

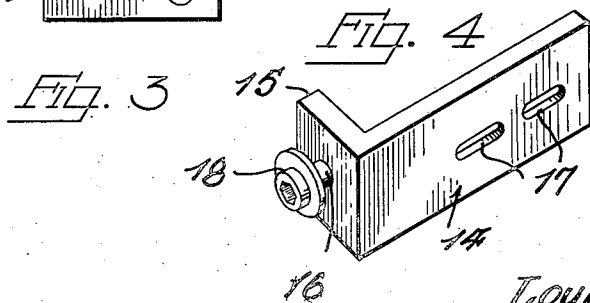
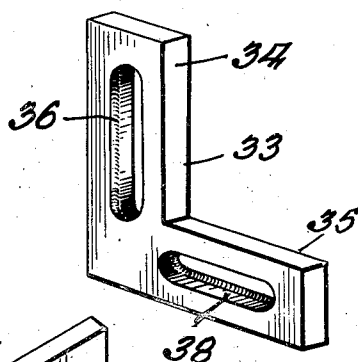
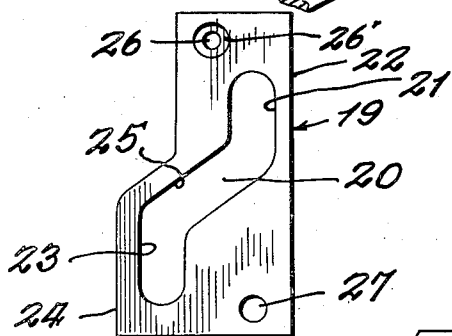
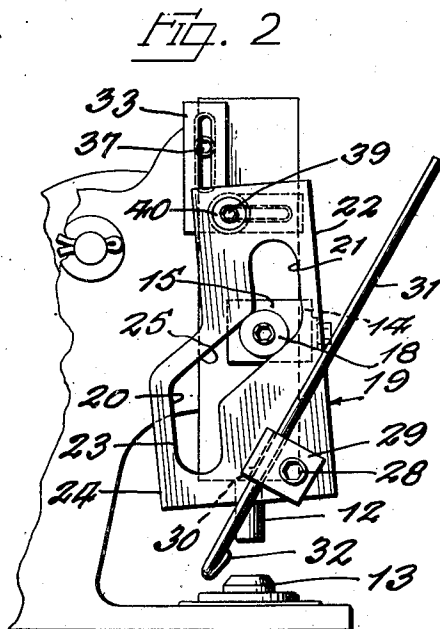
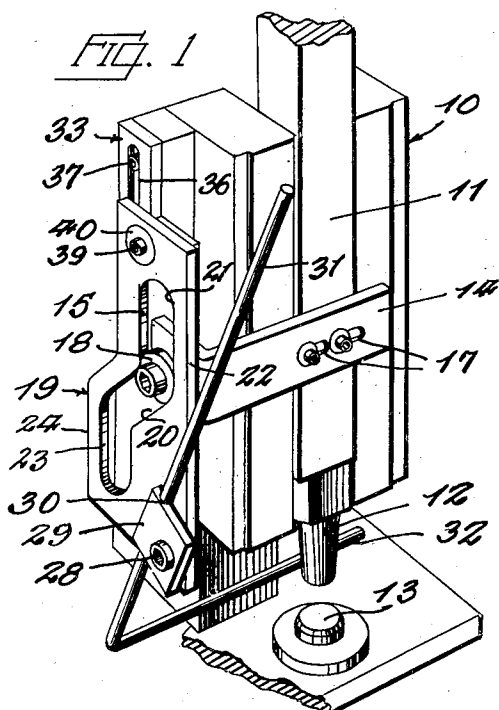
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2,485,714

SAFETY DEVICE FOR STAMPING PRESSES AND THE LIKE

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## UNITED STATES PATENT OFFICE

2,485,714

SAFETY DEVICE FOR STAMPING PRESSES  
AND THE LIKE

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1 Claim. (Cl. 74—615)

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This invention relates to devices for safeguarding operators of stamping presses and it consists in the constructions, arrangements and combinations herein described and claimed.

It is the cardinal object of the invention to provide a safety device which may readily be installed upon existing presses, which is simple in construction and of few parts, yet effective to positively force any portion of an operator's anatomy from the path of the reciprocating head or pressure member of the press.

More specifically, it is an object of the invention to provide a slotted body member which is adjustably and pivotally mounted upon a portion of the press, the slot of the body member being operatively engaged with a drive bar connected to the pressure member of the press, the slot having such contour as to swing the body to and fro and move a sweep arm across the path of the pressure member.

It is also an important object of the invention to provide a safety device in which a sweep arm is moved across the path of a pressure member and return to its normal position without the use of springs or gearing.

Additional objects, advantages and features of invention will be apparent from the following description and accompanying drawings, wherein

Figure 1 is a perspective view of a press having the safety device installed thereon.

Figure 2 is a side elevation of the press and safety device.

Figure 3 is a plan view of the swinging body member.

Figure 4 is a perspective view of the drive bar.

Figure 5 is a perspective view of the adjustable hanger plate.

There is illustrated a press of any conventional construction including a head 10 and a pressure member 11, the lower end of which carries a male die 12, in the present instance, coöperable with a female die 13.

Upon the pressure member 11 there is laterally adjustable a drive bar 14 which as may be seen in Figure 4, has a right angular offset arm 15, apertured and tapped for reception of a stud 16. The bar 14 is formed with a pair of elongated slots 17 in registry with threaded openings formed in the pressure member of the press. Preferably, I employ Allen type cap screws for mounting the bars to the pressure member, and it will be seen that the bar 14 may be adjusted laterally to position the arm 15 at the proper spaced distance with respect to the side of the head 10.

Upon the stud 16 a roller 18 is rotatably mount-

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ed, adapted to travel within a slot of a swinging body member, as will now be described.

As may be seen in Figure 3, the body member 19 is of elongated form, of substantial thickness and longitudinally of the body there is formed a slot 20. The slot 20 is of ogee form consisting of an upper straight portion 21 parallel to the front edge 22 of the body member and a similar straight portion 23 parallel to the rear edge 24 and approximately medially of the body member the straight portions of the slot are connected by a rearwardly inclined portion 25. To the rear of the upper portion of the slot 21 a countersunk aperture 26 is formed for a purpose presently to be explained, and forwardly of the lower end of the slot 23 a tapped aperture 27 is formed for reception of an Allen type cap screw 28 for securing a clamping plate 29. The clamping plate 29 is formed with a notch 30 which in conjunction with the side of the body member form a gripping means for securing the shank 31 of a sweep arm, the latter including a right angular extension 32 adapted to pass between the male and female dies of the press.

At the rear upper portion of the press head 10, there is mounted a hanger bracket 33, which as may be seen in Figure 5, is of L-shape formation, having right angular extensions 34 and 35. The extension 34 is positioned flush against the head 10 of the press extending vertically thereon, which will thus present the extension 35 horizontally and in a forward direction. The extension 34 is formed with an elongated countersunk slot 36 for reception of an Allen cap screw 37. It will be understood that the bracket may be vertically adjusted upon the head of the press so as to accommodate the device to various types of presses as well as to obtain the proper movement of the sweep arm. The extension 35 is also formed with a countersunk slot 38 extending horizontally, the countersink in this instance, being formed upon the side opposite that of the extension 34. A headed screw 39 is extended through the slot 38, the head resting upon the countersink of the slot, the shank extending therebeyond for presentation through the opening 26 of the body member. With the shank so positioned, a roller 40 is positioned upon the shank and seated within the countersink 26' of the body member. An Allen type nut is engaged upon the end of the shank and the body member 19 is thus swingably connected to the bracket.

In the normal position of the safety device, the roller 18 will occupy a position so that the rear edge of the slot 21 will intersect the vertical axis

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of the roller, as shown in Figure 2, positioning the arm 32 to the rear of the male and female dies. When the pressure member 11 moves downwardly, the drive bar 14 is likewise moved, causing the roller to swing the body member 19 forwardly due to the rearwardly inclined portion 25 of the slot, the body pivoting on the roller 40. The forward movement of the body is continued throughout the length of the inclined portion of the slot and it will be seen that the arm 32 moves forwardly in advance of the male die so that if an operator's hands or other portions of his body is disposed beneath the downwardly descending portions of the press they will be forced away from the danger area. The final movement of the pressure member is permitted by reason of the straight portion 20 of the slot. Upon upward movement of the pressure member, it will be understood that the roller 18 will follow the straight portion 20 until it reaches the inclined portion 25 of the slot when a rearward swinging movement of the body member is effected and positioning the arm 32 in normal position.

While I have shown and described a preferred form of the device, this is by way of illustration only, and I consider as my own all such modifications in construction as fairly fall within the scope of the appended claim.

I claim:

A safety device for stamping presses and the like, comprising a hanger bracket having a vertically disposed slot for reception of a fastening

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bolt for securement to the side of the head of a press, said hanger bracket further having a right angularly disposed slotted extension, a headed bolt adjustably secured in said slotted extension and having a shank extended outwardly therefrom, an elongated body member swingably mounted on said shank, said body member having an ogee slot formed therein, straight portions of the slot extending in vertical planes and connected by a rearwardly extending portion, a laterally adjustable drive bar connected to the reciprocating member of the press, said drive bar having rearward extension parallel to the side of the press head, a roller carried by said extension and disposed within the ogee slot, and a sweep arm carried by the body member having a right angular extension adapted to pass between the reciprocating pressure member and a cooperating pressure member.

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