No. 724,653. PATENTED APR. 7, 1903.

L. BAILEY.

COPYING PRESS.

APPLICATION FILED DEC. 18, 1902.

NO MODEL.

Fig. 1.

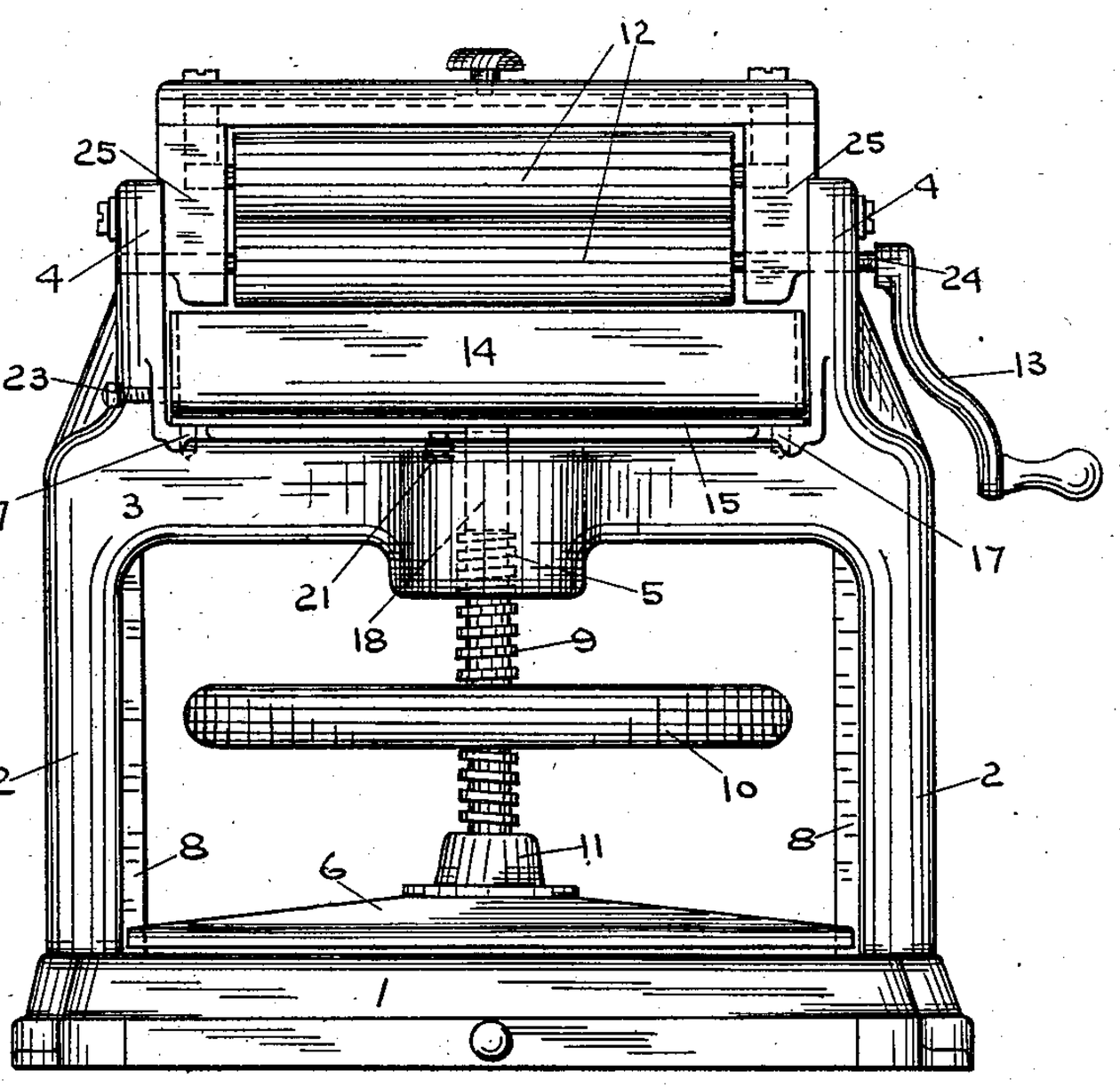


Fig. 2.

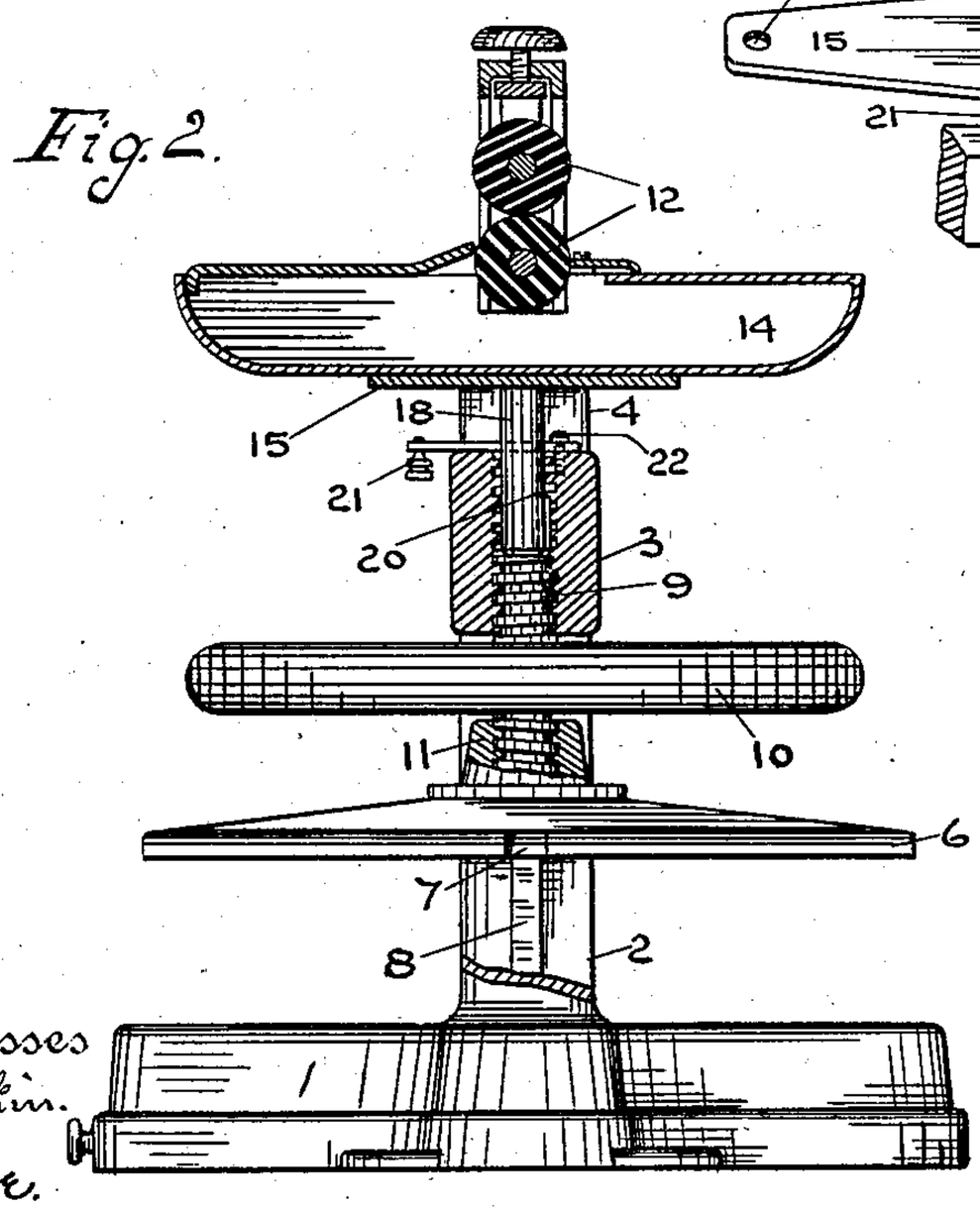
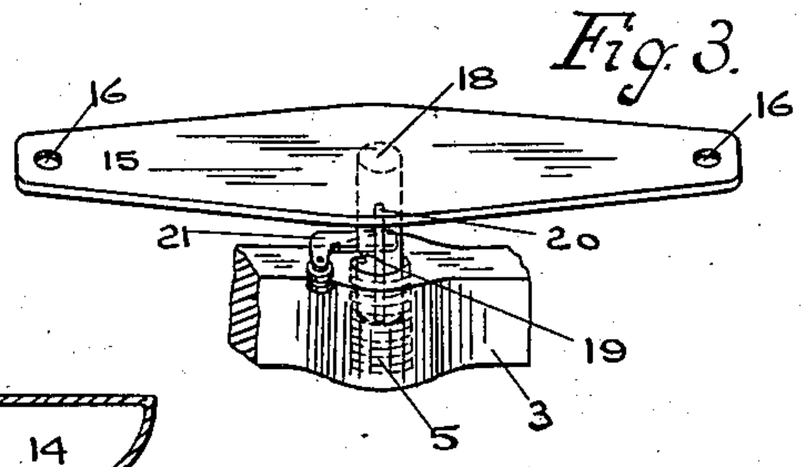


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

LEONARD BAILEY, OF WETHERSFIELD, CONNECTICUT.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 724,653, dated April 7, 1903.

Application filed December 18, 1902. Serial No. 135,772. (No model.)

To all whom it may concern:

Be it known that I, LEONARD BAILEY, of Wethersfield, Hartford county, in the State of Connecticut, have invented certain new and useful Improvements in Copying-Presses, which improvements are described in the following specification and are illustrated by the accompanying drawings.

My invention relates to that kind of a copying-press which is driven by a hand-wheel located below the arch and is provided with a detachable water-pan and a pair of pressure-rollers, which are all mounted successively above the arch. In presses of this kind as constructed before the present invention was made the necessary adjusting movements of the rollers and the water-pan relatively to each other have been effected either by an appropriate movement of the rollers alone or by raising and lowering the water-pan by means of an adjusting-screw and hand-wheel specially provided for that purpose.

It is the object of this invention to impart all necessary movements of adjustment to the water-pan in a more convenient and speedy manner and without such special screw and hand-wheel by utilizing for lifting and lowering that pan the same screw which drives the platen. To accomplish this object, I mount the rollers in a fixed position and set the water-pan below them upon a lifter, which consists of a horizontal plate or frame and a central vertical post or stem thereof, which is adapted to be actuated by such platen-driving screw and to work therewith in one and the same central bore of the arch.

The best manner in which I have contemplated applying the principles of my invention is shown in said drawings, in which—

Figure 1 is a side elevation of a copying-press constructed in accordance with those principles and adjusted with the platen in its lowest position and with the whole depth of the water-pan below the rollers. Fig. 2 is a central vertical section of the same press with the platen and the water-pan in raised positions. Fig. 3 is a perspective view of the pan-lifter seated upon the arch.

As shown in Figs. 1 and 2, the frame of the press consists of a base 1, which is a flat and horizontal bed-plate of general rectangular form, two vertical legs 2, standing up on the bed-plate, a horizontal crown or cross-piece 3, connecting those legs, and so completing the arch that spans the base, and two vertical arms 4 and 4, rising from that arch. The crown 3 is considerably enlarged at the middle and is there perforated by a vertical bore 5. Between base 1 and crown 3 is located horizontally the movable platen 6, provided with marginal notches 7 and guided by the leg-flanges 8, which run in those notches. The screw 9, which drives the platen, is turned by a hand-wheel 10. The terminal portions of this screw being respectively above and below the hand-wheel are threaded in opposite directions, but are of uniform size and pitch. The upper portion works in the crown-bore 5, which is provided with an appropriate internal screw-thread, while the lower portion works in a nut 11, which is fastened upon the middle of the platen. In the upper part of the frame two horizontal rollers 12 are mounted in suitable bearings 25 between arms 4 and 4 and may be set in motion by a hand-crank 13 on shaft 24 of the lower roller. The tank or water-pan 14 is adapted to be lowered to a position wholly below the rollers 12, as shown in Fig. 1, so that those rollers may be used to press out superfluous moisture from wet copying-pads into that pan and also to be raised to a position of contact with shaft 24, as indicated in Fig. 2, so that the rollers may be used to distribute needed moisture from the water-pan to dry copying-pads from the surface of the lower roller 12, partly immersed in the water which the pan contains.

As above indicated, the nucleus of my invention is a lifter which is adapted for raising, sustaining, and lowering the water-pan and is operated by the same screw 9 which drives the platen 6. Such a lifter in the preferred form (shown in Fig. 3) remains to be described.

The numeral 15 denotes a horizontal plate or frame of proper size and shape to hold the superposed water-pan 14. This plate is perforated by two vertical holes 16 and 16, which are normally occupied by two pin-shaped lugs 17 and 17, projecting from the bottom of pan 14, as shown in Fig. 1, and holding the pan detachably thereon in the normal position, (indicated in Figs. 1 and 2.) To the middle of the plate is rigidly fastened a vertical

stem 18, which is provided with a spline 20 and is adapted to work longitudinally in the upper portion of the crown-bore 5 without turning. In the side of stem 18 is cut a notch 19, and on the top of crown 3 is mounted a tongue 21, turning on a vertical pivot 22. By simply turning this tongue into notch 19 the lifter when lifted to its elevated position (indicated in Fig. 2) may be latched immovably in that position, and by a reverse movement of the tongue the stem 18 may be released whenever the lifter is to be let down.

The water-pan is raised, together with its lifter, by turning up screw 9 against stem 18, as shown in Fig. 2. By the pressure of that screw acting through the lifter the pan is forced against shaft 24 at opposite edges of the pan between the bearing-boxes 25 and the posts 4 and may be locked in that position, and thereby clamped between the lifter and that shaft by latching, as above described. When the pan is so fastened up, screw 9 is left at liberty to drive the platen in the usual manner and without interfering with the lifter-stem 18. When it is desired to lower the water-pan either for the purpose of using the rollers 12 for copying-pads which have been already wetted or for the purpose of lifting off the water-pan from the lifter-plate 15 or for any other purpose, screw 9 is again turned up, as in Fig. 2, the latch-tongue 21 is turned away from stem 18, the weight of the water-pan and its contents, as well as the weight of the lifter, is thereby brought again upon that screw, and as the latter is turned down the water-pan follows of its own accord steadily down to the position shown in Fig. 1, as desired. In that position it may be held immovable by a pair of set-screws, one of which is indicated by the numeral 23 in that figure, or may be so held by equivalent locking mechanism.

Such being the construction and operation of my invention, I claim—

1. In a copying-press, a screw, working in the press-frame, in combination with a platen and a pan-lifter, which are operated by that screw.

2. In a copying-press, a screw, working in the press-frame, and a movable water-pan, in combination with a platen and a pan-lifter, both operated by that screw.

3. In a copying-press, a screw, working in the press-frame, and a platen, operated by that screw, in combination with a movable water-pan, and intermediate mechanism, through which that water-pan is raised and lowered by the same screw.

4. A press-frame, a screw, working therein, and an adjustable water-pan, in combination with a platen and a pan-lifter, which are actuated by that screw, and mechanism for fastening the lifter in a lifted position.

5. In a copying-press, a screw, working in the press-frame, in combination with a platen and a movable water-pan, which are actuated by that screw.

6. In a copying-press, a vertically-adjustable water-pan, a vertically-reciprocable pan-lifter, and a vertical screw for lifting the lifter, in combination with mechanism, independent of that screw, for holding the lifter in a fixed position when lifted.

In testimony whereof I hereunto set my name in the presence of two witnesses.

LEONARD BAILEY.

Witnesses:
EDWARD M. YEOMANS,
WILLARD EDDY.