

No. 751,337.

PATENTED FEB. 2, 1904.

C. L. POST.
MULTICOLOR PRINTING PRESS.

APPLICATION FILED OCT. 3, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

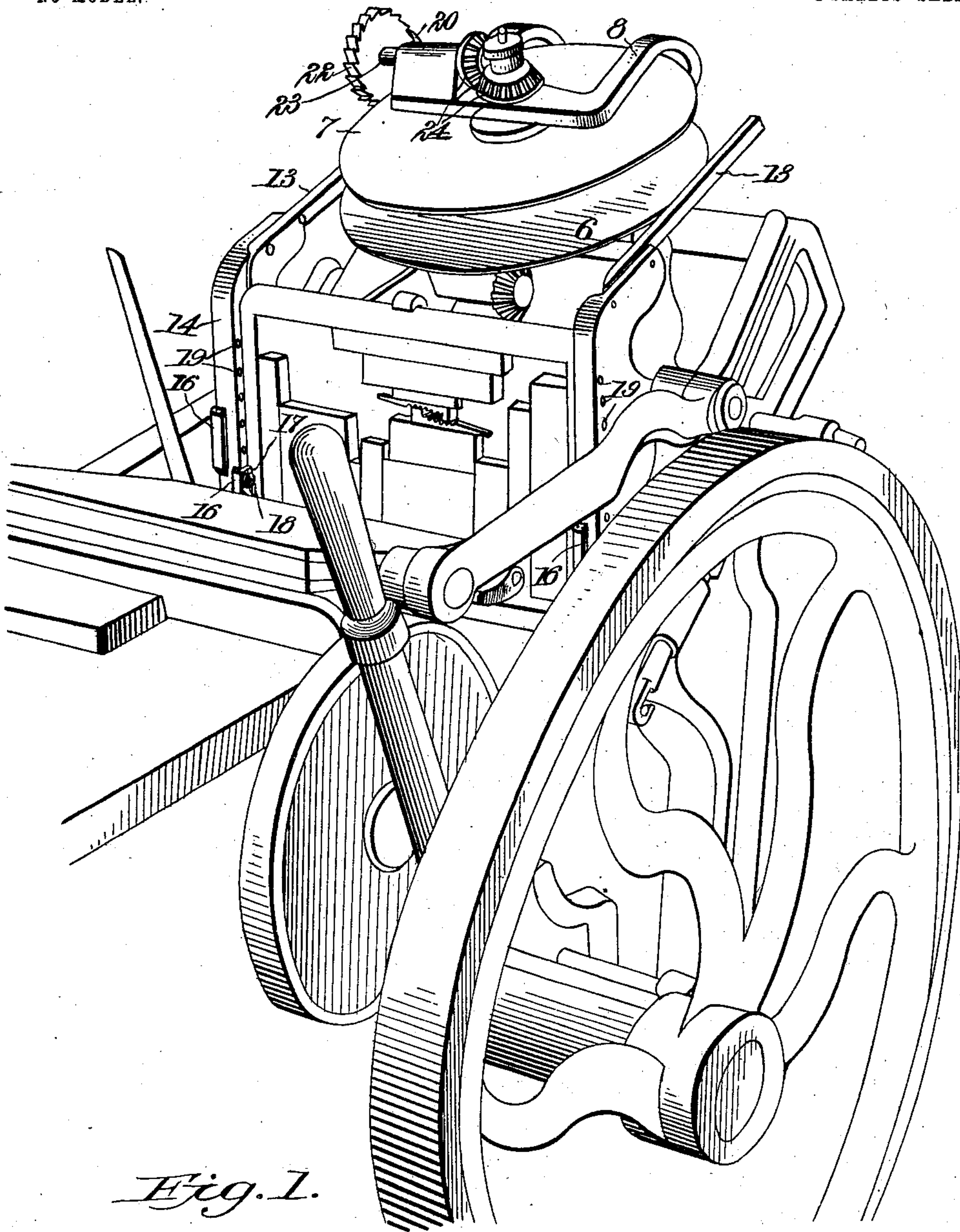


Fig. 1.

WITNESSES:

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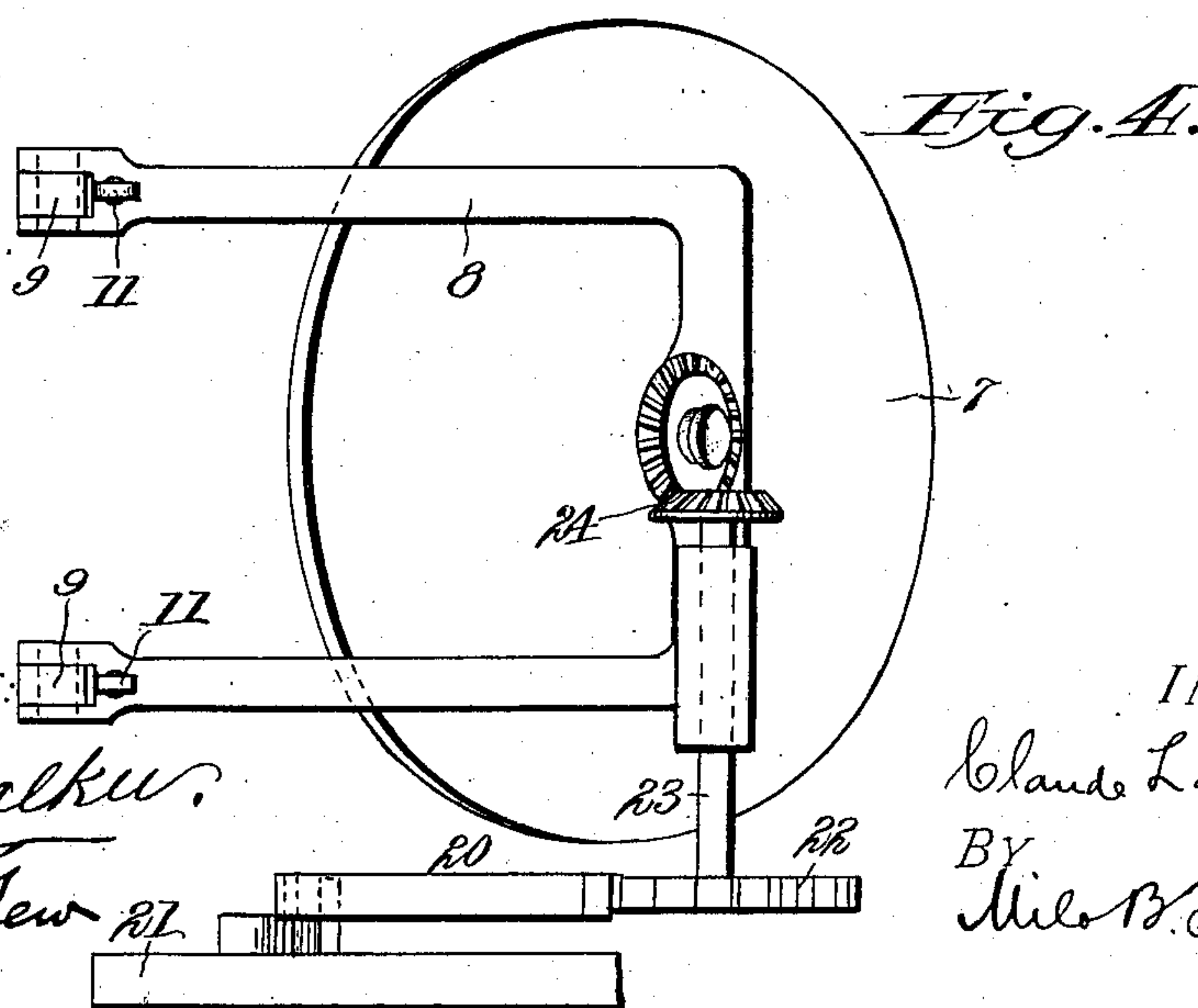
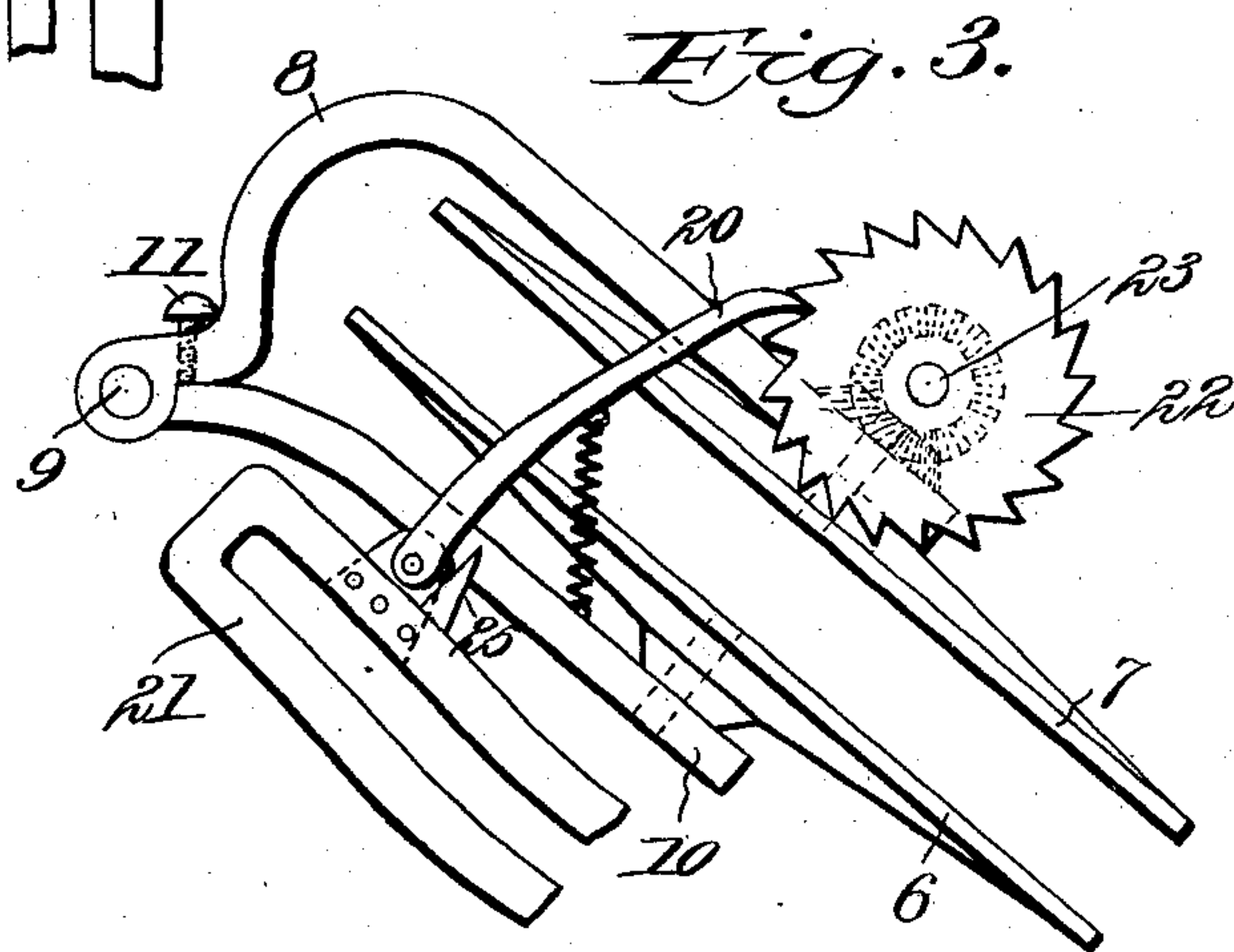
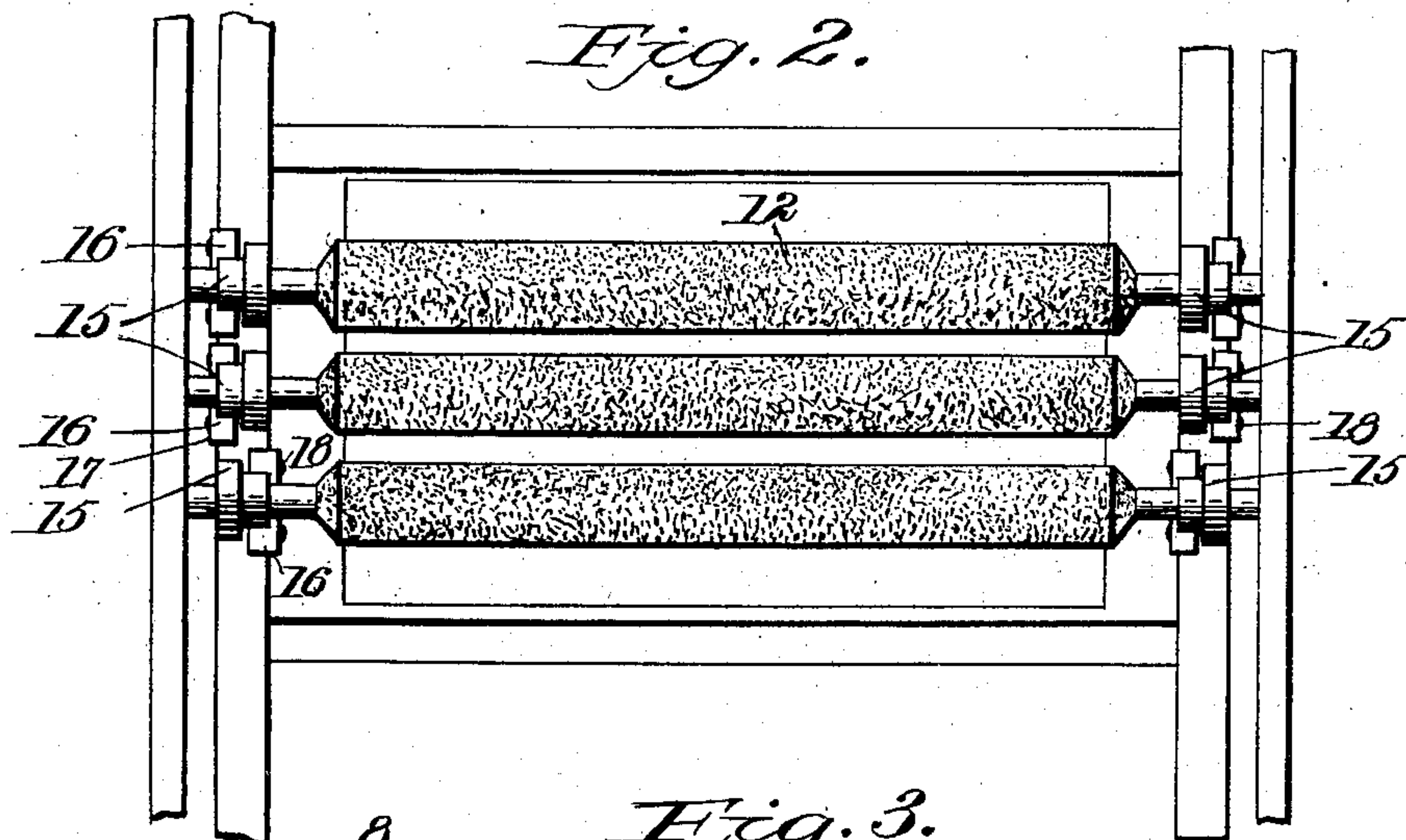
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2 SHEETS—SHEET 2.



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C. H. Walker.

Geo. E. Tew

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UNITED STATES PATENT OFFICE.

CLAUDE L. POST, OF CHICAGO, ILLINOIS.

MULTICOLOR-PRINTING PRESS.

SPECIFICATION forming part of Letters Patent No. 751,337, dated February 2, 1904.

Application filed October 3, 1903. Serial No. 175,660. (No model.)

To all whom it may concern:

Be it known that I, CLAUDE L. POST, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Multicolor-Printing Presses; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates particularly to a mechanism designed to be applied to an ordinary bed-and-platen printing-press for the purpose of printing two colors at one impression, and has for its object to provide an improved device of the kind stated.

In addition to the ordinary inking-disk and rollers a secondary inking-disk is provided in opposite relation to the ordinary inking-disk, and means are provided whereby part of the rollers will take the ink from one disk and part from the other.

The apparatus is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the press provided with the invention. Fig. 2 is a face view in detail of the bed of the press with the inking-rolls passing thereon, and Figs. 3 and 4 are details in side and top views of the means for rotating the upper inking-disk.

Referring specifically to the drawings, in addition to the well-known parts of an ordinary bed-and-platen printing-press having the customary inking-disk 6 I provide a secondary inking-disk 7, adapted to have ink of a different color. This disk 7 is arranged oppositely to the disk 6, and the space between the disks is slightly greater than the diameter of the inking-rolls. The disk 7 is supported by a yoke-shaped bracket 8, the ends of the arms of which are hinged at 9 to supporting-arms 10, projecting from the support or frame under the ordinary disk. The hinge connection permits the upper disk to be raised and lowered to vary the distance from the lower disk, and it may be fixed at adjustment by the set-screws

11, bearing between the bracket and the supporting-arms.

The inking-rollers are indicated at 12, and part of them take ink from the lower disk and part from the upper disk. This action is effected by extensions 13, projecting from and forming a continuation of the ordinary roller-track 14. The extensions are raised slightly above the track 14, so that the rollers which run on the extensions will be lifted from the lower inking-disk and will contact with the upper inking-disk. In order that some of the inking-rolls may ride upon the extensions and others not, peculiar rollers 15 are provided upon the shafts of the inking-rolls. These rollers are stepped, so that larger and smaller diameters are formed, and they are reversible on the axles to put the larger diameters inside or outside, as desired. When placed inside, as shown in the two upper rollers in Fig. 2, the larger diameters ride upon the extensions 13 and lift the rollers to contact with the upper disk. When the smaller diameters are placed inside, as in the lower roll of Fig. 2, the said diameters travel over the extension-tracks 13, and the inking-roll is not lifted thereby, but remains in contact with the lower disk. It will be understood that the disks, track extensions, and rollers are so positioned with relation to each other as to effect the action and object indicated. The extensions are conveniently bolted to the inner side of the ordinary track-plates, as indicated in Fig. 1.

By the means above indicated the two upper inking-rolls in the example illustrated will take ink of one color from the upper disk and the lower roll will take ink of a different color from the lower disk. To properly apply these colors to the several or respective lines of the form, movable cams 16 are employed, consisting of plates having angular flanges 17, whereby the cams may be located upon the roller-tracks 14 by means of bolts 18, which may be put in any of a series of bolt-holes 19, made along the edges of the track-plates. The cams are not more than half the width of the tracks and may be positioned upon either side thereof, as clearly shown in the drawings, and they are related

in width to the width of the steps of the rollers 15, so that as the rollers travel along the track those in which the larger diameters are outside will strike the cams fastened to the outside of the track and be accordingly lifted from the form, the period of the lift being proportioned to the length of the cams, which may be made any length desired, and those rollers which have the larger diameters on the inside will strike those cams which are fastened to the inside of the track and be lifted accordingly. The cams are placed in alternation on opposite sides, so that the rollers of the respective colors will be lifted in alternation from the form, the intent being that rollers of one color shall ink part of the lines of the form and rollers of the other color ink the remainder, and when the impression is taken the colors will be printed accordingly.

The lower disk is rotated by any old mechanism. To rotate the upper disk, I provide an upwardly-projecting pawl 20, which is carried by the vibrating arm or counterweight 21, which carries the rollers, and on the upward movement of the counterbalance this pawl engages a ratchet-wheel 22 on the shaft 23, which is supported in bearings upon the bracket 8 and engages by bevel-gearing at 24 the gudgeon or stem of the upper disk, so that the disk is accordingly rotated. A stop-block 25 for the pawl serves to hold the pawl in proper position to strike the ratchet when it rises.

It will be seen that a double roller-track is not essential for the operation of the multi-color attachment; but the same may be read-

ily applied to existing structures or removed therefrom when single-color work is done by taking off the cams and the track extensions.

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

1. In a printing-press, the combination with oppositely-presented inking-disks, and a track beside the same, of inking-rolls for different colors, movable between the disks, and rollers of different diameters carried on the different rolls and traveling upon the track, causing the rolls to respectively contact with different disks.

2. In a printing-press, the combination with upper and lower inking-disks facing each other, a bed, and a track beside the bed and disks, of inking-rolls for different colors movable over the bed and between the disks, rollers having different diameters carried on the rolls and traveling upon the track, and cams upon the track beside the bed, arranged in alternation to lift and lower the different rolls with respect to the bed.

3. The combination with the oppositely-presented inking-disks, and means to rotate, and means to vary the space between, the same, of inking-rolls traveling between the disks, and means to cause part of the rolls to contact with one disk and part with the other.

In testimony whereof I affix my signature in presence of two witnesses.

CLAUDE L. POST.

Witnesses:

H. G. BATCHELOR,
SIGNA FELTSKOG.