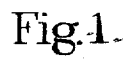


APPLICATION FILED JAN. 13, 1908.

Patented Apr. 20, 1909.
2 SHEETS—SHEET 1.



WITNESSES:
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Charles Bernier
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918,728.

Patented Apr. 20, 1909.
2 SHEETS—SHEET 2.

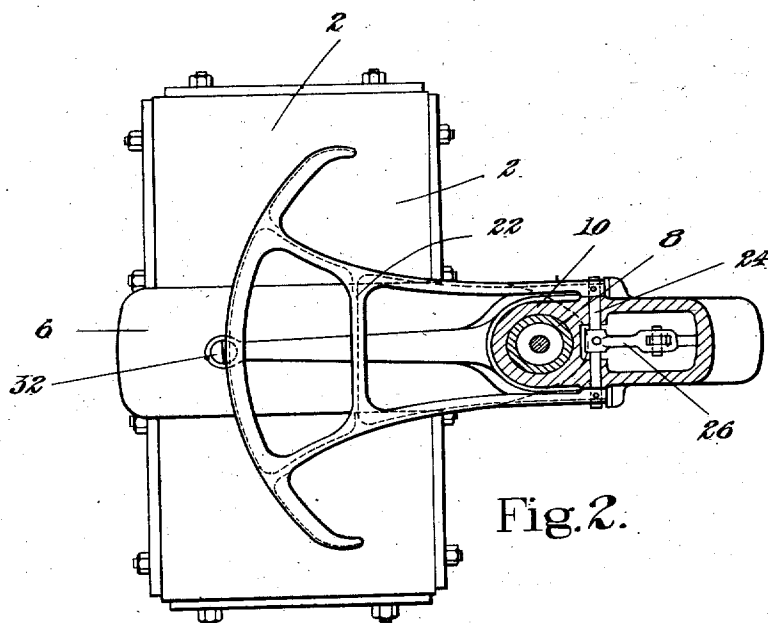


Fig. 2.

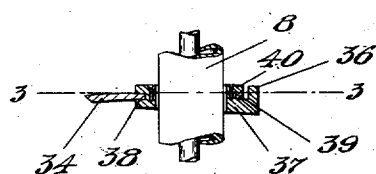


Fig. 4.

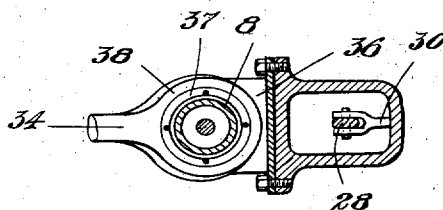


Fig. 3.

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CHARLES BENNION, OF LEICESTER, ENGLAND, ASSIGNOR TO UNITED SHOE MACHINERY COMPANY, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PRESS.

No. 918,728.

Specification of Letters Patent.

Patented April 20, 1909.

Application filed January 13, 1908. Serial No. 410,690.

To all whom it may concern:

Be it known that I, CHARLES BENNION, a subject of the King of England, residing at Leicester, in the county of Leicester, England, have invented certain Improvements in Presses, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to an improvement in presses of that type in which a pressure-applying member is movable into various positions relative to a bed to apply pressure to different parts of stock situated between them. While presses of this type may be used for many different purposes they are often used for dieing out sheet material, and accordingly I have shown my invention as applied to a press of this kind though it is to be understood that it is by no means limited to use with machines for accomplishing this result.

A principal feature of this invention relates to the provision in a press of the above character, of means extending into proximity to the pressure-applying member to render operative the mechanism for causing the said pressure-applying member and bed to be moved relatively to each other for applying pressure to stock interposed between them. Preferably the pressure-applying member is provided with a handle for convenience in adjusting it laterally relative to its bed and the means above referred to extends into proximity to said handle in the various positions which it assumes in positioning the pressure-applying member, so that the operator, who has grasped said handle to properly position the pressure-applying member relatively to its bed, may, without releasing said handle start the actuating means with the same hand. This result may be accomplished by shaping the starting device for the said actuating means to correspond with the path of movement of the handle in the adjustment of the pressure-applying member so that said handle throughout its range of movement will be in close proximity to some part of said starting device, and this construction and arrangement of starting device for the actuating means to correspond to the path of movement of the handle, forms another important feature of this invention.

A third feature of this invention relates to the provision in a machine of the above class of a handle movable with the pressure-applying member for positioning said member relatively to its bed but held against movement relatively to said bed as said member is actuated to apply pressure thereto so that said member is movable to apply pressure to its bed independently of said handle. This greatly increases the ease of operation of the machine as it is not necessary for the operator's hand and arm to follow the pressure-applying movement of said member.

Referring to the accompanying drawings which, as above indicated, illustrate my invention as applied to a press for dieing out sheet material Figure 1 is a side elevation, partly broken away, of a machine such as above indicated; Fig. 2 is a horizontal section taken on the line 2—2, Fig. 1; Fig. 3 is a horizontal section of a detail taken on the line 3—3, Figs. 1 and 4, and Fig. 4 is an elevation of the detail shown in Fig. 3.

The machine comprises a bed 2 mounted on a frame 4 and adapted to receive and support the stock to be operated upon. A pressure-applying member having the form of an arm 6 is so mounted as to be adjustable into different positions over said bed, being supported by a vertical shaft or tube 8 located at one side of the bed 2 and adapted to turn in bearings 10 and 12 formed in the frame. Pressure-applying member 6 is also movable in a direction substantially perpendicular to said bed to apply pressure thereto being moved by an eccentric 14 mounted on shaft 15 driven by pulley 16 which may be actuated from any suitable source of power. Eccentric 14 acts on presser member 6 through hollow shaft or tube 8, an adjustable connection 17 operated by hand wheel 18 being provided between said eccentric and shaft to determine the limits of movement of said presser member. This adjustment is rendered desirable on account of the varying thickness of dies. Interposed between eccentric shaft 15 and its driving pulley 16 is a clutch mechanism 20 by which said pulley may be coupled to the shaft to impart rotary motion thereto. The clutch is preferably of the type that communicates one revolution to the driven shaft and then automatically disconnects. The starting mechanism for starting the clutch comprises a lever 22 which will preferably

have approximately the form shown in Fig. 2, one of its ends being extended in the arc of a circle whose center is at the axis of shaft 8 on which pressure-supplying member 6 is mounted while the other end is rigidly secured to a horizontal rockshaft 24 journaled on the frame 4 of the machine. To shaft 24 is also rigidly secured a lever 26 pivotally connected by a link 28 to a lever 30, pivoted on the frame of the machine and operatively connected with the clutch mechanism as indicated on Fig. 1, the arrangement preferably being such that after said lever 30 has been actuated to couple pulley 16 to its shaft 15 it is returned by any convenient means, such as a spring 31, to a position in which said clutch mechanism may be rendered inoperative.

The means for adjusting the pressure-applying member 6 to its desired position over bed 2 comprise preferably a handle 32 which may be grasped by the operator and which is connected to presser member 6 in such a manner as to control the swinging movement thereof, either being secured directly thereto or preferably as shown on an arm 34 supported from the frame of the machine as by a bracket 36 which is mounted on said frame and is provided with a circular or ring-shaped member 37 surrounding the shaft or tube 8. The arm 34 is shown as provided at its upper end with a circular or ring-shaped part 38 which fits in a groove 39 formed in the circular part 37 of bracket 36. A circular plate 40 is secured to the bracket 36 above the circular part 38 to prevent said part from becoming separated from the bracket while permitting it to rotate to adjust the position of the pressure-applying member 6. Said handle 32 is shown as connected to the arm 6 to swing said arm through a rod 42 which is firmly secured to said part 6 and extends into a passage formed through said handle 32.

In practice the operator grasps the handle 32 and swings it laterally to adjust presser member 6 to the place over the bed at which it is desired to exert pressure. The member 6 being swung into the desired position the operator while still grasping said handle reaches out and depresses the end of lever 22. He is able to do this as by reason of the shape of said lever 22 some part thereof is within reach of said handle 32 in every position which said handle can assume in positioning member 6 over bed 2. By depressing the lever 22 the operator actuates clutch 20 through connections 26, 28, and 30 causing eccentric 14 to be operated, drawing presser member 6 down to exert pressure on the bed 2 and then returning it to its original position when it may be swung over another part of the bed as desired.

While I have thus shown and described my invention as applied to a press of a particular

type, I do not by any means desire to be understood as being limited thereto as the invention could advantageously be applied to a press in which the bed is moved up to a laterally swinging arm to apply pressure, the particular means by which the pressure is exerted forming no part of the present invention.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:—

1. In a machine of the class described, the combination with a bed and a presser member mounted to move laterally into different positions relatively thereto, of means for actuating said presser member toward and from said bed, and means extending constantly into proximity to said presser member but not partaking of the lateral movements thereof for starting said actuating means.

2. In a machine of the class described, the combination with a bed, a presser member mounted to move laterally into different positions relatively thereto, and means for actuating said presser member toward and from said bed, of means for starting said actuating means extending constantly into proximity to said presser member, arranged for vertical movement relatively to said bed and constrained from lateral movement relatively thereto.

3. In a machine of the class described, the combination with a bed, of a presser member movable laterally into and out of position over said bed, mechanism for independently moving said presser member toward said bed, and means located above the presser member in position for actuation by the hand of the operator to render said mechanism operative, said means not partaking of the lateral movement of said presser member.

4. In a machine of the class described, the combination with a laterally moving and reciprocating presser member and operating mechanism therefor, of means located in the field of lateral movement of the presser member but not partaking of such movement for controlling said operating mechanism.

5. In a machine of the class described, the combination of a bed, a presser member movable laterally into different positions relatively thereto, a handle for positioning said presser member, means for actuating said presser member toward and from said bed, and means extending into proximity to said handle and shaped to correspond to the path it traverses in positioning said member for starting said actuating means.

6. In a machine of the class described, the combination with a bed and a cooperating presser member manually movable over the bed and provided with a handle, of operating mechanism for operatively moving said bed and member relatively to apply pressure and

actuating mechanism therefor, including a member arranged in juxtaposition to said handle in its several positions, whereby it may be engaged and actuated by the operator in grasping the handle:

- 5 7. In a machine of the class described, the combination of a bed, a presser arm adjustable into different positions relative thereto and provided with a handle to be grasped by the operator in effecting this adjustment, and means independent of said handle for moving said presser arm toward said bed to apply pressure, said handle not partaking of the pressure-applying movement of said arm.
- 10 8. In a machine of the class described, the combination of a bed, a presser member movable about an axis into various positions relative to said bed, and means for actuating said bed and member relatively to exert
- 15 pressure, said last-mentioned means being provided with a starting device shaped substantially in an arc of a circle the center of which coincides with the axis of movement of said member.
- 20 9. In a machine of the class described, the combination of a bed, a presser member movable about an axis into various positions relative to said bed and provided with means adapted to be grasped by the operator for
- 25 such movement, and means for actuating

said bed and member relatively to exert pressure, said last-mentioned means being provided with a starting device shaped substantially in an arc of a circle the center of which coincides with the axis of movement of said member, said starting device being located in proximity to said means for moving the presser member as said presser member is moved into various positions relative to said bed.

10. In a machine of the class described, the combination with a bed and a cooperating presser member manually movable over the bed, of operating mechanism for operatively moving said bed and member relatively to apply pressure and actuating mechanism therefor, including a member independent of said presser member, constrained from lateral movement with the presser member and arranged in relation to said presser member to be actuated by the hand of the operator while it manually moves the presser member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES BENNION.

Witnesses:

JOHN RICHARD LAW,
ARTHUR ERNEST JERRAN.

Corrections in Letters Patent No. 918,728.

It is hereby certified that in Letters Patent No. 918,728, granted April 20, 1909, upon the application of Charles Bennion, of Leicester, England, for an improvement in "Presses," errors appear in the printed specification requiring correction, as follows: In line 101, page 1, the word "thickness" should read *thicknesses*, and in line 4, page 2, the compound word "pressure-supplying" should read *pressure-applying*; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 18th day of May, A. D., 1909.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.

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10. In a machine of the class described, the combination with a bed and a cooperating presser member manually movable over the bed, of operating mechanism for operatively moving said bed and member relatively to apply pressure and actuating mechanism therefor, including a member independent of said presser member, constrained from lateral movement with the presser member and arranged in relation to said presser member to be actuated by the hand of the operator while it manually moves the presser member.

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