

E. HILFRANK.
SAFETY DEVICE FOR PRESSES OR THE LIKE.
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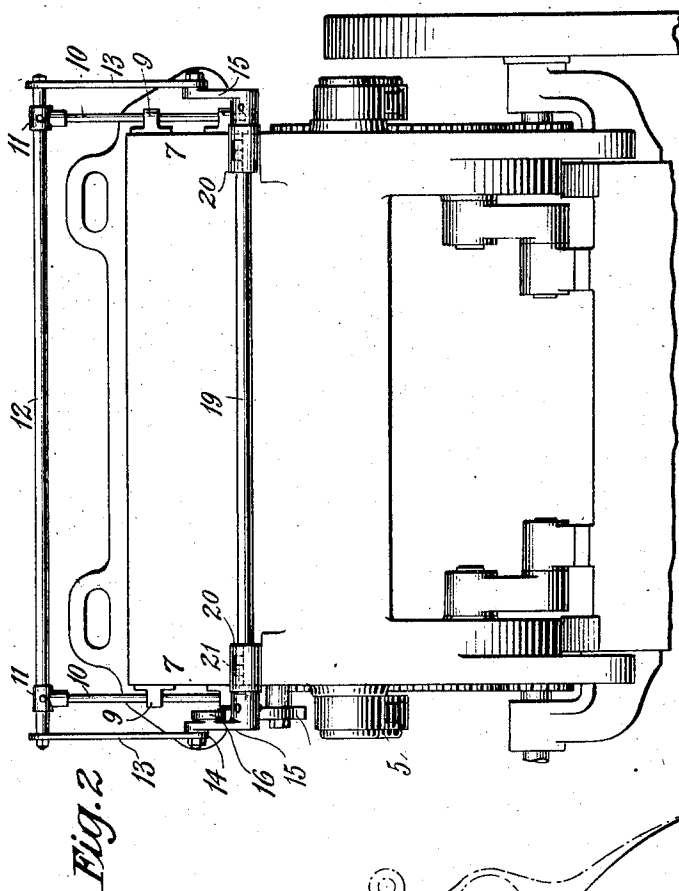


Fig. 2

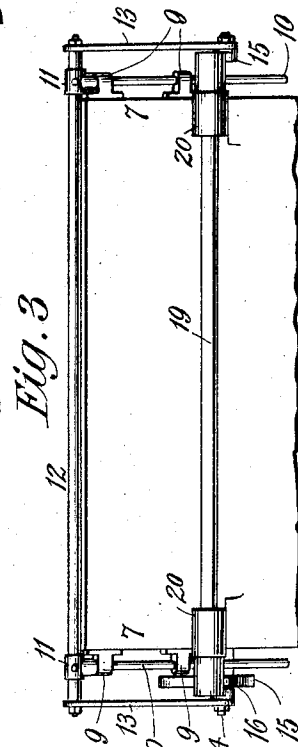


Fig. 3

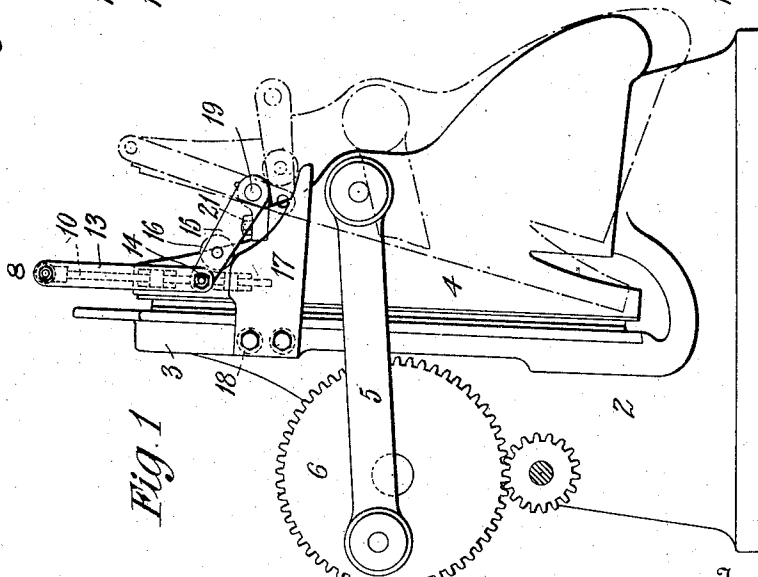


Fig. 1

Witnesses:
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UNITED STATES PATENT OFFICE.

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SAFETY DEVICE FOR PRESSES OR THE LIKE.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD HILFRANK, a citizen of the United States, residing at Castleton, Rensselaer county, New York, have invented a new and Improved Safety Device for Presses or the Like, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my device; Fig. 2 is a front elevation thereof and Fig. 3 is a plan view.

My invention relates to presses or the like into which the articles to be pressed are inserted by hand and is designed to prevent the workman from getting his hand or arm caught within the jaws of the press. The action of the device is automatic and insures the workman against negligence and accident. Its mechanism and operation, moreover, are simple and effective and it does not interfere in any way with the proper operation of the machine to which it is connected.

Referring to the drawings, 2 is the press having a fixed jaw 3 and a movable jaw 4. The movable jaw 4 may be driven through the lever 5 and gear 6 connected to a suitable source of power. Attached to the movable jaw 4 near its outer end 7 is my safety device 8.

9 are the guides attached to the part 7 through which the guiding rods 10 reciprocate. Upon these rods 10 are positioned the sleeves 11 which carry the safety bar 12, and to the ends of the safety bar 12 are connected the levers 13. These levers 13 are pivoted at 14 to the arms 15, upon one of which is positioned the roller 16 which coacts with the sloping edge of the plate 17. The plate 17 is mounted on the fixed jaw 3 by means of the studs 18 and has a sloping edge which coacts with the roller 16. The ends of the arms 15 are secured to the shaft 19, which is carried by the sleeves 20. The sleeves 20 are secured to the exterior of the movable jaw 4 by means of the bolts 21.

The operation of my device is as follows: When the press, which I have shown herein, is in motion, the workman stands in front of the machine and feeds the material to be operated on into the press, for instance, from the righthand side of Fig. 1. The moving jaw 4 and the safety device are then in the position shown in Fig. 1 in

dotted lines. As the press is set in motion the moving jaw 4 moves toward the fixed jaw 3, and the roller 16 rides up the sloping surface of the plate 17, which causes the arm 15 to rise with it. Both arms 15 rise together through their connection with the shaft 19 and the sleeves 20 fixed to the part 4. The rising of the arms 15 actuate the levers 13, which are pivoted to them, and through the levers 13 the safety bar 12. The motion of the levers is, however, confined by the guiding rods 10, so that the levers 13 and safety bar 12 can only be actuated in a direction parallel to the operating face of the moving jaw 4, so as to raise the safety bar 12 to the guarding position shown in full lines in Fig. 1 by which time the press is closed. If the operator either through carelessness or accident has allowed his hand or arm to get between the jaws of the press, the safety bar 12 will raise his hand or arm and throw it clear of the jaws before they close, so that by the action of the machine the workman is insured against harm.

It will thus be seen that when the press is open that the safety bar 12 will be in the position shown in dotted lines in Fig. 1, and will not interfere in any way with the workman placing the material to be operated upon in the machine, and that the bar is automatically raised to the guarding position shown in full lines in Fig. 1, and that it drops back to its original position as the jaws of the machine are again opened.

The device which I have shown is adapted for use in presses or the like, and is susceptible to a great variety of uses. It is obvious that many changes may be made by those skilled in the art without departing from my invention, one embodiment of which, I have shown and described herein.

What I claim is:

1. A safety device for presses, or the like, comprising a safety-bar, guide rods carrying said safety-bar and connected with one jaw of the press, a plate with a sloping edge fixed to the other jaw of the press, a contact surface connected with the said first mentioned jaw of the press and adapted to move along the sloping edge of said fixed plate as the press closes, and actuating levers connected with said surface and said safety-bar.

2. A safety device for presses, or the like, comprising a safety-bar attached to one jaw

of the press, guiding means adapted to
confine the movement of the safety-bar to
a plane parallel to the plane of the face of
the jaw to which the bar is attached, actuat-
5 ing means for the safety-bar comprising a
pair of supports connected to the safety-bar,
a lever carrying a contact surface attached
to one of said supports, and an inclined sur-

face fixedly attached to the other jaw and
with which the contact surface coöperates 10
as the press closes.

EDWARD HILFRANK.

Witnesses:

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