No. 616,745.

Patented Dec. 27, 1898.

O. J. TAEUBER.

COPYING PRESS.

(Application filed Mar. 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

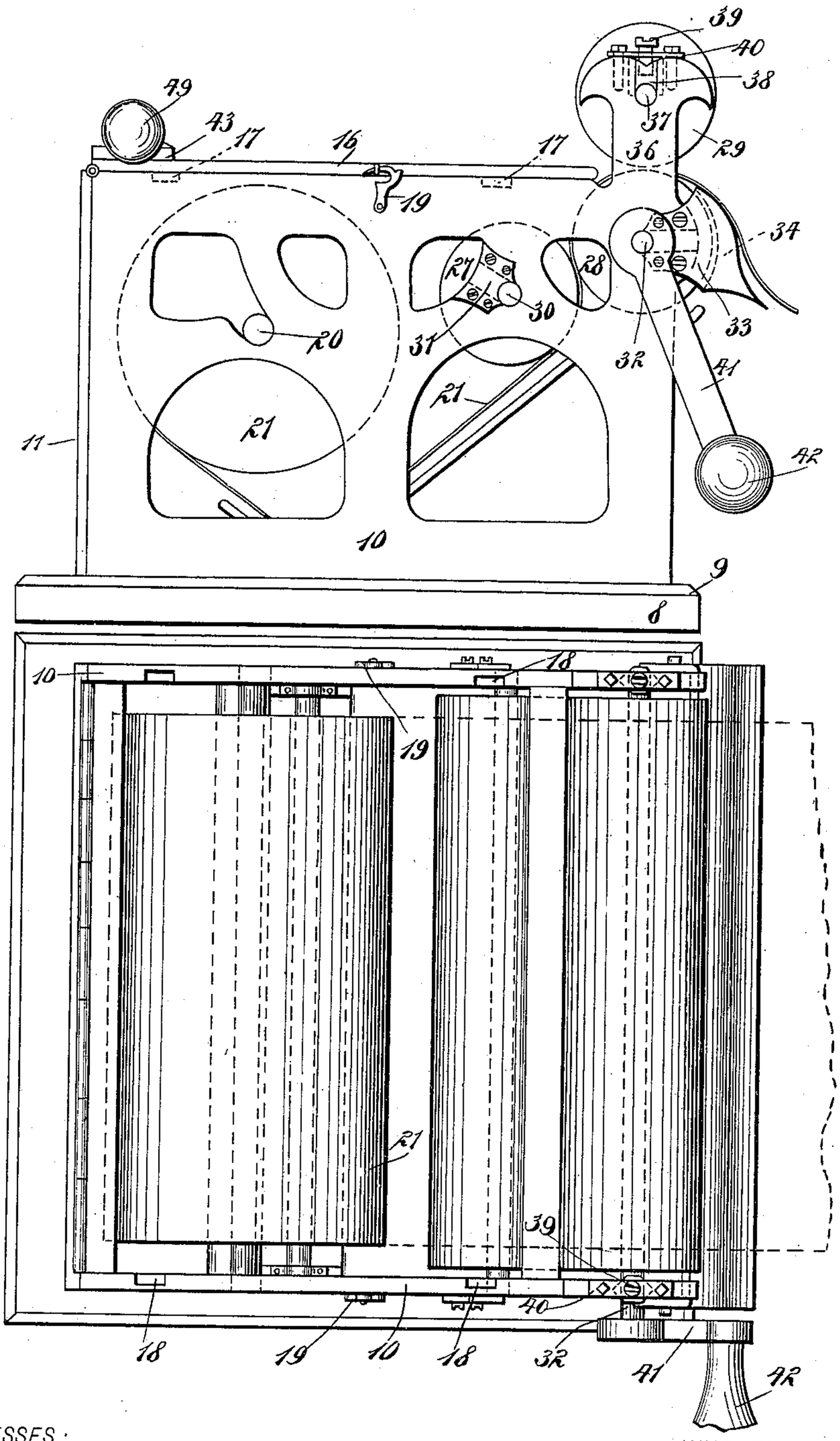

Fig. 2.

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Fig. 3

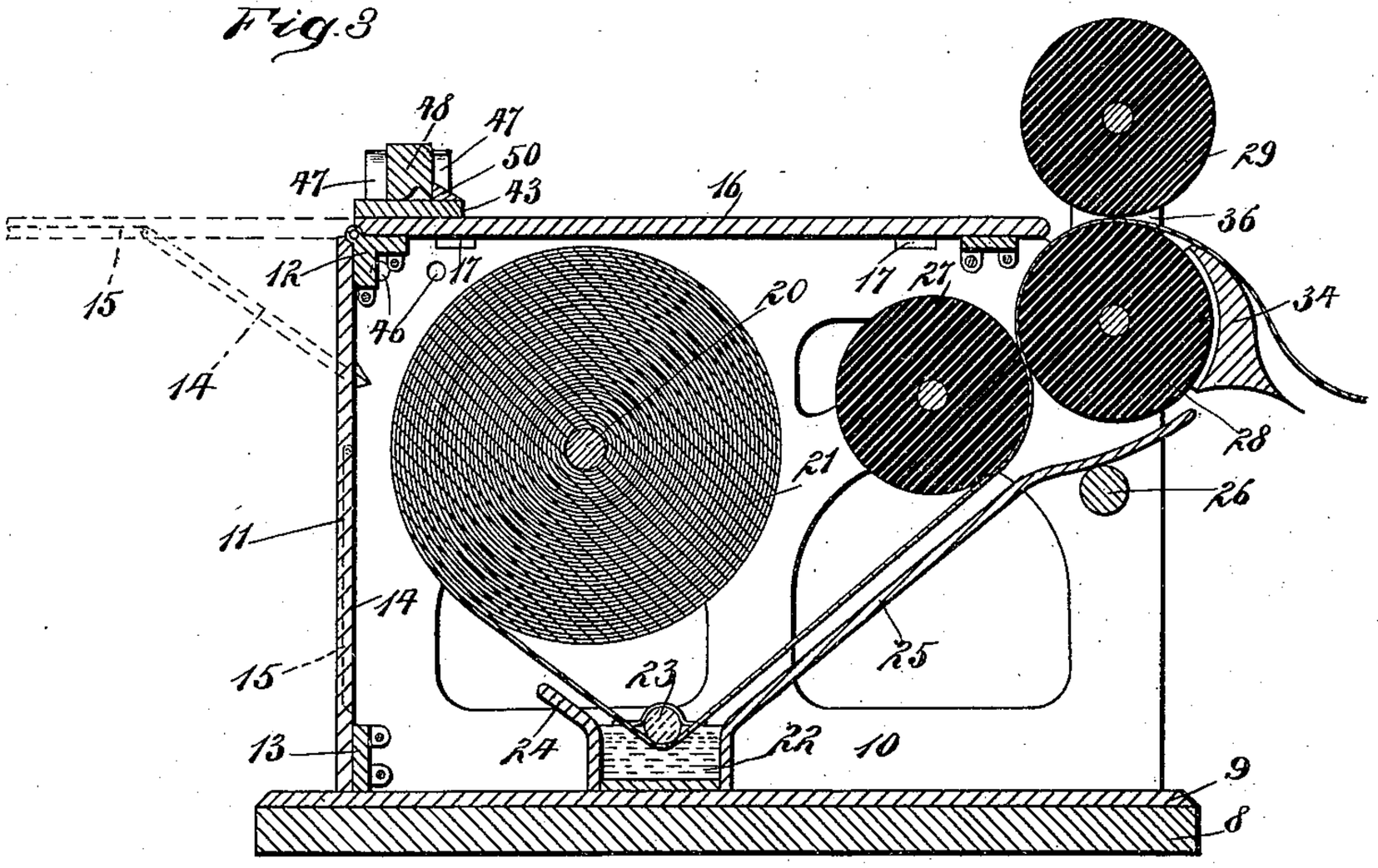


Fig. 4

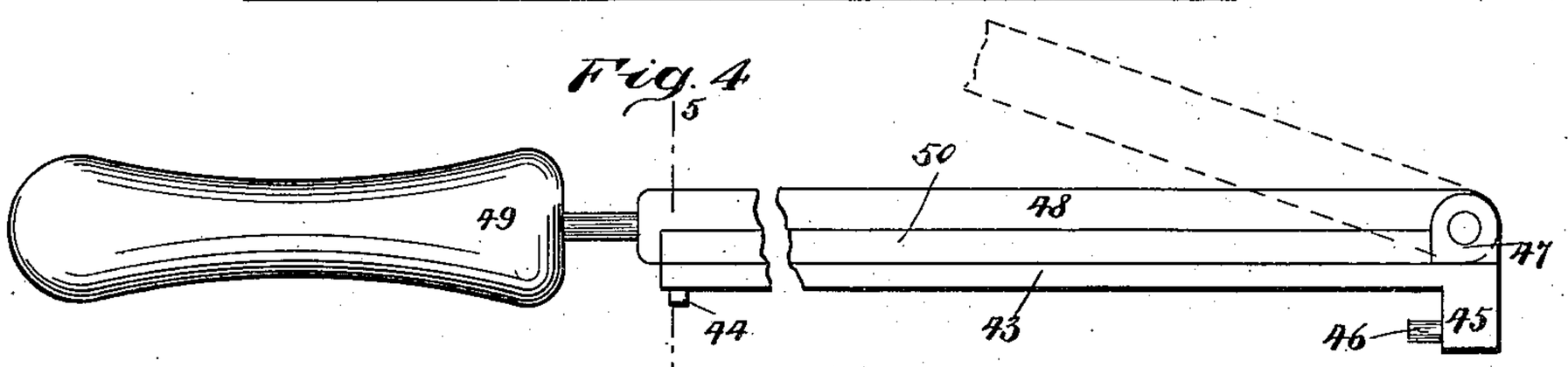


Fig. 5

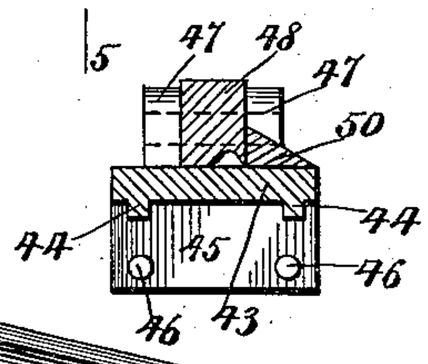


Fig. 7

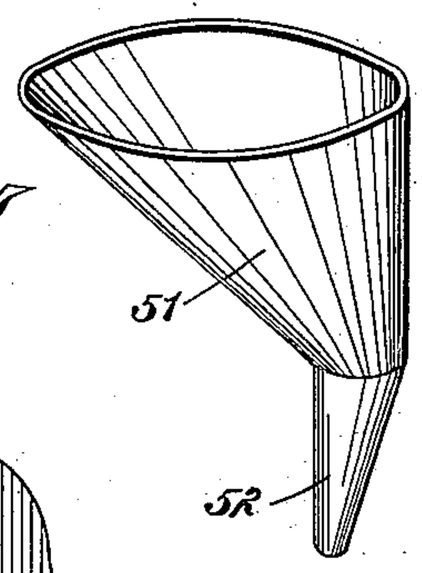
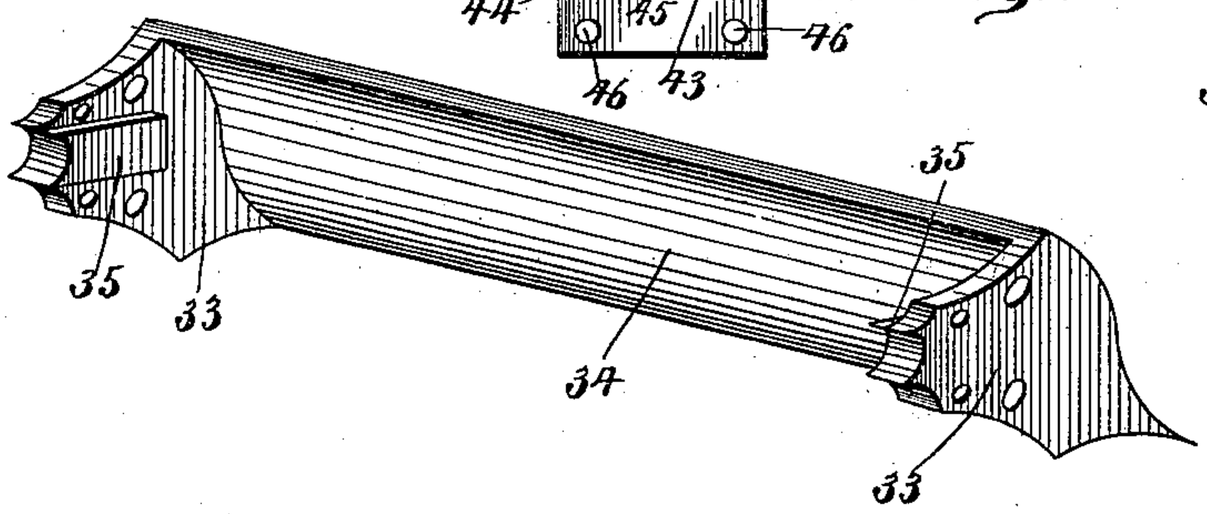


Fig. 6



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UNITED STATES PATENT OFFICE.

OSCAR J. TAEUBER, OF LA CROSSE, WISCONSIN.

COPYING-PRESS.

SPECIFICATION forming part of Letters Patent No. 616,745, dated December 27, 1898.

Application filed March 16, 1898. Serial No. 674,046. (No model.)

To all whom it may concern:

Be it known that I, OSCAR J. TAEUBER, of La Crosse, in the county of La Crosse and State of Wisconsin, have invented a new and Improved Copying-Press, of which the following is a full, clear, and exact description.

This invention is a copying-press of that class in which the copying-paper is in the form of a web wound upon a roll and carried in a casing, the paper being drawn from the roll and through a wet device by means of yielding rollers which press the paper against the original and effect the reproduction.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the invention. Fig. 2 is a plan view thereof with the top plate removed. Fig. 3 is a vertical longitudinal section. Fig. 4 is a fragmentary view of the cutting apparatus. Fig. 5 is a section on the line 5 5 of Fig. 4. Fig. 6 is a perspective view of the block employed to separate the wet copying-paper from the rolls, and Fig. 7 is a perspective view of a funnel useful in filling the wetting apparatus.

The copying-press is mounted on a heavy base 8, having a plate 9 secured thereto, on which stand the two skeleton-like standards 10, forming the frame of the base. These standards 10 are arranged parallel to each other, respectively at the sides of the base 8. The front end of the frame is open and the rear end is removably closed by a plate 11, hinged to an angular cross-brace 12, running between the standards 10 and bearing, when in closed position, against a stop-bar 13, which also runs between the standards 10 and forms a brace therefor. The plate 11 is provided with a hinged limb 14, which is adapted to engage one of the standards 10, as shown by dotted lines in Fig. 3, to hold the plate 11 in horizontal position, in which position the plate is arranged during the copying operation to form a table for the support of letters and other papers. When the plate 11 is moved downward into closed position, the limb 14 swings into a recess 15 formed in the plate, as also indicated by dotted lines in Fig. 3, in which position the limb is held flush with the inner face of the plate. The top plate 16 of the press is provided at each side edge with lugs 17, that fit into corresponding notches 18, formed in the upper edges of the standards 10. (See Fig. 2.) Each standard is provided with a swinging hook 19, which hooks are respectively adapted to engage eyes on the side edges of the plate 16, and thus hold the plate down on the standards 10. These hooks 19, with the studs 17 bearing in the recesses 18, serve rigidly to hold the top plate 16 and also to brace the frame structure formed by the standards 10. The top plate 16 is removable for the purpose of locating and displacing the various devices contained in the frame, as will be hereinafter described.

Mounted in suitable bearings in the standards 10 and running between the standards is a shaft 20, which carries in the form of a roll the web of paper 21. Beneath the roll of paper a transversely-extending water-tank 22 is arranged and rests on the plate 9. This tank carries a glass roller 23, which extends from end to end of the tank and beneath which the web of paper passes. The rear side of the tank 22 has an upwardly and rearwardly extending lip 24, forming a shield to catch splashed water. The front side of the tank 22 has an extension 25, which passes upwardly and forwardly to the front of the machine and is there rested on a bar 26, passing between and connected with the standards 10. This extension 25 serves to catch the water that may drip from the web of paper after it has been submerged in the tank 22 and to return the water to the tank. The paper drawn from the roll passes down beneath the roller 23 and through the tank, where it is impregnated with the water, and then is drawn up over the extension 25.

For drawing the paper 21 from the roll and for pressing it against the original to be copied I provide three rubber rolls 27, 28, and 29. The roll 27 has the ends of its shaft 30 mounted in bearings in the standards 10, such bearings being formed by slide-plates 31, removably held in position by means of screws, as shown in Fig. 1. The slide-plates are two in number, arranged one at each end of the shaft 30. The roller 28 is arranged slightly

above and in contact with the front side of the roller 27 in such a manner that the web of paper 21 may pass between the rollers 27 and 28, which rollers serve to draw the paper forward and to press therefrom all superfluous water, which water is taken up by the extension 25 and led back to the tank. The ends of the shaft 32 of the roller 28 are respectively mounted in the standards 10 in bearings formed by the plates 33, which are carried, respectively, at the ends of the block 34 and which serve the double purpose of holding the block in place transversely at the front of the roll 28 and also of mounting the ends of the shaft 32. This block 34 and its plates 33 are shown in detail in Fig. 6, wherein it will be seen that each plate 33 is provided at its inner face with a rib 35, which ribs are designed, respectively, to slide in grooves formed in the standards 10, and the plates 33 are held in place by screws, as shown in Fig. 1. The block 35 has a sharp upper edge lying slightly below the upper side of the roll 28 and in close proximity thereto, so that the web of paper in turning with the roll 28 will be separated from the roll and prevented from clinging thereto. The block 34 may also be used as a straight edge on which to tear off portions of the web of paper.

The roll 29 is mounted in supplementary standards 36, rising, respectively, from the standards 10. The ends of the shaft 37 of the roll 29 are held in bearings, each formed by a block 38, (see Fig. 1,) which blocks slide in the upper ends of the standards 36 and are held adjustably by screws 39, in turn carried in plates 40, made fast by screws to the upper ends of the standards 36. By these means the roll 29 may be mounted to turn with greater or less friction, as may be desired. To the right-hand end of the shaft 32 is fixed a crank-arm 41, carrying a handle 42, by which the roller 28 may be turned. This roller contacting with the rollers 27 and 29 causes all of the rollers to turn in unison. The paper is drawn from its roll by means of the rollers 27 and 28, and the copying is effected by passing the original from which the reproduction is to be made face downward between the rolls 28 and 29 and above the paper 21, so that the compressive action of the rollers 28 and 29 on the two thicknesses of paper will effect the reproduction. The original may be passed through the press repeatedly and with great rapidity, thus producing any number of copies.

Should a great number of copies be taken from a single original, the reproductions will be produced on a continuous web of the paper 21, which should afterward be severed into sections, according to the copies thereon. This is effected by the cutting device which forms a part of my invention and which is shown in detail in Figs. 4 and 5. Mounted at the rear end of the top plate 16 and lying on the same is the bed 43 of the cutting device. The right-hand end of the bed is provided with downwardly-projecting studs 44, which are seated in orifices formed in the top 16. The left-hand end of the bed 43 is provided with a downwardly-projecting extension 45, which lies against the outer face of the left-hand standard 10 and which is provided with two studs 46, projecting into orifices formed in the standard. Rising from the left-hand end of the bed 43 are two lugs 47, which carry the pivot of a knife-bar 48, which is mounted to swing toward and from the bed 43 and has a handle 49 of any desired construction at its free end. The knife-bar 48 coacts with a stationary or bed knife 50, which is carried rigidly on the bed 43. By raising and lowering the knife-bar 48, as indicated by dotted lines in Fig. 4, the cutting device may be made to act, and the web of paper 21 may be readily severed into sections of any desired number and size.

In order to conveniently fill the tank 22, I provide a funnel, as shown in Fig. 7, which has a body 51 and a spout or nozzle 52, the body being bent diagonally, so as to bring the spout at one side and permit it to be passed through an orifice in one of the standards 10, so that the spout will lead properly to the tank and avoid spilling the liquid.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A copying-press having a frame, a roll having the ends of its shaft mounted in the frame, a block extending along one face of said roll and serving to separate a web of paper therefrom, and plates carried at the ends of the block and engaging the ends of the shaft of the roll to hold the roll in place.

2. A copying-press having a frame, a shaft mounted in the frame and adapted to carry a roll of paper, a trough mounted on the bottom of the frame, a roller in the trough and serving to submerge the web of paper from the roll in the trough, two feed-rollers between which the web passes and by which the web is drawn from the roll, an additional roller bearing down upon one of the feed-rollers to impress the copy on the web, a block having a tapered edge engaging the outer feed-roller to separate the moistened web from said feed-roller, and a plate carried at each end of the block, and engaging the ends of the shaft of said outer feed-roll to hold the said shaft in place.

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Witnesses:
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