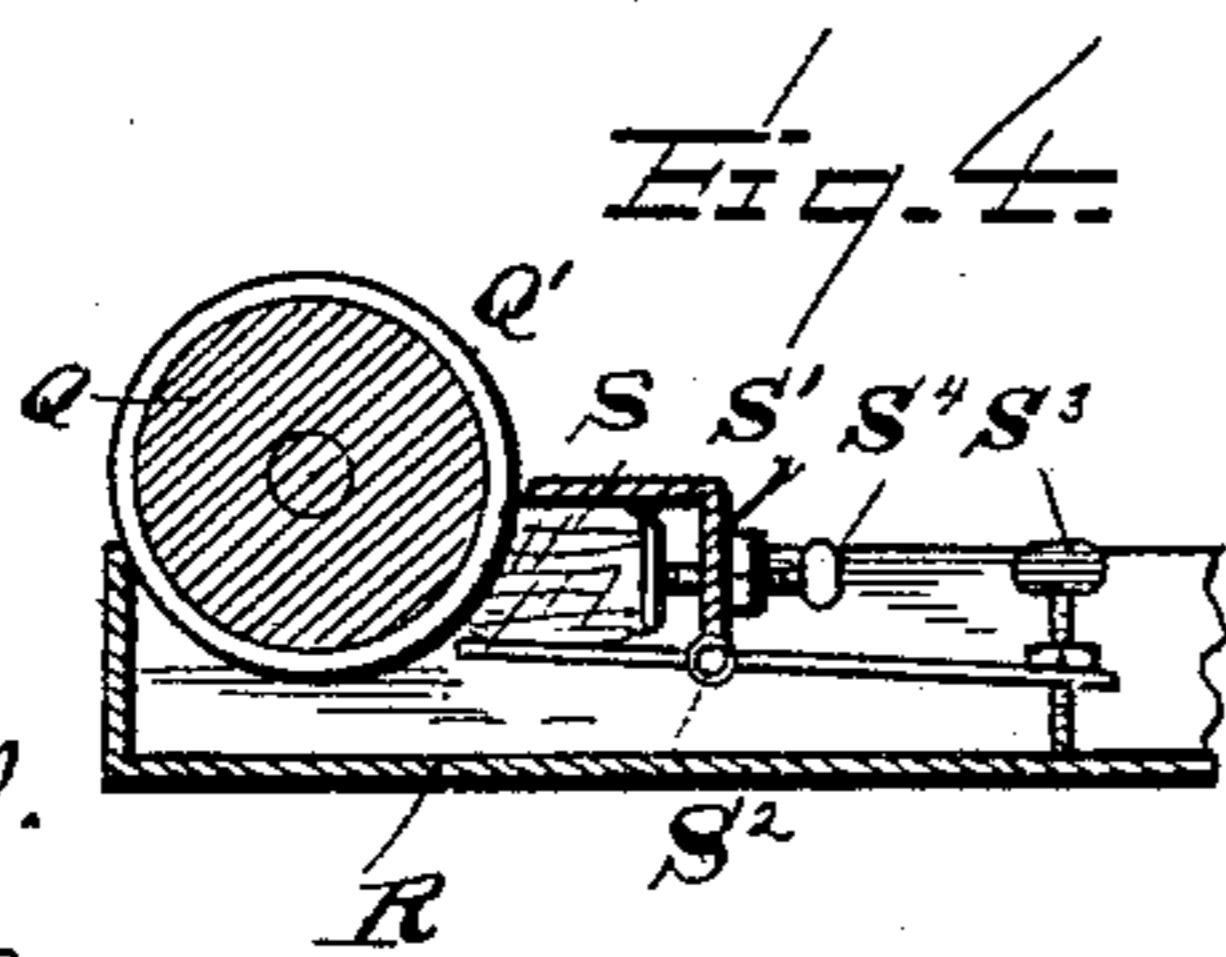
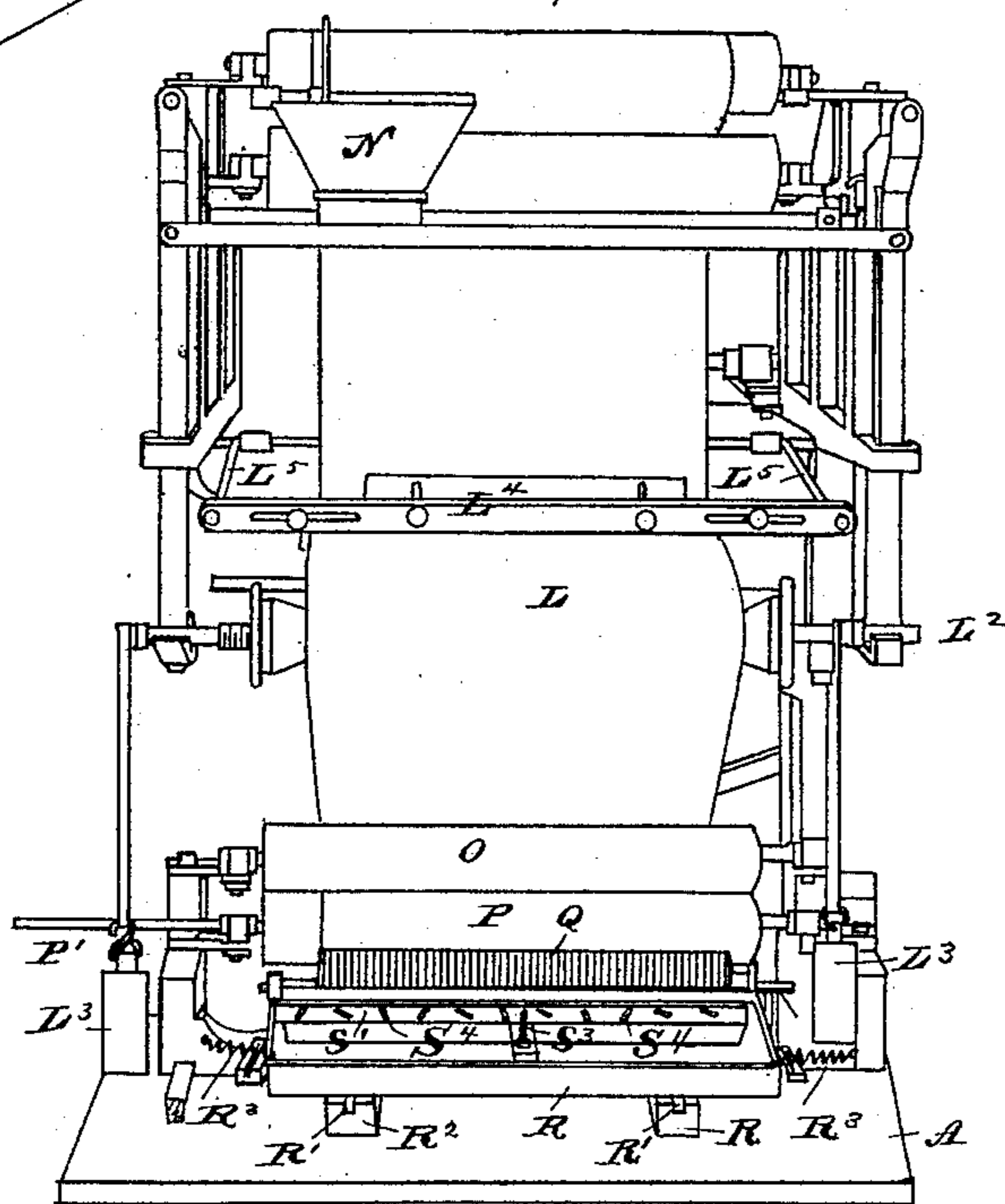
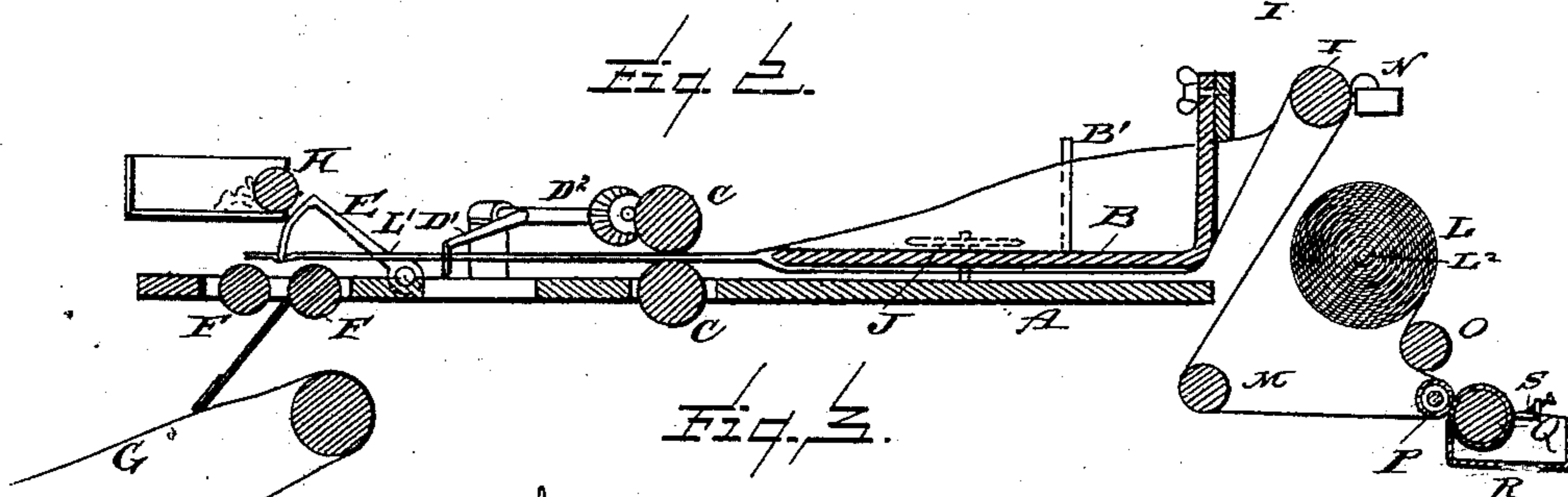
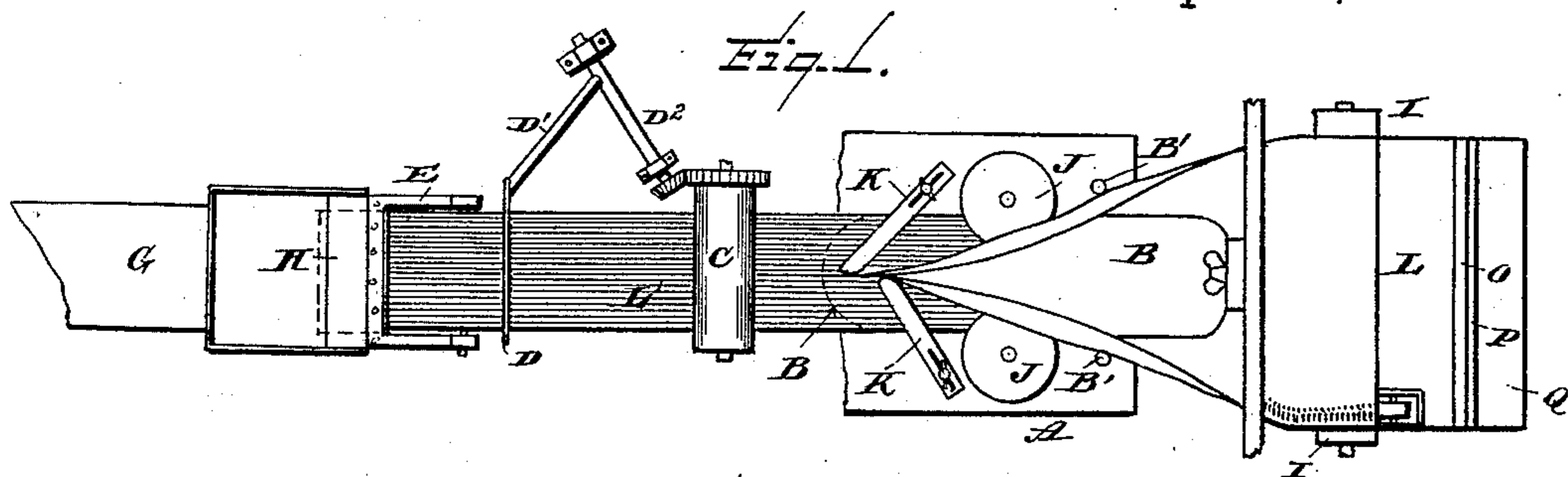


(No Model.)

C. A. DEAN & F. H. ROBIE.
MECHANISM FOR MAKING STRIPED PAPER BAGS.

No. 437,176.

Patented Sept. 30, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

CHARLES A. DEAN AND FREDERIC H. ROBIE, OF BOSTON, MASSACHUSETTS.

MECHANISM FOR MAKING STRIPED PAPER BAGS.

SPECIFICATION forming part of Letters Patent No. 437,176, dated September 30, 1890.

Application filed July 21, 1888. Serial No. 280,679. (No model.)

To all whom it may concern:

Be it known that we, CHARLES A. DEAN and FREDERIC H. ROBIE, citizens of the United States, residing at Boston, in the county of Suffolk, State of Massachusetts, have invented certain new and useful Improvements in Machines for Making Striped Paper Bags, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to mechanism for making stripes or otherwise similarly ornamenting paper bags; and among the objects in view are to adapt a paper-bag machine for the reception and co-operation of mechanism for ornamenting a web of paper from which bags are made; to provide suitable mechanism for ornamenting the paper as it is taken from the web and conducted to the machine proper; to provide means for controlling the supply of ink to the striping-roll, and to dry the ink as soon as or immediately after it is impressed upon the paper and before the inked or ornamented portion of the paper is made into bags by the machine.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

It is not intended that the invention be limited to any particular tube-forming or blank-severing or bottom-folding mechanism; but the invention is intended to be applied to any mechanisms of the character described which are adapted to receive paper from a web or roll and to manipulate the same so as to form therefrom either a plain or a "bellows-sided" tube, and to sever bag-blanks therefrom, and to close one of the blanks thus severed and deliver the same from the machine.

In the drawings, Figure 1 represents in plan, and Fig. 2 in section, the principal elements of one form of bag-machine adapted to co-operate and provided with striping or ornamenting mechanism in accordance with our invention. Fig. 3 is an end elevation of the complete machine, and Fig. 4 is a central vertical section of the striping-roller and ink-supply-controlling devices employed.

Like letters of reference indicate like parts in all the figures of the drawings.

A represents the bed or table of a bag-machine, B the former, C the feed or drawing rolls, D the severing-knife, E the folding-blade, F F the folding and delivering rolls, G the carrying-belt for conveying completed bags away from the machine, H the final paste-roll acting in conjunction with the folding-blade E, I the primary guiding-roller, J the bellows-fold-forming disks, and K the seam-lapping fingers, all of which are of a common well-known construction and arranged to perform their well-known function.

In this instance the knife D or severing device is mounted on an arm D', projecting from a shaft D², arranged diagonally with reference to the direction of the passage of the material through the machine and receiving its motion by being geared to one of the feed-rollers C, such construction also being well known in the art.

The various moving parts of the machine thus far mentioned are to be operated in any well-known manner.

L represents the web, and L' the tube formed therefrom.

M represents a guide-roller, which is arranged to cause the web L to pass clear of the roll from which it is unwound to the primary guide-roller I of the machine.

N is the usual seam-pasting roll and fountain.

In addition to the guide-roll M there is provided a companion roll O, which serves to retain the web L in contact with an impression-roller P, which in this instance is represented as being hollow and having hollow journals in order that steam may be introduced therein by means, for example, of the pipe P'. (Shown in dotted lines in Fig. 3.)

Q represents the striping-roll, and it consists in this instance of a roll the body of which is formed of wood and provided with a series of grooves Q', whereby the periphery of the roll is divided into rings which serve as the printing-surface, and which in the operation of the machine impress upon the web and completely over the same longitudinal stripes.

R represents the ink-well, in which the striping-roll Q revolves, so as to take up the ink.

S represents a scraper or wiper, consisting of any suitable material—for instance, cloth, felt, or leather—and is arranged in a frame S' , pivoted, as at S^2 , so that by means of an adjusting screw or bolt S^3 one end of said frame may be depressed, thereby elevating the opposite end, which is adjacent to the striping-roll, and thus causing the scraper or wiper S to bear with more or less force upon the periphery of the roll.

Adjusting-screws S^4 are arranged in the back wall of the frame and provided each with a set-nut, so that the wiper or scraper may be forced against the roll to exert a greater or less pressure, as desired, and that, too, at different points along the roll, whereby the wear of the scraper or wiper may be taken up, and whereby, also, the quantity of ink transferred by the roll to the paper may be controlled. In this case the scraper or wiper removes the ink from the periphery of the roll, and therefore the ink remaining in the grooves will be transferred to the paper in the form of parallel stripes, and by reason of the arrangement of the striping mechanism with relation to the web conducting and guiding rolls and paper-manipulating mechanisms of the machine the stripes will not only be parallel with each other, but will be parallel with the edges of the completed bag and will appear upon all the outer sides and upon the bottom of the bag when completed whether the bag be made from a plain tube or when having what are known as "bellows" sides.

If desired, the peripheries of the rings may do the printing, we not limiting our invention in this respect.

An additional important advantage of this invention is that it saves the winding and re-winding of the web and the passage thereof through striping mechanism and subsequent drying mechanism in order to ornament the same, one complete handling being saved.

By the location and arrangement of the drying-roller in close proximity to the striping mechanism the web has a longer time to dry before it arrives at any of the tube or bag

forming mechanisms which come into contact with the striped surface of the web, this being in this instance, first, the guide-roller I, and next the upright guiding-rods B' , which serve to maintain the surplus material at each side of the former B.

The ink-well R is provided on its under surface with ribs R' , which ride in grooves formed in the upper surface of two risers R^2 , and is connected with a fixed part of the machine by coiled springs, or it may be by any other suitable device or devices, for yieldingly drawing the well and the striping-roller mounted thereon against the web as it passes around the impression and drying roller P, thus permitting the striping-roller to adapt itself to varying thicknesses of different webs.

The web L is supported on the web-shaft L^2 , which is provided with tension weights L^3 and the usual well-known tension-bar L^4 , pivotally connected with a fixed part of the frame by arms L^5 .

Having described our invention, what we claim is—

1. The combination, with a bag-machine and with its primary guide-roller and web-supporting shaft, of striping mechanism arranged intermediate said roller and shaft and of suitable guide-rollers to conduct the paper from the web to the striping mechanism and from the striping mechanism to the primary guide-rollers, substantially as specified.

2. The combination, with the primary guide-roll of a bag-machine, of an ink-well, a striping-roller, an adjacent impression-roller, and a guide-roller arranged to conduct the web from the impression-roller and free from the web-roll and to the primary guide-roller, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

CHAS. A. DEAN.

FREDERIC H. ROBIE.

Witnesses:

W. B. FRENCH,

ARTHUR P. FRENCH.