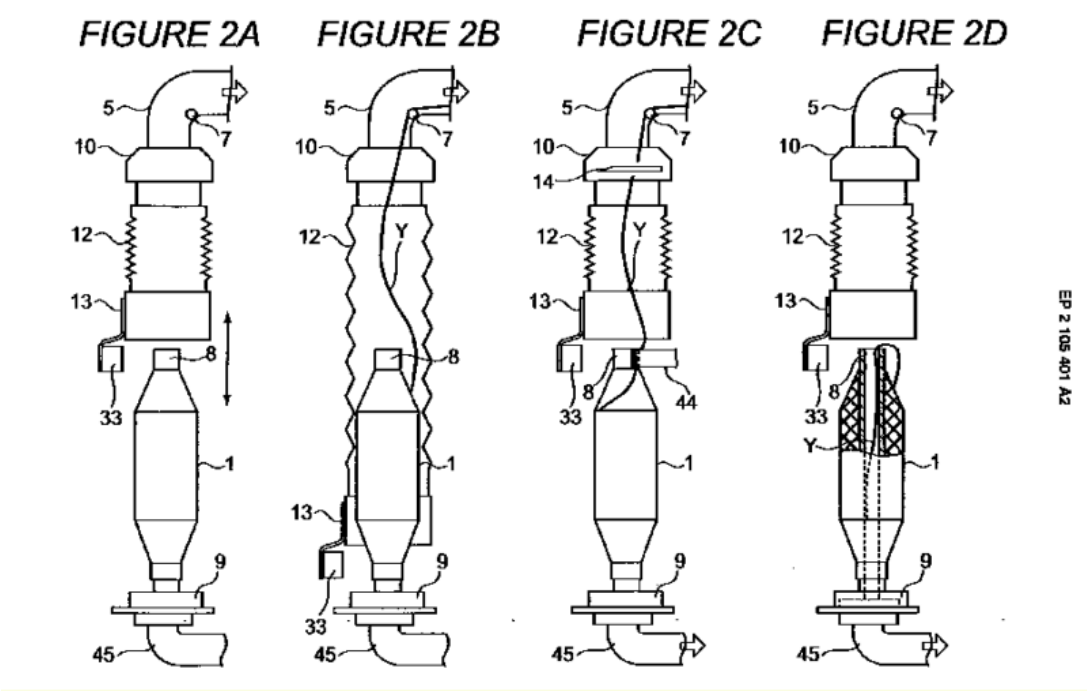
B65H 67/088

{Prepositioning the yarn end into the interior of the supply package}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



B65H 69/00

Methods of, or devices for, interconnecting successive lengths of material;
Knot-tying devices {;Control of the correct working of the interconnecting
device}

References

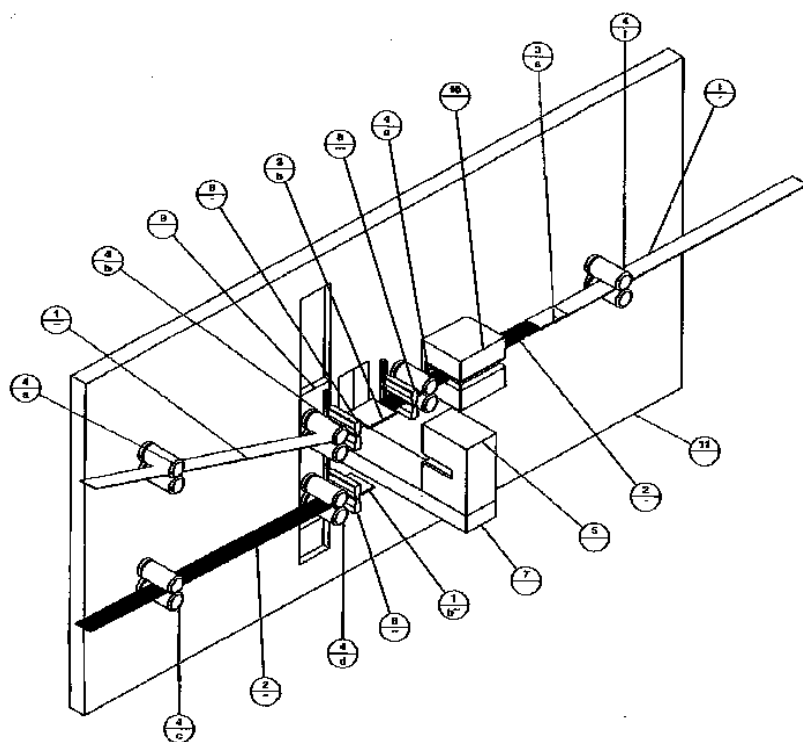
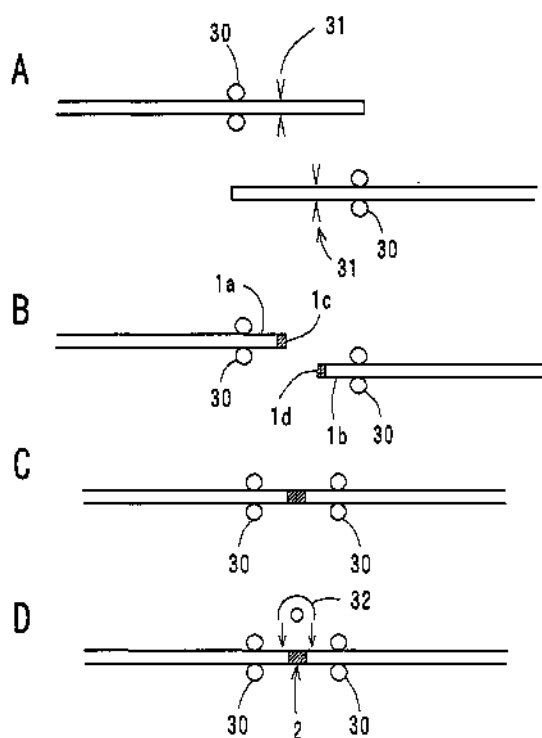
Informative references

Attention is drawn to the following places, which may be of interest for search:

Automatic end-finding and material-interconnecting arrangements	B65H 67/08
Joining	B29C 65/00
Apparatus for joining warp ends	D03J 1/16
For joining, e.g. tying, a complete series of fresh warp threads to the used warp threads	D03J 1/18
Means for fastening cables or ropes to one another or to other objects	F16G 11/00
Splicing of light guides, e.g. by fusion or bonding	G02B 6/255

B65H 69/02**by means of adhesives****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Joining using adhesives	B29C 65/48
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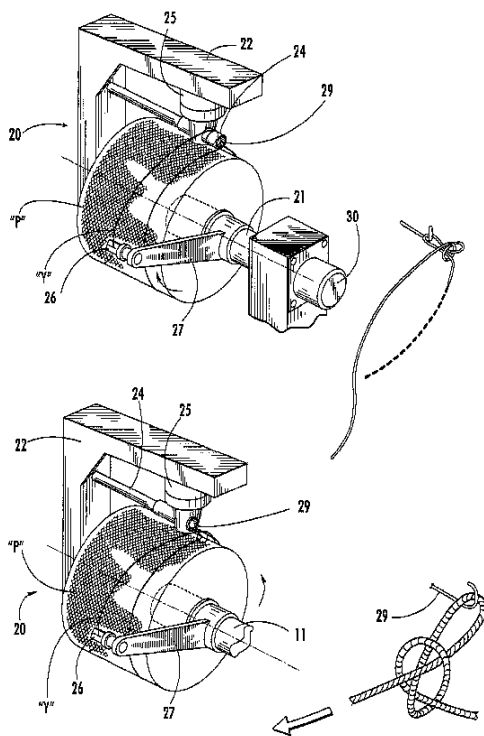
B65H 69/04

by knotting

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Apparatus for joining warp ends	D03J 1/16
For joining, e.g. tying, a complete series of fresh warp threads to the used warp threads	D03J 1/18
Weavers' tools, e.g. knot-tying tools	D03J 3/00

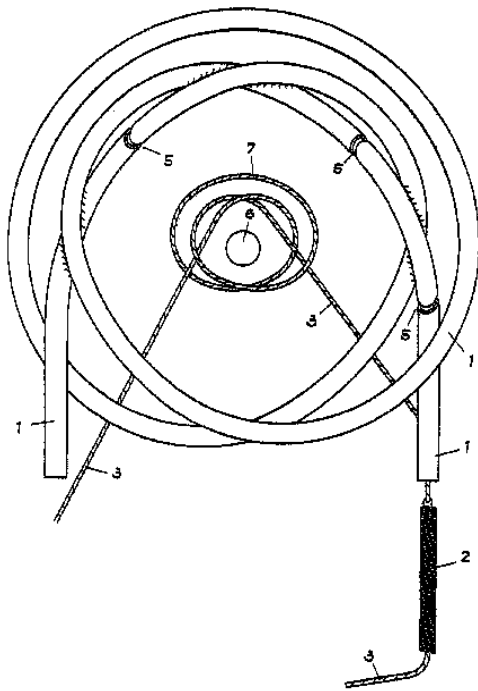
B65H 69/043

{the threads are moved in ducts having the form of the wanted knot}

Definition statement

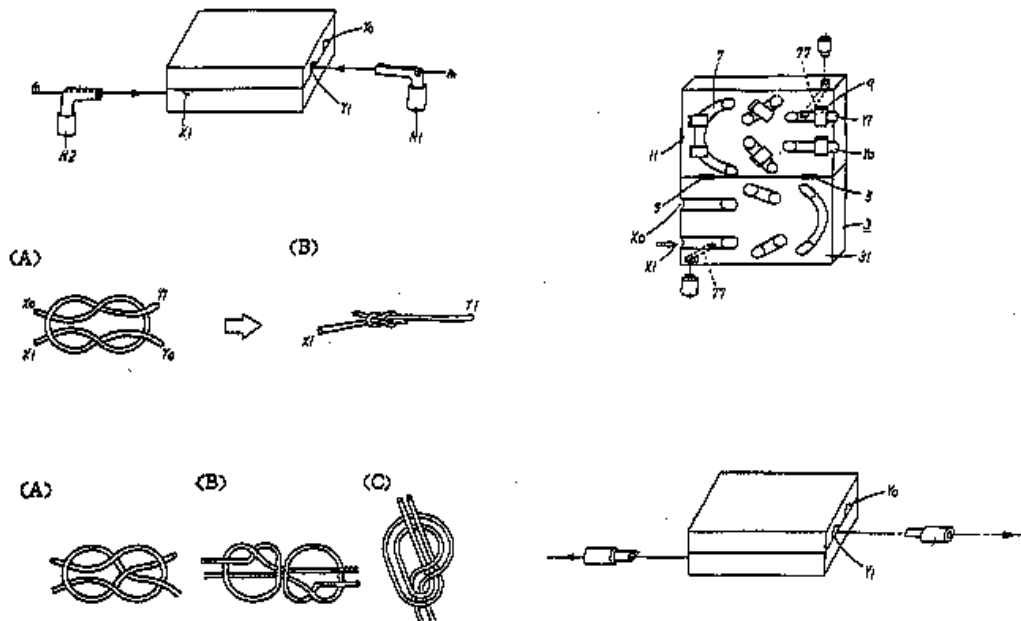
This place covers:

Illustrative example of subject matter classified in this group:



B65H 69/046**{by a fluid}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



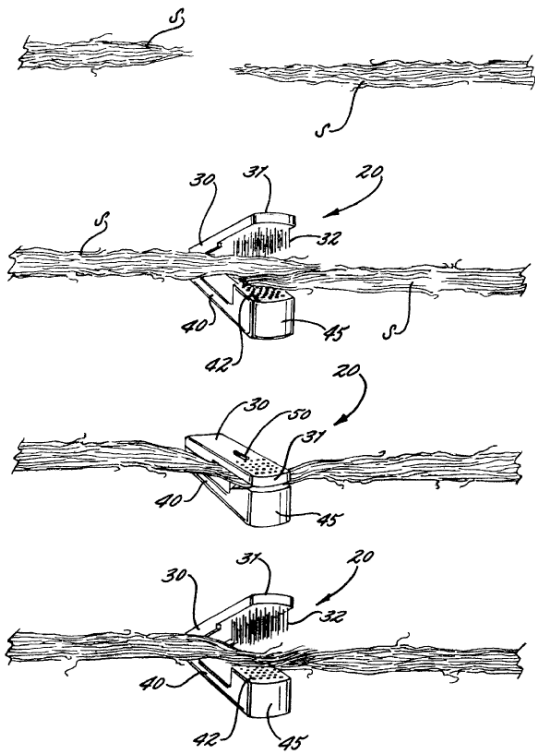
B65H 69/06

by splicing {(grommets made by splicing [D07B 1/18](#), auxiliary apparatus for splicing ropes or cables [D07B 7/169](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Grommets made by splicing	D07B 1/18
Auxiliary apparatus for splicing ropes or cables	D07B 7/169
Splicing of light guides, e.g. by fusion or bonding	G02B 6/2555

Informative references

Attention is drawn to the following places, which may be of interest for search:

Piecing arrangements in open end spinning machines	D01H 4/48
Piecing arrangements in spinning machines	D01H 15/00

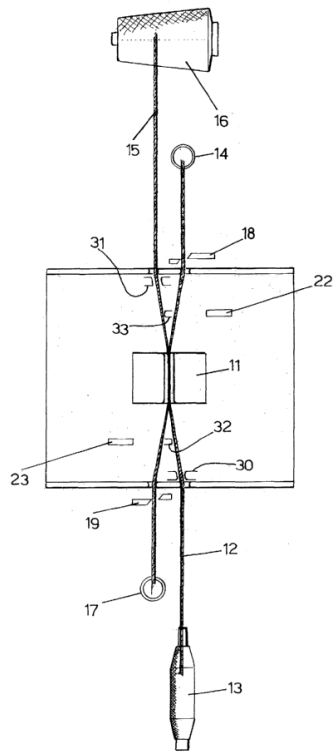
B65H 69/061

{using pneumatic means}

Definition statement

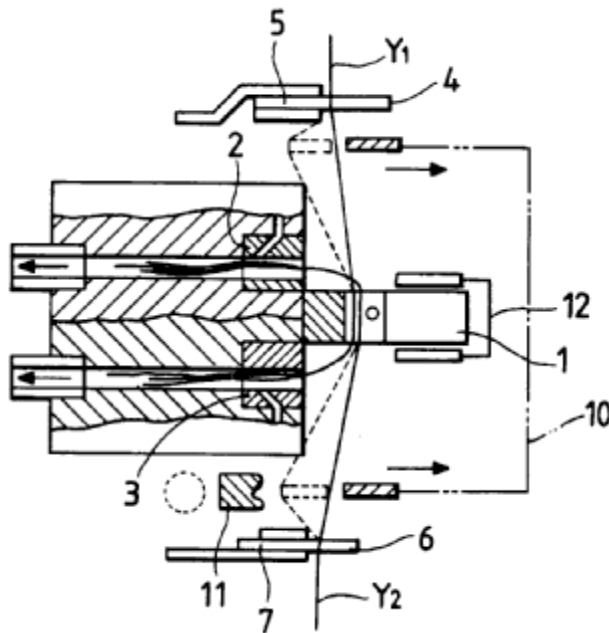
This place covers:

Illustrative example of subject matter classified in this group:



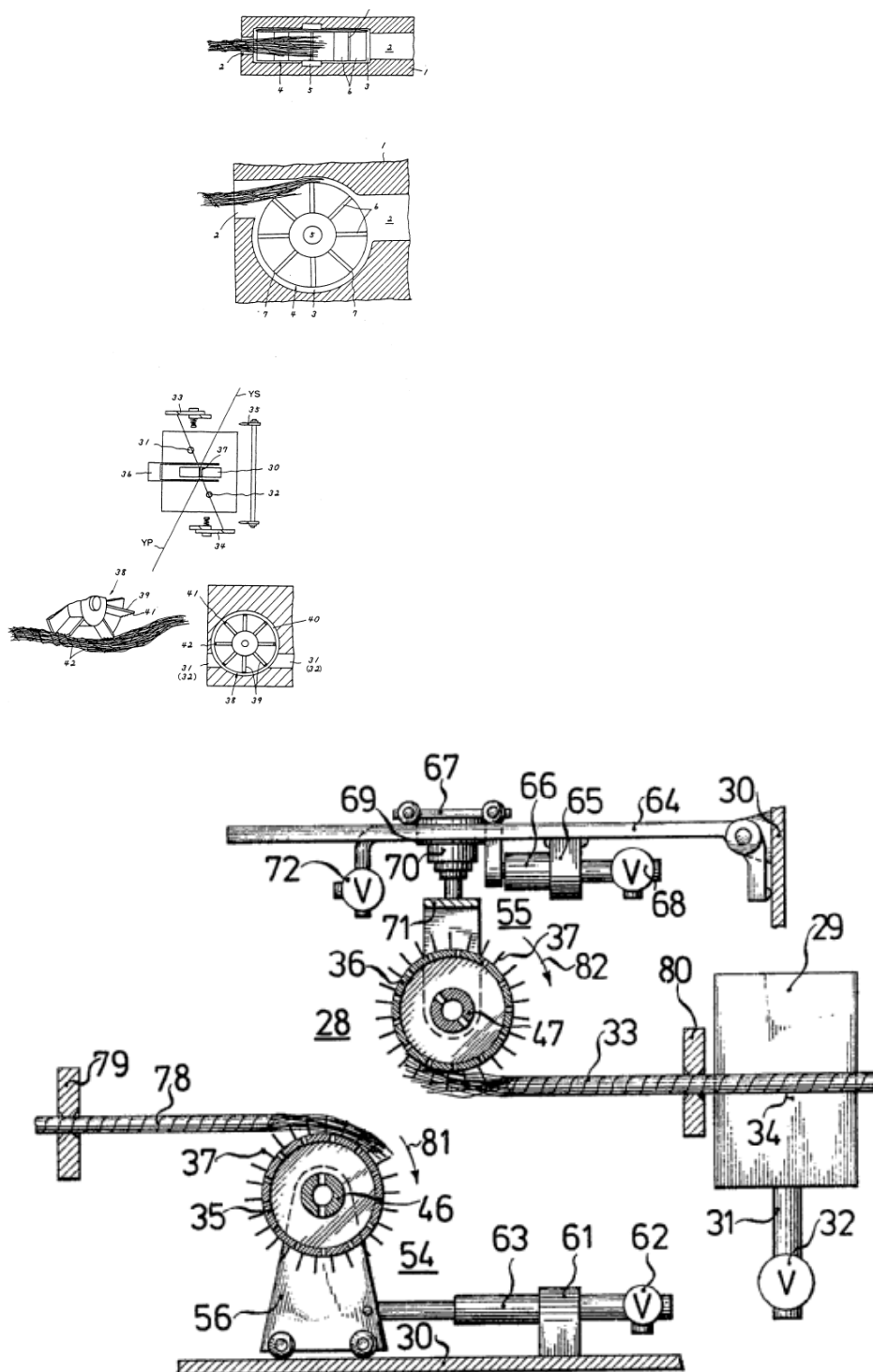
B65H 69/063**{Preparation of the yarn ends}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 69/065**{using mechanical means}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:



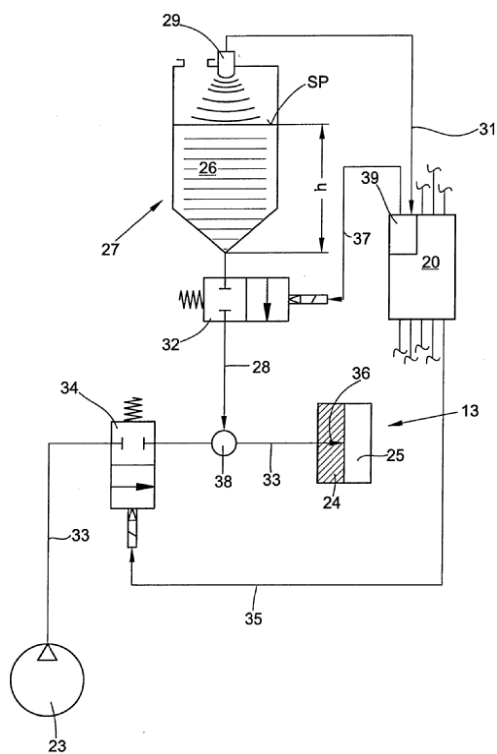
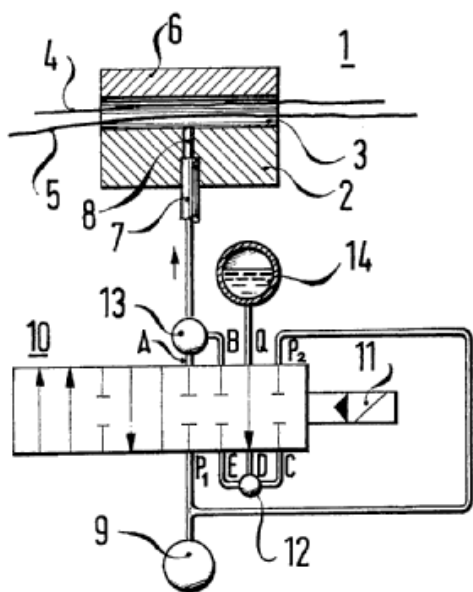
B65H 69/066

{Wet splicing, i.e. adding liquid to the splicing room or to the yarn ends preparing rooms}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



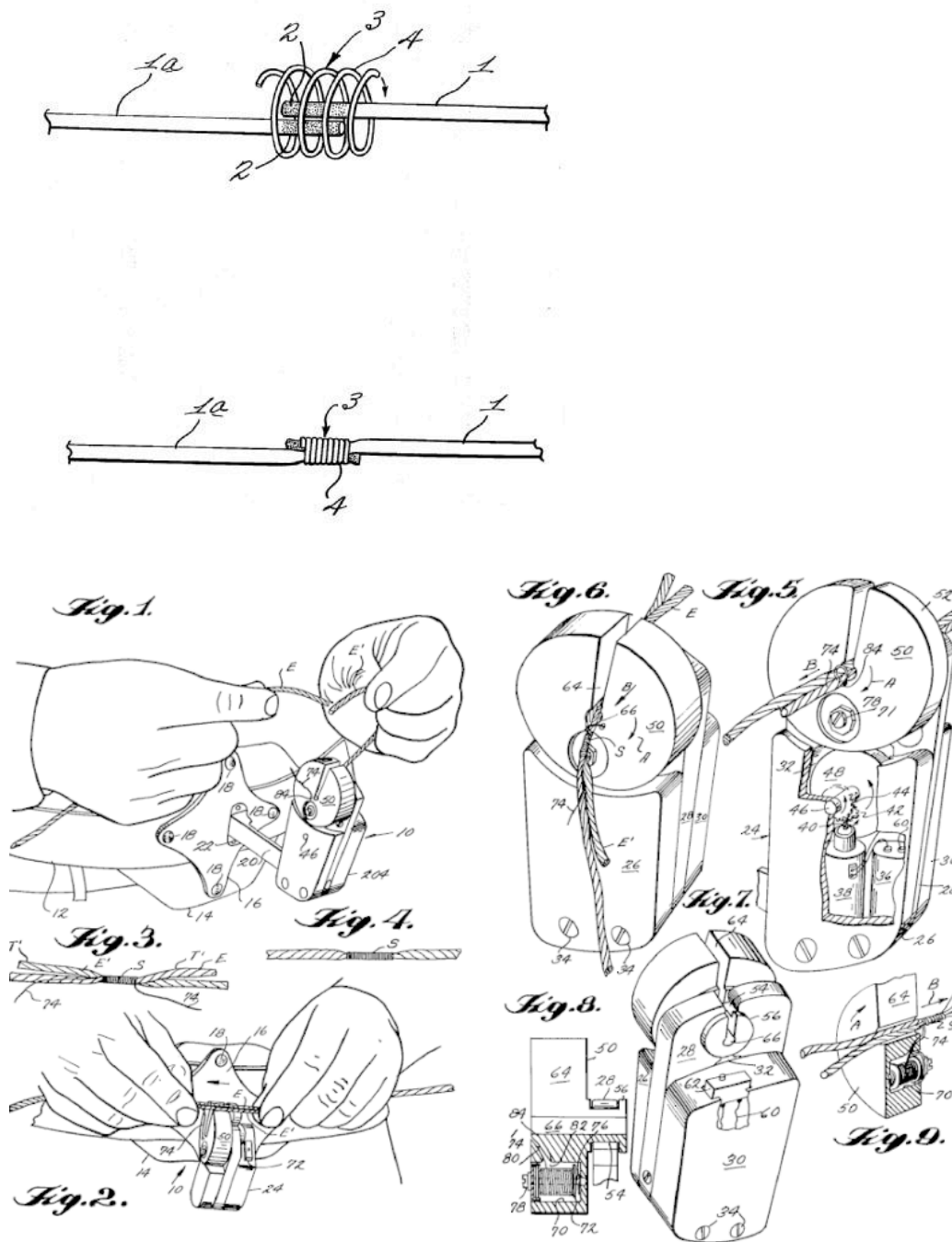
B65H 69/068

{using a binding thread, e.g. sewing}

Definition statement

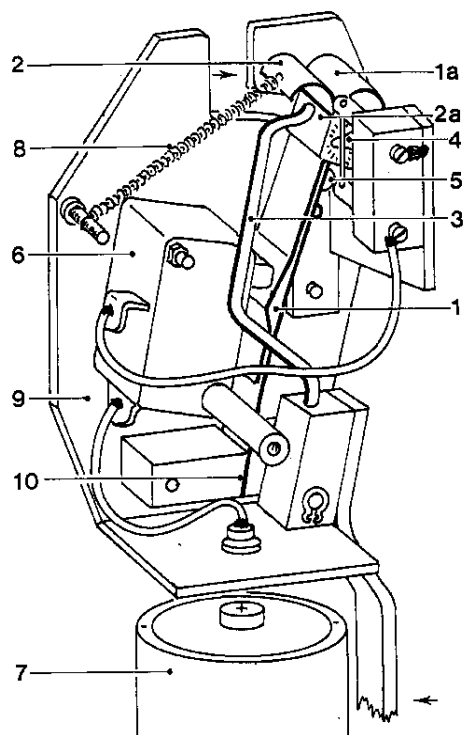
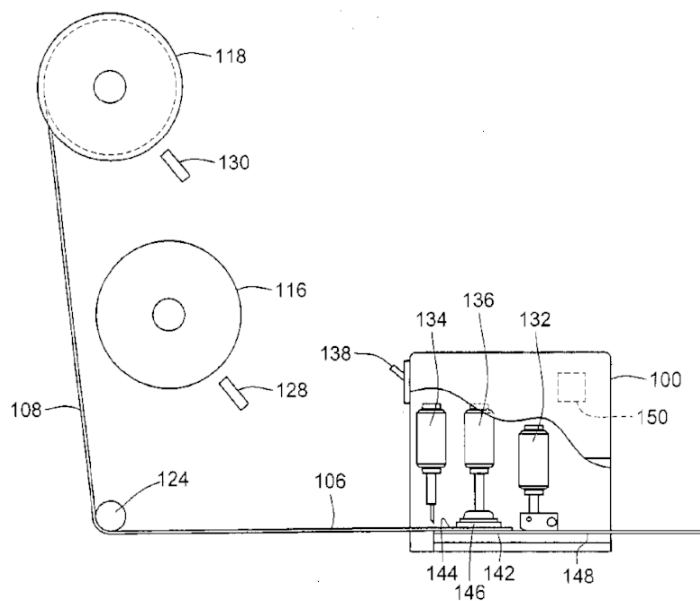
This place covers:

Illustrative examples of subject matter classified in this group:



B65H 69/08**by welding****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Joining by heating, using heated tools	B29C 65/18
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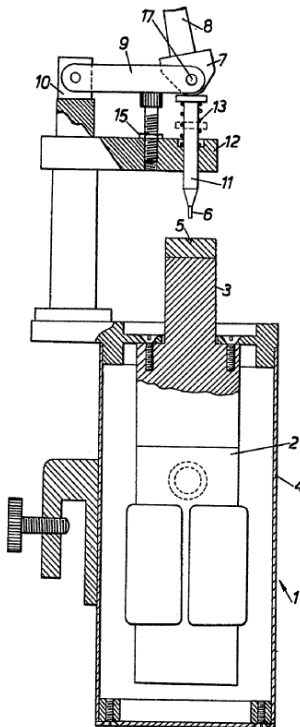
B65H 69/085

{using ultrasonic means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Joining using ultrasonic vibrations	B29C 65/08
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B65H 71/00

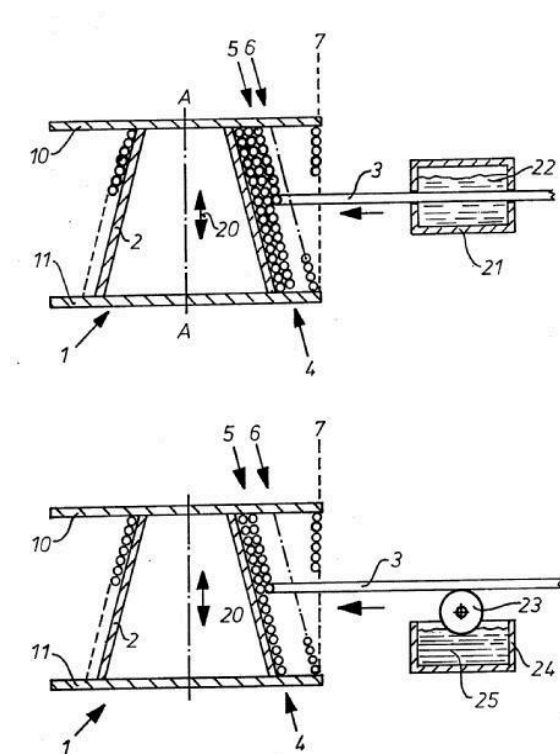
Moistening, sizing, oiling, waxing, colouring or drying filamentary material as additional measures during package formation (applying liquids or other fluent materials to surfaces in general [B05](#))

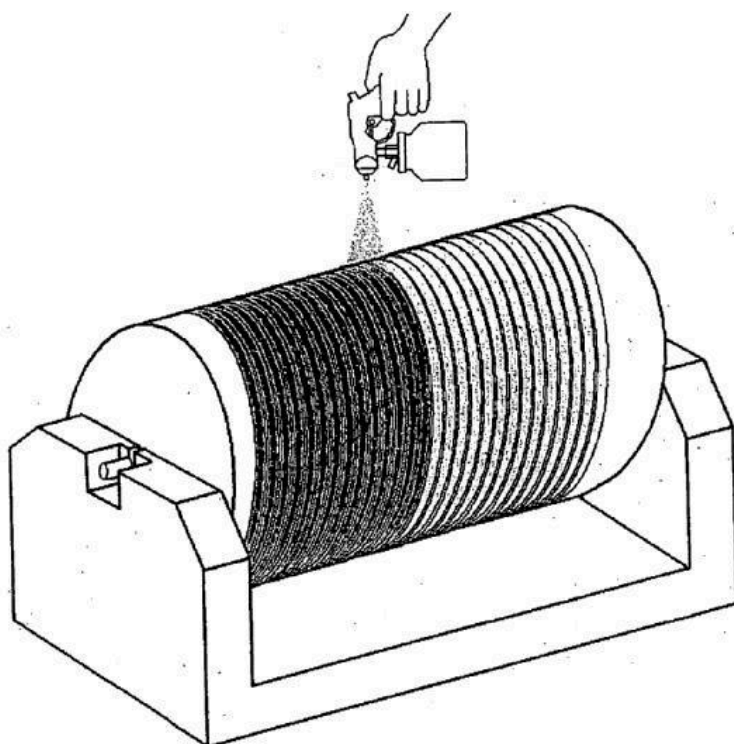
Definition statement

This place covers:

Moistening, sizing, oiling, waxing, colouring or drying filamentary material as additional measures during package formation.

Illustrative example of subject matter classified in this group:





References

Limiting references

This place does not cover:

Moistening or lubricating threads in knitting machines	D04B 35/24
--	----------------------------

Informative references

Attention is drawn to the following places, which may be of interest for search:

Applying liquids to surfaces in general	B05
Surface treatment of fibres or filaments from glass, minerals or slags	C03C 25/00
Humidity control, or oiling, of filaments, threads or the like, leaving spinnerettes	D01D 5/096
Moistening, sizing, oiling, waxing, colouring, drying yarns during spinning or twisting	D01H 13/30
Treating warp, e.g. moistening on a weaving loom	D03J 1/02
Treating weft on a weaving loom	D03J 1/04
Applying liquids, gases or vapours on to textile materials to effect treatment, e.g. washing, dyeing, bleaching, sizing, impregnating	D06B 1/00
Passing individually handled yarns, threads or filaments through liquids, gases or vapours to effect treatment	D06B 3/04
Devices for softening, lubricating or impregnating ropes, cables or strands in rope- or cable-making machines	D07B 7/12

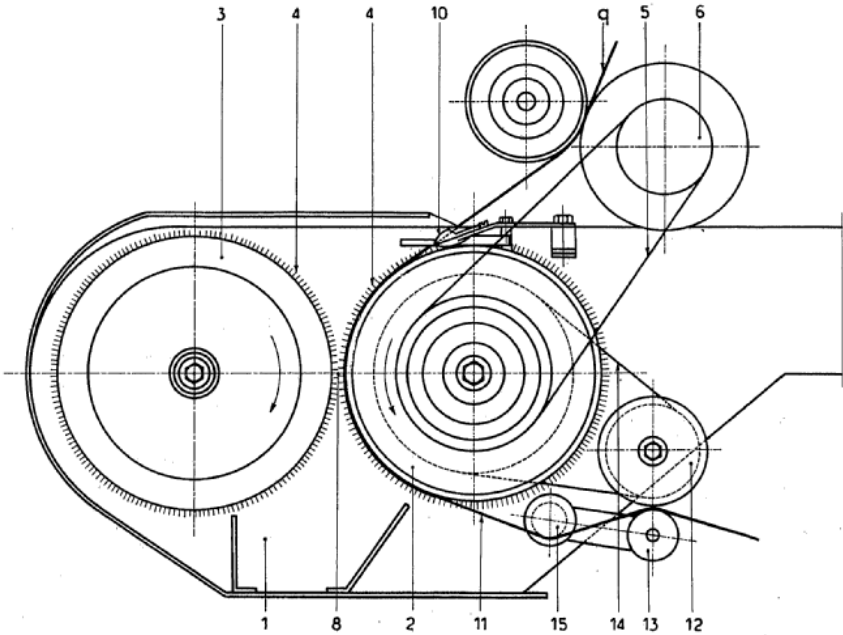
B65H 71/002

{Abrading, scraping (in general [D02J 3/00](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

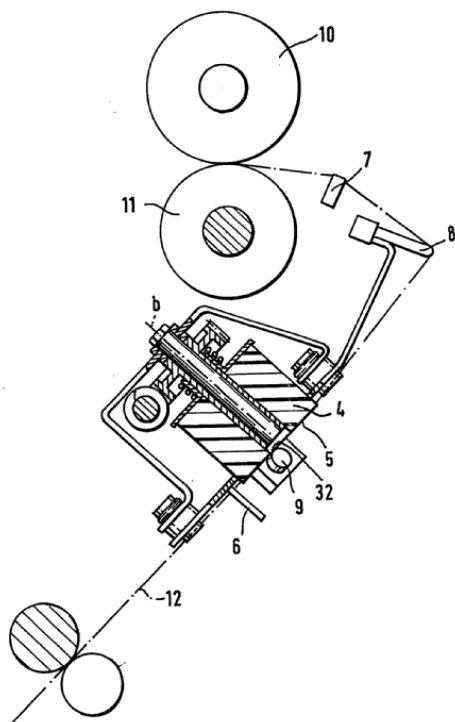
Informative references

Attention is drawn to the following places, which may be of interest for search:

Roughening of fibres	D01G 3/00
Producing crimped or curled fibres, filaments, yarns or threads, at least some of the filaments being simultaneously broken or cut	D02G 1/0246
Modifying the surface of filaments, yarns, threads, cords, ropes or the like by abrading, scraping	D02J 3/02

B65H 71/005**{Oiling, waxing by applying solid wax cake during spooling}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Applying solids, e.g. wax during spinning or twisting

[D01H 13/308](#)

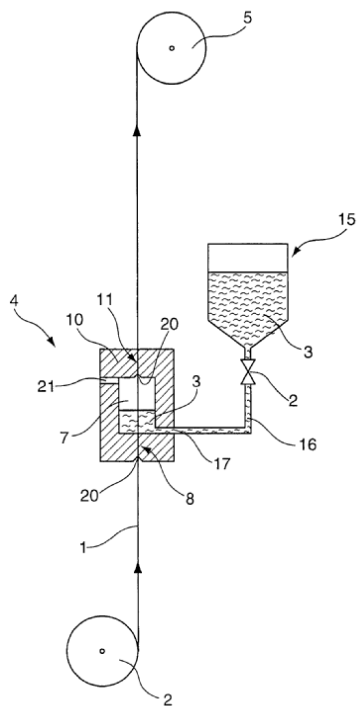
B65H 71/007

{Oiling, waxing by applying liquid during spooling}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Moistening, sizing, oiling during spinning or twisting by applying fluids, e.g. steam or oiling liquids	D01H 13/306
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B65H 73/00

Stripping waste material from cores or formers, e.g. to permit their re-use

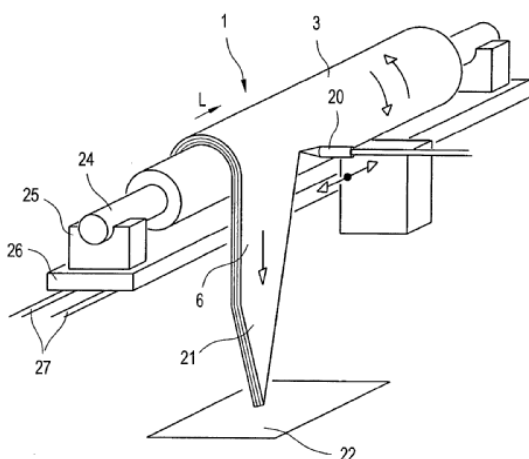
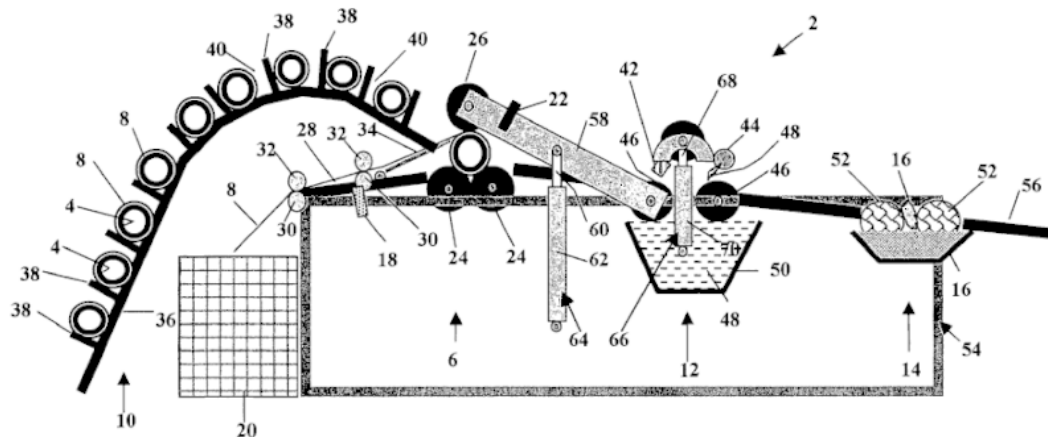
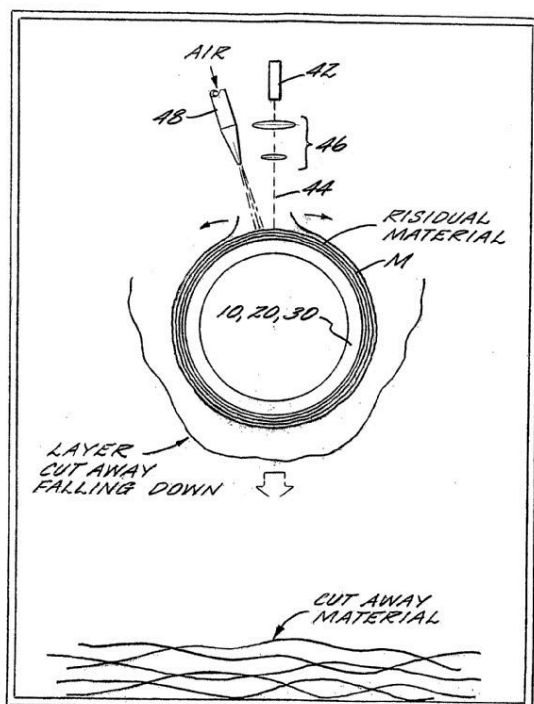
Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

Definition statement

"...waste material being webs, tapes, or filamentary material..."



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Supplying cores to or transporting from winding or depositing stations	B65H 67/06
Removing waste reserve lengths from spinning spindles	D01H 1/385

B65H 75/00

Storing webs, tapes, or filamentary material, e.g. on reels (fishing reels [A01K 89/00](#); storing means for record carriers, specially adapted for cooperation with the recording or reproducing apparatus [G11B 23/02](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fishing reels	A01K 89/00
In metal wire coiling	B21C 47/28
Specially adapted for cooperation with the recording apparatus	G11B 23/02

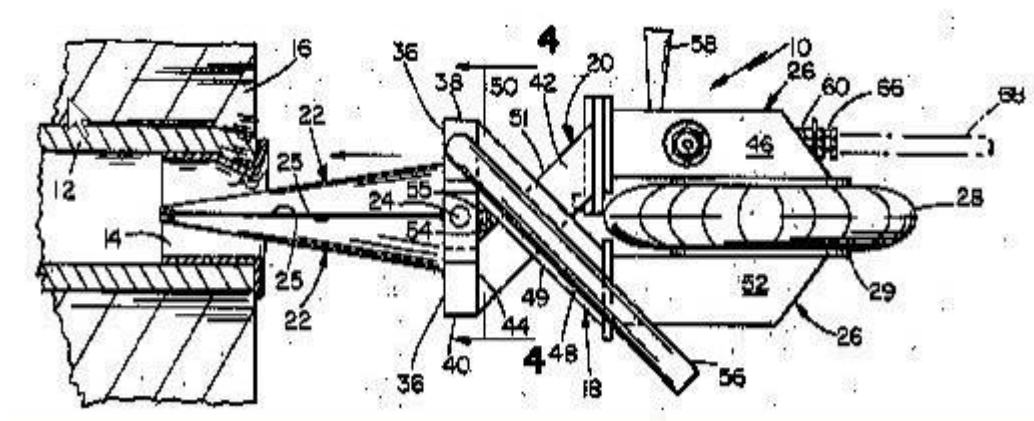
B65H 75/005

{Working on damaged packages, e.g. reshaping collapsed cores (working on cores, reels or the like to permit their reuse [B65H 75/505](#))}

Definition statement

This place covers:

Reshaping collapsed cores with the material wound thereon.



References

Limiting references

This place does not cover:

Working on cores, reels or the like (without material wound thereon) to permit their reuse	B65H 75/505
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B65H 75/02

Cores, formers, supports, or holders for coiled, wound, or folded material, e.g. reels, spindles, bobbins, cop tubes, cans {, mandrels or chucks} (packaging aspects [B65D 85/67](#))

Definition statement

This place covers:

Reels, spindles, bobbins, cop tubes or cans not provided for in subgroups.

References

Limiting references

This place does not cover:

Packaging aspects	B65D 85/67
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Special rules of classification

The following Indexing Codes are to be used in combination with the subgroups:

- Material to be wound: [B65H 2701/30](#) Indexing Codes
- Material of core or reel: [B65H 2701/51](#) Indexing Codes
- Elements within core or reel: [B65H 2701/52](#) Indexing Codes
- Adaptations of cores or reel for special purpose: [B65H 2701/53](#) Indexing Codes

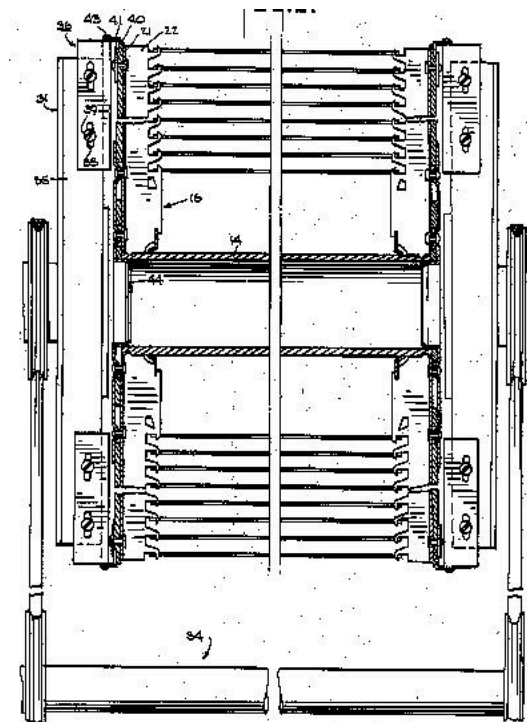
B65H 75/025

{specially adapted for winding or storing webs with the confronting layers spaced from each other, e.g. frames for storing nap fabrics}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



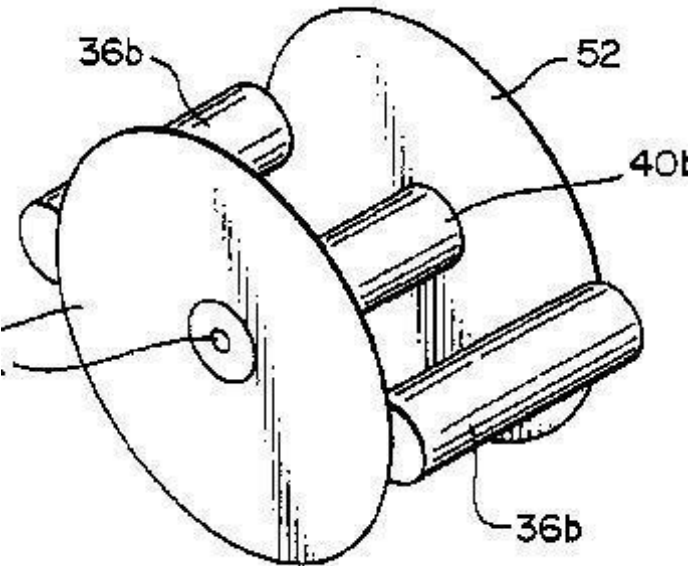
B65H 75/04

Kinds or types ([B65H 75/18](#) takes precedence)

Definition statement

This place covers:

Kinds or types not provided for in subgroups.



References

Limiting references

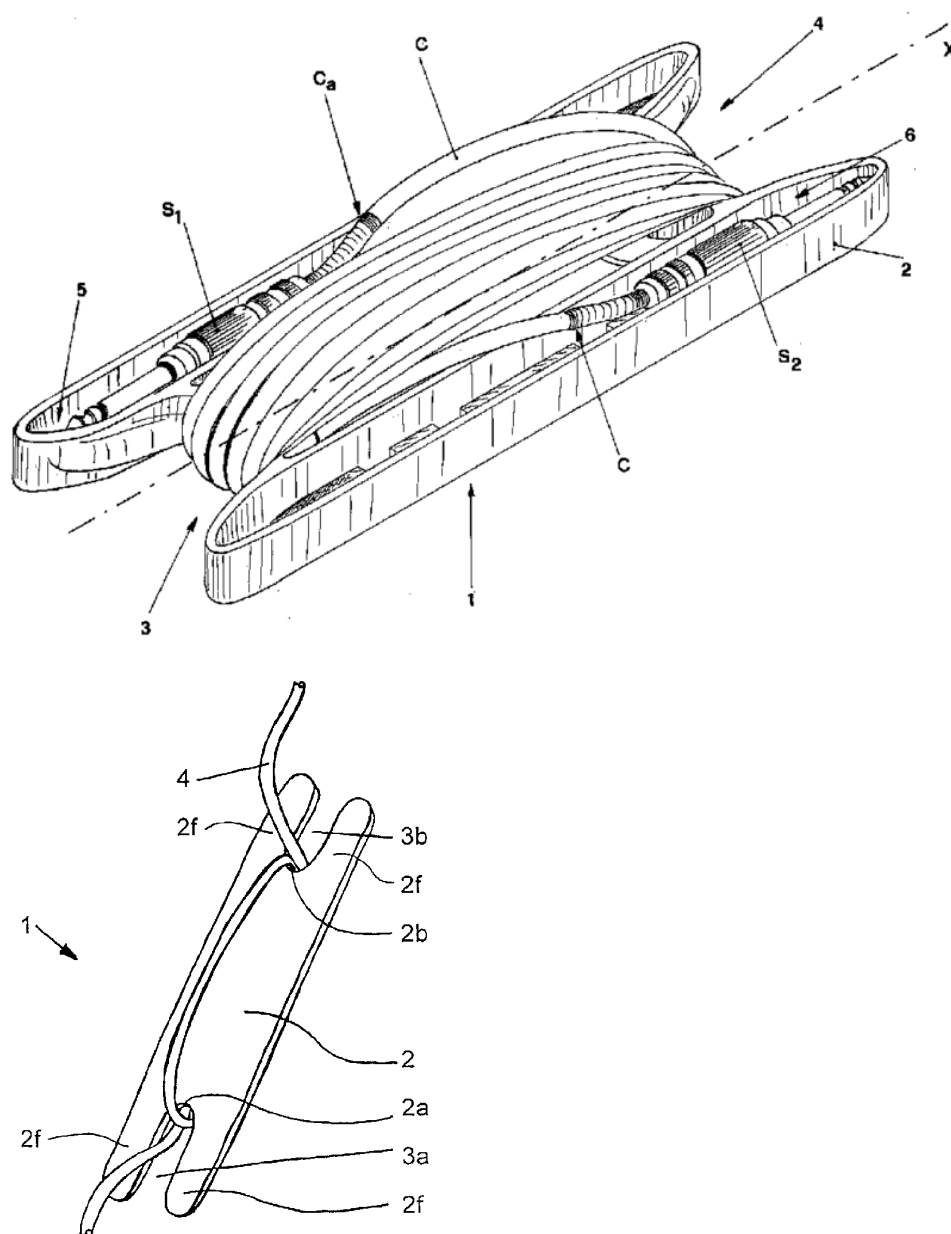
This place does not cover:

Constructional details	B65H 75/18
------------------------	----------------------------

B65H 75/06**Flat cores, e.g. cards****Definition statement**

This place covers:

Illustrative examples of subject matter classified in this group:



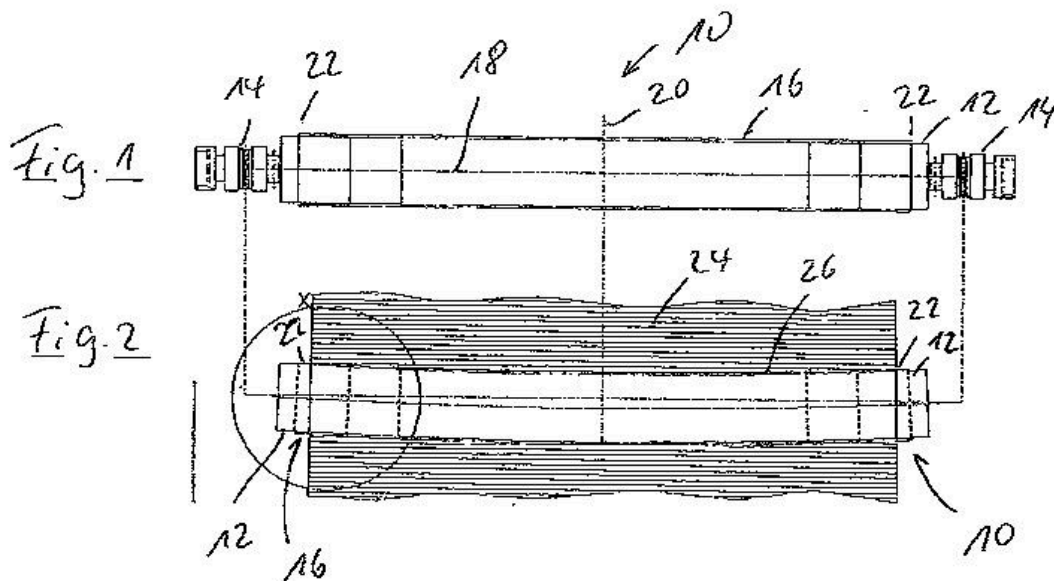
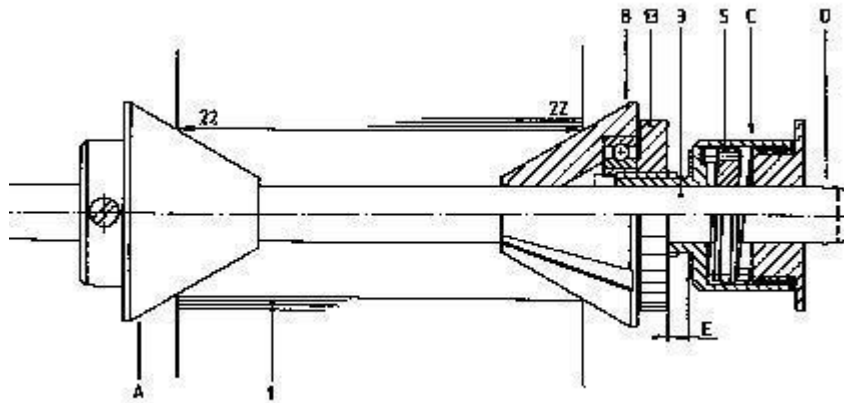
B65H 75/08

of circular or polygonal cross-section (cans or receptacles [B65H 75/16](#))

Definition statement

This place covers:

E.g. details of winding shafts or chucks in contact with or near the core or material (web or filamentary).

**Relationships with other classification places**

Supporting the web roll for unwinding or winding: [B65H 16/00](#), [B65H 18/00](#).

References**Limiting references**

This place does not cover:

Expansible winding shafts or chucks	B65H 75/242
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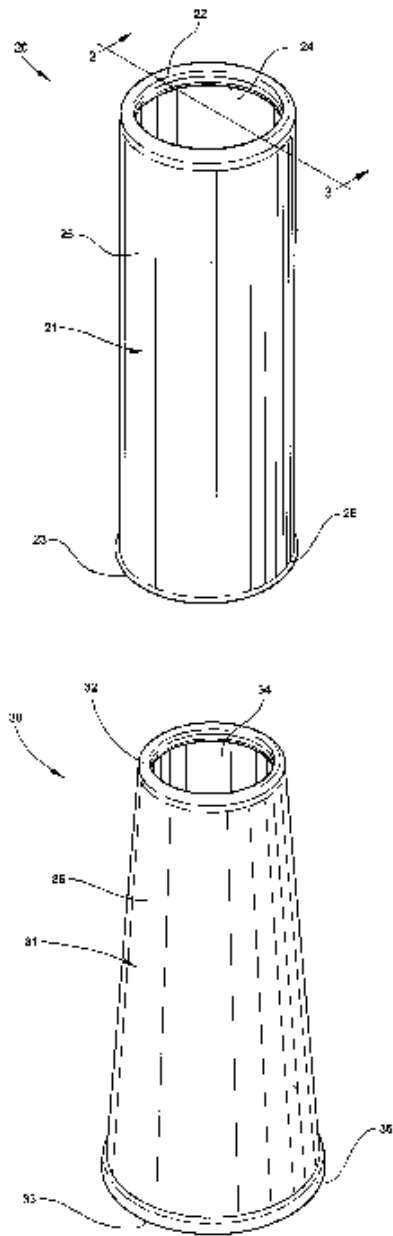
B65H 75/10

without flanges, e.g. cop tubes

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Limiting references

This place does not cover:

Drying tubes	D06B 23/042
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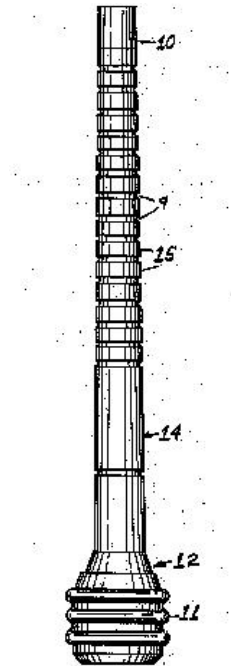
B65H 75/105

{Pirns destined for use in shuttles, i.e. with a yarn receiving portion and a thicker base portion, this thicker portion being adapted to be engaged by a spindle in a spinning frame and also being adapted for fitting in a shuttle}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



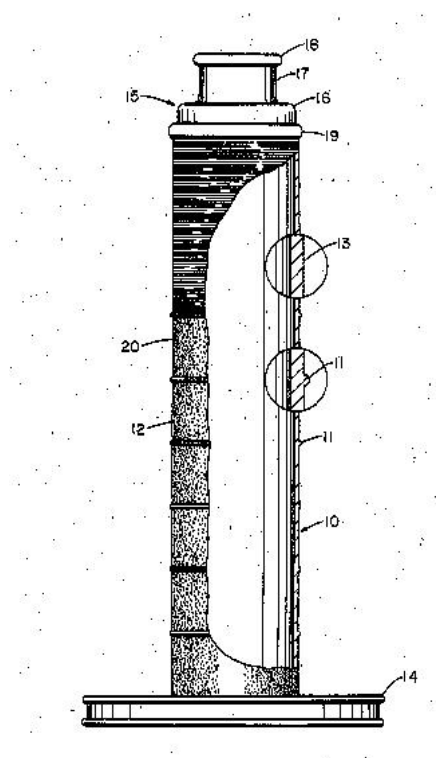
B65H 75/12

with a single end flange {(e.g. with a conical end flange)}; formed with one end of greater diameter than the barrel

Definition statement

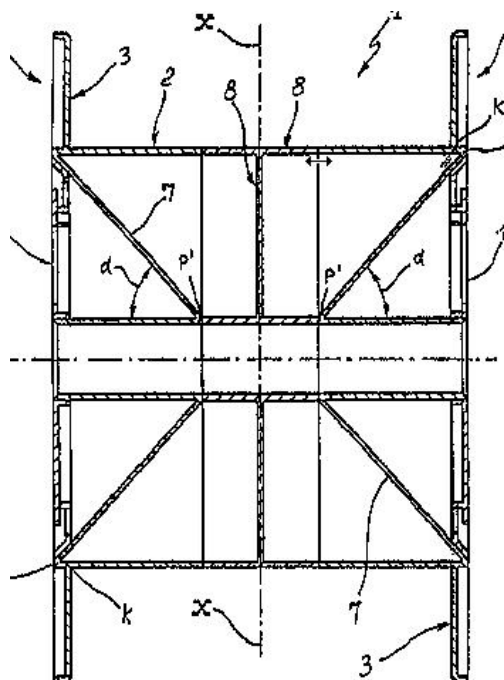
This place covers:

Illustrative example of subject matter classified in this group:



B65H 75/14**with two end flanges****Definition statement***This place covers:*

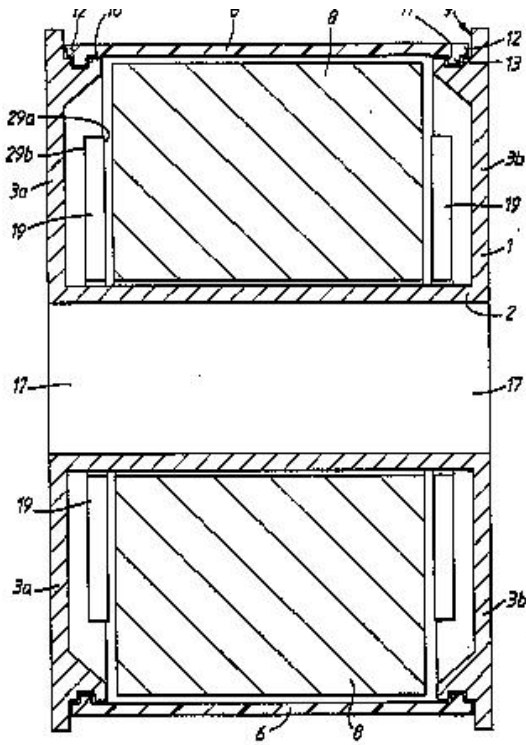
Illustrative example of subject matter classified in this group:

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Ink ribbon spools	B41J 33/003
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B65H 75/141**{covers therefor}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



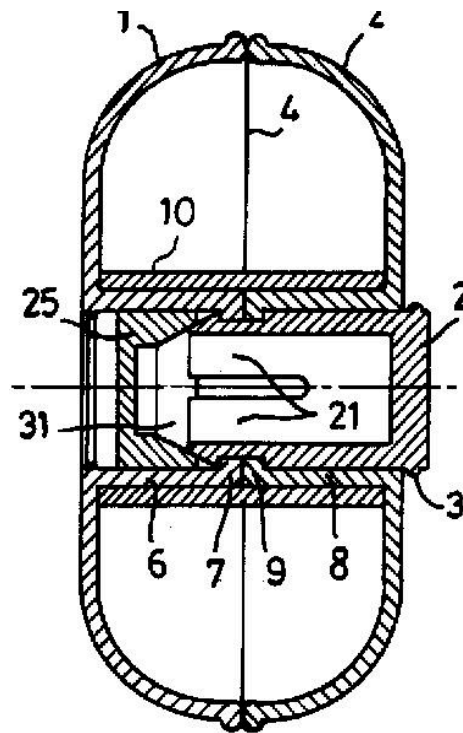
B65H 75/143

{at least one end flange being shaped to cover the windings}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



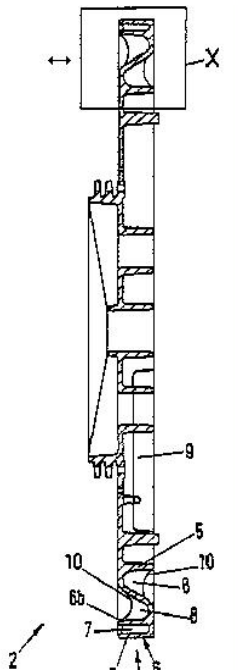
B65H 75/145

{Reinforcement or protection arrangements for the peripheral edge of the flanges}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



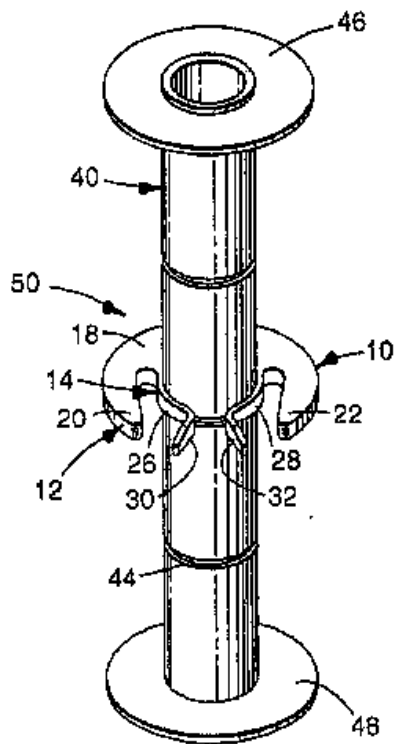
B65H 75/146

{with at least one intermediate flange between the two end flanges}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



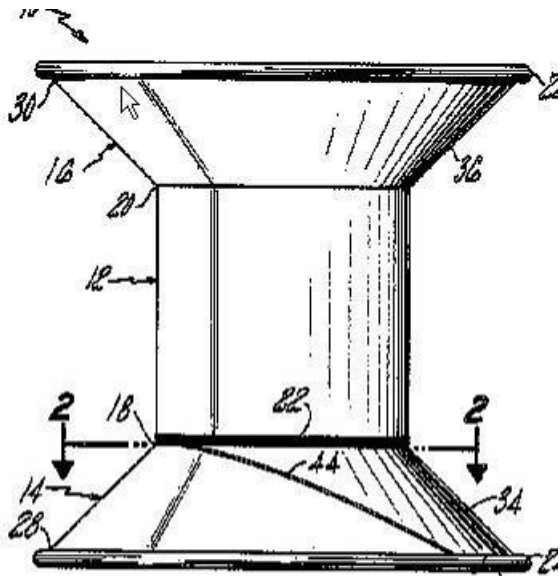
B65H 75/148

{with at least one frustoconical end flange}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

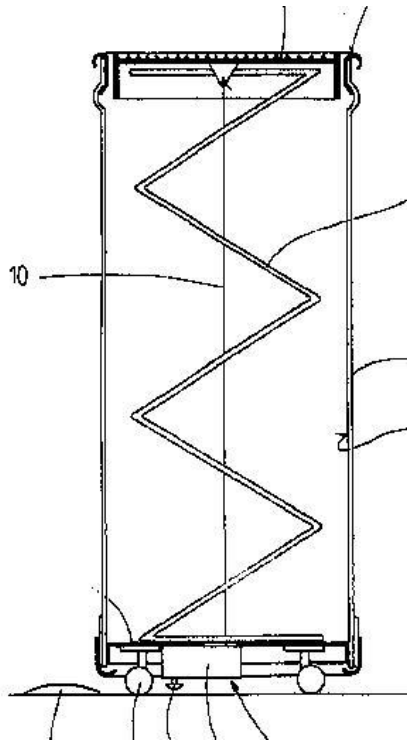
Limiting references

This place does not cover:

Winding on frusto-conical cores	B65H 54/103
---------------------------------	-----------------------------

B65H 75/16**Cans or receptacles, e.g. sliver cans****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**Relationships with other classification places**Supporting devices enclosing the non-rotating package for unwinding: [B65H 49/08](#)**B65H 75/18****Constructional details****Special rules of classification**[B65H 75/18](#) should not be used. Only subgroups are to be used. Several constructional details may be classified.

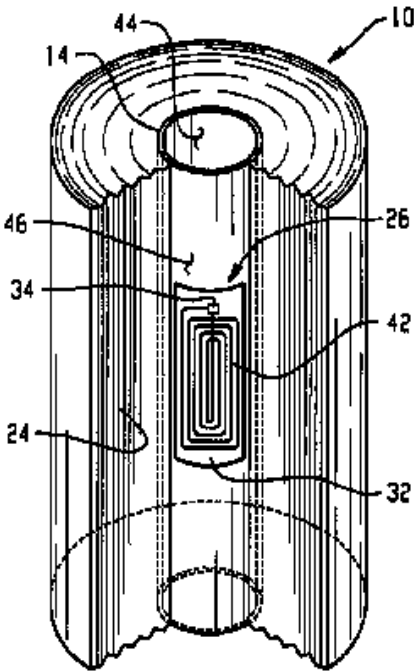
B65H 75/182

{Identification means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Barcodes	G06K 1/121 , G06K 1/123
Labels with barcode	G09F 3/0297

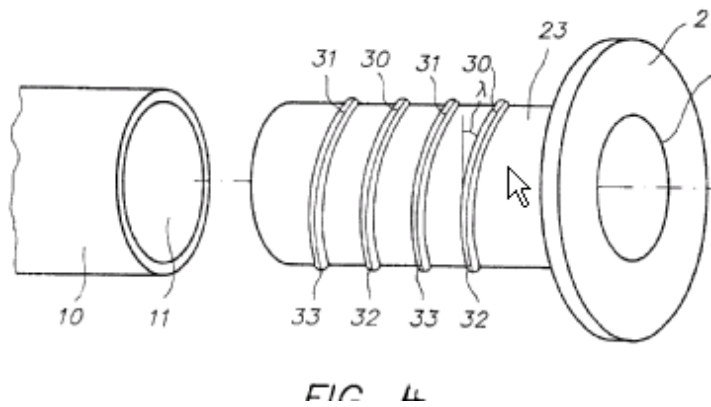
B65H 75/185

{End caps, plugs or adapters}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

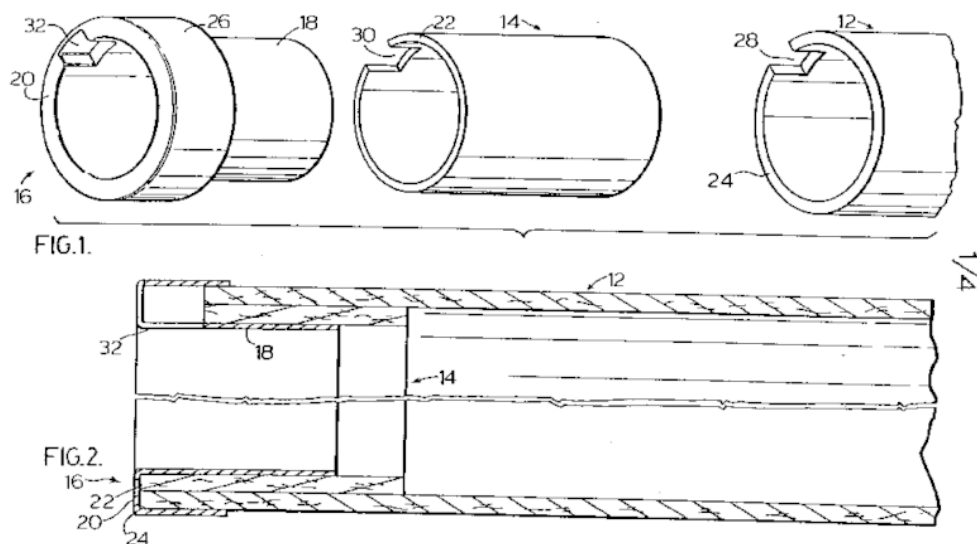
Attention is drawn to the following places, which may be of interest for search:

Handles	B65H 2402/412
Printer Roll	B41J 15/042
Wrapping apparatus	B65B 67/085
Plugs, sleeves or caps for packaging	B65D 59/00

B65H 75/187**{Reinforcing end caps}****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



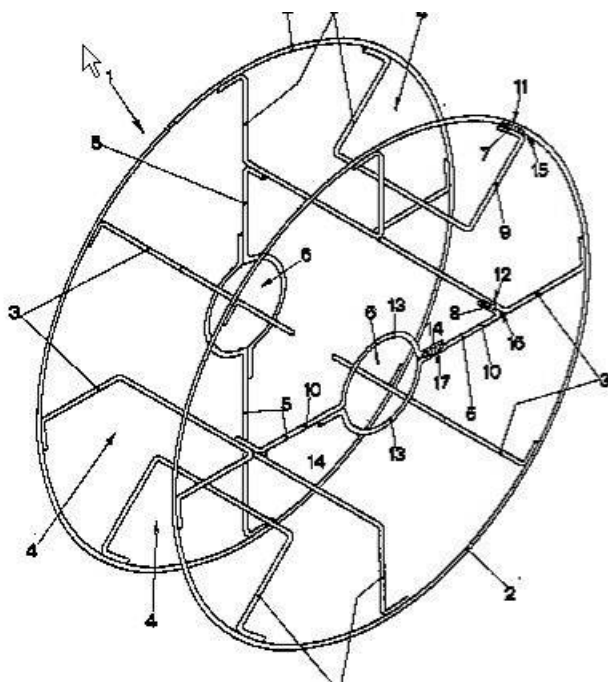
B65H 75/20

Skeleton construction, e.g. formed of wire {(perforated supports for textile materials to be treated [D06B 23/042](#))}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Limiting references**

This place does not cover:

Perforated supports for textile materials to be treated	D06B 23/042
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B65H 75/22

collapsible; with removable parts

Definition statement

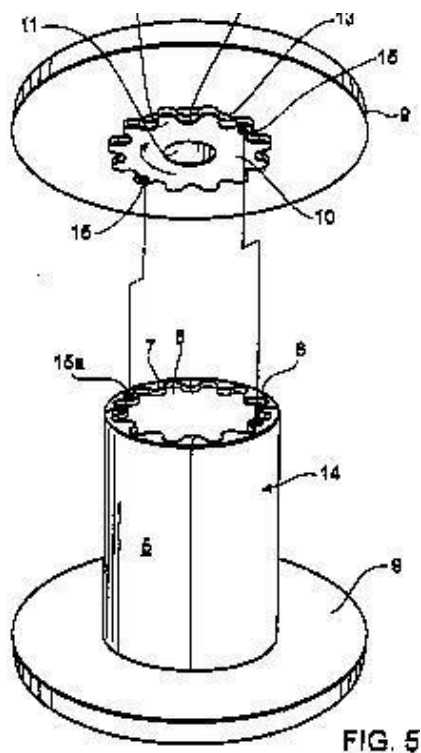
This place covers:

Cores, formers, supports or holders that are collapsible or demountable, or have removable parts.

Illustrative examples of subject matter classified in this group:



Definition statement

**B65H 75/2209**

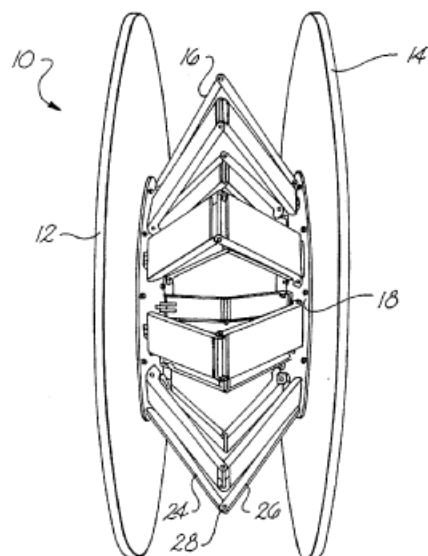
{collapsible by use of hinged or slidable parts; foldable without removing parts}

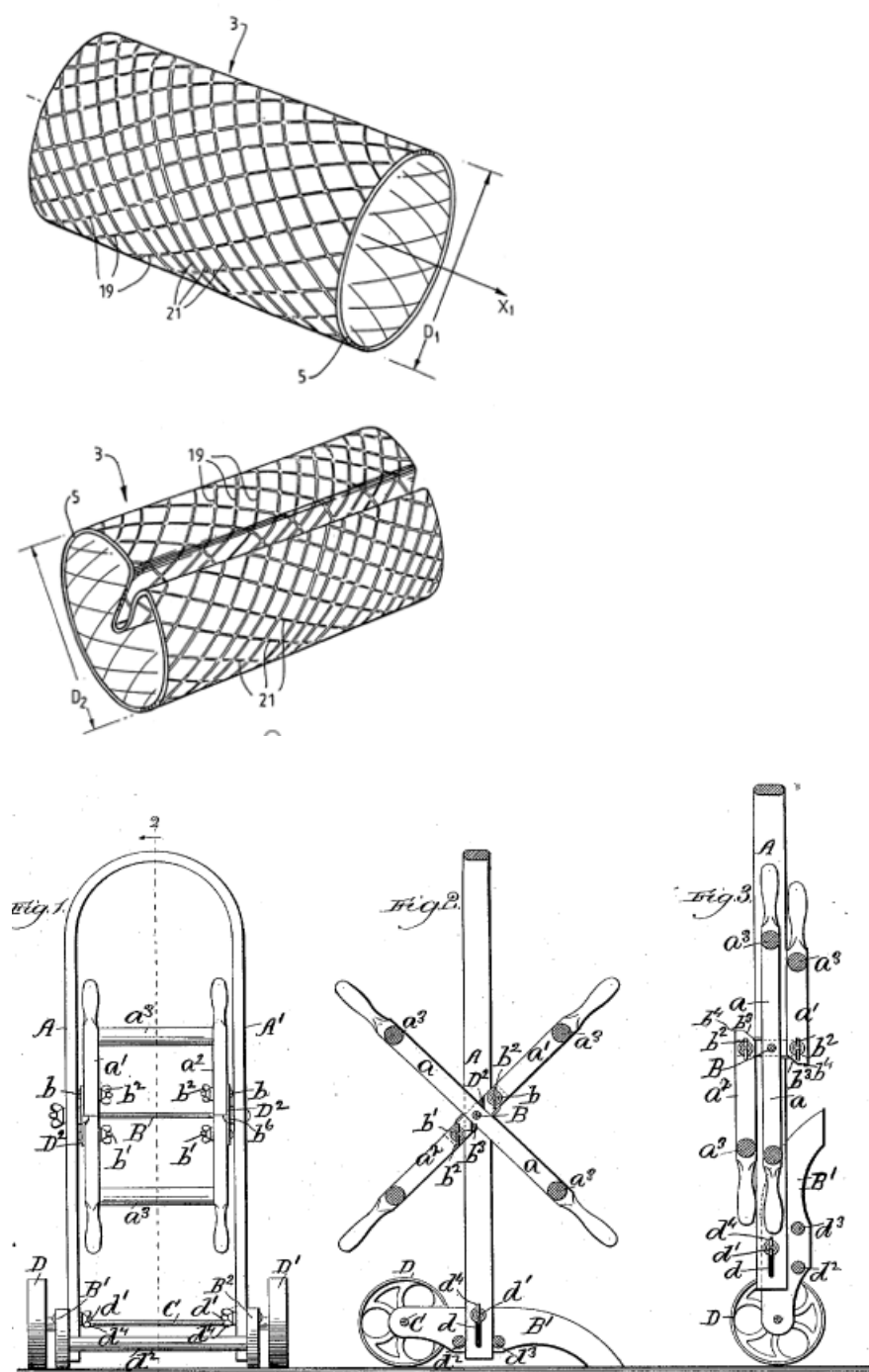
Definition statement

This place covers:

Cores, formers, supports or holders that are collapsible as a whole without substantially removing parts.

Illustrative examples of subject matter classified in this group:



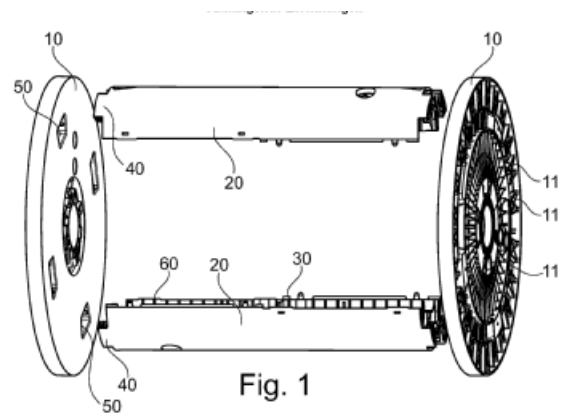
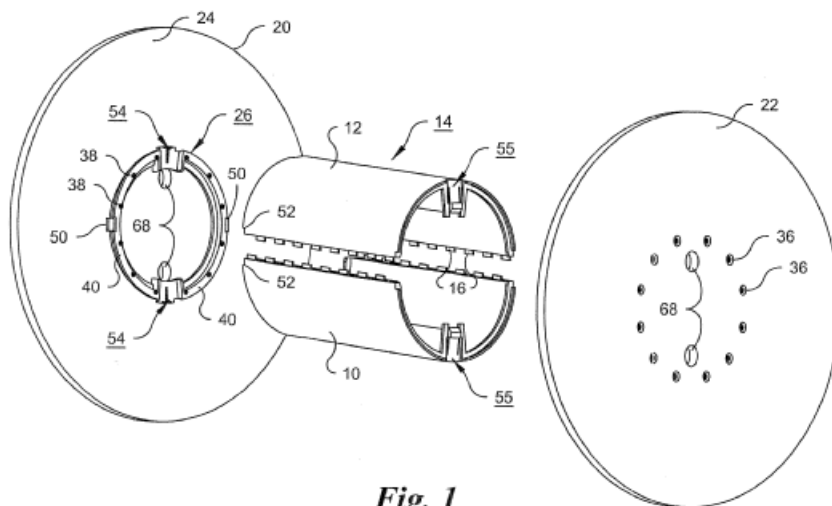


B65H 75/2218**{Collapsible hubs}****Definition statement**

This place covers:

Cores, formers, supports or holders of which the hub itself is collapsible or demountable.

Illustrative examples of subject matter classified in this group:



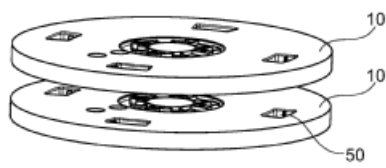


Fig. 3

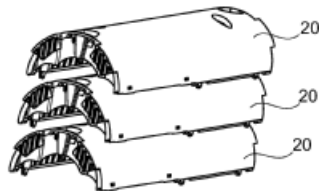


Fig. 4

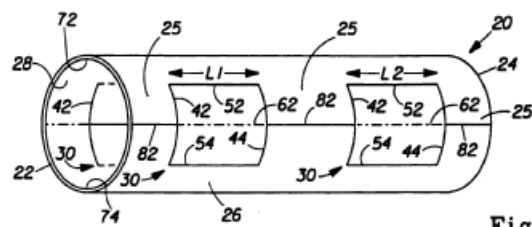


Fig. 5

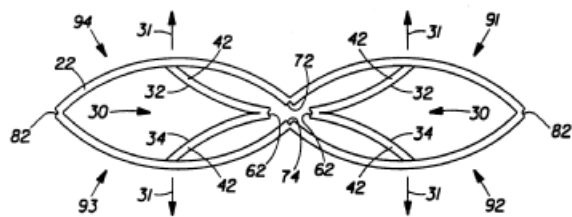
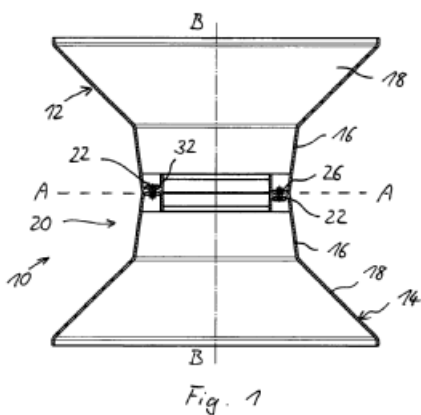
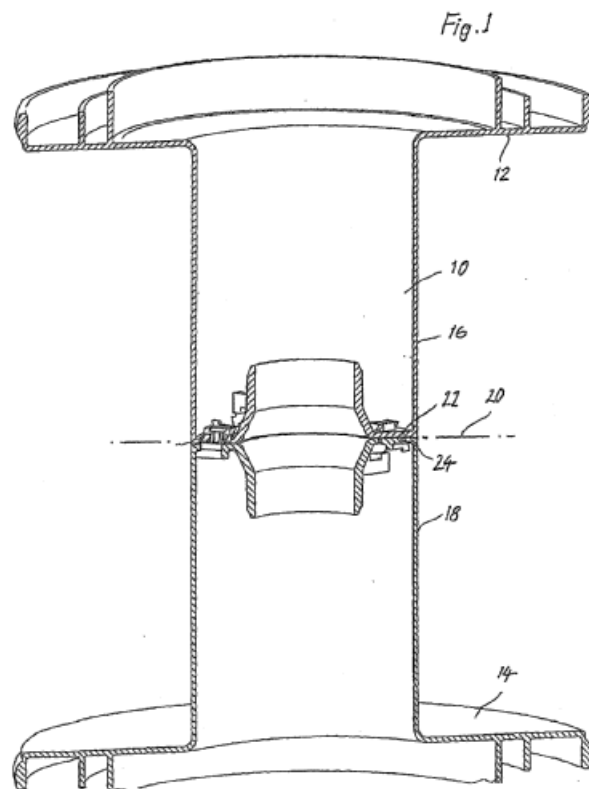


Fig. 6

B65H 75/2227**{with a flange fixed to the hub part}****Definition statement***This place covers:*

Cores, formers, supports or holders of which the hub itself is collapsible or demountable, whereby the hub exists of several (typically two) parts with a flange fixed to a hub part as a single piece construction, i.e. not releasably connected.

Illustrative examples of subject matter classified in this group:



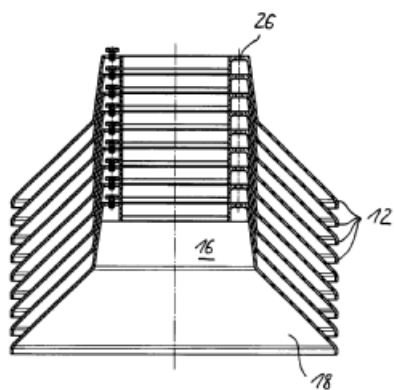


Fig. 3

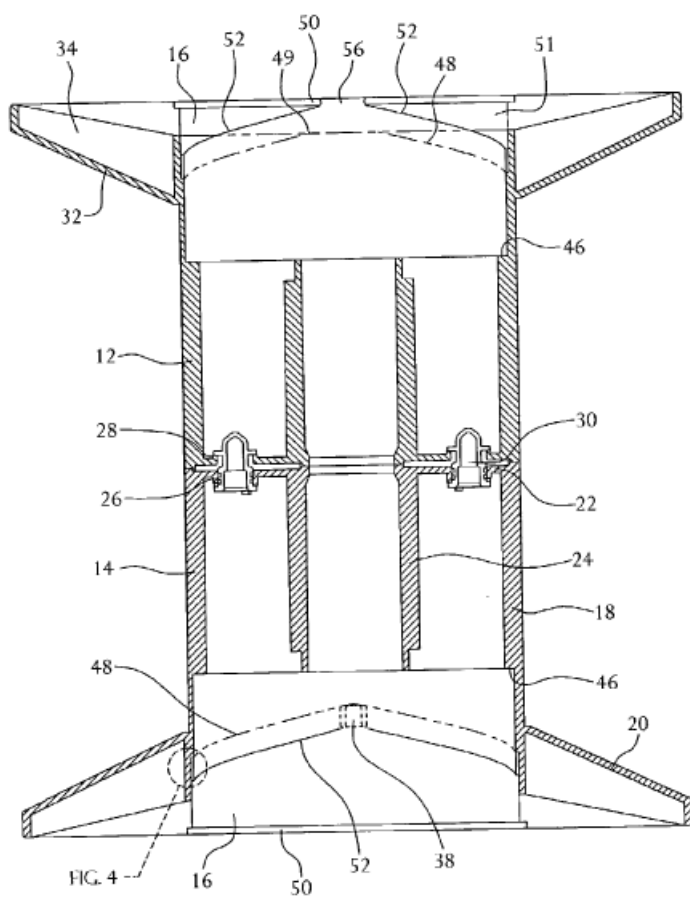


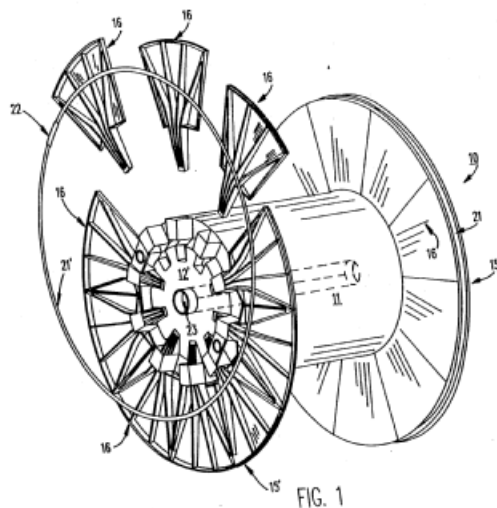
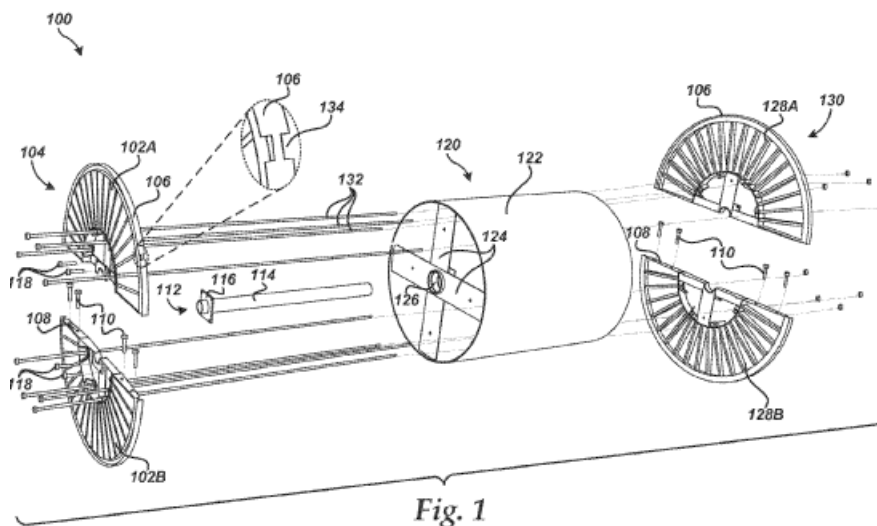
FIG. 4

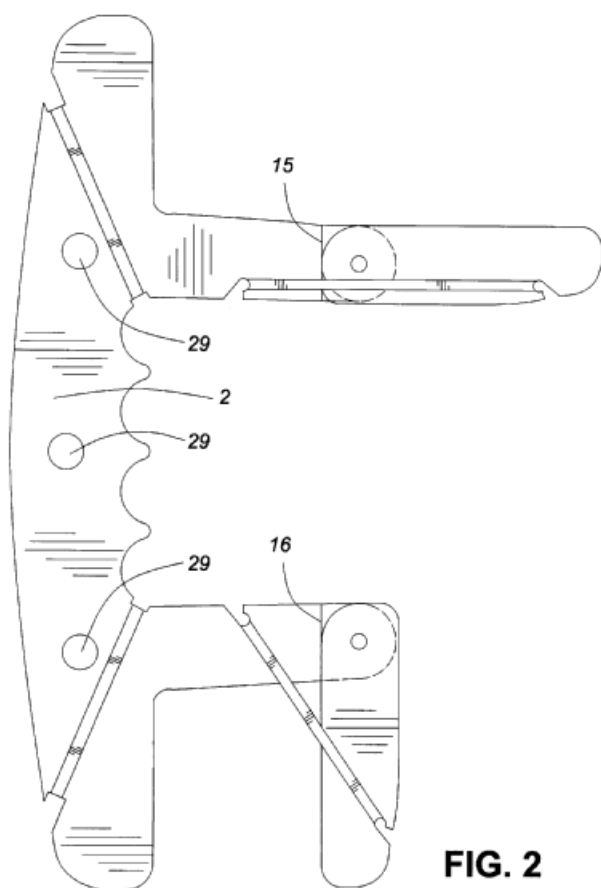
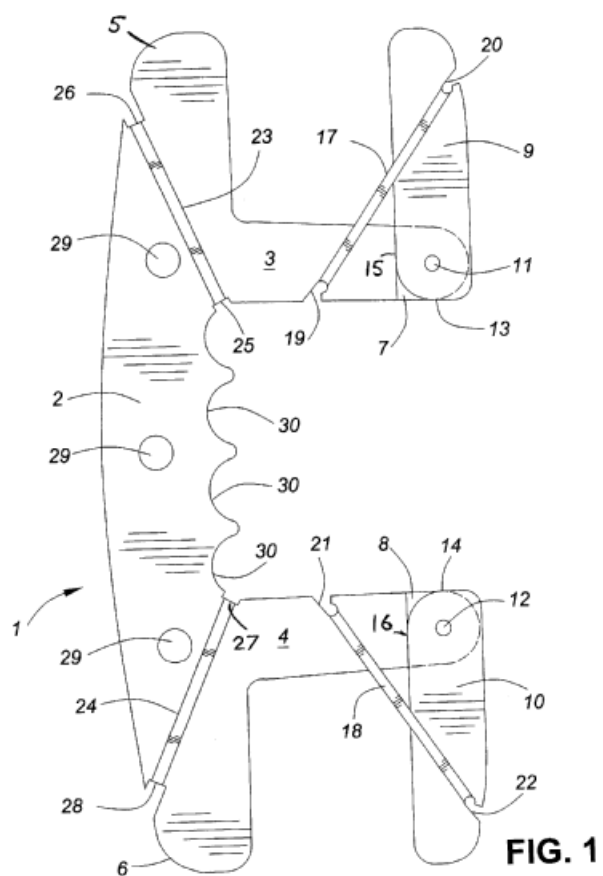
B65H 75/2236**{Collapsible flanges}****Definition statement**

This place covers:

Cores, formers, supports or holders of which at least one flange itself is collapsible or demountable.

Illustrative examples of subject matter classified in this group:

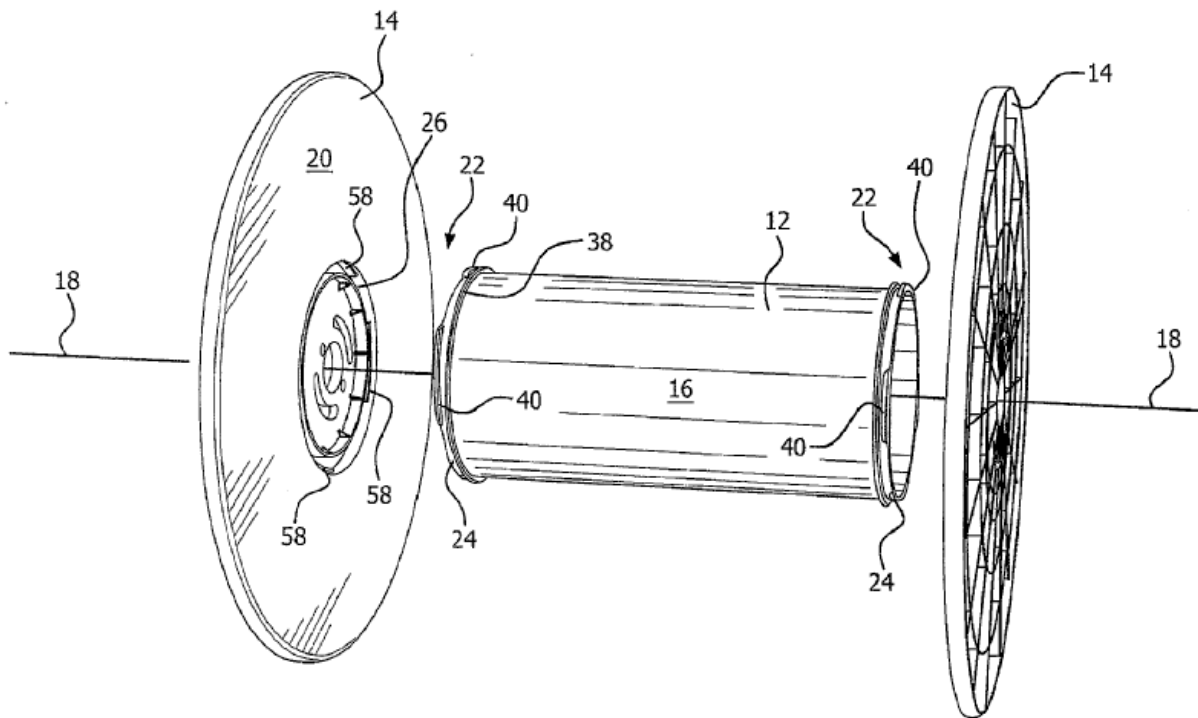




B65H 75/2245**{connecting flange to hub}****Definition statement***This place covers:*

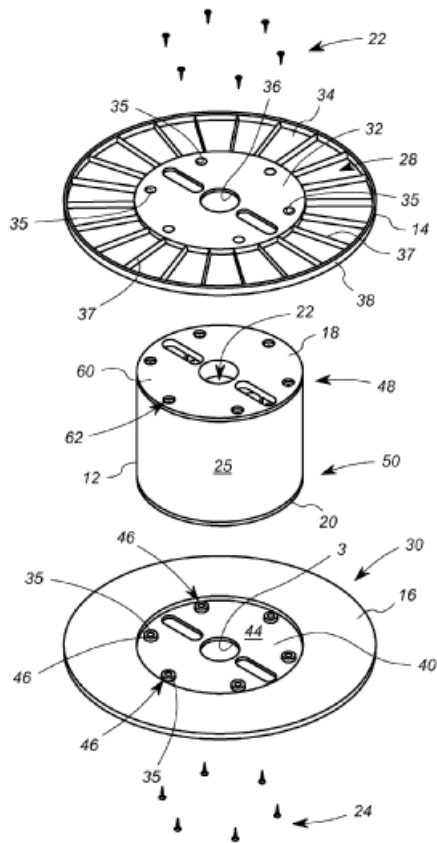
Releasable connecting means between flange and hub.

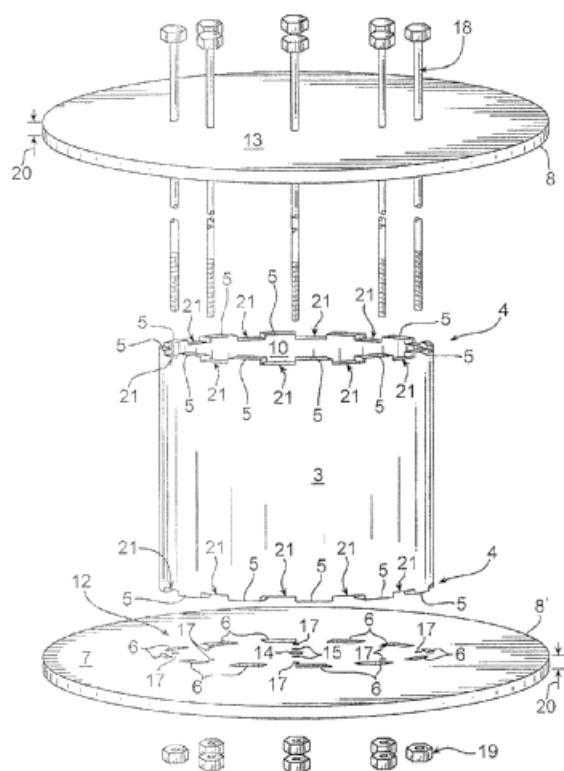
Illustrative examples of subject matter classified in this group:



B65H 75/2263**{Discrete fasteners, e.g. bolts or screws}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:

**FIG. 2**



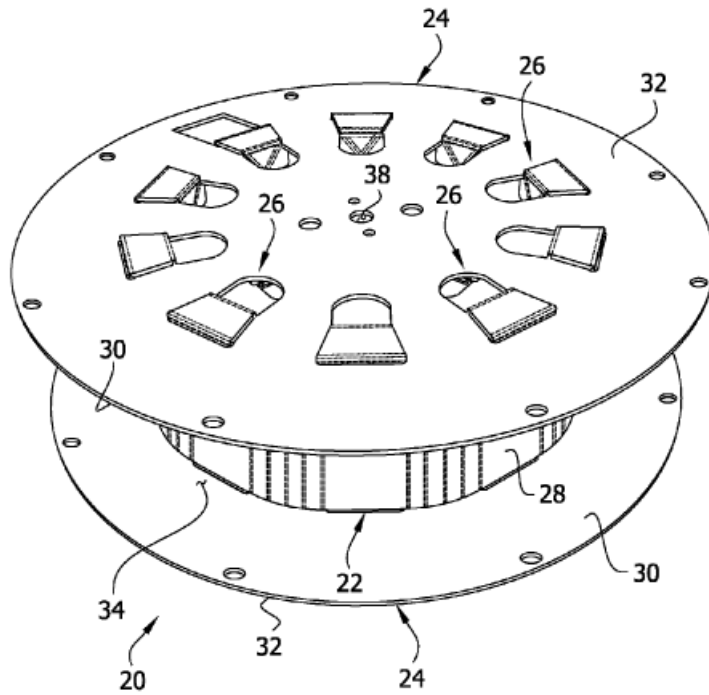
B65H 75/229

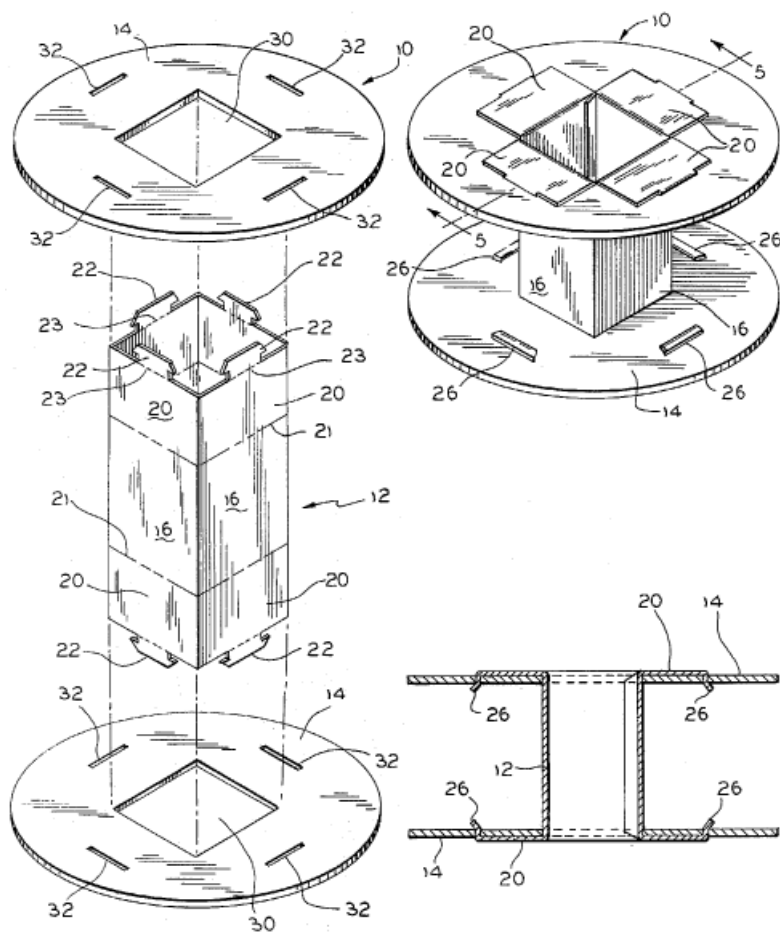
{Bendable tabs being deformable over a cooperating surface}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:





B65H 75/24

adjustable in configuration, e.g. expandable

Definition statement

This place covers:

E.g. radially adjustable or expandable reels or cores.

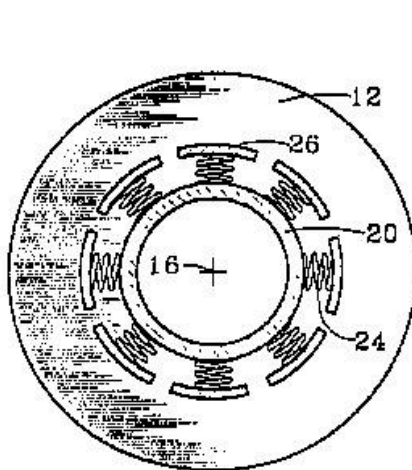


FIG. 3

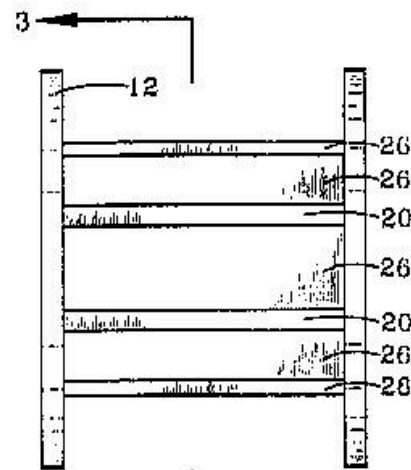
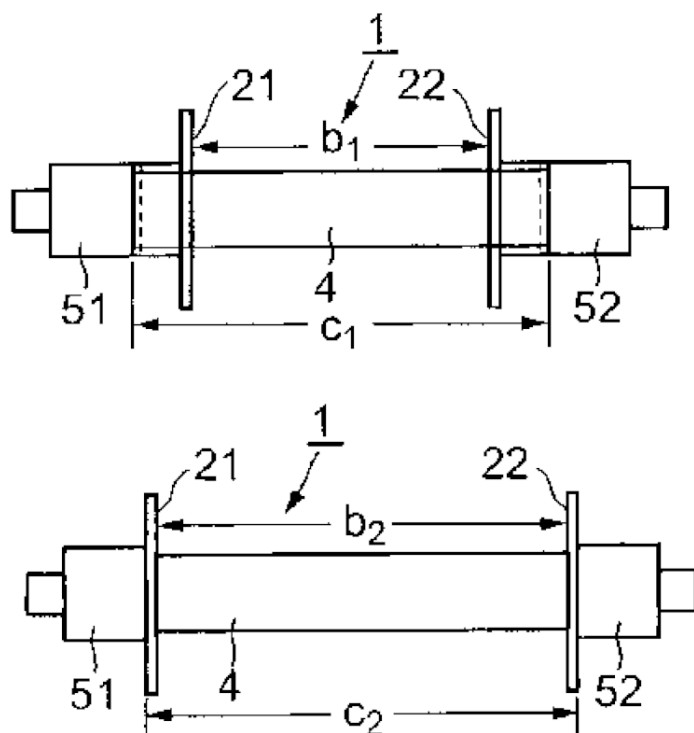


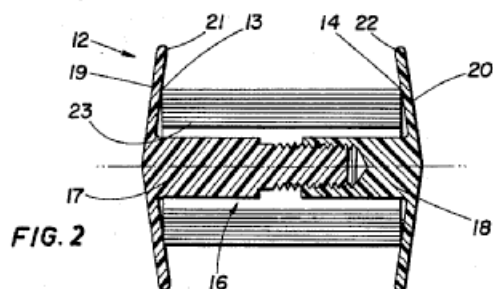
FIG. 4

B65H 75/241**{axially adjustable reels or bobbins}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**B65H 75/2413****{adjustable by threaded means}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 75/2416

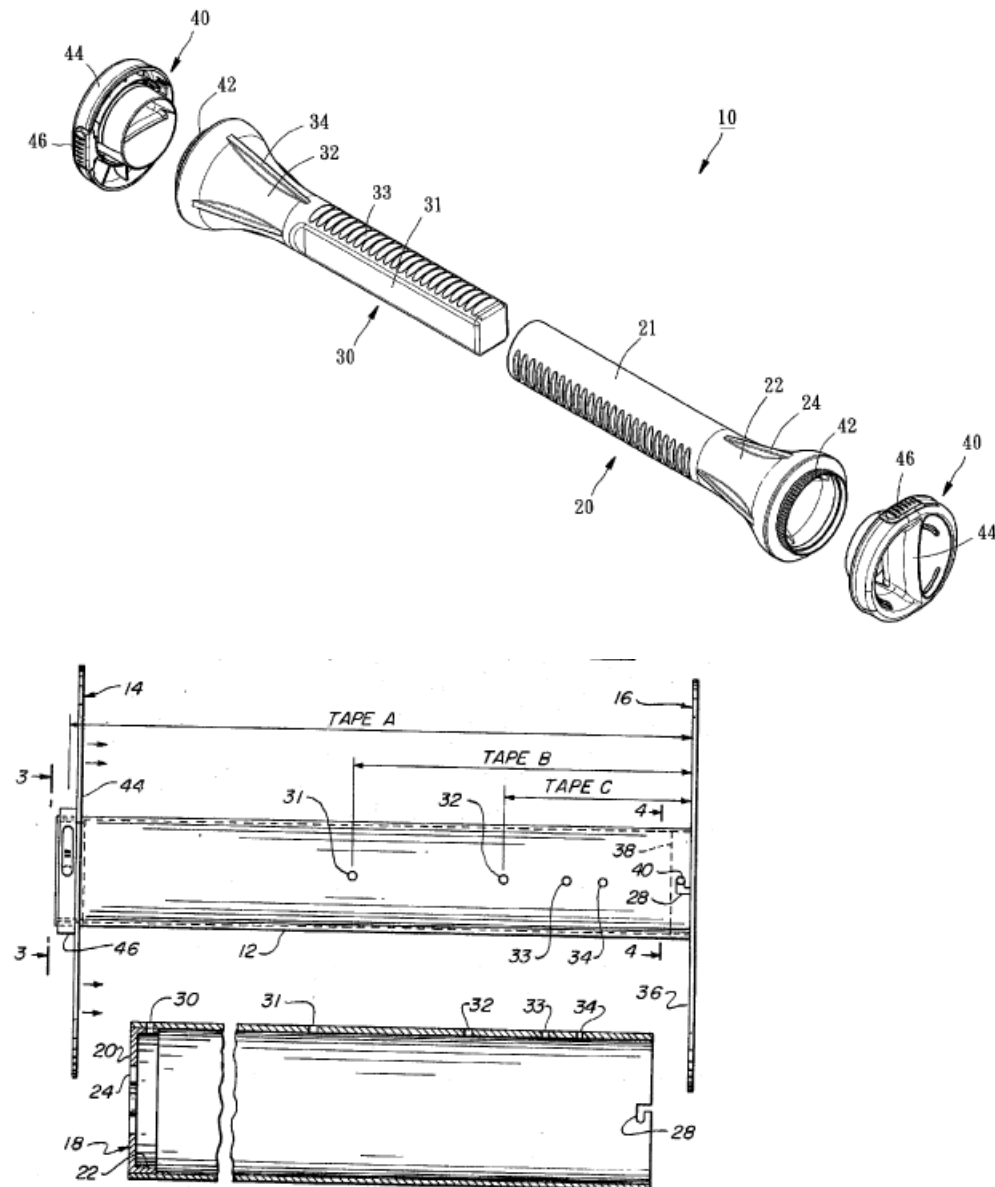
{with axial positions defined by discrete locations}

Definition statement

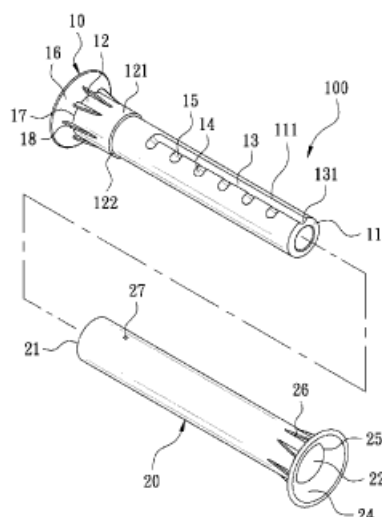
This place covers:

Length-adjustable devices with a series of engagement portions positioned along the axial direction:

Illustrative example of subject matter classified in this group:



Definition statement

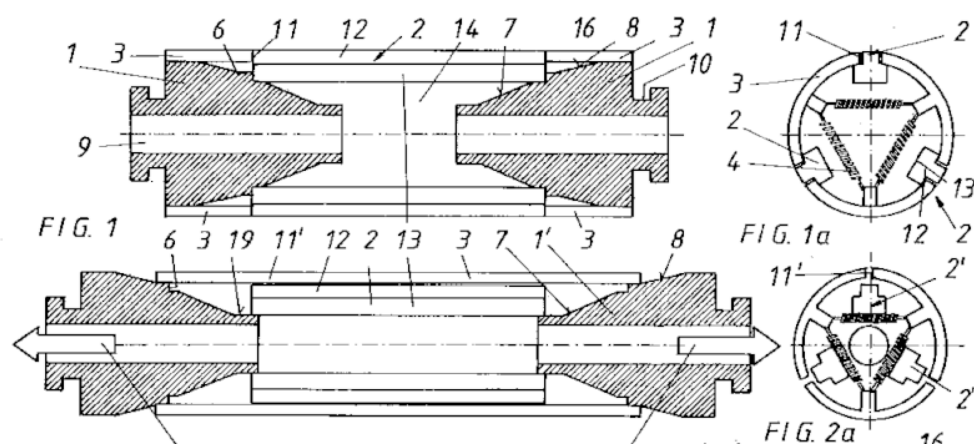
**B65H 75/242**

{Expandable spindles, mandrels or chucks, e.g. for securing or releasing cores, holders or packages}

Definition statement

This place covers:

Arrangements of expandable spindles, mandrels or chucks not provided for in subgroups, e.g.

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Spindles, mandrels and chucks for securing or releasing cores for winding and unwinding webs	B65H 16/00 , B65H 18/00
Expandable drum for winding metal wire	B21C 47/30
Expandable mandrels for machine tools	B23B 31/00

Special rules of classification

"Expansion" mechanisms of spindles, mandrels and chucks for securing or releasing cores for winding and unwinding webs are to be classified in [B65H 75/242](#) and not in [B65H 16/00](#) or [B65H 18/00](#).

Securing packages of filamentary material is also classified in [B65H 49/36](#) (unwinding) or [B65H 54/543](#) (winding).

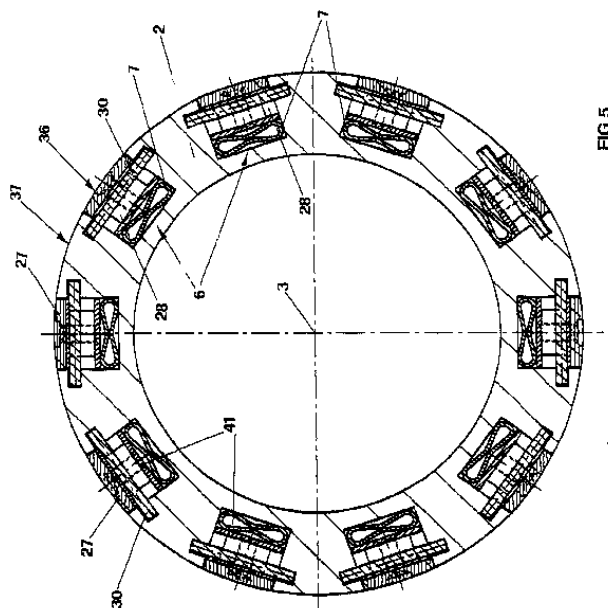
B65H 75/243

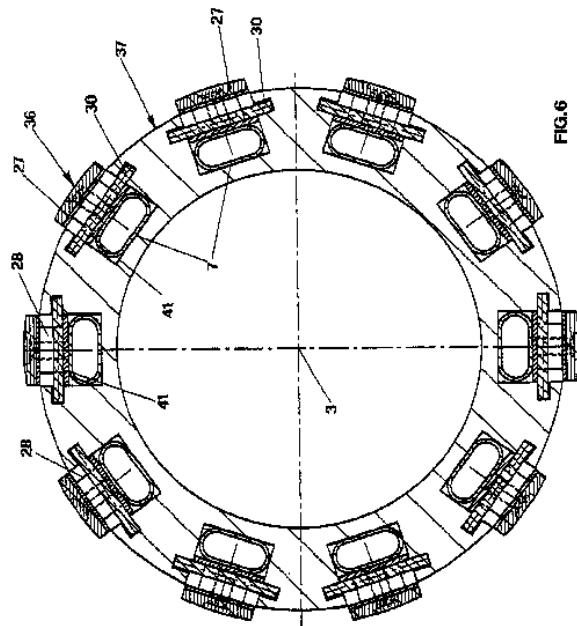
{actuated by use of a fluid}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:





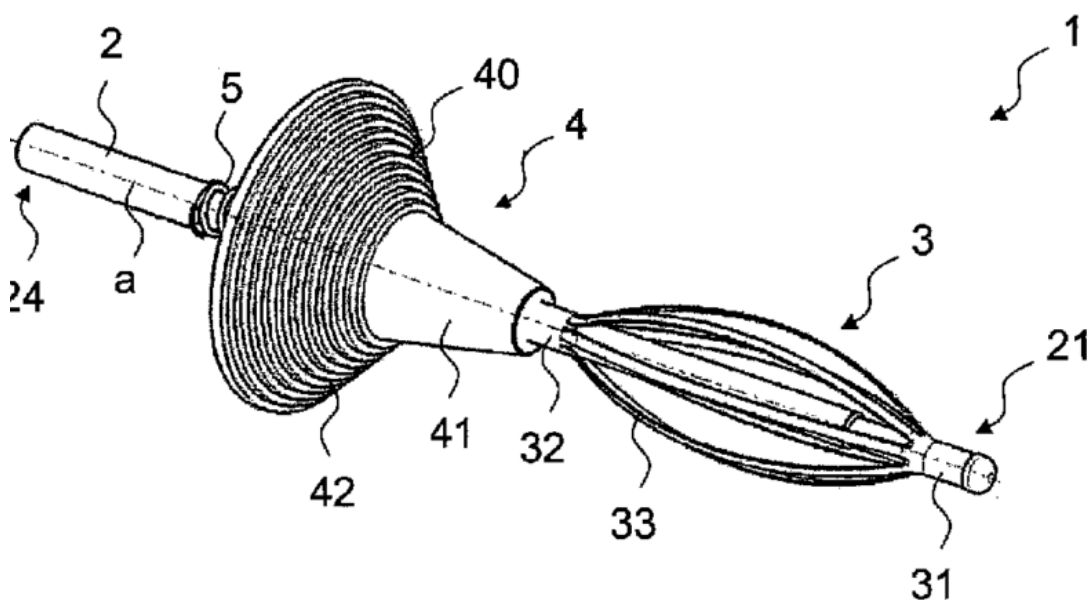
B65H 75/245

{by deformation of an elastic or flexible material ([B65H 75/2437](#) takes precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Expansible spindles, mandrels or chucks comprising a fluid pressure actuated elastic member, e.g. a diaphragm or a pneumatic tube

B65H 75/2437

B65H 75/2455

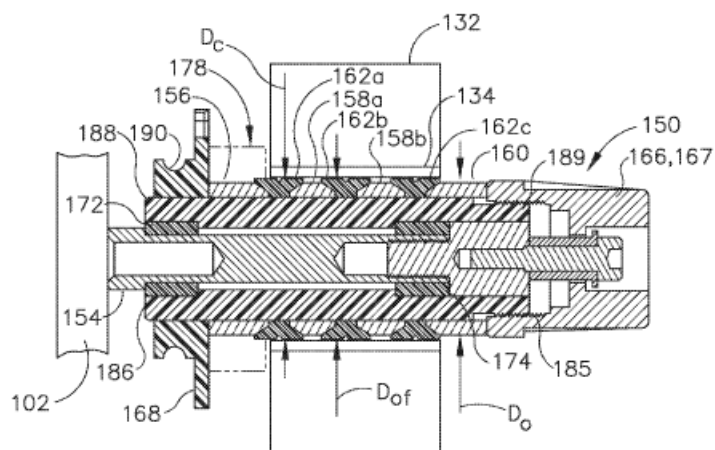
{deformation resulting from axial compression of elastic or flexible material}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

Pressure applied by adjustment member (166) to outer ring (160) increases the diameter of expansion rings (162a,b,c) to secure reel (132):



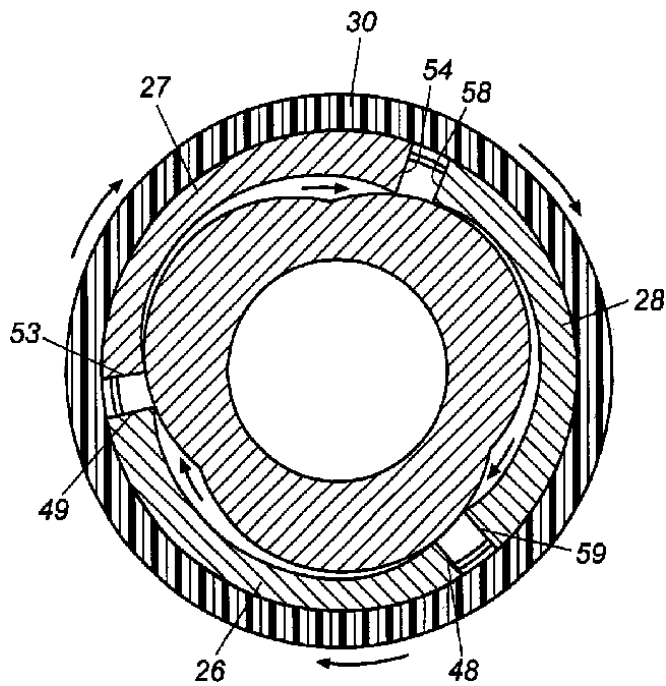
B65H 75/246

{expansion caused by relative rotation around the supporting spindle or core axis}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



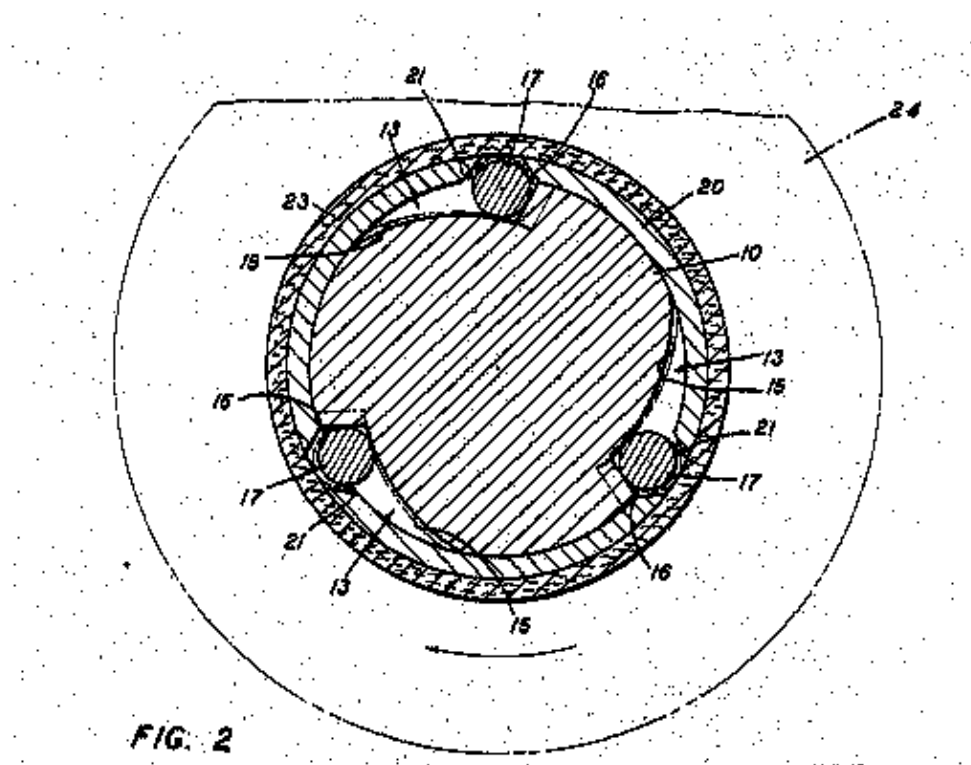
B65H 75/247

{using rollers or rods moving relative to a wedge or cam surface}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



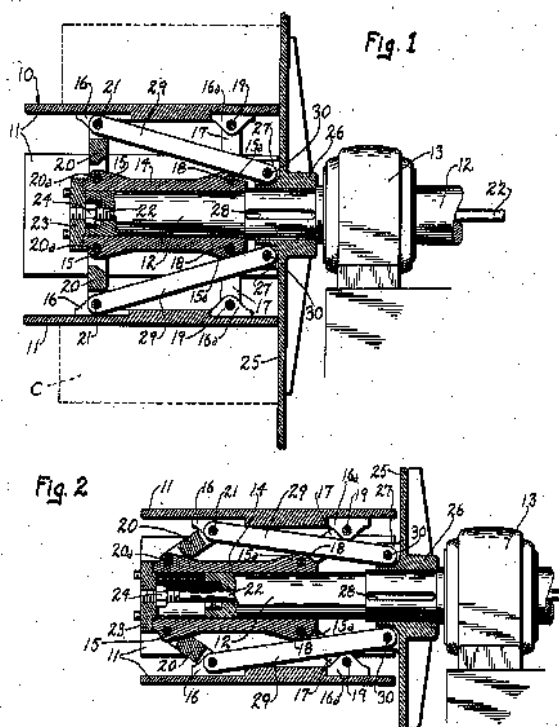
B65H 75/248

{expansion caused by actuator movable in axial direction}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 75/2487

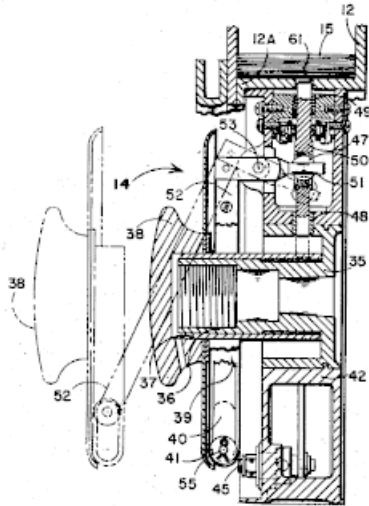
{comprising a linkage}

Definition statement

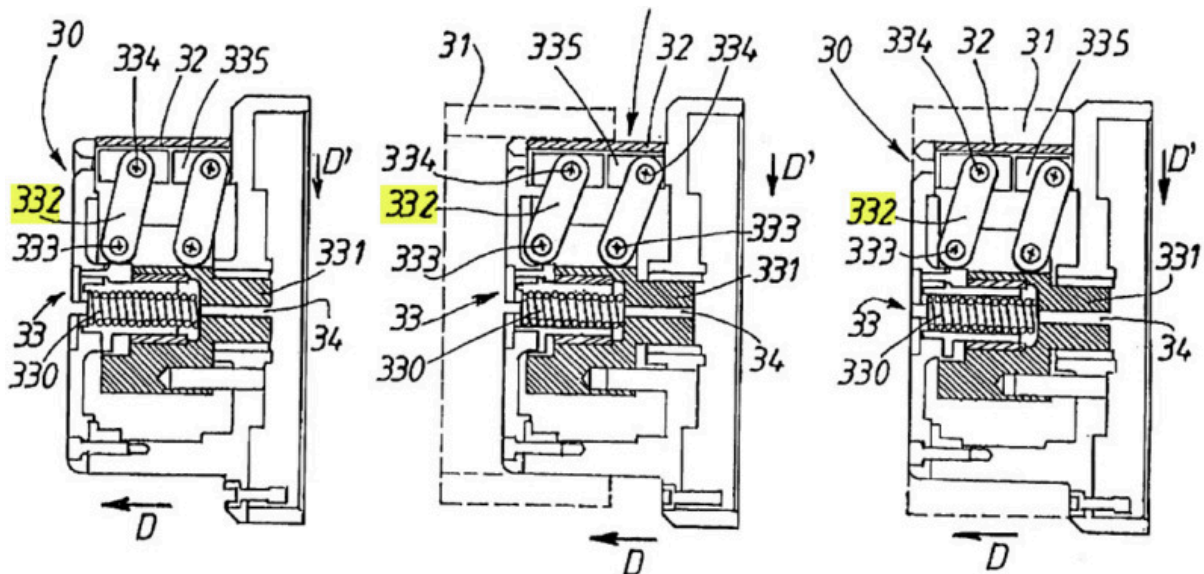
This place covers:

Illustrative example of subject matter classified in this group:

Actuator (38) moves axially and operates linkage (52) and toggle drive link (47) to engage reel (12):



Linkage mechanism (332) in figure below.



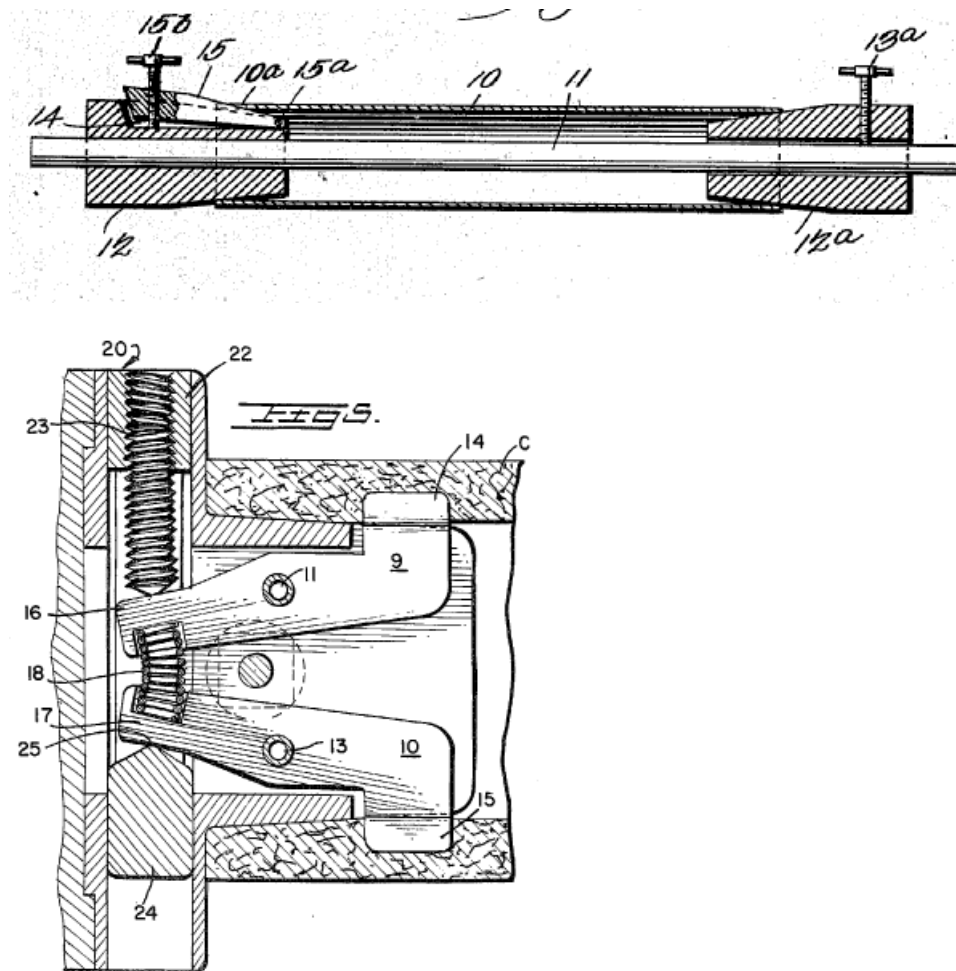
B65H 75/249

{expansion caused by actuator movable in direction perpendicular to or about the axis ([B65H 75/243](#) – [B65H 75/2487](#) take precedence)}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Limiting references

This place does not cover:

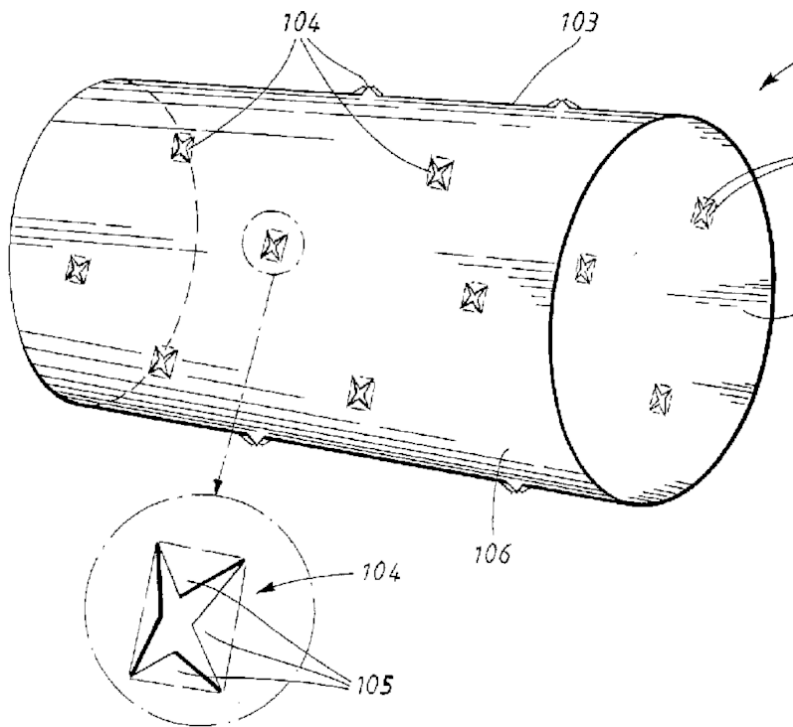
Expansible spindles, mandrels or chucks: actuated by use of a fluid, by deformation of an elastic or flexible material, by relative rotation around the supporting axis, or by actuator movable in axial direction

[B65H 75/243](#)
-[B65H 75/2487](#)

B65H 75/26**Arrangements for preventing slipping of winding****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



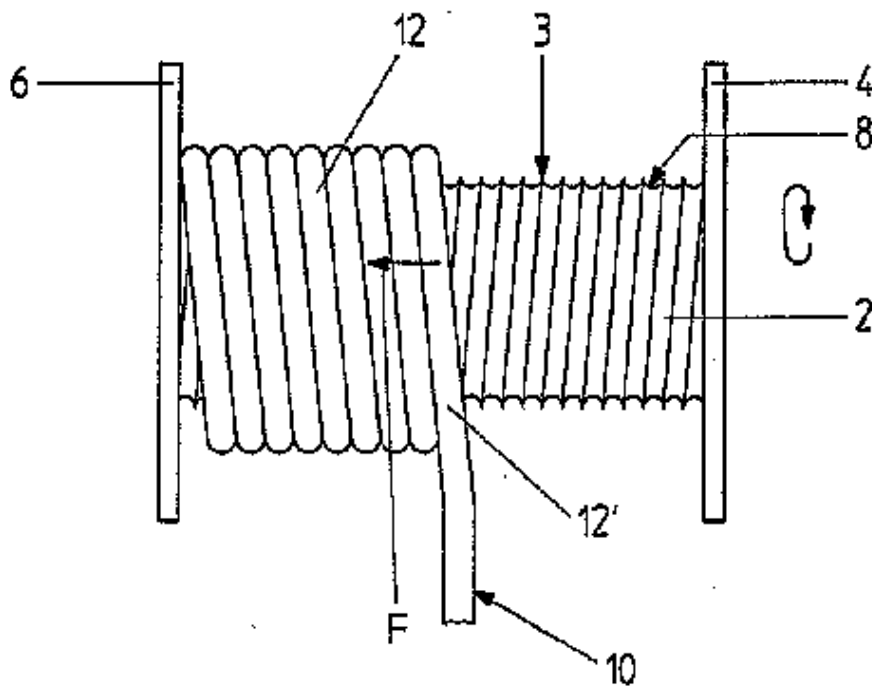
B65H 75/265

{Reels with grooves or grooved elements inhibiting aligned or orderly winding}

Definition statement

This place covers:

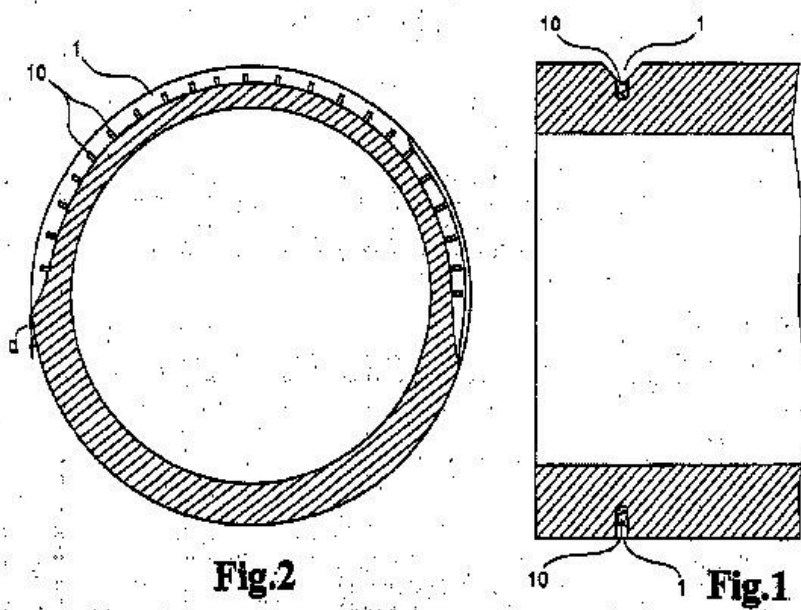
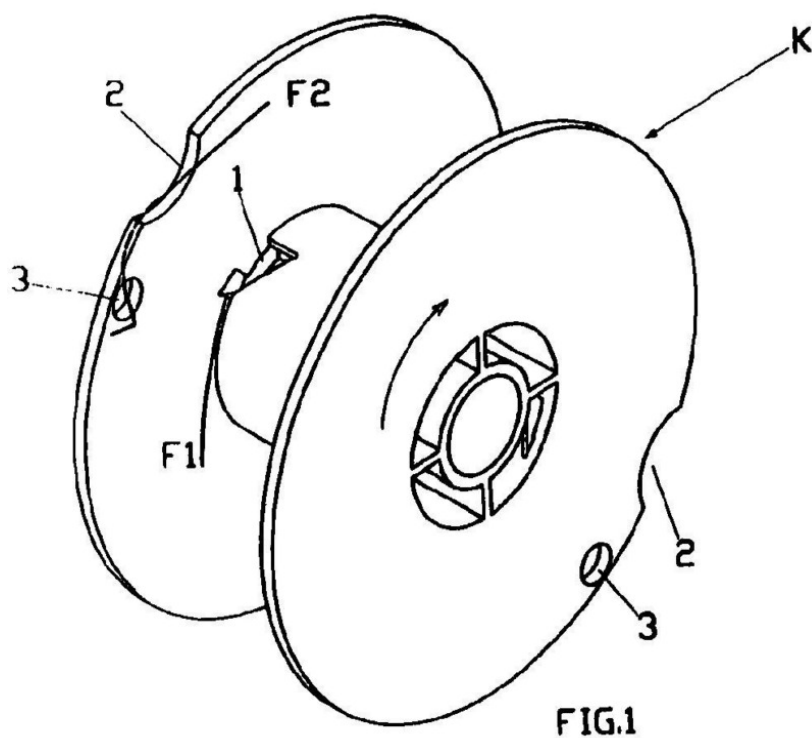
Illustrative example of subject matter classified in this group:

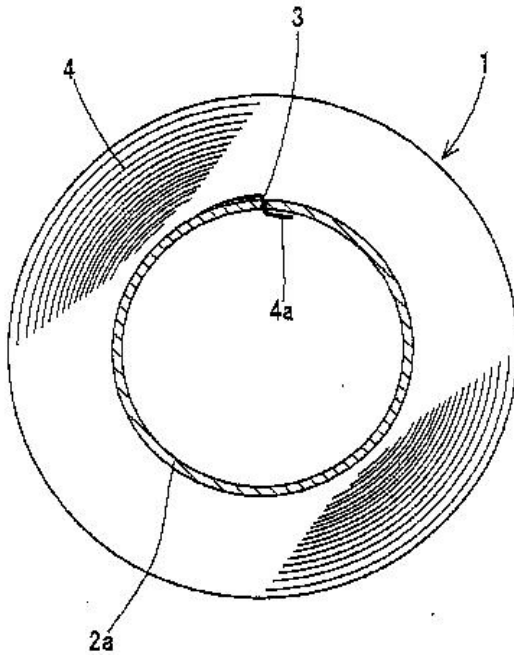


B65H 75/28**Arrangements for positively securing ends of material****Definition statement**

This place covers:

Securing the start or end of the material (filamentary, web).





B65H 75/285

{Holding devices to prevent the wound material from unwinding}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:

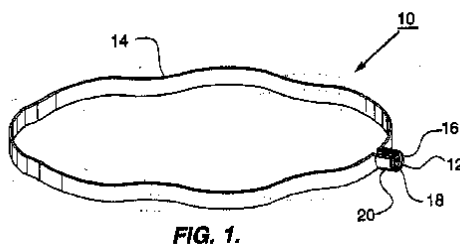


FIG. 1.

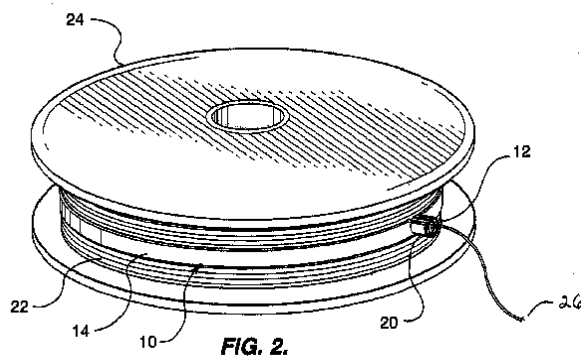
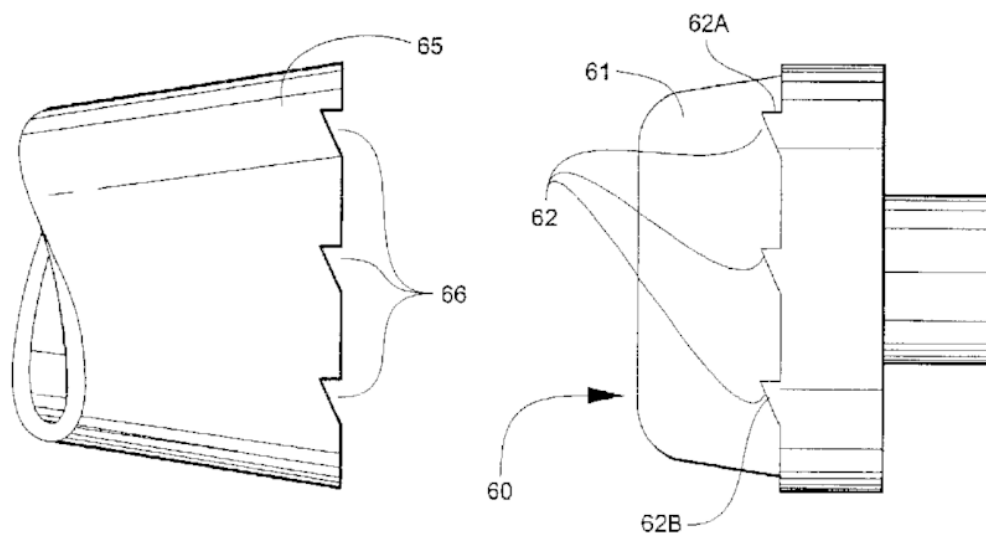


FIG. 2.

B65H 75/30**Arrangements to facilitate driving or braking****Definition statement**

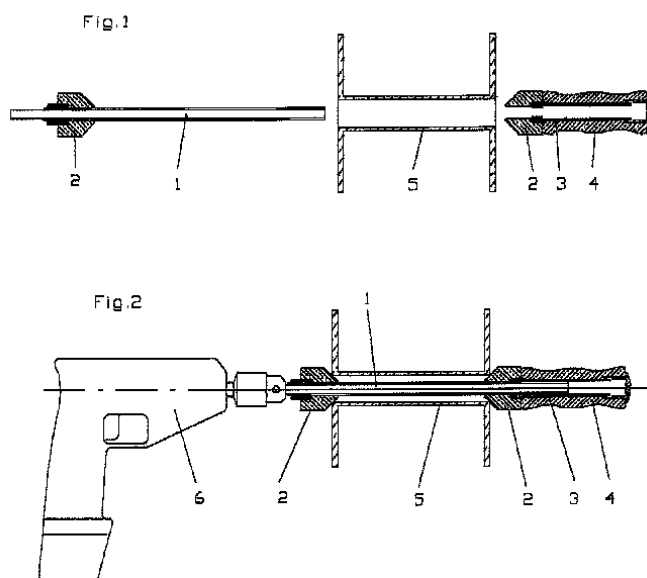
This place covers:

Illustrative example of subject matter classified in this group:

**B65H 75/305****{Arrangements to facilitate driving by a portable drill}****Definition statement**

This place covers:

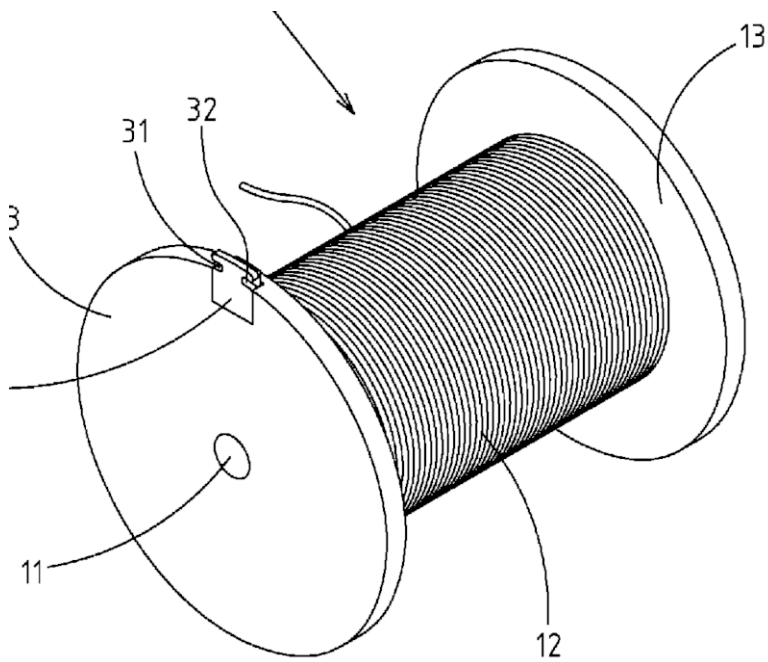
Illustrative example of subject matter classified in this group:



B65H 75/32**Arrangements to facilitate severing of material****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:

**B65H 75/34**

especially adapted or mounted for storing and repeatedly paying-out and re-storing lengths of material provided for particular purposes, e.g. anchored hoses, power cables (retractors for storing flexible hoses as accessories of dental work stands [A61G 15/18](#); vehicle safety belt retractors [B60R 22/34](#); hose-storing devices in apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or portable containers [B67D 7/40](#); clothes-line supports [D06F 53/00](#); spring drums for liftable blinds with horizontal lamellae [E06B 9/322](#); spring drums or tape drums for roll-type closures or roller blinds [E06B 9/56](#); hauling- or hoisting-chains with arrangements for holding electric cables, hoses or the like [F16G 13/16](#); devices for guiding pipes, cables or protective tubing, between relatively movable points, e.g. movable channels, [F16L 3/01](#); flexible rulers or tapes with scales [G01B 3/10](#); electrical features of stored material, see the relevant subclasses, e.g. [H02G](#))

Definition statement

This place covers:

Devices for repeatedly winding and unwinding in which the application in a specific field is of main interest without further interesting details about the device per se.

References

Limiting references

This place does not cover:

Fishing reels	A01K 89/00
Retractors for storing flexible hoses as accessories of dental work stands	A61G 15/18
Vehicle safety belt retractors	B60R 22/34
Winches	B66D 1/00
Hose storing devices in apparatus or devices for transferring liquids from bulk storage containers or reservoirs into vehicles or portable containers	B67D 7/40
Clothes-line supports	D06F 53/00
Spring drums for liftable blinds with horizontal lamellae	E06B 9/322
Spring drums or tape drums for roll-type closures or roller blinds	E06B 9/56
Hauling or hoisting-chains with arrangements for holding electrical cables, hoses or the like	F16G 13/16
Jumbo reels on pipe laying vessels	F16L 1/203
Devices for guiding pipes, cables or protective tubing, between relatively movable points, e.g. movable channels	F16L 3/01
Flexible rulers or tapes with scales	G01B 3/10
Electrical features of stored material, see the relevant subclasses, e.g.	H02G

Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for guiding or supporting cables in mowers	A01D 34/822
Winch driven watering arrangements, e.g. for watering gardens, sport grounds	A01G 25/095
Retractable leashes, e.g. for dogs	A01K 27/001
Shoe lace tighteners	A43C 7/00
Holders for carriers for hand articles	A45F 5/00
Fire Hose Reels	A62C 33/04
Cord line chalkers	B44D 3/38
Tow ropes	B60D 1/18
Air supply for tyre inflation	B60S 5/04
Waterski winches	B63B 34/67
Cast or safe lines	B63C 9/26
Communication means for working underwater	B63C 11/26
Cable slack preventing in cranes	B66C 13/10
Flexible barrier members	E01F 13/028
Wheeled apparatus for emptying sewers	E03F 7/10
Cleaning sewers	E03F 9/005
Padlocks	E05B 67/006

Handling reeled pipe or rod units, e.g. flexible drilling pipes	E21B 19/22
In lighting devices	F21V 21/00 , F21V 27/00
Storing optical elements	G02B 6/444 , G02B 6/4457
Holders for films	G03B 21/321 , G03D 13/02
Information storage	G11B 23/02 , G11B 23/04
Connectors	H01R 13/72
Installing electrical cables	H02G 1/00
Arrangements of cables between relatively movable parts	H02G 11/00
Winding cord in general	H02G 11/02
Protection of telephone cord; Guiding telephone cord; Winding-up telephone cord	H04M 1/15

Special rules of classification

Devices for repeatedly winding and unwinding without essentially involving a core or former internal to a stored package are classified in [B65H 75/36](#) and subgroups.

Devices for repeatedly winding and unwinding involving a core or former internal to a stored package are classified in [B65H 75/38](#) and subgroups

Devices for repeatedly winding and unwinding in which the application in a specific field is of main interest without further interesting details about the device per se are only classified in [B65H 75/34](#).

Stackable reels are additionally classified in [B65H 2701/534](#).

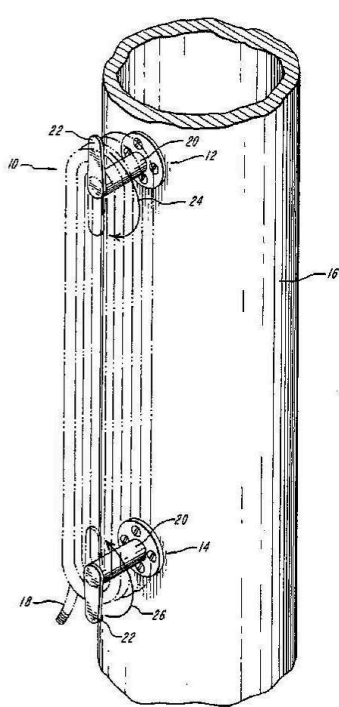
B65H 75/36

without essentially involving the use of a core or former internal to a stored package of material, e.g. with stored material housed within casing or container, or intermittently engaging a plurality of supports as in sinuous or serpentine fashion

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



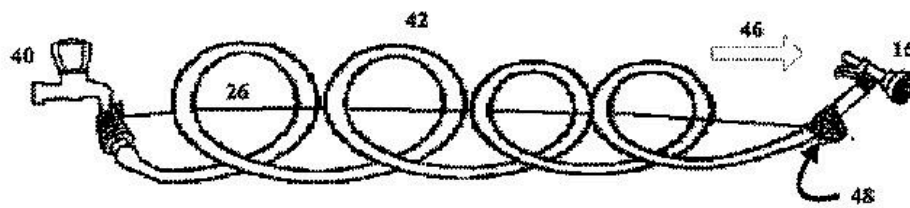
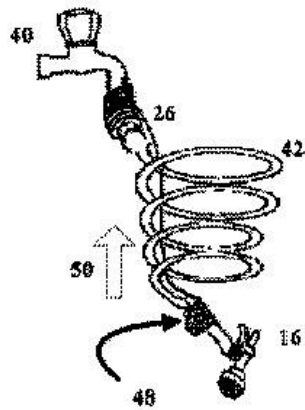


Figure 9



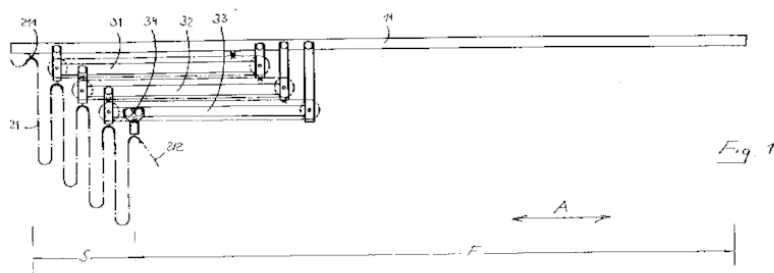


Fig. 1

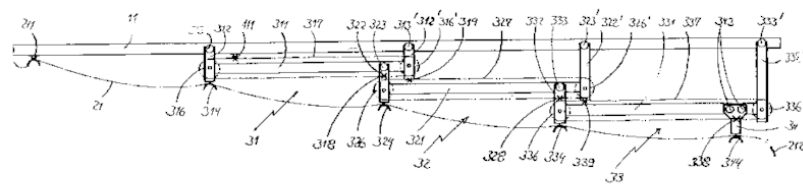


Fig. 2

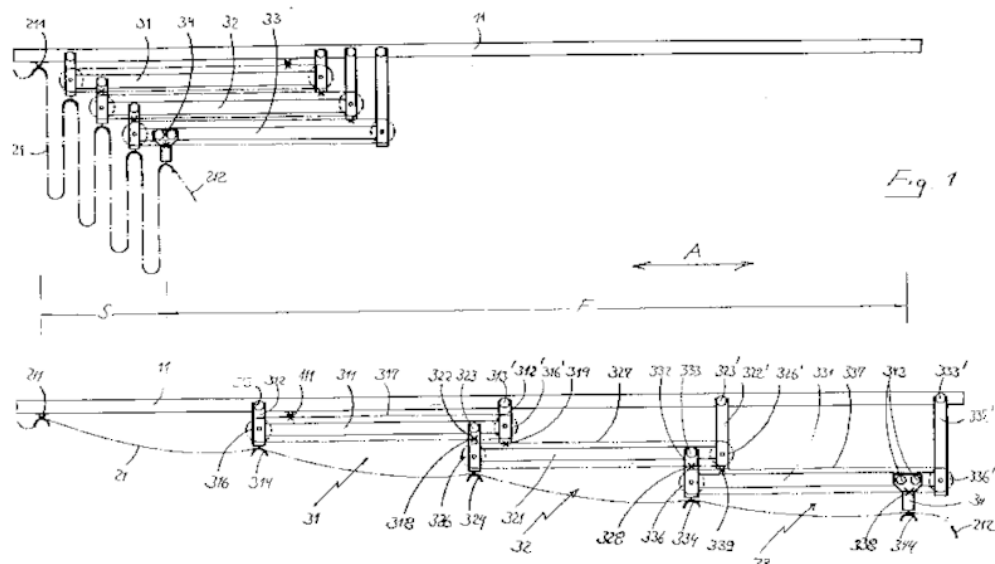


Fig. 1



Fig. 2

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Flat cores	B65H 75/06
Optical fiber surplus length storage	G02B 6/444

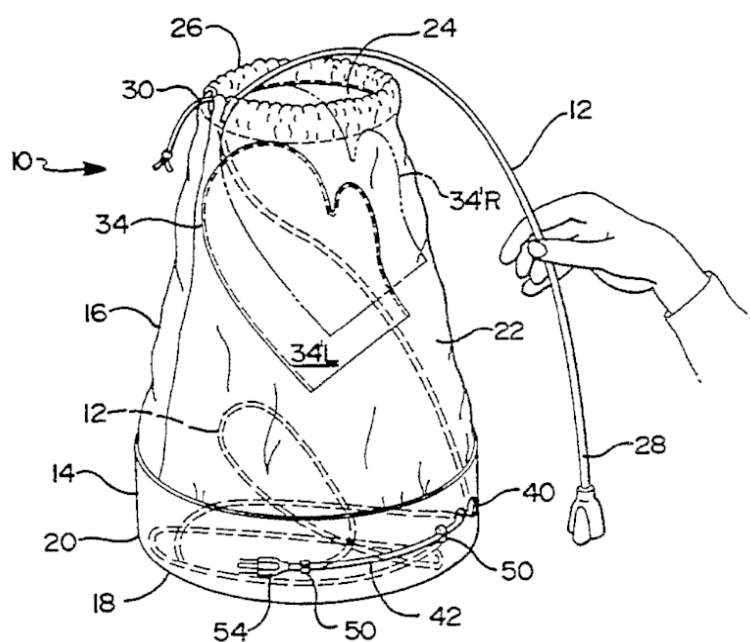
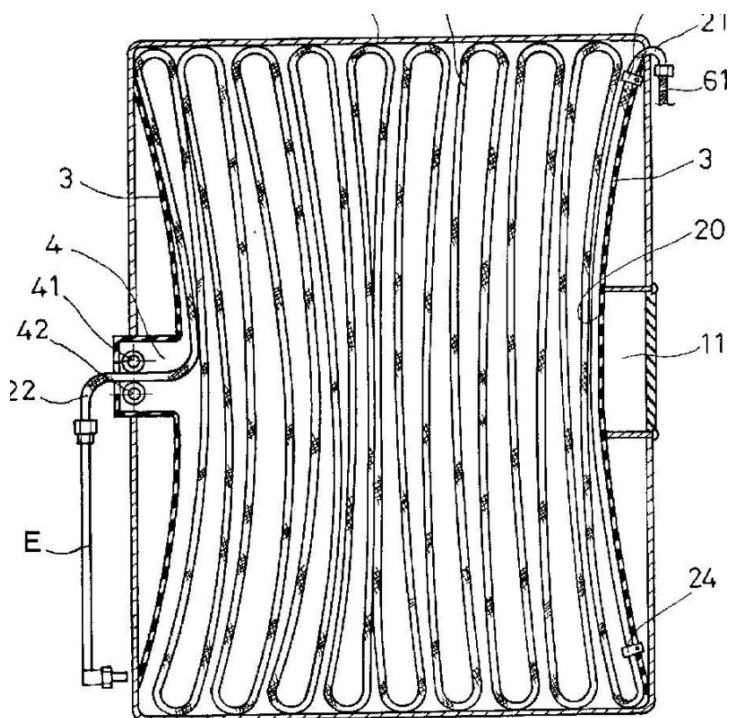
B65H 75/362

{with stored material housed within a casing or container (**B65H 75/368** takes precedence)}

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Limiting references

This place does not cover:

With pulleys around which the material is wrapped	B65H 75/368
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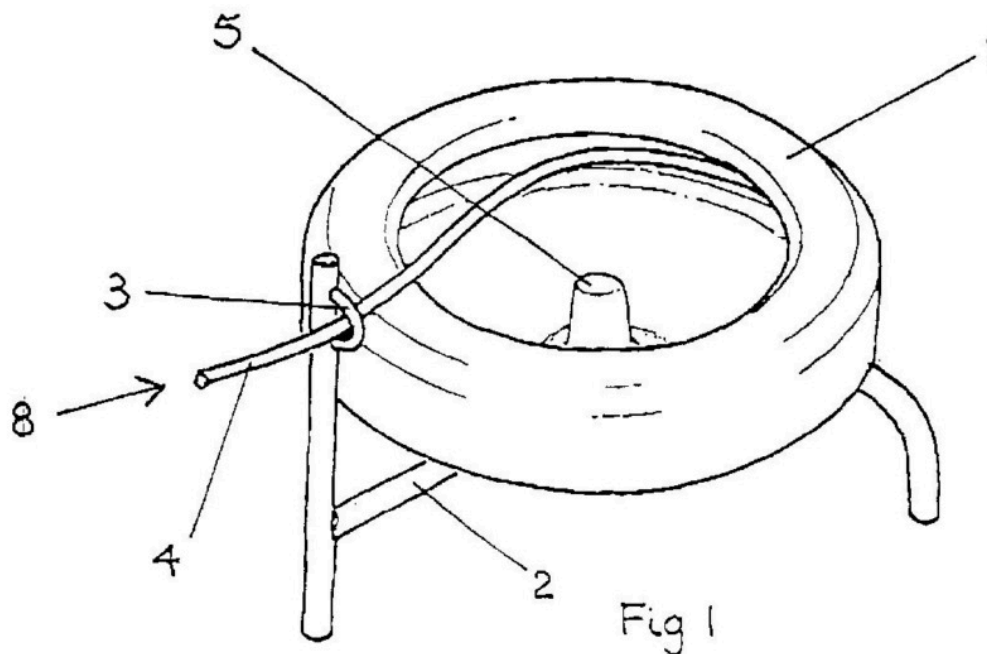
B65H 75/364

{the stored material being coiled}

Definition statement

This place covers:

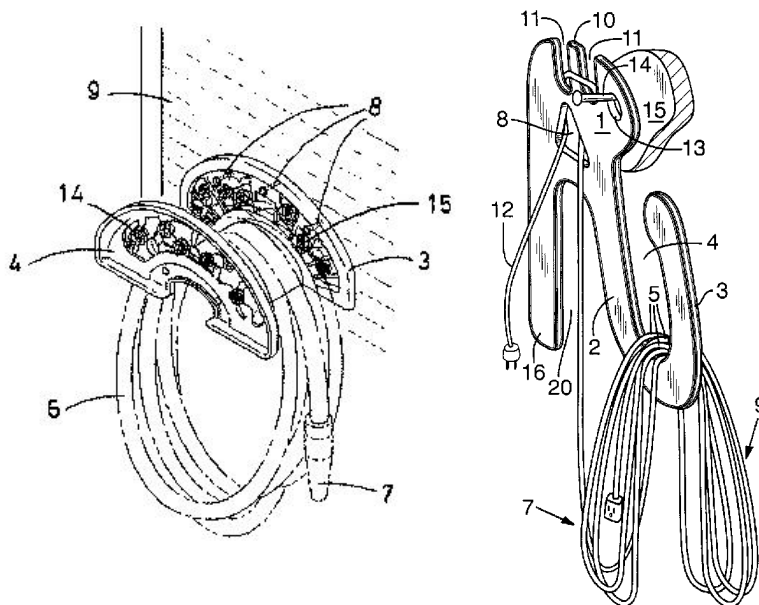
Illustrative examples of subject matter classified in this group:



{with stored package of material loosely hanging on a support, e.g. a hose hanger}

This place covers:

Illustrative examples of subject matter classified in this group:



With additional support for the lower part of the coil classify in [B65H 75/36](#)

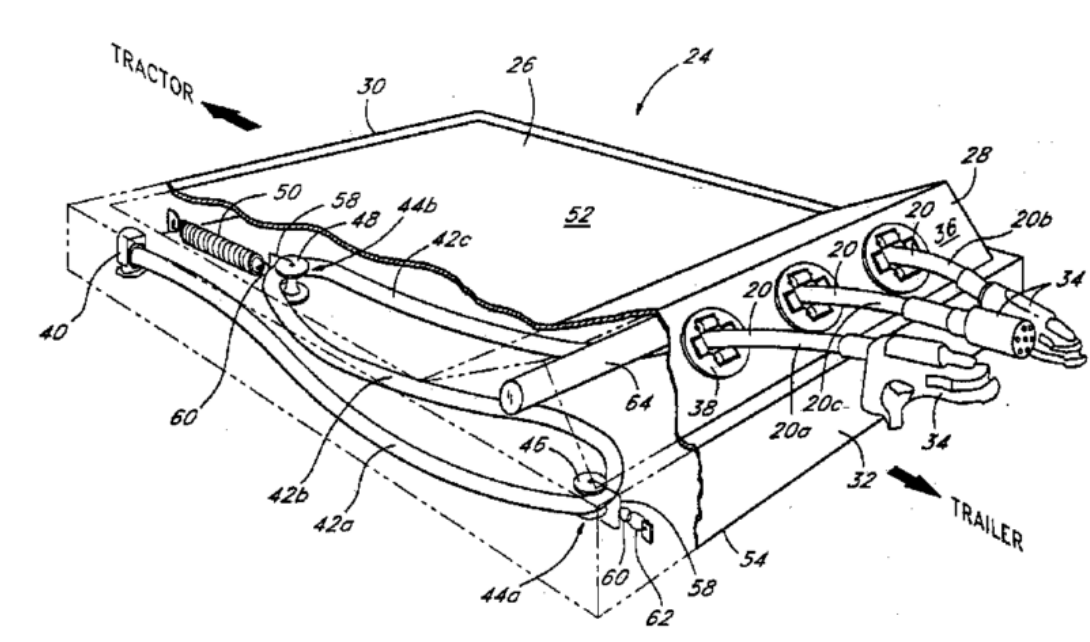
B65H 75/368

{with pulleys}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



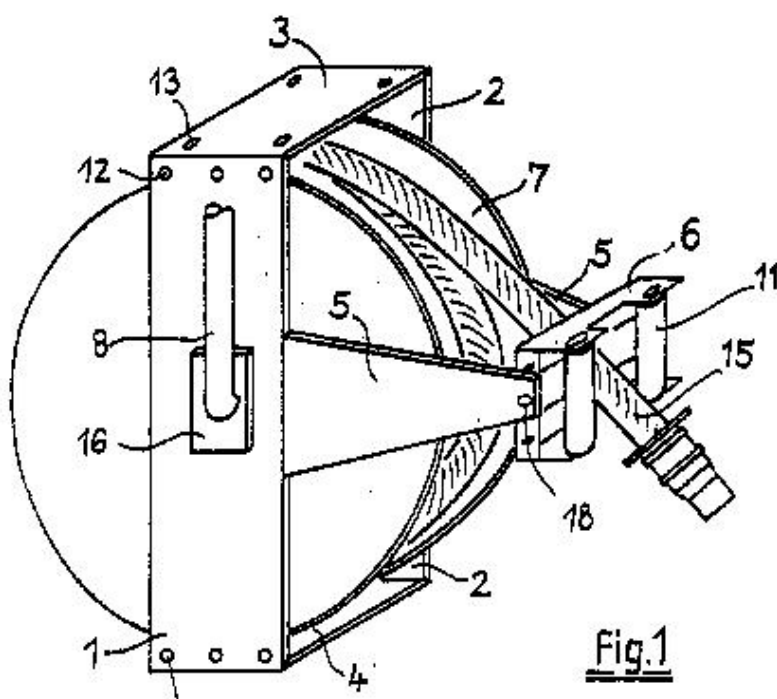
B65H 75/38

involving the use of a core or former internal to, and supporting, a stored package of material

Definition statement

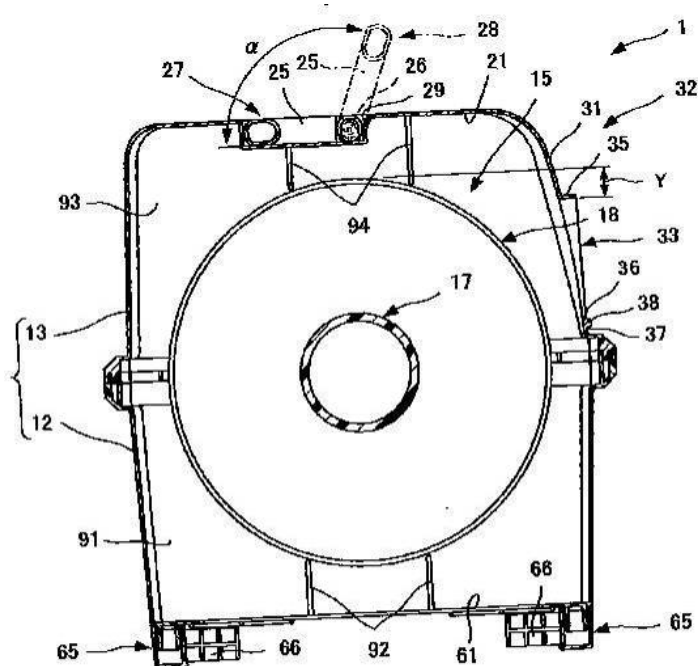
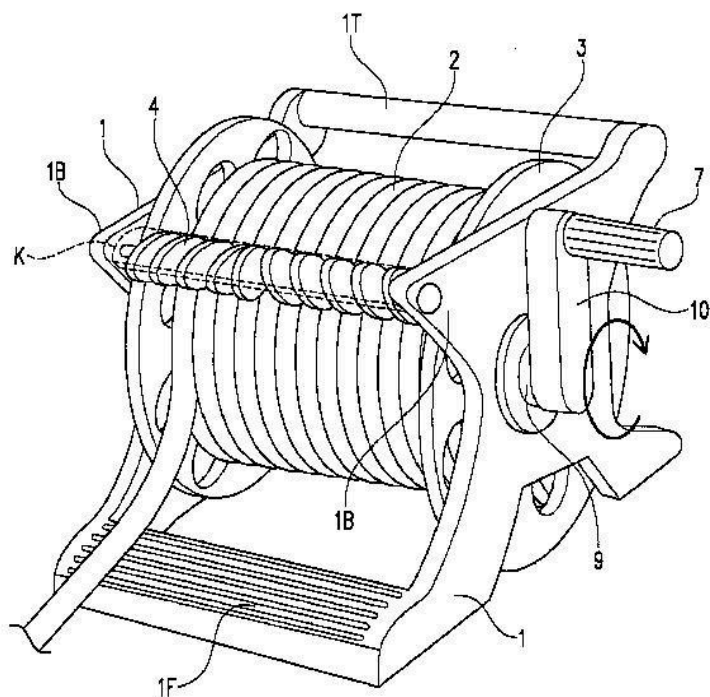
This place covers:

E.g. non-movable cable or hose reels.



B65H 75/40**mobile or transportable****Definition statement***This place covers:*

Reels that are manually mobile or transportable, e.g. hose reel carts. Contains in general reels on a wheeled manually manoeuvrable carriages.



Relationships with other classification places

Reels attached to or forming part of cars, trucks, trailers, boats and reels forming part of mobile tools, such as electrical appliances: [B65H 75/42](#).

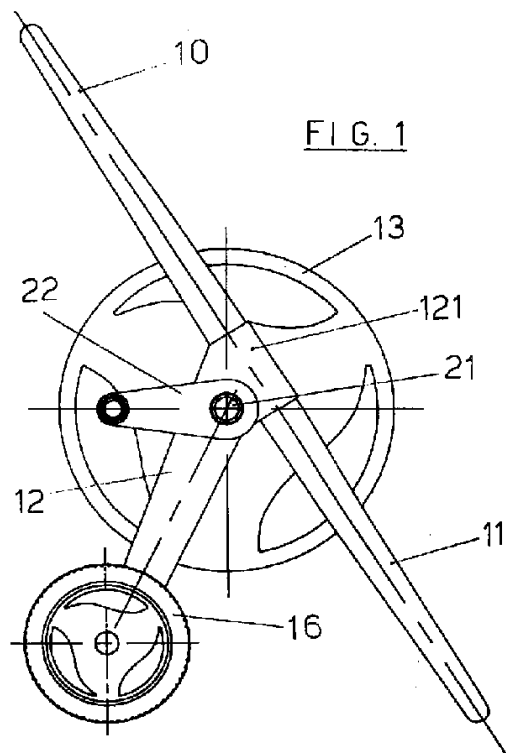
B65H 75/403

{Carriage with wheels}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



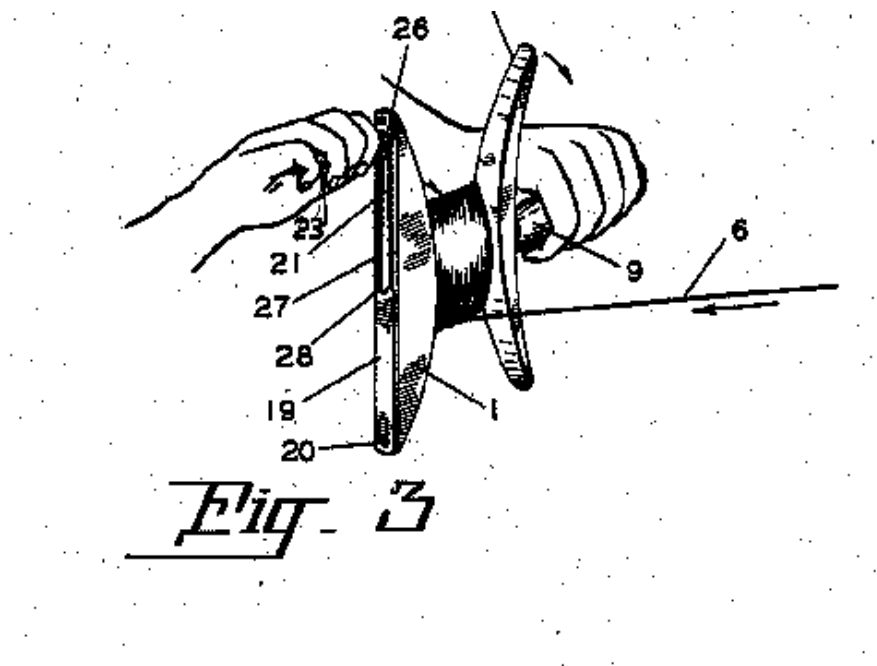
B65H 75/406

{hand-held during use ([B65H 75/48](#), [B65H 75/4473](#) take precedence)}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Limiting references

This place does not cover:

Automatic restoring devices (by spring)	B65H 75/48
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Retractable leashes, e.g. for dogs	A01K 27/001
Hand-held fishing apparatus	A01K 89/08
Means for manipulating kiteline	A63H 27/002

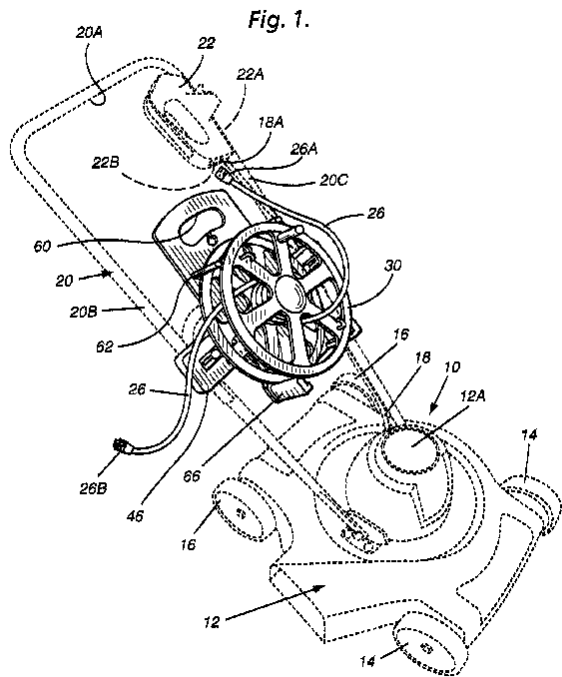
B65H 75/42

attached to, or forming part of, mobile tools, machines or vehicles

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Winding devices in a suction cleaner	A47L 9/26
--------------------------------------	---------------------------

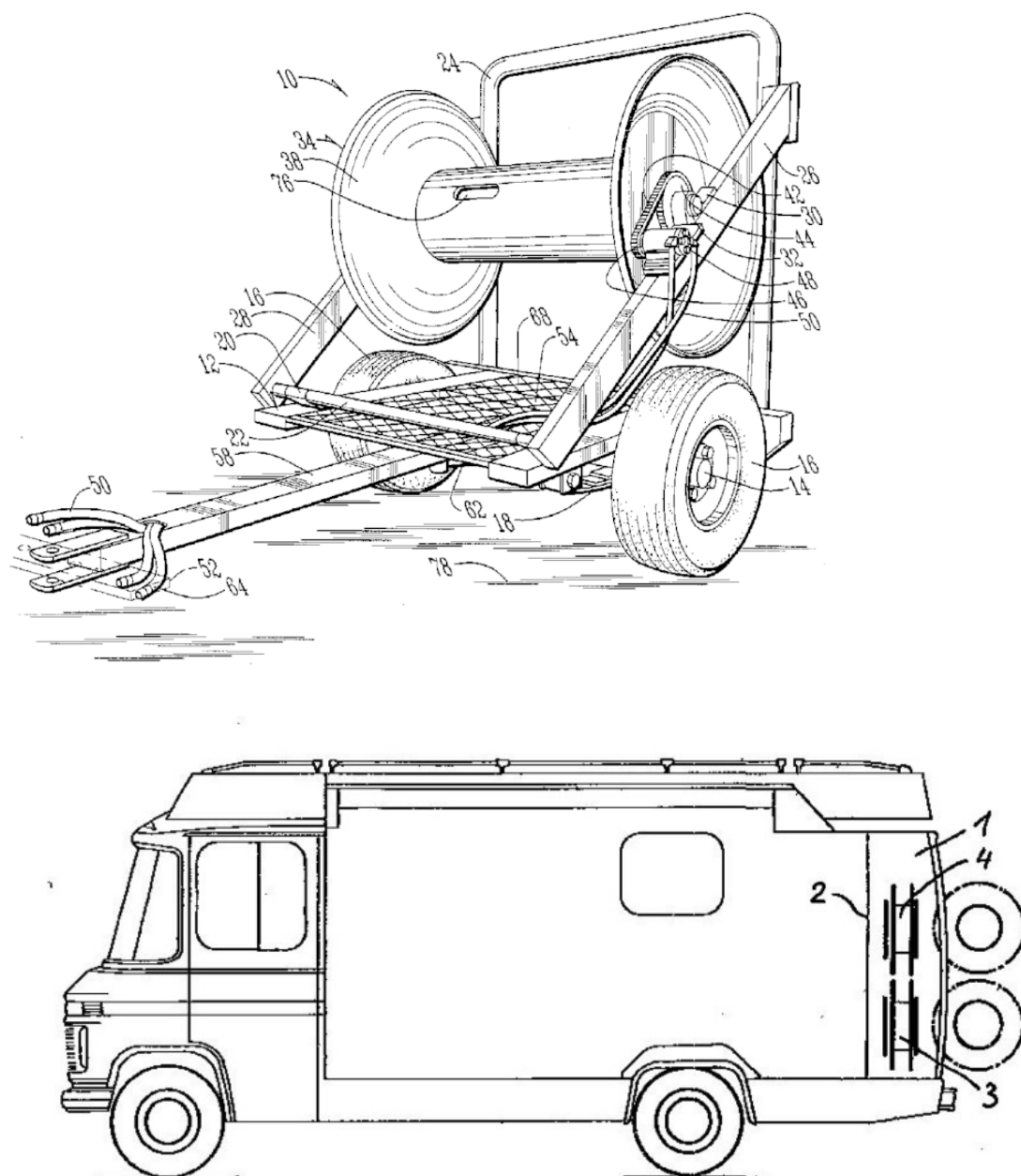
B65H 75/425

{attached to, or forming part of a vehicle, e.g. truck, trailer, vessel}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 75/44

Constructional details

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Winding/unwinding machines with particular frame	242/398 (USPC)
--	----------------

Special rules of classification

If a constructional detail which is not covered by subgroups [B65H 75/4402](#) – [B65H 75/486](#) is of relevance, symbol [B65H 75/44](#) can be used provided that the document is also classified in one of the subgroups [B65H 75/38](#) - [B65H 75/425](#). Multiple constructional details may be classified.

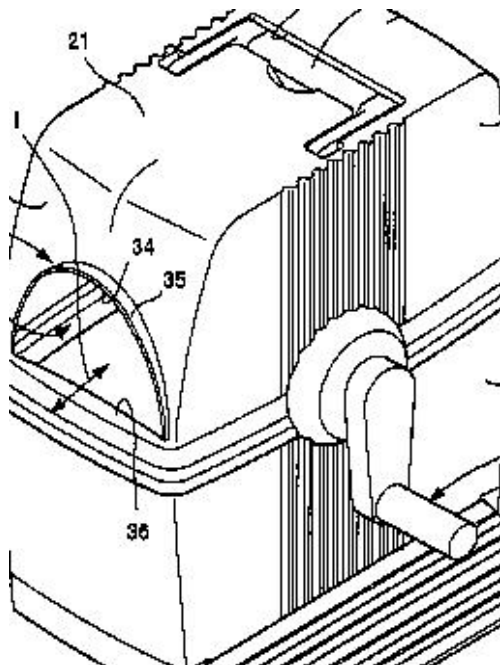
B65H 75/4402

{Guiding arrangements to control paying-out and re-storing of the material
(guides per se [B65H 57/00](#))}

Definition statement

This place covers:

Many of the documents relate to fixed guides, the movable traversing guides being classified in one of the subgroups.



Relationships with other classification places

Guides per se: [B65H 57/00](#).

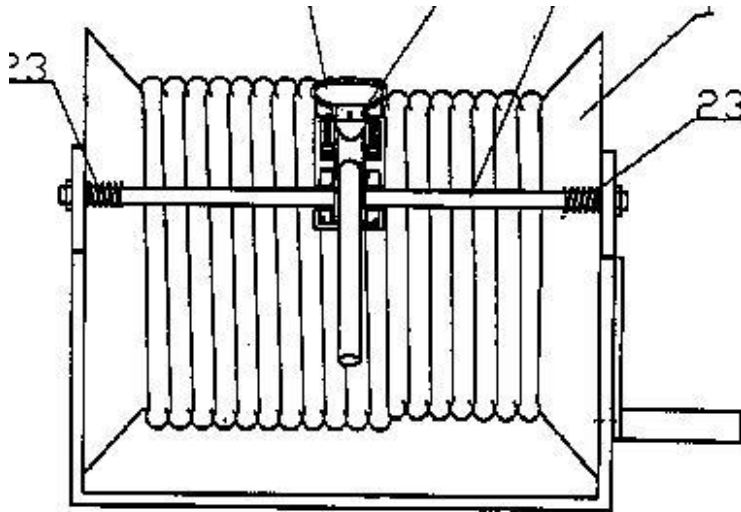
B65H 75/4405

{Traversing devices; means for orderly arranging the material on the drum}

Definition statement

This place covers:

Contains documents in which the guide is moved by the already wound material.



Relationships with other classification places

Traversing per se: [B65H 54/28](#).

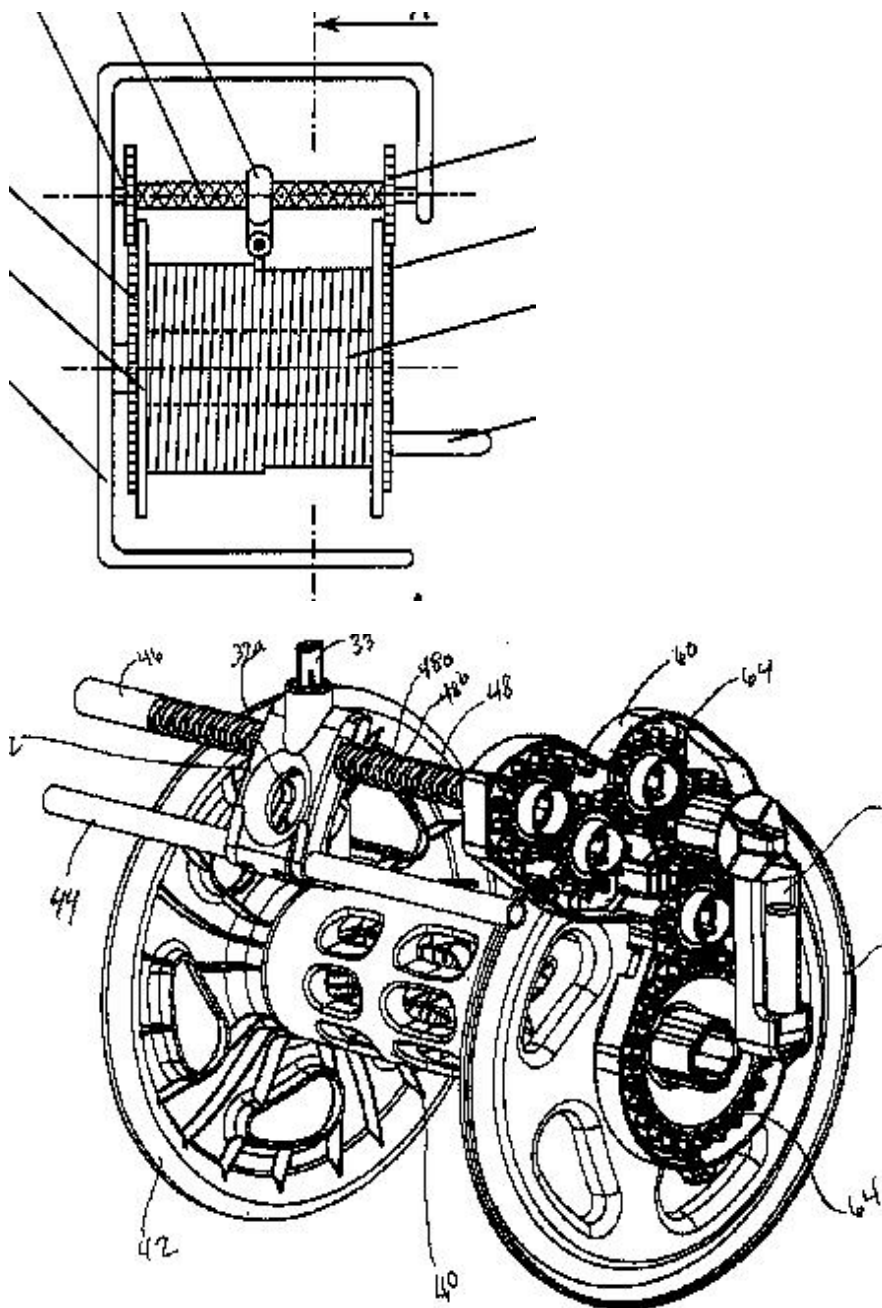
B65H 75/4407

{positively driven, e.g. by a transmission between the drum and the traversing device}

Definition statement

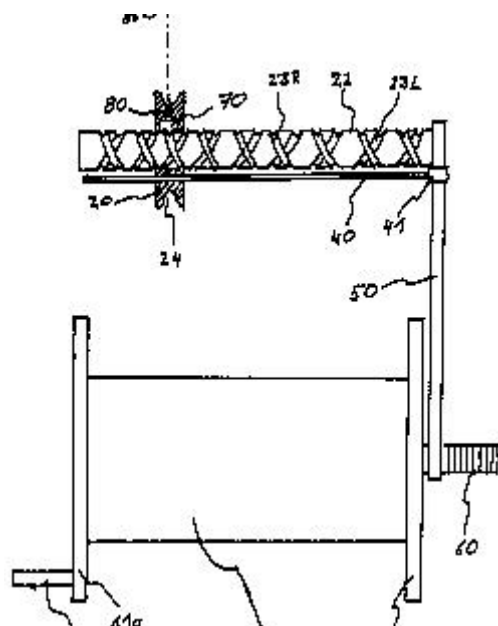
This place covers:

Illustrative example of subject matter classified in this group:



Definition statement

also devices driven by the material being wound



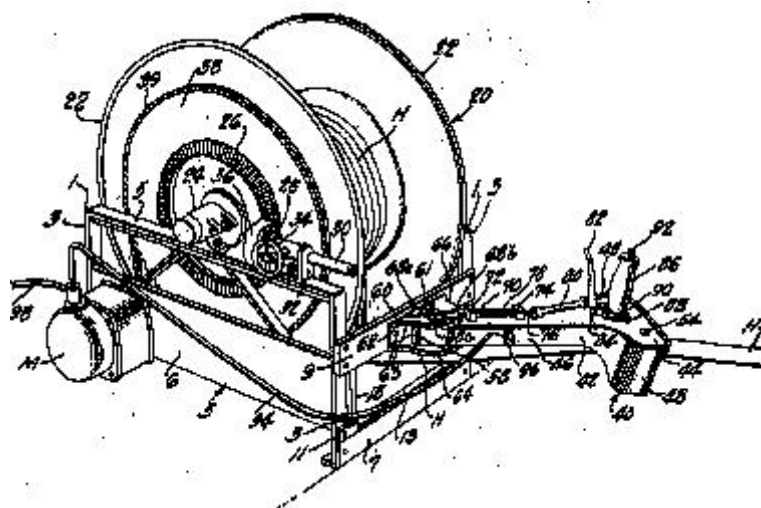
B65H 75/441

{with a handle on the guide for manual operation}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



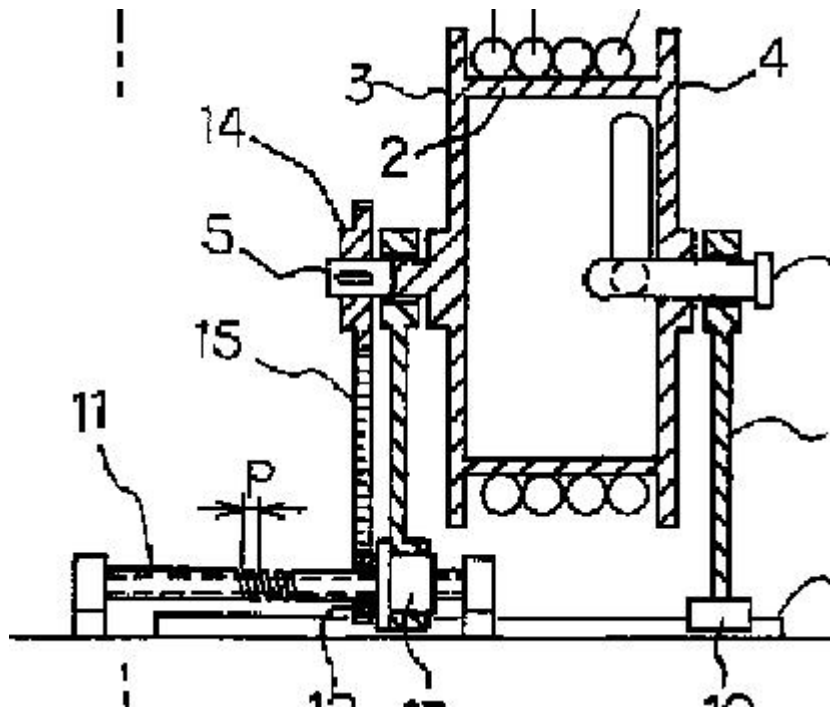
B65H 75/4413

{with a transversely moving drum}

Definition statement

This place covers:

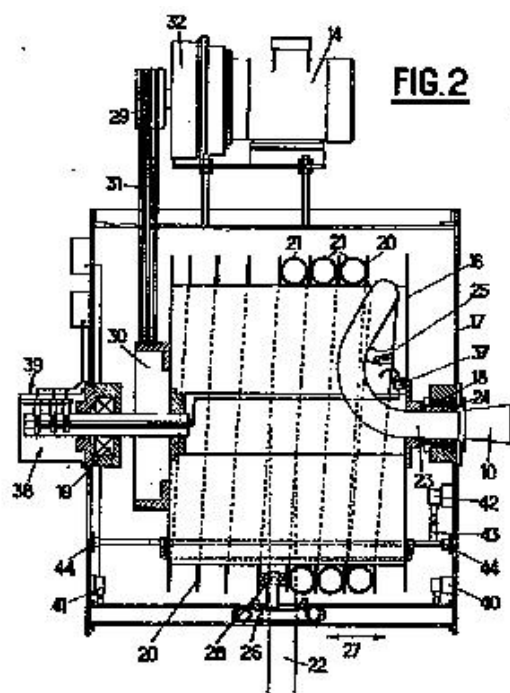
Illustrative example of subject matter classified in this group:



Also documents with a pivoting drum

B65H 75/4415**{Guiding ribs on the drum}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**Relationships with other classification places**Reels with grooves inhibiting aligned or orderly winding: [B65H 75/265](#).

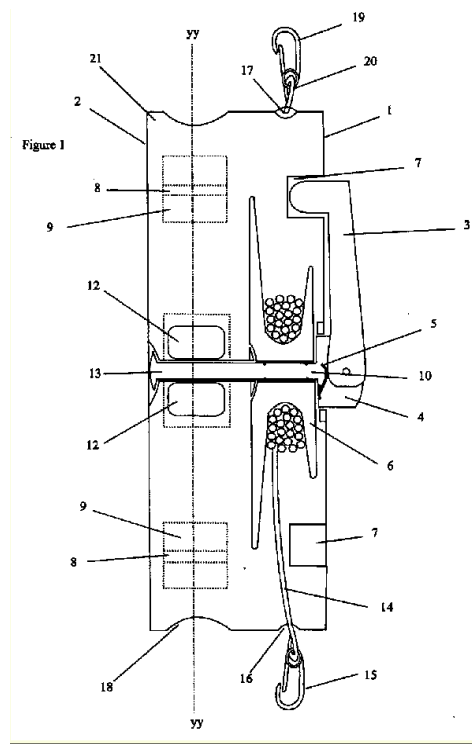
B65H 75/4418

{Arrangements for stopping winding or unwinding; Arrangements for releasing the stop means}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Safety belt with fall arrest reel device	A62B 35/0093
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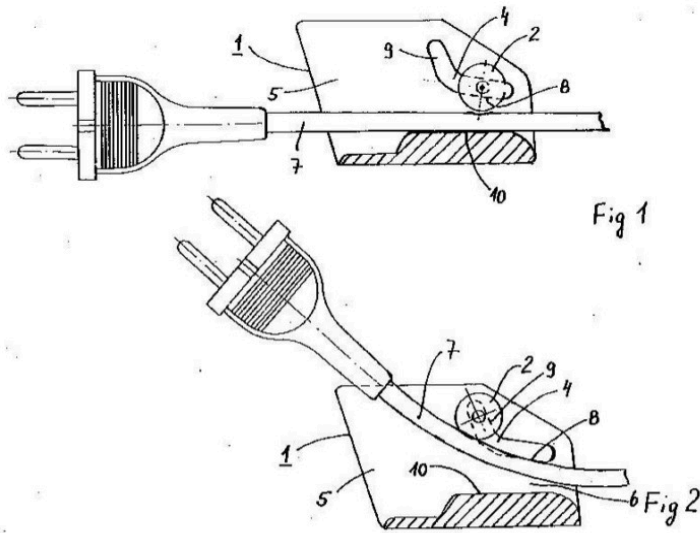
B65H 75/4421

{acting directly on the material}

Definition statement

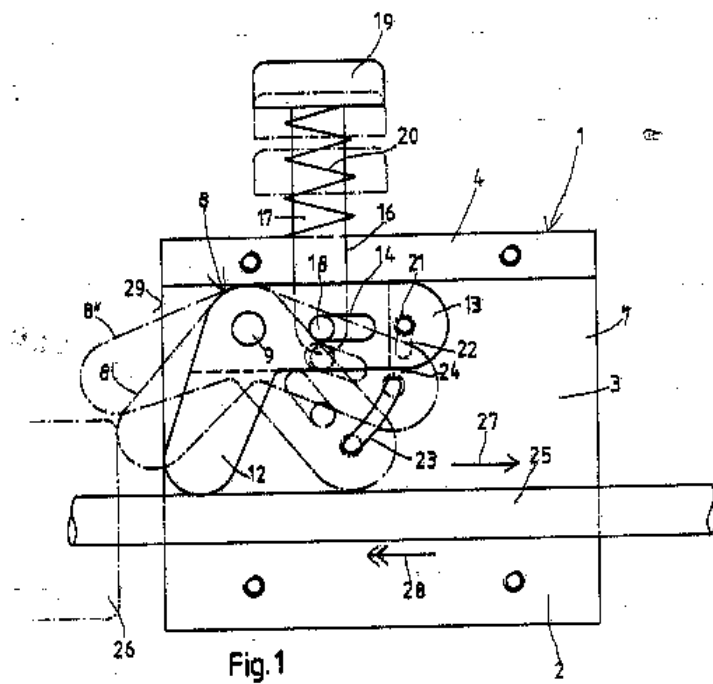
This place covers:

E.g. lock acting on cable and releasable by pulling the cable



B65H 75/4423**{Manual stop or release button}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

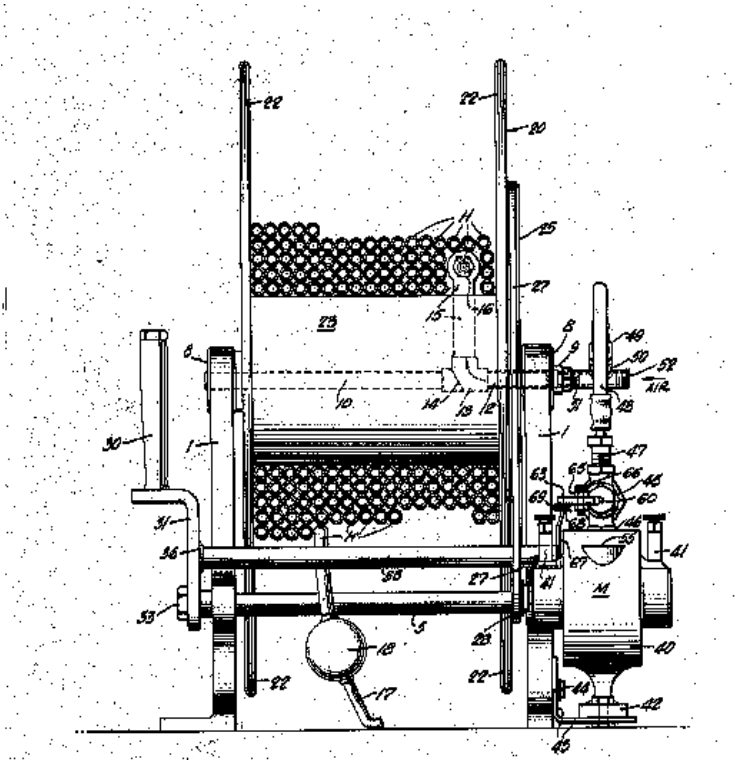


B65H 75/4426

{Stopping at the end of winding or unwinding}

Definition statement

This place covers:
E.g. mechanical stop attached to the end of the hose.



References

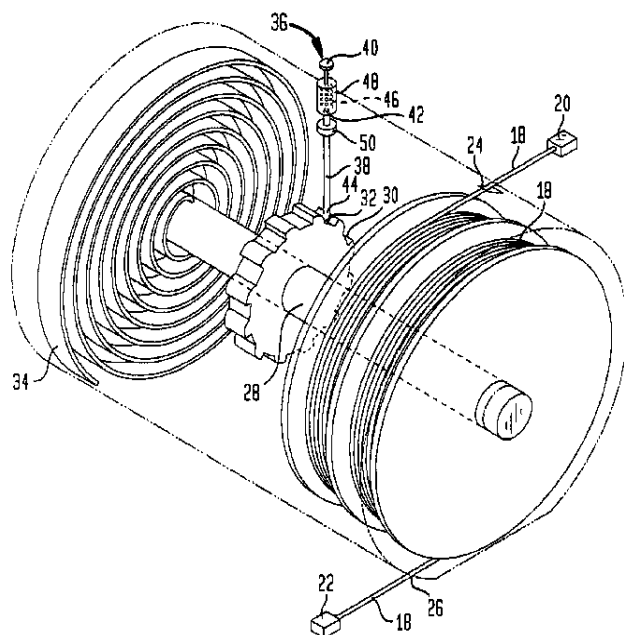
Limiting references

This place does not cover:

Stopping at the end of unwinding by control of the electrical motor	B65H 75/4486
---	------------------------------

B65H 75/4431**{Manual stop or release button}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



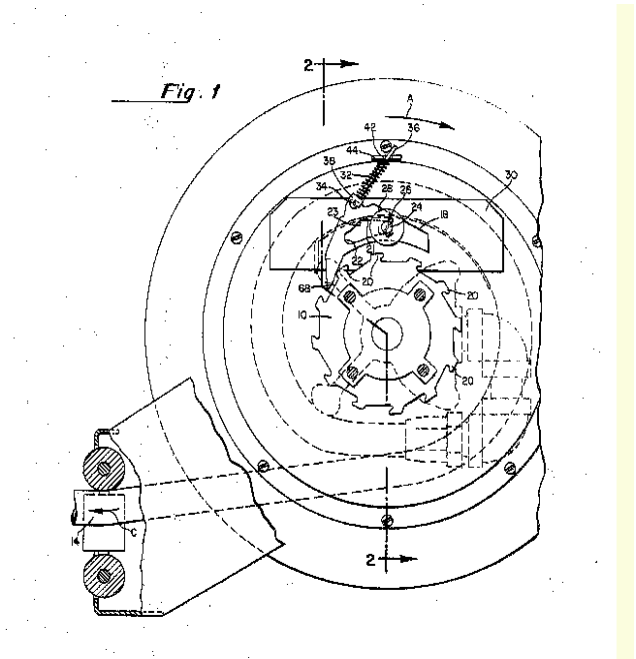
B65H 75/4434

{actuated by pulling on or imparting an inclination to the material}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 75/4436

{Arrangements for yieldably braking the reel or the material for moderating speed of winding or unwinding}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Brake devices for fishing reels	A01K 89/02
Devices for lowering persons with brake mechanism	A62B 1/08
Winding/unwinding machines with brake (US Classification)	242/396

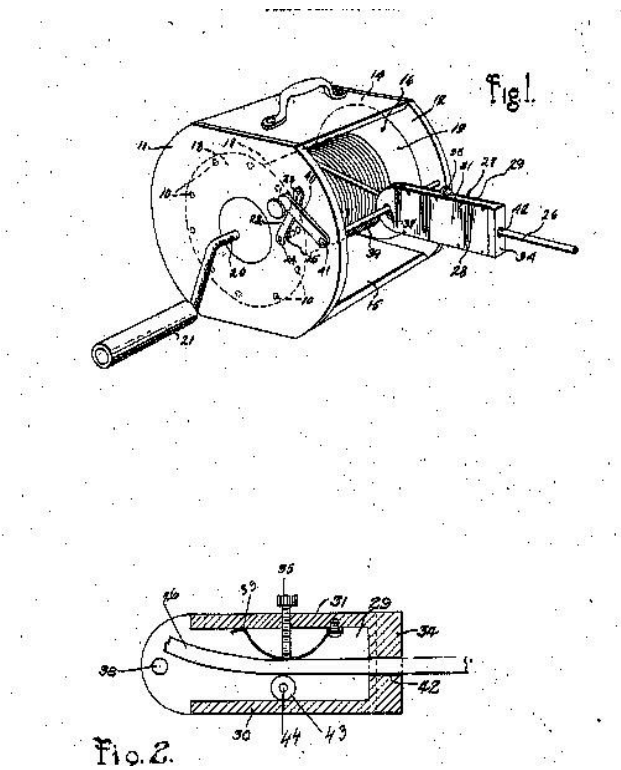
B65H 75/4439

{acting directly on the material}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for lowering persons with brake sliding on the rope	A62B 1/14
---	---------------------------

B65H 75/4442

{acting on the reel}

Definition statement

This place covers:

e.g. electromagnetic or rheological brake operating on the reel.

References

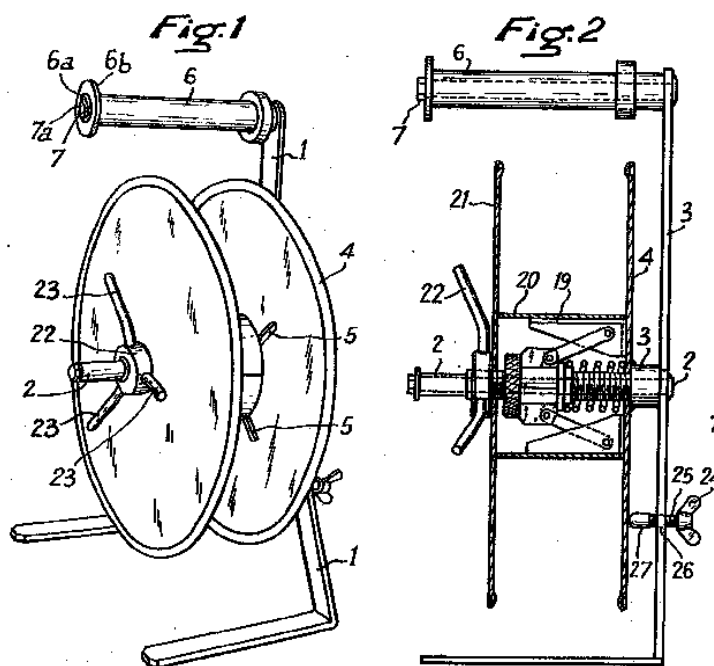
Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for lowering persons with brake mechanism	A62B 1/08
---	---------------------------

B65H 75/4444**{with manually adjustable brake pads}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



B65H 75/4447**{centrifugally}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

Fig. 2

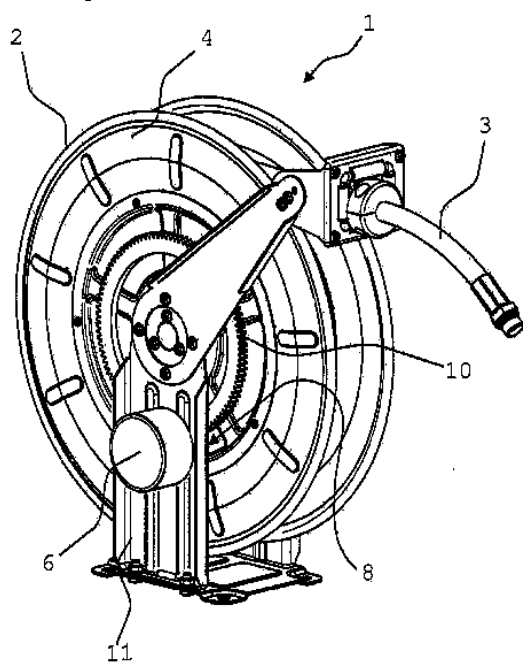
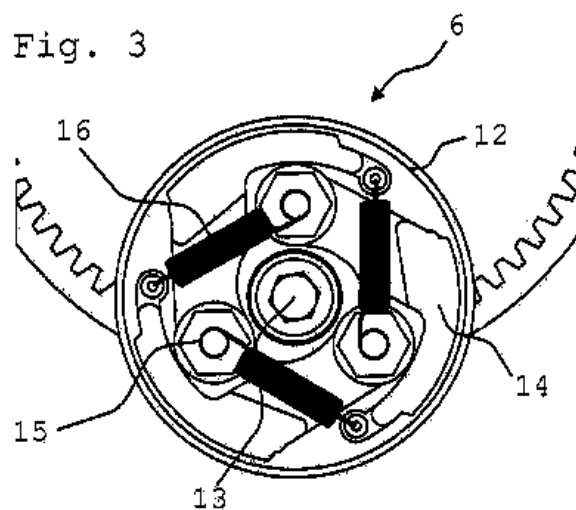


Fig. 3



B65H 75/4449

{Arrangements or adaptations to avoid movable contacts or rotary couplings, e.g. by the use of an expansion chamber for a length of the cord or hose}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:

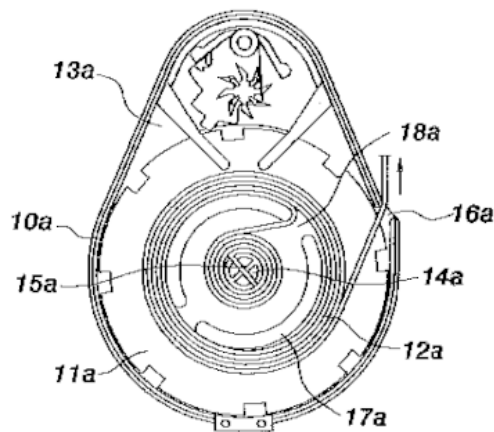


FIG. 1

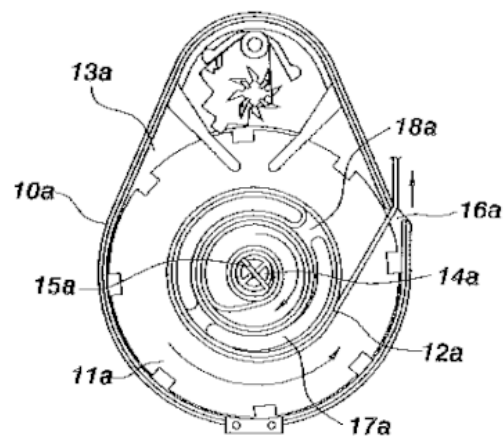


FIG. 2

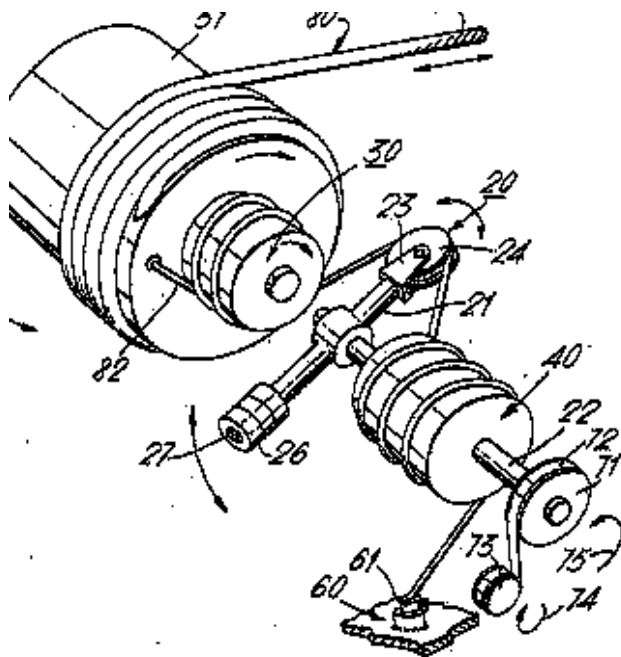
B65H 75/4452

{Simultaneous winding and unwinding of the material, e.g. winding or unwinding on a stationary drum while respectively unwinding or winding on a rotating drum using a planetary guiding roller}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



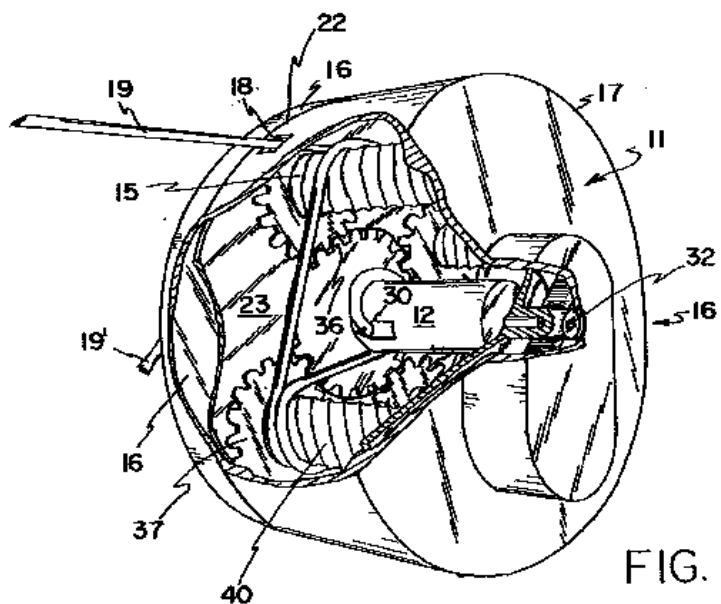
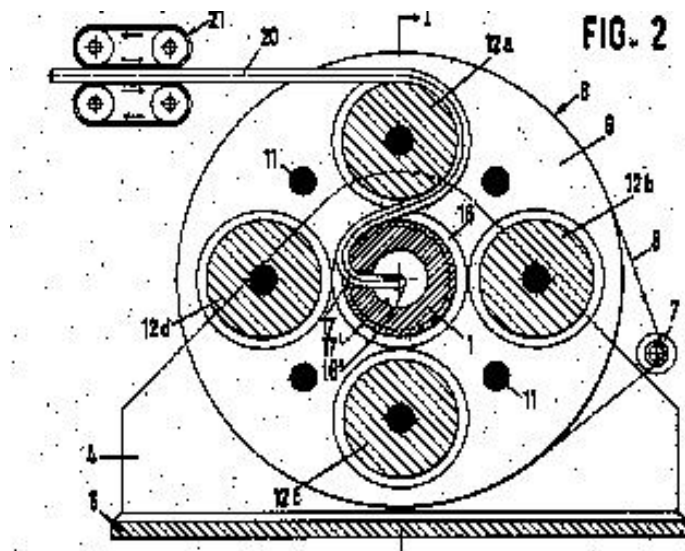
B65H 75/4455

{using a planetary assembly coaxially rotating around a central drum}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 75/4457

{Arrangements of the frame or housing}

Special rules of classification

Not used. Only use subclasses.

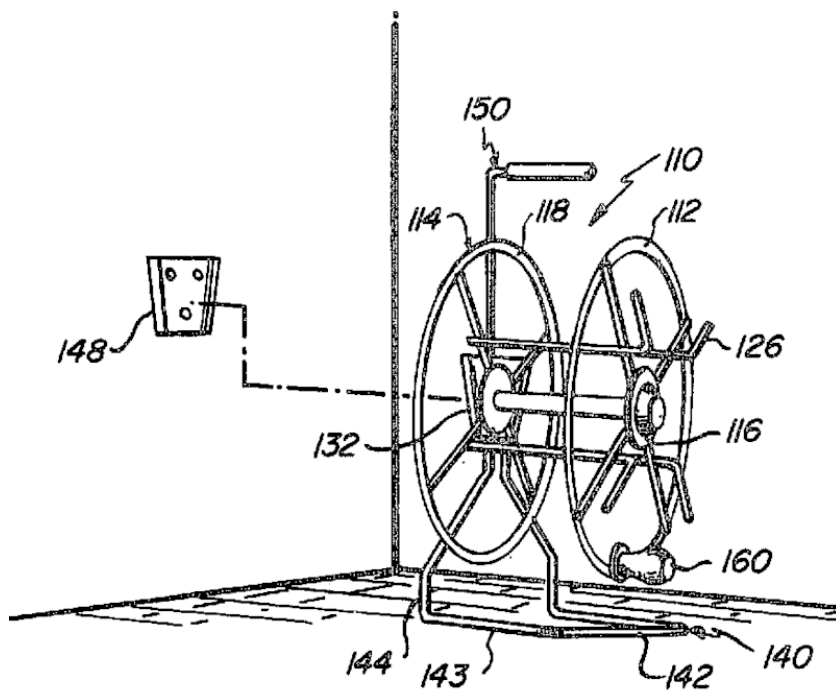
B65H 75/446

{for releasably or permanently attaching the frame to a wall, on a floor or on a post or the like}

Definition statement

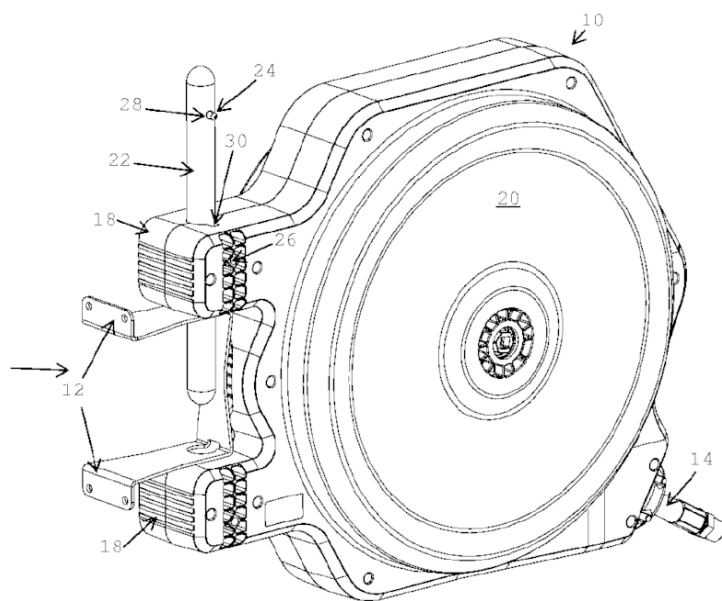
This place covers:

Illustrative example of subject matter classified in this group:



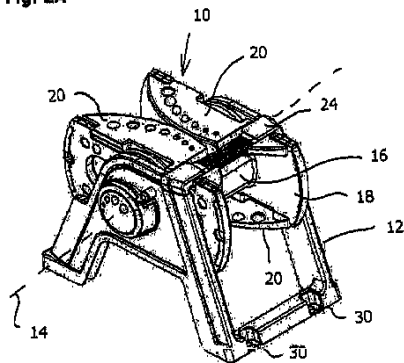
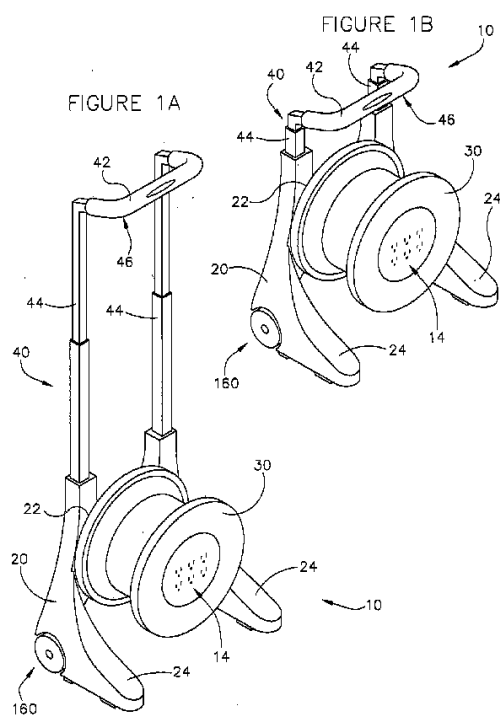
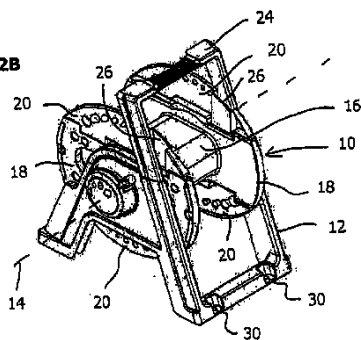
B65H 75/4463**{Swivelling attachment}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

**FIG. 2**

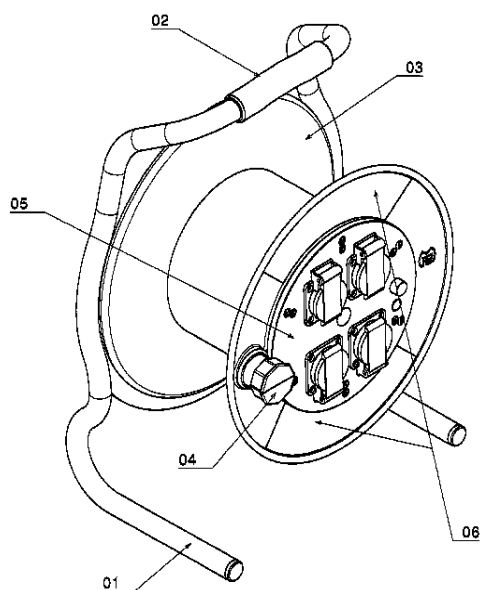
B65H 75/4465**{Foldable or collapsible}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:

Fig. 2A**Fig. 2B**

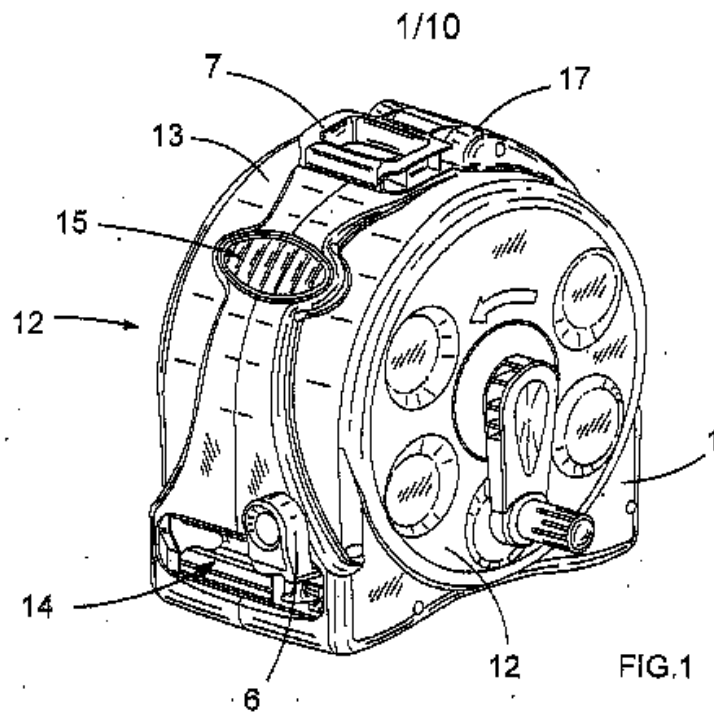
B65H 75/4468**{Tubular frame}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:

Fig. 1

B65H 75/4471**{Housing enclosing the reel}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



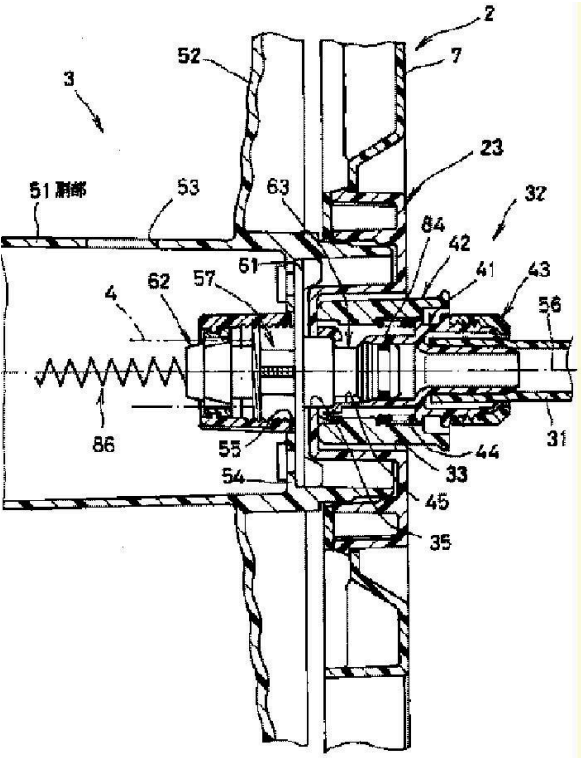
B65H 75/4478

{relating to handling of fluids}

Definition statement

This place covers:

Connectors for connecting the (rotating) input of the hose on the reel to the (fixed) fluid supply.



B65H 75/4481

{Arrangements or adaptations for driving the reel or the material (by a spring [B65H 75/48](#))}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Winding/unwinding machines with particular drive	US Classification: 242/389
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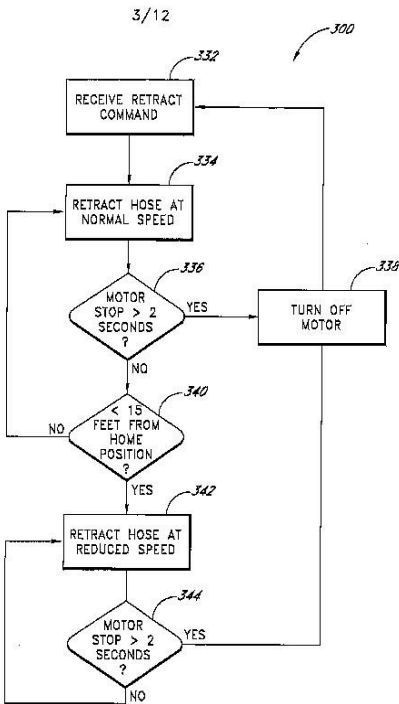
B65H 75/4486

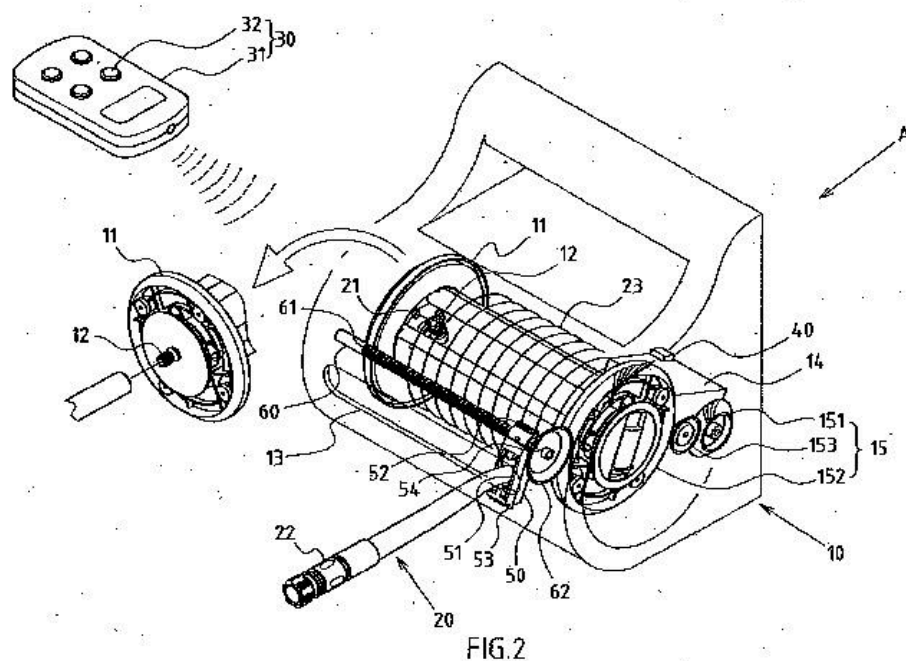
{Electric motors}

Definition statement

This place covers:

Details about driving the reel with an electric motor. Contains also control or detection of the winding or unwinding.





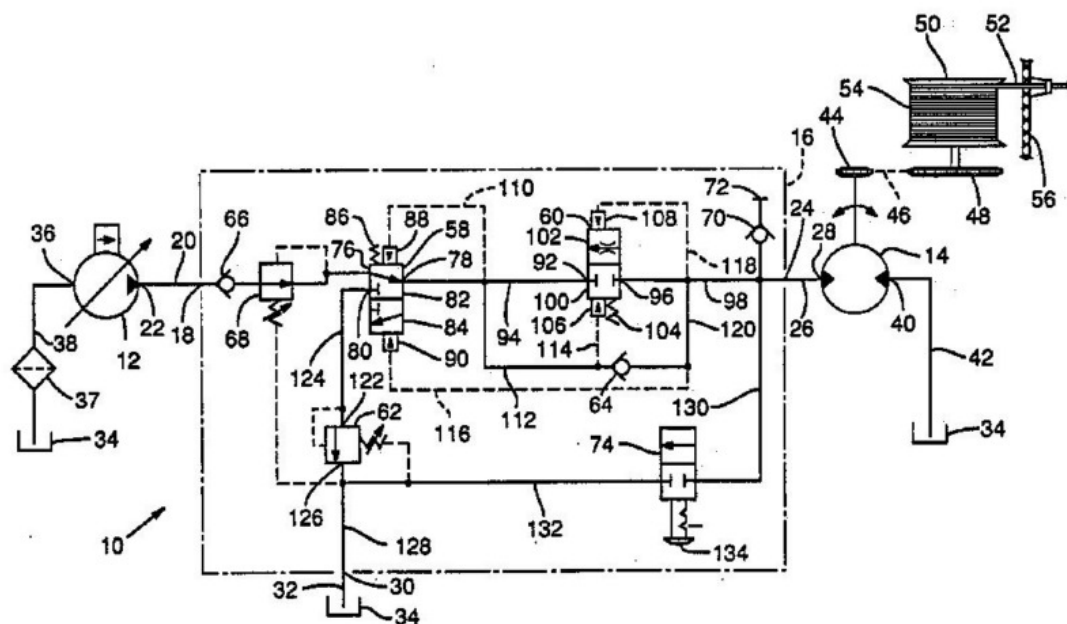
B65H 75/4489

{Fluid motors}

Definition statement

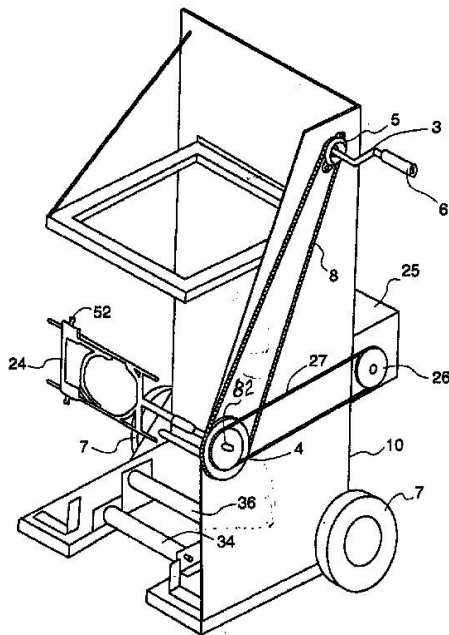
This place covers:

Details about driving the reel with a hydraulic motor. Contains also control or detection of the winding or unwinding.



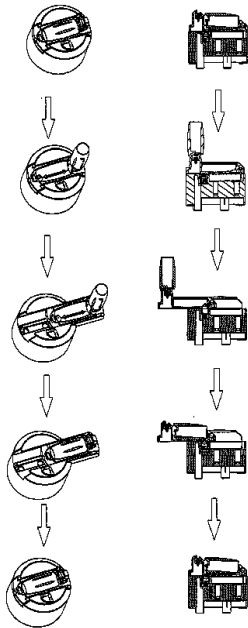
B65H 75/4492**{Manual drives}****Definition statement***This place covers:*

E.g. transmission between the hand-crank and the reel.

FIG. 2

B65H 75/4494**{Arrangements or adaptations of the crank}****Definition statement***This place covers:*

Illustrative example of subject matter classified in this group:



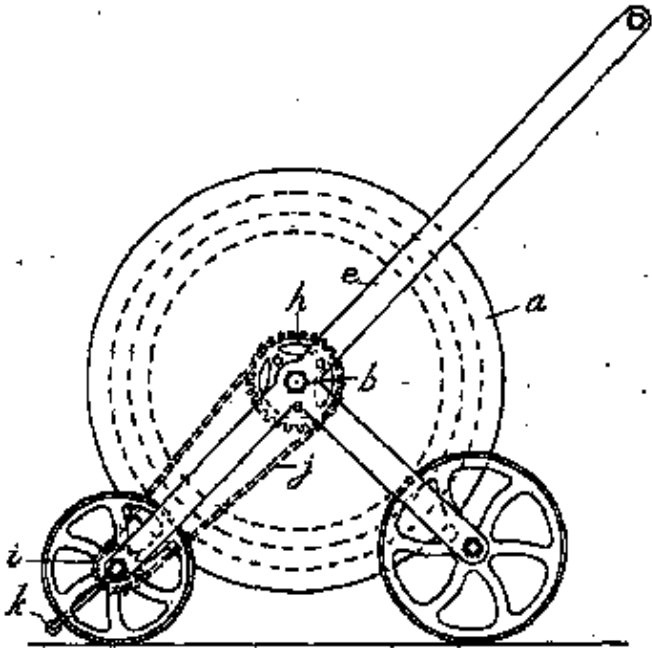
B65H 75/4497

{driving by the wheels of the carriage or vehicle}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group:



B65H 75/48

Automatic re-storing devices

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arrangements for stopping winding or unwinding; Arrangements for releasing the stop means	B65H 75/4418
Retraction clips	A45F 5/004
Apparatus for physical training	A63B 21/015
Flexible barrier member as used in, e.g. airports	E01F 13/028

Special rules of classification

With a mechanism for stopping winding or unwinding or braking is only classified in [B65H 75/4418](#) and [B65H 75/4402](#) and subgroups.

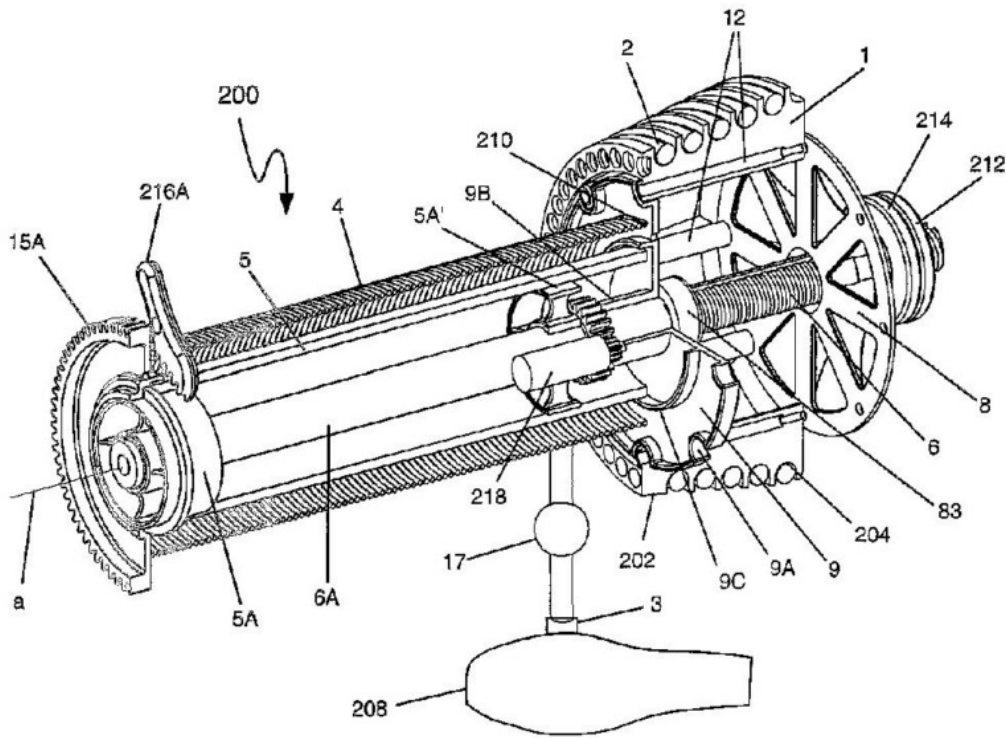
B65H 75/483

{Balance reel}

Definition statement

This place covers:

Reels with spring motor to balance a hanging weight (tool) at a certain height



References

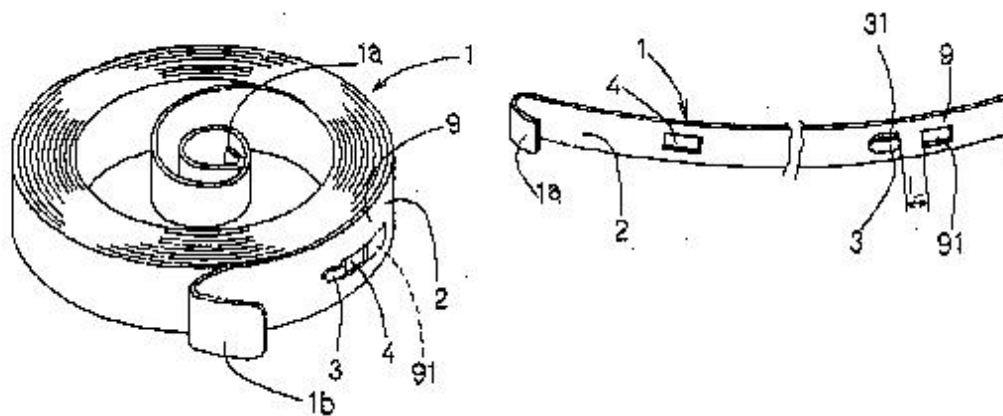
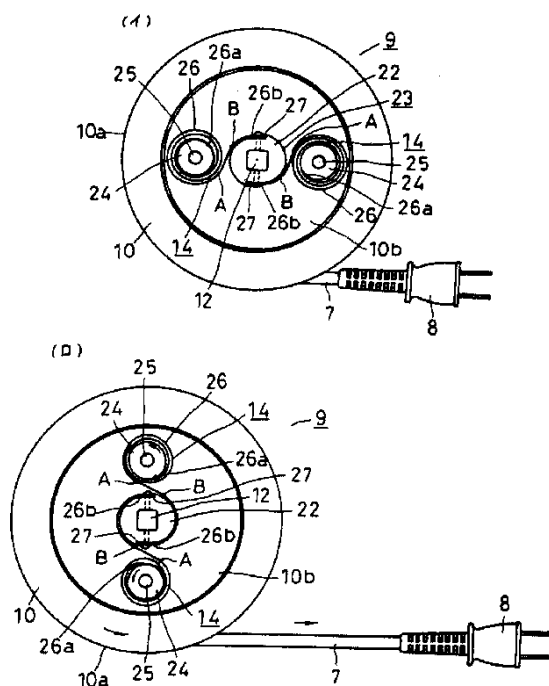
Informative references

Attention is drawn to the following places, which may be of interest for search:

Tool balancers	B25H 1/0028
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B65H 75/486**{Arrangements or adaptations of the spring motor}****Definition statement***This place covers:*

Illustrative examples of subject matter classified in this group:

**第4図**

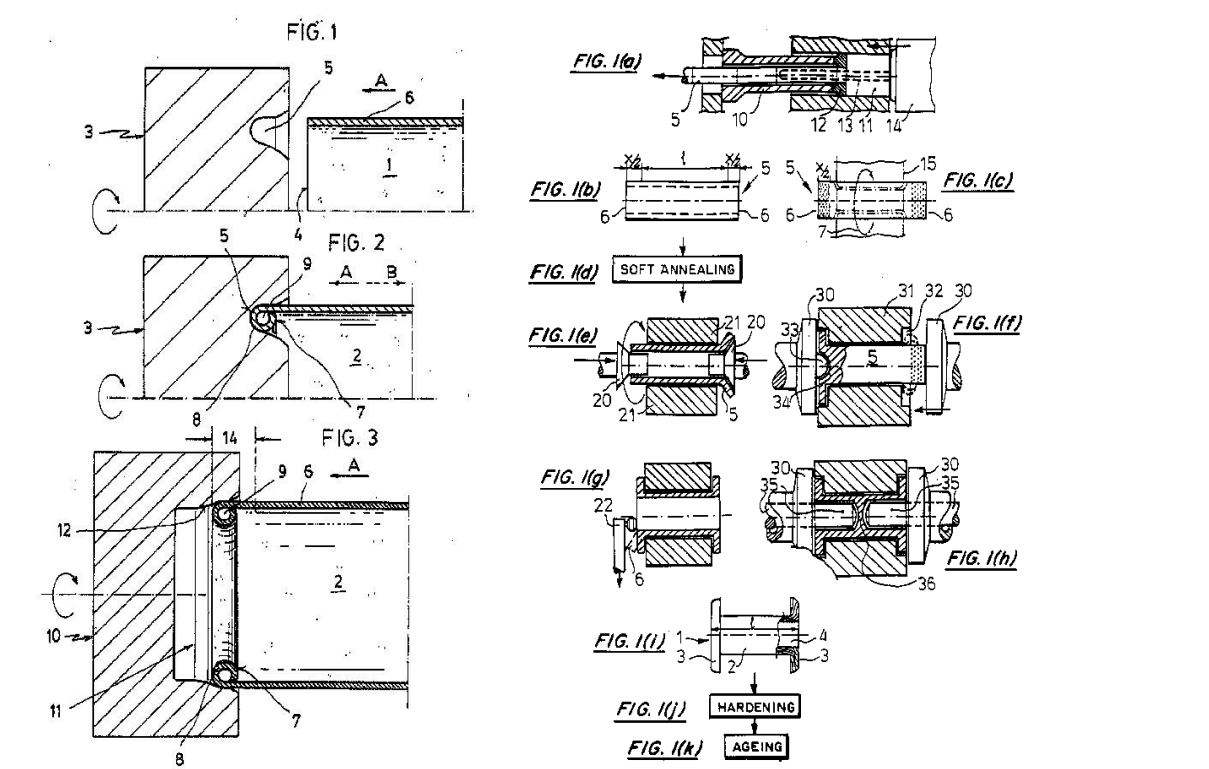
B65H 75/50

Methods of making reels, bobbins, cop tubes, or the like by working an unspecified material, or several materials

Definition statement

This place covers:

Illustrative examples of subject matter classified in this group:



References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Winding paper cores	B31C
Working on paper cores	B31F

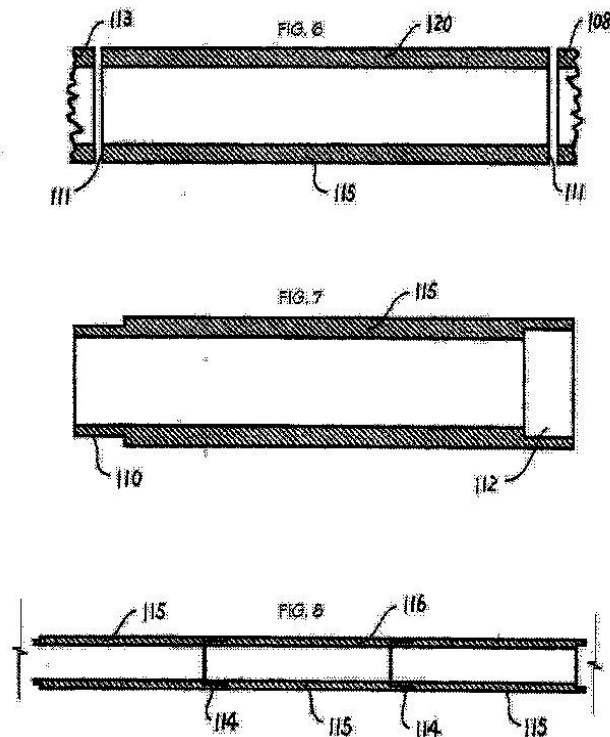
B65H 75/505

{Working on cores, reels or the like to permit their reuse, e.g. correcting distortion, replacing parts of the core or reel}

Definition statement

This place covers:

Working on the edges of used cores, e.g. to connect several thereof to form new cores.

**B65H 79/00**

Driving-gear for devices for forwarding, winding, unwinding, or depositing material, not otherwise provided for

Special rules of classification

Not Used.

B65H 81/00

Methods, apparatus, or devices for covering or wrapping cores by winding webs, tapes, or filamentary material, not otherwise provided for (forming hollow objects by winding filamentary material on to fusible or soluble cores {[B29C 53/56](#)}; wrapping for the purpose of packaging [B65B 11/00](#); making wound articles of paper [B31C](#))

Definition statement

This place covers:

Only methods and devices for covering or wrapping cores by winding webs, tapes or filamentary material not otherwise provided for.

References

Limiting references

This place does not cover:

Making tubes or metal hoses	B21C 37/12
Coiling wire helically on a mandrel	B21F 3/04
Jacketing or reinforcing with wire	B21F 17/00
Producing tubular article by wrapping (cement)	B28B 21/48
Forming hollow objects by winding filamentary material on to fusible or soluble cores	B29C 53/56
Applying winding materials	B29C 53/8016
Sheathing by winding helically plastic material	B29C 63/105
Shaping by layup on a rotating core	B29C 70/32
Making wound articles of paper	B31C
Wrapping for the purpose of packaging	B65B 11/00
Braiding, lacing	D04C 3/00
Cable stranding	D07B 3/00
Wrapping ropes, cables	D07B 7/14
Hoses with helically wound layers	F16L 11/081
Hoses wound from strips	F16L 11/24
Coating wrapped around a pipe	F16L 58/1063
Manufacturing of air ducts	F24F 13/0245
Twisting optical cables	G02B 6/449
Stranding up conductors	H01B 13/02
Sheathing by winding	H01B 13/26
Winding electrical coils	H01F 41/06

Special rules of classification

In practice documents are only exceptionally classified in [B65H 81/00](#) and subgroups, since they are mostly provided for otherwise.

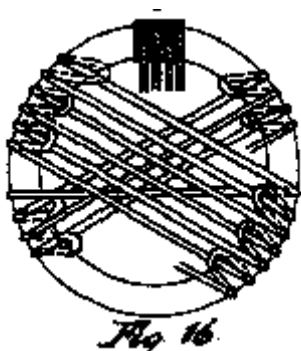
B65H 81/02

Covering or wrapping annular or like cores forming a closed or substantially closed figure

Definition statement

This place covers:

E.g. thread buttons.

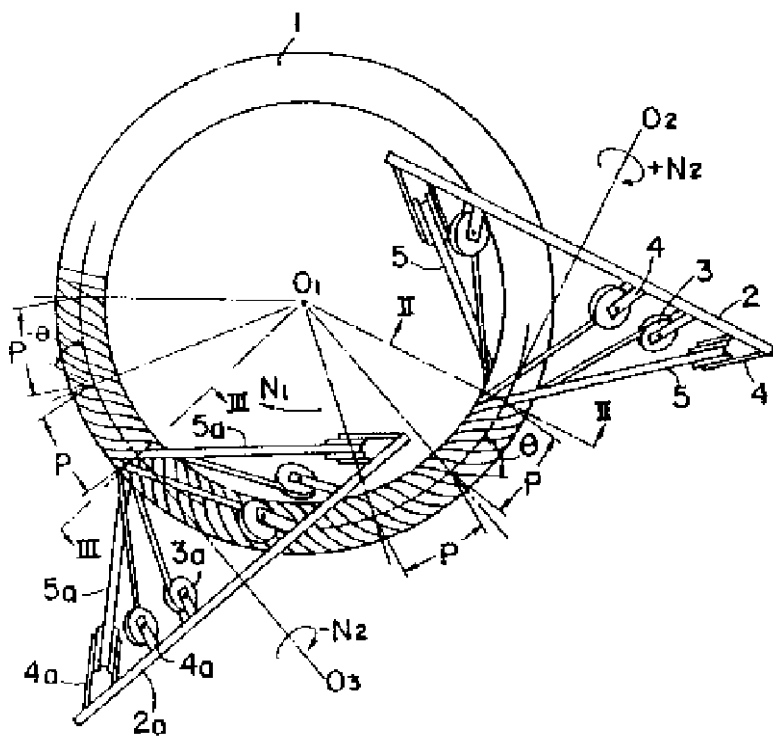
**B65H 81/04**

by feeding material obliquely to the axis of the core

Definition statement

This place covers:

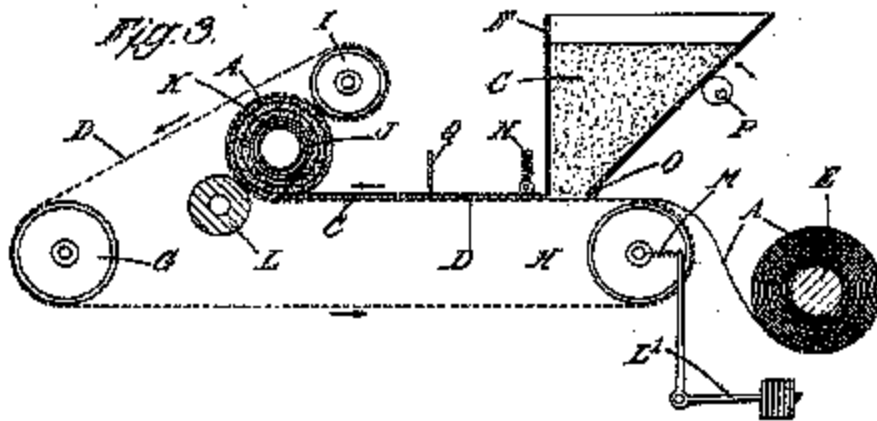
Illustrative example of subject matter classified in this group:



B65H 81/06**Covering or wrapping elongated cores****Definition statement**

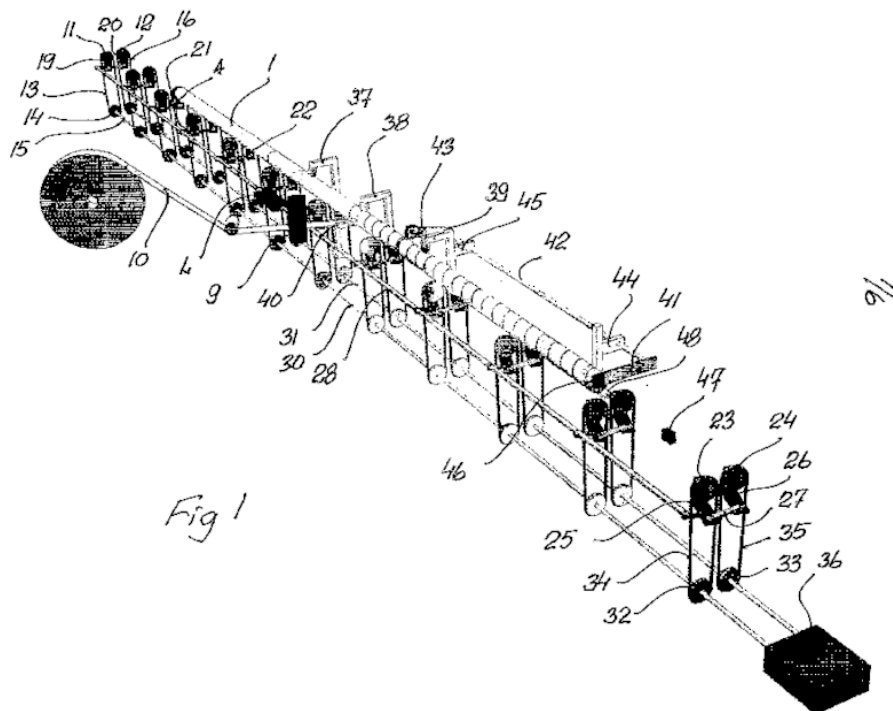
This place covers:

Illustrative example of subject matter classified in this group:

**B65H 81/08****by feeding material obliquely to the axis of the core****Definition statement**

This place covers:

Illustrative example of subject matter classified in this group:



B65H 83/00

Combinations of piling and depiling operations, e.g. performed simultaneously, of interest apart from the single operation of piling or depiling as such

Definition statement

This place covers:

aspects which determine that methods and /or devices are able to perform both piling and depiling operations.

References**Limiting references**

This place does not cover:

Supplying complete piles or stacks to the support or magazine during continuous separation therefrom	B65H 1/30
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Architecture, e.g. modular construction of devices accepting paper currency	G07D 11/40
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Special rules of classification

This main-group should be used only for subject-matter not being covered by any of its sub-groups.

Documents which mainly concern depiling e.g. separation aspects, such as constructional details of the separator, and only deals with the possibility of piling as a secondary aspect, should be additionally classified in [B65H 3/00](#) or relevant subgroups.

Documents which mainly concern piling e.g. stacking of articles and only deal with the possibility of depiling as a secondary aspect, should be additionally classified in [B65H 29/00](#) or relevant subgroups.

B65H 83/02

performed on the same pile or stack

Special rules of classification

Supplying individual articles, either continuous or discontinuous to the support or stack during continuous separation therefrom should be classified in this group or relevant subgroups.

B65H 85/00

Recirculating articles, i.e. feeding each article to, and delivering it from, the same machine work-station more than once

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Ink-jet or thermal printers for printing on both sides of the material	B41J 3/60
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Arrangements for moving an original once or repeatedly through an exposure station in an photographic printing apparatus	G03B 27/6257
Special arrangements in electrographic devices for copying both sides of an original or for copying on both sides of a receiving media	G03G 15/23
Refeeding in connection with double-sided scanning	H04N 1/00572

B65H 99/00

Subject matter not provided for in other groups of this subclass

Special rules of classification

This group is not used.