(No Model.) 2 Sheets—Sheet 1

R. A. BROWN.

COPY PRESS.

No. 440,823. Patented Nov. 18, 1890.

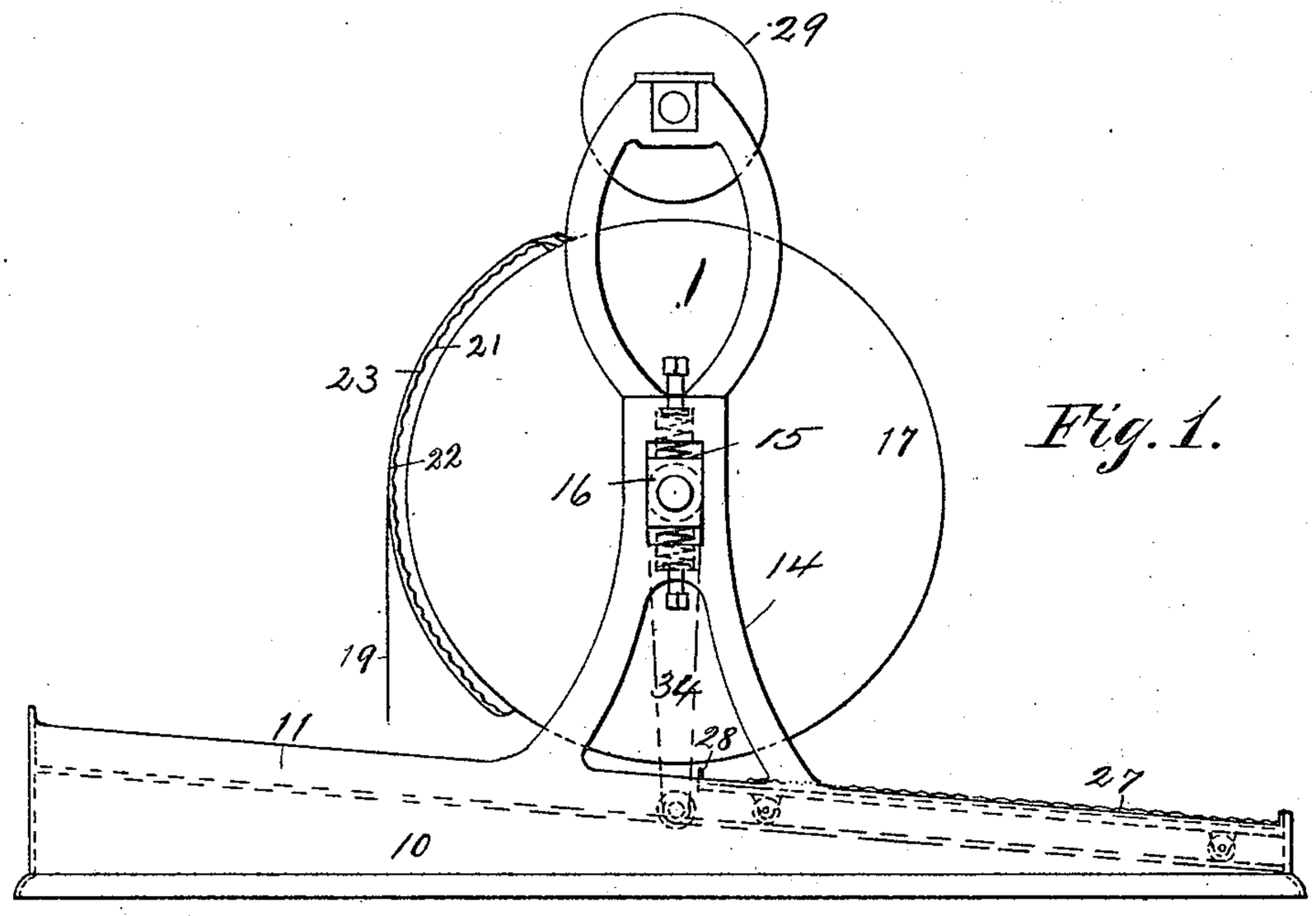

Fig. 1.

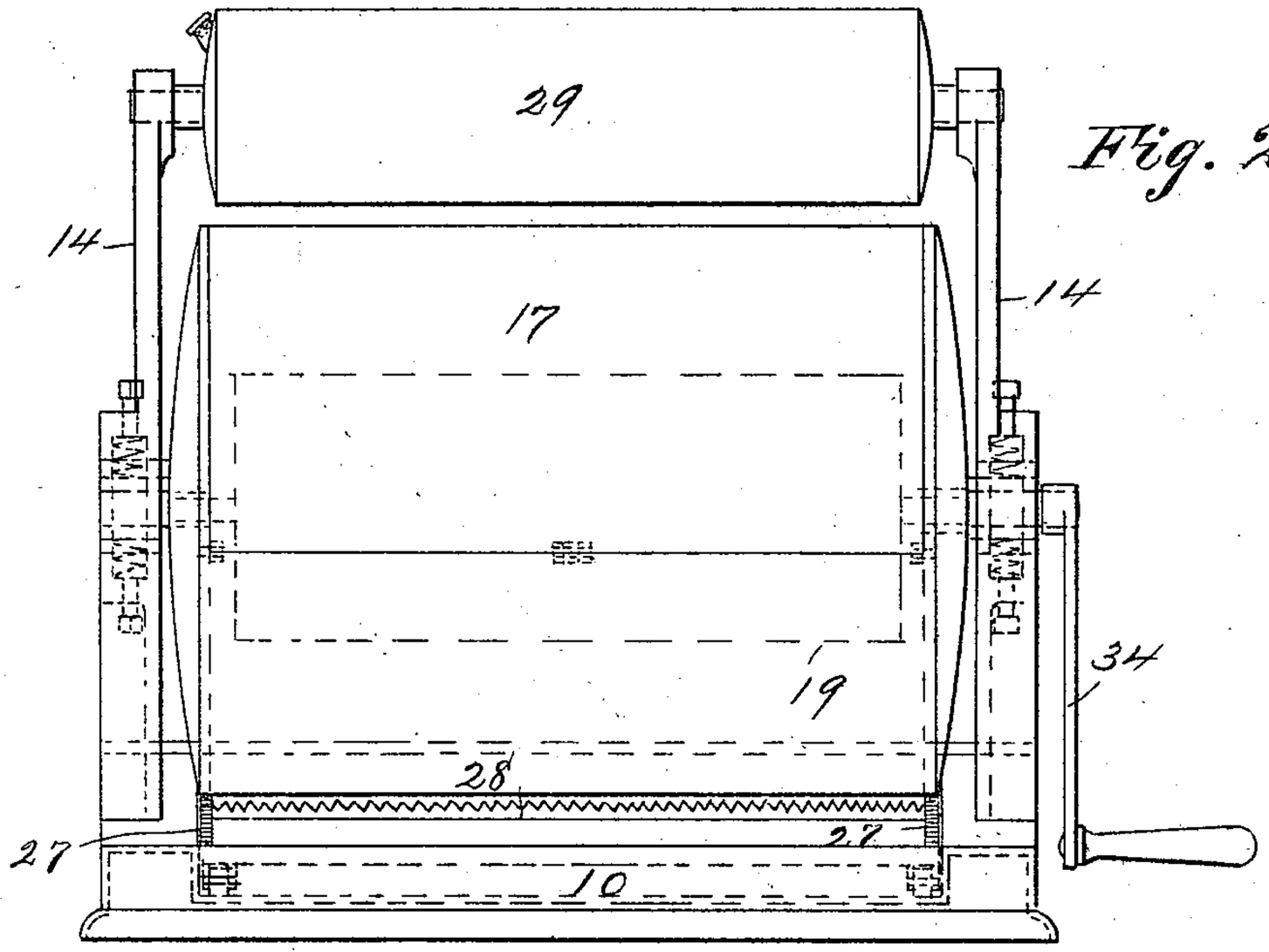

Fig. 2.

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C. Sedgwick

INVENTOR:

R. A. Brown

BY Munn & Co.

ATTORNEYS

(No Model.) 2 Sheets—Sheet 2.

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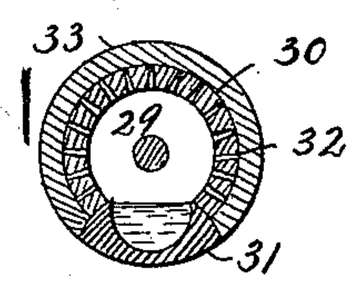


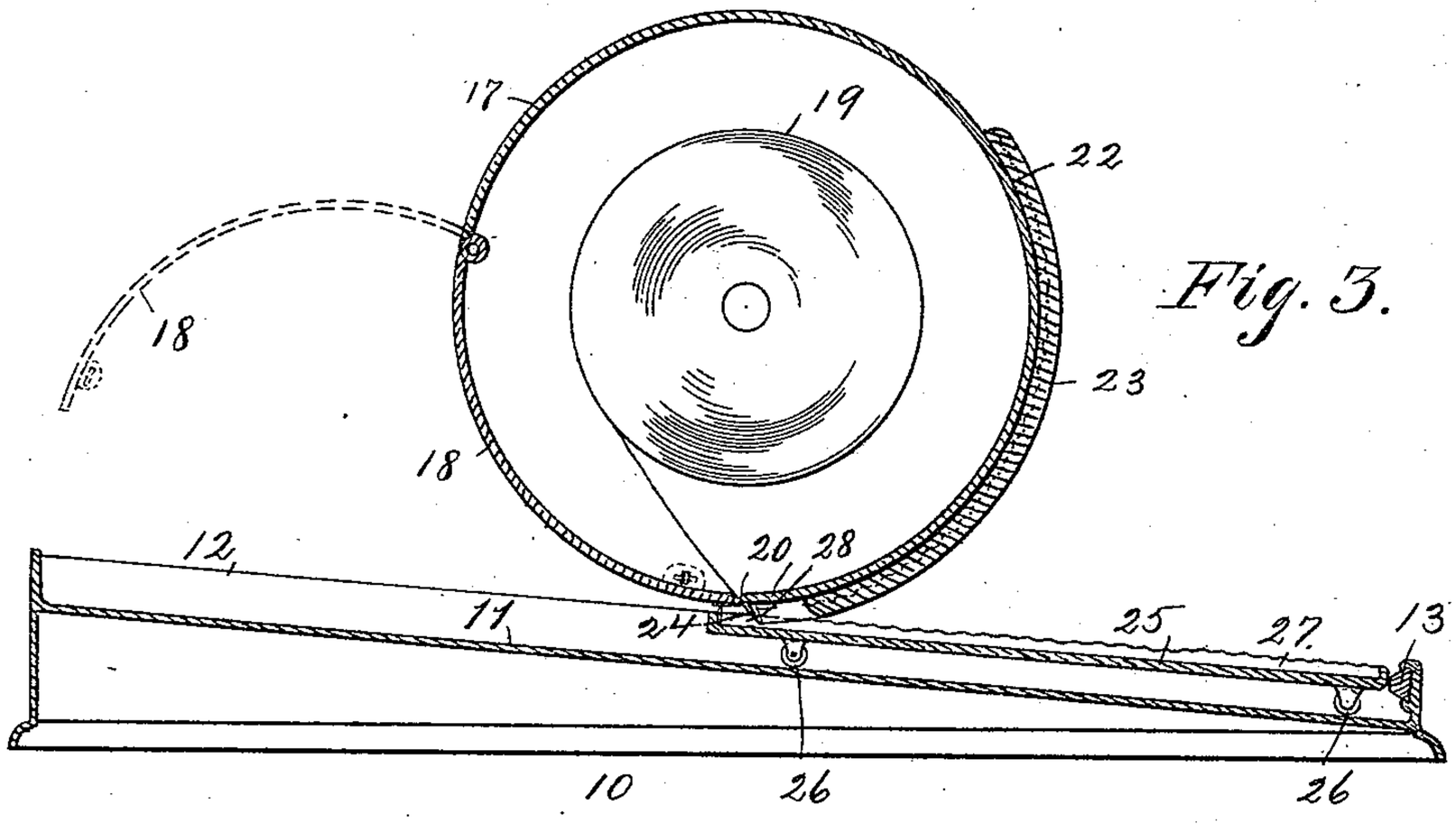


Fig. 3.

Fig. 5.

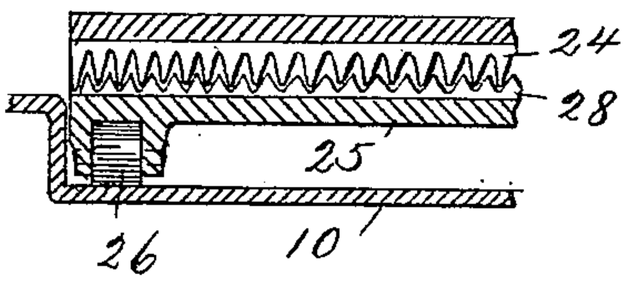


Fig. 6.

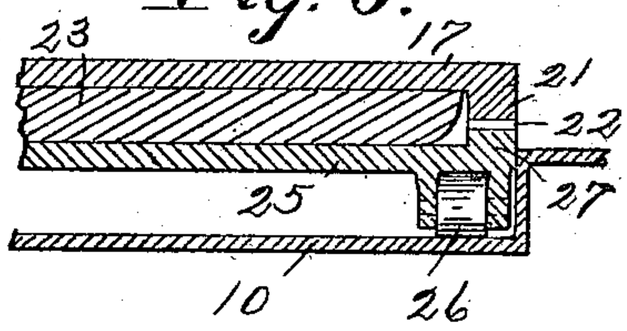
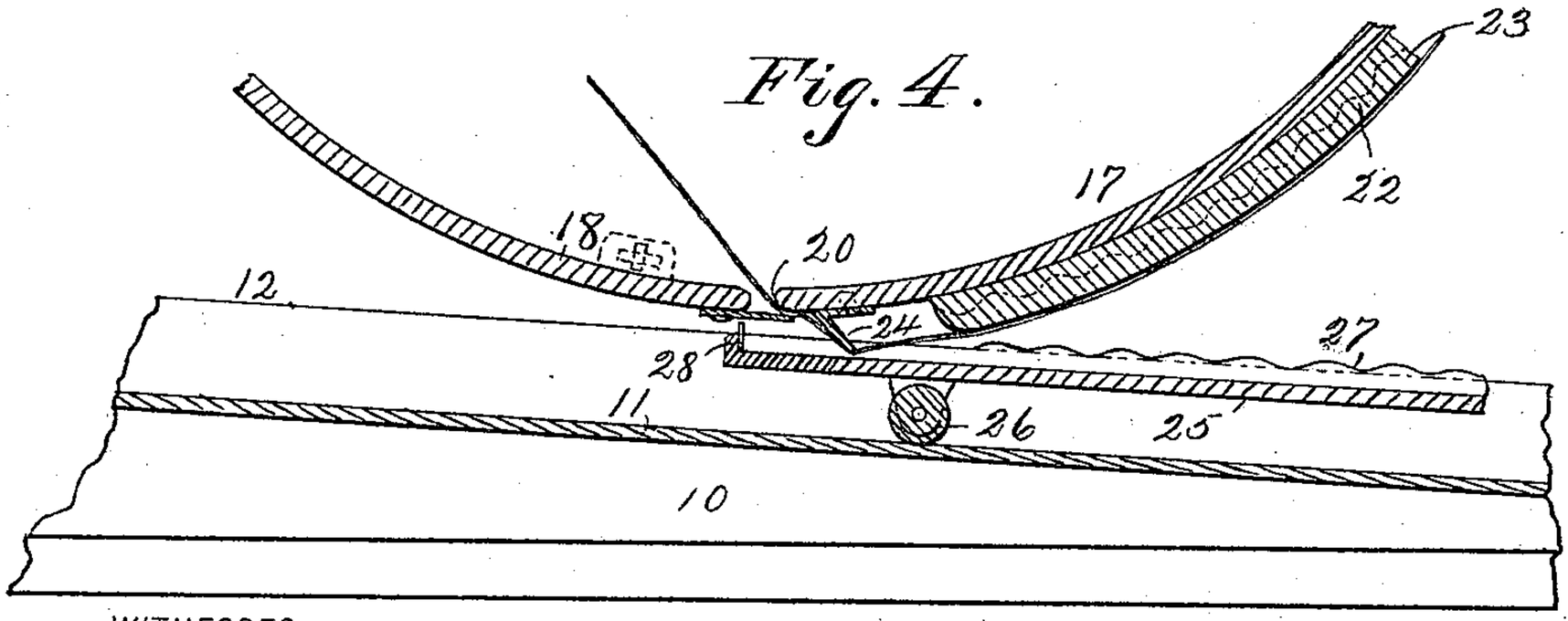


Fig. 4.



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UNITED STATES PATENT OFFICE.

RICHARD A. BROWN, OF NEW YORK, N. Y.

COPY-PRESS.

SPECIFICATION forming part of Letters Patent No. 440,823, dated November 18, 1890.

Application filed December 14, 1889. Serial No. 333,753. (No model.)

To all whom it may concern:

Be it known that I, RICHARD A. BROWN, of New York city, in the county and State of New York, have invented a new and Improved Copy-Press, of which the following is a full, clear, and exact description.

My invention relates to an improved copy-press, and has for its object to provide a press whereby the impression of a letter or other written sheet may be expeditiously, conveniently, and cleanly taken by one revolution of a crank-arm or similar device.

A further object of the invention is to provide a press so constructed that the cylinder of the press will carry a stock of copying-paper and the said paper be automatically dampened as the cylinder is revolved and cut to a proper length as the impression is taken.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

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

Figure 1 is a side elevation of the press. Fig. 2 is a front view of the same. Fig. 3 is a central vertical section through the press. Fig. 4 is an enlarged central section through a portion of the base, the platen, and the cylinder. Fig. 5 is a transverse section through a portion of the platen, the base, and the cylinder, illustrating the action of the cutters; and Fig. 6 is a similar transverse section illustrating the toothed contact of the cylinder with the platen and the position of the cylinder-pad.

In carrying out the invention the base 10 is provided with an inclined upper surface or bed 11 and a flange 12, extending upward from the edges of the bed, the flange at the lower end of the bed being provided upon its inner face preferably with an elastic buffer 13. From the sides of the base standards 14 are upwardly projected and at or near the center of said standards vertical openings 15 are produced, in which openings journal-boxes 16 are held to slide, which journal-boxes are spring-seated, as illustrated in Fig. 1. In the said boxes 16 the trunnions of a cylinder 17 are journaled, the said cylinder being constructed hollow, the trunnions forming a portion of its heads, and the said cylinder is also further provided with a hinged portion at one side, forming a door 18, as illustrated in Fig. 3, whereby access may be gained to the interior. This cylinder is adapted for the reception of a reel of paper 19 of a character suitable for taking impressions, and in practice the roll or reel of paper is mounted upon any ordinary spindle, which spindle is forced into the cylinder in contact with the heads, either within a groove produced in said heads, or is held fixedly in position by the elasticity of the heads. The position of the roll of paper in the cylinder is illustrated in dotted lines in Fig. 2. At one point in the cylinder a longitudinal peripheral opening 20 is made, through which one end of the paper may be carried, which opening is preferably located between one end of the door and the contiguous edge of the cylinder, and the opening is partially spanned by a spring-plate attached to the door, whereby a proper tension is exerted upon the paper when drawn from the cylinder.

The peripheral surface of each head is preferably provided with a flange or rib 21, and the said flange or rib of each head has produced therein a series of teeth 22, as best illustrated in Fig. 6. Between the ribs 21 a pad 23, of any suitable or approved material, is secured to the periphery of the cylinder, the said pad being located between the opening 20 and one edge of the opening closed by the door 18, as best shown in Fig. 3. The toothed surfaces 22 of the cylinder extend around the same the length of the pad 23 only, the balance of the periphery of the heads being perfectly plain. The pad does not extend as far as the opening 20, and at said opening a toothed plate 24 is longitudinally secured upon the cylinder.

Upon the inclined bed 11 of the base the platen 25 is held to travel, the said platen being mounted upon suitable rollers 26 and constructed of a length equivalent to about one-half of the length of the bed. The side edges of the platen are provided with an upwardly-extending toothed flange 27, the teeth of which flange are adapted to mesh with the teeth 22

of the cylinder ribs or flanges 21. At the upper or rear end of the platen a toothed plate 28 is transversely secured, the teeth of the plate 28 being adapted as the platen is moved upward upon the bed 11 to pass between the teeth of the cylinder toothed plate 24, as best illustrated in Fig. 5.

In the upper end of the standards 14 a moistening-roller 29 is journaled, the said roller consisting of a tubular cylindrical body 30, cut away longitudinally for the admission of a weighted metal well 31, as best illustrated in Fig. 3, and the peripheral surface of the cylindrical body 30 is provided with a series of apertures or perforations 32. The perforated cylindrical body is incased in a jacket 33 of an absorbent material such as felt. The outer surface of the well 31 is convexed and completes the circle formed by the exterior surface of the jacket. One trunnion of the cylinder is provided with an attached crank-arm 34 or equivalent device.

In operation the paper is drawn out through the opening 20 of the cylinder a sufficient distance to cover the pad 23, when the cylinder is revolved through the medium of its crank 34. The normal position of the pad 23 is at the rear of the cylinder, as shown in Fig. 1. Upon turning the crank 34 the paper is passed beneath the moistening-roller in contact with the well portion thereof, and as the cylinder revolves the moistening-roller is also revolved and the water contained in the well finds an exit through the apertures of the roller into the absorbent jacket, which conveys the moisture to the paper. After the paper has passed out of contact with the moistening-roller the said roller returns by gravity to its normal position, which is with the well downward, the water remaining within the well, as shown in Fig. 3. As the cylinder continues to revolve, the knife 24 of the cylinder contacts with the knife 28 of the platen and causes the platen to be carried a slight distance upon the bed 11. As soon as an upward tension is exerted upon the paper, the toothed surfaces of the cylinder mesh with the toothed surfaces of the platen and carry the said platen still farther upward, and the knives 24 and 28 passing one another sever the paper, and the pad 23, contacting with the platen upon which the letter to be copied has been laid, causes an impression of said letter to be taken upon the moistened paper carried by the pad. When the pad has passed the platen, the platen returns automatically to its normal position, owing to the inclined face of the bed. This operation is all effected by one revolution of the crank 34.

I desire it to be understood that, although details of construction have been shown and described, other equivalent constructions may be employed without departing from the spirit of the invention—as, for instance, any other approved form of moistening-roller may be substituted for that illustrated, or the cylinder and the platen may be made to engage in any other manner than that described.

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

1. In a copy-press, the combination, with a bed and a platen held to slide thereon, of a hollow longitudinally-slotted paper-carrying cylinder provided with an exterior pad adapted to contact with the platen, substantially as shown and described.

2. In a copy-press, the combination, with a bed provided with an inclined face and a platen held to slide upon said bed, provided with a cutter at one end, of a hollow longitudinally-slotted paper-carrying cylinder held to revolve above the bed, provided with a pad covering a portion of its periphery and adapted to contact with the platen, and a cutter secured to the cylinder near one end of said pad, adapted to act in connection with the cutter upon the platen, substantially as and for the purpose specified.

3. In a copy-press, the combination, with a bed having an inclined upper face and a platen held to slide upon said bed, provided with a cutter at one end and toothed side surfaces, of a hollow longitudinally-slotted paper-carrying cylinder held to revolve above the bed, provided with a pad secured upon its periphery, toothed surfaces at its heads corresponding in position with the position of the pad, and a cutter secured to the cylinder near one end of said pad and adapted to act in conjunction with the cutter of the platen, substantially as shown and described.

4. In a copy-press, the combination, with a bed having an inclined upper face and a platen held to slide upon said bed, provided with a cutter at one end, of a paper-carrying cylinder mounted to revolve above the bed, provided with a pad upon its periphery, and a cutter near one end of said pad, adapted to act in conjunction with the cutter of the platen, and a moistening-roller located above the cylinder and capable of contact with the paper upon the cylinder-pad, substantially as specified.

5. In a copy-press, the combination, with a bed having an inclined upper face and a platen held to slide upon said bed, provided with a cutter at one end, of a paper-carrying cylinder mounted to revolve above the bed, provided with a pad upon its periphery and a cutter near one end of said pad, adapted to act in conjunction with the cutter of the platen, a moistening-roller mounted above the cylinder, consisting of an apertured cylindrical body having a weighted well attached thereto and a covering of absorbent material, and means, substantially as shown and described, for moving the platen upward upon the inclined bed when in contact with the cylinder-pad, substantially as and for the purpose specified.

6. In a copy-press, a hollow longitudinally-

slotted cylinder or drum provided with an opening through which a roll of paper may be inserted and a pad on the face of the cylinder, substantially as set forth.

7. In a copy-press, a hollow longitudinally-slotted cylinder or drum having an opening between its ends for the insertion of a roll of copying-paper, a hinged door for said opening, the free edge of which door forms one wall of said longitudinal slot, and a tension-plate along said free edge and extending across said slot, substantially as set forth.

8. The longitudinally-slotted hollow cylinder or drum having an opening between its ends for the insertion of a roll of paper, a hinged door therefor, the free edge of which forms one wall of said longitudinal slot, a tension-plate along the free edge of said door and crossing said slot, and a cutter on the cylinder along the slot opposite the said tension-plate, in combination with a platen having a vertically-projecting cutter along its inner edge in the path of the said cylinder-cutter, the partial rotation of the cylinder causing its cutter to engage the platen-cutter and impart movement to the platen, the cylinder-heads in the further rotation thereof engaging the platen and operating it, substantially as set forth.

9. The combination, with a moistening-roller, of a hollow paper-carrying cylinder having an exit for the paper and a pad on which the paper lies when presented to the moistening-roller, and a platen operating in connection with said cylinder, substantially as set forth.

10. The combination, with a hollow paper-carrying cylinder having a horizontal slot for the passage of the paper and a pad covering a portion of its face, and end ribs or flanges beyond the ends of the pad, and a moistener for the paper carried by said cylinder, of a platen under the cylinder and having flanges or ribs to be engaged by those on the cylinder ends, substantially as set forth.

11. The combination, with a hollow moistening-roller having apertures and a longitudinally-extending counterbalancing-well having a convex exterior projecting beyond the apertured portion of the roller and a fabric covering on the apertured portion of the roller, of a hollow longitudinally-slotted paper-carrying cylinder having an external pad on its face, and a platen operated by and in connection with said cylinder, substantially as set forth.

RICHARD A. BROWN.

Witnesses:
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EDGAR TATE.