

(No Model.)

2 Sheets—Sheet 1.

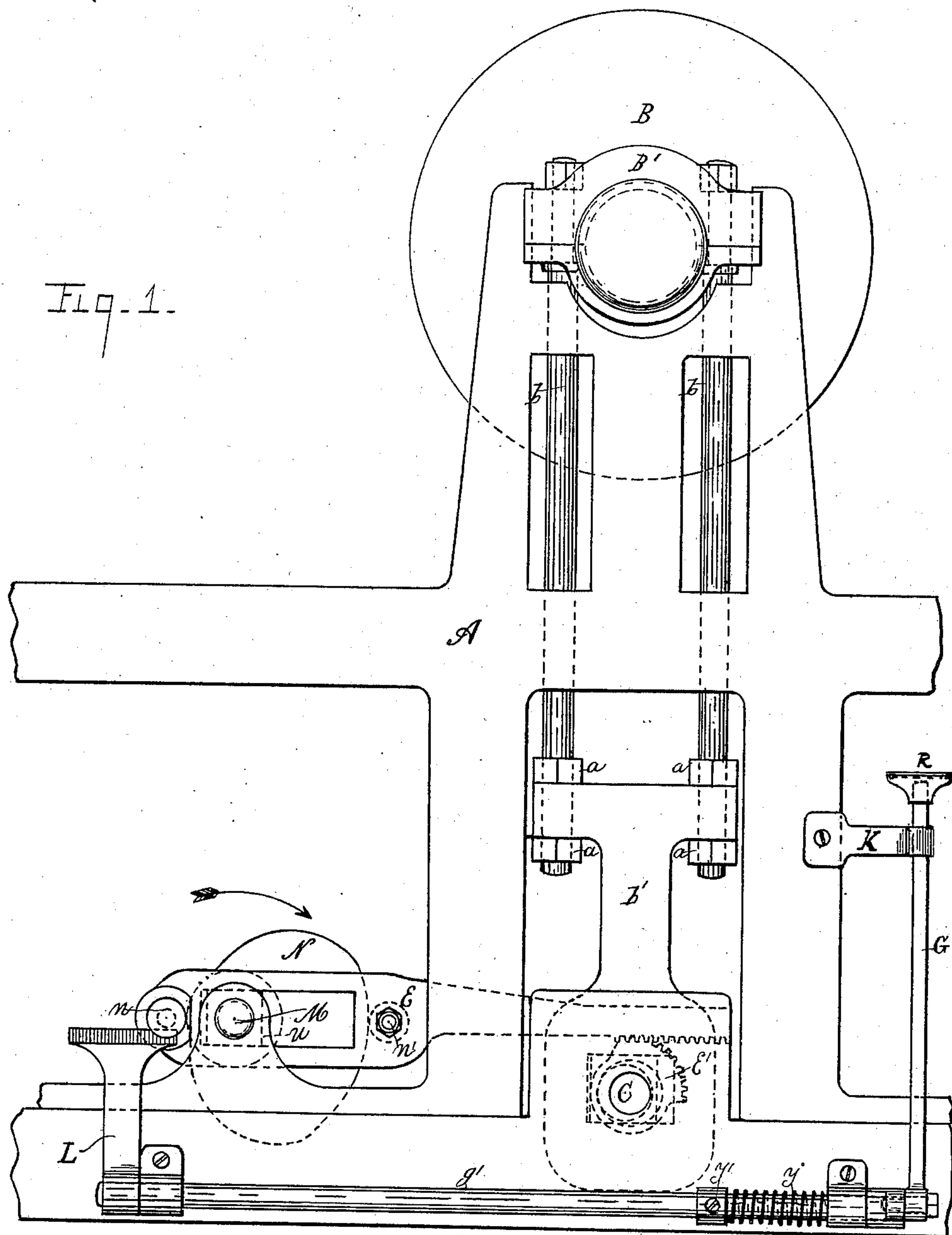
R. MIEHLE.

TRIPPING MECHANISM FOR CYLINDER PRINTING MACHINES.

No. 365,931.

Patented July 5, 1887.

Fig. 1.



Witnesses:

Alfred Roby
Ashlin J. Beckler

Inventor:

Robert Miehle

R. MIEHLE.

TRIPPING MECHANISM FOR CYLINDER PRINTING MACHINES.

No. 365,931.

Patented July 5, 1887.

Fig. 4.

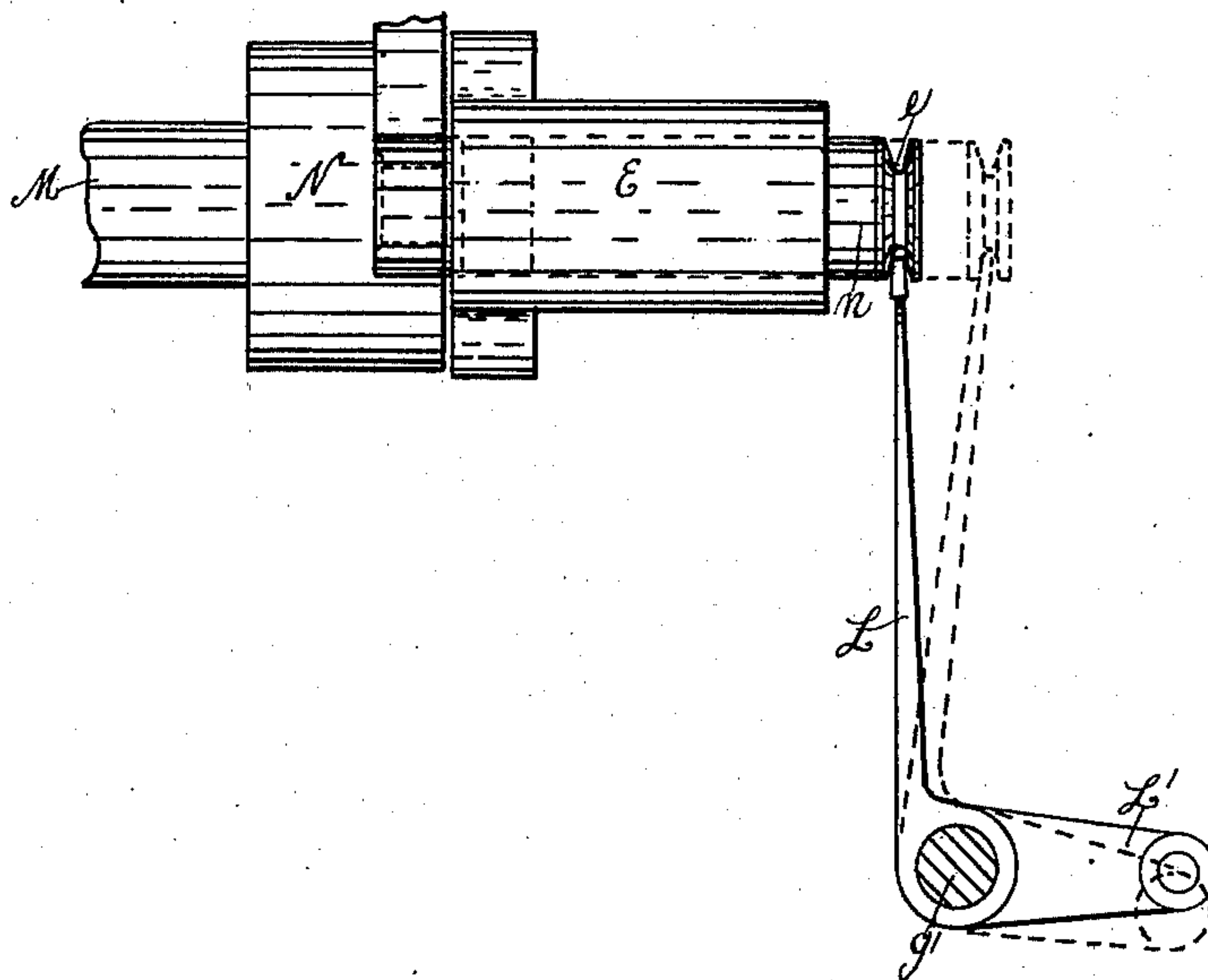


Fig. 3.

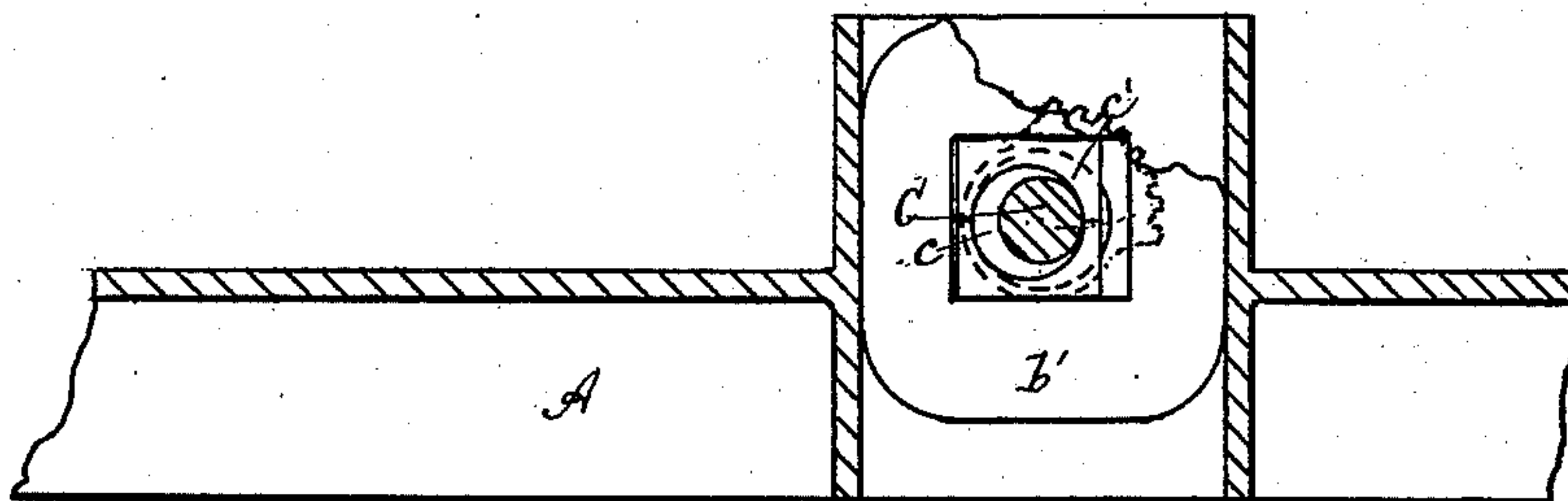
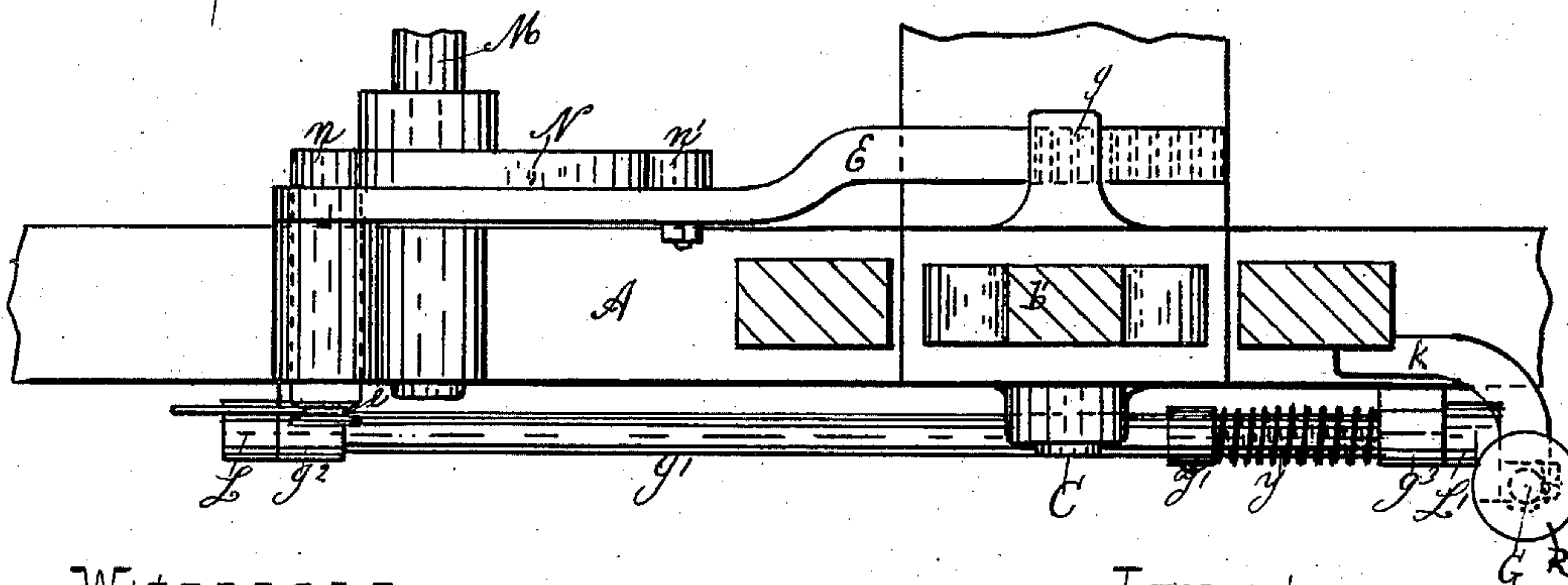


Fig. 2.



Witnesses:

Alfred Robt.
Ashlin J. Beckler

Inventor:

Robert Miehle.

UNITED STATES PATENT OFFICE.

ROBERT MIEHLE, OF CHICAGO, ILLINOIS.

TRIPPING MECHANISM FOR CYLINDER PRINTING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 365,931, dated July 5, 1887.

Application filed October 4, 1886. Serial No. 215,324. (No model.)

To all whom it may concern:

Be it known that I, ROBERT MIEHLE, of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Tripping Mechanism for Cylinder Printing-Machines, of which the following is a specification, to wit:

This invention relates to the tripping mechanism for cylinder printing-presses, in which the cylinder has two or more revolutions for one impression, the same consisting in the combination and arrangement of parts, whereby the cylinder is controlled at will by the attendant, as hereinafter fully described.

In the drawings, Figure 1 is a portion of a side view in elevation of a two-revolution-cylinder printing-press with the invention applied thereto. Fig. 2 is a top plan view of the same. Fig. 3 is a sectional side view showing the rock-shaft and connecting-link for the impression-cylinder. Fig. 4 illustrates the engaging friction roller or stud in and out of position with the cam.

A designates the main frame of the press, in which the impression-cylinder B is mounted, having split journal-boxes B', which are movable vertically in the frame A. The two halves of the journal-boxes are held together by extension-rods b, which pass through the link b', having set nuts a a, which serve for regulating the height of the cylinder. The links b' pass downward in a square opening in the main frame, which guides the same in their movement when raised or lowered by the rock-shaft C, by means of eccentric e and square sliding box c', which slides horizontally in the square opening of the link b'.

Upon the cam-shaft M is cam N, which engages with the friction rollers or studs n n' upon the sliding or cam arms E, which has a sliding box, u, for supporting the same upon the shaft M as it is moved to and fro by the cam N. The farther end of the arm E is formed with rack-teeth, which engage the segmental gear E', secured upon rock-shaft C. The lug g prevents the arm E disengaging from the segment E'.

It will be noticed that the friction roller or stud n' is made stationary, while the other stud, n, is made somewhat elongated, and is ca-

pable of being moved laterally from cam N, which will be explained presently.

Upon the lower portion of the main frame is a rod, g', having bearings g² g³. At one end of this rod is secured a lever, L, broadened at its top, which engages the groove e of the stud n, the other end of said rod having a crank-arm, L', connecting with the vertical rod G, which passes through bracket K, the rod G having its top end broadened into a disk, R, for the operator to step upon when the impression-cylinder is to be tripped. The spring y upon rod g', which has one end secured to the bearing g³, and the other to the stop y' on rod g', serves to always keep the lever L pressed inward, so that the friction-roller n will keep its proper position with cam N.

The following is a descriptive operation of all parts just described: Beginning at the time when the cylinder is in a raised position, as in the drawings, and the shaft M is turned in the direction of the arrows, the cam N in revolving engages the friction-roller n, thereby drawing arm E away from the rock-shaft C, which revolves the same, so that eccentric e draws the cylinder downward. The same is kept in this position until the impression is taken, after which the cam N arrives at a point to engage the friction-roller n', the rock-shaft C being then turned so as to raise the cylinder.

In order to make cam N inoperative, so as to leave the cylinder in a raised position, the attendant forces the vertical rod G downward, which, through the crank-arm L', swings lever L outward, thereby drawing the elongated stud n out of the path of cam N sidewise, and thereby preventing the cam disturbing the arm E, which leaves the cylinder in a raised position until the rod G is released by the attendant, after which spring y returns the friction roller or stud n in its proper position, to be again engaged by cam N in its next revolution.

In view of modifying the means for operating the stud n, it is held that the same may be operated by a hand-lever, or any other suitable means may be employed to slide stud n out from engagement with cam N. The rock-shaft for raising and lowering the cylinder, as shown herein, may be substituted for any of

the well-known means which are used for this purpose, which are operated by a cam and cam-arm, as herein described.

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

1. In a cylinder printing-press, the combination, with the impression-cylinder, operating-cam and cam-arm, and means, substantially as described, operated by said cam and cam-arm, to raise and lower the cylinder, of the engaging-stud or friction-roller receiving a sidelong shifting movement from out of the path of said cam independent of said cam-arm, to trip the cylinder, substantially as described.

2. In a cylinder printing-press, the combination, with the impression-cylinder, operating-cam and cam-arm, and means, substantially as described, operated by said cam and cam-arm, to raise and lower the cylinder, having a sidelong sliding stud or friction-roller operated by the lever L independent of said cam-arm, substantially as described.

3. In a cylinder printing-press, the combination, with the impression-cylinder, operating-cam and cam-arm, and means, substan-

tially as described, operated by said cam and cam-arm, to raise and lower the cylinder, having a sliding stud or friction-roller operated by the lever L and crank-arm L', substantially as described.

4. In combination with the impression-cylinder, cam and cam-arm, and means, substantially as described, operated by said cam and cam-arm, to raise and lower the cylinder, sliding stud or friction-roller, lever L, crank-arm L', and rod G, substantially as and for the purpose set forth.

5. In combination with the impression-cylinder, cam and cam-arm, and means, substantially as described, operated by said cam and cam-arm, to raise and lower the cylinder, sliding stud or friction-roller, lever L, crank-arm L', rod G, and spring y, all combined as set forth.

In testimony whereof witness my hand, at the city of Chicago, State of Illinois, this 20th day of September, 1886.

ROBERT MIEHLE.

Witnesses:

GEO. W. FRITZ,

ASHLIN J. BECKLER.