

No. 632,379.

Patented Sept. 5, 1899.

N. C. STILES.
LETTER COPYING PRESS.

(Application filed Aug. 26, 1898.)

(No Model.)

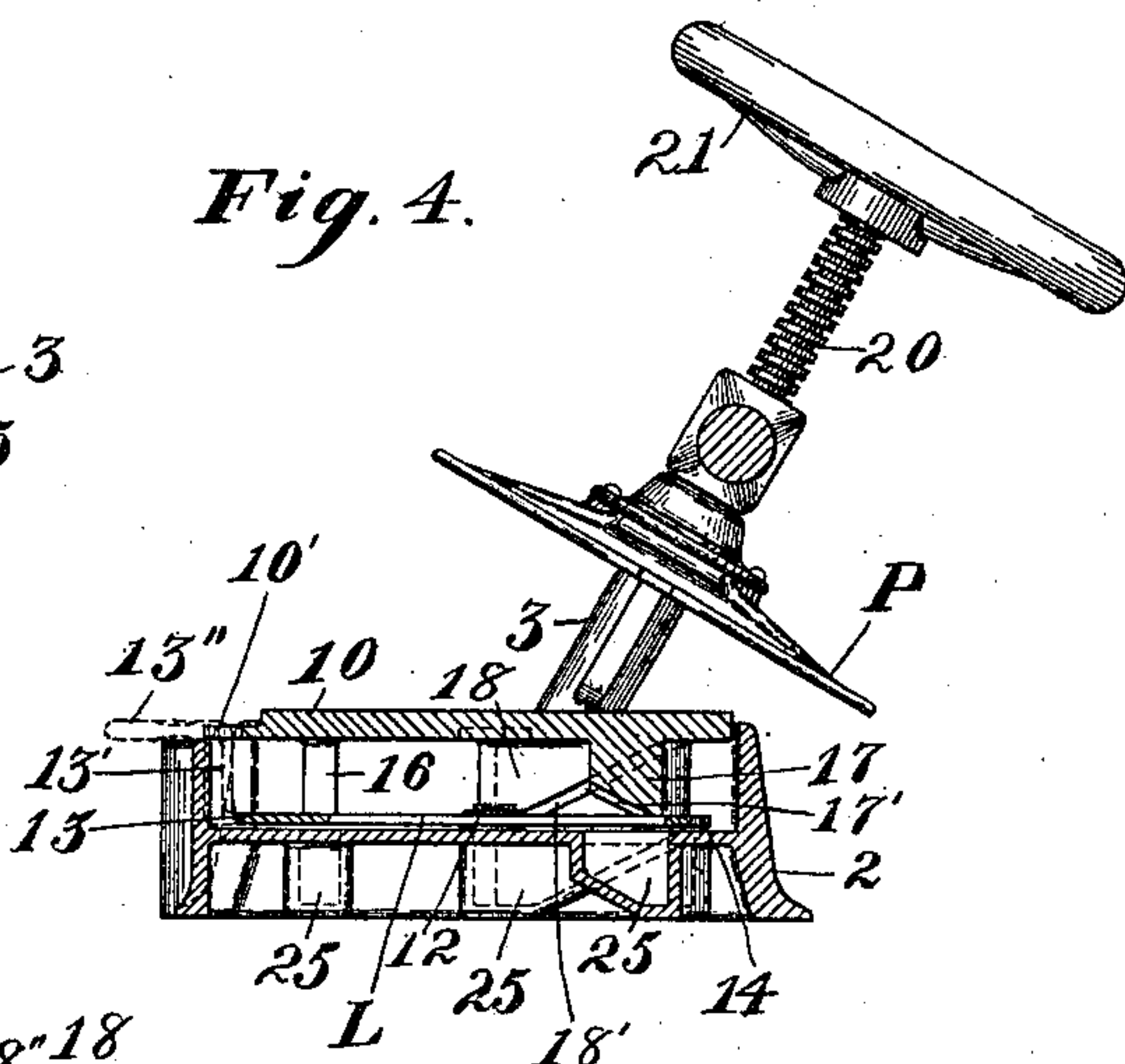
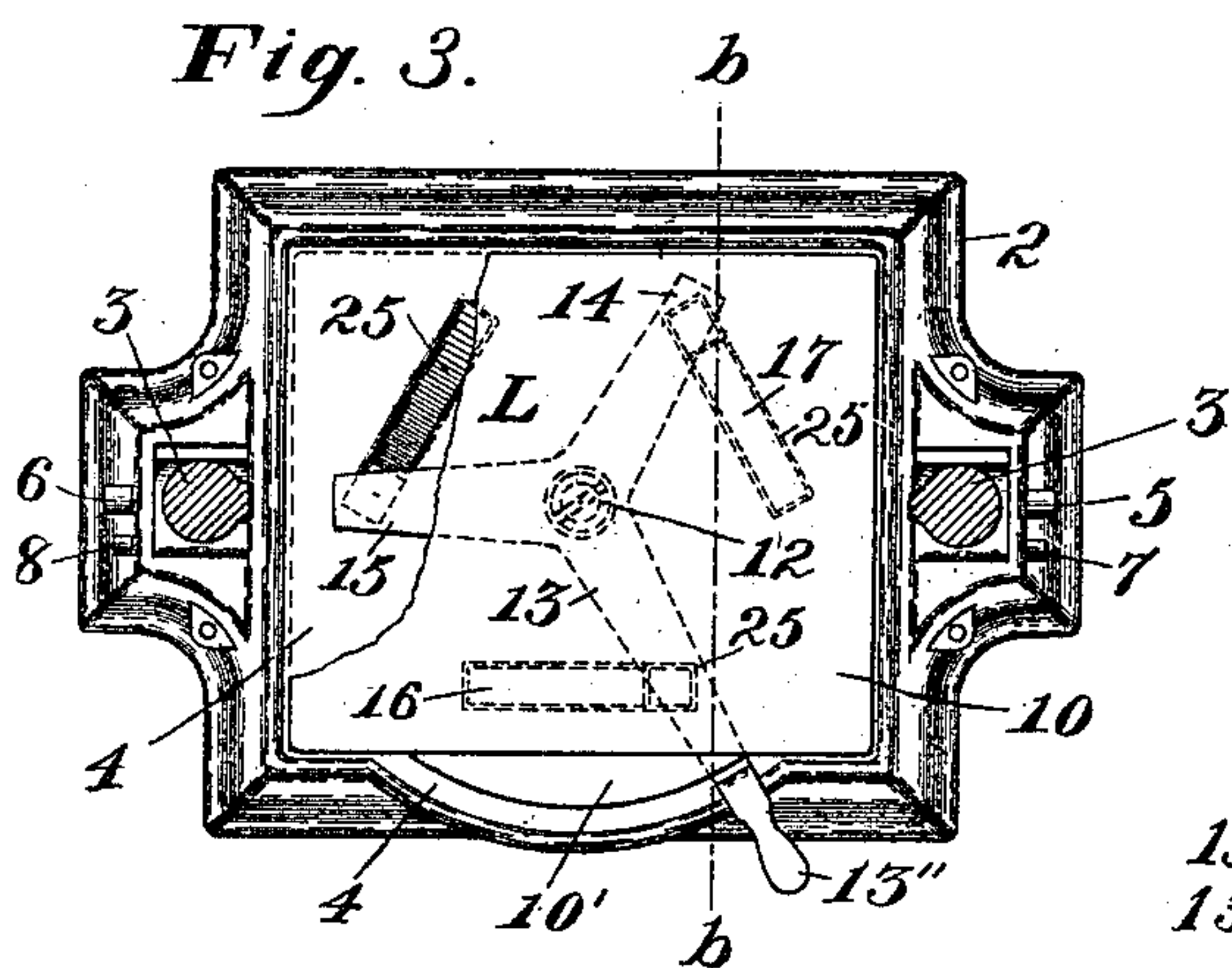
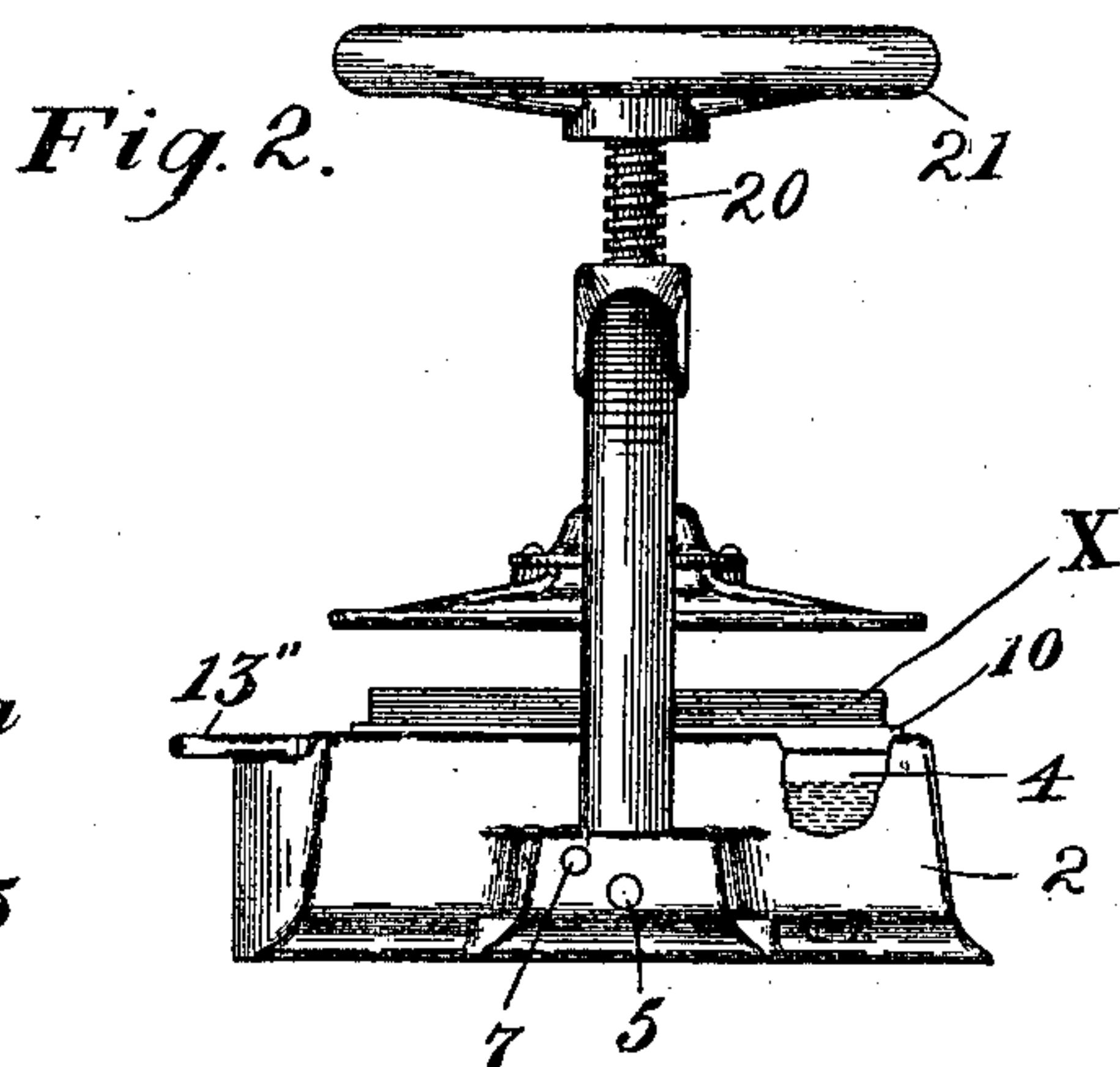
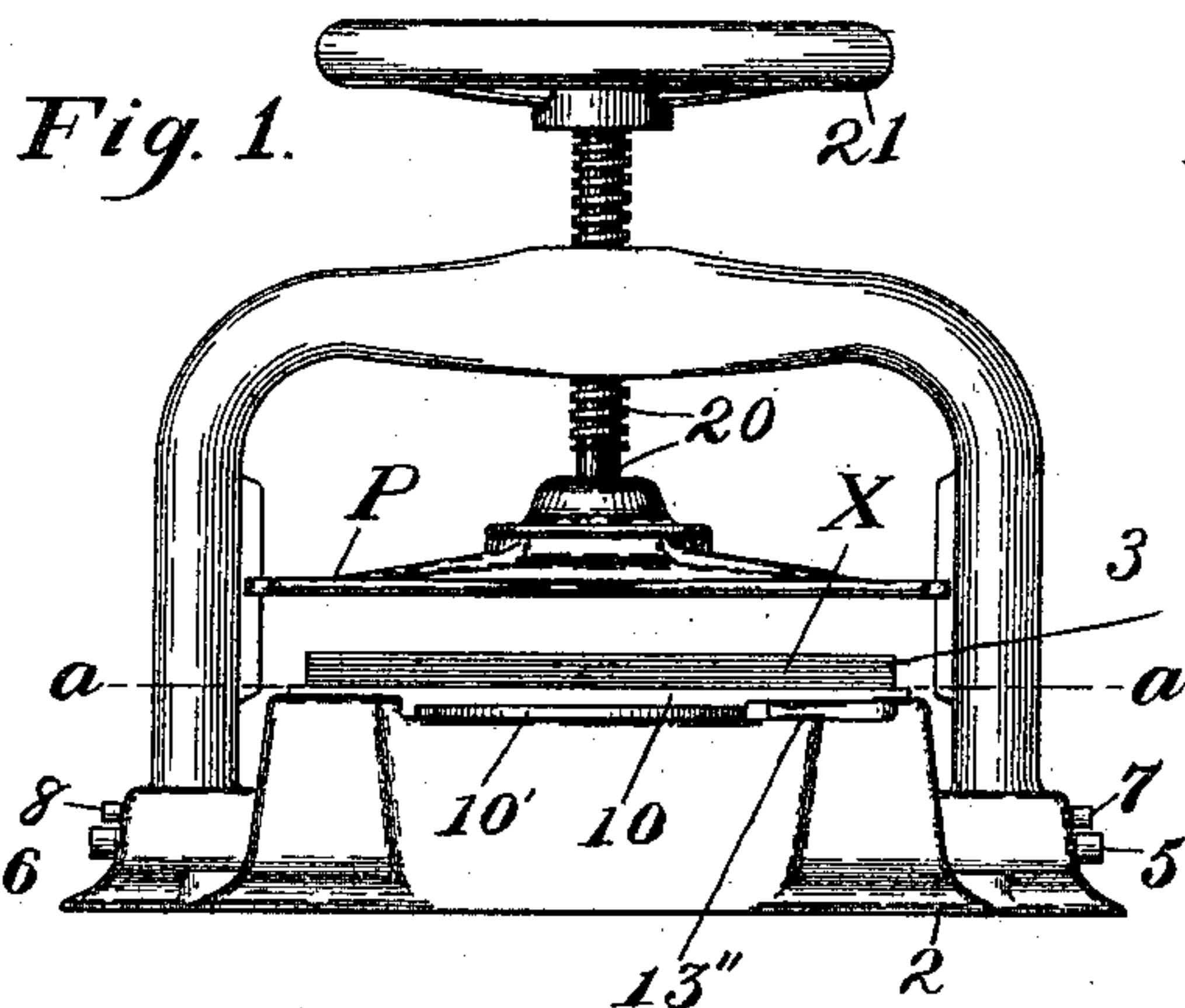
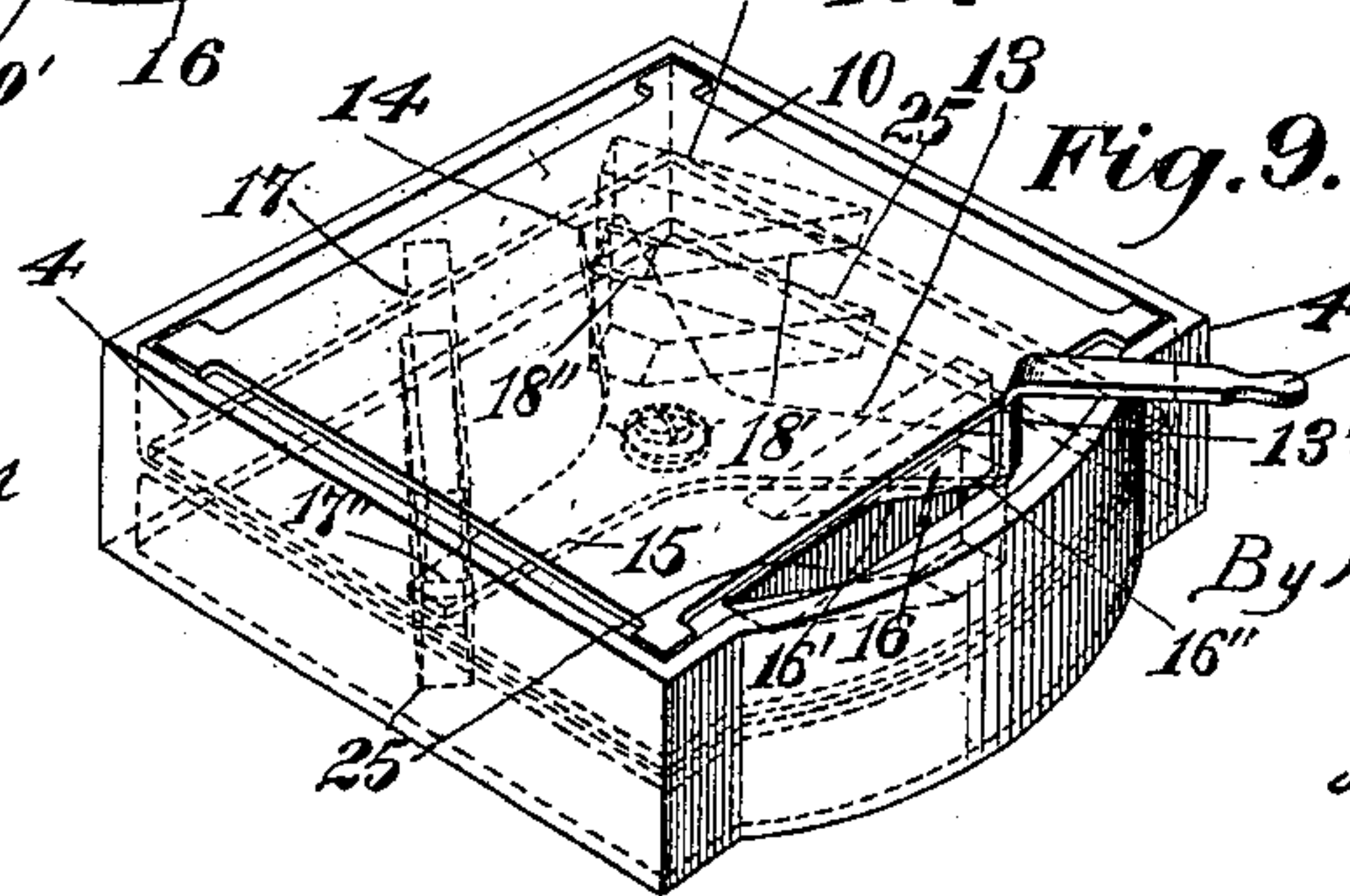
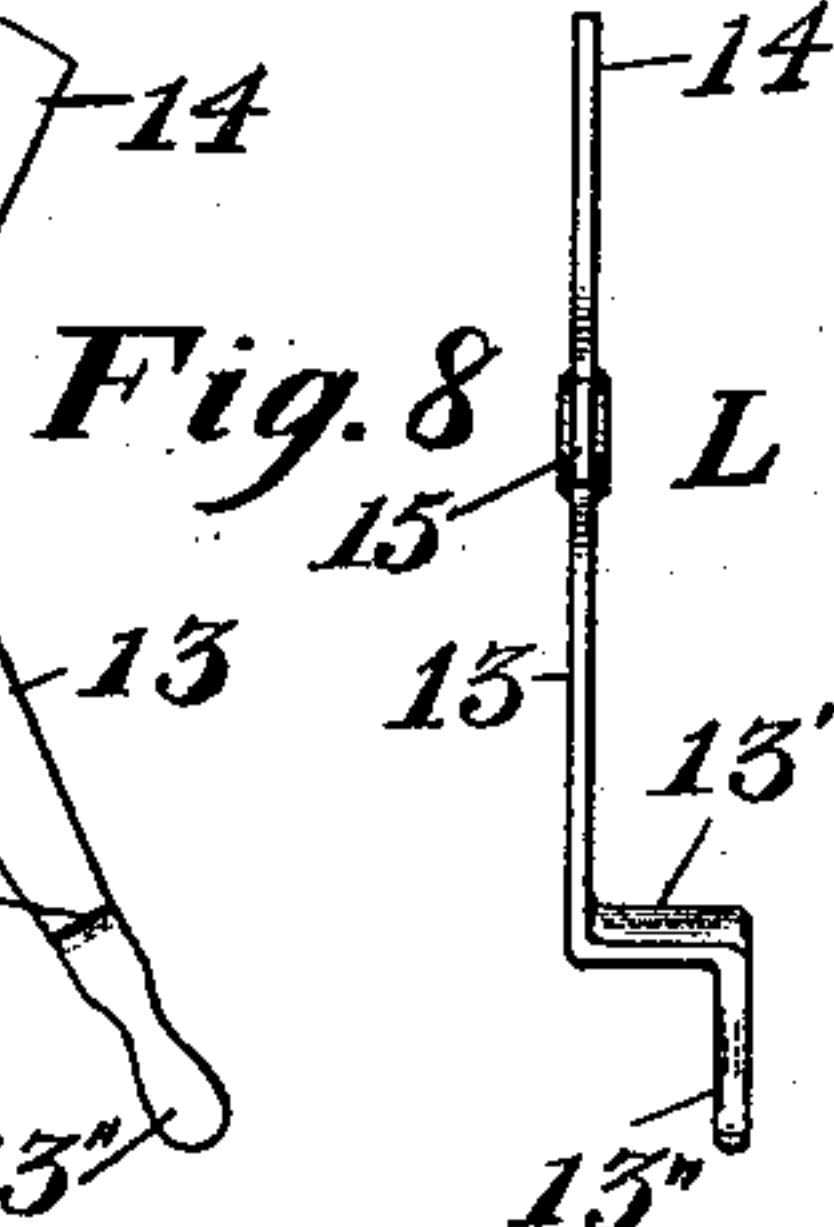
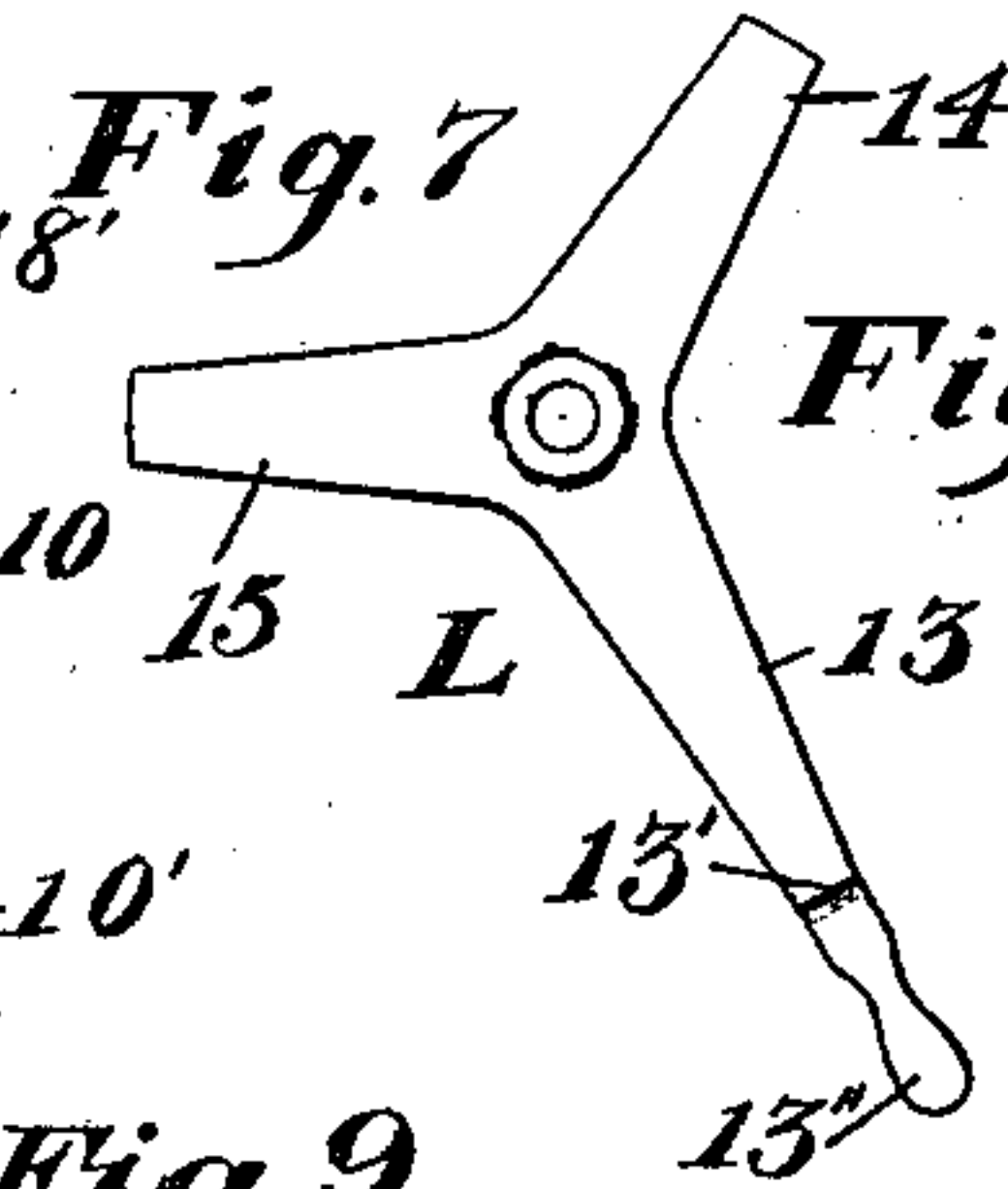
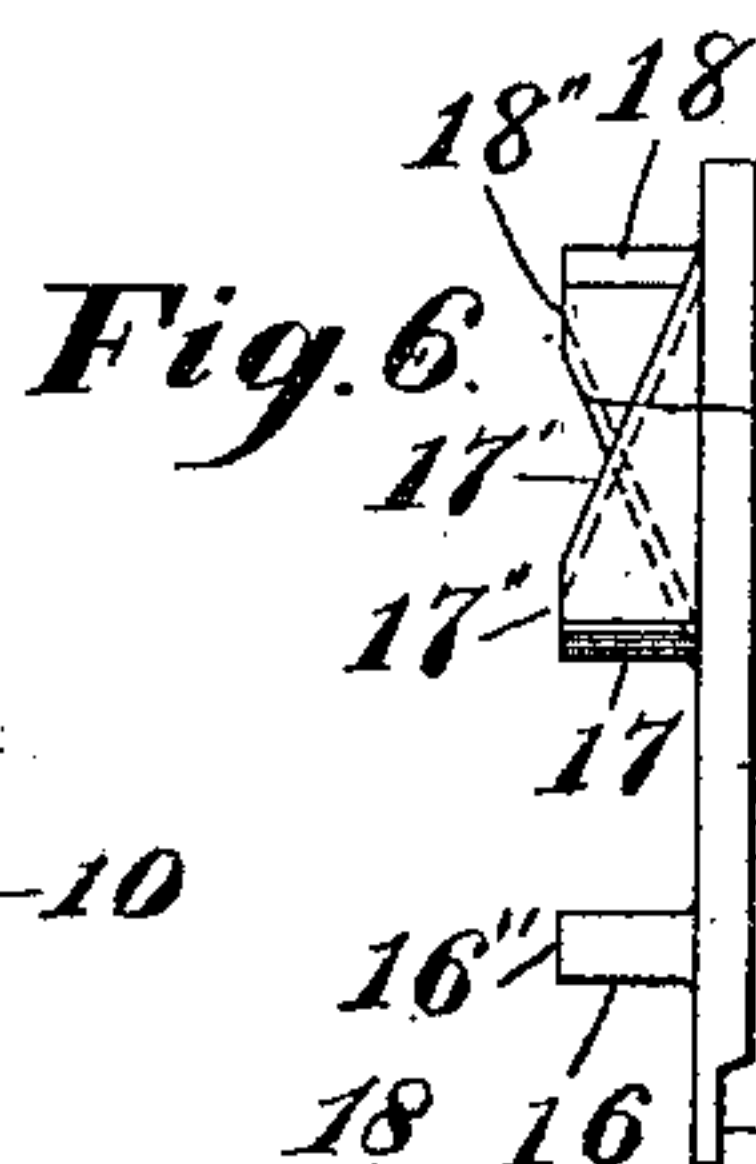
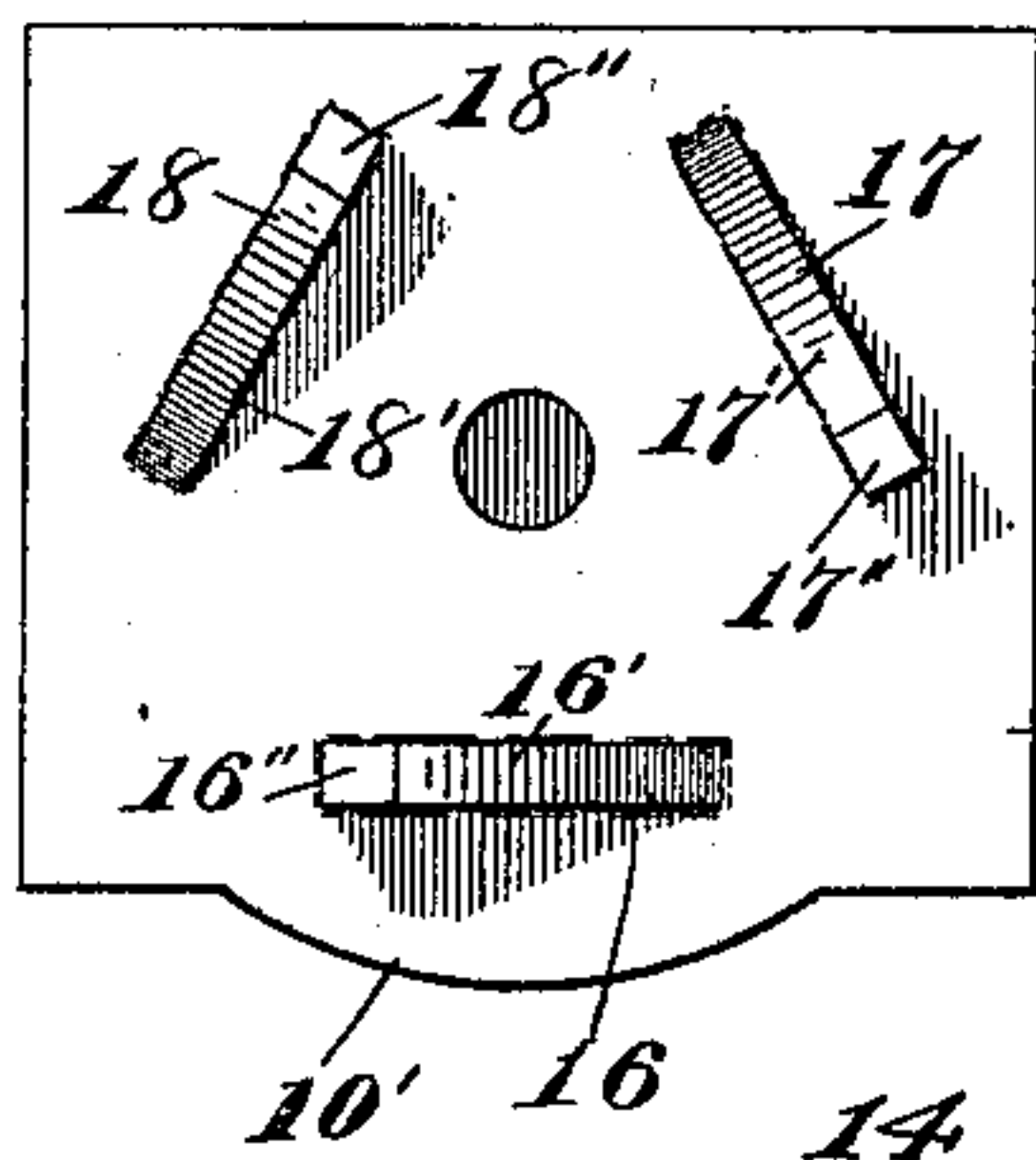


Fig. 5.



Witnesses.

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LETTER-COPYING PRESS.

SPECIFICATION forming part of Letters Patent No. 632,379, dated September 5, 1899.

Application filed August 26, 1898. Serial No. 689,567. (No model.)

To all whom it may concern:

Be it known that I, NORMAN C. STILES, a citizen of the United States, residing in Watertown, in the county of Jefferson and State
5 New York, have invented certain new and useful Improvements in Letter-Copying Presses, of which the following is a specification.

This invention relates to letter-copying presses, the object of the invention being to
10 provide an improved and efficient device of this character in which the copying-pads may be moistened promptly and to the proper degree.

My improved letter-copying press, in the
15 form thereof illustrated in the accompanying drawings, includes in its organization and as one of its essential features a water-receptacle and a pad support or plate mounted for movement into and out of the water in the
20 receptacle, and means are preferably employed for operating the pad-support. In the present case the means for operating the pad-support is located under the same, by reason of which a flat unobstructed upper surface
25 thereof is secured, upon which the pads or blotters can be placed, and said support can thereby be utilized as a carrier for the copying-book.

The base of the press in the present case is
30 hollow and is conveniently employed as a water-receptacle into which the pad can be dipped. As the pads when immersed in the water take up considerable water, it is important that the excess should be removed before the copying operation. For this purpose
35 my improved press includes means located and operable to remove the surplus water from the pads after the latter have been lifted from the water. The invention is not limited to any particular means for this purpose;
40 but for convenience I prefer to employ the vertically-reciprocating platen common in this class of apparatus.

In the drawings accompanying and forming
45 part of this specification, Figure 1 is a front elevation of my improved copying-press. Fig. 2 is a side elevation of the press as seen from the right in Fig. 1. Fig. 3 is a sectional plan view with a portion of the pad-support broken
50 away and the section being taken in the line *a a*, Fig. 1. Fig. 4 is a sectional side elevation, the section being taken in the line *b b*,

Fig. 3. Figs. 5 and 6 are bottom plan and side views of the pad-supporting plate. Figs. 7 and 8 are plan and side views, respectively, 55 of a simple operating device for the pad-support; and Fig. 9 is a view of one form of fluid-receptacle and pad-support adapted for use independently of or with various forms of letter-presses. 60

Similar characters of reference designate like parts in all the figures of the drawings.

My improved copying-press, in the form thereof illustrated in the accompanying drawings, involves in its construction a base or
65 bed 2 and a standard 3, the base being preferably hollow or chambered, as at 4, and the chamber serving as a convenient receptacle for containing water, in which the pads or blotters can be dampened. The standard 3 70 may be supported for movement relatively to the base or bed 2, the two parts being shown as connected by pivots, as 5 and 6, by reason of which the standard, which constitutes a carrier for the movable platen, may be tilted, 75 as represented in Fig. 4, whereby better access may be had to the pads upon the pad-support, this being advantageous where a large quantity of pads are to be wet. The standard is held in its upright position (shown 80 in Fig. 2) by locking-pins, as 7 and 8, adapted to engage the lower ends of said standard or to enter recesses (not shown) therein. It is not essential that the standard 3 should be supported for movement relatively to the base 85 or bed, for the reason that these parts may be readily formed integral.

The pad-support may be of any construction capable of sustaining one or a series of pads; but it is represented consisting of a
90 rectangular plate 10, freely fitted in the chamber 4 and adapted to be lowered therein, the chamber being deep enough to contain water sufficient to soak a large number of pads or blotters, as X, (shown only in Figs. 1 and 2,) 95 on the support.

For the purpose of operating the pad-support, whereby it may be lowered into or raised from the water, any suitable means may be employed which are capable of sustaining 100 said pad-support and for rigidly holding the same when required in its elevated position. The means shown in the present case for this purpose consists of a lever, as L, fulcrumed,

as at 12, between the base and pad-support, whereby it can oscillate back and forth, but which is fixed against movement with said pad-support. For the purpose of maintaining the latter at the proper level at all times the lever is equipped with a plurality of arms, in the present instance three in number, which simultaneously operate upon the support at different places, and thereby prevent wobbling thereof. The arms of the lever are designated, respectively, by 13, 14, and 15, the arm 13 having the angular offset 13', provided with a handle 13'', by which the lever can be manipulated, and said offset portion passing through the space between the base and the pad-support to permit the handle to be in reach of the operator. The several arms of the lever L coact with a corresponding series of wedge-shaped projections or ribs, as 16, 17, and 18, equidistantly disposed upon the under side of said pad-support and the angular or oblique faces of which are designated by 16', 17', and 18' and terminate in the straight or horizontal locking-faces 16'', 17'', and 18'' in parallelism with the under surface of the pad-support. In Fig. 3 the arms 13, 14, and 15 of the operating-lever are represented in engagement with the straight faces 16'', 17'', and 18'', and the handle of the lever is illustrated as being at the extreme right, by reason of which the plate or support 10 is locked in its topmost position, so that a series of pads may be relieved from their excess moisture or that copies may be made in a book thereon.

To dampen the blotters, they are first placed upon the upper side of the support 10 when in its uppermost position, (shown in Figs. 1, 2, and 3,) after which the handle 13'' is grasped and swung to the left, thereby causing the arms 13, 14, and 15 of the lever to ride down the inclined faces 16', 17', and 18' and permitting the support 10 to be lowered by its weight until the pads are immersed, after which the operation is reversed, and until the several arms again engage the three locking-faces 16'', 17'', and 18''. The base 2 has in the floor of the water-receptacle a series of pockets, as 25, shaped to correspond with and adapted to receive the wedge-shaped ribs 16, 17, and 18 when the pad-support is in its lowermost position.

As a convenient means for extracting the excess moisture from the blotter I employ the platen P, secured to the lower end of the feed-screw 20, the latter working in a corresponding threaded recess in the standard 3 and having a hand-wheel 21 at its upper end. By rotating the hand-wheel in the proper direction the platen P can be forced against the series of dampened blotters upon the support 10 to press the water therefrom. When this is accomplished, the pads are ready to be used in the copying-book. To secure the copies, the upper surface of the support 10 is dried or a sheet of non-absorbent material laid thereon and a copy-book can be placed upon

such sheet, after which the hand-wheel is again manipulated to secure the desired copies. The pad-support 10 may be provided with an extension or lip 10', upon which the water from the pads can pass to be guided thereby into the chamber 4, from which it may be discharged by any suitable means or conduit, (not shown,) or the pad-support may be so shaped or provided with cut-away portions, as its edges, (see Fig. 9,) so as to permit the water to readily pass therefrom into the receptacle.

By reason of my improvement I am enabled to combine in one apparatus and in an exceedingly small compass two independent and efficient devices for securing copies of letters, &c., with rapidity; and I do not limit my invention to the means represented for operating the pad-support nor to the means for extracting the superfluous water from the copying-pads thereon.

It will be understood that when it is desired to use this improved pad-support with letter-presses already in use this may be accomplished by the use of any suitable receptacle 4', Fig. 9, adapted to receive the shiftable pad-support.

The copying operation is as follows: The requisite number of pads or blotters are first placed upon the pad-support, after which said support is lowered into the water a sufficient distance to submerge the pads, at which time the support is raised, and when it is at the proper level or substantially in line with the upper edge of the base of the press the movable platen is forced against the pads with sufficient pressure to squeeze the superfluous moisture therefrom, after which said pads are removed and inserted in the copying-book in the familiar manner. The book is then placed upon the combined pad and book support or upon a non-absorbent covering or sheet thereon, after which the platen may be operated in the ordinary manner to secure the copies. The operating means for the pad-support preferably acts upon the same at different places on its under surface, by reason of which said support is maintained at a true level position as it is alternately lowered and raised and while it is at rest.

Having described my invention, I claim—

1. The combination, with a receptacle adapted to contain fluid, of a pad-support mounted for movement into and out of the fluid in said receptacle, and means free of rigid connection with said pad-support for raising said support and during such movement maintaining the same in a horizontal position.

2. In a letter-press, the combination, with a water-receptacle, of a pad-support mounted for movement into and out of the water in the receptacle, and means intermediate the bottom of said receptacle and said pad-support for operating the support.

3. In a letter-press, the combination, with a water-receptacle, of a pad-support mounted

for movement into and out of the water in the receptacle, and means in position for engaging the pad-support simultaneously at different places at the under side thereof for operating the same.

4. In a letter-press, the combination, with a water-receptacle, of a pad-support mounted for movement into and out of the water in the receptacle, and a lever in position for operating said pad-support and shiftable in a plane transversely of the plane of movement of said pad-support.

5. In a letter-press, the combination, with a water-receptacle, of a pad-supporting plate mounted for movement into and out of the water in the receptacle and provided with a series of wedge-shaped projections, and means in position to engage said wedge-shaped projection for operating the pad-supporting plate.

6. In a letter-press, the combination, with a water-receptacle, of a support mounted for movement into and out of the water in the receptacle, and means for operating said pad-support and for locking the same rigidly in a predetermined position.

7. In a letter-press, the combination, with a water-receptacle, of a pad-support mounted for movement into and out of the water in the receptacle and having a series of projections having angular faces which terminate in straight faces, and means in position to engage said angular faces, thereby to raise or lower the pad-support, and for engaging said straight faces to rigidly lock the same.

8. In a letter-press, the combination, with a water-receptacle, of a pad-supporting plate mounted for movement into and out of the water in the receptacle, and a lever fulcrumed between said parts and having a series of arms in position to operate said pad-supporting plate.

9. In a letter-press, the combination, with a water-receptacle, of a pad-supporting plate mounted for movement into and out of the water in the receptacle; means shiftable in a plane transversely of the plane of movement of said plate for operating the plate; and means located and operable to press the surplus water from the pads after they are removed from the water.

10. In a letter-press, the combination, with a water-receptacle, of a pad-support mounted for movement in a perpendicular plane into and out of the water in the receptacle; means for operating said pad-support; and a movable platen located and operable to remove the surplus moisture from the pads when they are removed from the water.

11. The combination, with a water-receptacle, of a pad-support mounted for movement into and out of the water in the receptacle, and a tilting standard carrying a platen

operable to press the surplus water from the pads when they are removed from the water-receptacle.

12. In a letter-press, the combination, with a fluid-receptacle having a chamber formed therein and adapted to contain fluid, of a combined pad and book support movable into and out of said fluid, and means for obtaining copies in a book carried on such support after the removal of the pads therefrom.

13. In a device of the class specified, the combination, with a fluid-receptacle, of a pad-supporting member mounted for movement; an actuating member for operating said supporting member, thereby to shift the same into and out of the fluid in said receptacle; and means carried by one of said members and free of rigid connection with and cooperating with the other of said members for effecting the movement of said supporting member and during such movement maintaining the same in a horizontal plane.

14. The combination, with a fluid-receptacle, of a pad-supporting member mounted for movement into and out of the fluid in the receptacle; an actuating member for operating said supporting member; and means comprising a plurality of wedge-shaped projections carried by one of said members for effecting, in connection with said actuating member, the movement of said supporting member.

15. A pad-bath comprising a receiver adapted to contain fluid; a pad-supporting plate disposed in position for movement into and out of the fluid in said receiver; and means operative to shift said supporting-plate into and out of said fluid, and during such shifting movement maintaining the same in a horizontal plane, thereby to permit all parts of the surface of a pad to be simultaneously operated upon to press the surplus water therefrom.

16. The herein-described improvement in letter-presses, it comprising, in combination with a fluid-reservoir, of a shiftable support for supporting a letter-book, a shiftable standard or carrier provided with a follower or letter-pressing platen, and means for operating the letter-pressing platen, substantially as described.

17. In a letter-press, the combination, with a base having a fluid-chamber formed therein, of a combined pad and book support disposed in said chamber, and a movable platen adapted to be moved into position directly to engage a pad carried by said pad-support, or, on the removal of such pad, directly to engage a letter-press book carried by such support.

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