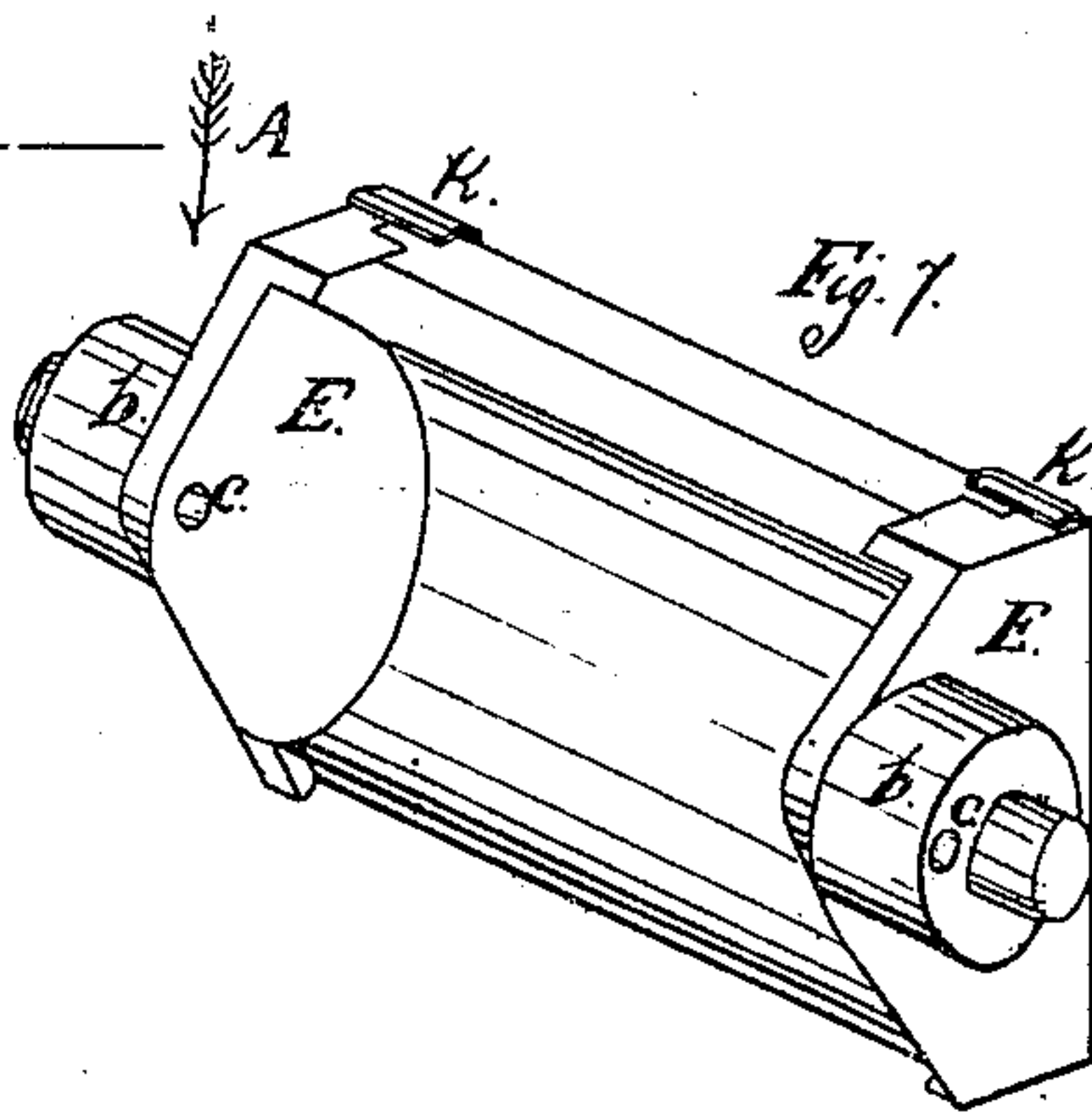
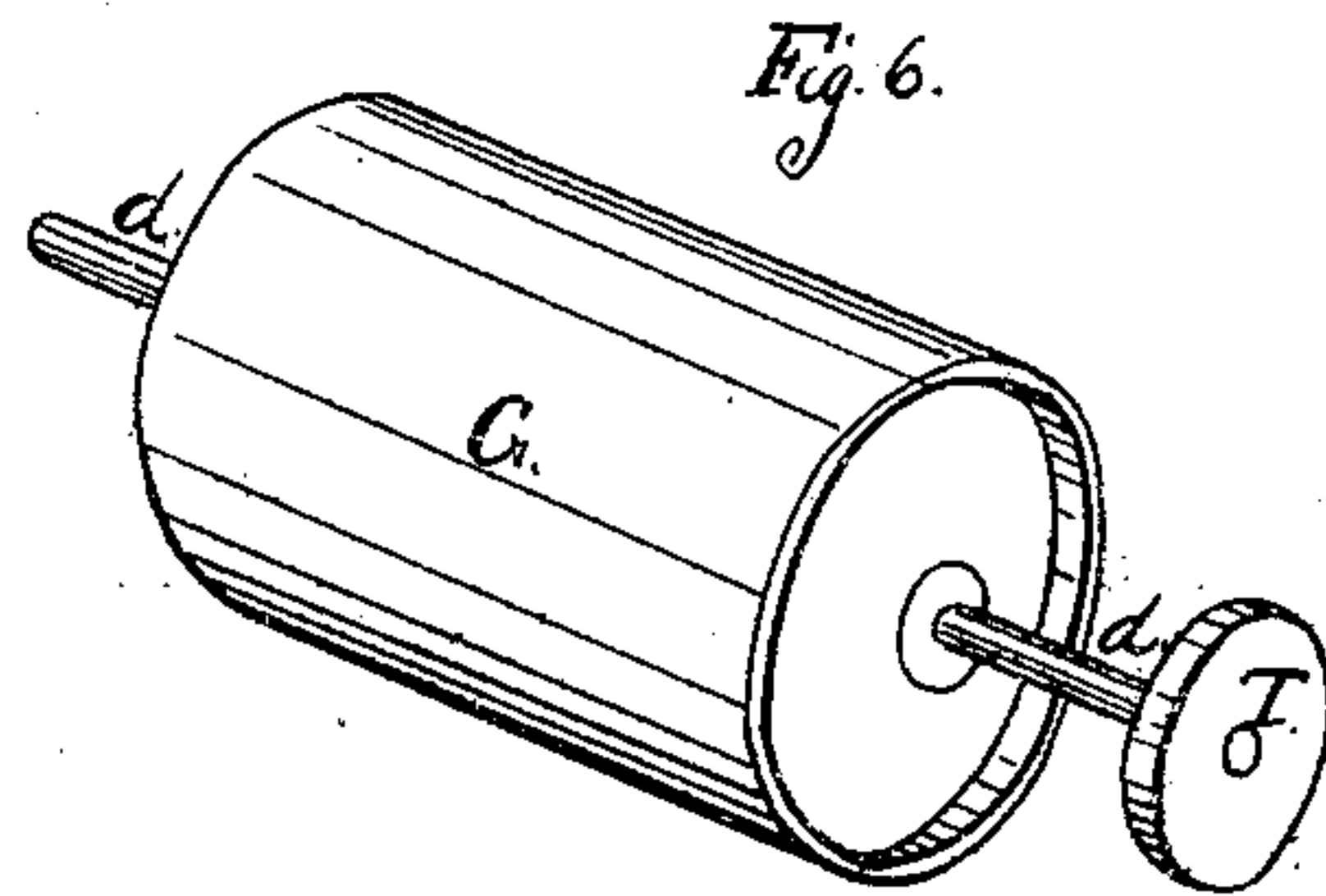
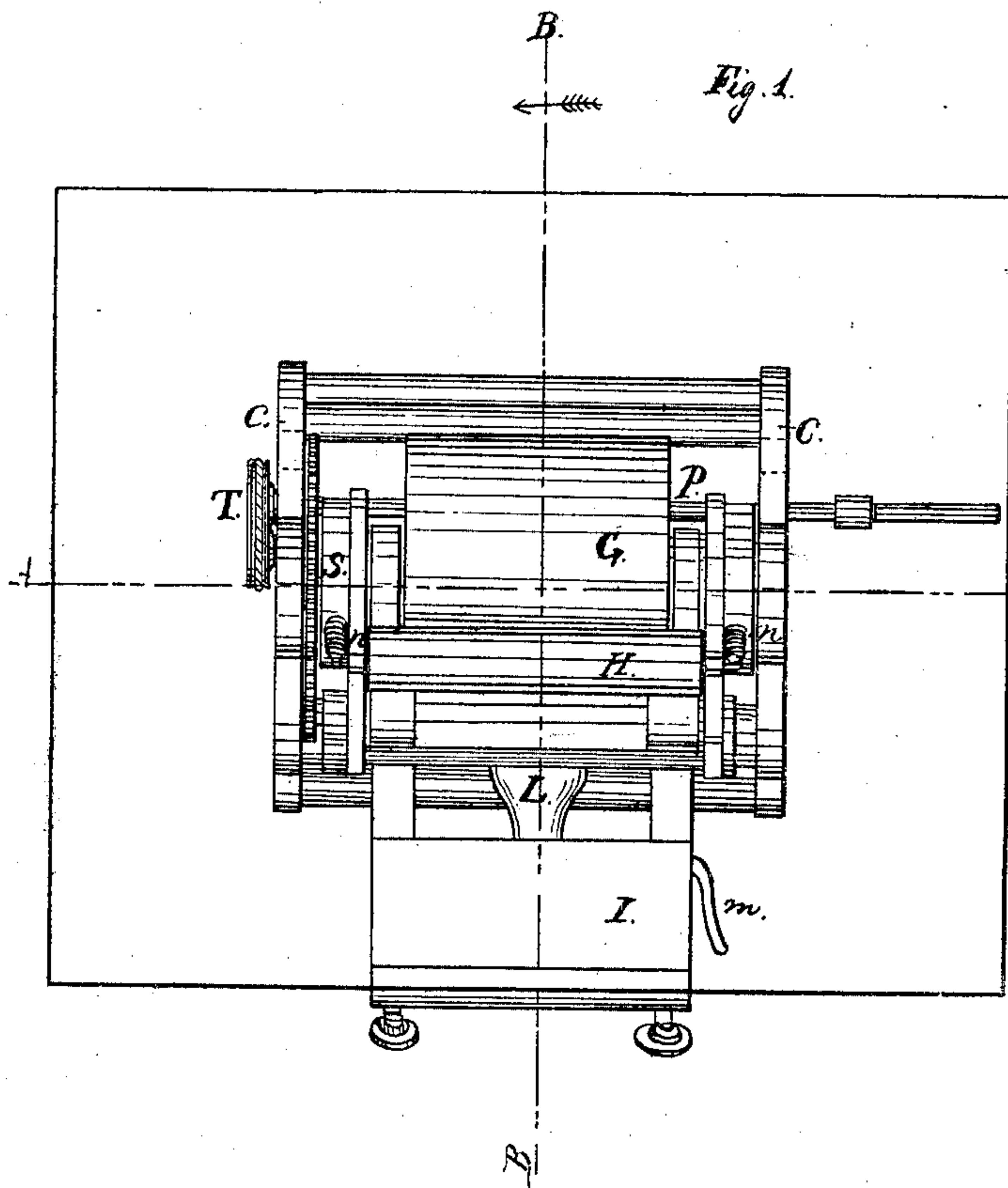
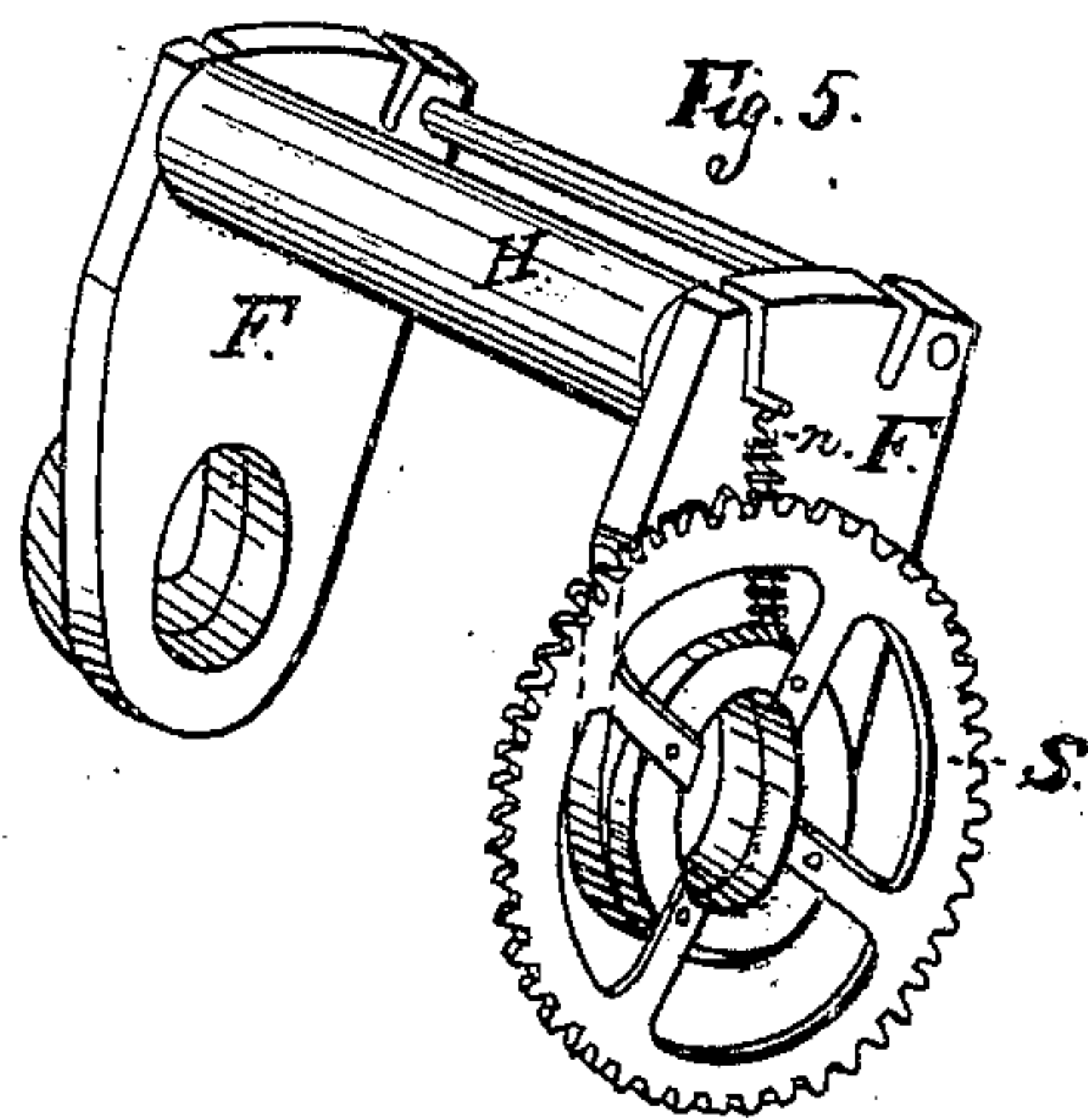
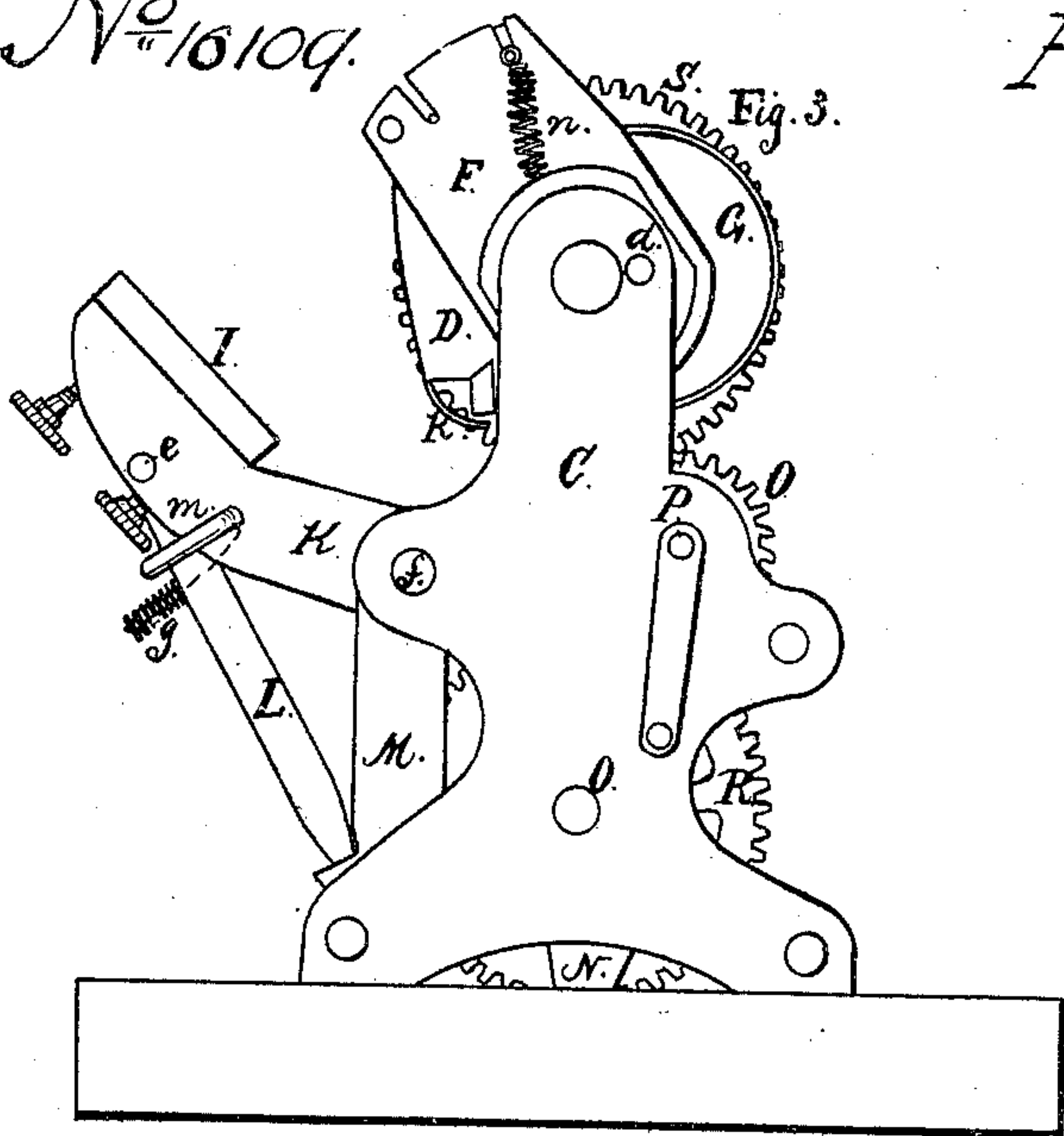


*F. L. Bailey Sheet 1. 2 Sheets*  
*Printing Press.*

*Nº 16109.*

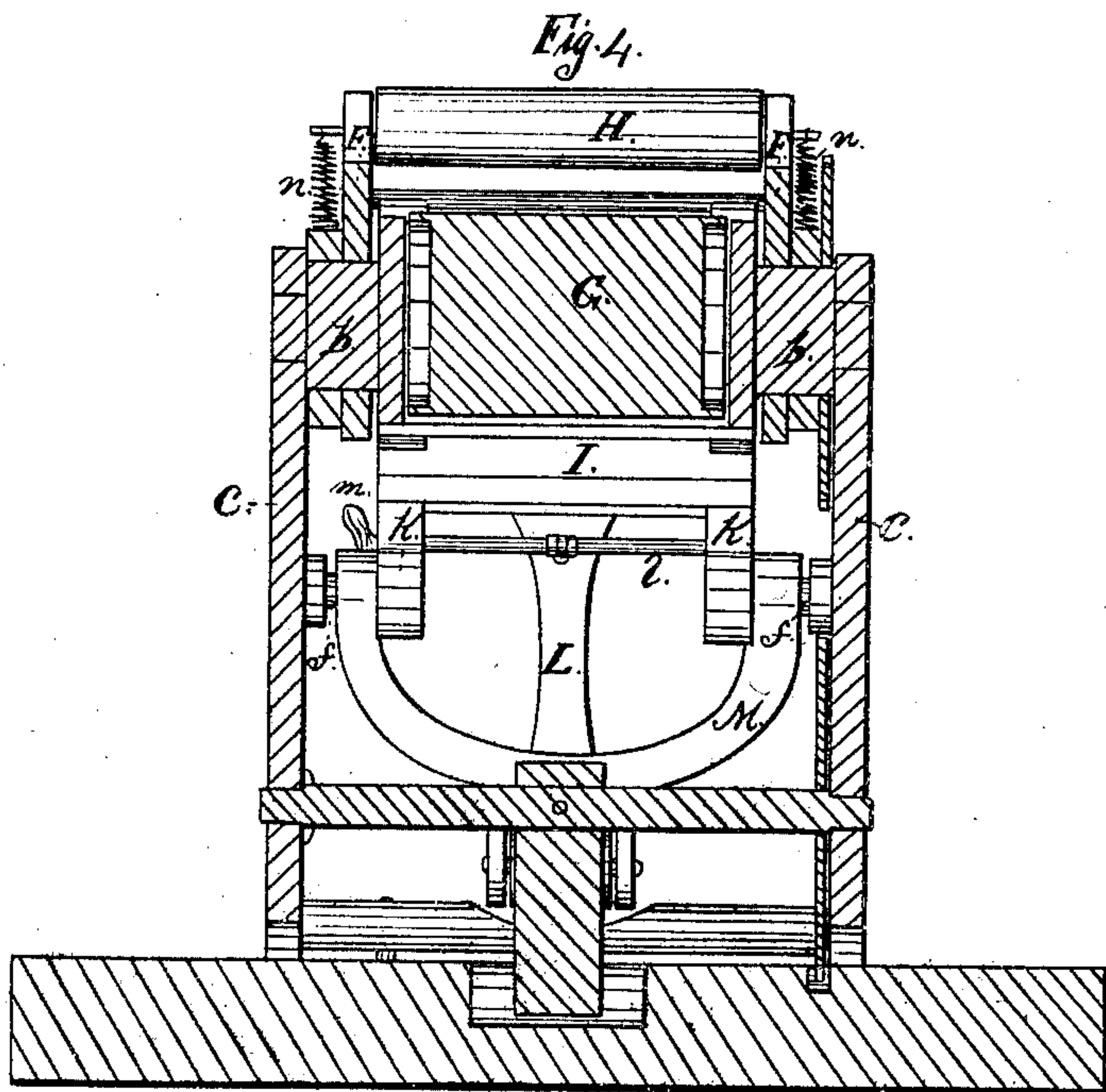
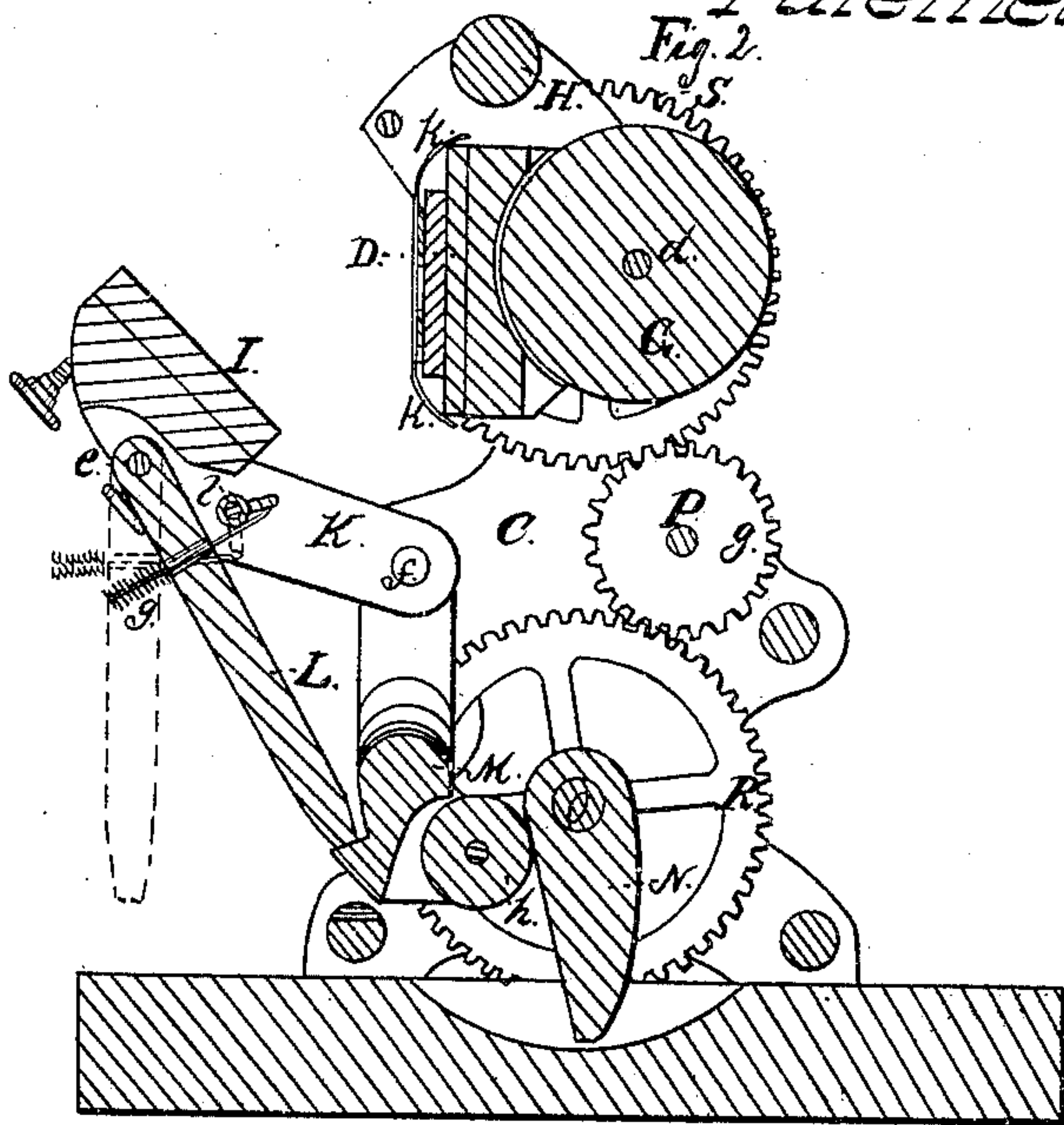
*Patented Nov. 25. 1850*



*F. L. Bailey. Sheet 2 of 2 Sheets.*  
*Printing Press.*

*N<sup>o</sup> 16109.*

*Patented Nov. 25. 1850.*





# UNITED STATES PATENT OFFICE.

F. L. BAILEY, OF BOSTON, MASSACHUSETTS.

## PRINTING-PRESS.

Specification of Letters Patent No. 16,109, dated November 25, 1856.

*To all whom it may concern:*

Be it known that I, F. L. BAILEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improvements in Printing-Presses, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan. Fig. 2 a section upon the line B, B, of Fig. 1. Fig. 3 an end view. Fig. 4 a section upon the line A, A, of Fig. 1. Figs. 5, 6, and 7 details which will be referred to hereafter.

My machine is of that class in which the ink rolls make an entire revolution, passing once on each rotation over the surface of the types, the type bed being placed within the circle of revolution of the rolls.

In machines of this class as heretofore constructed, a curved stationary distributing surface has been employed for the purpose of transferring the ink to the rolls, and it has not been found practicable to employ a revolving cylinder in its stead, owing to the difficulty of rotating the cylinder when placed within the circle of revolution of the ink rolls. The stationary distributing surface is however liable to many objections, the principal of which arises from the difficulty attending the equal distribution of the ink upon its surface. The revolving cylindrical distributor is free from these objections, as the ink may be evenly distributed upon its surface by means of rolls vibrating longitudinally in a manner well known and often employed.

My invention has for its object the employment of a revolving cylindrical distributor, in combination with a stationary bed when the two are placed within the circle of revolution of the ink rolls, whereby the springs which serve to press the rolls to the surface of the type also hold them down upon the distributing cylinder as will presently be more fully described.

Where printing machines are operated rapidly, if from any cause the regular feed of the sheets becomes interrupted, the bed is thrown forward upon the types, and is thereby soiled; to remedy this inconvenience is the object of the 2nd part of my improvement which consists in so arranging the bed and the parts by which it is actu-

ated, that the operator may at any moment stop its motion until the difficulty is removed, when he again throws the bed into gear with its operating machinery.

To enable others skilled in the art to understand my invention I will proceed to describe the manner in which I have carried it out.

In the said drawings C, is the framework; D, the type bed, which together with the heads E, forms a carriage which is permanently secured to the frame work. A detached view of this carriage is seen in Fig. 7.

At b the heads E are turned off for the double purpose of forming bearings around which the carriage F, which sustains the ink rolls, may revolve, and of furnishing boxes c, for the shaft d, of the distributing roll G, by which means the ink rolls and the distributing roll are allowed to revolve eccentric with respect to each other. But one ink roll H, is shown in the drawings, it is contemplated however to employ four which are allowed to pass once over the surface of the types previous to each impression.

The platen I, is carried by the arms K, which together with the impression lever M, is pivoted to the frame work at f. L, is a connecting bar pivoted to the plate at e, and sustained in the position represented in Figs. 2 and 3 by the spring g, when in this position the foot of the bar rests in a notch in the foot of the impression lever. The platen is carried against the form by the cam N, upon the shaft O, which strikes against the friction roll n as this shaft revolves.

It often happens when working rapidly that the paper upon the platen becomes torn, or that for some other reason the printer is not enabled to get his fresh sheet in time upon the platen, and the latter is carried against the surface of the type and soiled by the ink. To remedy this I have made use of the following device. The spring g which holds the bar L, in place, is attached to a short arm projecting from the rod z, which rod has a handle m, within reach of the printer's hand, Figs. 2, and 3, by turning this handle the printer may at any instant relieve the bar L, of the pressure of the spring g when this lever falls into the



position seen in red Fig. 2, and is no longer operated upon by the cam N, and lever M. This is effected without interrupting the motion of the machine, and when the paper is again adjusted, the bar L, may be returned to its notch in the lever M, by means of the handle *m*. The machine is operated as follows.

Operation: Power being applied to the shaft P, is communicated by means of the gear Q, to the wheel R upon the cam shaft O, the gear Q, also engages with the wheel S, which is secured to the carriage F, of the ink rolls Fig. 5. By means of this arrangement, the latter are caused to make an entire revolution and to pass over the surface of the types once for each revolution of the cam shaft and consequent elevation of the platen, the wheels S, and R, being of equal diameters. As the ink rolls revolve, the springs *n*, which press them down upon the surface of the types, also keep them in contact, during a considerable portion of their revolution, with the distributing roll G. This roll is caused constantly to revolve in the following manner. As before stated its shaft *d*, passes through the holes *c*, of the carriage E, and also through the frame work, and has upon one end a pulley T, which is driven by a band from a corresponding pulley upon the shaft P.

K, are "ink bearers" which serve to di-

rect the motion of the ink rolls over the type bed.

It is evident that the usual vibrating distributing rolls may be applied to the cylinder G, for the purpose of equalizing the ink longitudinally upon its surface, and that all the advantages of a revolving distributing cylinder are retained, and the disadvantages of a stationary distributing surface avoided, while owing to the position of the cylinder G, within the circle of revolution of the ink rolls, the springs which press them down upon the types as before stated, keep them also in contact with the surface of the cylinder.

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

1. The combination of the stationary bed D with the revolving distributing cylinders G when the two are placed within the circle of revolution of the ink rolls H as set forth.

2. I claim the impression lever M, in combination with the connecting bar L, when the two are so arranged that they may be disconnected at pleasure for the purpose set forth.

F. L. BAILEY.

Witnesses:

THOS. R. ROACH,  
SAM COOPER.