

J. R. RANKIN.  
PRINTING-PRESS.

No. 177,002.

Patented May 2, 1876.

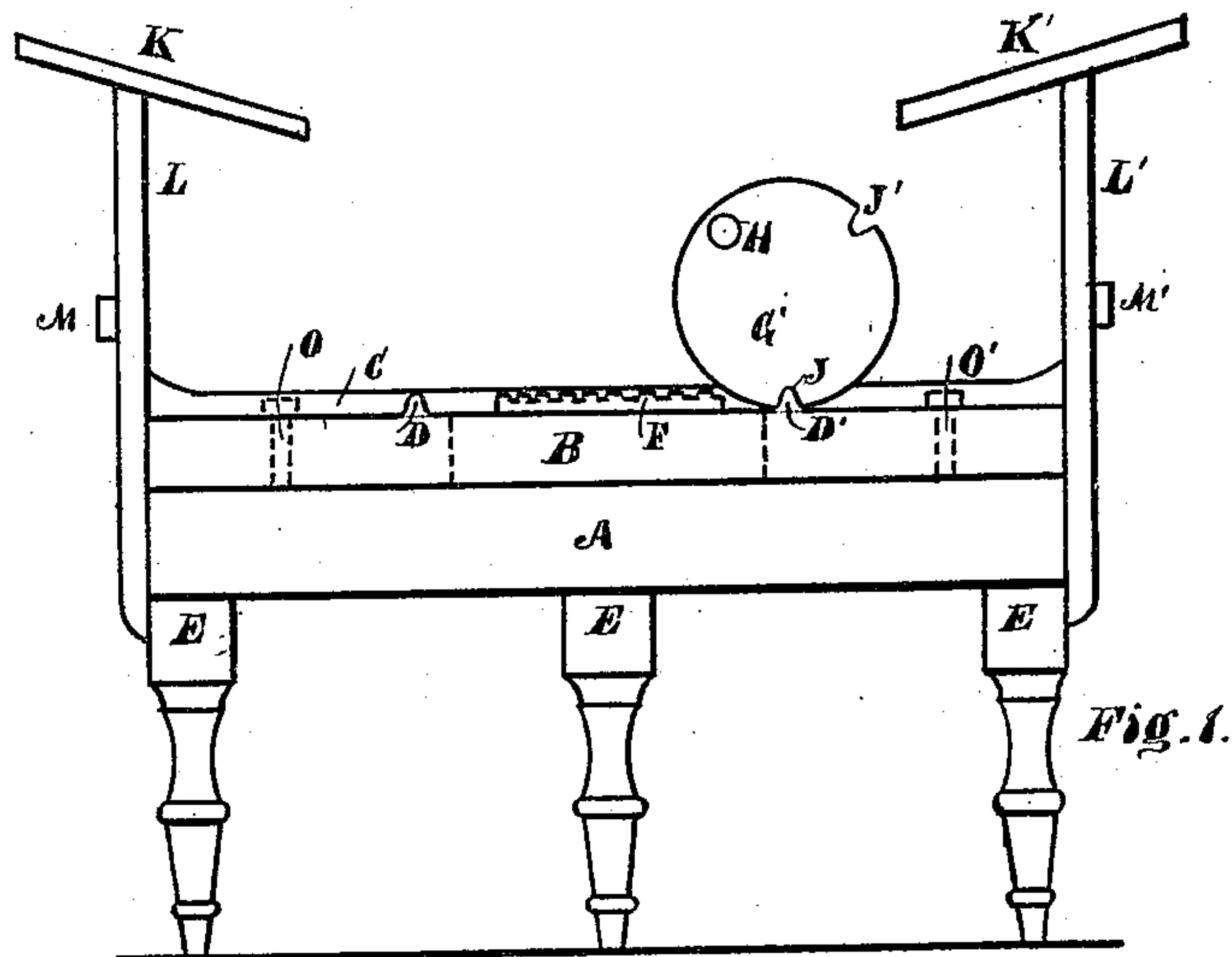


Fig. 1.

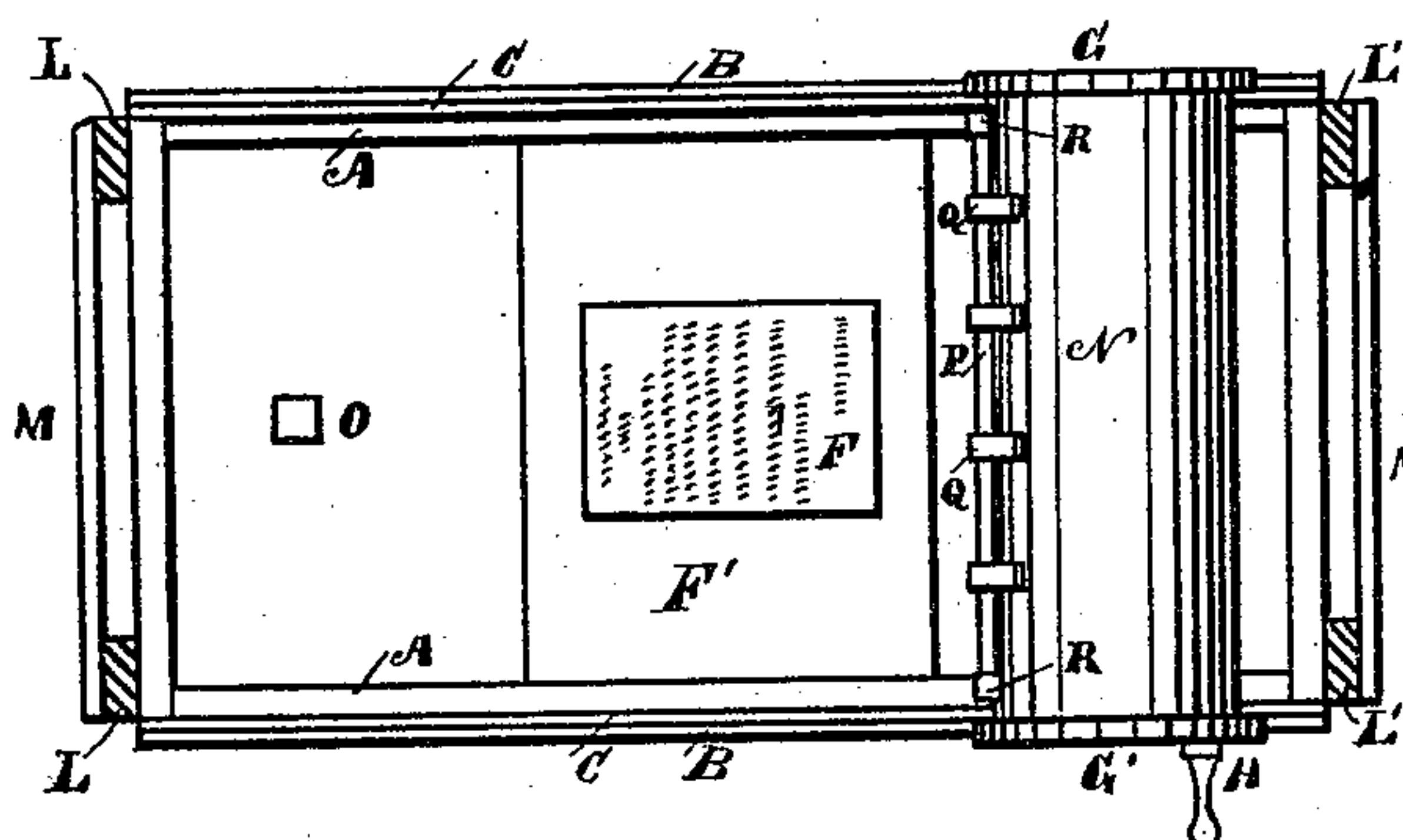


Fig. 2.

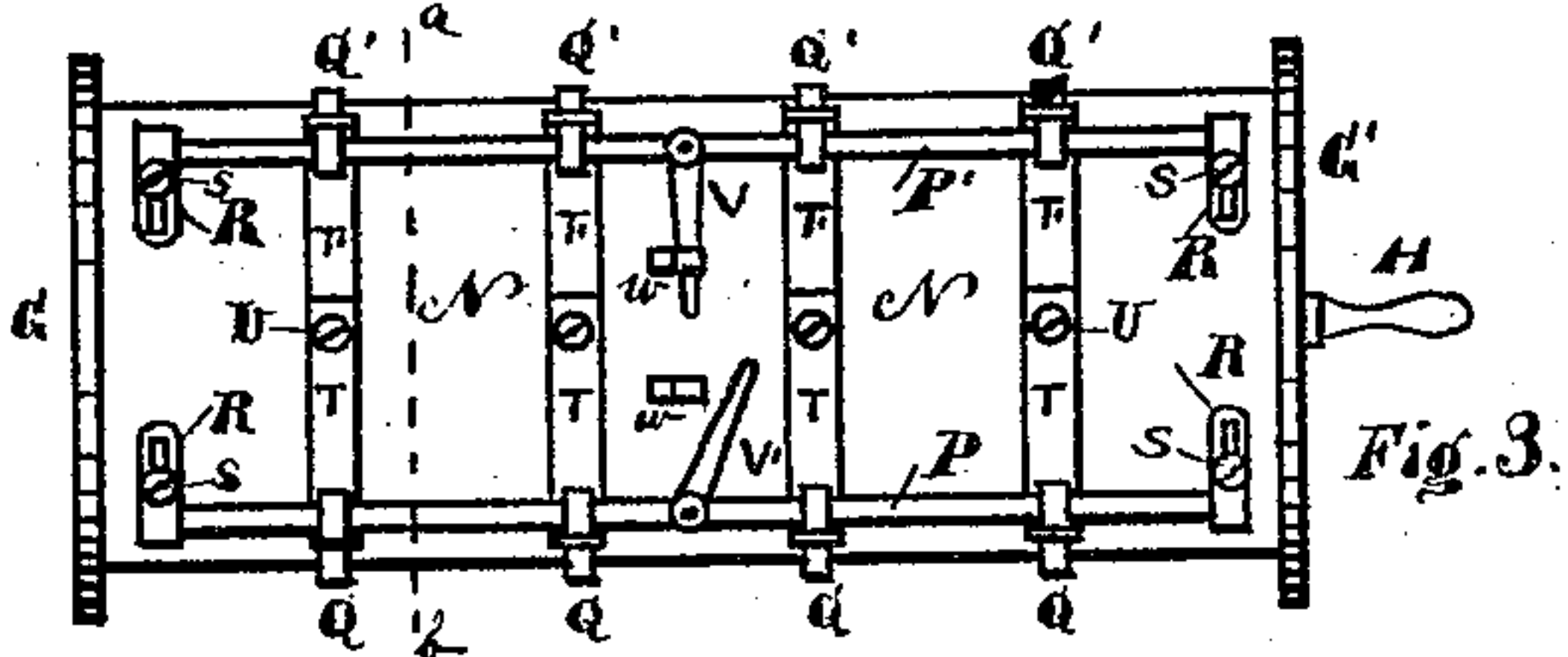


Fig. 3.

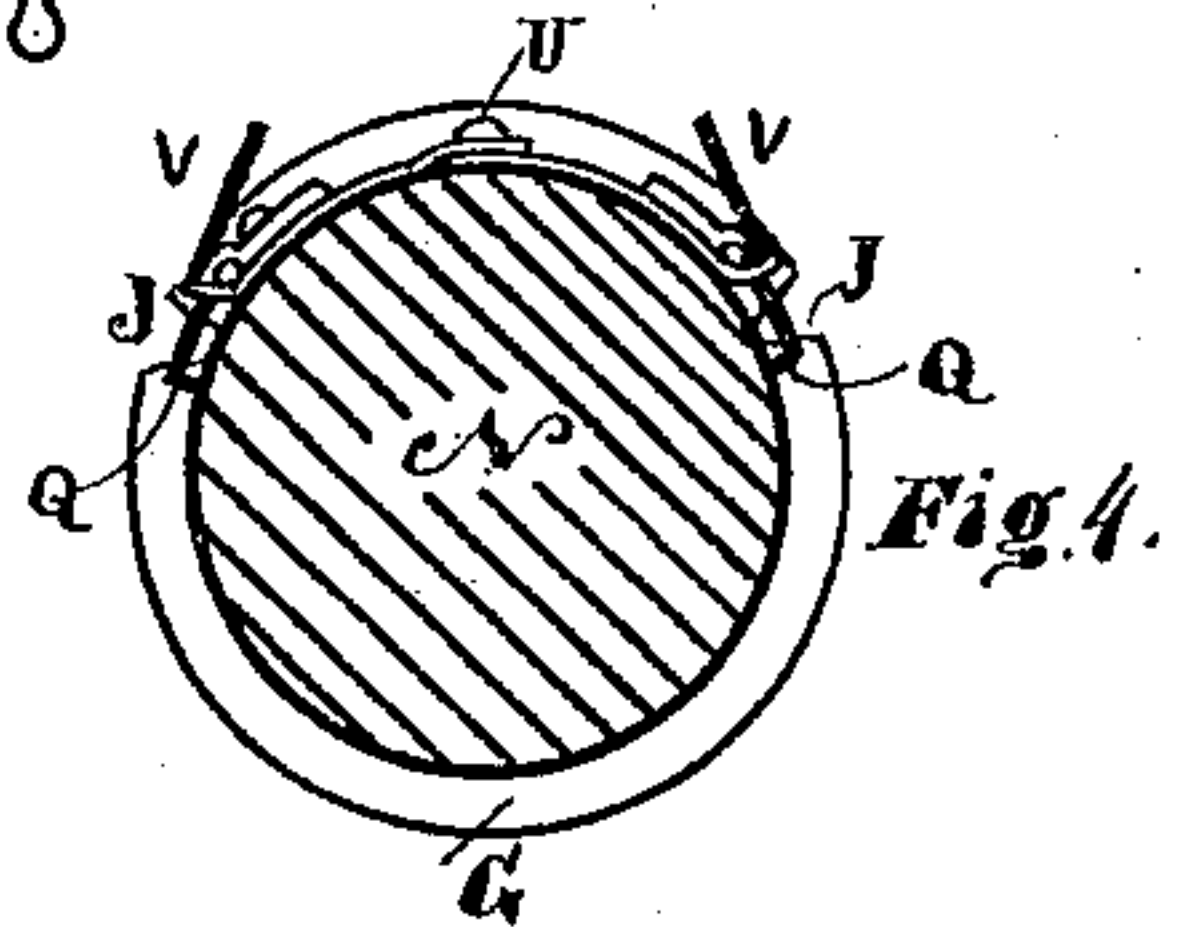


Fig. 4.

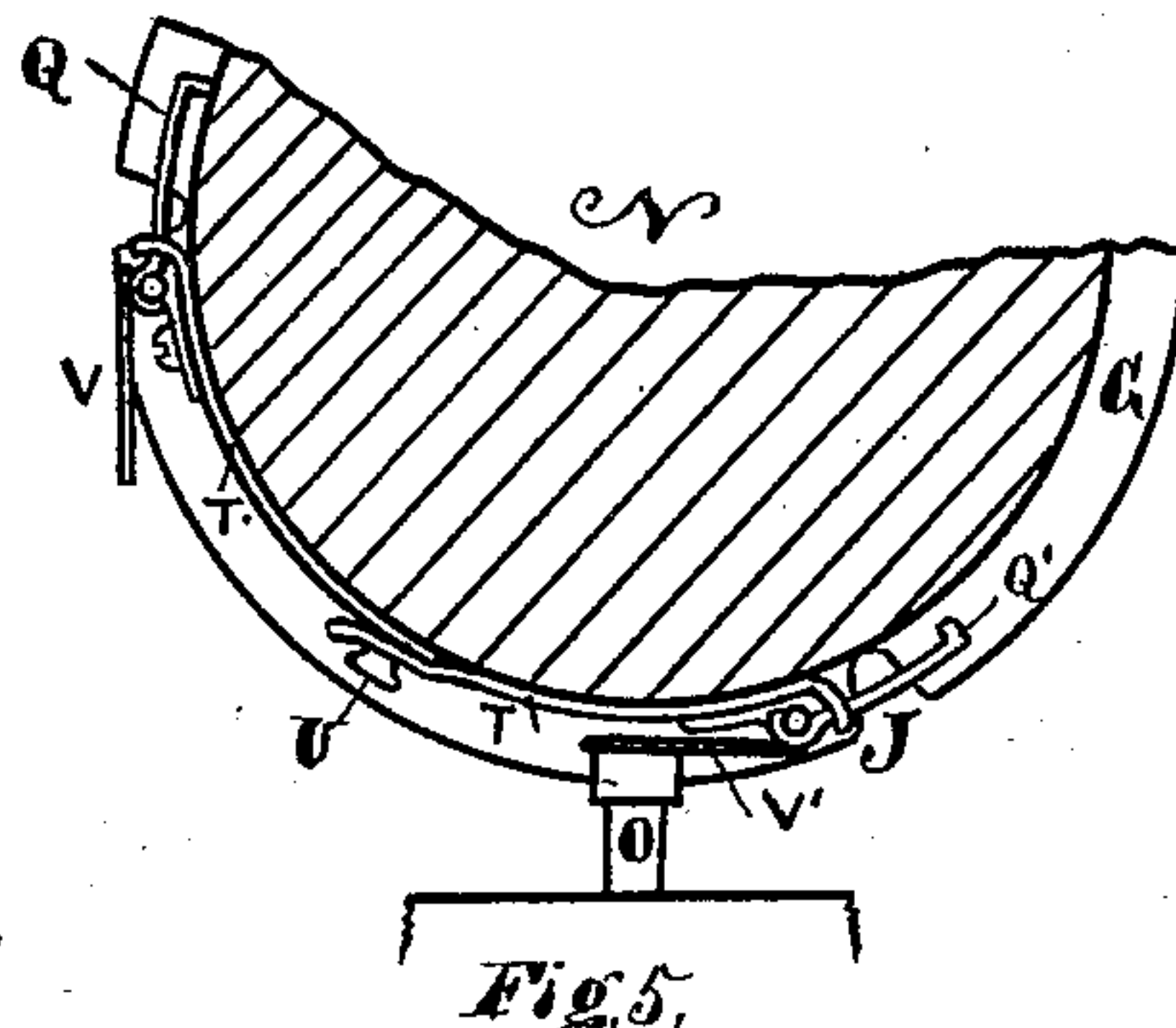


Fig. 5.

WITNESSES;  
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# UNITED STATES PATENT OFFICE.

JOHN R. RANKIN, OF INDIANAPOLIS, INDIANA.

## IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. **177,002**, dated May 2, 1876; application filed November 19, 1875.

*To all whom it may concern:*

Be it known that I, JOHN R. RANKIN, of Indianapolis, county of Marion, State of Indiana, have invented certain Improvements in Hand Printing-Presses, of which the following is a description, reference being had to the accompanying drawings.

My invention consists in the construction and arrangement of the bed-frame and guide-tracks, whereby a weighted rolling-cylinder, and its improved arrangements, are made to roll from one end of the machine to the other, and make impressions of all matter set up on the raised bed below the cylinder; also, the arrangement of the grippers and mode of operating them in connection with the rolling-cylinder and stops or studs on the bed, whereby the paper is first clasped and held firm to the cylinder until an impression has been taken, and then to release and deposit the paper on racks at each end of the machine, the whole designed as a hand printing-press for newspapers and job-work.

Figure 1 represents a side elevation of my improved hand printing-press. Fig. 2 is a plan view of the same, with the feed-tables removed to show more fully the arrangement of the parts below. Fig. 3 is an enlarged view of the cylinder, showing the arrangement of the grippers and their connections with the cylinder. Fig. 4 is a sectional view of the cylinder, taken through the line *a b*. Fig. 5 is an enlarged sectional view of the same, showing more fully the arrangement and connection of the grippers and cylinder.

A represents the bed or frame of the table mounted on legs *E E E E*. On each end of the frame A are arranged upright standards *L L L' L'*, and on top of these standards are secured the feed-tables *K K'*. On each pair of standards *L L'* are also arranged racks or bars *M M*, designed to receive the printed paper after it has been carried by the roller N over the form *F*. On each side of the frame A are arranged the guide-tracks C and the cog-tracks B, on which the cylinder N rolls from one end of the machine to the other. The tracks B are provided with two cogs, one near each end, as at *D D'*, which are designed to hold the cylinder N, by means of the notches *J J'* in the flanges *G G'*, in its proper position

when at each end, so as to always present the grippers *Q Q'* in the proper position to receive or release the paper at each end of the machine. Between the two frames A A is arranged a raised portion of the bed *F'*, designed to hold the type or form *F*, as shown in Figs. 1 and 2. The cylinder N is made very heavy, and is provided with a flange, *G G'*, at each end, which projects over the inside guide-track C, and rolls on the top of the outside track B. This arrangement allows the main cylinder N to roll on the track C perfectly free from any interruption. Each flange *G G'* of the cylinder is provided with two notches, *J J'*, arranged to receive the cogs *D D'* of the track B, and always present the grippers *Q Q'* in their proper place. On the cylinder N are arranged two rods, *P P'*, which are journaled to the adjustable plates *R R R' R'*. Each of these adjustable plates *R* are secured to the cylinder N at a sufficient distance from the flanges *G G'* to allow the track C to work between them, and each plate *R* is provided with a slot in which is inserted the screws *S S* for securing the plates *R*, as desired, so as to allow the grippers *Q Q'*, which are attached to the rods *P*, to be adjusted on the cylinder for different lengths of paper. On the rods *P P'* are also arranged the grippers *Q Q'*. An end view of the arrangement is shown in Figs. 4 and 5. These grippers *Q* are securely fastened to the rods *P P'*, and the springs *T T'*, which are made of rubber, are looped over the grippers, and pass under the rods *P P'*, and are secured to the studs or screws *U* in such a manner as to cause a pressure of the ends of the grippers *Q* on the cylinder N sufficient to hold the paper, which is clasped between the grippers and cylinder. On the rods *P P'* are also pivoted the levers *V V'*, which are arranged so as to be hooked under the catches *w w* by hand, while the paper is being inserted between the grippers and cylinder, and are then released from the catches *w w* by hand, in order to allow the grippers *Q* to firmly clasp the paper and hold it in its position on the cylinder while an impression is being taken. When the cylinder N has been rolled over the form *F*, and approaches either end of the bed, then the levers *V* will come in contact alternately with the studs *O* or *O'* that project up



om the bed of the press at each end, and thus depress the levers V, which, by their connection with the rods P will cause the grippers Q Q' to be elevated from the cylinder and release the paper, which is then deposited on the rack M. While the cylinder is in this position the grippers on the other side are lifted and held up in the same manner to receive another sheet of paper from the other table, and is operated the same on the return of the cylinder, and deposits the paper on the other rack M, thus making a double-acting hand printing-press of great utility for newspapers and job-work.

The cylinder N is to be made of sufficient weight to make a good impression, and the gripper-bars P P' should not be long enough to interfere with the track U; but to leave sufficient room between their ends and the flanges X G' to allow the cylinder to roll unobstructed over the track.

I do not claim the cylinder rolling on a track, as that is old, and has been used in ordinary proof-presses.

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

1. In a proof-press, the combination, with the cylinder N having the notched end flanges G G', of the guide-rails U, and the slotted journal-plates R R' supporting the gripper-

rods P P', said plates being located upon the cylinder in such a manner as to secure its free revolution without the interference of the gripper-rods, substantially as herein described.

2. The combination, with the adjustable journal-plates R R' attached to the cylinder N substantially as described, and the gripper-rods P P', provided with the fingers Q Q' and corresponding retaining-springs T T', of the lever V V' and the catches w w, whereby the gripper-fingers are held from contact with the cylinder while the paper is being fed, substantially as herein described.

3. The combination, with the adjustable journal-plates R R' attached to the cylinder N substantially as described, and the gripper-rods P P' having the fingers Q Q' and corresponding retaining-springs T T', of the levers V V' and studs O O', whereby the printed sheets are released from the gripper-fingers during the revolution of the cylinder, substantially as hereinbefore set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN R. RANKIN.

Witnesses:

E. O. FRINK,  
S. C. FRINK.