

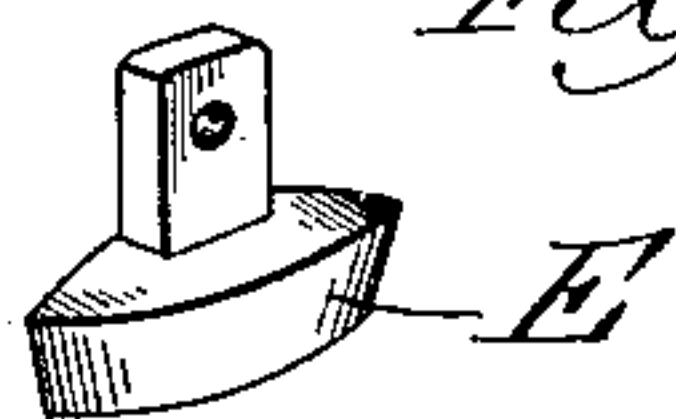
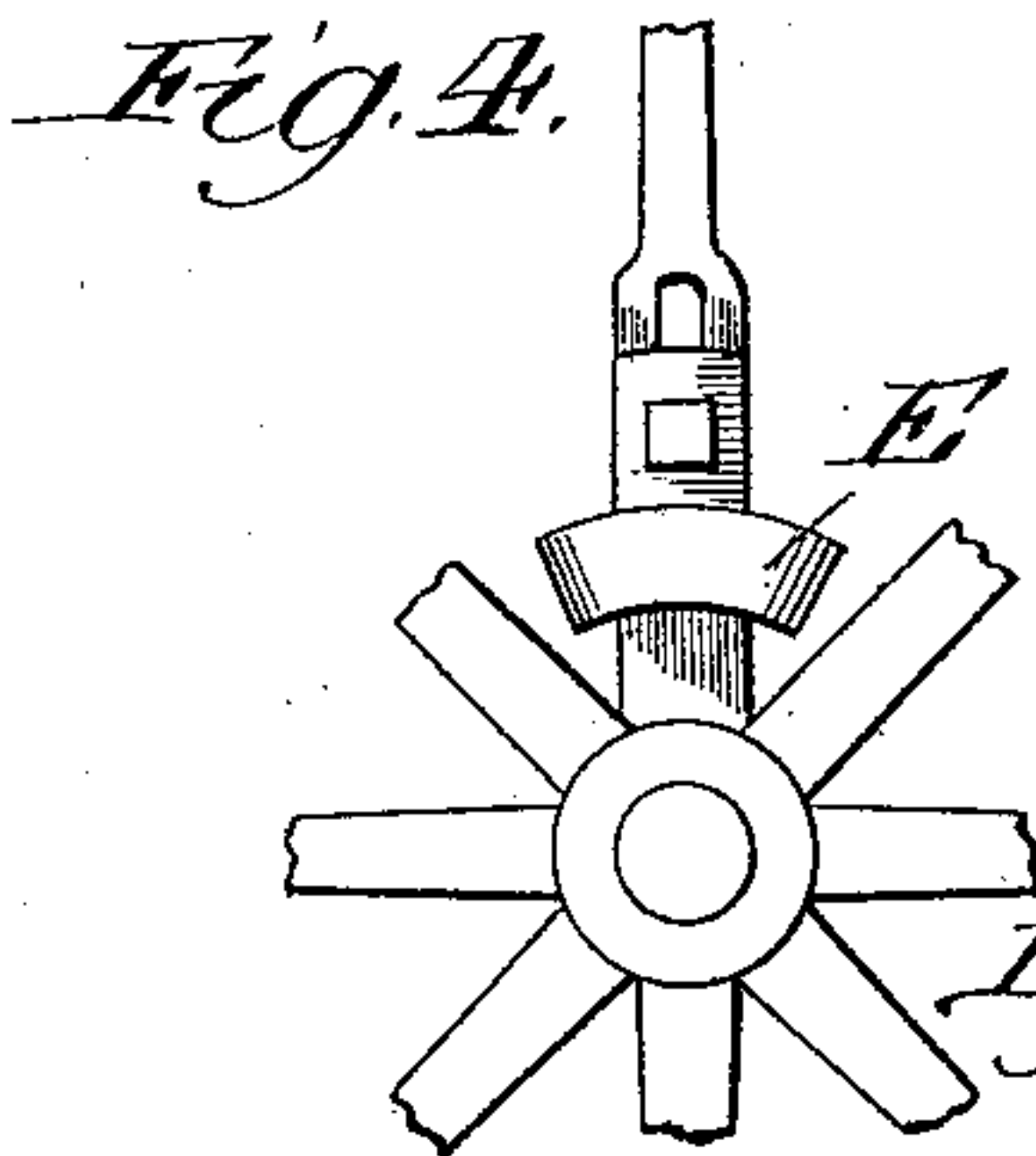
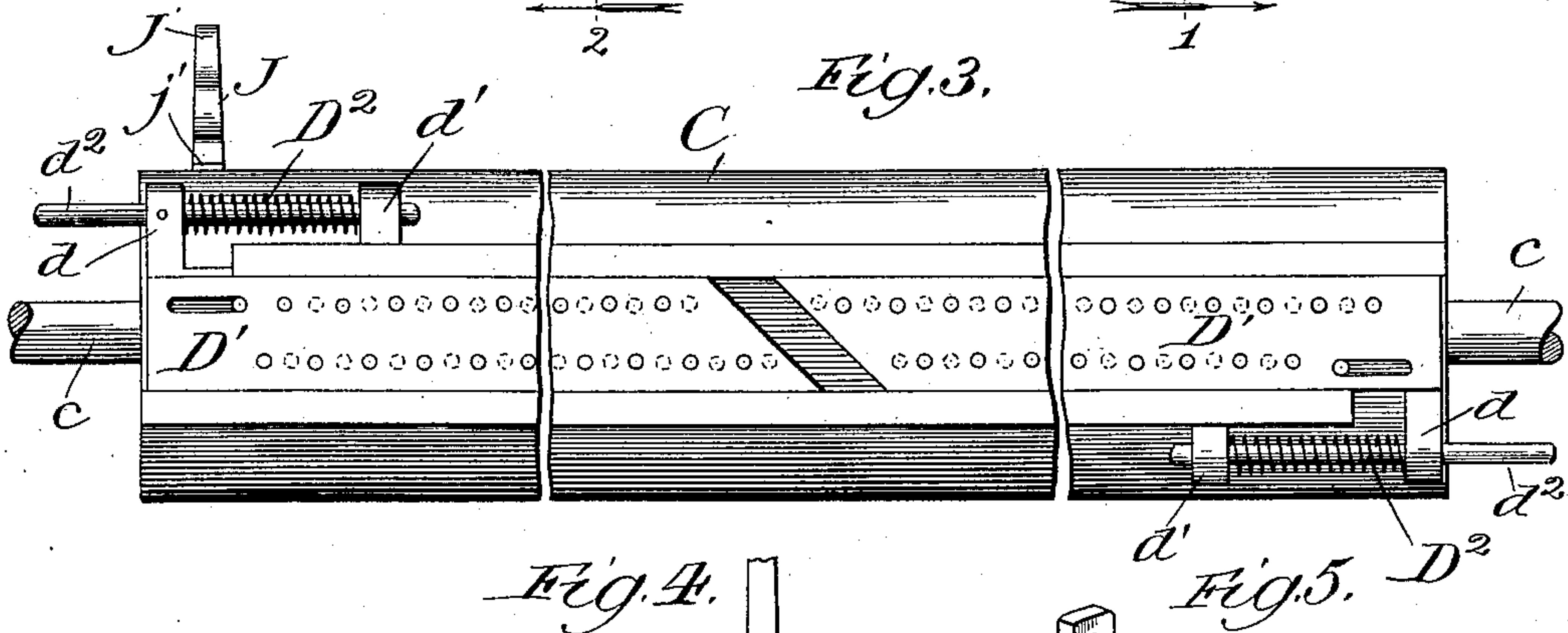
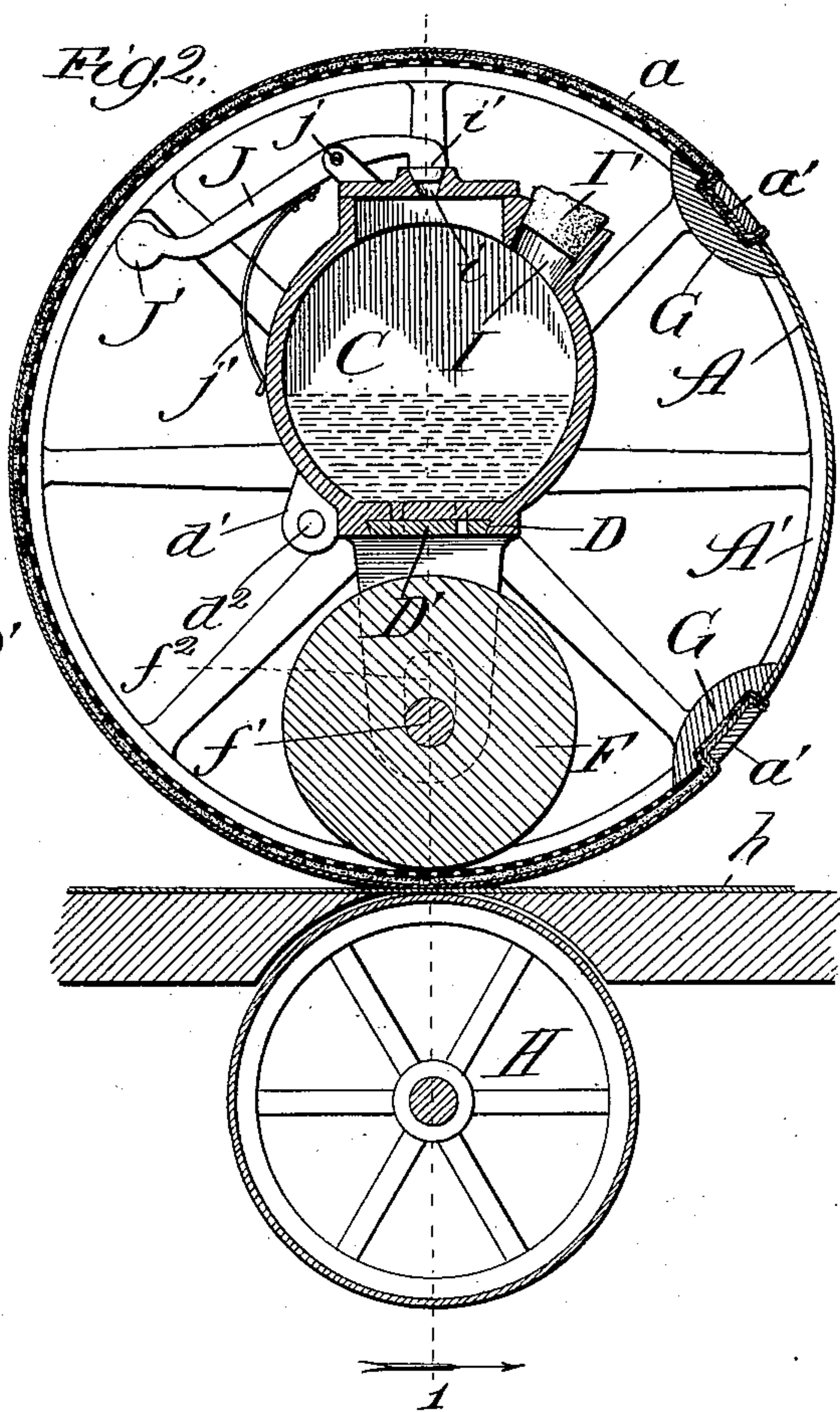
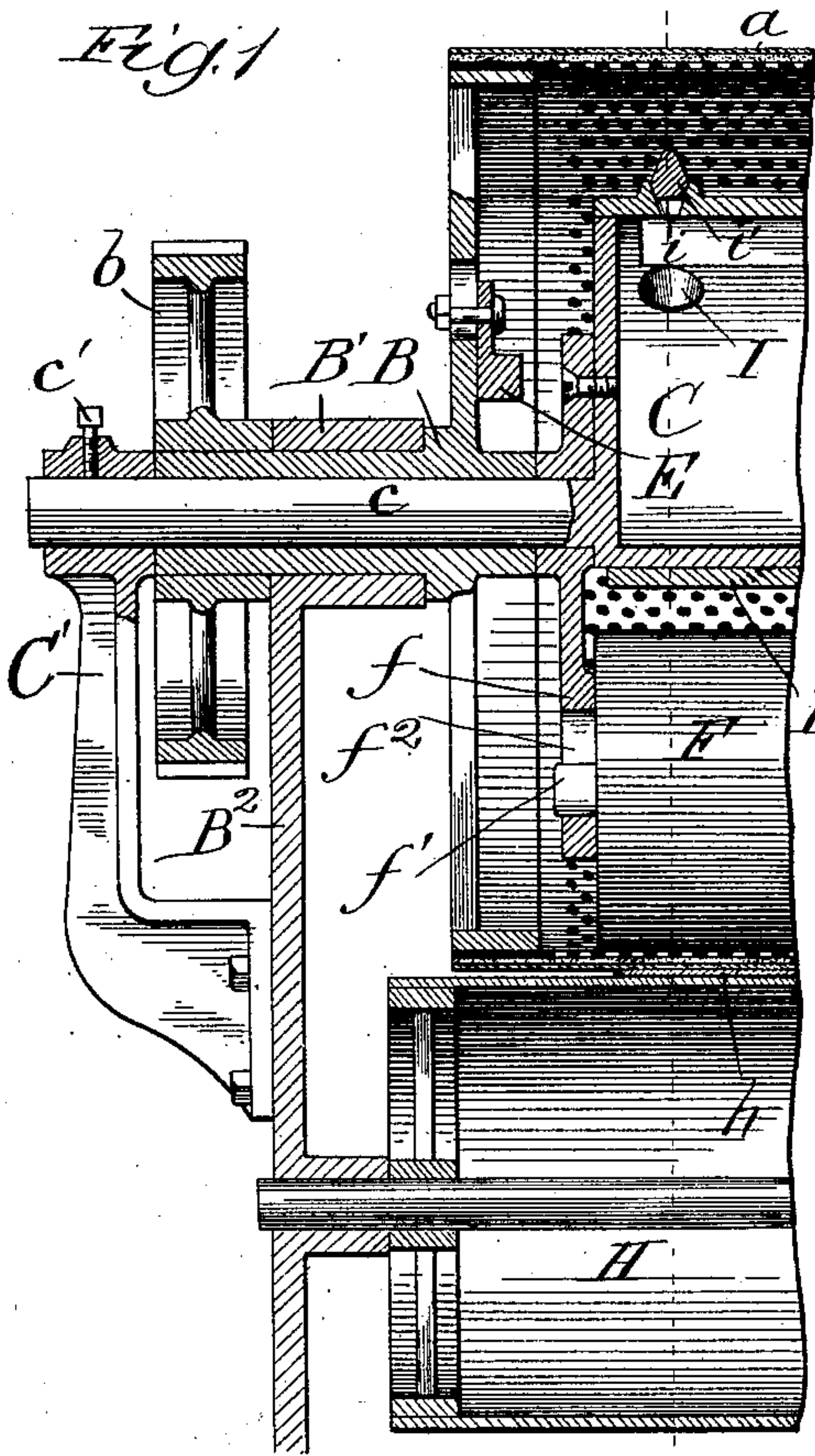
No. 606,878.

Patented July 5, 1898.

L. M. ROUSE.  
PRINTING PRESS.

(Application filed June 18, 1897.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

LOVELL M. ROUSE, OF CHICAGO, ILLINOIS.

## PRINTING-PRESS.

SPECIFICATION forming part of Letters Patent No. 606,878, dated July 5, 1898.

Application filed June 18, 1897. Serial No. 641,277. (No model.)

*To all whom it may concern:*

Be it known that I, LOVELL M. ROUSE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Printing-Presses, of which the following is a specification.

The object of my invention is to provide an ink-distributing roller for printing-presses with a fountain or self-feeding device by which the ink may be supplied to the distributing-roller as required; and my invention consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a longitudinal sectional elevation of a portion of a printing-press, showing my invention, taken on line 1 of Fig. 2; Fig. 2, a transverse sectional elevation taken on line 2 of Fig. 1; Fig. 3, a bottom or plan view of the fountain or ink-containing receptacle, and Figs. 4 and 5 details which will be hereinafter explained.

In making my improved inking-roller for printing-presses I make a hollow perforated cylinder A by mounting a sheet of steel or other metal on spiders A' of the desired circumferential size. The sheet of metal is intended to be perforated from end to end and over about three-fourths of its circumferential area. The perforated surface of the cylinder is intended to be covered by a cloth of cotton sheeting or suitable material to receive and absorb the ink supplied to it, as hereinafter explained. This covering is secured at its edges by two longitudinal bars a', resting in longitudinal grooves or channels adapted to receive them, as shown in Fig. 2, and in which they may be retained in any desired way. While but one end of the cylinder is shown in Fig. 1, yet it will be understood that both ends are arranged alike. The spiders are provided with hubs B, arranged in journals B', formed in the frame B<sup>2</sup>. To impart rotation to the cylinder, a gear-wheel or pulley b is mounted on the hub B, which gear-wheel or pulley may be driven or rotated in any desired way.

Arranged within the perforated cylinder is a fountain or ink-containing receptacle C. This receptacle is preferably cylindrical in form and extends substantially the length of the perforated cylinder. It is provided with

spindles c at its ends, which pass longitudinally through the hubs B and receive support by brackets C', mounted on or attached to the frame B<sup>2</sup>, as shown in Fig. 1. The fountain or ink-receptacle is intended to be held in a stationary position, and the spindles c are held by set-screws c' in the brackets C', so as to prevent rotation. These set-screws may be at both ends or only at one, as may be preferred. The bottom of the fountain or ink-receptacle is made flat, as shown in Fig. 2, and is provided on the outside with a dovetailed channel or groove D, extending from one end of the receptacle to the other. Perforations are arranged in the flat bottom of the receptacle, as shown in Figs. 2 and 3, and dovetailed slides D' are arranged in the dovetailed groove D, as shown in Figs. 2 and 3. These dovetailed slides are provided with perforations adapted to register with the perforations in the flat bottom of the receptacle when they are moved longitudinally into the proper position. The slides are provided with lugs d, extending out at the sides, and the bottom of the receptacle is provided with lugs d' to enable pins d<sup>2</sup>, passing through the lugs d and fastened to them, to extend through holes in the lugs d'. Coiled springs D<sup>2</sup> are arranged between the lugs, so as to hold them their farthest distance apart and to hold the slides in their out positions. When the slides are held in their out positions, their perforations do not register with the perforations in the bottom of the ink-receptacle, so that such latter perforations are closed and the ink prevented from passing through. To move the slides in, so as to cause their perforations to register with the perforations in the bottom of the ink-receptacle, I mount a cam E on one of the spokes of the spider at each end. These lugs may be of the form shown in Fig. 5 or of any other desired form to present an inclined surface to impinge against the ends of the pins d<sup>2</sup> as the spider is rotated. This causes the pins to be pushed in against the tension of the springs and to move the slides in, so that their perforations will register with the perforations in the bottom of the ink-receptacle to permit the passage of ink there-through.

Below the fountain or ink-receptacle is arranged a distributing-roller F, supported in



depending flanges  $f$  from the hubs B. The distributing-roller is provided with spindles  $f'$ , which are arranged in vertical slotted holes  $f^2$  of the flanges F, so as to permit of a vertical movement of the distributing-cylinder toward the bottom of the ink-receptacle. To effect this vertical movement, I arrange on the inside of the perforated cylinder, and preferably immediately opposite to the bar  $a'$ , longitudinal ridges G. These ridges also are required to enable me to fasten or support the perforated cylinder in its longitudinal dimensions. As the cylinder rotates these ridges from time to time pass under the distributing-roller F. This causes the distributing-roller to move toward the bottom of the ink-receptacle. While in this position, the ink that is passed through the bottom of the receptacle is placed or deposited on the distributing-roller and from it pressed out through the perforations into the cloth cover, which absorbs or receives it. If desired, the cams E may be so arranged on the spiders as that they will move the slides in and cause their perforations to register with the perforations in the bottom of the ink-receptacle just before the distributing-roller is moved against it, although this is a matter of no great importance, inasmuch as the distributing-roller is constantly under the bottom of the ink-receptacle, so that it must receive whatever ink passes through the perforations and drips upon it. Immediately beneath the perforated cylinder may be arranged an impression-cylinder H, properly mounted and supported so as to rotate, and between the impression-cylinder and the cloth cover on the perforated cylinder may be arranged a sheet of paper  $h$ , on which the impressions—as words, sentences, figures, cuts, or designs—are transferred or printed from the impression-cylinder.

The ink-receptacle is provided with a hole I, through which the ink may be introduced. This hole may be also made of a sufficient size to permit the interior of the receptacle to be washed out or cleaned from time to time. It may be kept closed, except when it is necessary to open it, by a stopper  $I'$ , as shown in Fig. 2. To provide the ink-receptacle with a valve to admit air, so that ink will flow, I make a conical hole  $i$  in the top, and to keep this hole closed, except at such times as may be necessary to admit air onto the surface of the ink to cause it to flow, I arrange a valve-stopper  $i'$ , mounted on an arm J, fulcrumed at  $j$ . The free end of this arm terminates in a ball or roller  $J'$ , which occupies a position in proximity to the inner surface of the per-

forated cylinder. A spring  $j'$  bears against the free end of the arm, so as to hold the valve-stopper  $i'$  in the conical valve-hole  $i$  and keep the same closed until force applied to the free end of the arm causes the valve to be lifted out of its seat. As the cylinder rotates the ridges G pass over the free end of the arm J and cause it to be depressed, and thus from time to time lift the valve from its seat. The instant, however, that the ridges have passed in the revolution of the cylinder the valve again closes the hole. When the parts are at rest also, the valve-hole is kept closed. This excludes air at such times and so prevents the ink from flowing out through the bottom perforations even though the holes may not be closed by the slides.

While I have described my improvements and their mode of operation with considerable minuteness of detail, I desire it understood that I do not intend to limit myself to details further than as may be called for in the claims.

What I regard as new, and desire to secure by Letters Patent, is—

1. In a printing-press, the combination of a perforated inking-cylinder, a distributing-roller arranged therein, a fountain or ink-receptacle within the perforated inking-cylinder for supplying ink to the distributing-roller, and a sliding perforated plate for intermittently and automatically permitting and preventing the passage of ink from the ink-receptacle to the distributing-roller, substantially as described.

2. In a printing-press, the combination of a perforated inking-cylinder, a distributing-roller arranged therein, a fountain or ink-receptacle within the perforated inking-cylinder for supplying ink to the distributing-roller provided with perforations in its bottom, and means for intermittently and automatically opening and closing the perforations in the bottom of the ink-receptacle, substantially as described.

3. In a printing-press, the combination of an inking-cylinder, a distributing-roller arranged therein, a fountain or ink-receptacle within the perforated inking-cylinder for supplying ink to the distributing-roller, and means for intermittently and automatically permitting and preventing the ingress of air to the interior of the ink-receptacle, substantially as described.

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