

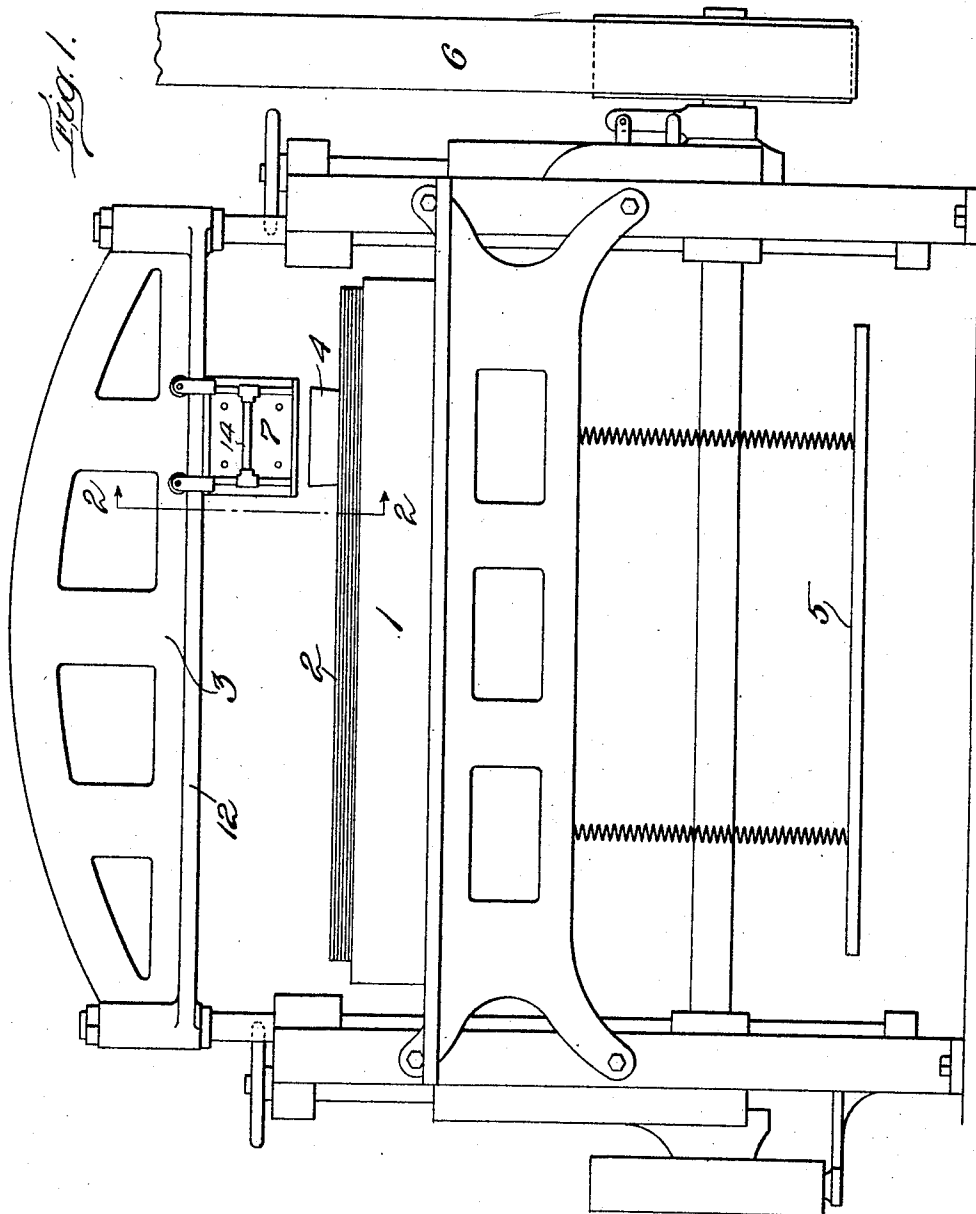
Nov. 23, 1926.

L. E. DEZOTELL

1,607,609

PRESS

Original Filed Dec. 7, 1918 3 Sheets-Sheet 1



Inventor:
Lewis Edward Dezotell
by George A. Rockwell,
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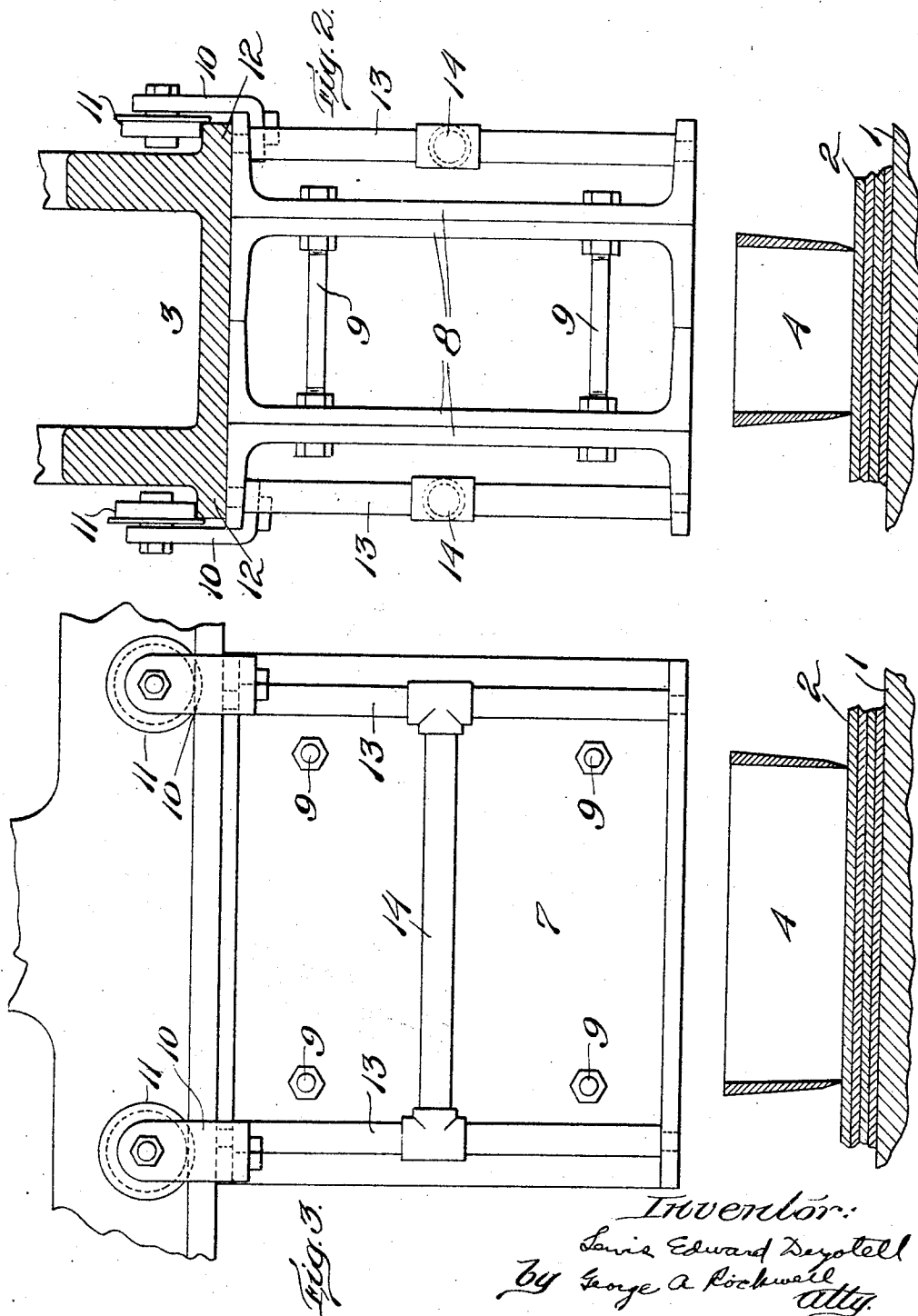
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Fig. 4.

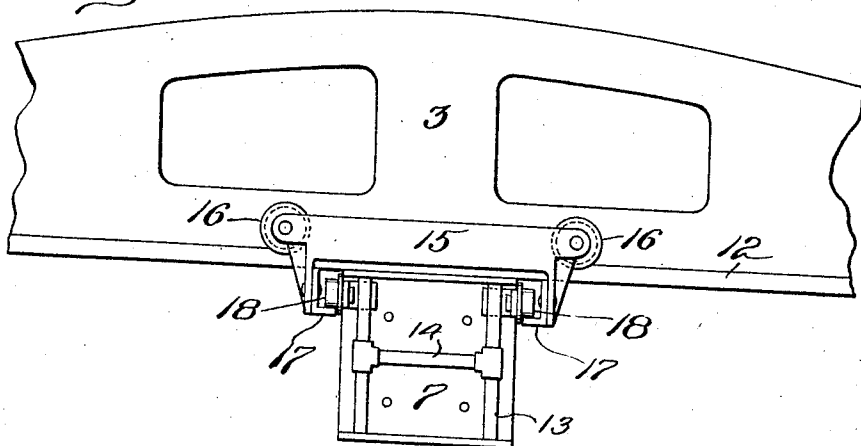
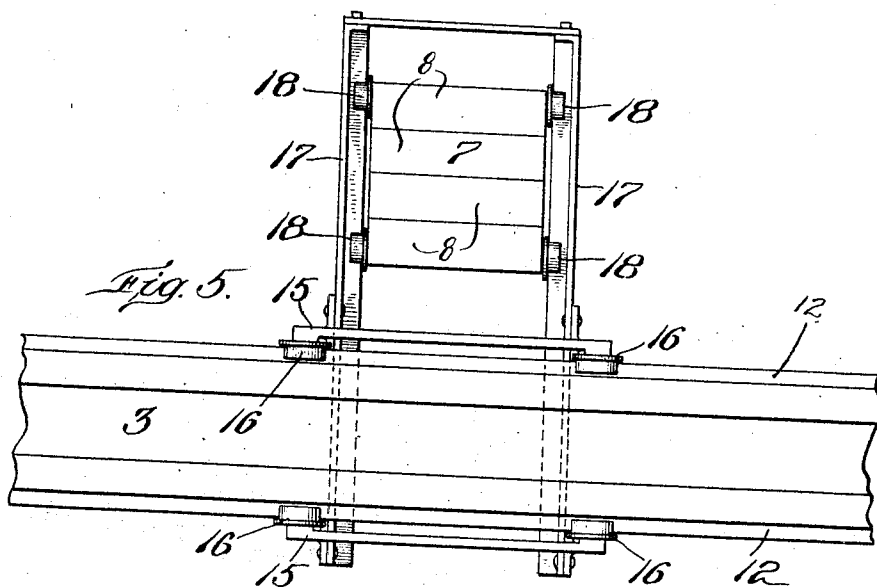


Fig. 5.



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UNITED STATES PATENT OFFICE.

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PRESS.

Application filed December 7, 1918, Serial No. 265,795. Renewed January 5, 1924.

This invention relates to presses in which a presser member is utilized in forcing a die through sheet material supported on a die block or other work supporting member.

5 In the use of beam presses such as those of the type disclosed in United States Letters Patent No. 368,108, granted Aug. 9, 1887, on application filed by Henry Parsons, it has frequently happened that serious injury to the operator has resulted through an
10 unexpected operation of a press while the operator had his hand between the beam and the work or die for the purpose of manipulating the work or positioning the die. To avoid this danger of injury to the operator, presses have been provided with a
15 presser member movable along the beam so that the operator may move the presser member aside during manipulation of the die or work. A number of machines of the
20 type referred to have been so constructed that the presser member is arranged for movement lengthwise of, as well as crosswise of, the beam for convenience in positioning
25 the presser member for operation over any desired portion of the work support.

One objection to such machines, as heretofore constructed, has been that the arrangement of parts was such that there was considerable lost motion between the beam and the
30 presser member during the operation of the machine, resulting in increased wear and breakage of parts.

In view of the foregoing, it is an object
35 of this invention to provide an improved pressing means, adapted for presses of the beam type, which will retain the advantages of presses of the type referred to and eliminate the disadvantage mentioned.

40 To this end, one feature of the invention resides in the provision of a presser member movable transversely of a press into and out of operative position, and also arranged for movement toward and from work to be operated upon, without lost motion. Preferably, and as shown, the machine comprises a
45 bed, a beam, a presser member, and means for supporting the presser member in position for operation between the beam and the bed, but substantially fixed as to vertical
50 movement with relation to the beam, the construction and arrangement being such as to provide for rectilinear movement of the presser member lengthwise of, and crosswise

of, the beam to and from operative position. 55

Another feature of the invention resides in the provision of a presser member construction which is strong and durable, yet light and readily movable. To this end, the
60 illustrated presser member is constructed of channel irons secured together in the form of I-beam sections. Preferably, and as shown, the I-beam sections carry rollers by which movement of the presser member relatively to the beam is facilitated. 65

An important feature of the invention resides in a presser member which is movable into and out of operative position transversely of the machine along a path having
70 always a predetermined angular relationship with respect to the beam. Preferably, and as shown, the construction is such that the presser member is movable longitudinally of the machine as well as transversely with respect to the beam, thus enabling the operator
75 to shift the presser member in two directions so that the presser member may be brought into operative relation with respect to a die whatever the selected position of the latter
80 on the bed or die block.

In the illustrative machine a strong and durable, yet light and easily movable presser member is provided by securing channel
85 irons together in the form of I-beam sections. Preferably, and as shown, the I-beams carry rollers by which movement of the presser member relatively to the beam is facilitated.

Other features of the invention and novel combinations of parts will be described in the detailed specification and pointed out in
90 the appended claims.

In the drawings—

Figure 1 is a front elevation of a press embodying my invention;

Figure 2 is a section on a larger scale on
95 line 2—2 of Figure 1;

Figure 3 is a side elevation, partly in section, of the parts shown in Figure 2; and

Figures 4 and 5 are, respectively, elevation and plan views of a portion of a press
100 embodying a modification.

As illustrated my invention is applied to a well known type of machine for dieing out sheet material. It will be understood, however, that it is not so limited in its use
105 but that it may have various applications and uses.

Herein I have shown my invention as em-

bodied in a machine for cutting out shoe soles from sheet material, 1 being the bed on which the material 2 is placed and 3 being the vertically movable beam by means of which the die 4 is forced down through the material 2. 5 is the usual foot treadle controlling the operation of the machine, said treadle acting through the usual one revolution clutch and stop mechanism to control the connection between the continuously driven belt 6 and the vertically movable beam 3. Depressing the treadle 5 acts through the one revolution clutch and stop mechanism referred to to cause the beam 3 to descend pushing die 4 through the work and to rise to its uppermost position again where it stops and dwells until the treadle 5 is again depressed. In machines of this kind as heretofore constructed it was necessary for the operator to reach across the machine between the bed 1 and beam 3 to pull the sheet material into position for being operated upon by the die 4 and it has frequently happened that while thus engaged with his arms between the beam and bed that the operator would accidentally depress the treadle 5 resulting in lowering of the beam 3 and the crushing of his arms. In my improved machine the beam 3 is supported in a higher position than heretofore and is provided upon its under side with a presser member or post 7 movable on the beam lengthwise of the latter so that while the operator is shifting the work about on the bed 1 and reaching under the beam 3 as described, the presser member or post 7 can occupy a position at one side of the machine so that should the treadle 5 be accidentally depressed no injury will result to the operator.

In Figures 1, 2 and 3 the presser member or post 7 comprises four pieces of channel iron 8 fastened together by four bolts 9 as shown clearly in Figures 2 and 3. To this channel iron structure are secured four upwardly extending brackets 10 each carrying a truck or roll 11, the pair of rolls 11 at one side of post 7 resting upon a flange 12 provided as usual upon the beam 3, while the pair of rolls at the opposite side of the channel iron structure rest upon a similar flange provided at the opposite side of the beam. To each outer channel iron 8 is secured a pair of upright bars or posts 13 to which the ends of a horizontal bar or pipe 14 are secured, the latter providing a handle by means of which the post 7 may be conveniently moved on the beam 3 to follow changes in the position of die 4 or to be placed out of the way at one side of the machine when the workman is manipulating the leather 2.

In Figures 4 and 5 which show a modification, 15 is a carriage provided with trucks 16 resting on the flanges 12 of the beam 3 so

that this carriage can be moved as desired lengthwise of the latter. The carriage 15 includes two angle iron rails 17 disposed cross-wise relatively to beam 3 and extending beneath the latter. These two rails 17 support rollers 18 provided on the presser member or post 7. By shoving the presser member 7 rearwardly on the rail 17 it may be moved out from its position between beam 3 and bed 1 and into the inoperative position shown in plan view in Figure 5. The operative position of the post 7 is, of course, when it is between the beam and the bed, and as will be clear it may be adjusted lengthwise of the beam to accord with the position of the die by moving the carriage 15 lengthwise of the flanges 12. Movement of the presser member crosswise of the beam is along a path bearing a predetermined angular relationship to the longitudinal axis of the beam due to the fact that the tracks or rails 17 form a positive guide for the presser member.

In using my invention it will be clear that the operator moves the presser member or pusher to one side of, or back of, the position where the die is to be placed and then places the die in position and thereafter moves the presser member in position over the die. He then operates the treadle and the die is pressed through the material and, when the beam stops, he again moves the presser member out of position over the die and subsequently moves the die to another position, repeating the operations until all of the material has been converted into blanks.

When the mechanism is at rest it is practically impossible for the operator to get his hands between the presser member and die on account of lack of room, and therefore the operator will of necessity protect himself since the presser member must be moved out of position over the die in order to manipulate the latter. Even if the machine should keep on running no harm would result because the presser member would not be in position over the die.

The presser member may be made of any size desired to cover any size of die thus making sure of complete protection for the operator.

What I claim is:

1. A machine of the character described comprising a bed; a beam; a presser member; and means for supporting the presser member in position for operation between the beam and the bed but substantially fixed as to vertical movement with relation to the beam, said means providing for rectilinear movement of the presser member crosswise of the beam to and from said position along a path bearing a predetermined angular relationship to the longitudinal axis of the beam.

2. A machine of the character described comprising a bed; a beam; a presser member; and means for supporting the presser member in position for operation between
5 the beam and the bed but substantially fixed as to vertical movement with relation to the beam with provision for rectilinear movement lengthwise of, and crosswise of, the beam to and from said position.

10 3. A machine of the character described comprising a bed; a beam provided with lengthwise tracks; and a presser member between the bed and beam but substantially fixed as to vertical movement with relation
15 to the beam, said presser member comprising a portion having rollers to run on said tracks and having tracks extending crosswise of the beam and comprising a second portion having rollers to run on said cross-
20 wise tracks.

4. A machine of the character described comprising a bed; a beam; a presser member comprising two outer and two inner
25 channel irons, a pair of posts secured to each outer channel iron, a horizontal bar secured to each of said pairs of posts; and rollers operatively connected with said out-

er channel irons and running on said beam to permit horizontal movement of the presser member with respect to the beam.

5. A machine of the character described comprising a bed; a beam; a presser member; and means mounted on the beam to support the presser member at a fixed distance from the beam and to provide for
35 rectilinear movement of the presser member crosswise of the beam along a path bearing always the same fixed angular relation to the longitudinal axis of the beam, said means preventing turning of the presser
40 member.

6. In a machine of the character described, a work supporting bed, a beam movable toward and from the bed in pressure applying operations, a presser member
45 comprising two I-beam members secured together side by side, a handle secured to one of the I-beam members, and rollers operatively connected with the beam and the presser member for facilitating movement
50 of the presser member with respect to the beam.

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