

## B67B

### APPLYING CLOSURE MEMBERS TO BOTTLES JARS, OR SIMILAR CONTAINERS; OPENING CLOSED CONTAINERS (opening or closing devices attached to, or incorporated in, containers or container closures B65D)

#### Definition statement

*This subclass/group covers:*

Closing bottles or jars by applying:

- Stoppers;
- caps
- protective or decorative covers to closures;
- wire to secure bottle closures;

Devices for opening closed containers being hand- or power operated.

#### References relevant to classification in this subclass

*This subclass/group does not cover:*

Apparatuses for applying closures and/or covers (of closures) to gas bottles are historically	<a href="#">B67B</a>
Opening or closing test tubes in laboratory (see e.g. SA850578)	<a href="#">G01N 35/00</a> , <a href="#">G01N 2035/0405</a>
Devices for transferring samples to, in, or from, the analysis apparatus with means for piercing stoppers or septums	<a href="#">G01N 35/1079</a>

#### Informative references

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

Details related to the filling gas bottles	<a href="#">F17C 13/00</a>
Applying plugs or threadless stoppers	<a href="#">B65B 7/2821</a>
Inserting and rotating screw stoppers	<a href="#">B65B 7/2828</a>

Manufacturing of bottle cork safety cages or muzzles	<a href="#">B21F 45/04</a> .
Apparatus for cutting in general	<a href="#">B26F 1/00</a> .
Devices for breaking closed containers	<a href="#">B01F 15/0205</a> , <a href="#">A61J 1/2089</a> , <a href="#">A61F 2/46C4</a>

## **B67B 1/00**

**Closing bottles, jars or similar containers by applying stoppers (stoppers per se B65D39/00)[C1012]**

### **Definition statement**

*This subclass/group covers:*

Feeding stoppers.

Pretreatment of stoppers.

Inserting threadless stoppers.

Inserting and rotating screw stoppers.

Securing stoppers.

Inserting disc closures.

### **References relevant to classification in this group**

*This subclass/group does not cover:*

Mechanical details	<a href="#">B67B 1/03</a>
Chemical details related to treatment of cork	<a href="#">B27K 7/00</a>

### **Informative references**

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

Applying plugs or threadless stoppers	<a href="#">B65B 7/2821</a>
Inserting and rotating screw stoppers	<a href="#">B65B 7/2828</a>

Opening or closing test tubes in laboratory (see e.g. SA850578)	<a href="#">G01N 35/00</a>
Orienting and/or conveying of caps in general	<a href="#">B65G 47/14</a>
Closing containers other than bottle- or jar-type containers	<a href="#">B65B 7/2821</a> , <a href="#">B65B 7/2828</a> , <a href="#">B65B 7/2835</a>

## **B67B 1/005**

**[N: Feeding stoppers (in general B65G)]**

### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this

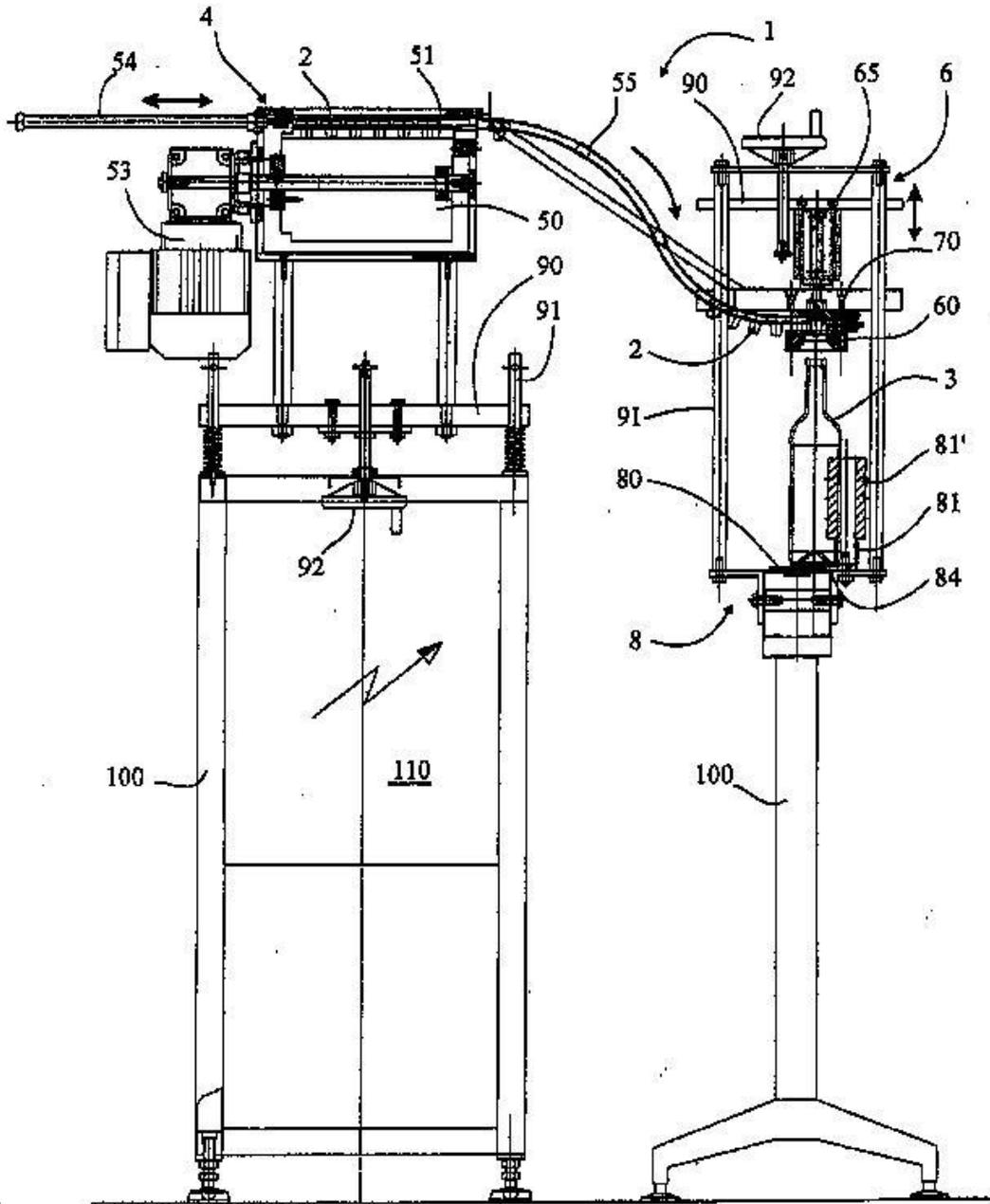


FIG. 1

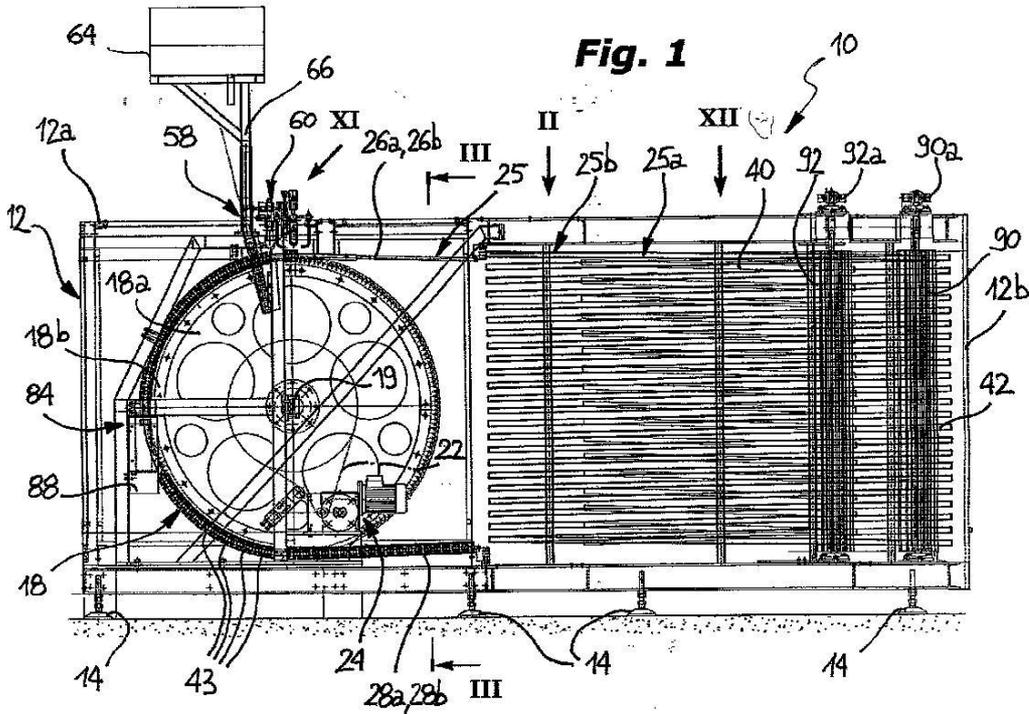
**B67B 1/03**

Pretreatment of stoppers, e.g. cleaning, steaming, heating, impregnating or coating; Applying resilient rings to stoppers (mechanical working of cork B27J5/00)

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



W/O 2006/050855

1/9

PCT/EP2005/011803

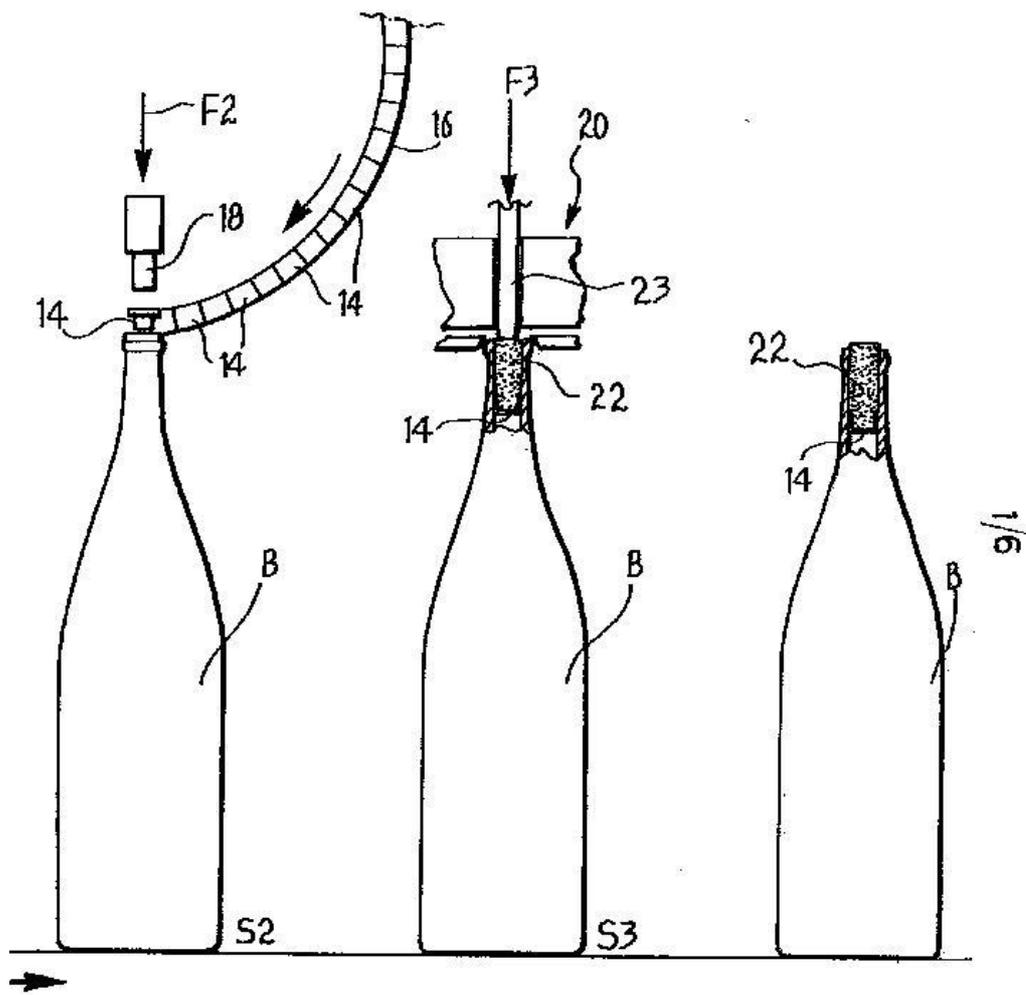
**B67B 1/04**

by inserting threadless stoppers, e.g. cork

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



WO 00/73200

PCT/IB00/00735

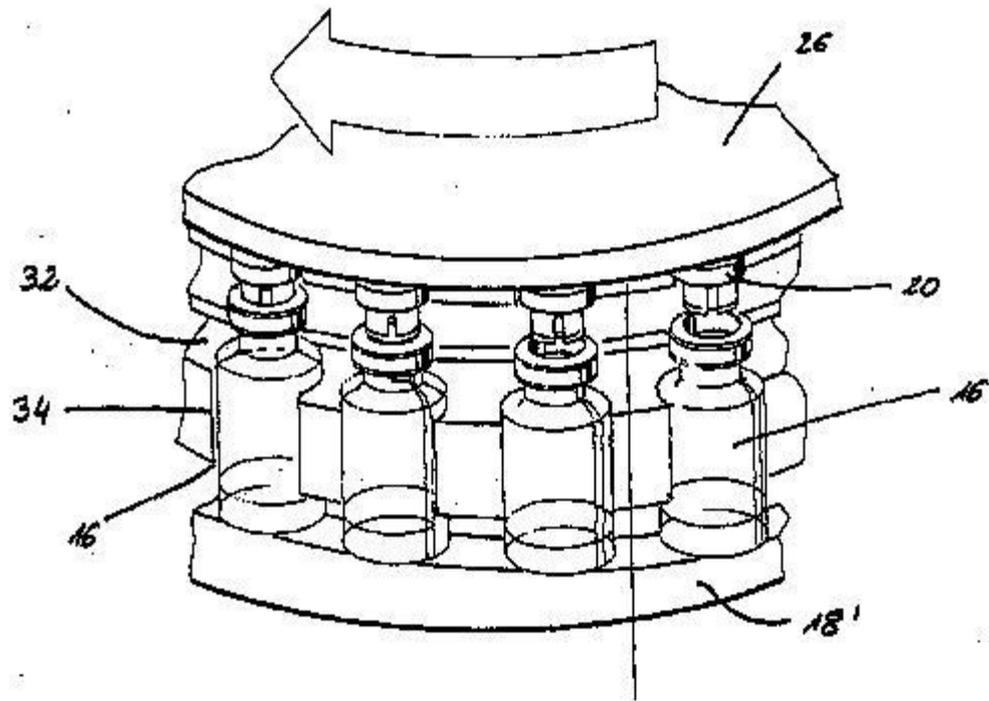


FIG. 3

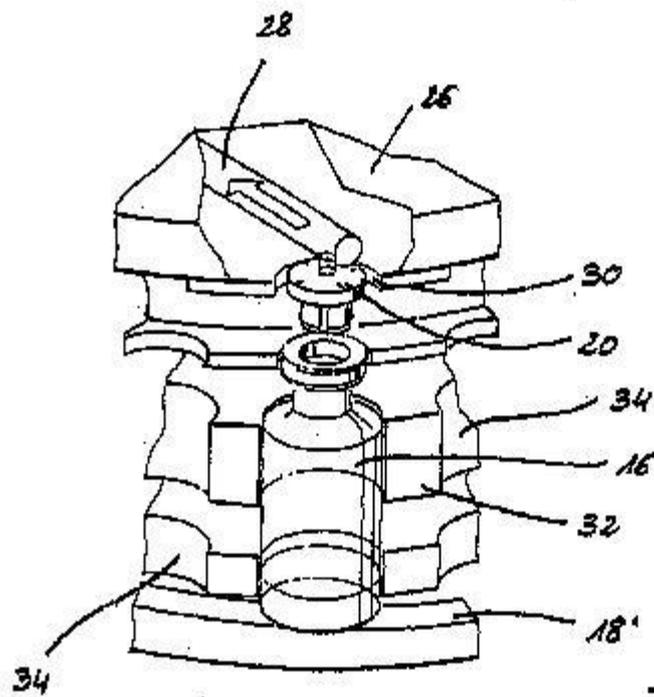


FIG. 4

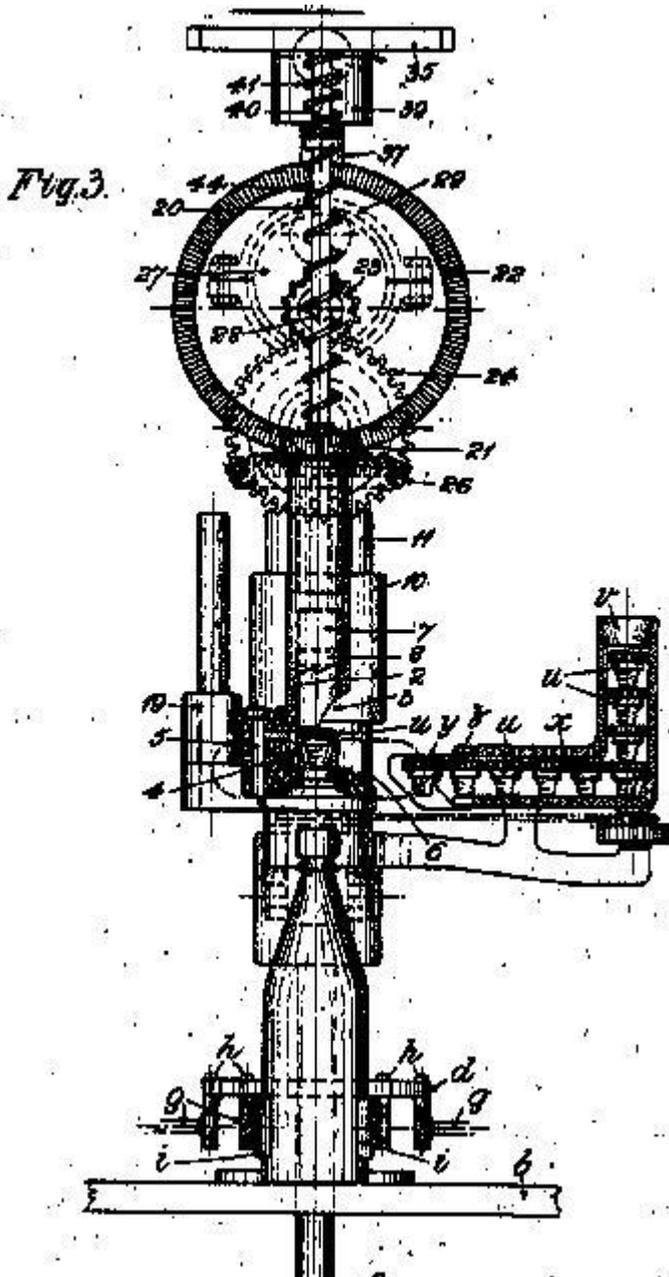
## B67B 1/06

by inserting and rotating screw stoppers

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



## B67B 1/08

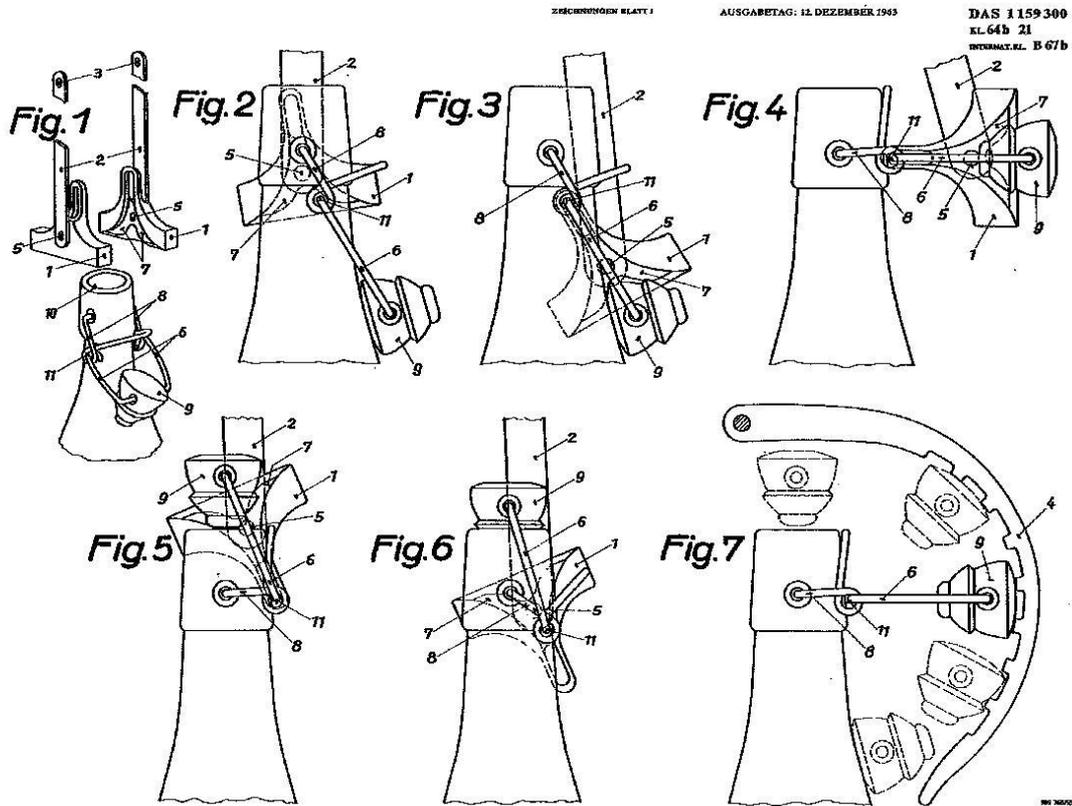
Securing stoppers, e.g. swing stoppers, which are held in position by associated pressure-applying means coacting

with the bottle neck

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



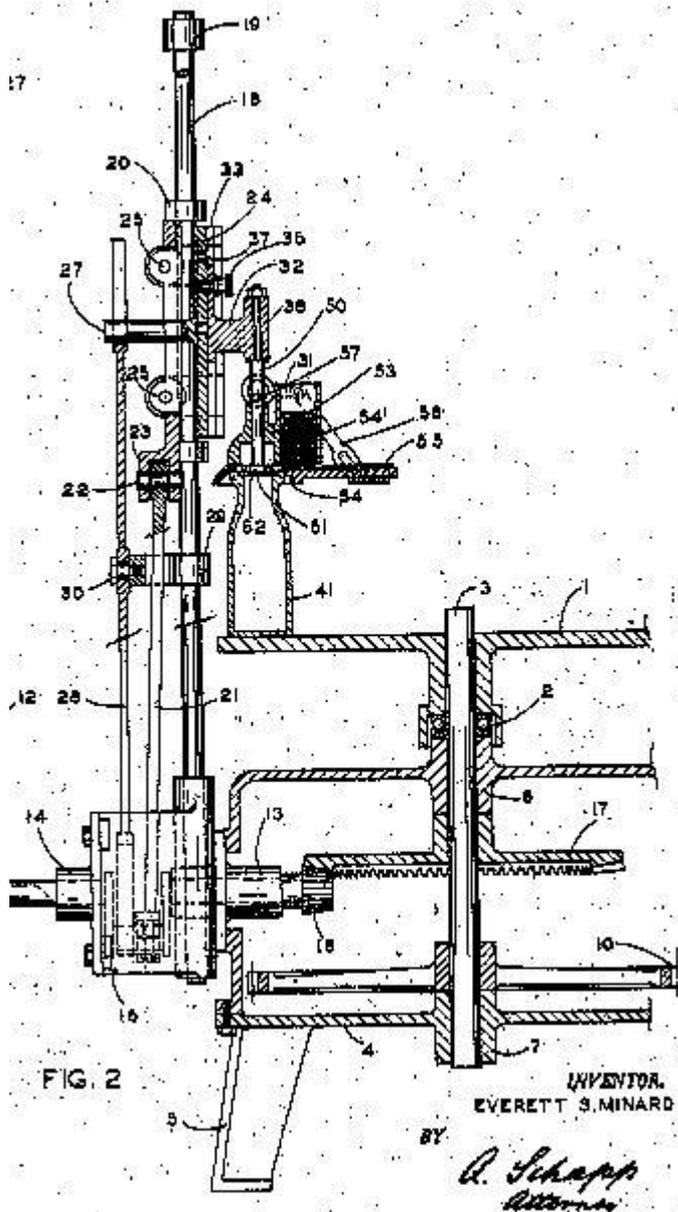
**B67B 1/10**

by inserting disc closures

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



## B67B 3/00

Closing bottles, jars or similar containers by applying caps  
(caps per se B65D41/00)

### Definition statement

*This subclass/group covers:*

Pretreatment of caps.

Applying marks to caps.

Applying:

- Flanged caps, e.g. crown corks, by deformation of flanges;

- preformed threaded caps;
- snap-on caps.

Means for applying caps under vacuum Applications of control, warning and safety in capping machinery.

### References relevant to classification in this group

*This subclass/group does not cover:*

Making closures, e.g. crown caps, screw caps	<a href="#">B21D 51/44</a>
--	----------------------------

### Informative references

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

Inserting and rotating preformed threaded caps	<a href="#">B65B 7/2835</a>
Opening or closing test tubes in laboratory (see e.g. SA850578)	<a href="#">G01N 35/00</a> , <a href="#">G01N 2035/0405</a>

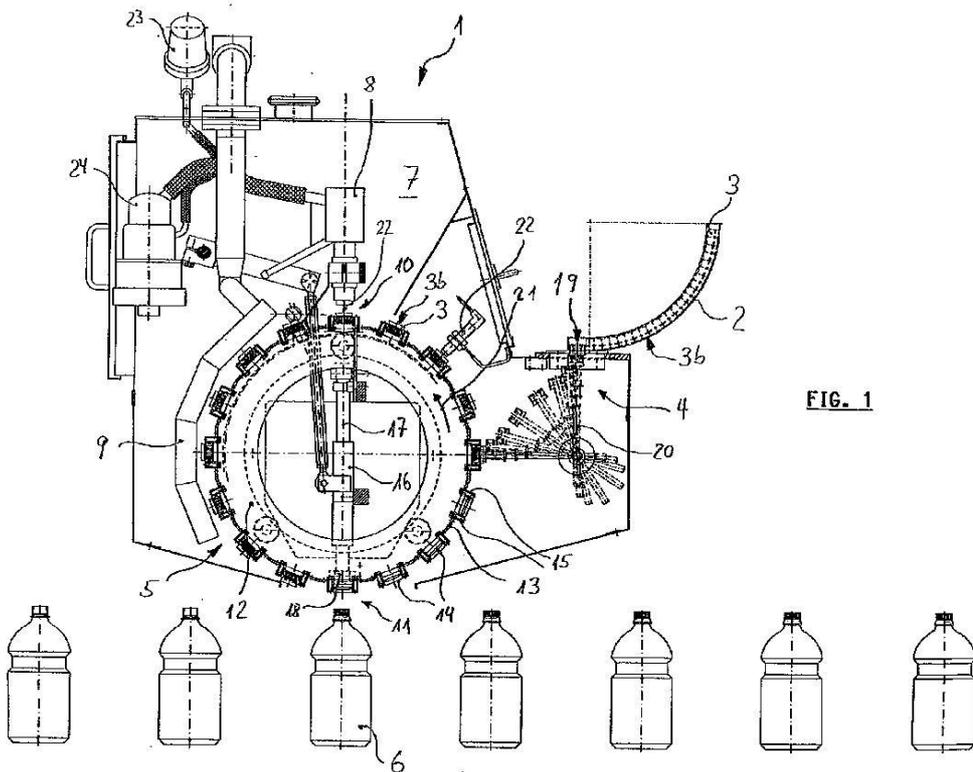
## B67B 3/003

**[N: Pretreatment of caps, e.g. cleaning, steaming, heating or sterilizing]**

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



Nummer:  
Int. Cl. 8:  
Offenlegungstag:  
DE 197 27 942 A1  
B 67 B 3/00  
7. Januar 1999

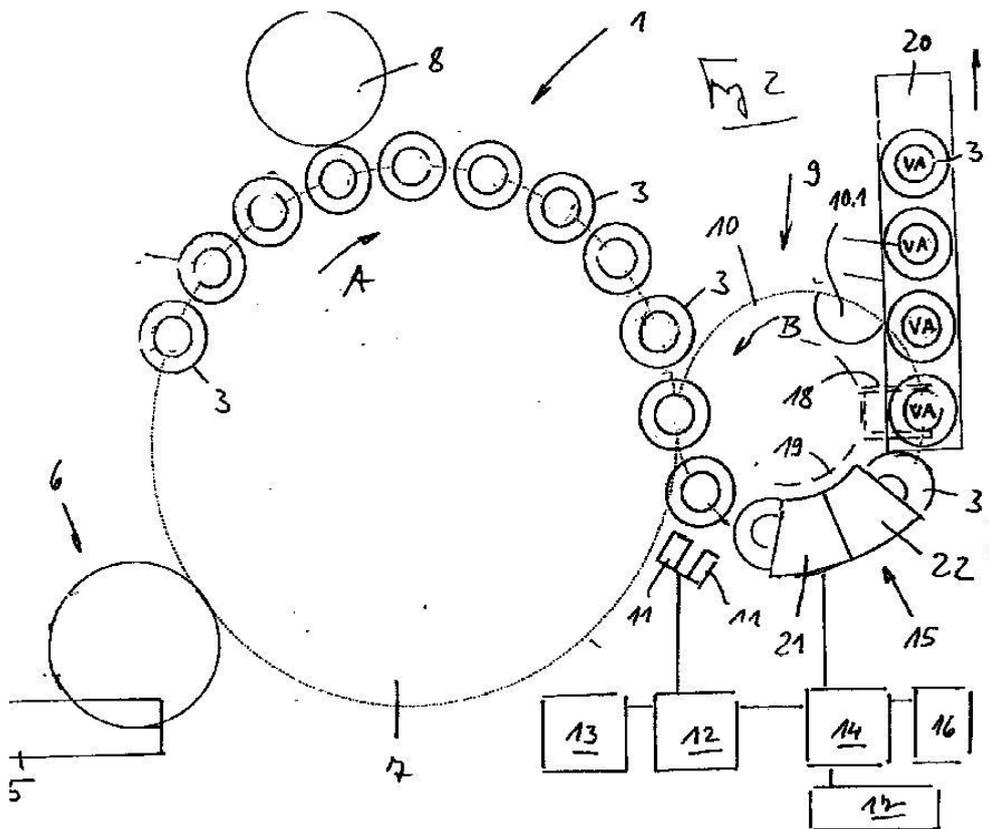
## B67B 3/006

[N: Applying date marks, code marks, or the like, to caps during capping (applying marks to labels B65C9/46)]

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



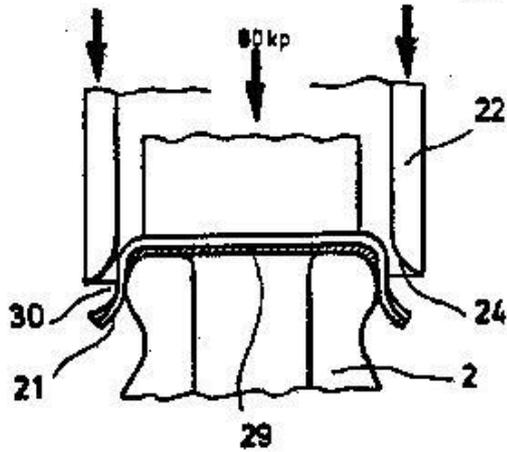
### B67B 3/02

by applying flanged caps, e.g. crown caps, and securing by deformation of flanges

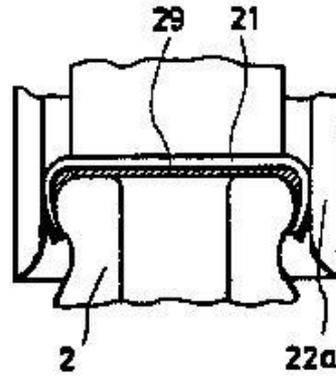
#### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



**FIG. 5**



**FIG. 6**

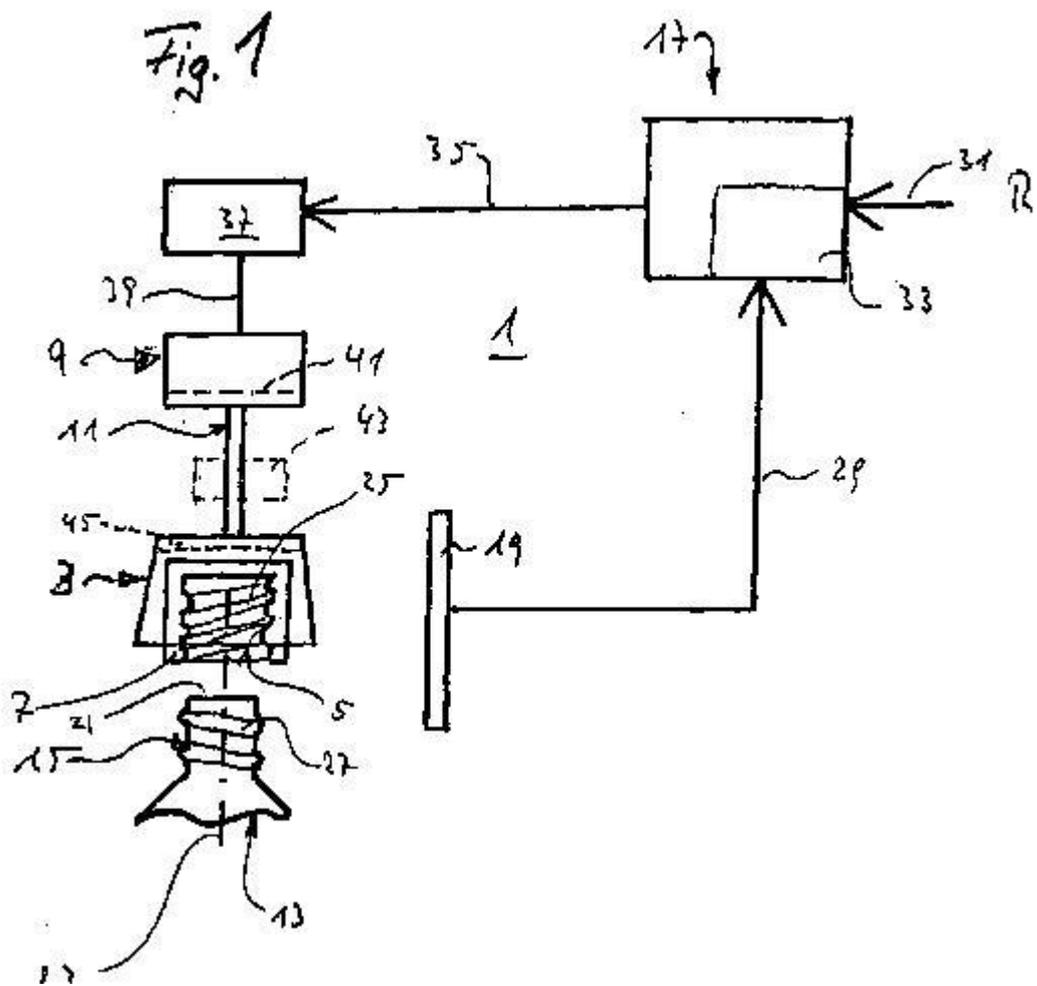
**B67B 3/20**

by applying and rotating preformed threaded caps (forming threads in situ by resilient deforming means B67B3/16, by rotary capping heads B67B3/18)

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



**B67B 3/2006**

**[N: using manually-controlled or manually operated devices]**

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

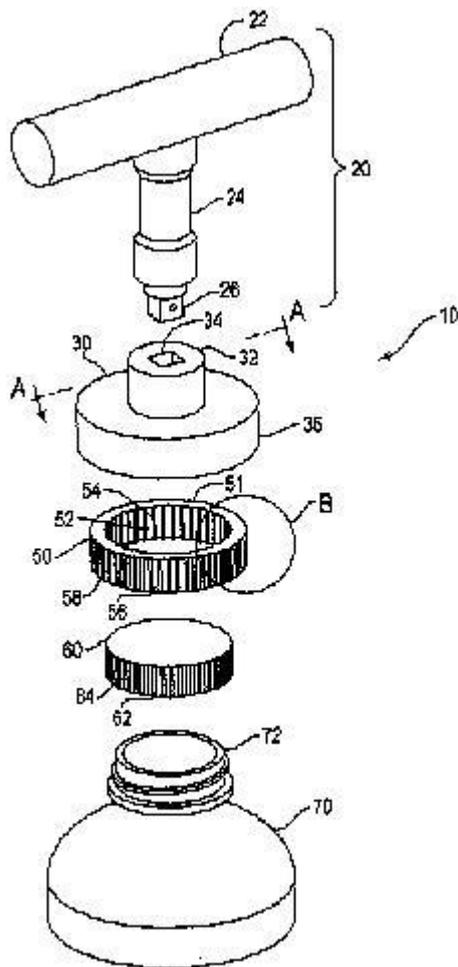


FIG. 1

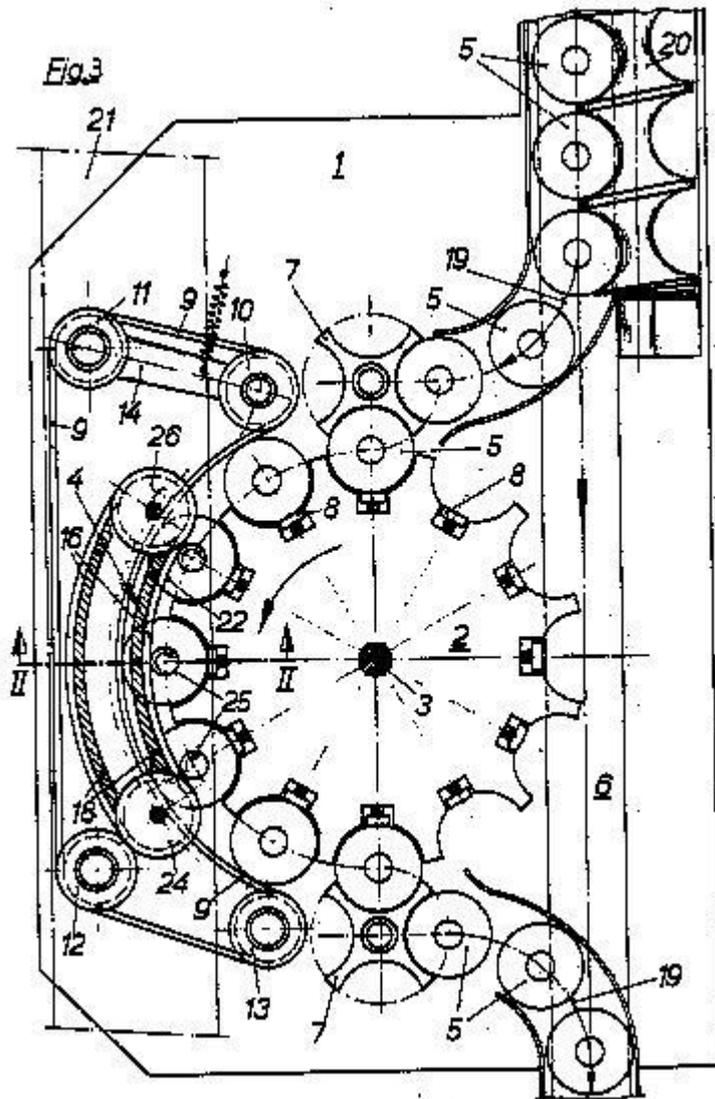
## B67B 3/202

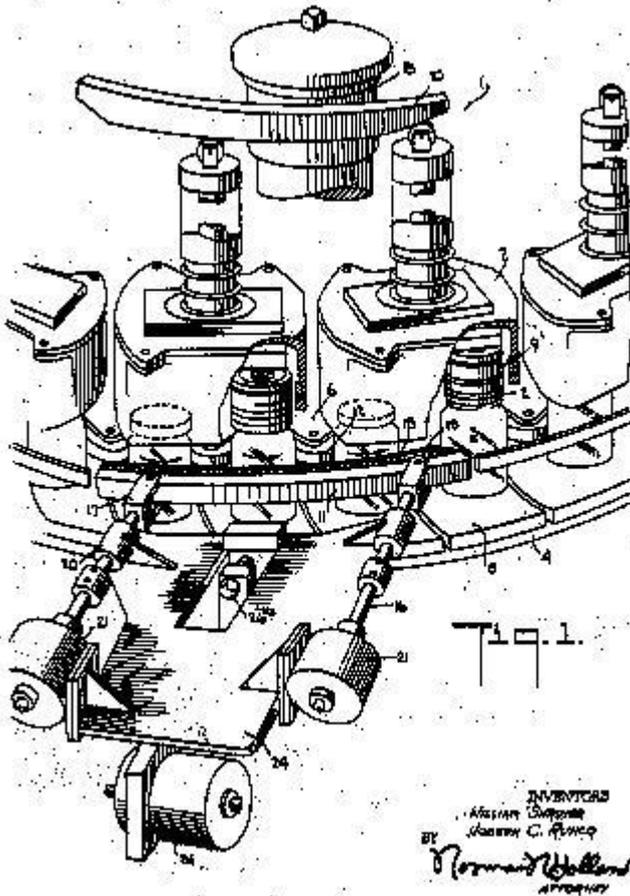
[N: using friction means for screwing the caps, e.g. belts or guides (B67B3/2026, B67B3/2033 take precedence)]

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.





**B67B 3/2026**

**[N: comprising stationary capping heads]**

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

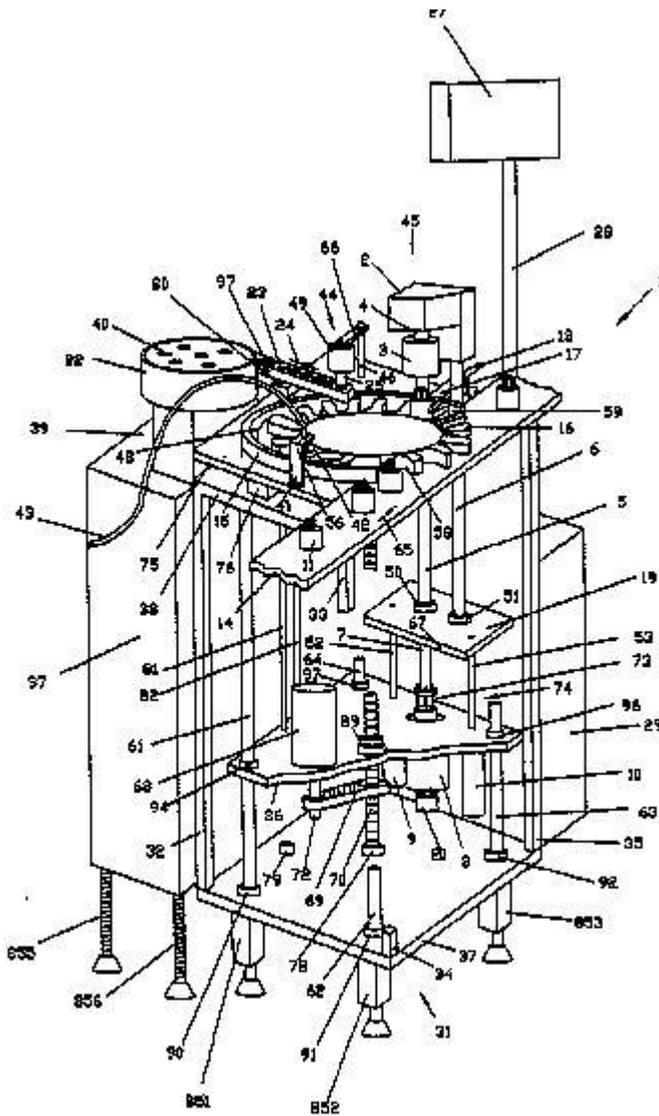


FIG. 1

## B67B 3/2033

[N: comprising carousel co-rotating capping heads]

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

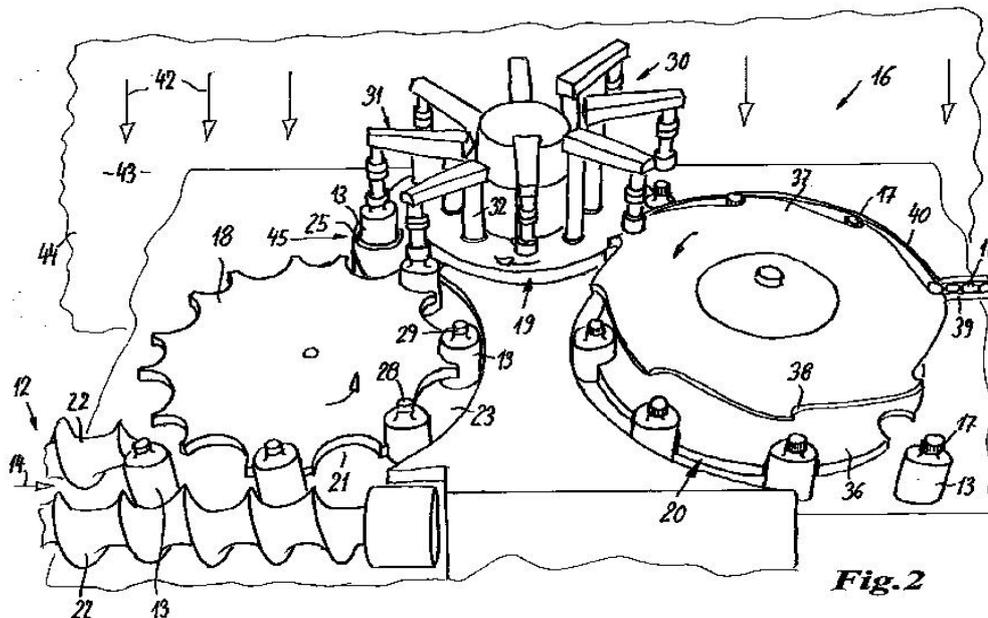


Fig. 2

**B67B 3/204**

[N: Linear-type capping machines]

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

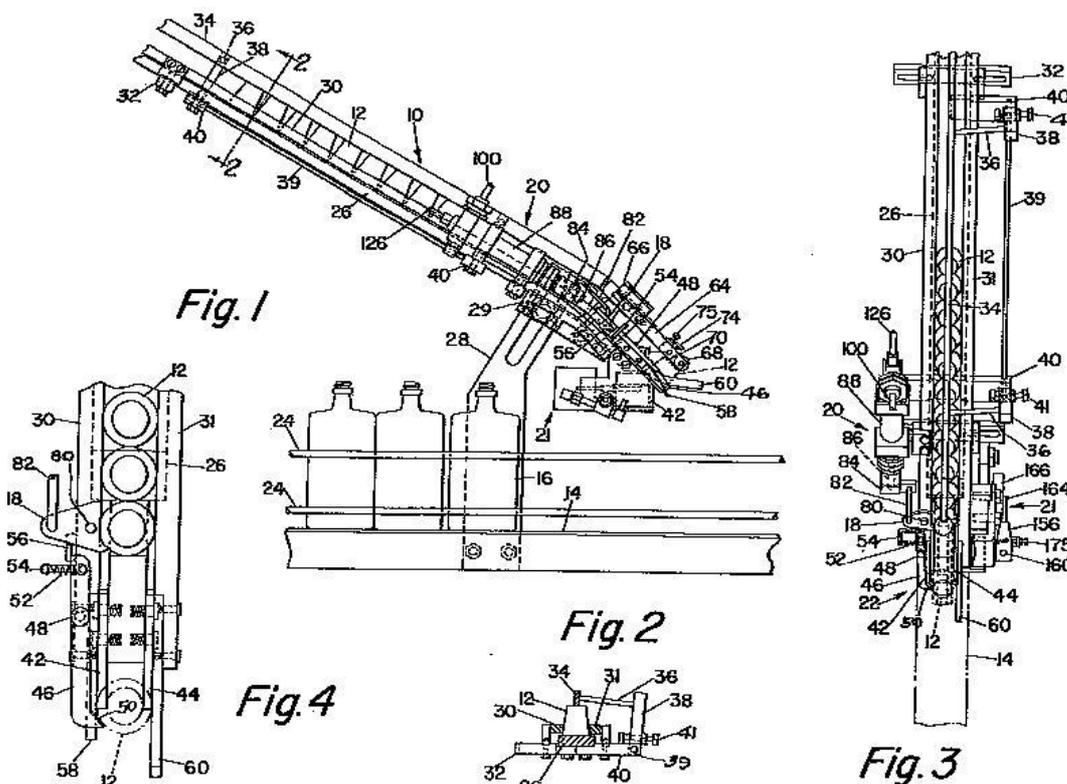


Fig. 1

Fig. 2

Fig. 3

Fig. 4

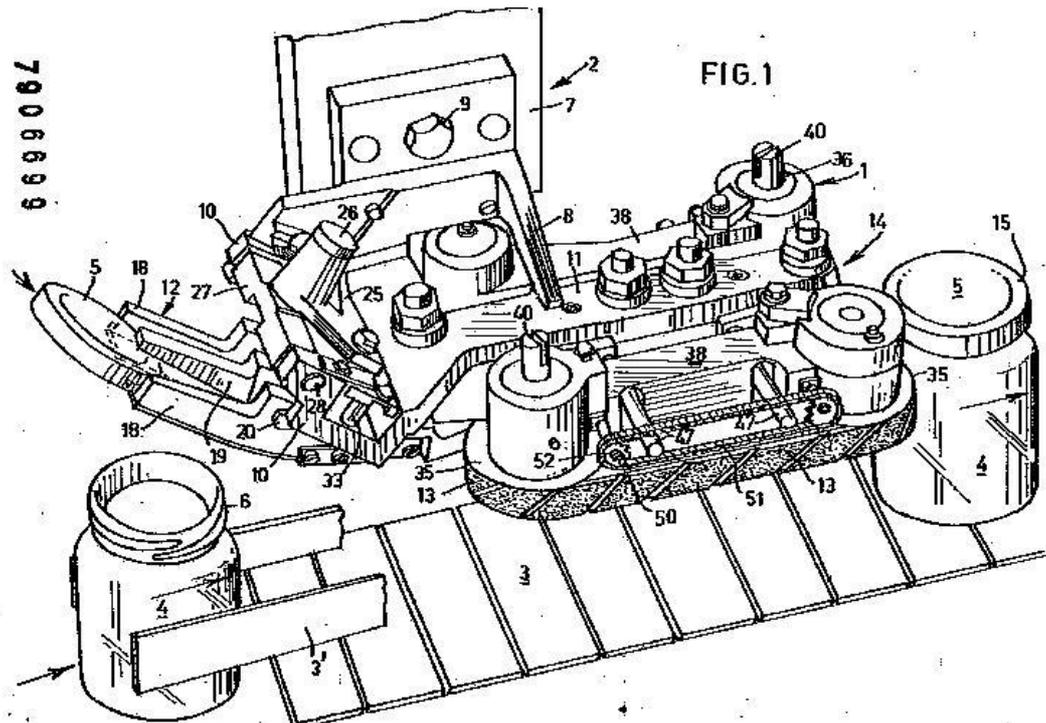
## B67B 3/2046

[N: using friction means for screwing the caps, e.g. belts or wheels (B67B3/2053 takes precedence)]

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



## B67B 3/2053

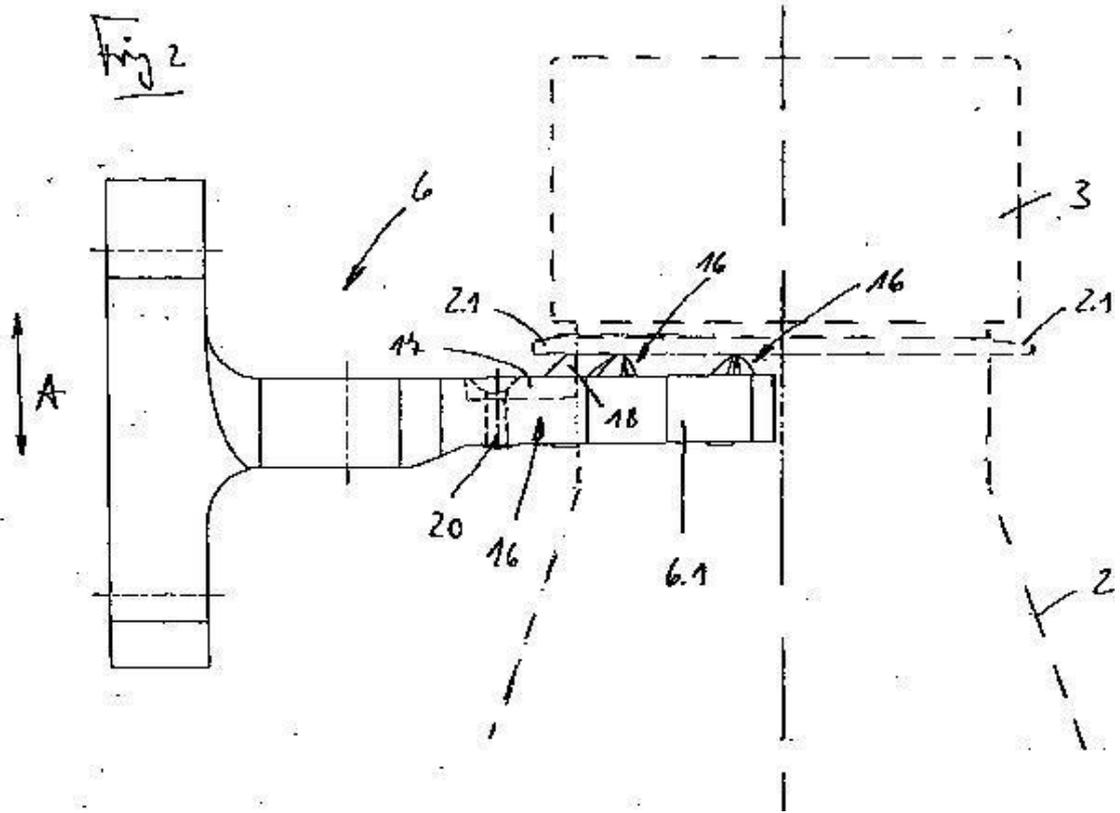
[N: comprising capping heads]

### Definition statement

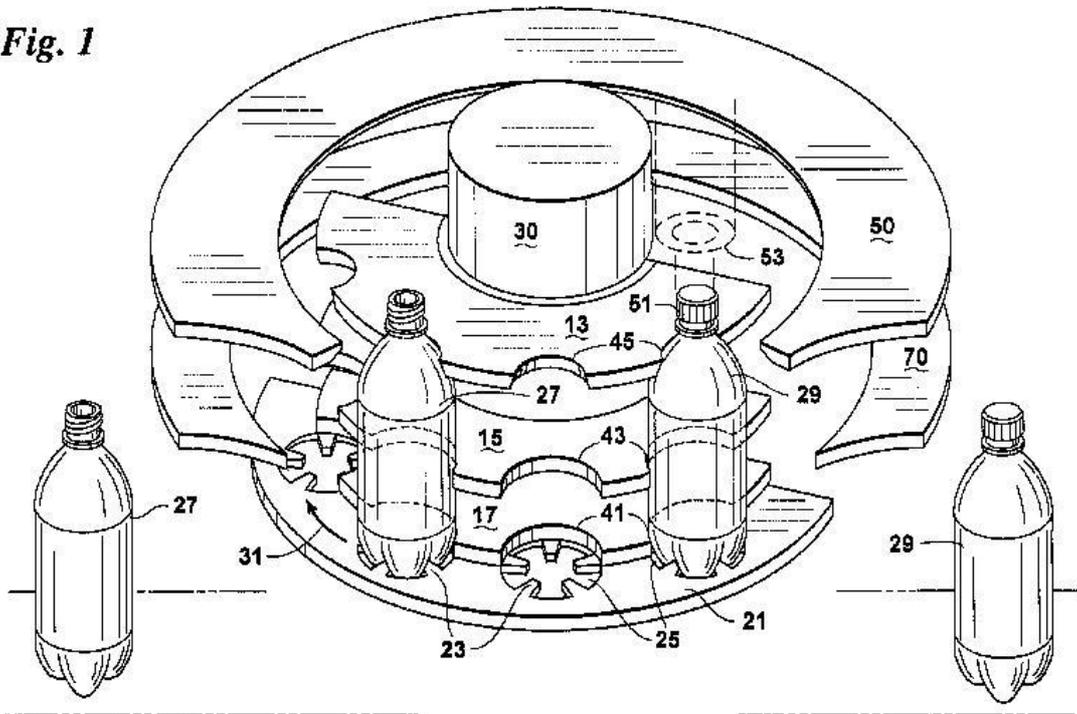
*This subclass/group covers:*

Illustrative example of subject matter classified in this group.





**Fig. 1**



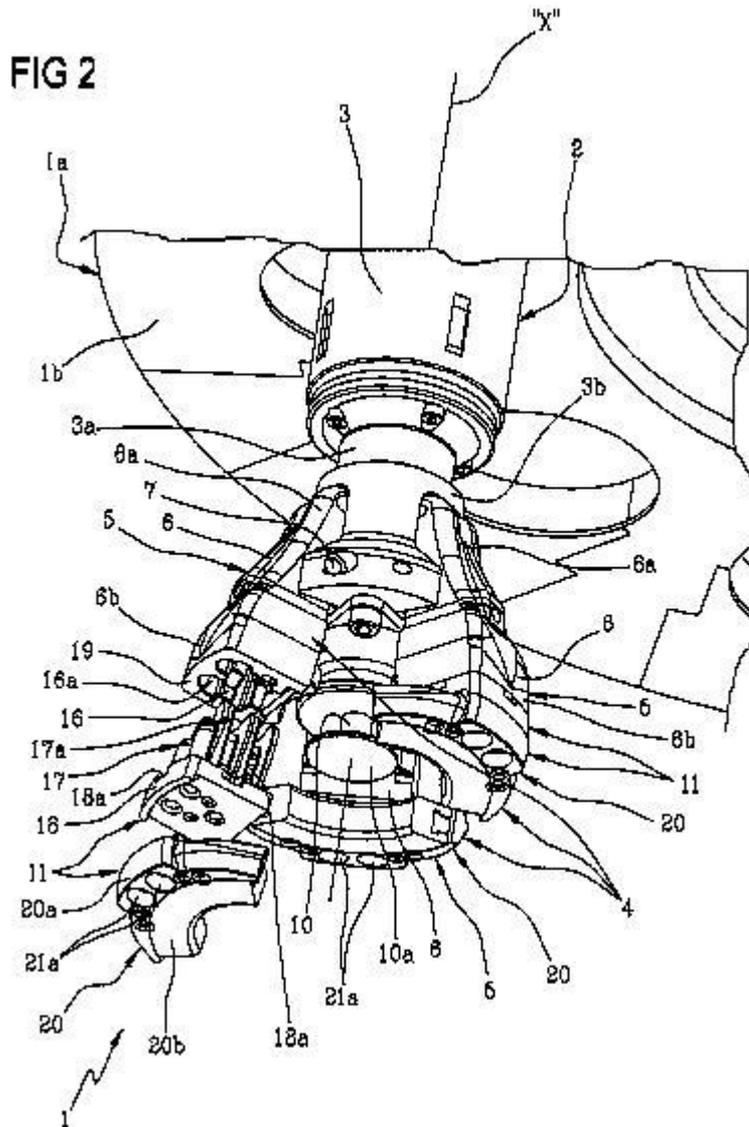
**B67B 3/2066**

[N: Details of capping heads (B67B3/2073 takes precedence)]

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



**B67B 3/2073**

[N: comprising torque limiting means (torque limiters in wrenches or screwdrivers B25B23/14; couplings or clutches per se F16D)]

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

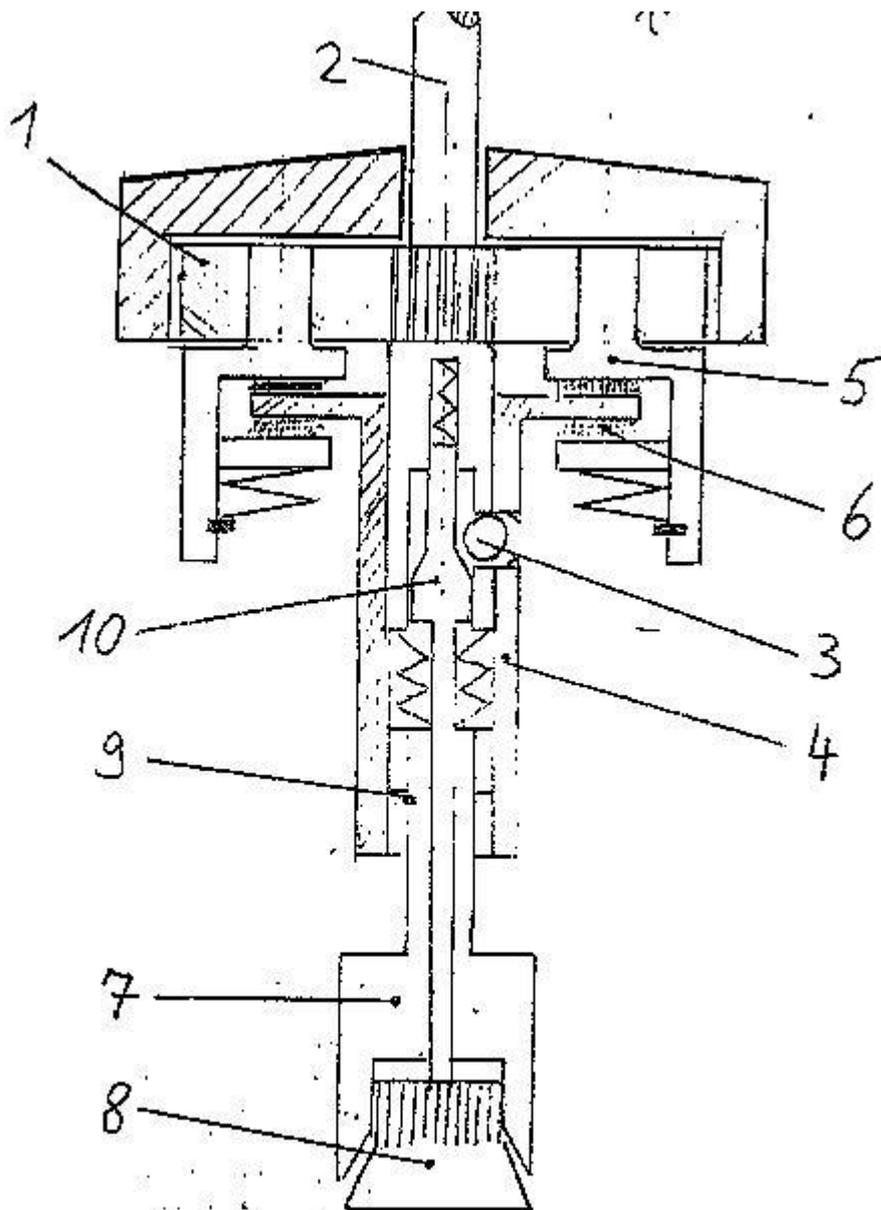


Fig 3

**Informative references**

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

Permanent magnetic clutches	<a href="#">H02K 49/10</a>
-----------------------------	----------------------------

**B67B 3/22**

**by applying snap-on caps**

**Definition statement**

*This subclass/group covers:*

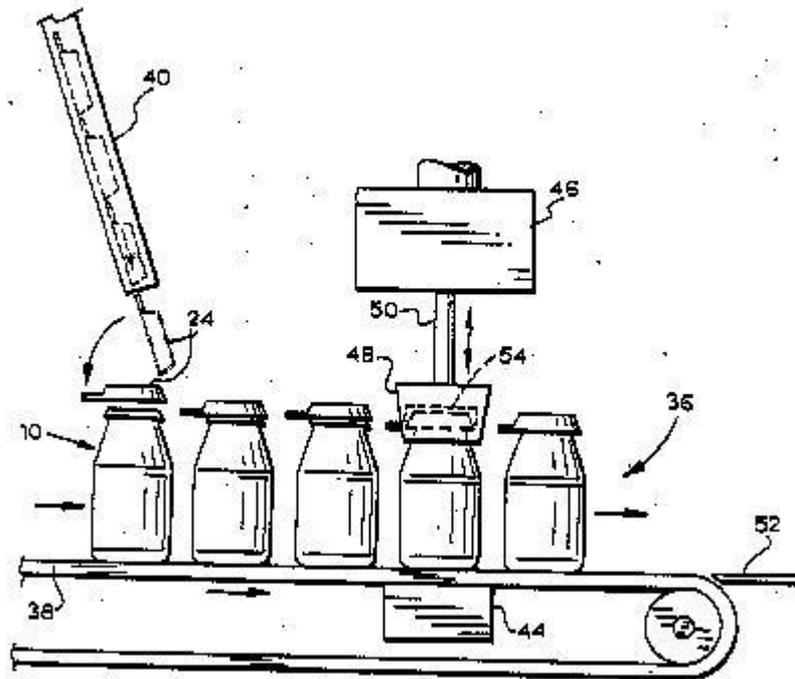
Illustrative example of subject matter classified in this group.

**U.S. Patent**

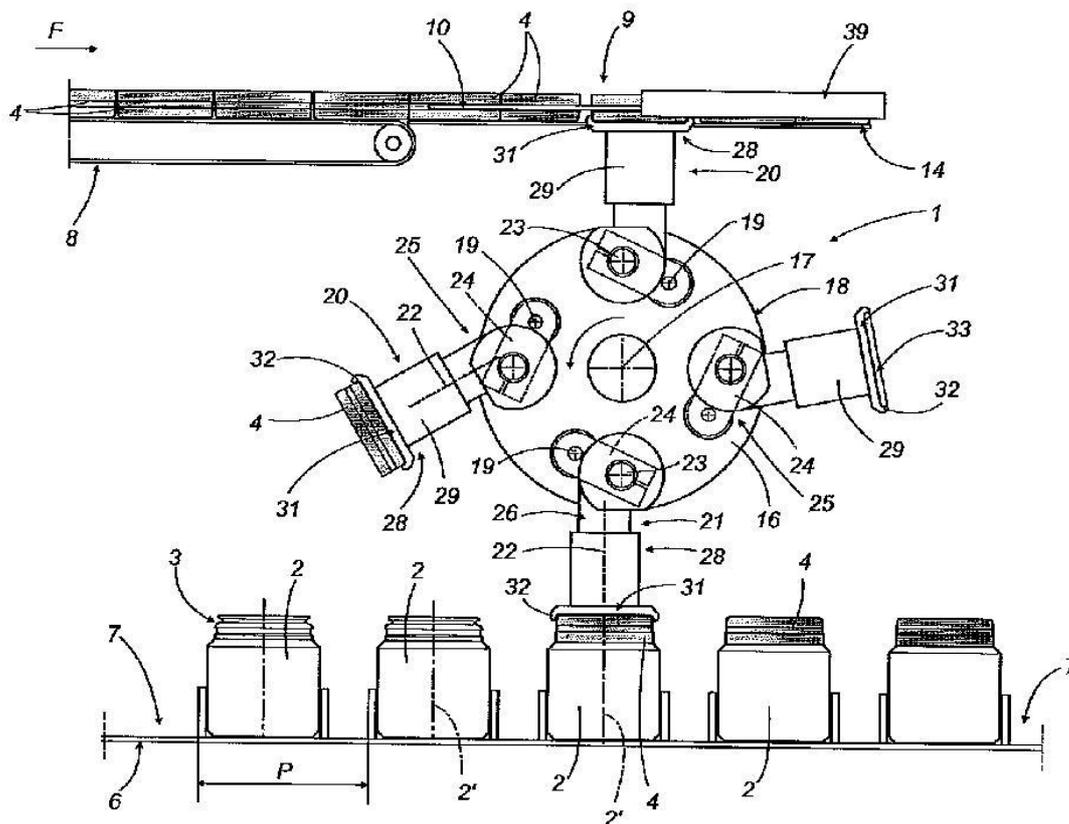
Sep. 20, 1988

Sheet 2 of 2

**4,771,903**



**FIG. 3**



## B67B 3/24

**Special measures for applying and securing caps under vacuum**

### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

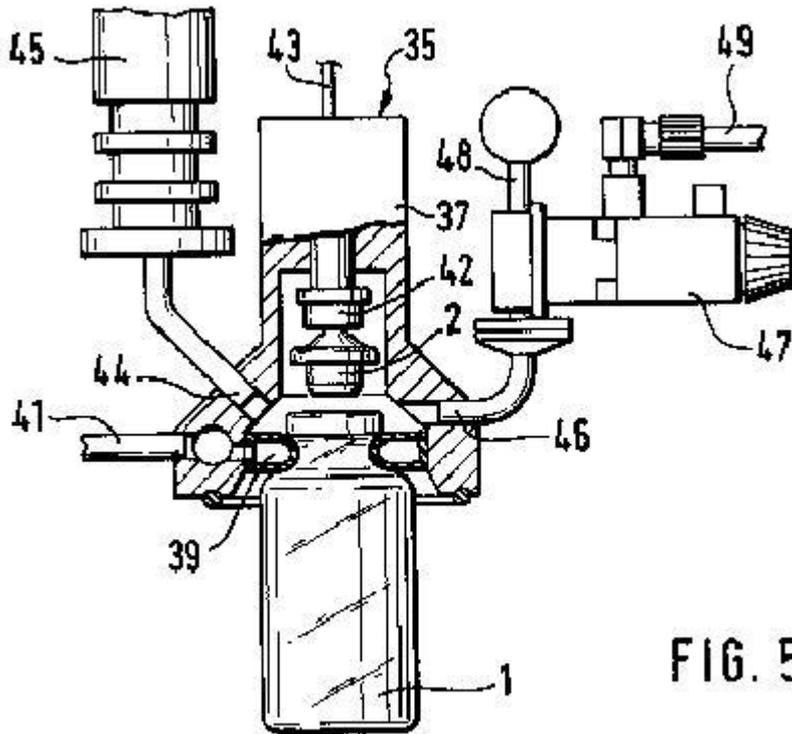


FIG. 5

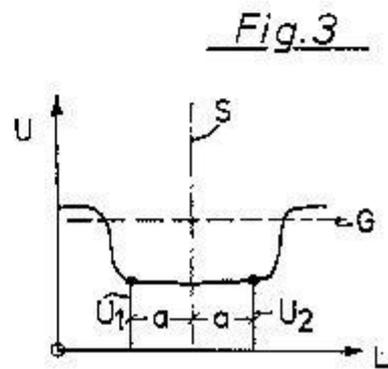
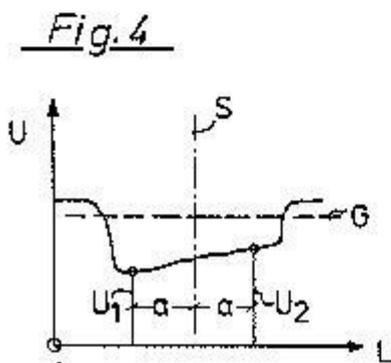
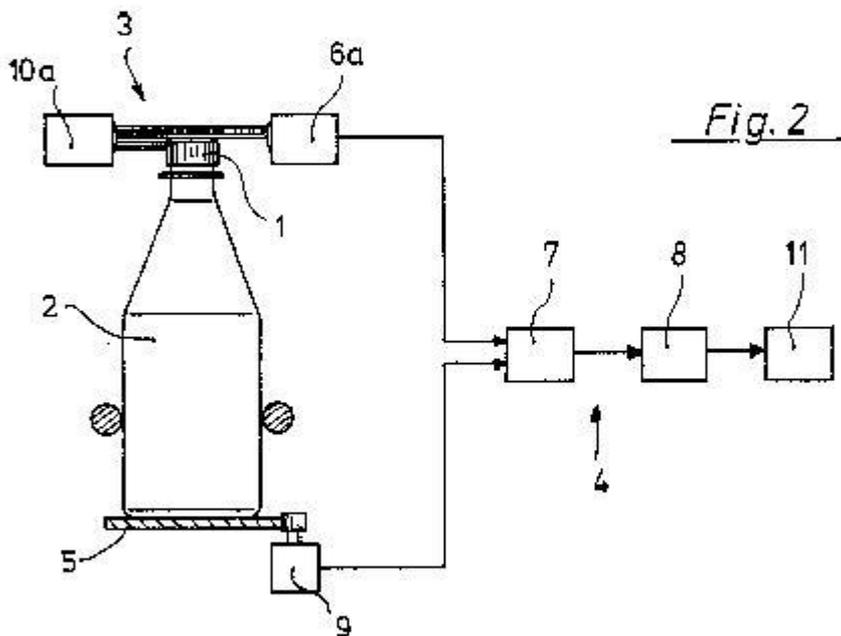
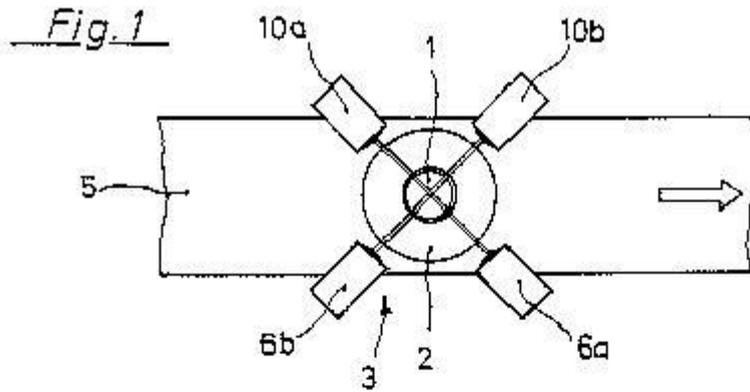
## B67B 3/26

Applications of control, warning, or safety devices in capping machinery

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



702 020/38

### B67B 3/28

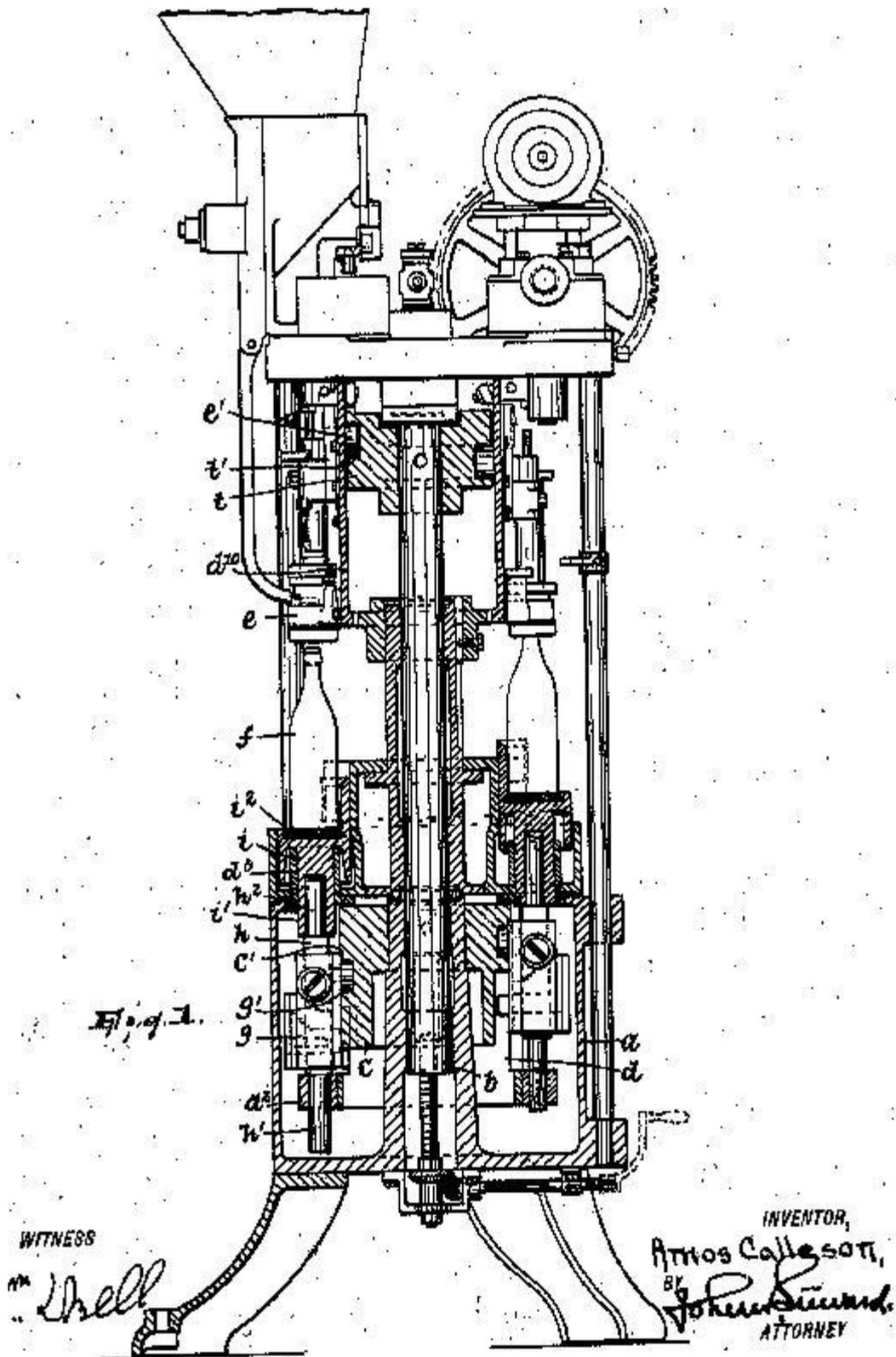
Mechanisms for causing relative movement between bottle or

## jar and capping head

### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



**B67B 5/00**

Applying protective or decorative covers to closures; Devices for securing bottle closures with wire (infant feeding teats)

**with means for fastening to bottles A61J11/04)**

**Definition statement**

*This subclass/group covers:*

Applying protective or decorative covers to closures.

Securing bottle closures with wire.

**References relevant to classification in this group**

*This subclass/group does not cover:*

Manufacturing of bottle cork safety cages or muzzles	<a href="#">B21F 45/04</a>
--	----------------------------

**B67B 5/03**

**Applying protective or decorative covers to closures, e.g. by forming in situ**

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

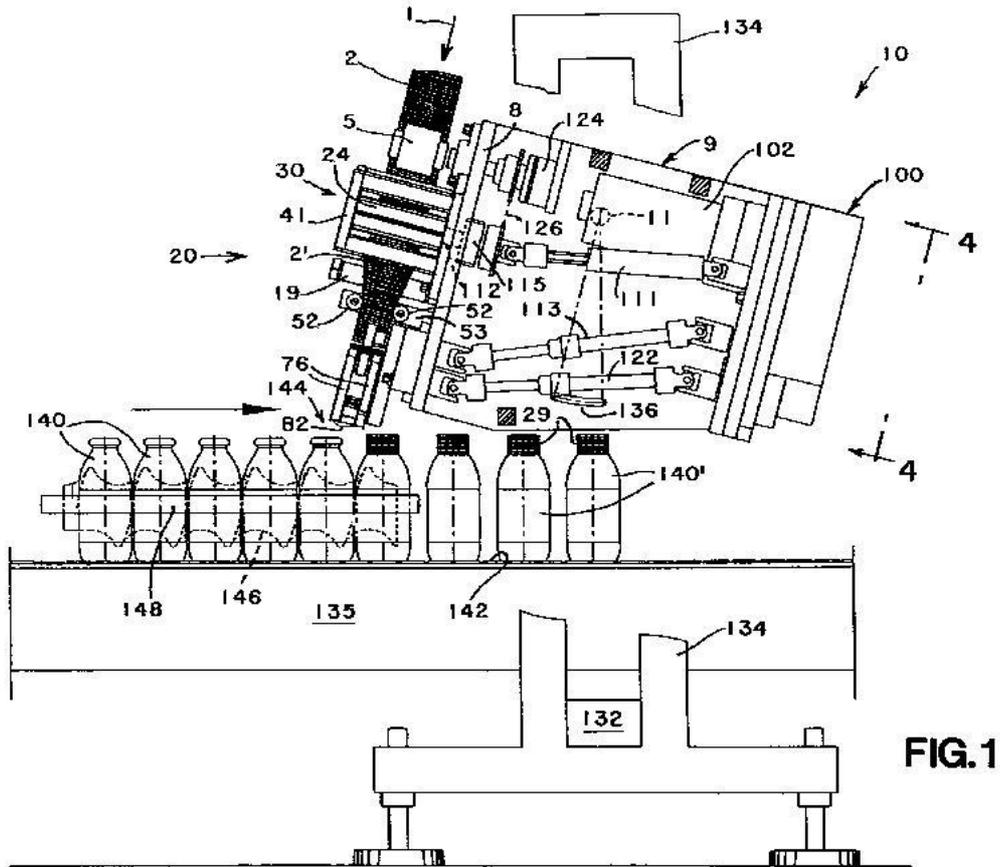


FIG. 1

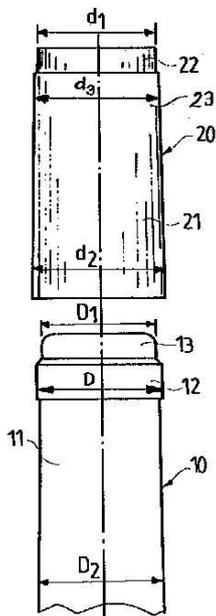


FIG 5

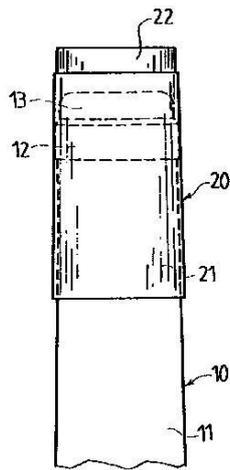


FIG 6

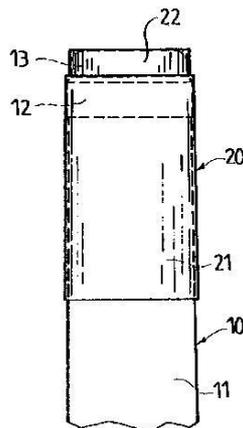


FIG 7

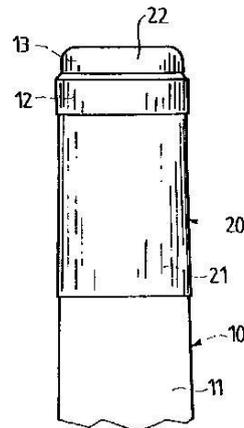


FIG 8

NO 93/11064

2/2

PCT/FR92/01158

**B67B 5/06**

**Devices for securing bottle closures with wire (B67B1/08 takes precedence)**

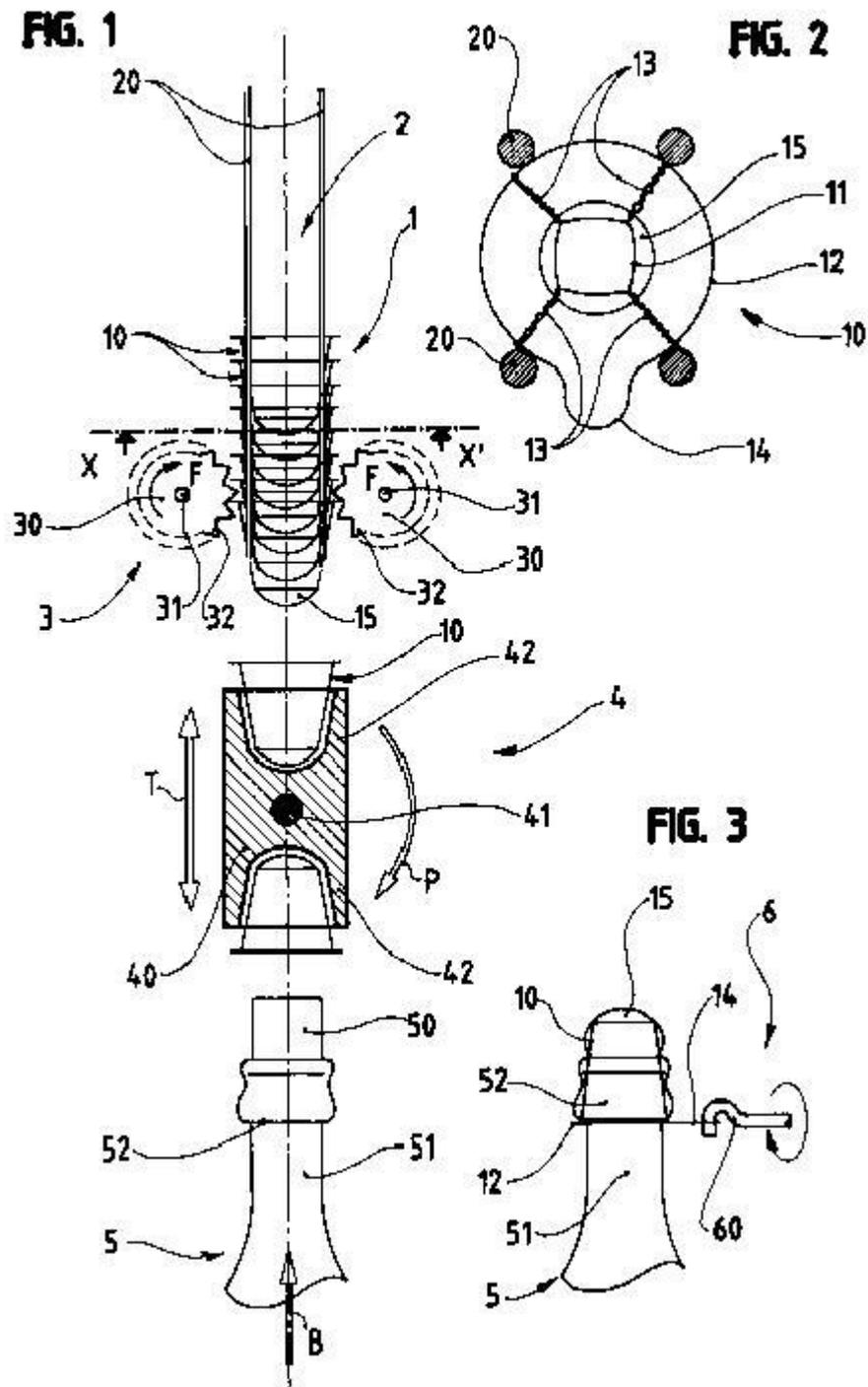
## Definition statement

This subclass/group covers:

Illustrative example of subject matter classified in this group.

# PL UNIQUE

2778905



## **B67B 6/00**

**Closing bottles, jars or similar containers by applying closure members, not provided for in groups B67B1/00 - B67B5/00**

### **Special rules of classification within this group**

This main group has been created to bring the scheme in line with the IPC but has not been used so far (July 2011).

## **B67B 7/00**

**Hand- or power-operated devices for opening closed containers (nail pullers or extractors B25C11/00; [N: for expelling solid content, e.g. pills, from blister packs B65B67/00D1;] attached to, or incorporated in, containers or container closures B65D; [N: dispensers for pills from blister packs B65B69/0058])**

### **Definition statement**

*This subclass/group covers:*

Devices for removing:

- Stoppers;
- disc-closures;
- tightly fitting lids or covers;
- threaded caps;
- vacuum seals.

Devices for piercing holes in closed containers

Device for cutting open closed containers operated by hand

Device for cutting open closed containers power operated

Devices for engaging elements for opening closed containers by tearing

Devices for removing barrel bungs

Combination tools for opening several different closed containers

Devices for opening closed containers by means of breaking.

### **Informative references**

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

Apparatus for cutting in general:	<a href="#">B26F 1/00</a> .
Devices for breaking closed containers, see also	<a href="#">B01F 15/0205</a> , <a href="#">A61J 1/2089</a> , <a href="#">A61F 2/46C4</a>

### **Special rules of classification within this group**

For the groups [B67B 7/24](#) - [B67B 7/92](#), the scheme is based on IPC3.

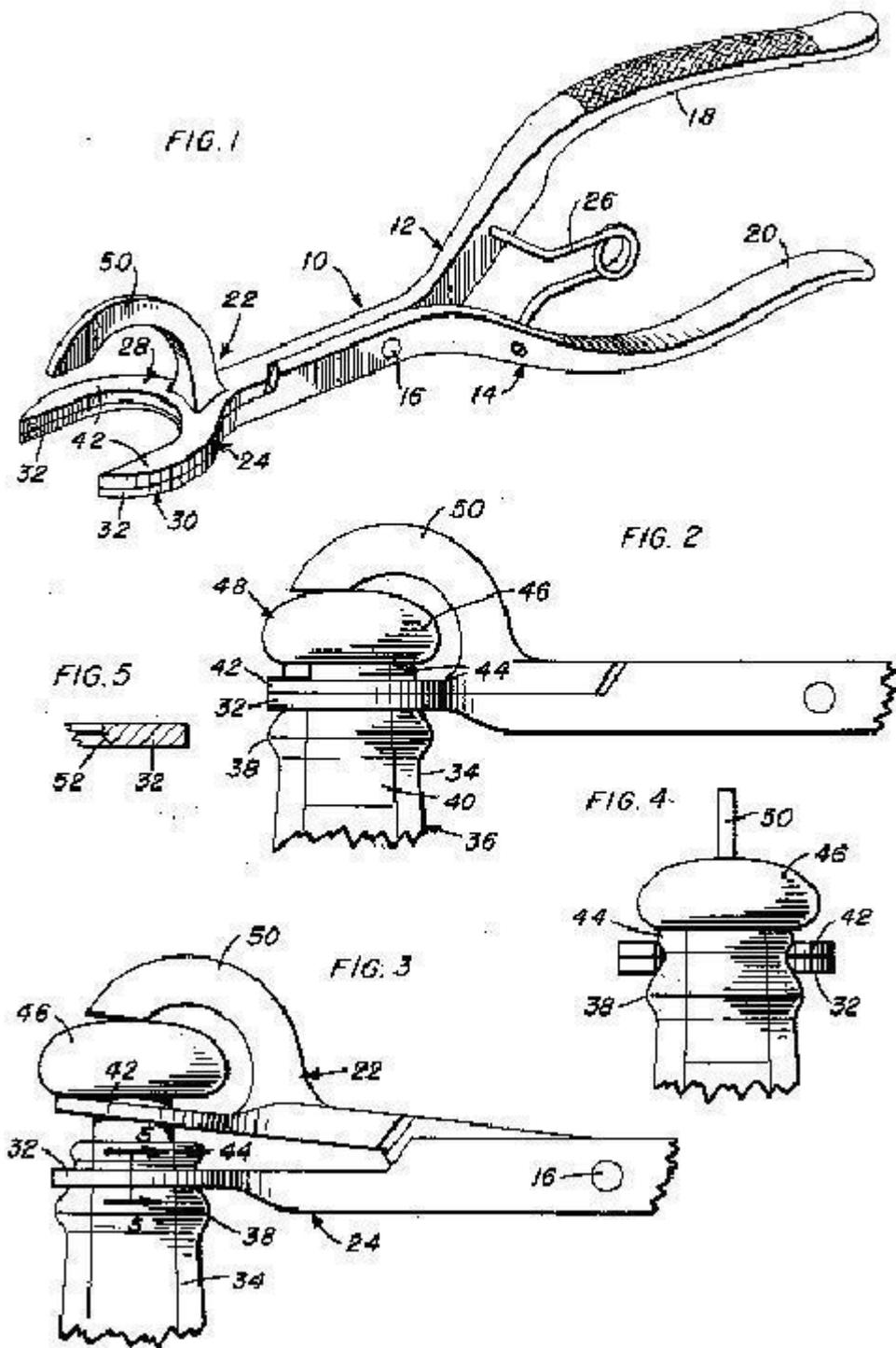
### **B67B 7/02**

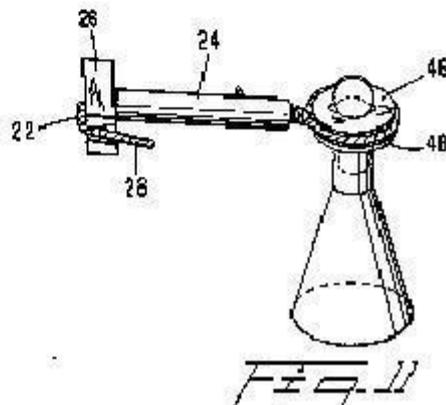
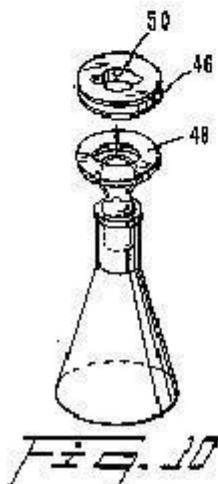
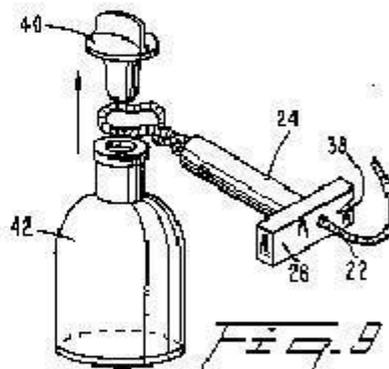
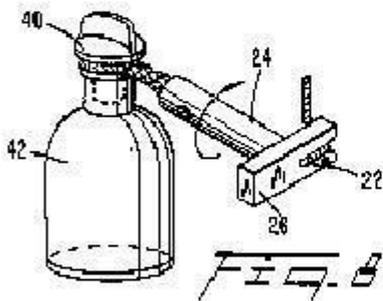
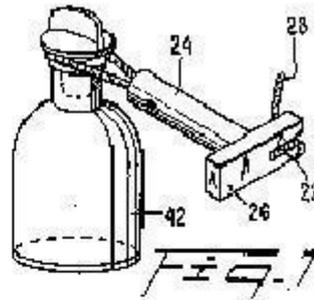
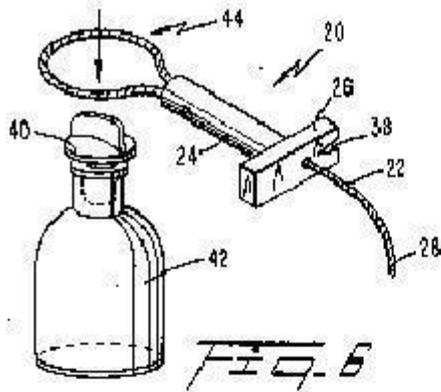
#### **for removing stoppers**

#### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.





**B67B 7/04**

**Cork-screws**

**Informative references**

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

Details of cork screws, cork screws that do not fit in any of the subgroups	<a href="#">B67B 7/44</a>
---	---------------------------

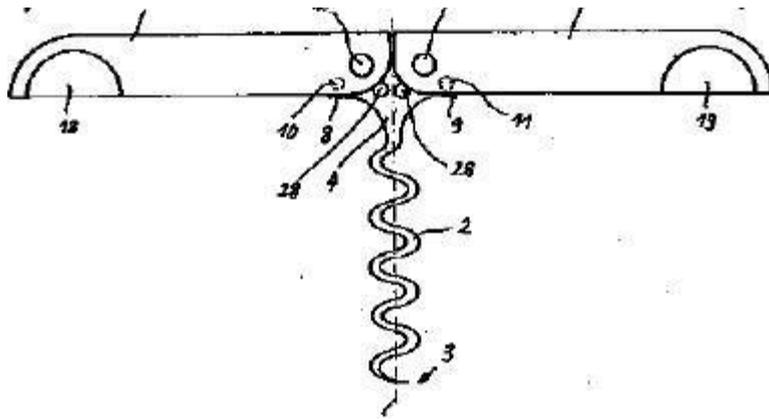
## B67B 7/0411

[N: without supporting means for assisting the pulling action]

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



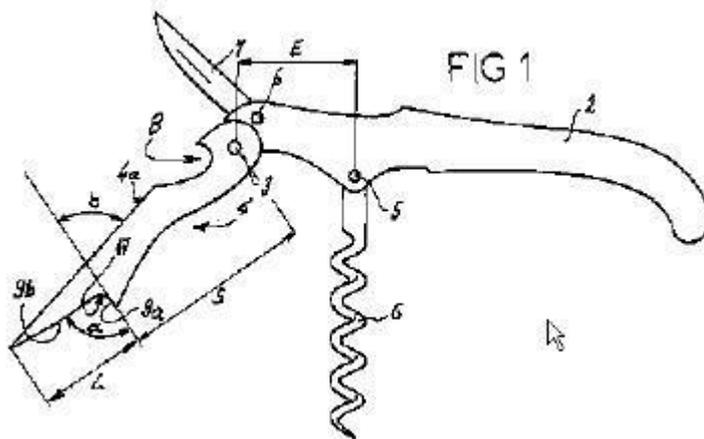
## B67B 7/0423

[N: of wine-waiter, i.e. sommelier type]

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



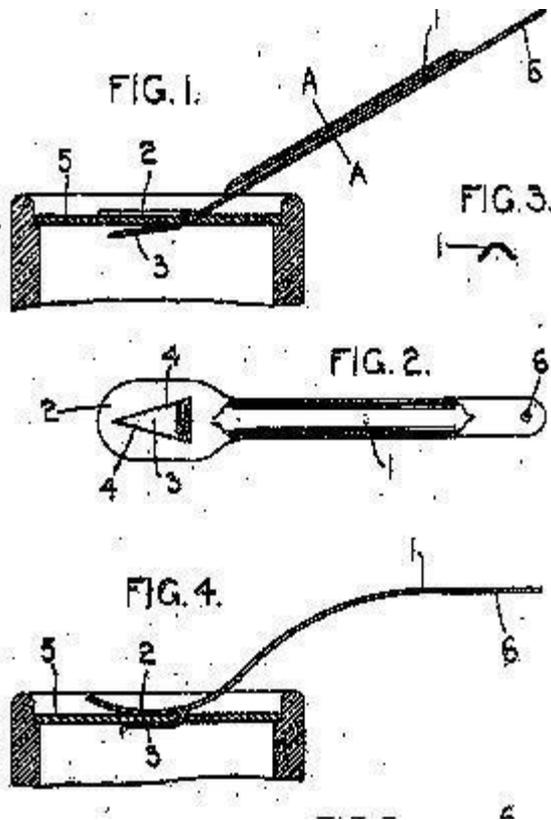
## B67B 7/12

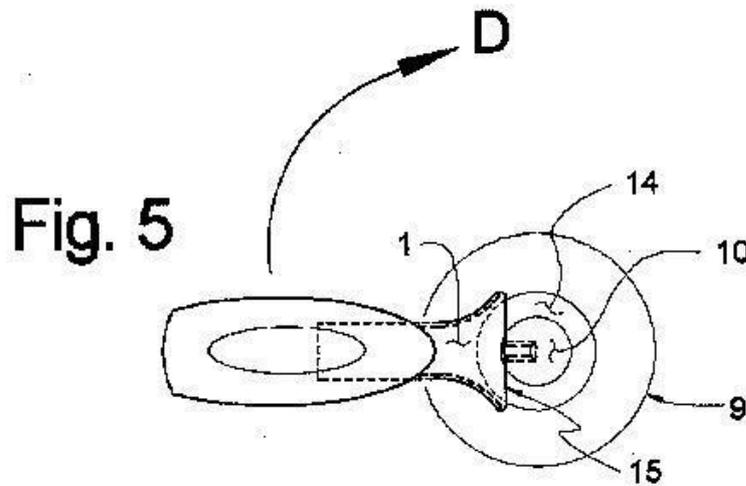
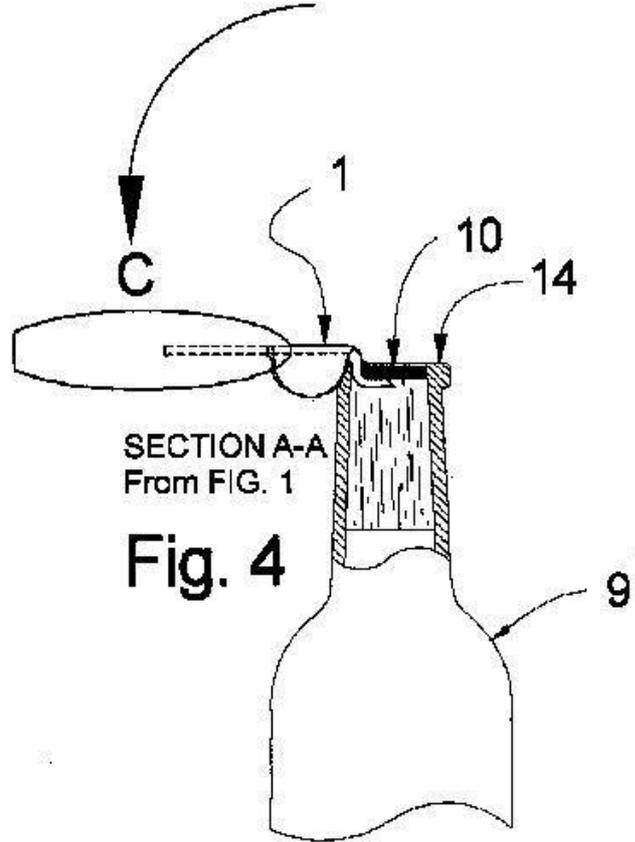
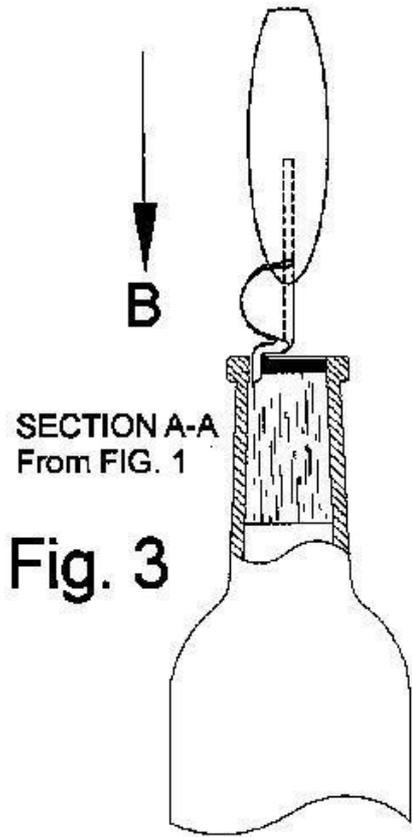
for removing disc-closures

## Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.





**Informative references**

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

Needs to be cleaned in combination with	<a href="#">B67B 7/14</a>
---	---------------------------

**B67B 7/14**

for removing tightly-fitting lids or covers, e.g. of shoe-polish tins, by gripping and rotating

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

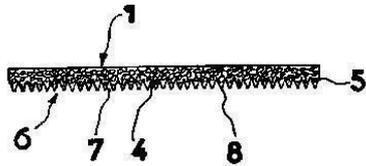


Fig. 1

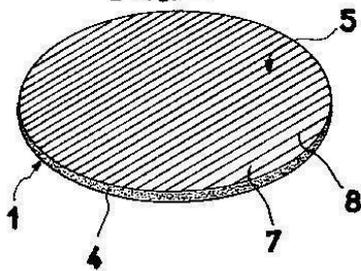


Fig. 2

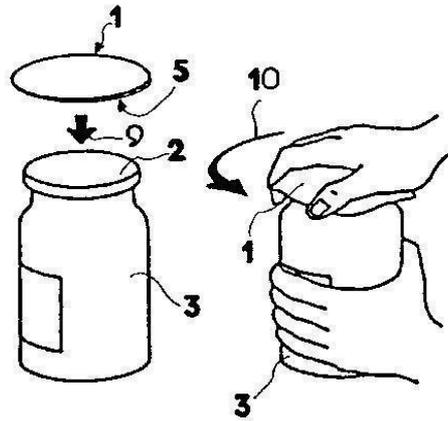
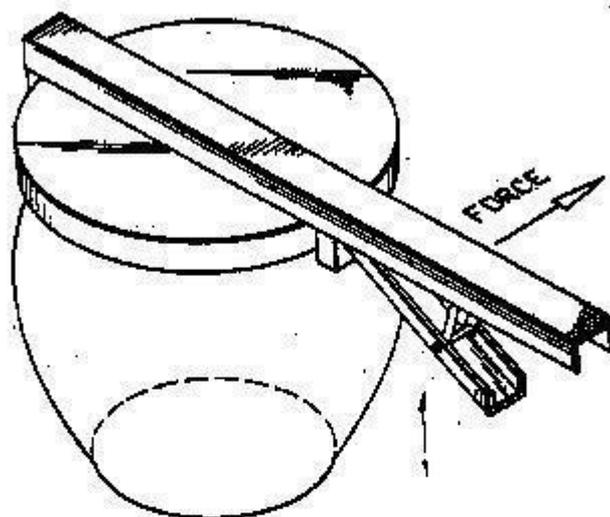


Fig. 3

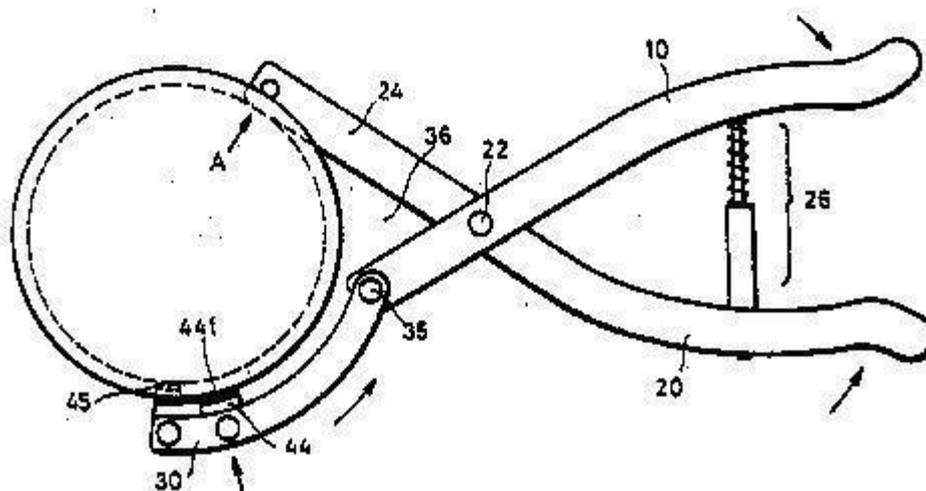
Fig. 4

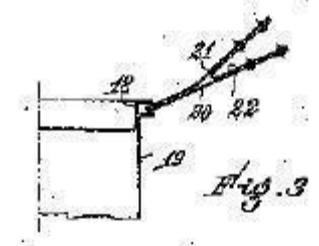
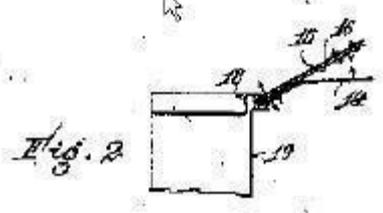
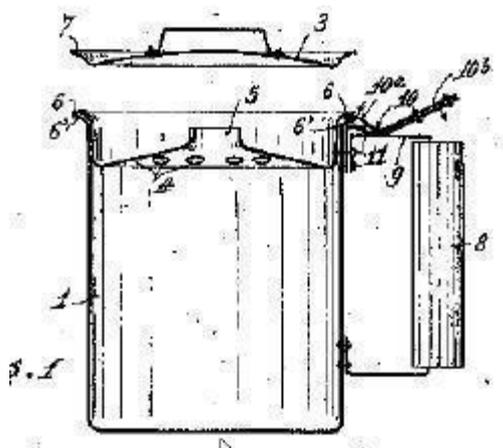
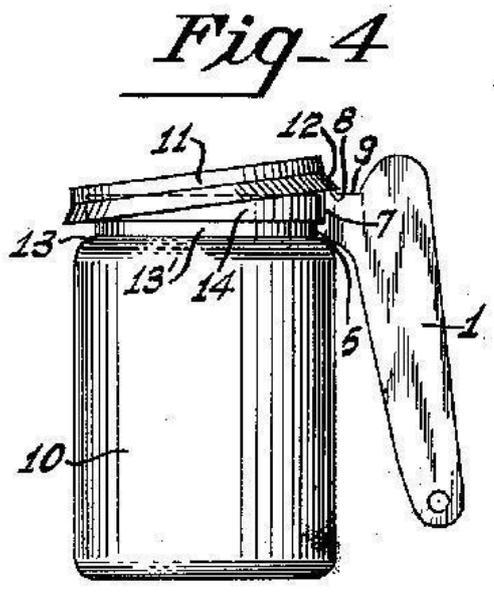
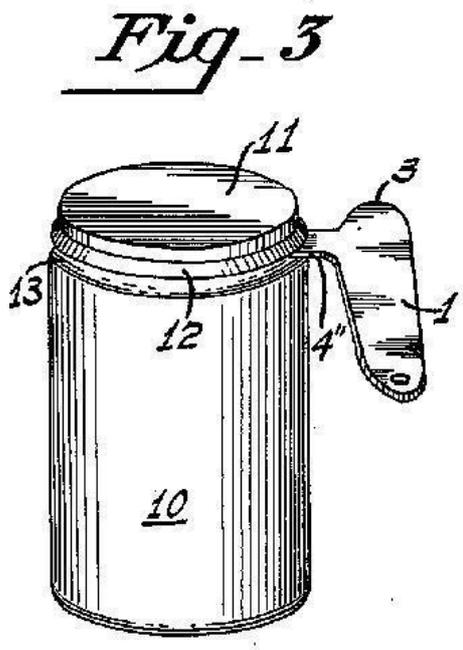
FIG 1



PRIOR ART

FIG 4





**Informative references**

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

Needs to be cleaned in combination with	<a href="#">B67B 7/12</a>
---	---------------------------

## **B67B 7/16**

**for removing flanged caps, e.g. crown caps**

### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

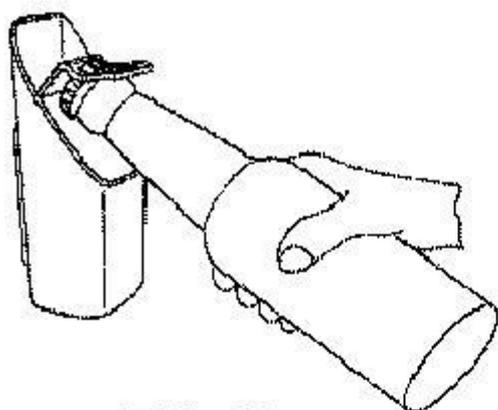


FIG. 17

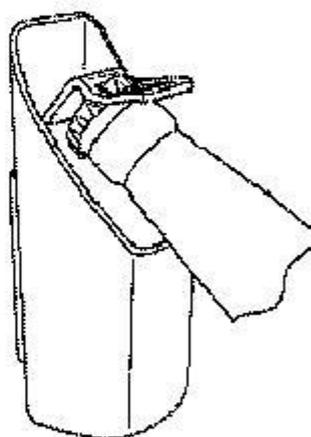


FIG. 18

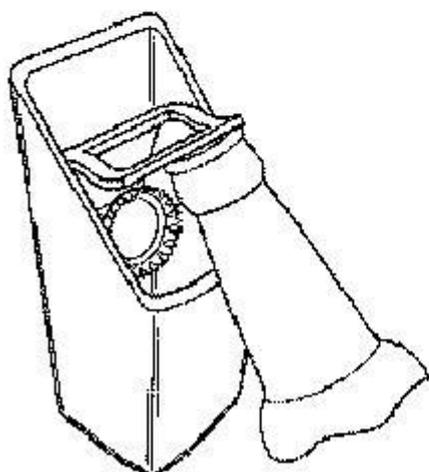


FIG. 19

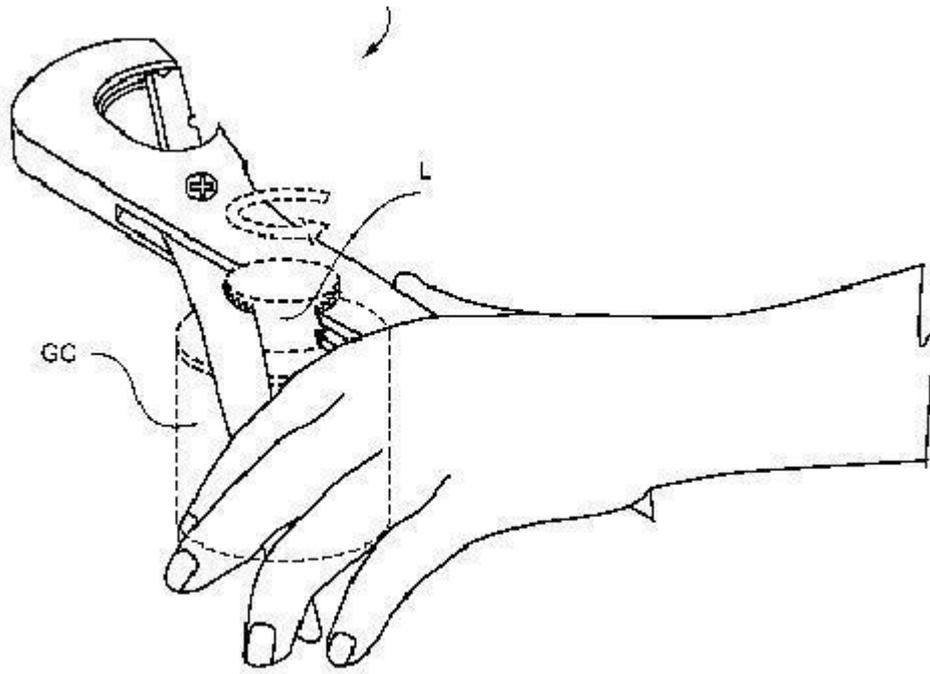
### **B67B 7/18**

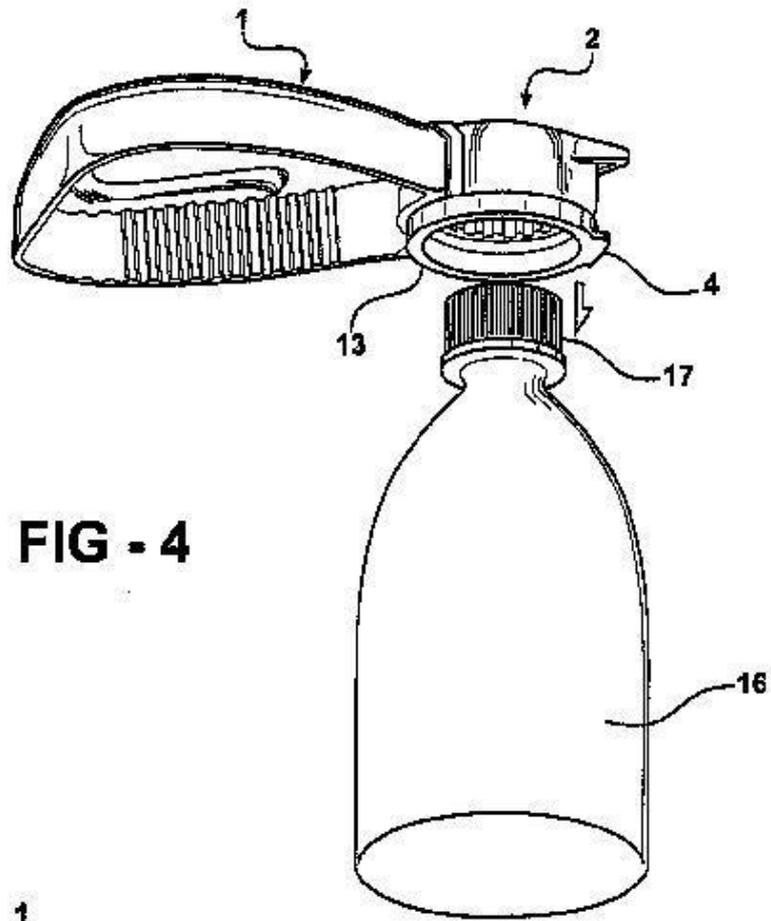
**for removing threaded caps (B67B7/14 takes precedence;  
wrenches B25B13/00)**

#### **Definition statement**

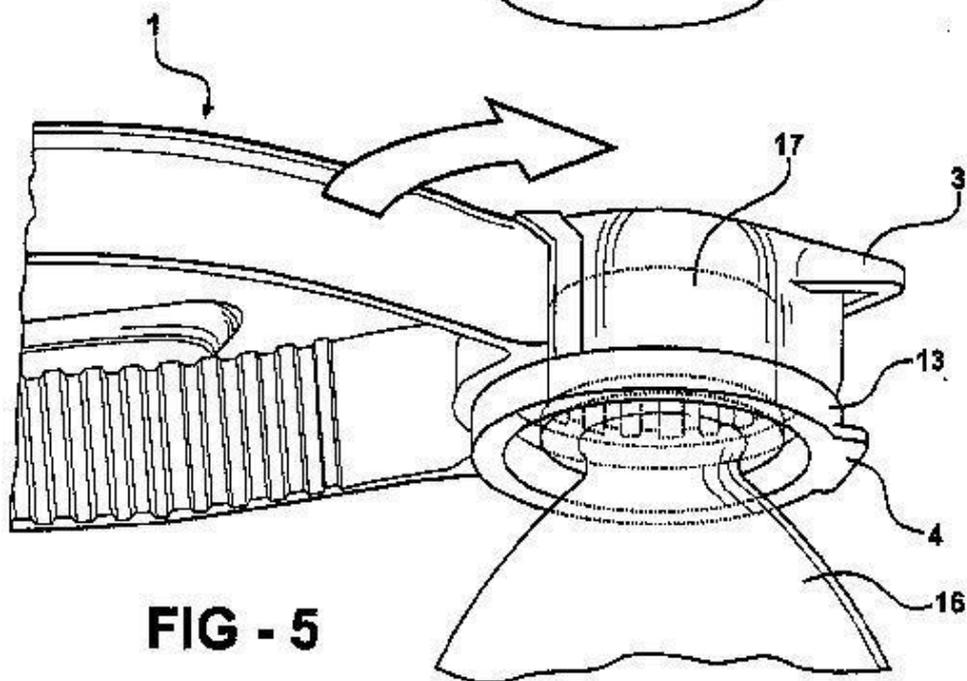
*This subclass/group covers:*

Illustrative example of subject matter classified in this group.





**FIG - 4**



**FIG - 5**

**B67B 7/20**

for breaking vacuum seals between lids or covers and bodies of preserving jars, e.g. by wedge action

## Definition statement

*This subclass/group covers:*

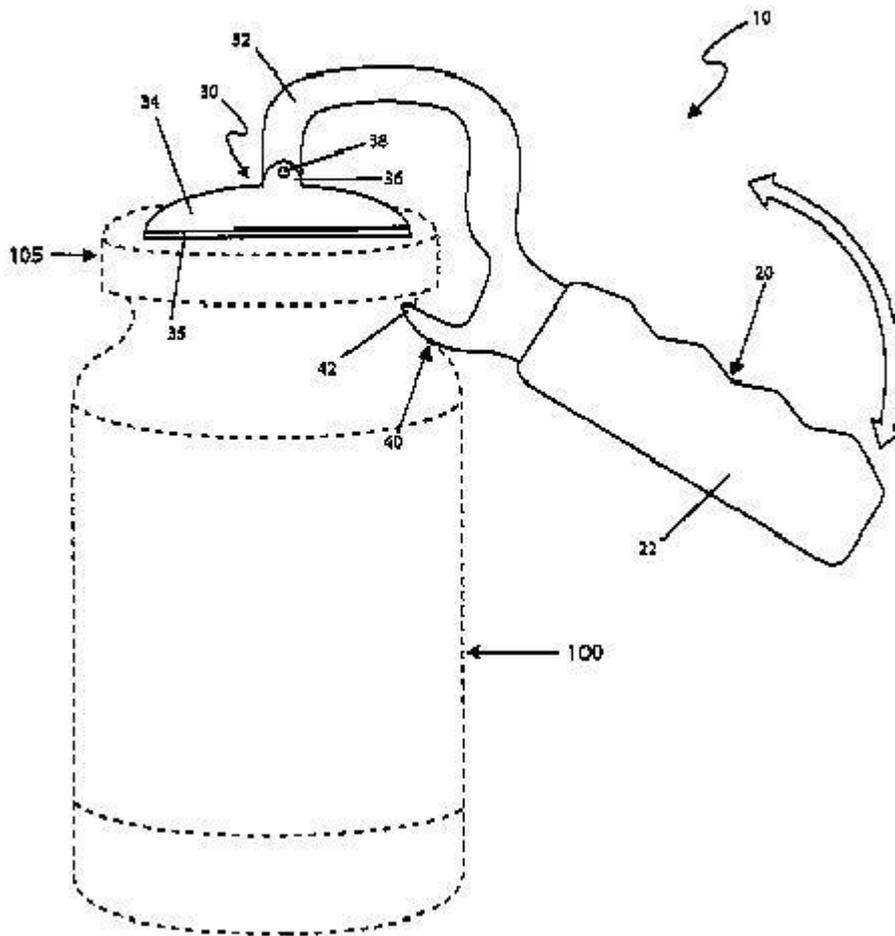
Illustrative example of subject matter classified in this group.

**U.S. Patent**

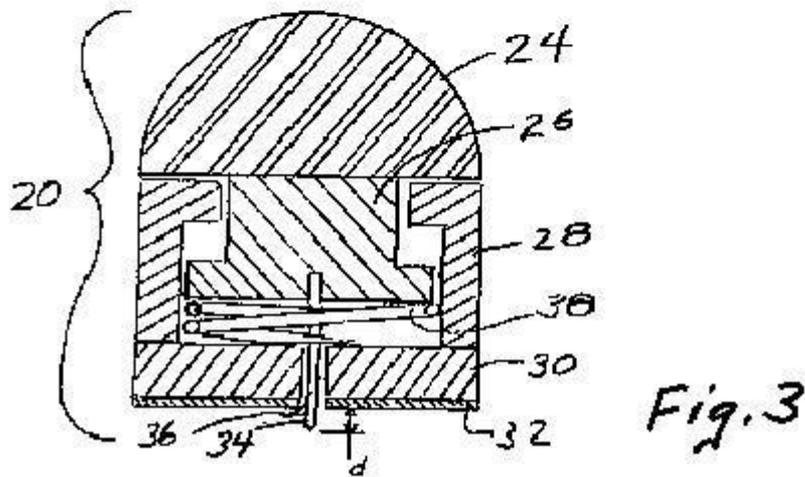
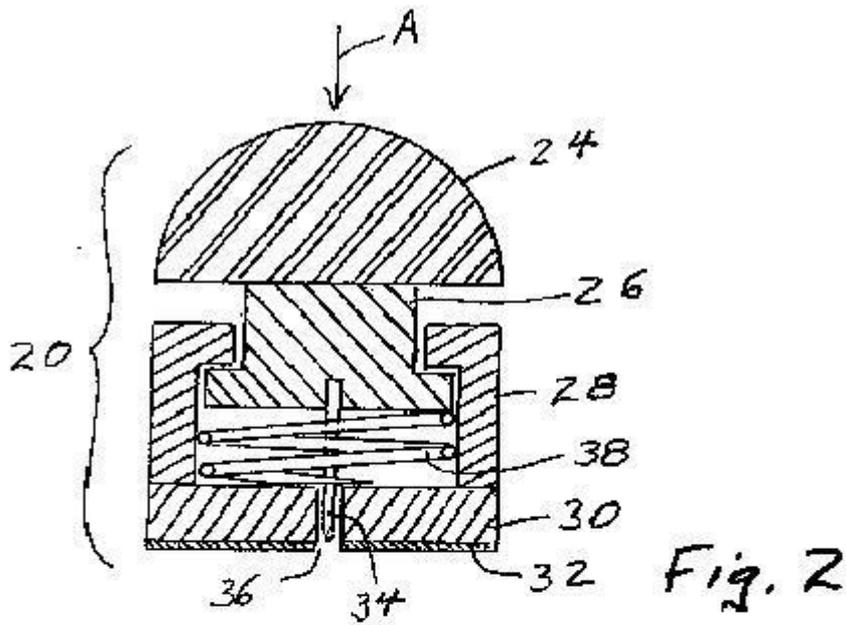
Mar. 22, 2011

Sheet 1 of 6

**US 7,908,942 B1**



**Fig. 1**



**B67B 7/24**

[N: IPC3] Hole-piercing devices

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

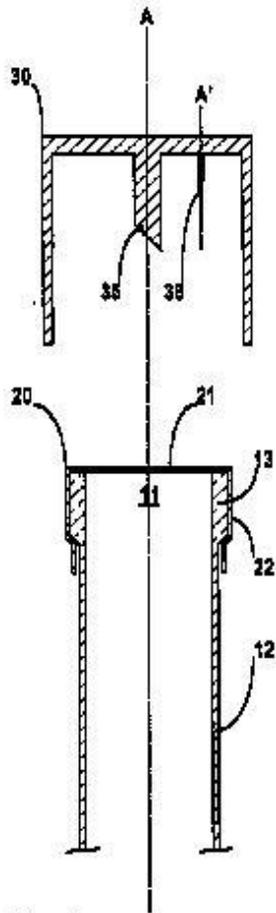


Fig. 1

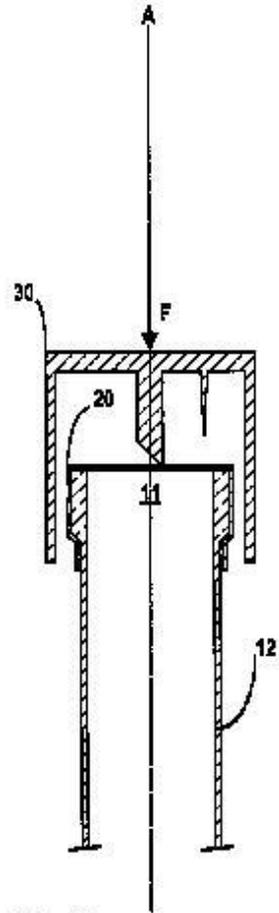


Fig. 2

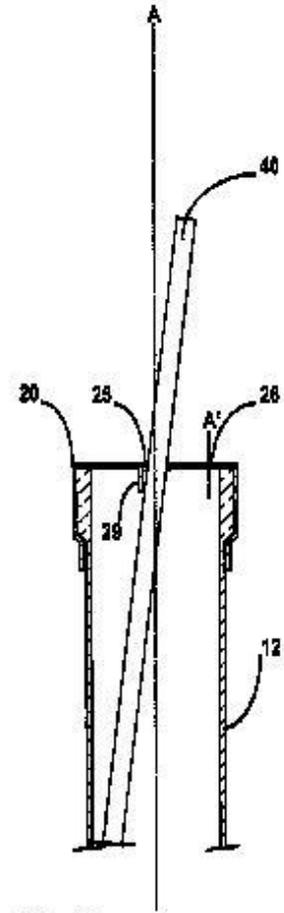
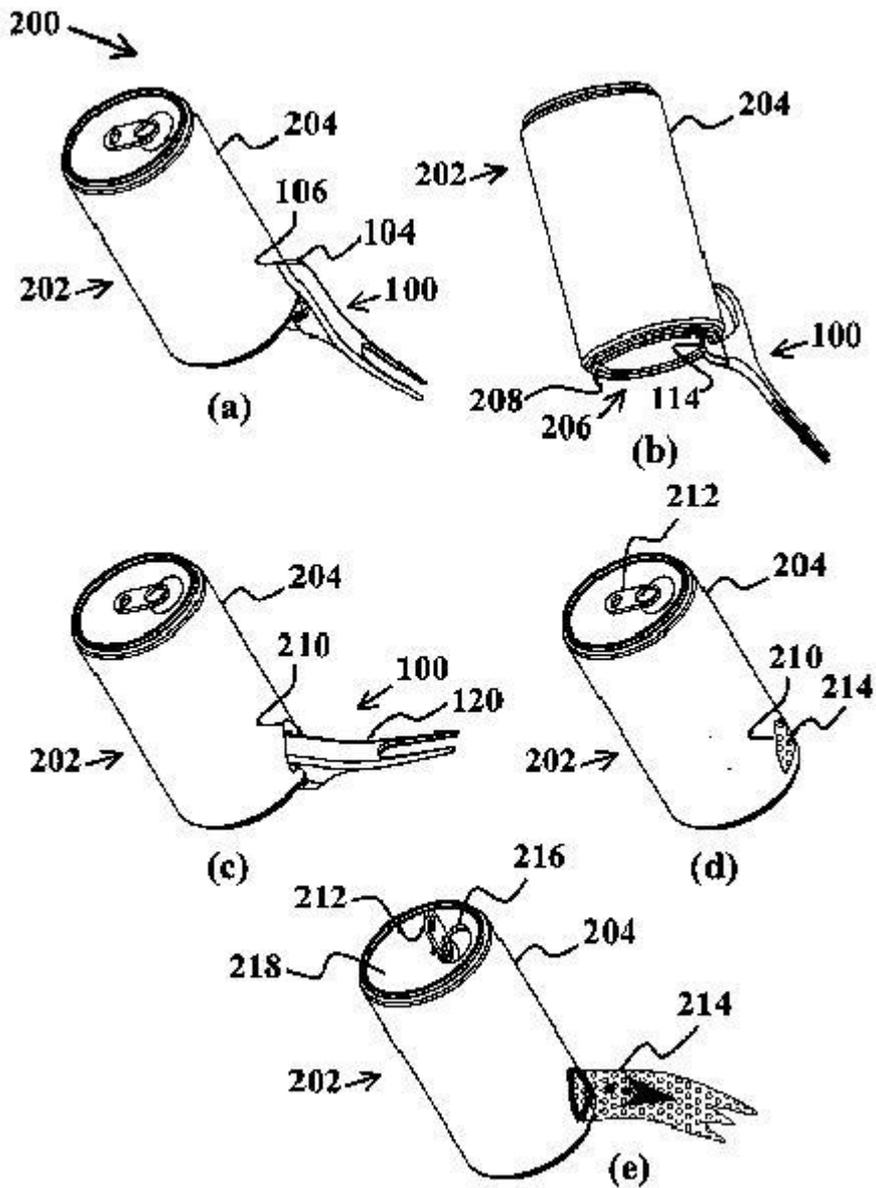


Fig. 3



**FIG. 2**

**Informative references**

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

<p>Devices for transferring samples to, in, or from, the analysis apparatus with means for piercing stoppers or septums</p>	<p><a href="#">G01N 35/1079</a></p>
---	-------------------------------------

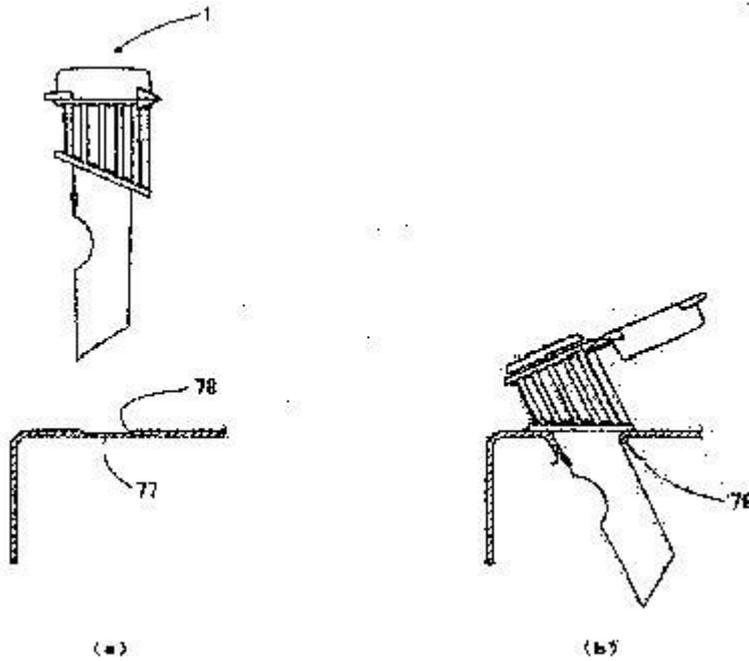
**B67B 7/26**

## [N: IPC3] combined with spouts

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



## B67B 7/28

## [N: IPC3] and associated with receptacle holders

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

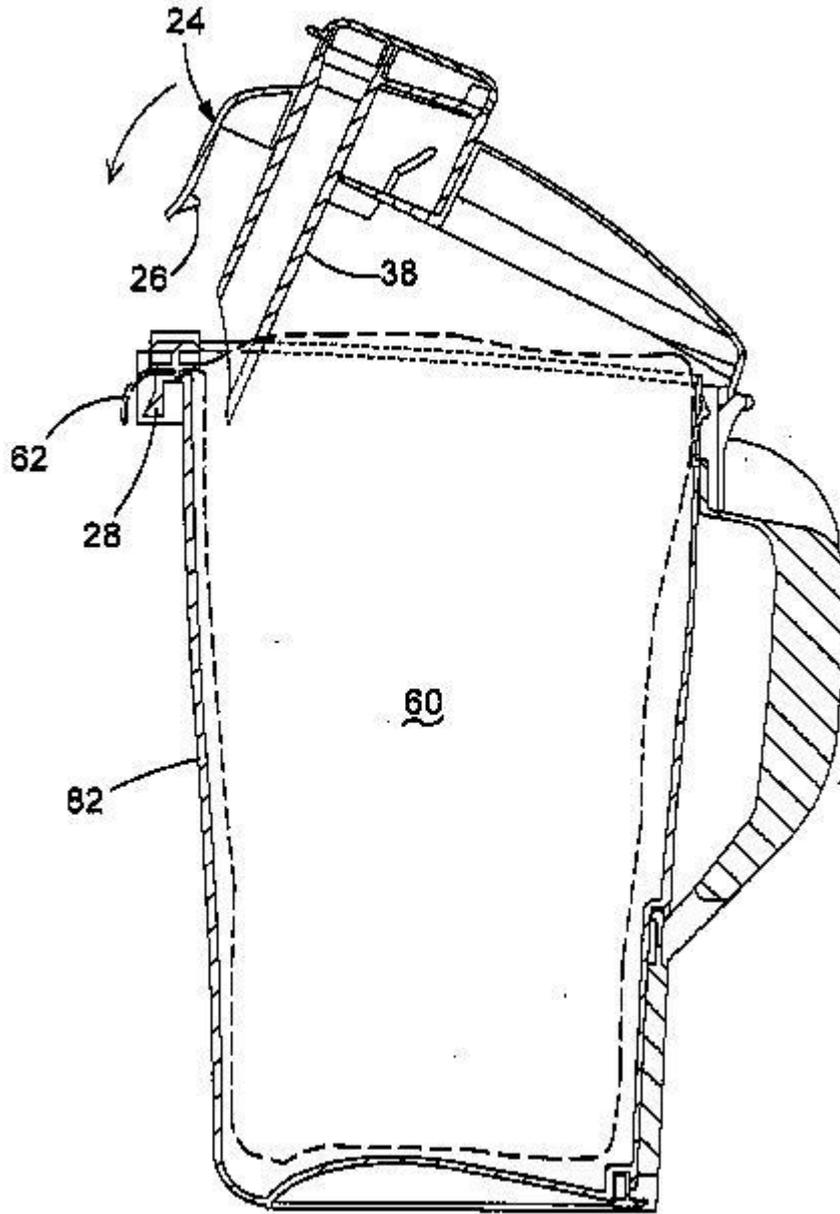


FIG. 6

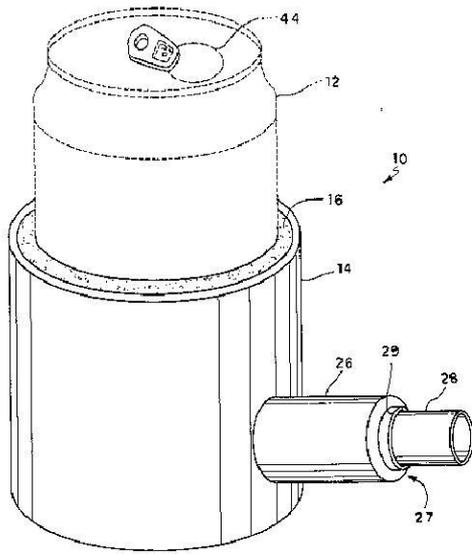


Fig. 1

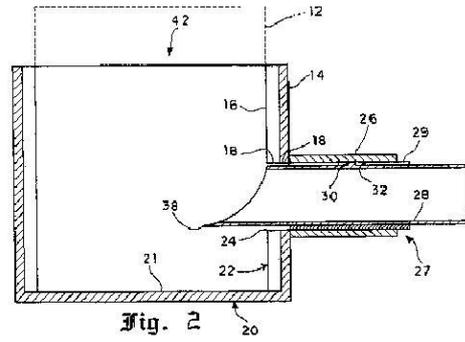


Fig. 2

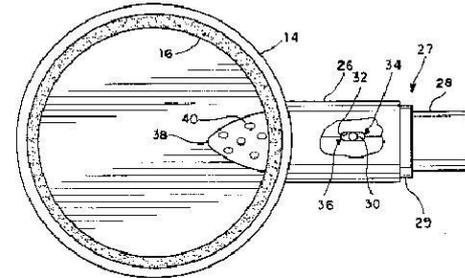


Fig. 3

## B67B 7/30

### [N: IPC3] Hand-operated cutting devices

#### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

Fig. 1

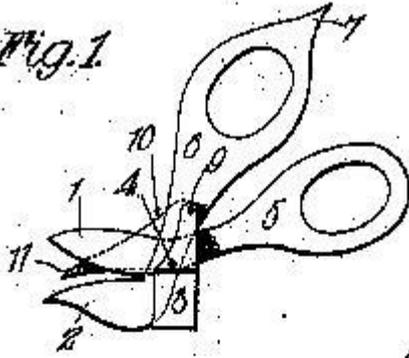
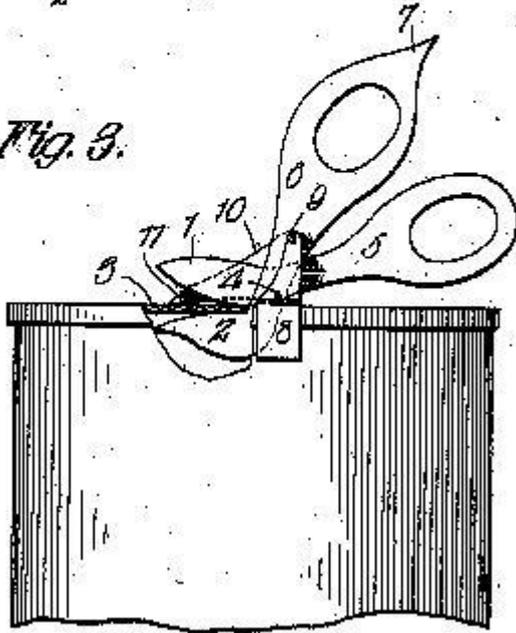
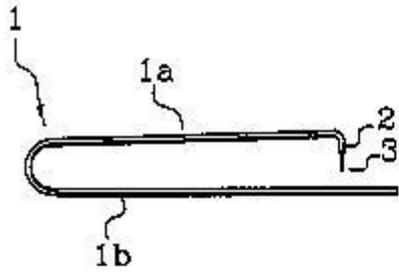
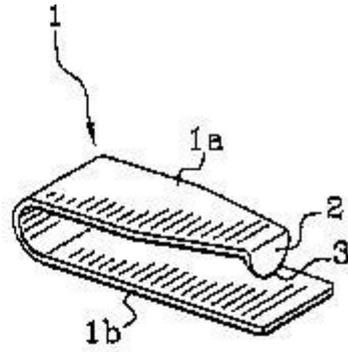


Fig. 3.

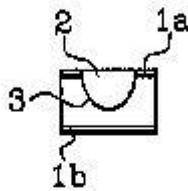




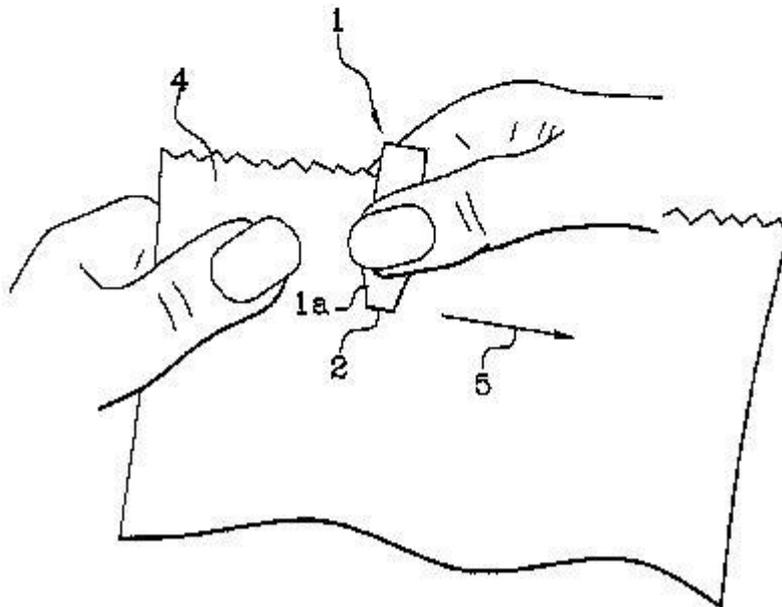
**Fig. 1**



**Fig. 2**



**Fig. 3**



**Fig. 4**

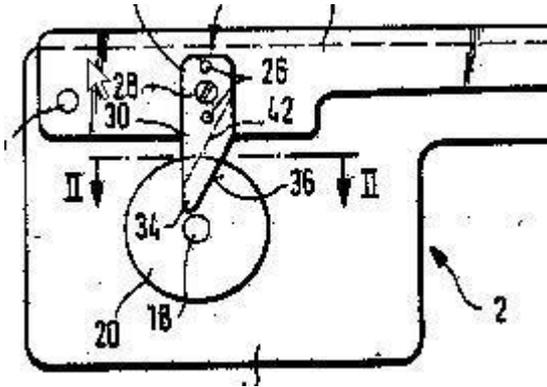
**B67B 7/32**

[N: IPC3] propelled by rotary gears or wheels around periphery of container

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



### **Special rules of classification within this group**

The cutter **MUST** be rigidly fixed to the tool.

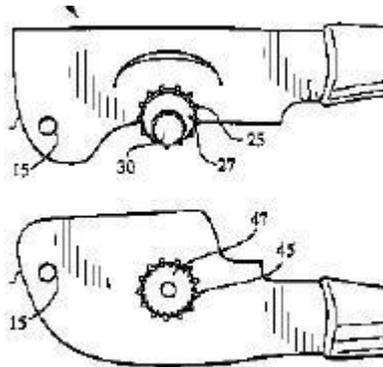
### **B67B 7/34**

**[N: IPC3] with rotatable cutters**

### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



### **Special rules of classification within this group**

The cutter wheel **MUST** rotate.

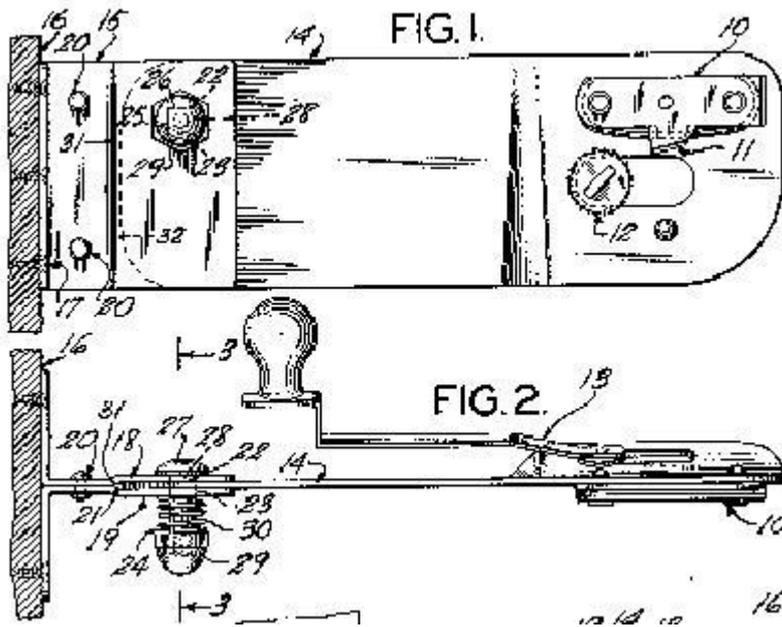
### **B67B 7/36**

**[N: IPC3] adapted to be mounted on walls**

### **Definition statement**

This subclass/group covers:

Illustrative example of subject matter classified in this group.



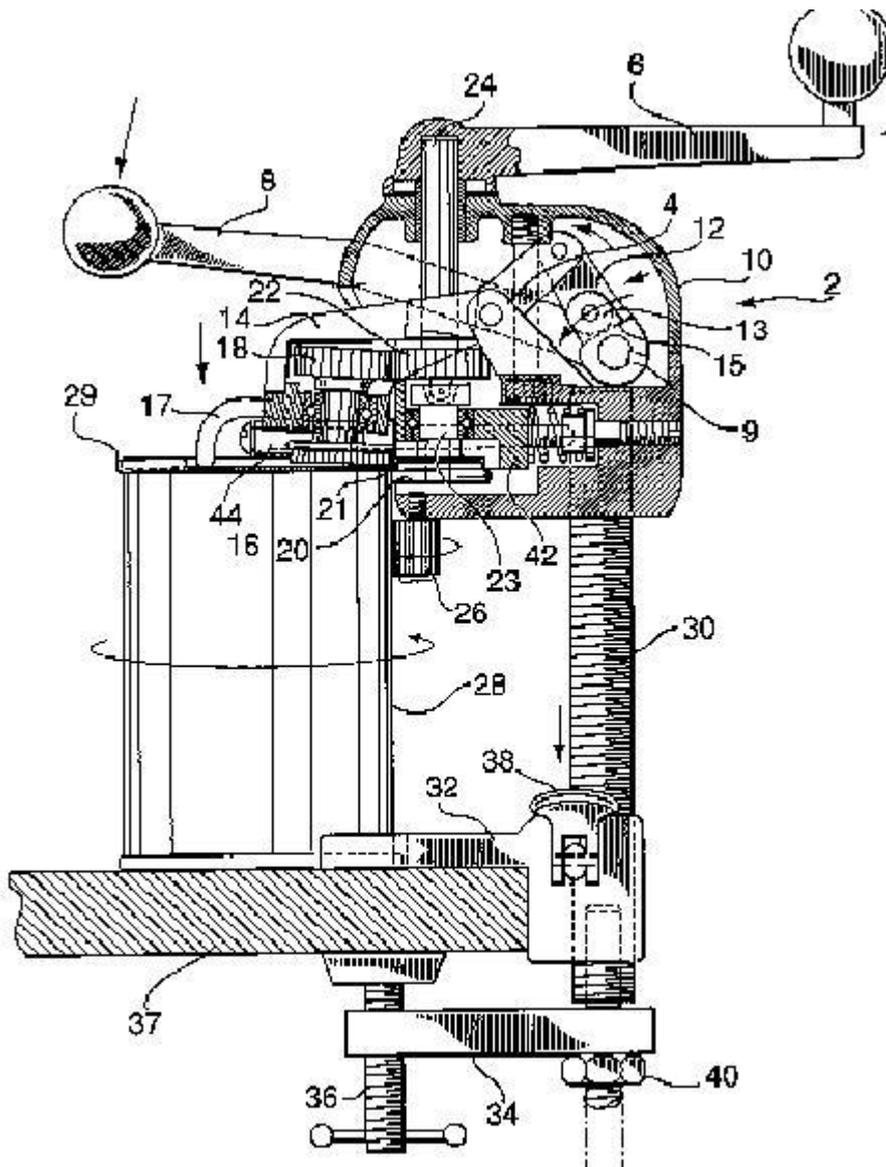


FIG. 2

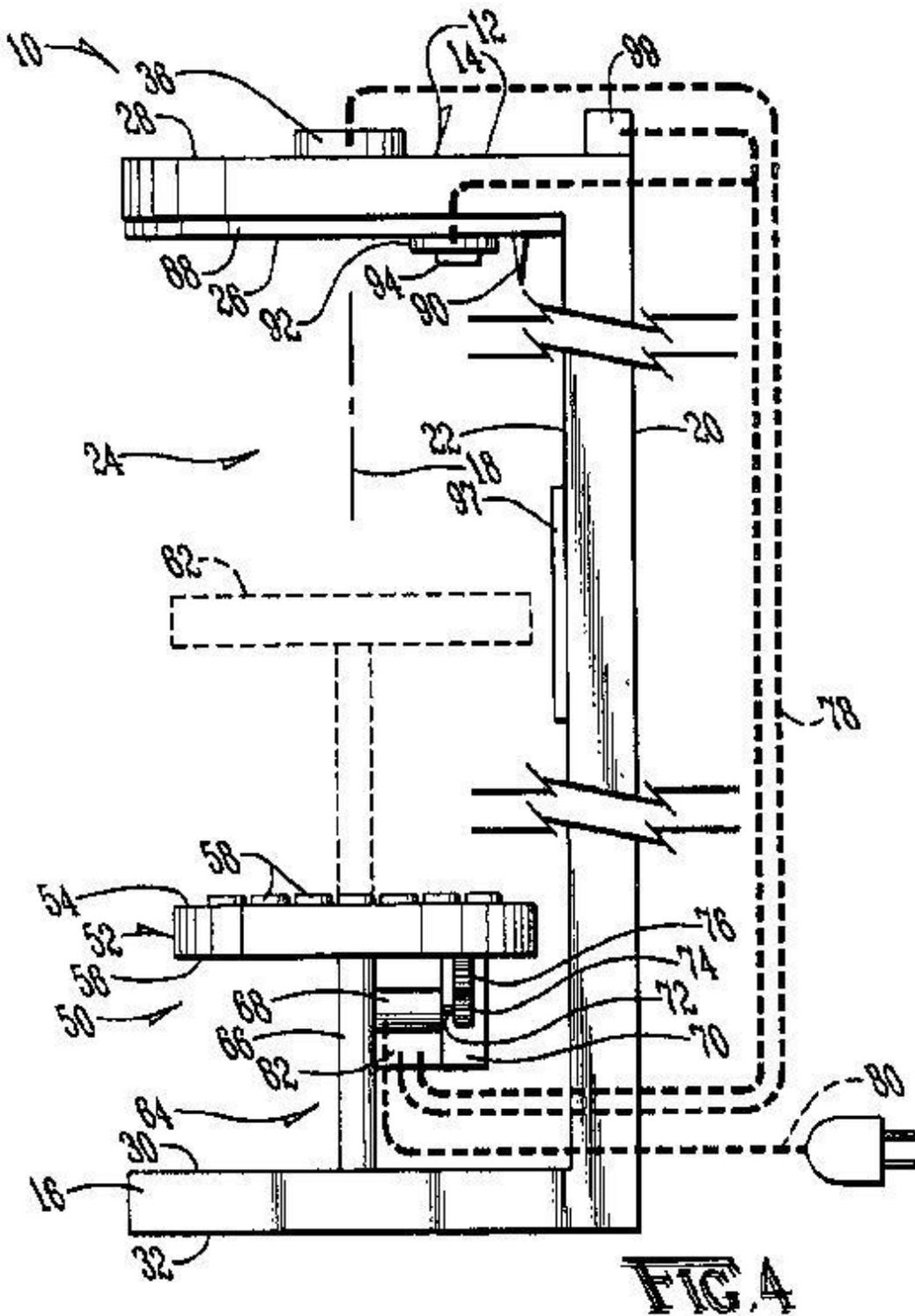
## B67B 7/38

[N: IPC3] Power-operated cutting devices (machines for domestic use with a plurality of interchangeable units A47J43/06, A47J44/00)

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



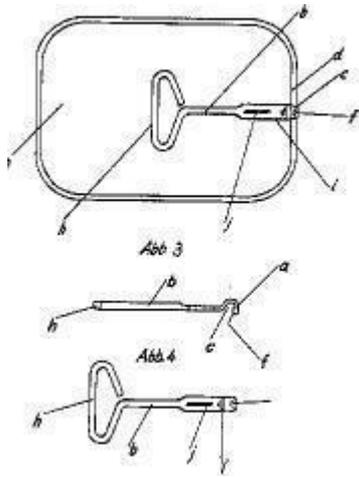
**B67B 7/40**

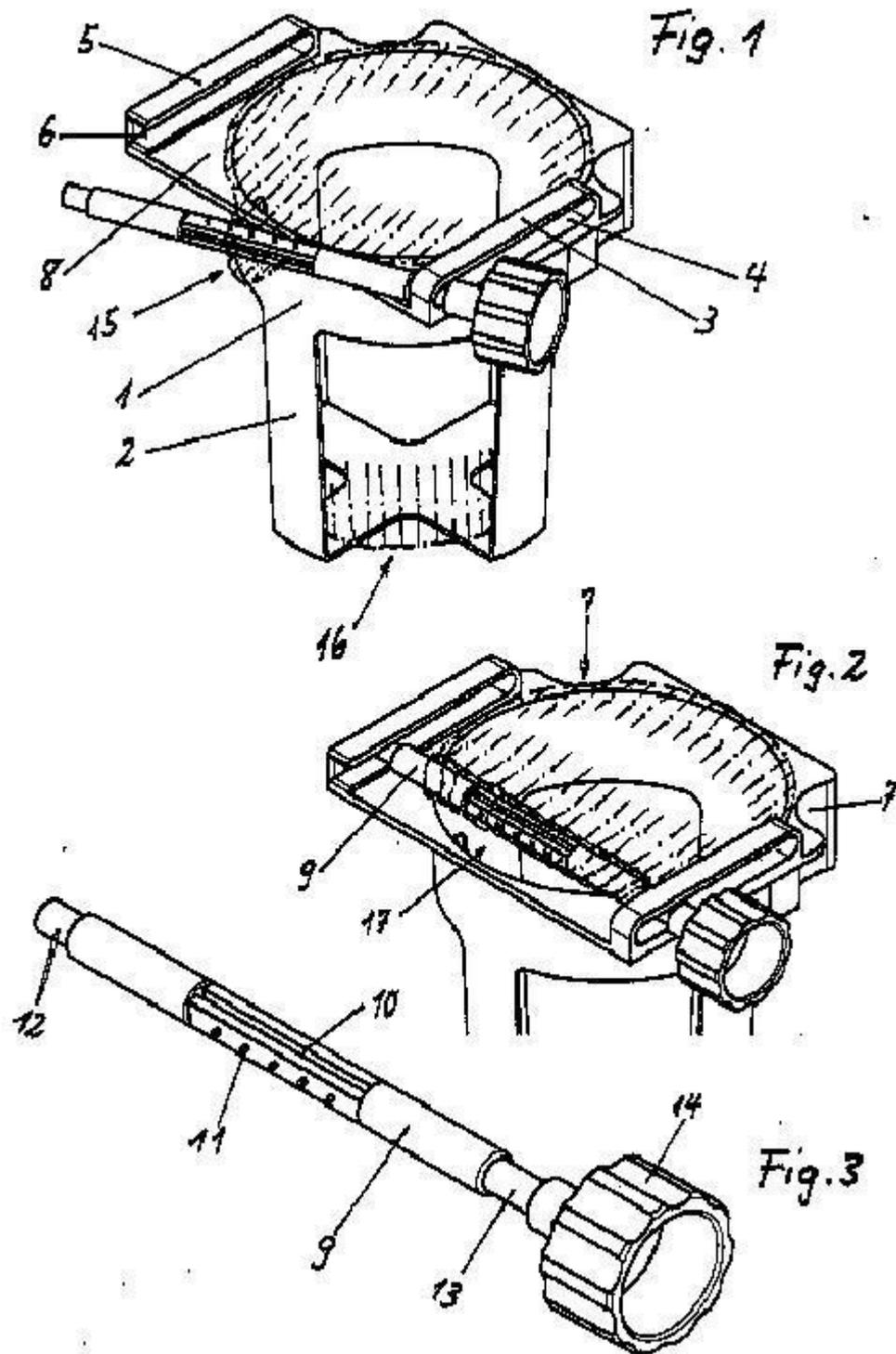
Devices for engaging tags, strips, or tongues for opening by tearing, e.g. slotted keys for opening sardine tins

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.





**B67B 7/403**

[N: adapted for engaging the ring of a pull tab for opening an aperture]

**Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

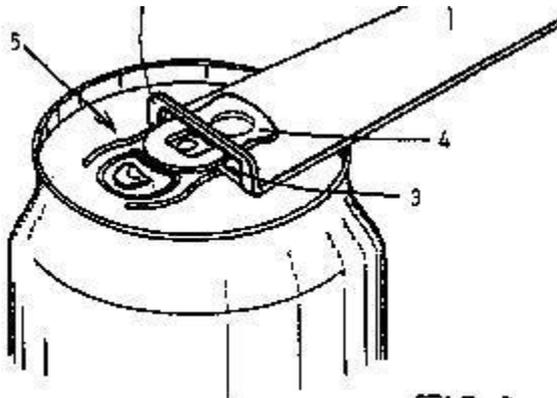


FIG. 3

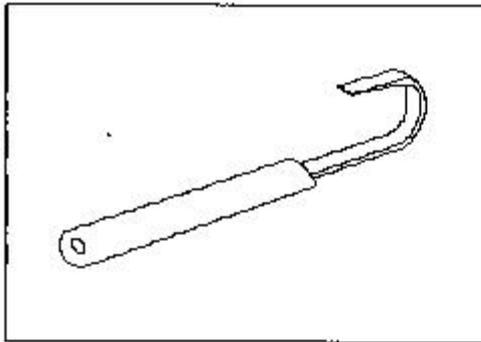


Fig. 1

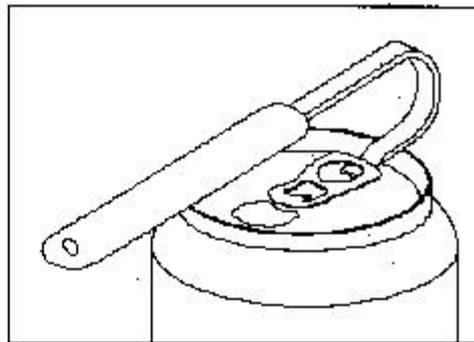


Fig. 2

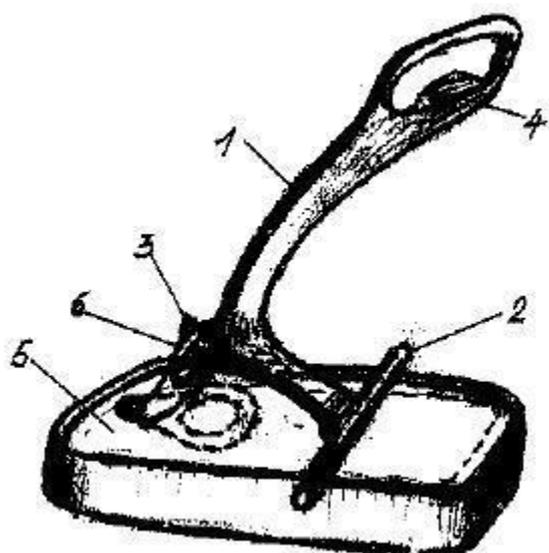
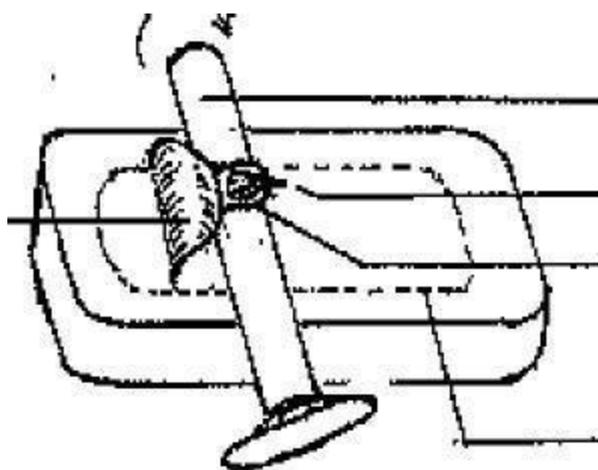
## **B67B 7/406**

**[N: and subsequently tearing off the top of the can]**

### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



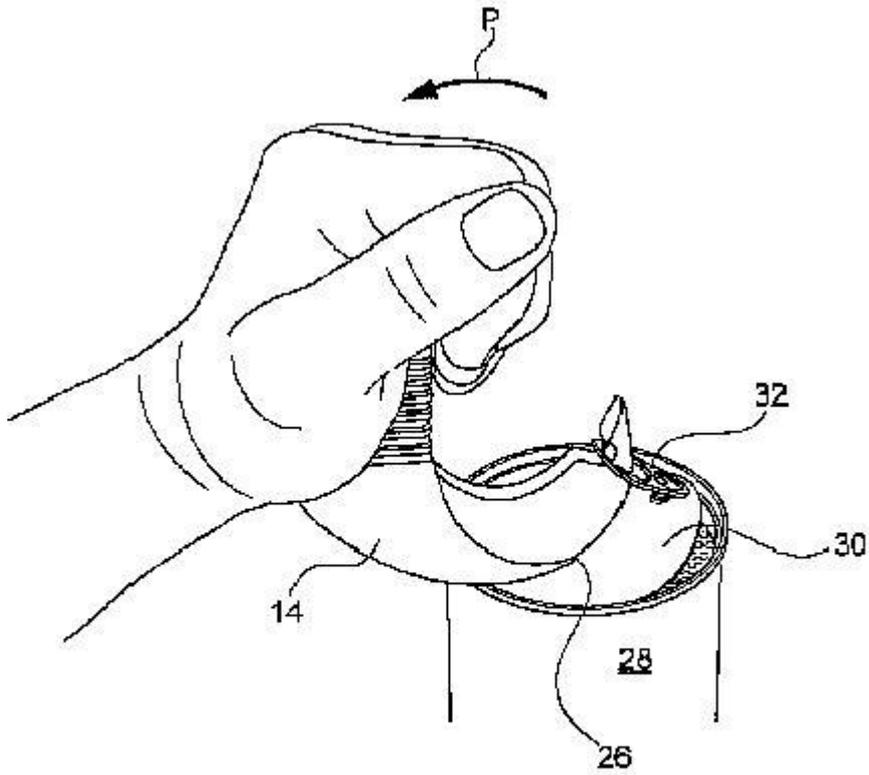


FIG. 5

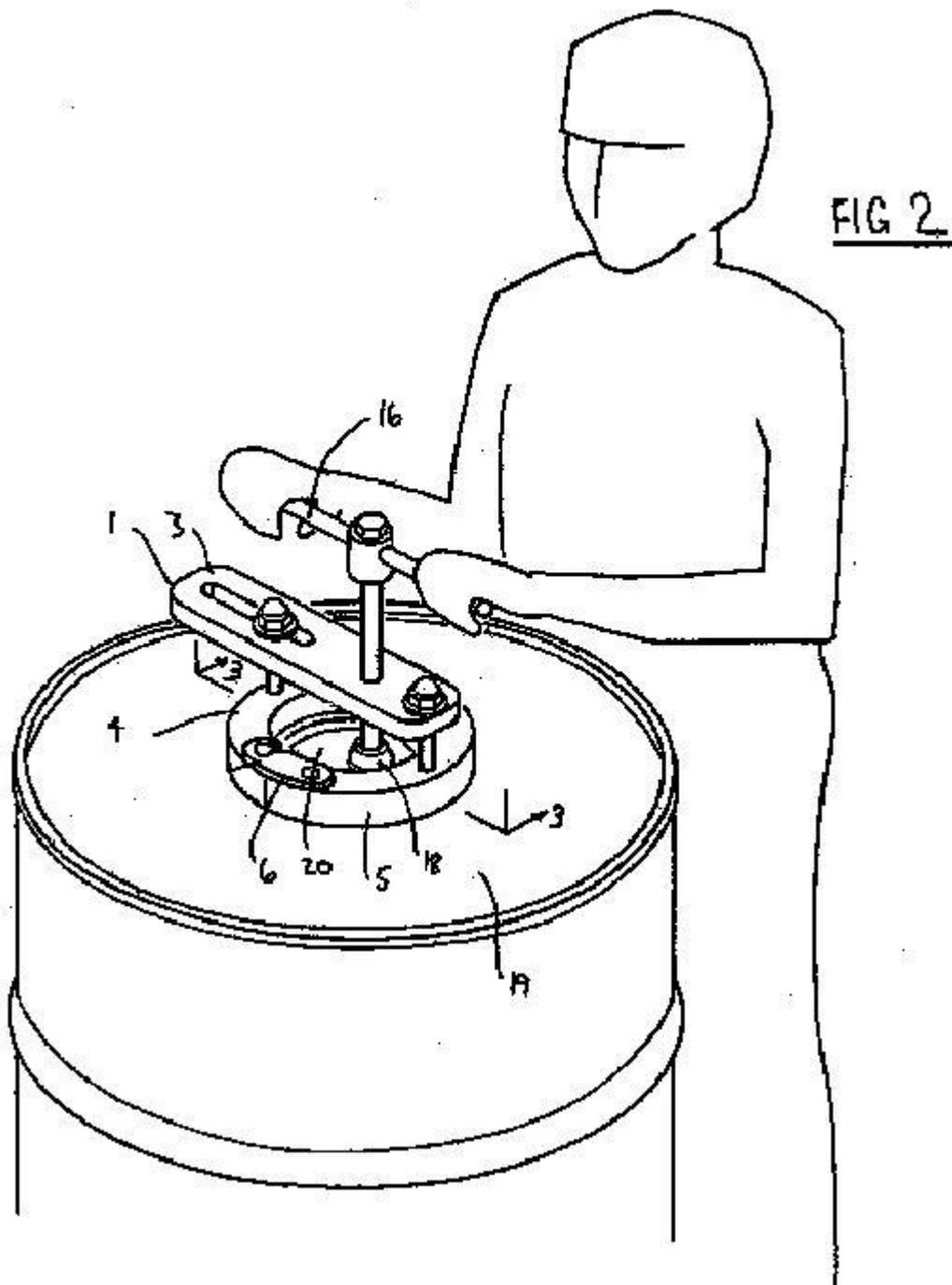
## **B67B 7/42**

### **Devices for removing barrel bungs**

#### **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



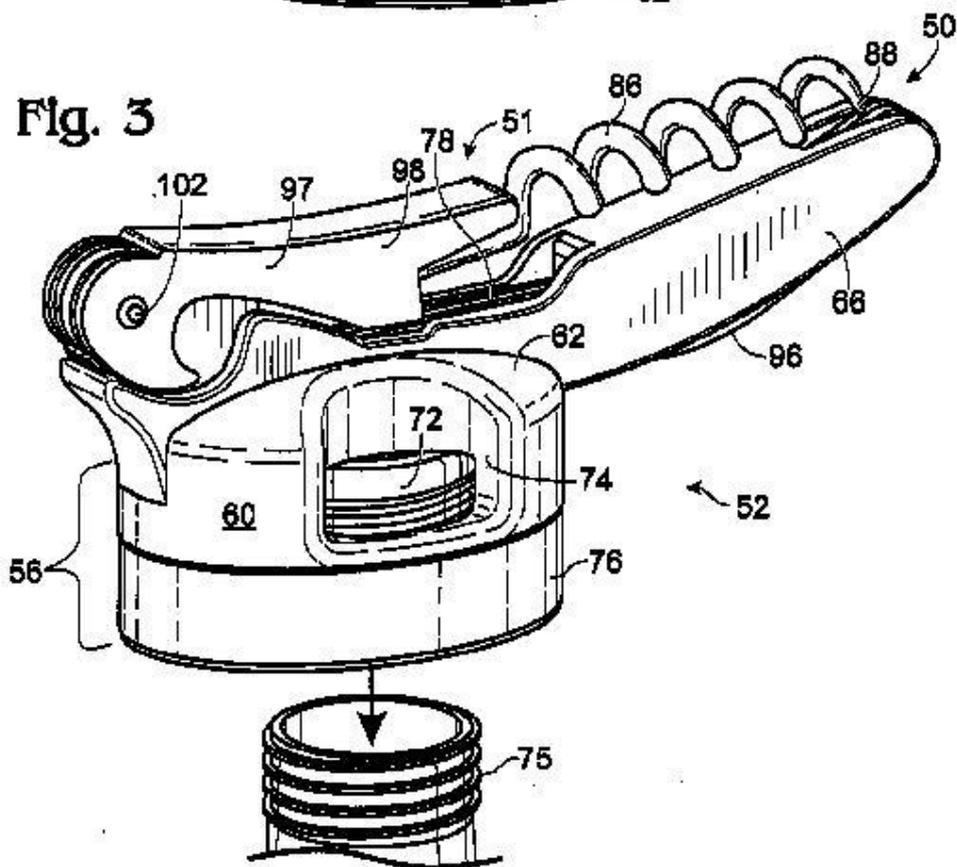
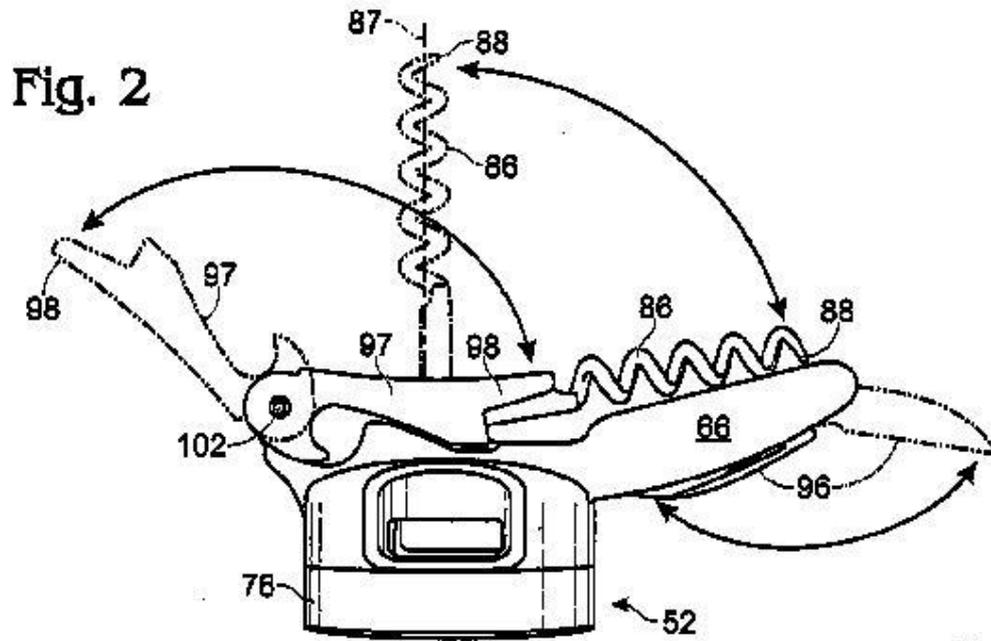
## B67B 7/44

Combination tools, e.g. comprising cork-screws, can piercers, crowncap removers (combinations of opening devices with cutting tools B26; with devices serving other purposes, see appropriate subclasses, e.g. B25F; B43K29/00)

### Definition statement

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.



**B67B 7/92**

by breaking, e.g. for ampoules

## **Definition statement**

*This subclass/group covers:*

Illustrative example of subject matter classified in this group.

1/1

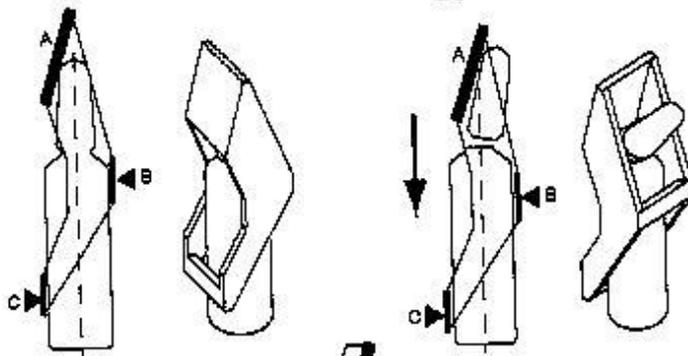


FIG. 1

FIG. 2

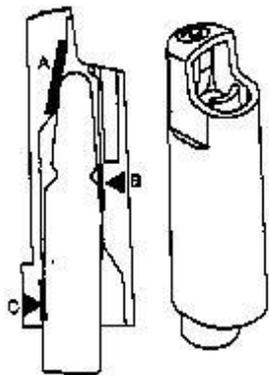
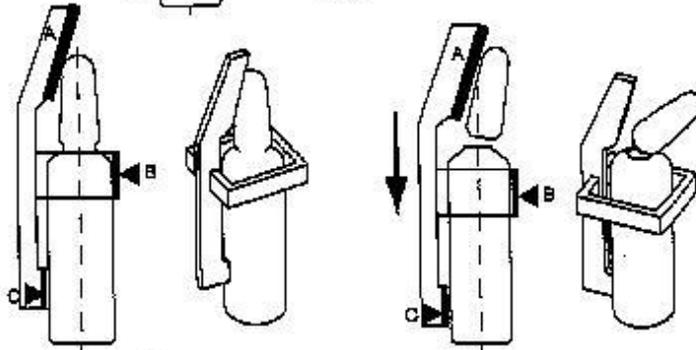


FIG. 3

FIG. 4

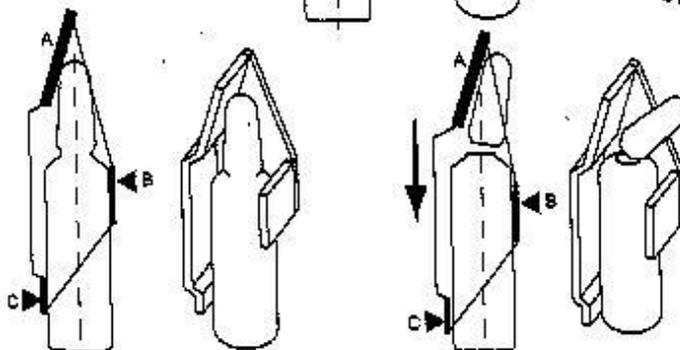
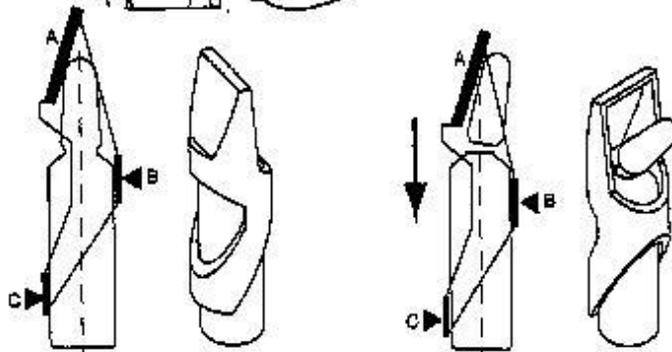


FIG. 5

## Informative references

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

Devices for breaking closed containers	<a href="#">B01F 15/0205</a> , <a href="#">A61J 1/2089</a> , <a href="#">A61F 2/46C4</a>
--	--