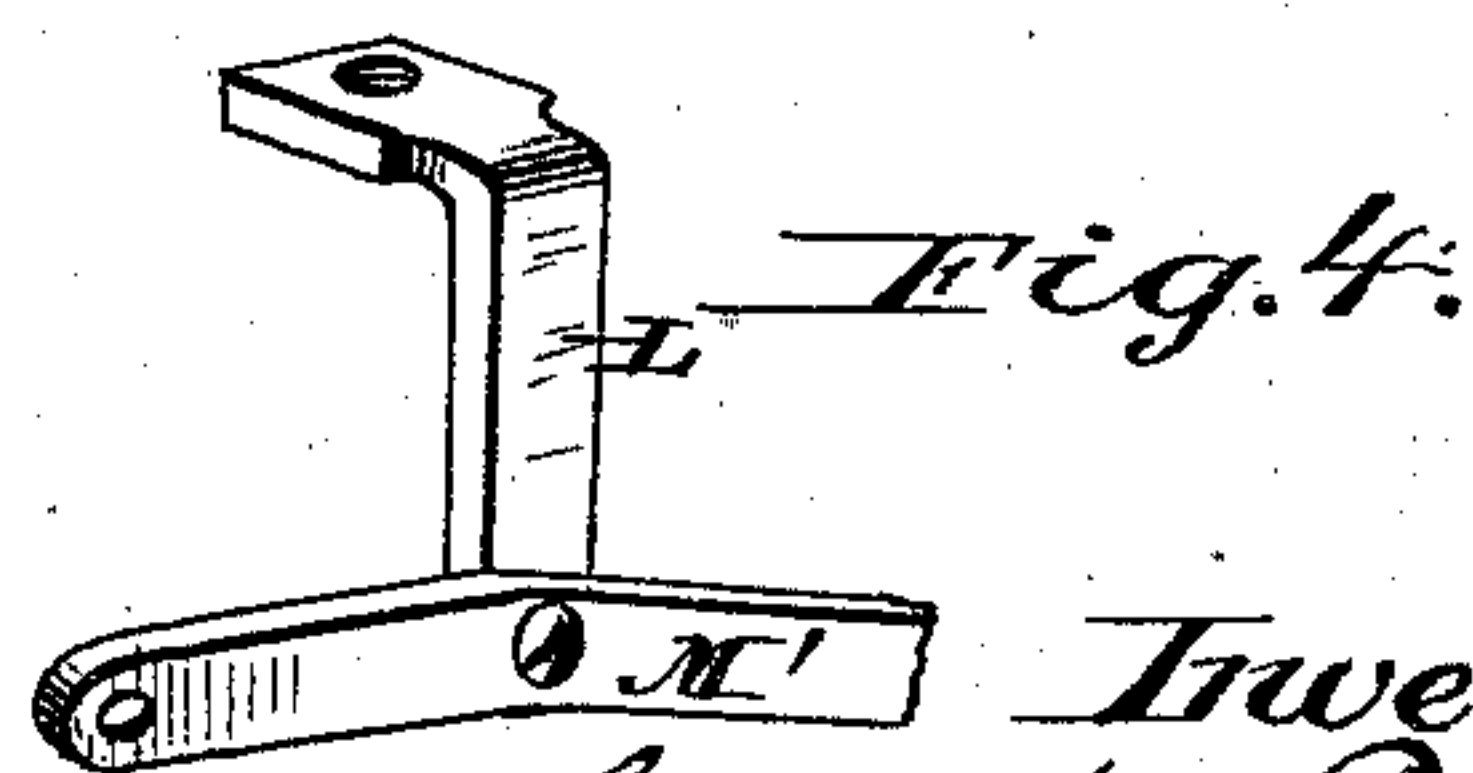
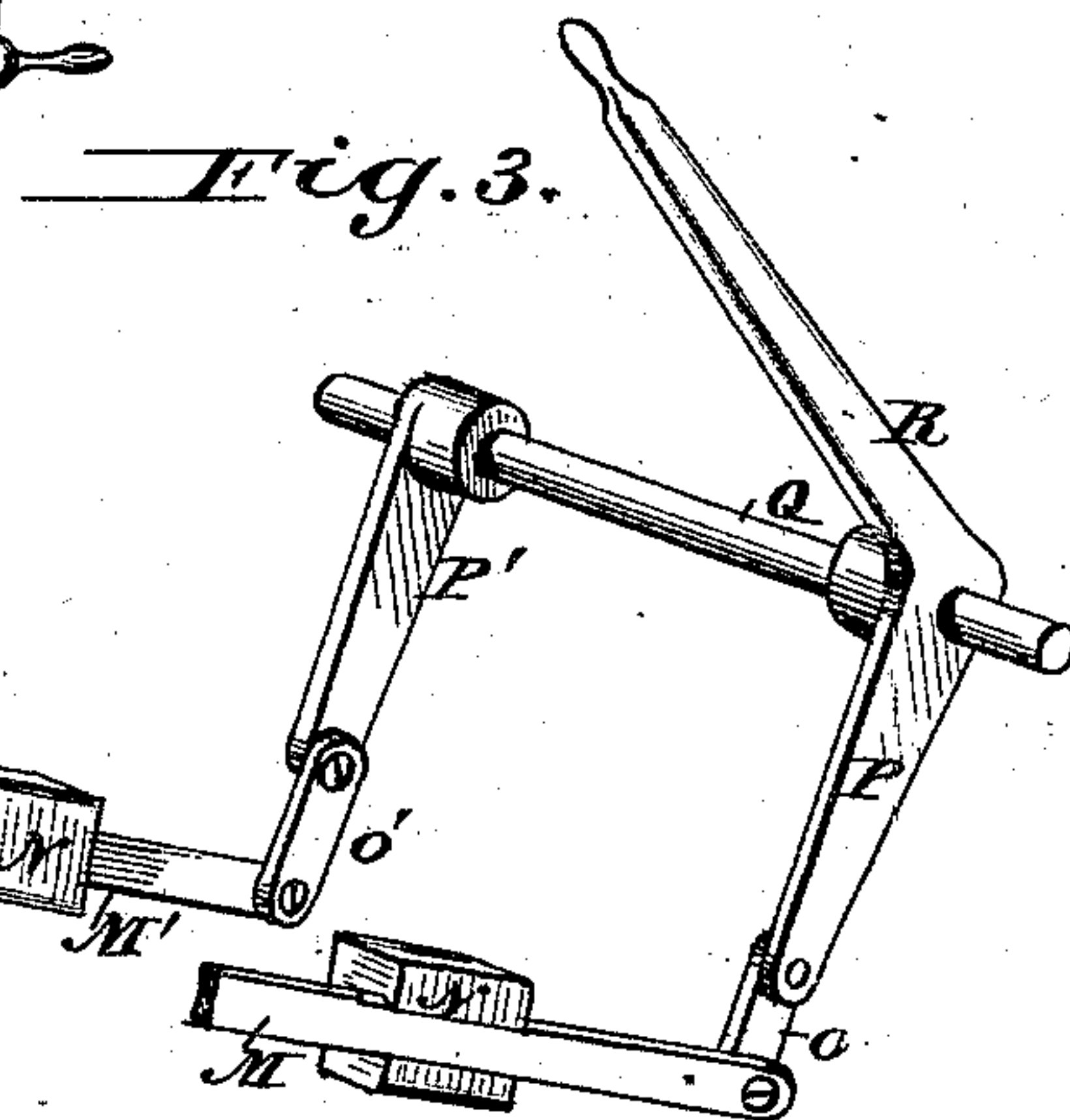
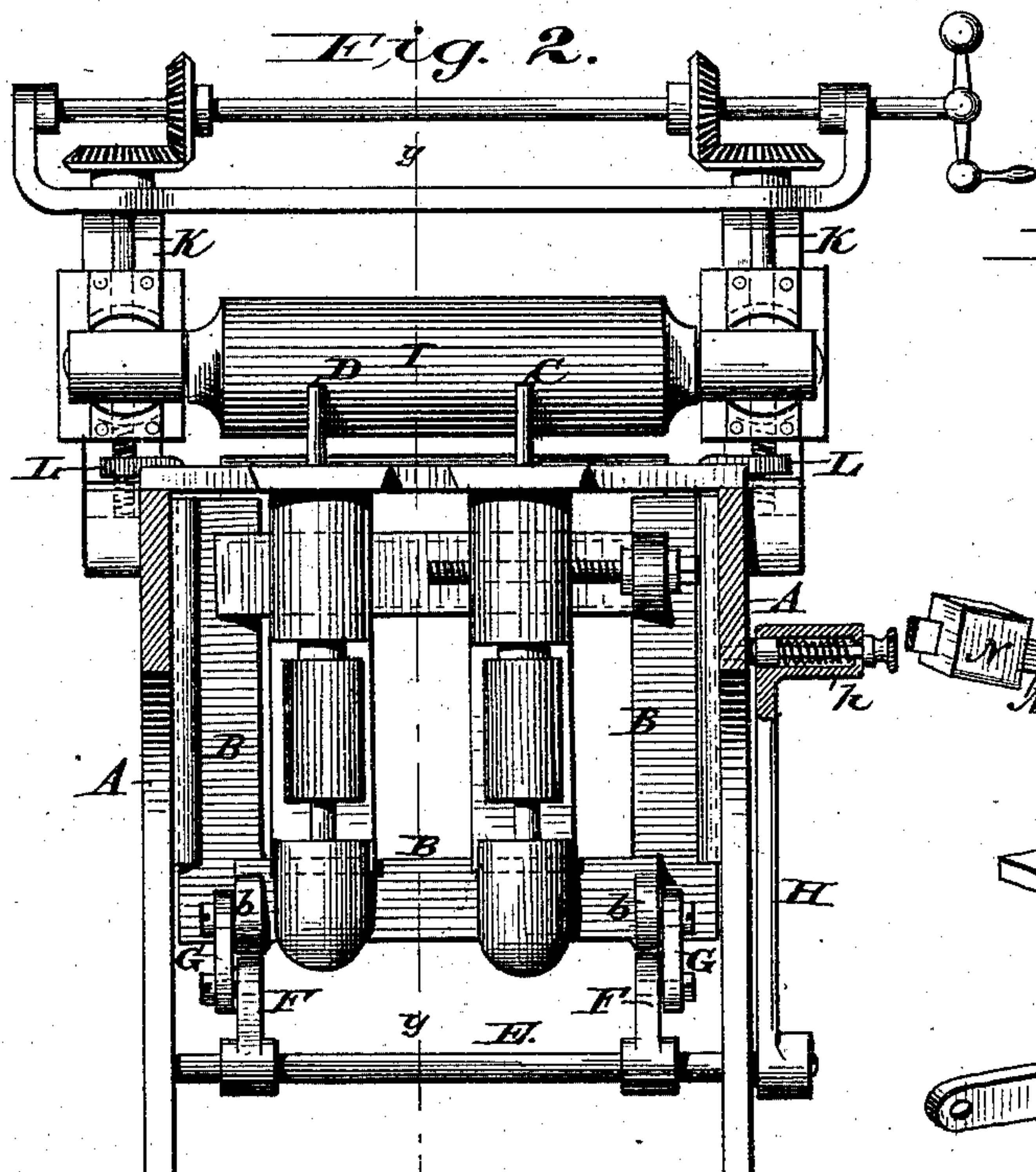
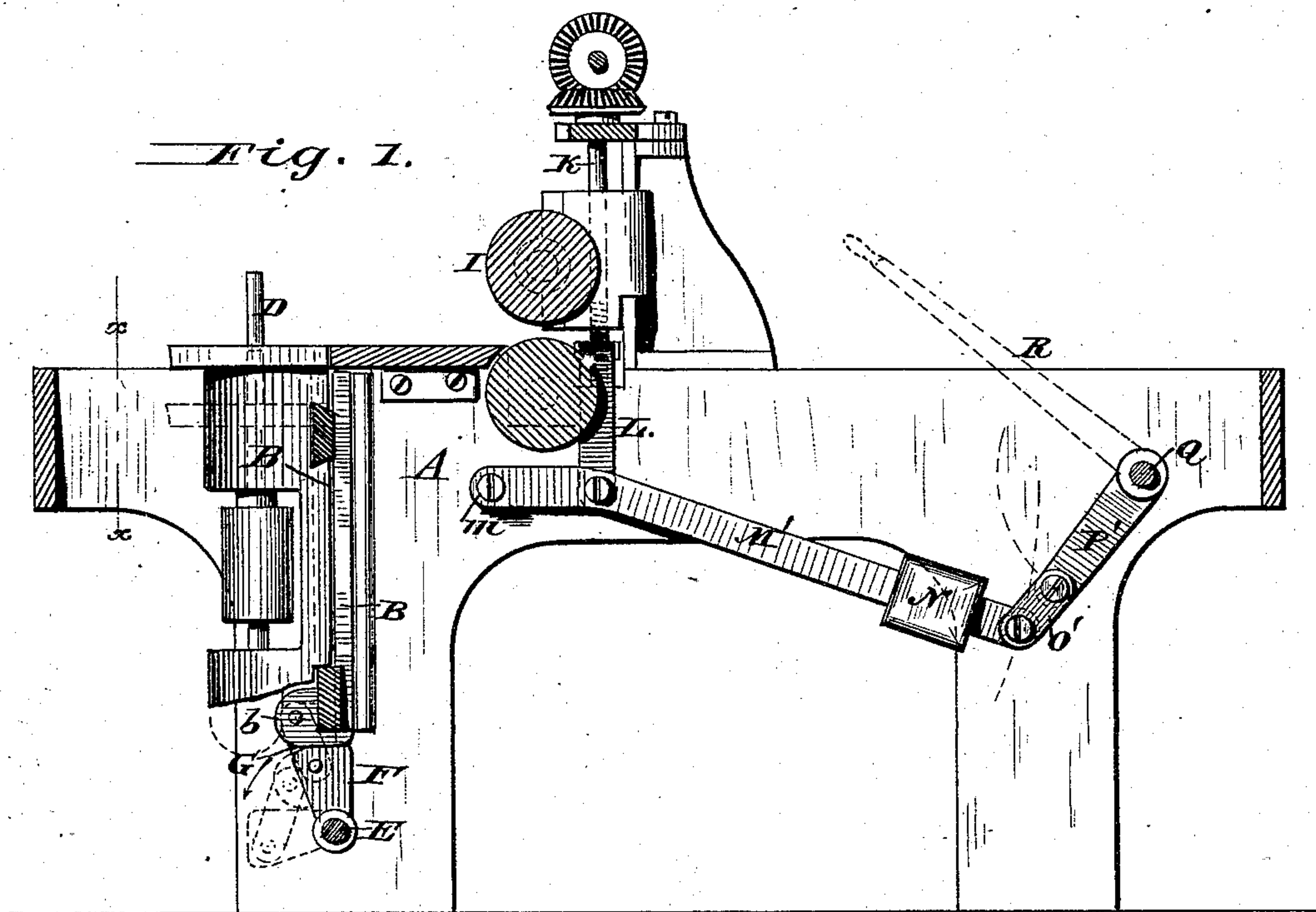


G. W. PASSEL & G. W. DOANE.
Planing and Matching Machine.

No. 219,651.

Patented Sept. 16, 1879.



Attest:
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by their attorney
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UNITED STATES PATENT OFFICE.

GEORGE W. PASSEL AND WILLIAM H. DOANE, OF CINCINNATI, OHIO,
ASSIGNORS TO J. A. FAY & CO., OF SAME PLACE.

IMPROVEMENT IN PLANING AND MATCHING MACHINE.

Specification forming part of Letters Patent No. **219,651**, dated September 16, 1879; application filed February 21, 1879.

To all whom it may concern:

Be it known that we, GEORGE W. PASSEL and WM. H. DOANE, both of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Planing and Matching Machines; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates more especially to planing and matching machines in which provision is made for lowering the matcher-heads below the surface of the platen or bed, so that the machine can be used either in its duplex character or as a simple planing-machine.

One feature of our improvement consists of a peculiar mechanism for adjusting—that is, elevating and lowering—the matcher-frame to move the matcher-heads into and out of working position. This mechanism consists of a crank-shaft and links so devised that on elevating the matcher-frame the crank-arms of said shaft arrange themselves vertically under and come in contact with the bottom of the matcher-frame, giving a solid support to the latter, and relieving the link-pins from strain.

Another feature of our improvement, one adapted for application to most all machines operating with weighted feed-rolls, consists in connecting the weighted ends of the levers by links to crank-arms of a transverse rock-shaft, so that the levers must operate in unison, and will maintain the feed roll or rolls they are connected with in horizontal positions.

In the annexed drawings, Figure 1 is a longitudinal section of so much of a planing and matching machine as it seems necessary to show in order to illustrate our invention. Fig. 2 is a sectional front or end elevation. Figs. 3 and 4 are detail views of detached parts.

The same letters of reference are used in all the figures in the designation of like parts.

The matcher-frame B of the machine is mounted in ways and between the sides of the main frame A, so that the matcher-head spindles C and D will be the proper distance from

the planing-cylinder. (Not shown.) The bearings of the matcher-head spindles are seated or supported on a horizontal rail of the matcher-frame, and are provided (one or both) with means for adjusting them laterally, as usual. The entire matcher-frame, with its appendages, is supported by the shaft E, with the crank-arms F F of which said frame is connected by the links G G.

The crank-arms F are in line or in the same vertical planes with the lugs b of the matcher-frame to which the links G are pivoted, and the end of the crank-arms and the bottom edge of said lugs are so formed, respectively, and so proportioned that when the crank-arms are turned up into a vertical position they will touch the bottom edge of the lugs and act as props between the matcher-frame and the shaft E. As the crank-arms in their turned-up position receive the weight of the matcher-frame directly, the links G and the pivot-pins thereof are then relieved entirely from strain.

The shaft E is supported in bearings in the sides of the main frame. One end projects through the frame, and is provided with a handle, H, by which the shaft may be turned to lower and elevate the matcher-frame. A spring latch-pin, h, in the handle of the lever is adapted to shoot into a hole in the main frame and lock the lever when the matcher-frame has been elevated into working position.

The upper adjustable feed-roll, I, turns with its journals in boxes mounted to slide on standards and supported by screw-spindles K, as usual. The lower ends of the screw-spindles K are, respectively, swiveled to elbow-links L, the lower ends of which are pivoted to levers M and M', respectively. The short arms of these levers are fulcrumed on stud-pins m on the sides of the main frame, while their long rearwardly-projecting arms carry adjustable weights N to bear the feed-roll I down with the requisite amount of pressure. The long arms of these levers are connected by links O and O' to crank-arms P and P' of a rock-shaft, Q, mounted on the main frame. Being thus connected, the levers must always move in unison and raise or lower the feed-roll I equally and simultaneously at both ends, so as to maintain its horizontality. In conse-

quence no provision requires to be made with respect to the binding of the gearing for driving the feed-rolls, and one set of such gearing only will be required, instead of a set at each end of the feed-rolls. Shaft Q is provided with a hand-lever, R, for rocking it to lift the weighted levers and feed-roll I when required.

It is obvious that the crank-arms P and P' may be directly connected to the weighted levers by fixed stud-pins playing in slots, in which case the links O and O' could be dispensed with.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, substantially as before set forth, of the matcher-frame, the shaft pro-

vided with crank-arms adapted to act as props between the shaft and the matcher-frame, and the connecting-links.

2. The combination, substantially as before set forth, of the weighted levers, of the adjustable feed-roll, and the rock-shaft provided with crank-arms, with which said levers are connected.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

GEO. W. PASSEL.
W. H. DOANE.

Witnesses:

ALBERT N. SPENCER,
CHAS. G. JONES.