

(No Model.)

H. W. HONEYMAN.  
CLOTH PRESSING MACHINE.

No. 454,798.

Patented June 23, 1891.

Fig. 1.

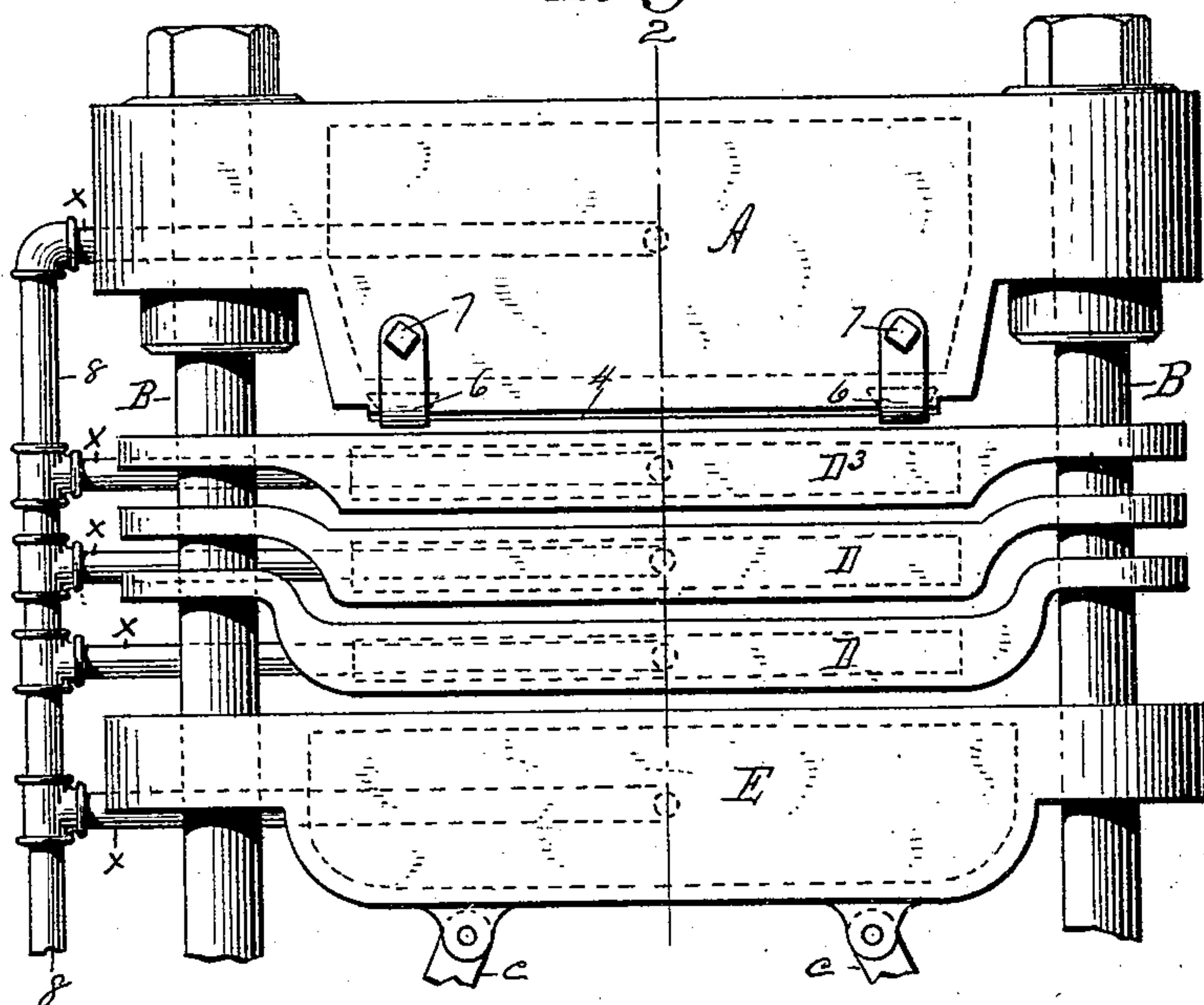


Fig. 2.

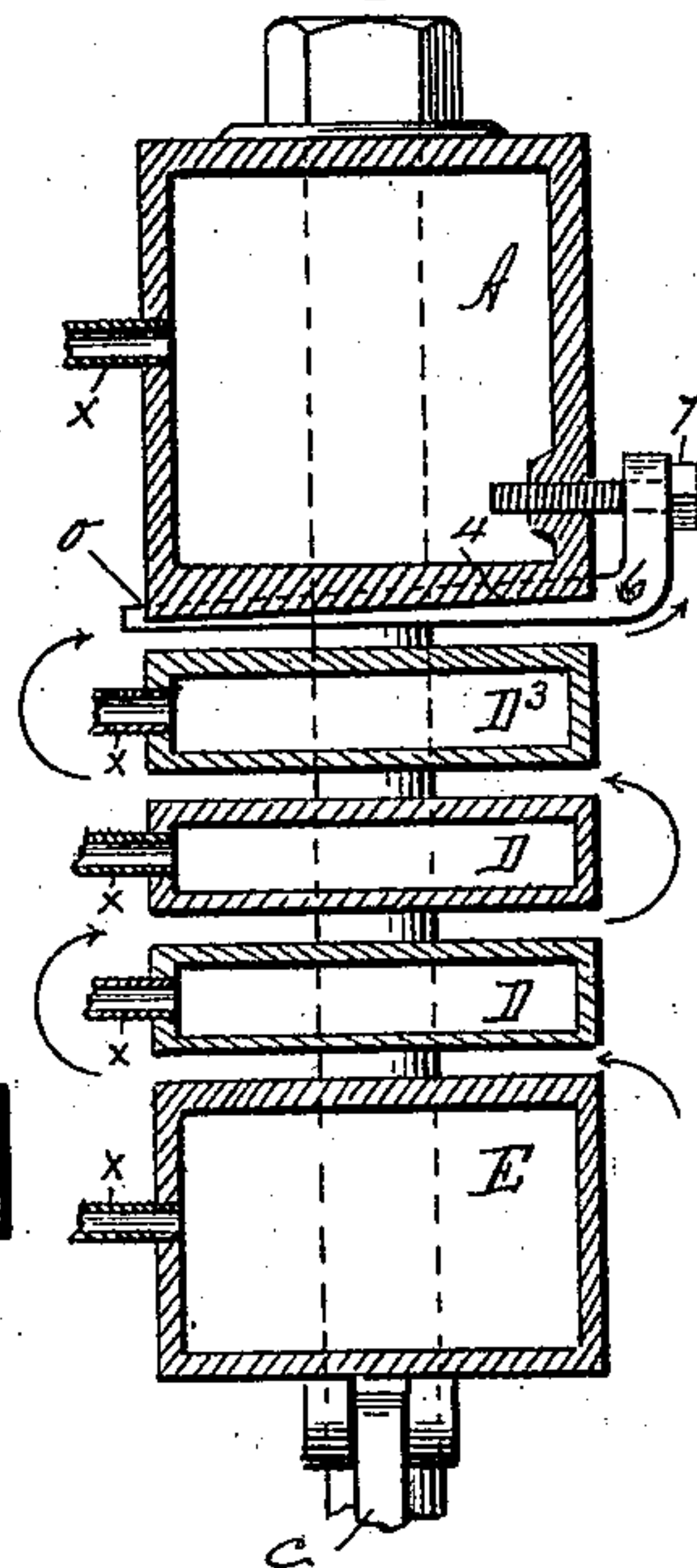


Fig. 3.

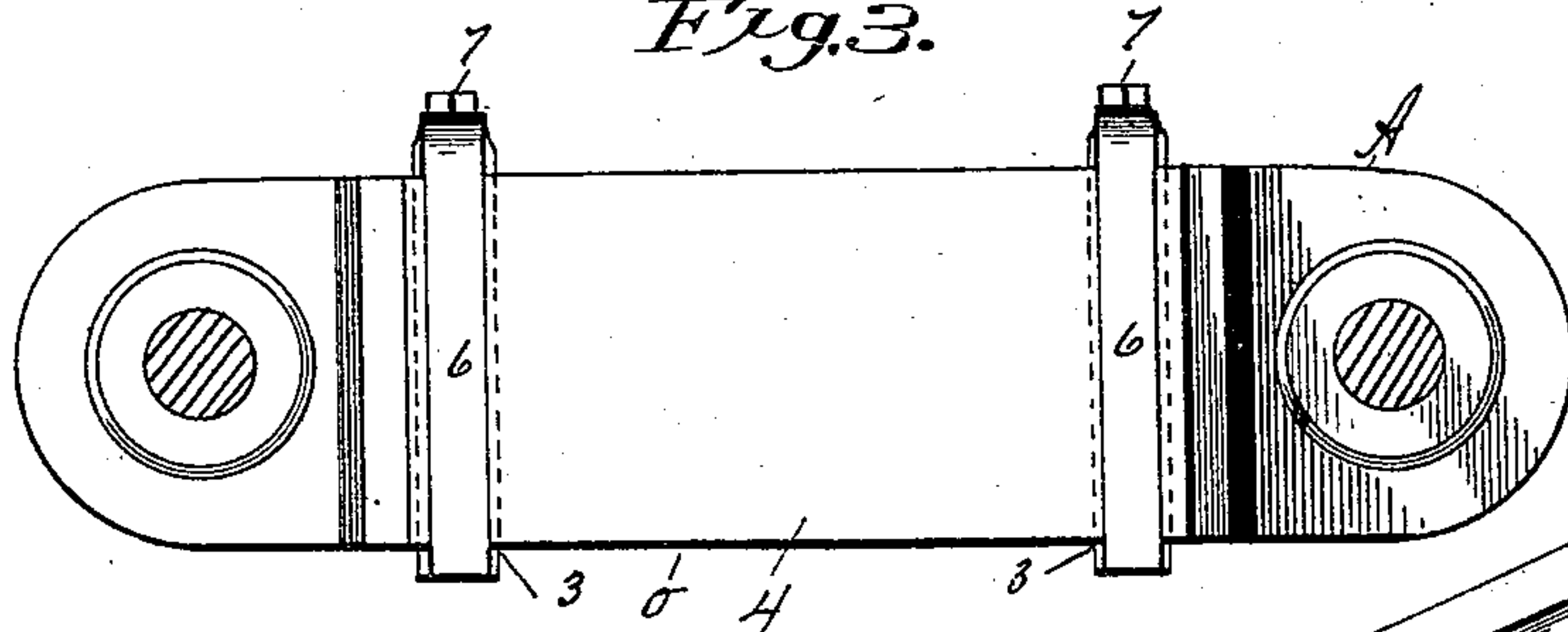


Fig. 4.

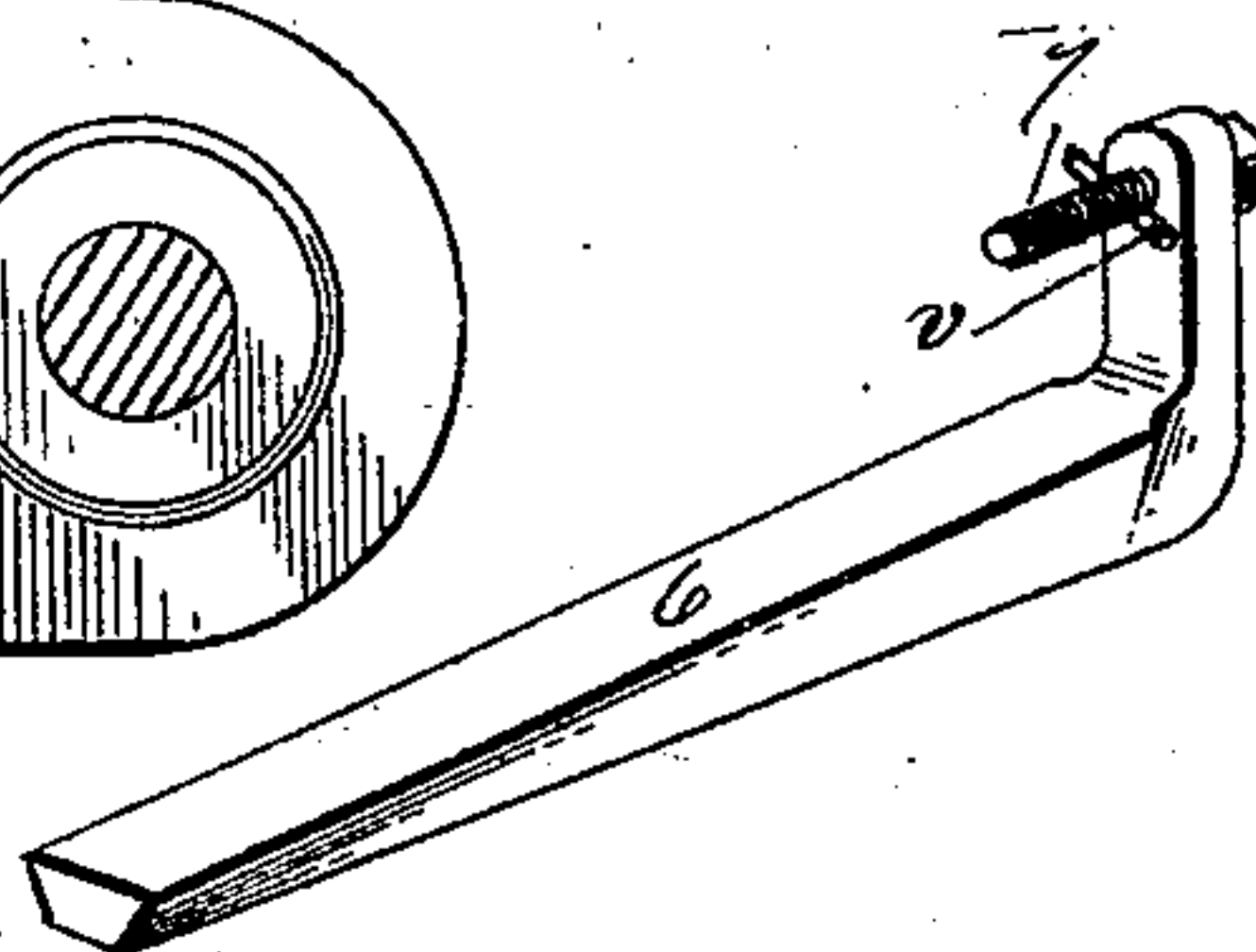
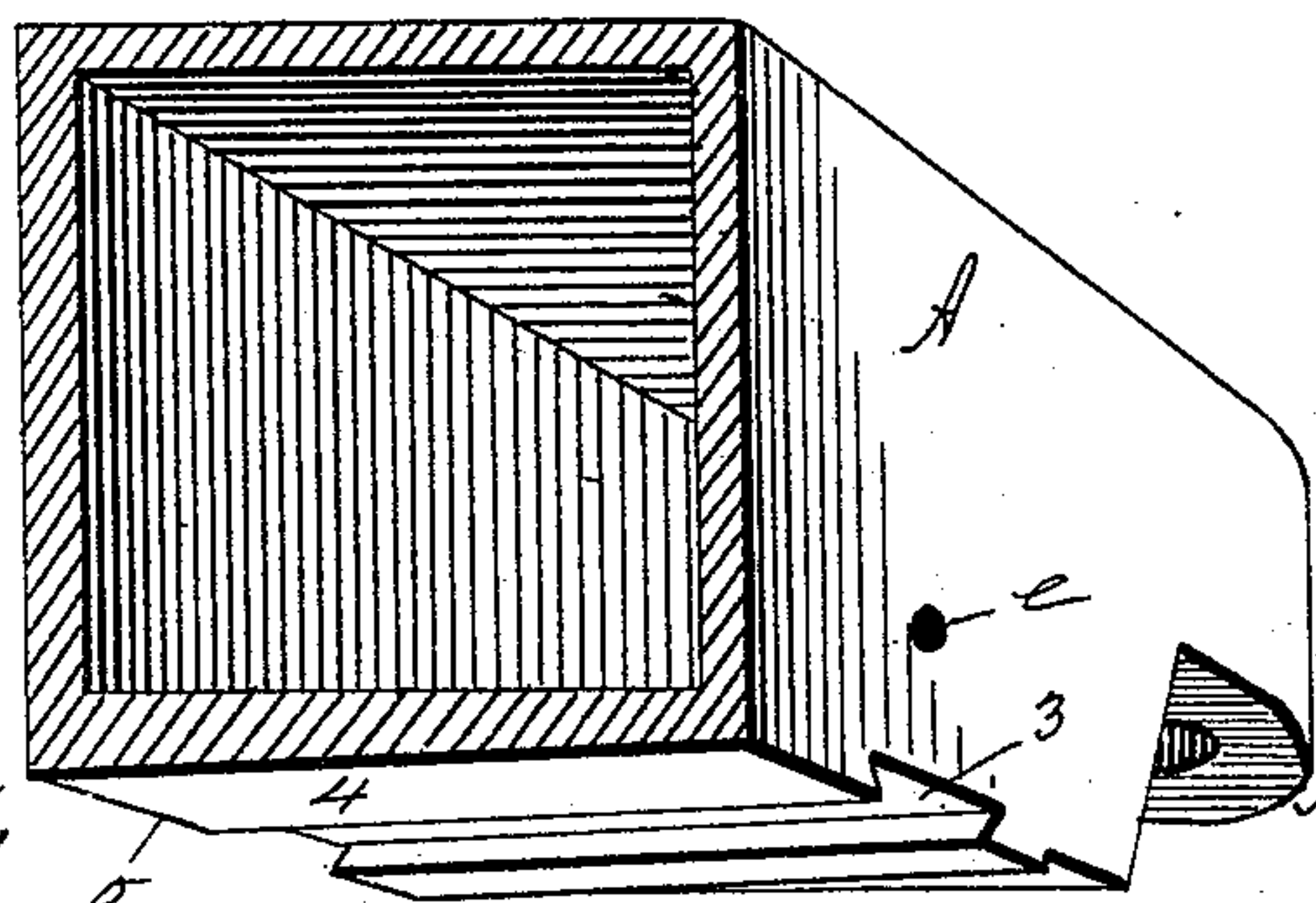


Fig. 5.



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# UNITED STATES PATENT OFFICE.

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THE GRANGER FOUNDRY AND MACHINE COMPANY, OF SAME PLACE.

## CLOTH-PRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 454,798, dated June 23, 1891.

Application filed June 25, 1890. Serial No. 356,669. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY W. HONEYMAN, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in Cloth-Pressing Machines, of which the following is a specification.

This invention relates to machines for pressing and finishing cloth, the object being to provide in machines of this class an improved platen, against which one of the press-plates of the machine moves, and devices connected with said platen or one of said press-plates whereby the press-plate of the machine next to or adjoining the face of the platen has its movement toward the latter graduated, so that it shall be more or less, according to the thickness of the cloth being operated upon, all as hereinafter fully described.

In the drawings forming part of this specification, Figure 1 is a front elevation of the platen and the cloth-pressing plates of a machine for pressing and finishing cloth, said platen and cloth-pressing plates being shown in connection with the usual guiding-posts of a cloth-pressing machine, and there being also shown in said figure the usual steam-pipe connections with said platen and plates. Fig. 2 is a vertical sectional view of said platen and cloth-pressing plates on the line 2, Fig. 1. Fig. 3 is a bottom plan view of the platen. Fig. 4 is a perspective view of one of the wedges operating in transverse grooves in the face of the platen, as below described. Fig. 5 is a perspective view of a section of the platen.

In the drawings are illustrated the platen and the cloth-pressing plates of a machine for pressing cloth and the usual vertical posts or supports by which the above-mentioned parts of such a machine are supported in operative position, and since the improvements herein described relate solely to the platen and one of the press-plates of such a machine it is deemed that the illustration of those parts, together with the said improvements, will be sufficient for the purpose of fully understanding this invention when taken in connection with the following specification.

A in the drawings indicates the platen of a cloth-pressing machine, which is made preferably hollow for the reception of steam therein, said platen being rigidly supported in such a machine by the vertical posts B. The cloth-pressing plates of the machine are indicated by D D and D<sup>3</sup> and E, the latter being the lower plate and D<sup>3</sup> the upper one, or that one adjoining or directly next to the platen A, and the plates D D being those intermediately arranged between the plates E and D<sup>3</sup>. The said press-plates are all adapted to have the usual vertical movements toward and from the platen A. Pivotaly connected with the under side of said press-plate E are in practice toggle-bars c, portions of which bars are shown in Fig. 1, these portions being the upper ends of ordinary toggle-bar constructions in machines of this class, which serve to force the lower press-plate E upward to press the cloth, which is in the usual manner passed between the upper press-plates D D and D<sup>3</sup>, the cloth ordinarily following the folded directions indicated by the arrows in Fig. 2. The said cloth in the process of pressing it is drawn along between said press-plates and platen intermittently in the ordinary way, whereby little by little the entire surface of the piece of cloth so drawn along becomes pressed and finished. The said press-plates are ordinarily made hollow, as shown, for the reception of steam therein for heating them in order to hot-press said cloth, and steam is conveyed thereto and to the said platen A by means of an ordinary steam-supply pipe 8 and branches x, leading therefrom to said platen and plates and connected therewith.

In the operation of pressing cloth by machines of this class, as above described, it is found that such machines as heretofore constructed almost invariably leave press-marks in the cloth, and it is found that said press-marks are the result of the action of the upper or last press-plate and of the platen thereabove, between which and said upper press-plate D<sup>3</sup> the cloth is last pressed as it passes through the machine, and that said marks result, ordinarily, directly from the pressure of the cloth between the front edges of the platen A and the adjoining press-plate D<sup>3</sup>,



these last-named edges being the last ones to whose pressing action the cloth is subjected as it is drawn through the machine in the direction of said arrows in Fig. 2, for, as is well known to those familiar with the operation of cloth-pressing machines, the cloth during the operation of the machine thereon is moved after each plate-pressure thereupon such distance as to bring any press-marked places that may be thereon inside of the borders of the plates, so that when next pressed said marked places may be subjected to the action of the faces of the plates, whereby such marks are obliterated. The presence of said press-marks in cloth occasions great inconvenience and seriously deteriorates the quality thereof, and the essential purpose of the improvements within described is to so improve the construction of the platen of a cloth-pressing machine and devices co-operating therewith and with the adjoining upper press-plate  $D^3$  that the said press-marking of the cloth is entirely obviated.

Instead of employing a platen A, having its under side or face 4 parallel with the adjoining upper side of the upper press-plate  $D^3$ , as in machines heretofore made, the said upper platen has its said under face planed off from its front to its rear edge at a slight incline, as shown in Figs. 2 and 5, whereby the rear edges of the platen and the upper press-plate  $D^3$  approach each other nearer than the front edges thereof, and consequently the cloth may be compressed between said rear edges of the platen and upper cloth-plate and for a limited distance inwardly therefrom, but the opposite or front edges of said platen and plate are normally so separated that they at no time compress the cloth therebetween. The angle of gradual separation of the faces of the platen A and the press-plate  $D^3$  is somewhat exaggerated in Fig. 2 for the purpose of clearly illustrating this feature of improvement, but in practice the incline is only about one-sixteenth (1-16) of an inch in the width of the platen. Owing, however, to the fact that cloth of varying thicknesses is, in practice, operated upon by the same machine, arbitrary or unadjustable means of producing a varying separation of the upper press-plate and the platen from their rear to their front edges, as above described, is not sufficient, and therefore the said platen 4 is provided with the wedges 6, which extend from the front of the platen A across its under inclined face, said wedges being of dovetail form in cross-section and having an adjustable endwise sliding movement in grooves 3 of like conformation in the under side or face of said platen, said wedges having an upturned end, as shown, through which is inserted a freely-turning screw-bolt having a screw-connection with the outer side of the platen A. The head of the bolt 7, which passes through the said upturned end of the wedge 6, bears against said end when the bolt is screwed into

the side of the platen, and thereby forces the wedge 6 inwardly. A pin  $v$  is passed through the screw-bolt inside of said upturned end and adjoining the inner side of the latter, and therefore when the bolt is turned out from the side of the platen A the wedge is drawn outwardly, and thus said wedge is adjusted inwardly, or outwardly in the grooves 3 of said platen, and according to the position of said wedges transversely therein is the separation of the faces of the upper press-plate  $D^3$  and the adjoining under face of the platen—that is to say, while rear portions of the wedges project at all beyond the face of the platen A.

Referring to Figs. 1, 2, and 3, that portion of the face of the platen A indicated by 4 and between the two wedges 6 is the portion of said face under which the cloth to be pressed is drawn. The wedges 6 in the operation of cloth-pressing are adjusted to such positions in the platen-face as to cause their rear portions at and near the edge  $o$  of the platen to project beyond the face of the latter toward the adjoining face of the platen  $D^3$  to a degree somewhat less than the thickness of the cloth which is operated upon, so that the movement of the plate  $D^3$  toward the face of the platen shall be limited thereby, according to the thickness of the cloth, and the pressure required to be exerted thereupon to produce the proper finish and the obliteration of any press-mark made thereon by a preceding press-plate; but, as aforesaid, the front edges of the platen and upper press-plate  $D^3$  are normally separated and are never allowed to press upon the cloth; but the last pressing action thereon is had to said limited degree between that portion of the faces of said platen and press-plate which extends from the rear edges thereof inwardly for a certain distance.

By the operation of the screws 7 in withdrawing the wedges more or less from the platen the rear edge of the latter may receive the unrestricted full force of the pressure of the plate  $D^3$  thereagainst, or the movement of the said plate  $D^3$  toward the face of the platen A may by the contrary operation of the screw-bolt 7 and the driving in of the wedge 6 be restricted, as required, according to the thickness of the cloth being pressed.

It is obvious that the upper face of the press-plate  $D^3$  may be inclined instead of that of the platen and that the wedges 6 may be transferred to said plate; but it is preferable to construct the platen with those features of improvement, for that is fixed and rigid in the machine.

What I claim as my invention is—

1. In a cloth-pressing machine, the platen thereof, having its under face inclined from its front to its rear edge, whereby the front edge of said platen and of the adjoining press-plate thereunder are normally separated, substantially as set forth.

2. In a cloth-pressing machine, the platen



thereof, having its under face inclined from its front to its rear edge, whereby the front edge of said platen and of the adjoining press-plate thereunder are normally separated, combined with said press-plate and with wedges attached to said platen-face and adjustable transversely thereof and constituting means for regulating the degree of movement of said press-plate toward the face of said platen, substantially as set forth.

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Witnesses:

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