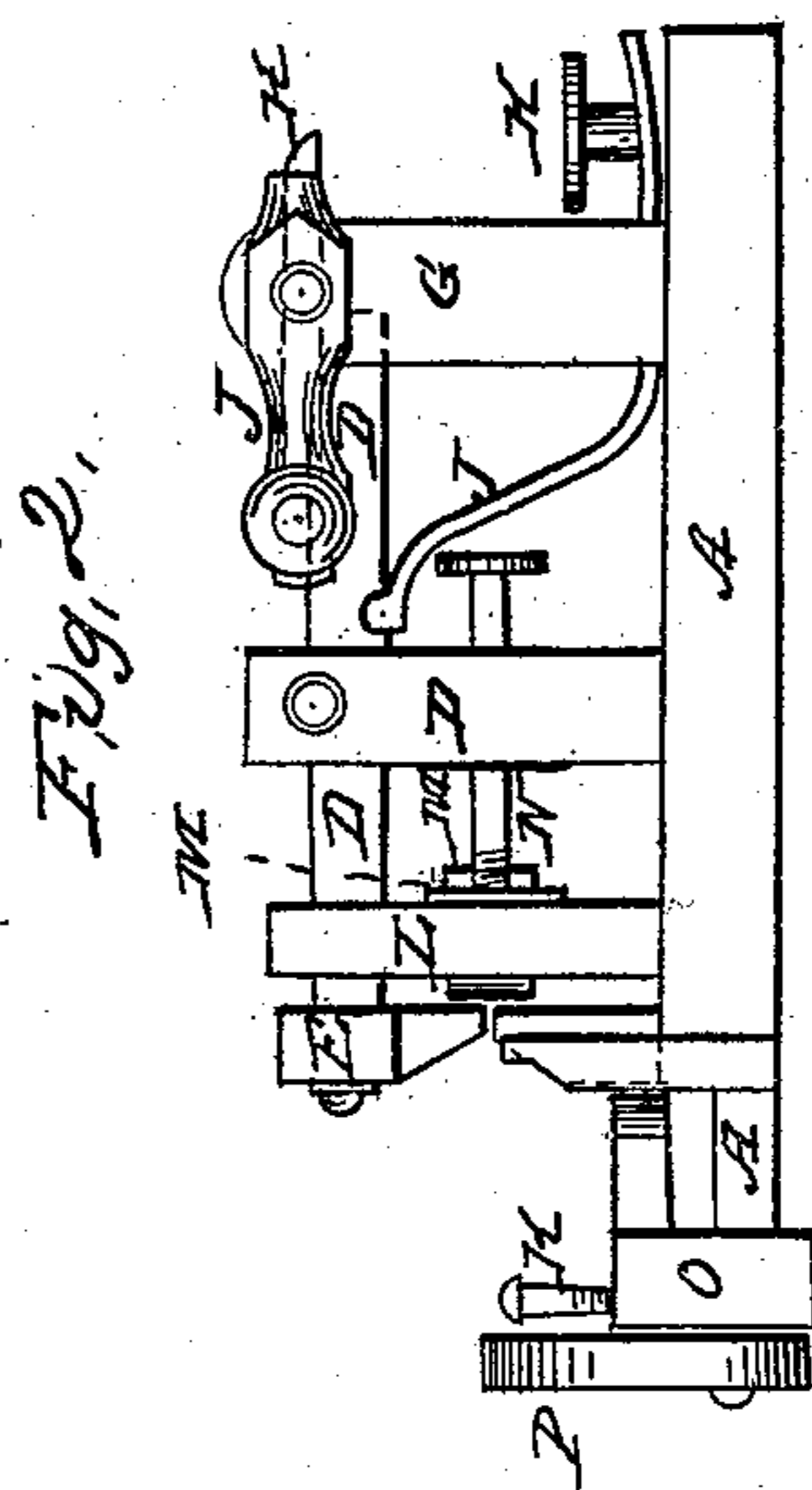
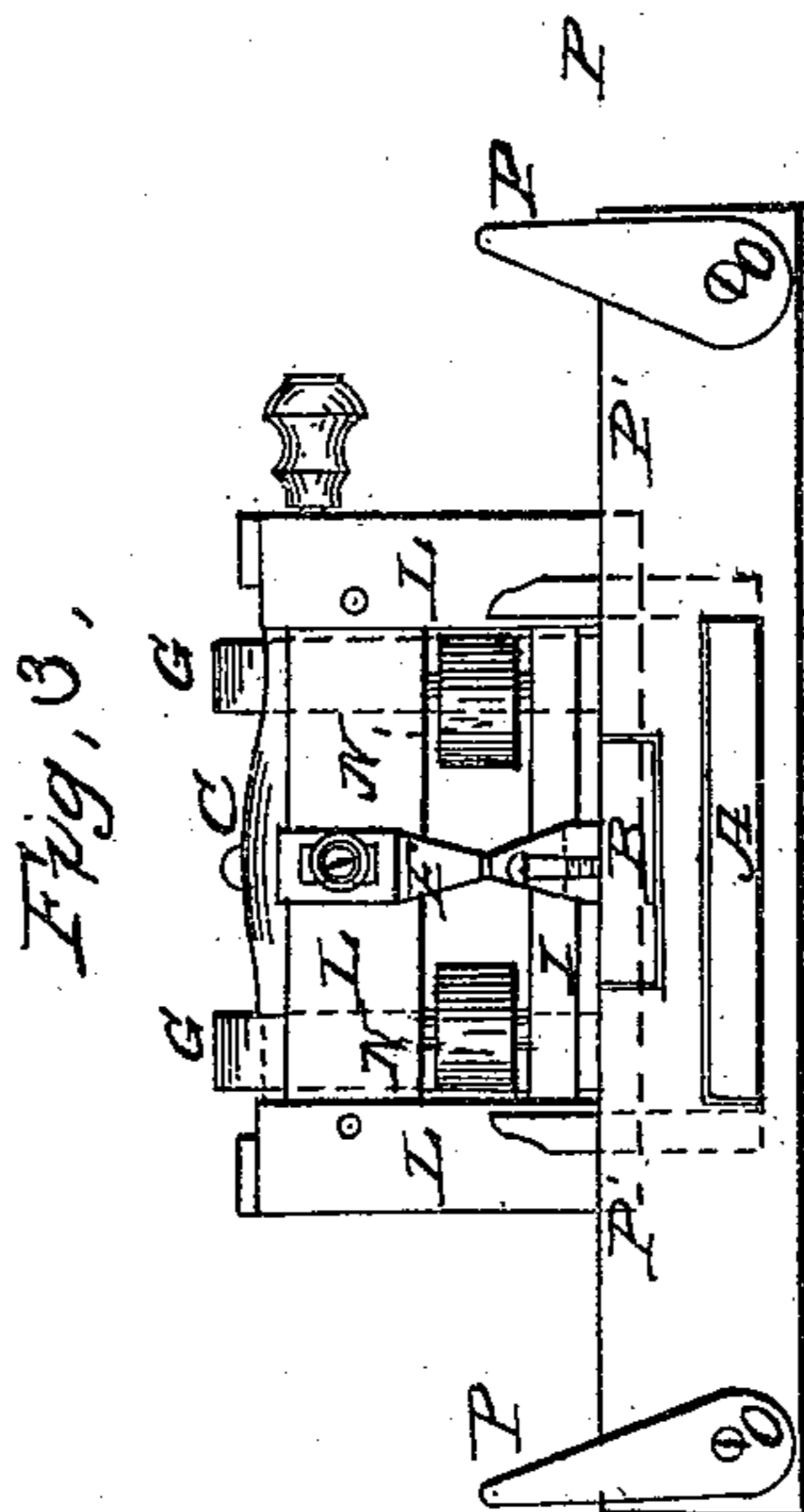
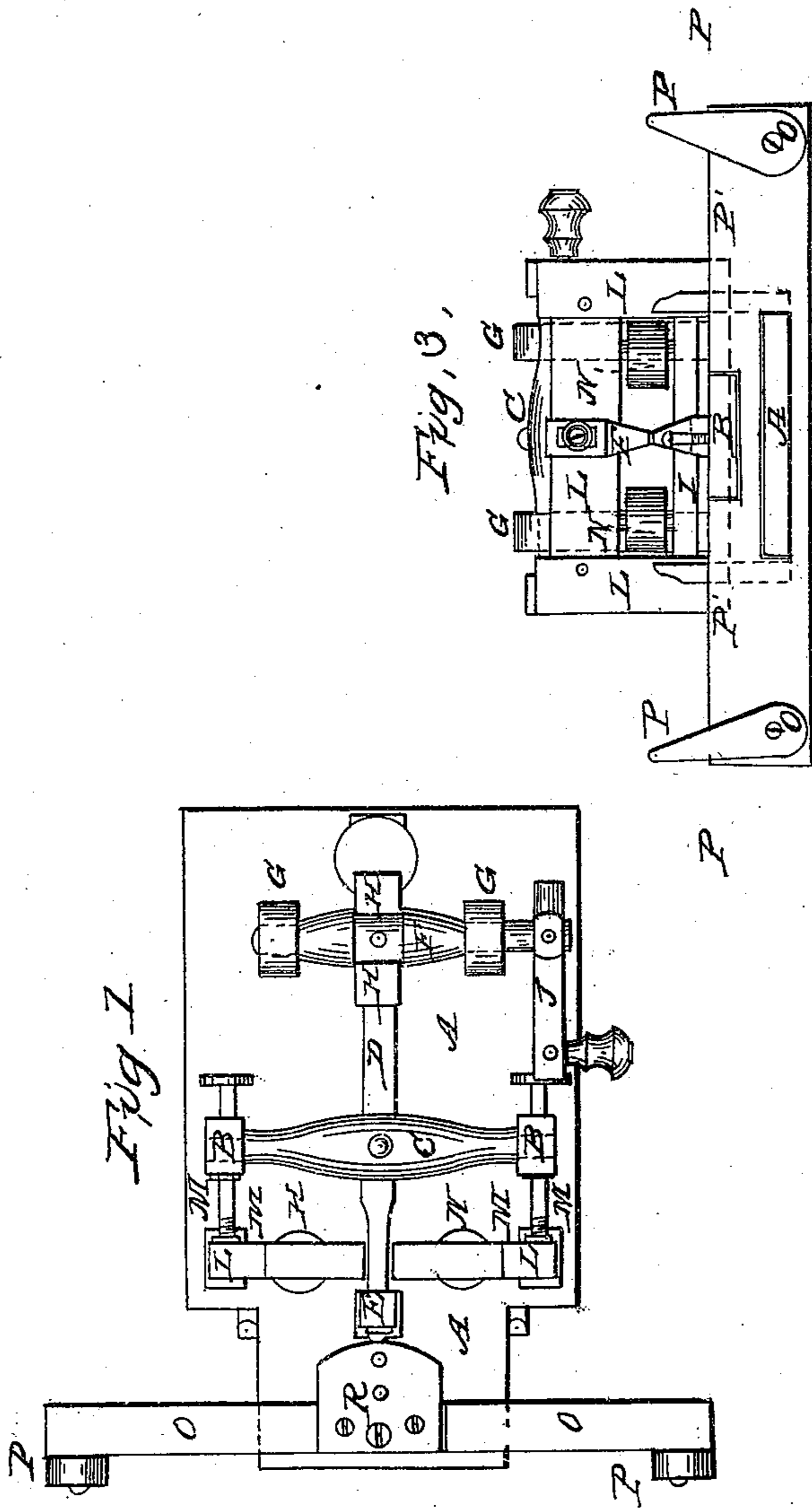


A. SHOEMAKER.

Saw Set.

No. 24,408.

Patented June 14, 1859.



Witnesses:
Joseph S. Starr
Solomon Hale

Inventor:
Alex. Shoemaker

UNITED STATES PATENT OFFICE.

ALEXANDER SHOEMAKER, OF CAREY, ASSIGNOR TO JAMES G. HUNT, OF
READING, OHIO.

IMPROVED SAW-SET.

Specification forming part of Letters Patent No. 24,408, dated June 14, 1859.

To all whom it may concern:

Be it known that I, ALEXANDER SHOEMAKER, of Carey, in the county of Wyandot and State of Ohio, have invented certain new and useful Improvements in Saw-Sets; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a plan view, Fig. 2, a side view, and Fig. 3 a front end view.

Like letters denote like parts in the several views.

To the platform or table A are secured two standards B B, Figs. 1 and 2. To the upper end of these standards is connected the rock-shaft C, by means of its journals in boxes C', in such manner as to allow the shaft to work. To this shaft is secured the arm D, to one end of which is fastened the hammer E in any proper manner. The other end of the arm D extends under the shaft F, which shaft has its bearings in the standards G G, which are secured to the platform A. In or about the center of the cam-shaft F is fastened the cam H, which, acting on the arm, causes the hammer E to be raised, and by the action of the spring I on the under side of the arm the hammer is thrown back, thus alternately the hammer is raised and forced by the action of the cams H H and spring I, Figs. 1 and 2.

The cam-shaft F is operated by the crank J keyed to it, and for the purpose of increasing or decreasing the force of the blow by the hammer, as may be required in setting saws, more or less tension for that purpose may be given to the spring I by means of the thumb-screw K.

For the purpose of gaging the saw-teeth of various sizes and thickness, so that the hammer will at all times be the same uniform distance from each point of the tooth, which will insure an even set to the teeth and prevent the blade from crimping, I employ the sliding gage L, which consists of a stand or frame, as seen in Fig. 3. The side posts of this frame are inserted in a slot in the table A, so as to allow the frame to slide to and from the hammer, according to the size of the teeth. This sliding frame is operated by means of the screws M M, each of which has a bearing in

the standards B B, so as to allow them to turn but not slide lengthwise. These screws work in nuts M' M', fastened to the stand, so that by turning the screws the stand may be moved at any required distance according to the size of the teeth. Connected with the stand are two rollers N N, which receive the points of the teeth, and which allow the saw to move easily from one tooth to another on the anvil when set.

From the table extends a projection A, upon which slides the arm O. To this arm are connected two fingers P P, which may be turned upon the pins Q Q, as indicated at P', Fig. 3, so that the points of the fingers in connection with the gage-screw R, in accordance with the set to be given to the saw, as the blade of the saw rests upon the gage-screw R, and the fingers when the saw is being set. In the arm are a series of holes which allow the gage-screw to be adjusted nearer the hammer in case of narrow saws; and for this purpose the arm O may be turned round and placed upon the projection, so that the fingers P P will be on the inside of the arm and nearer the hammer than on the outside of the arm, as herein shown.

By means of the adjustability of the arm with the gage-screw and fingers saws of various widths may be very conveniently set, and uniformly. As the blow for each tooth will be the same, the force of the blow of the hammer is in accordance with the thickness of the tooth, this force being controlled by the tension given to the spring I by the set-screw K.

On each side of the hammer is a rest S S in line with the anvil and upon which the saw-blade partially rests. These rests S S are always of the same height as the anvil, so that the teeth will be on the same plane with the face of the anvil, while the saw-blade may be placed on a different angle by the adjusting-screw and fingers, according to the set of the saw. By this arrangement saws which may be uneven in thickness will have the same uniform set, as the blow will be uniform upon all the teeth if the saw-blade is uneven, while it is impossible to strike a succession of blows by hand with the same force, consequently all saws set by hand blows will be more or less uneven. The saw is readily

moved by the left hand, while the crank is turned by the right.

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

1. The adjustable arm O, with the fingers and adjusting-screw, in combination with the spring trip-hammer.

2. The spring I and trip-hammer, in com-

bination with the adjusting-frame L and rollers N N, and adjusting-screws.

3. These several devices, when arranged substantially as herein set forth, for the purpose described.

ALEX. SHOEMAKER.

Witnesses:

JOSEPH S. STARR,
SOLOMON HARE.