

F16P

SAFETY DEVICES IN GENERAL; {SAFETY DEVICES FOR PRESSES}

Definition statement

This place covers:

Safety systems allowing protection of the operator from a machine, a machine tool, a press. Safety systems designed specifically for certain machine/tool/application should be classified in the group related to this specific machine/tool/application if a group related to this safety system exists.

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:

Safety devices in or for harvesters or mowers	A01D 75/00
Protection in threshing machines or balling presses	A01F 21/00
Garments affording protection	A41D 13/00 , A42B 1/06 , A42B 3/00 , A61F 11/14 , A62B 17/00
Headwear affording protection	A42B
Masks for protection of eyes of workers	A61F 9/04
Safety belts or harnesses in general	A62B 35/00
Safety devices for machines for crushing	B02C 23/04
Safety devices for machines rolling metal	B21B 33/00
Safety devices for machines cutting or perforating of sheet metal	B21D 55/00
Safety guard for turning machines	B23B 25/04
Safety devices for machine tools	B23Q 11/00
Protective coverings for machine tools	B23Q 11/08
Safety devices for grinding or polishing machines	B24B 55/00
Safety devices for portable percussive tools	B25D 17/00
Safety devices for manipulators	B25J 19/00
Safety devices for cutting machines	B26D 7/22
Safety guards or devices for saws	B27G 19/00
Details of presses	B30B 15/00
Control systems for packing	B65B 57/00
Control during transport of goods (by conveying, loading, storing)	B65G 43/00
Safety devices in spinning or twisting apparatus	D01G 31/00 , D01H 13/14
Safety devices in paper making apparatus	D21G 5/00

Special rules of classification

[F16P](#) is only related to general use and general configuration of safety systems. More detailed systems, or specific features of these systems should be classified in the corresponding subclasses. For example a general description of a light grid used to avoid a person to enter a dangerous area has to be classified in [F16P](#), however if the invention is related to a specific feature of the light grid (e.g.

detailing the elctronical circuits or the light grid) and not linked directly to the safety, [F16P](#) should not be given but rather [G01V](#).

F16P 1/00

Safety devices independent of the control and operation of any machine (protective devices for the eyes or ears, worn on the body or carried in the hand, [A61F 9/00](#), [A61F 11/00](#))

Definition statement

This place covers:

Safety systems which are independent from the machine, and which are meant to protect the operator by creating a physical barrier between the operator and a dangerous area. No interaction exist between the safety system and the machine.

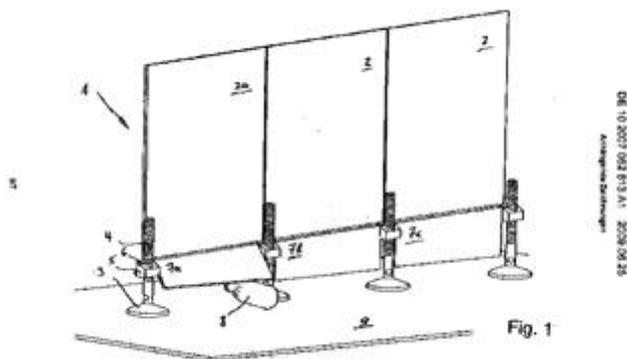
F16P 1/02

Fixed screens or hoods

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: The document DE102007062813 discloses a screen (4) which provides a barrier in order to avoid an operator to enter a dangerous area. In use the barrier does not move, except that the panels (2) can be adjusted in height. Once these panels are adjusted, the screen generally does not move with respect to the machine.



References

Informative references

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

Safety enclosures for children	A47D 13/06
Safety guards for machine tools	B23Q 11/08

F16P 1/06

especially designed for welding

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: EP1908546

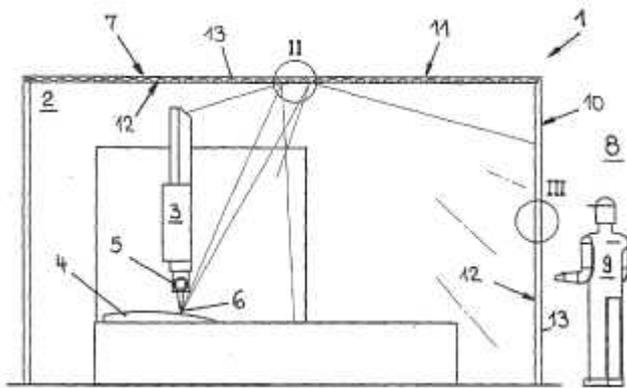


Fig. 1

References

Informative references

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

Welding	B23K
Protective screens for laser working	B23K 26/706

F16P 3/00

Safety devices acting in conjunction with the control or operation of a machine; Control arrangements requiring the simultaneous use of two or more parts of the body ([F16P 5/00](#) takes precedence)

Definition statement

This place covers:

Safety systems which depend on the machine by way of any possible interactions and which are meant to protect the operator from being injured by the machine.

F16P 3/001

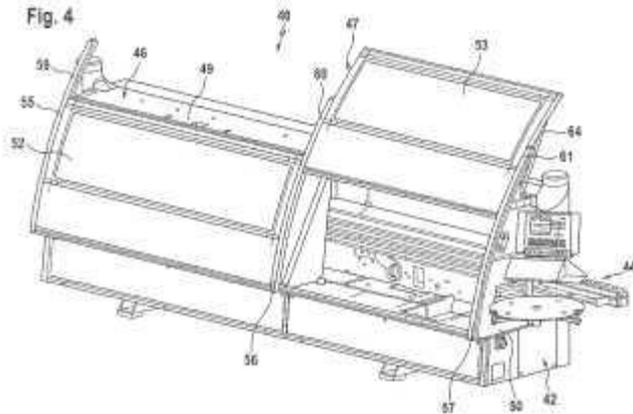
{Safety devices for guarding the human operator of punch presses or like machine tools performing an opening and closing travel}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: The document EP1990130 discloses a screen which depends on the functioning of the machine, in the sense that there is an interaction

between the screen and the machine. Here the safety device performs an opening and closing travel in order to restrict access to the machine.



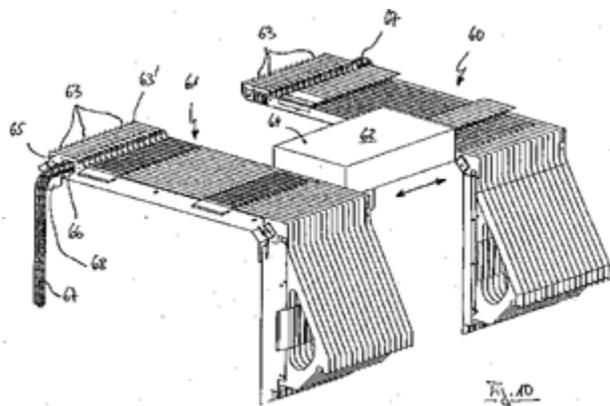
F16P 3/02

Screens or other safety members moving in synchronism with members which move to and fro

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: EP2039960



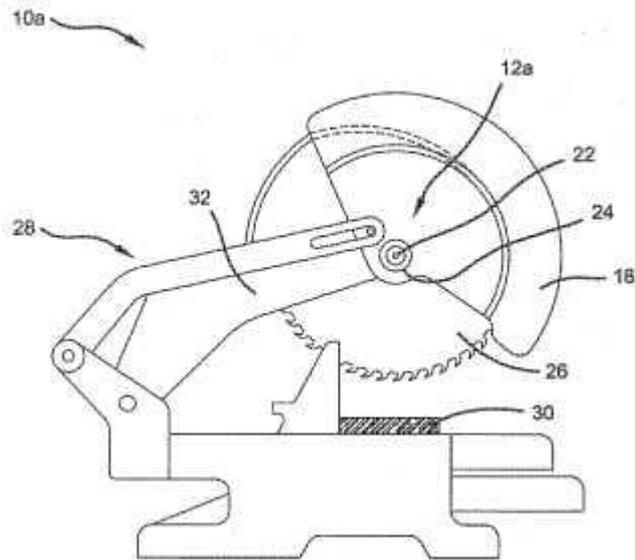
F16P 3/06

in which body parts of the operator are removed from the danger zone on approach of the machine parts

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: US2004226424

**F16P 3/08**

in connection with the locking of doors, covers, guards, or like members giving access to moving machine parts

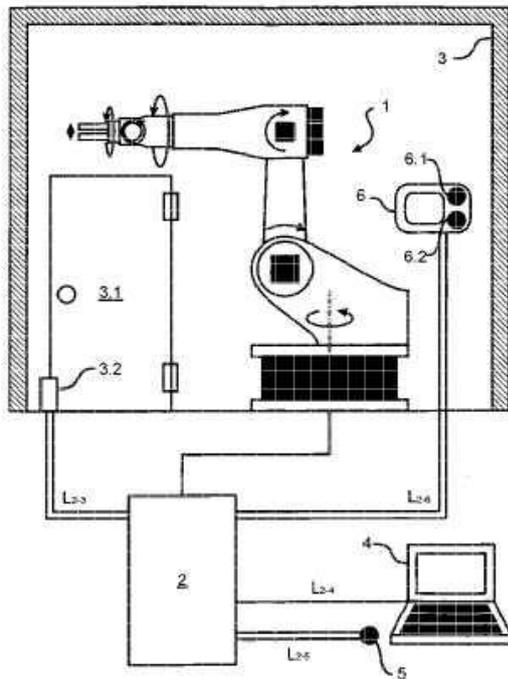
Definition statement

This place covers:

The activation or deactivation of the machine is linked to the state of the lock which is provided on the doors, covers guards or like members which give access to moving machine parts or by extension to the machine in general.

Illustrative example of subject matter classified in this group: EP2289672 if the door 3.1 is closed the machine 1 can be active. If the door 3.1 is opened the machine can not be active.

Fig. 1



References

Limiting references

This place does not cover:

Safety locks for washing machines	D06F 37/42
Locks in general	E05B

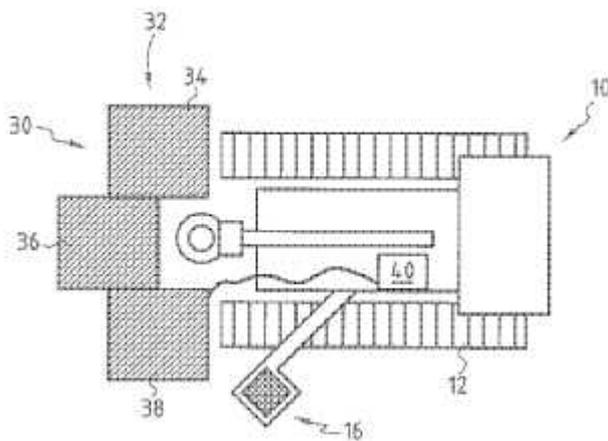
F16P 3/12

with means, e.g. feelers, which in case of the presence of a body part of a person in or near the danger zone influence the control or operation of the machine ([F16P 3/08](#) takes precedence)

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: FR2885401



(carpet 34, 36, 38 analysing the pressure exerted by an operator)

F16P 3/14

the means being photocells or other devices sensitive without mechanical contact

References

Informative references

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

Safety devices for manipulators	B25J 19/06
Program controlled system monitoring safety	G05B 19/406

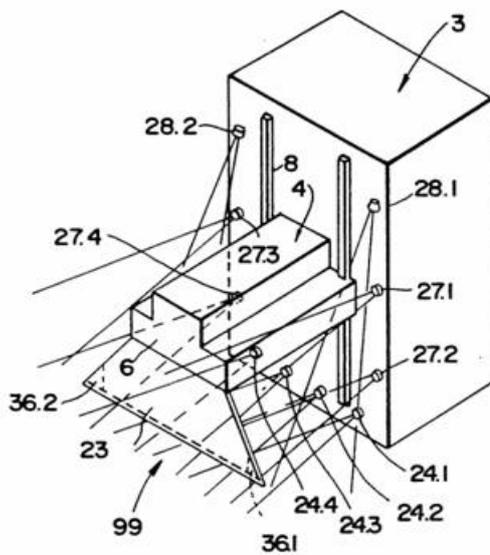
F16P 3/141**{using sound propagation, e.g. sonar}****Definition statement***This place covers:*

Safety device using e.g. ultrasound. Illustrative example of subject matter classified in this group:
US5323513

U.S. Patent

June 28, 1994

Sheet 10 of 17

5,323,513**Fig - 22**

F16P 3/142

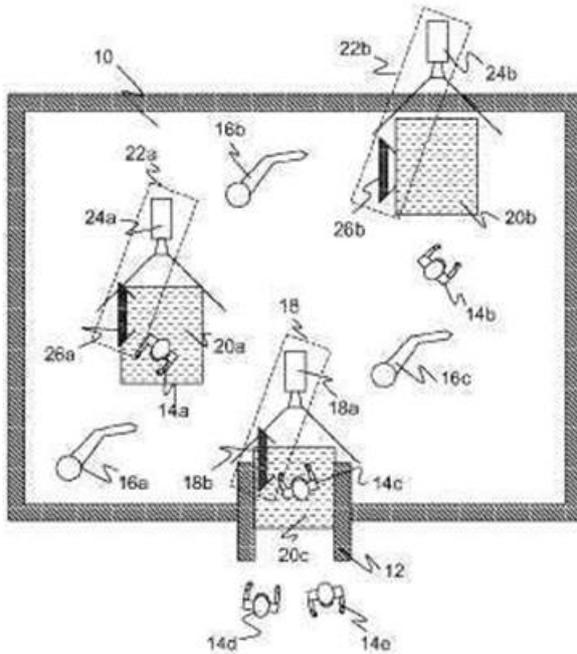
{using image capturing devices}

Definition statement

This place covers:

Using cameras: e.g. EP2282106

Figur 1



See also [F16P 3/14](#)

F16P 3/144

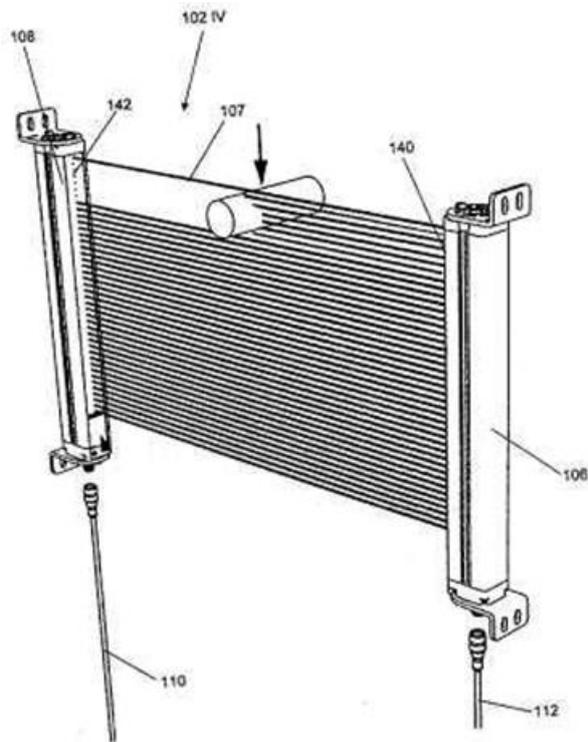
{using light grids}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group

Using a light grid: US2007069114



References

Informative references

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

Light barriers	G01V 8/20
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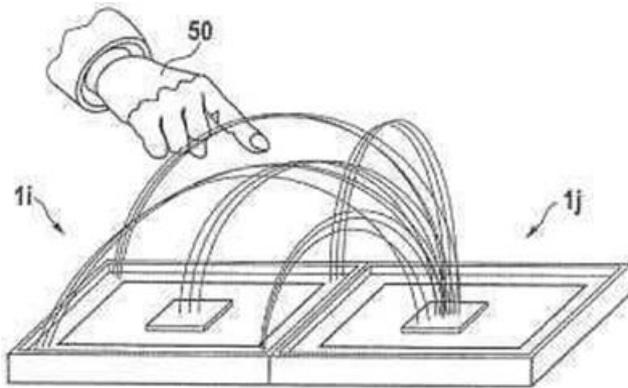
{using magnetic technology}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group

e.g. US2011050256



F16P 3/147

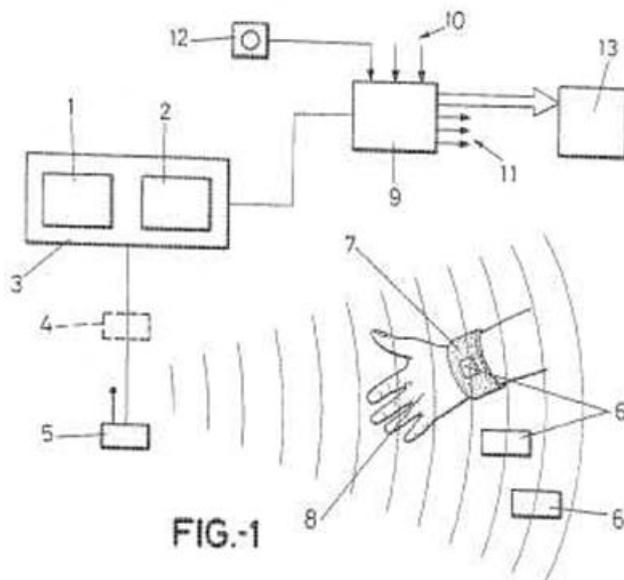
{using electro-magnetic technology, e.g. tags or radar}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group

e.g. WO2009050316



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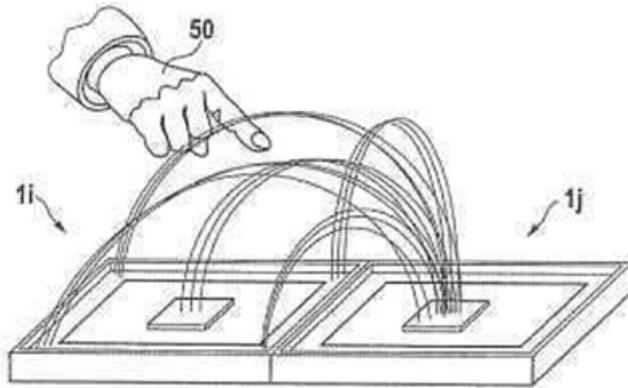
{using capacitive technology}

Definition statement

This place covers:

Illustrative example of subject matter classified in this group

Using magnetic or capacitive sensors: e.g.US2011050256



F16P 3/16

with feeling members moved by the machine

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: WO2010072193, the document shows feelers (20) which are provided on the moving arm parts (14, 16, 18).

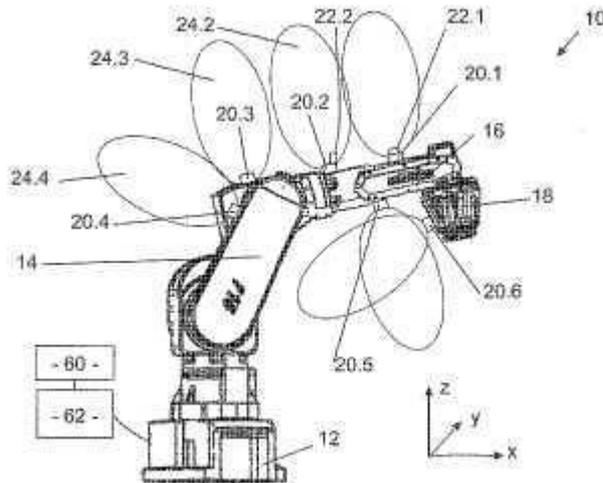


Fig. 1

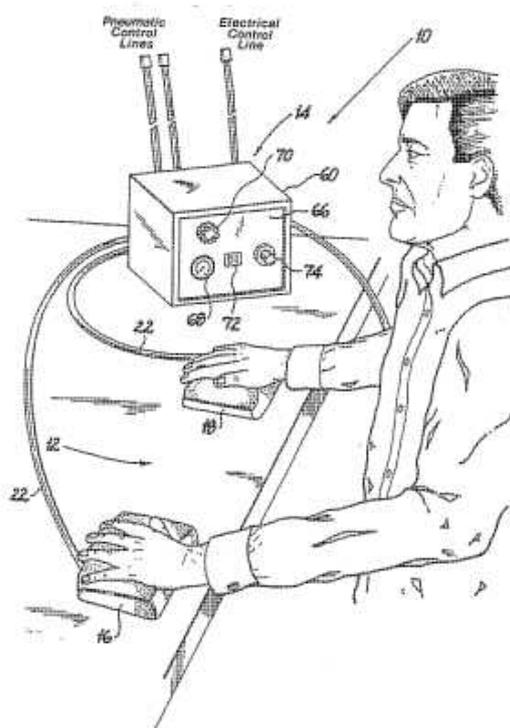
F16P 3/18

Control arrangements requiring the use of both hands

Definition statement

This place covers:

Illustrative example of subject matter classified in this group: US5396222



F16P 5/00

Emergency means for rendering ineffective a coupling conveying reciprocating movement if the motion of the driven part is prematurely resisted

Definition statement

This place covers:

Safety systems which render ineffective a coupling conveying reciprocating movement if the motion of the driven part is prematurely resisted. The safety system is preventing the machine from being damaged.

References

Limiting references

This place does not cover:

Safety means disconnecting couplings	F16D 9/00
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F16P 7/00

Emergency devices preventing damage to a machine or apparatus ([F16P 1/00](#), [F16P 3/00](#), [F16P 5/00](#) take precedence; indicating means, see the appropriate classes)

Definition statement

This place covers:

Safety systems preventing damages of the machine itself.