

(No Model.)

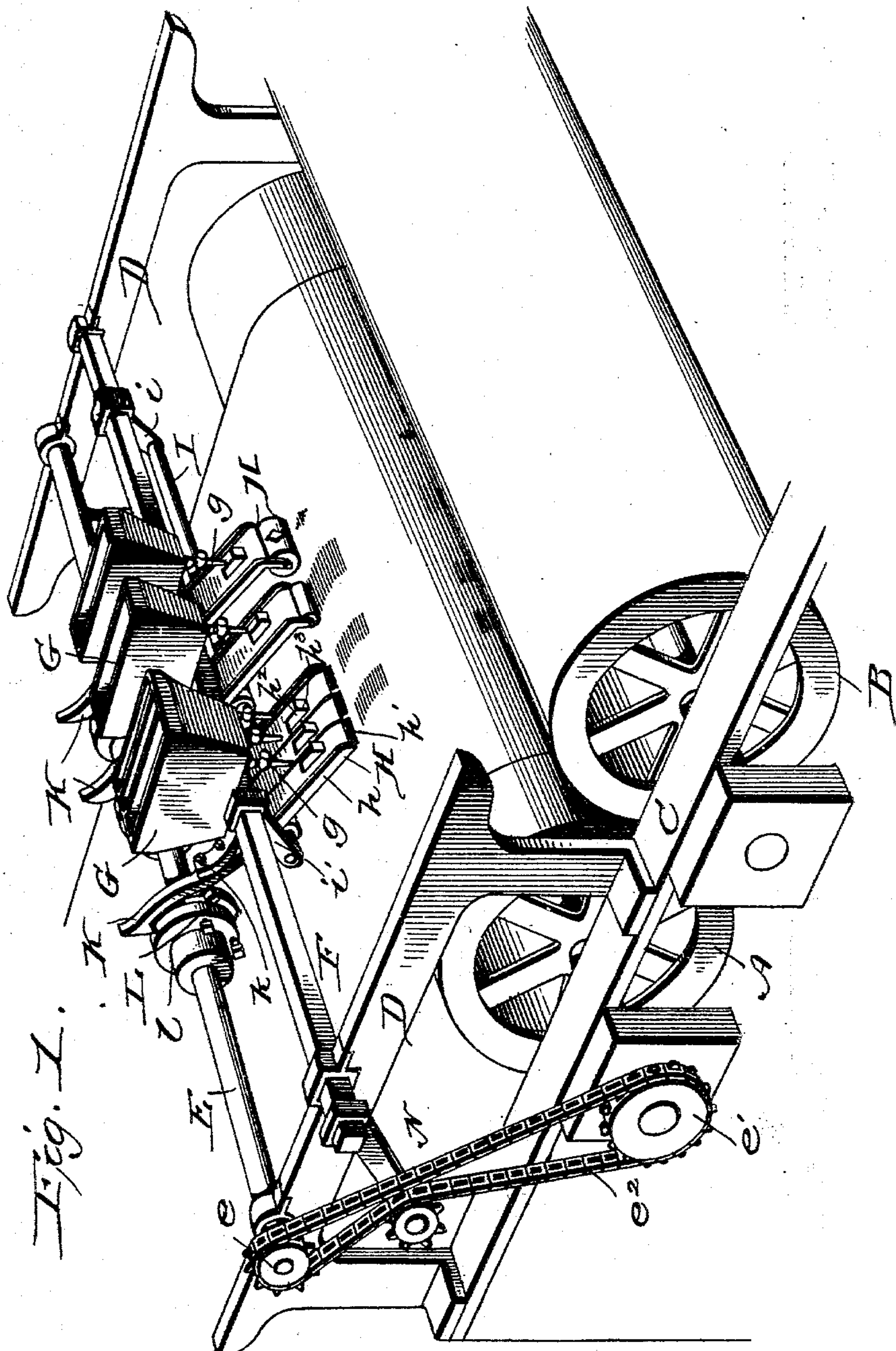
2 Sheets—Sheet 1.

M. P. KENNA.

COLORING ATTACHMENT FOR PRINTING PRESSES.

No. 553,032.

Patented Jan. 14, 1896.



Witnesses  
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Inventor  
*M. P. Kenna*,  
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Attorneys

(No Model.)

2 Sheets—Sheet 2.

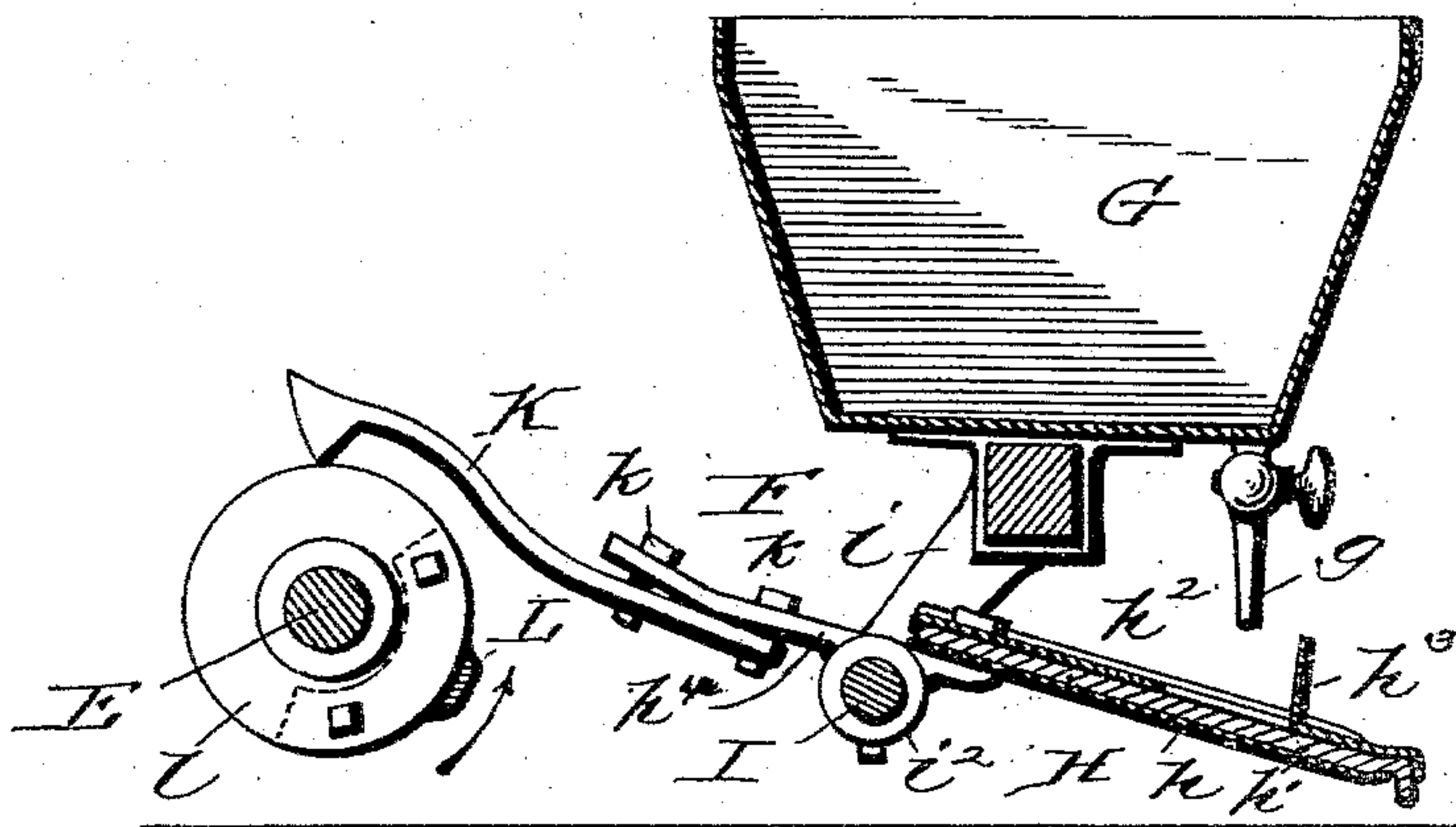
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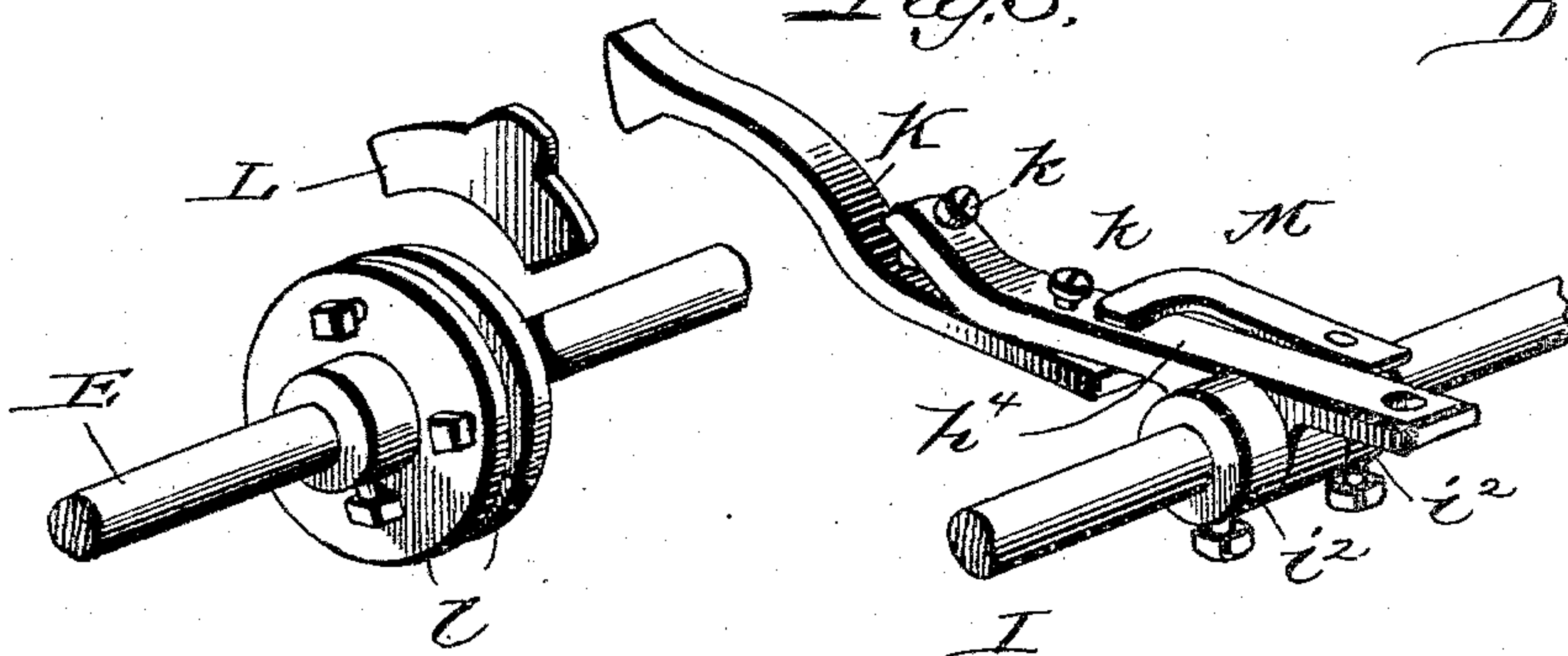
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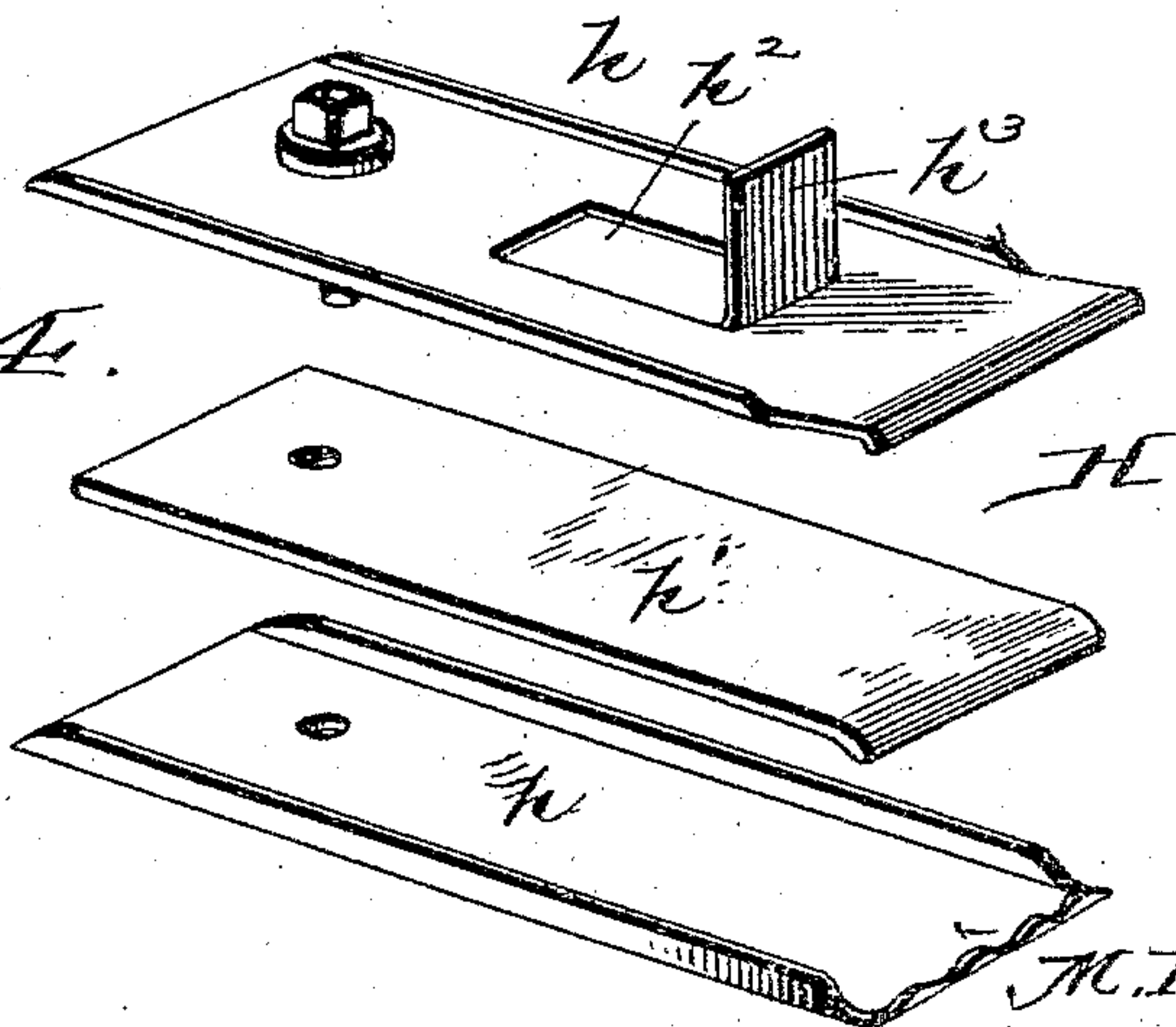
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

MICHAEL P. KENNA, OF DUBUQUE, IOWA, ASSIGNOR OF ONE-THIRD TO  
FRANK L. MURRAY, OF SAME PLACE.

## COLORING ATTACHMENT FOR PRINTING-PRESSES.

SPECIFICATION forming part of Letters Patent No. 553,032, dated January 14, 1896.

Application filed October 6, 1894. Renewed December 12, 1895. Serial No. 571,959. (No model.)

*To all whom it may concern:*

Be it known that I, MICHAEL P. KENNA, a citizen of the United States, residing at Dubuque, in the county of Dubuque, State of Iowa, have invented certain new and useful Improvements in Coloring Attachments for 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.

This invention relates generally to printing-presses, particularly to rotary or cylinder presses, and it is an improved coloring attachment to be placed upon said presses and used in connection therewith.

The object of the invention is to provide an attachment which will color the sheets to be printed, at certain definite points or intervals, and with the same or different colors as desired, thus producing an attractive sheet for advertising purposes.

Another object is to so construct the attachment that the colors can be distributed at one time and in alignment, or at intermittent periods and scattered over the sheet in regular order or patterns.

With these objects in view my invention consists broadly in providing one or more reservoirs adapted to hold the colored inks or dyes, movable brushes for receiving and applying said colors, said brushes being held normally away from the paper, and means for intermittently moving said brushes into contact with the paper.

My invention consists in providing a novel combination of reservoirs and brush, and also in the peculiar construction of the brush.

My invention likewise includes certain novel means for adjusting the movement of the brush, and besides these it involves certain details of construction and combination of parts, all of which will be fully described hereinafter, and then pointed out in the claims.

In the drawings forming a part of this specification, Figure 1 is a perspective view of a printing-press provided with my improved attachment. Fig. 2 is a detail view of the foundation and brush, showing the means for actuating said brush. Fig. 3 is a detail view of

the tripping-arm, cam, and spring. Fig. 4 is a detail view of the brush.

Referring to the drawings, A indicates the paper-feeding cylinder I and B the impression-cylinder of an ordinary printing-press, said cylinder being journaled in the frame C. Upright frames D D are arranged at each side of the frame or press, and journaled upon said frame is a revoluble shaft E, which receives its motion from the feed-cylinder shaft *a* by means of the sprockets *e* and *e'* and the drive chain or belt *e''*. A stationary rod or bar F is mounted upon the upright D in advance of the revolving shaft E, and fixed upon the rod or bar at definite points are the ink or color reservoirs G G, which are intended to receive and distribute the color or dye upon the paper as it passes over the feed to the impression-cylinder. These reservoirs are laterally adjustable upon the rod or bar so that they can be placed to color any particular portion of the paper, and this may also be divided into a series of compartments, so that different colors or shades can be supplied from a single reservoir. The colored ink or dye is in a liquid state, and is fed from the reservoir by the cocks or spigot *g g*, which depend from the bottom near one end and discharge upon the brushes H H, which are mounted upon a rod I supported below the bar F by means of the arms *i i*, which are connected to the bar F and depend therefrom.

The brushes H comprise a metallic case *h*, within which is held the brush proper, *h'*, which consists of a sponge, wick or filling of some absorbent material, the end of which projects beyond the end of the casing so that it can touch the paper sheet as it passes to the impression-cylinder. The brush depends upon capillary action and receives the coloring ink or dye from the cock *g* through an opening *h''* in the top of the case *h*, said opening having a lip *h'''* at its lower end to prevent the surplus ink flowing down the face of the casing before it is absorbed by the brush proper. This casing *h* is attached to a casting-piece *h''''*, which is loosely mounted upon the rod I and adapted to rock between two rigid collars *i''*, and to the opposite end of the casting-piece is attached the tripping-lever K, which is adapted to contact with a cam L



mounted upon the revolving shaft E, whereby the brush is depressed and brought into contact with the paper as it passes to the impression-cylinder, said brush remaining in contact with the paper as long as the lever contacts with the cam. The brush is normally held raised from the cylinder by means of a spring M attached to one of the collars at the side of the casting-piece and bearing upon the rear end of the same. The cams L are held between collars I and can be adjusted to strike the lever at any particular time and thus apply the color to any desired portion of the paper.

The tripping-lever is connected with the casting-piece by means of two screws K K which are in the nature of regulating-screws and by tightening or loosening them the amount of depression of the brush can be regulated so that a light or heavy stroke of ink is applied to the paper. The brush proper may be a strip of felt held within the casing or it may be a roll of absorbent material revolvably supported at the end of the case and this roll may be cut out, embossed or otherwise figured to produce a figured print. The length of the stroke or impression depends entirely upon the length of time the tripping-lever and cams are in contact, and by lengthening or shortening the cam the size of the impression is increased or decreased at will.

The entire coloring attachment can be moved laterally upon the shaft E and bar F, so that any portion of the paper can be colored and any reservoir can be used or not, as desired, as each spigot is provided with a cut-off valve by means of which the flow is regulated or cut off entirely. If desired, a belt-tightener N may be attached to the end of bar F and engage the drive chain or belt  $e^3$  to make the action of the same positive.

In operation the paper is fed to the press the same as usual, and as the feed-cylinder revolves the shaft E revolves also, bringing the cams into contact with the tripping-levers. By this means the brushes are depressed and made to contact with the paper, which being moved away from the brushes causes a stripe to be made thereon. As soon as the cam

passes the end of the lever the springs bearing upon the brushes lift them from the paper and it passes on uncolored until the cam again reaches the end of the lever. The coloring ink or dye drops from the reservoir upon the brush within the case, and is absorbed thereby and the brushes being held normally in an inclined position the color is fed rapidly to the lower or projecting end of the brush which contacts with the paper.

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

1. In a printing press, the combination with the frame and cylinders, of the uprights, the rotary and stationary shafts, the drive chain and sprockets, the actuating cams, the reservoirs, the brushes constructed as described and the tripping lever connected with said brushes and adapted to contact with the cams, substantially as shown and described.

2. In a printing press, the combination with the main frame and cylinders, of the stationary horizontal bar, the reservoir mounted upon said bar and provided with a discharge spigot, a rod arranged beneath the bar, the brushes pivoted upon said rod and comprising the collar, the case, and tripping lever, the revolving shaft, the cam, adjustably mounted thereon, and adapted to engage the tripping lever, and the spring adapted to normally hold the brush elevated, substantially as shown and described.

3. In a printing press, of the class described, a brush comprising the strips of absorbent material, the case for containing the same, composed of the upper and lower portions, the upper portion having an opening therein, the collar to which said case is attached, and a tripping lever, connected with the opposite end of said collar, all of said parts being arranged substantially as shown and described.

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

MICHAEL P. KENNA.

Witnesses:

J. J. MCCARTHY,  
P. C. MURRAY.