

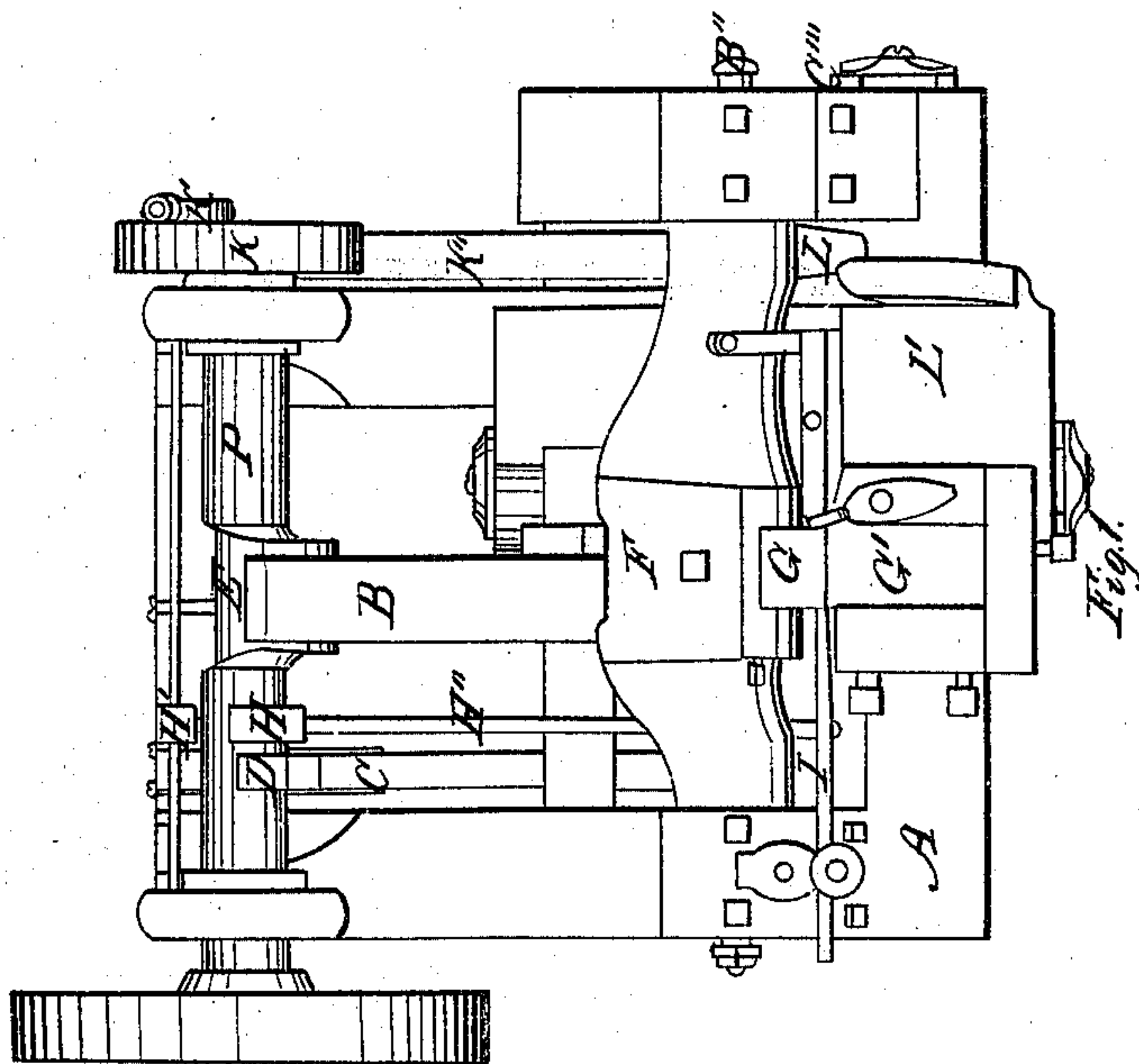
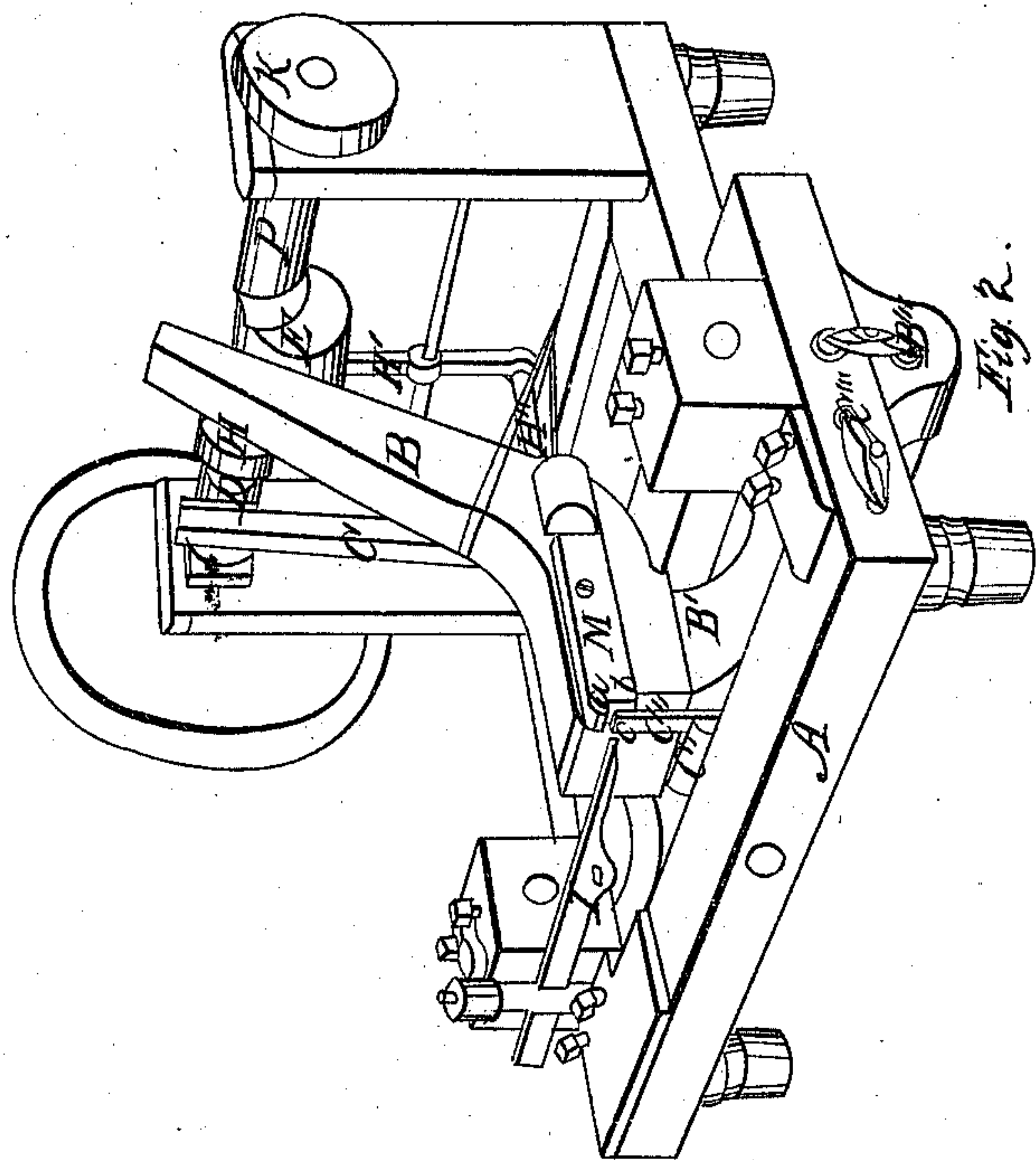
J. B. Hingham

Sheet 1-2 Sheets.

Nail Mach.

Nº 90,108.

Patented May 18, 1869.



Witnesses.
Frank G. Parker
A. Sam Berry

Inventor.
Jacob B. Hingham

Sheet 2-2 Sheets.

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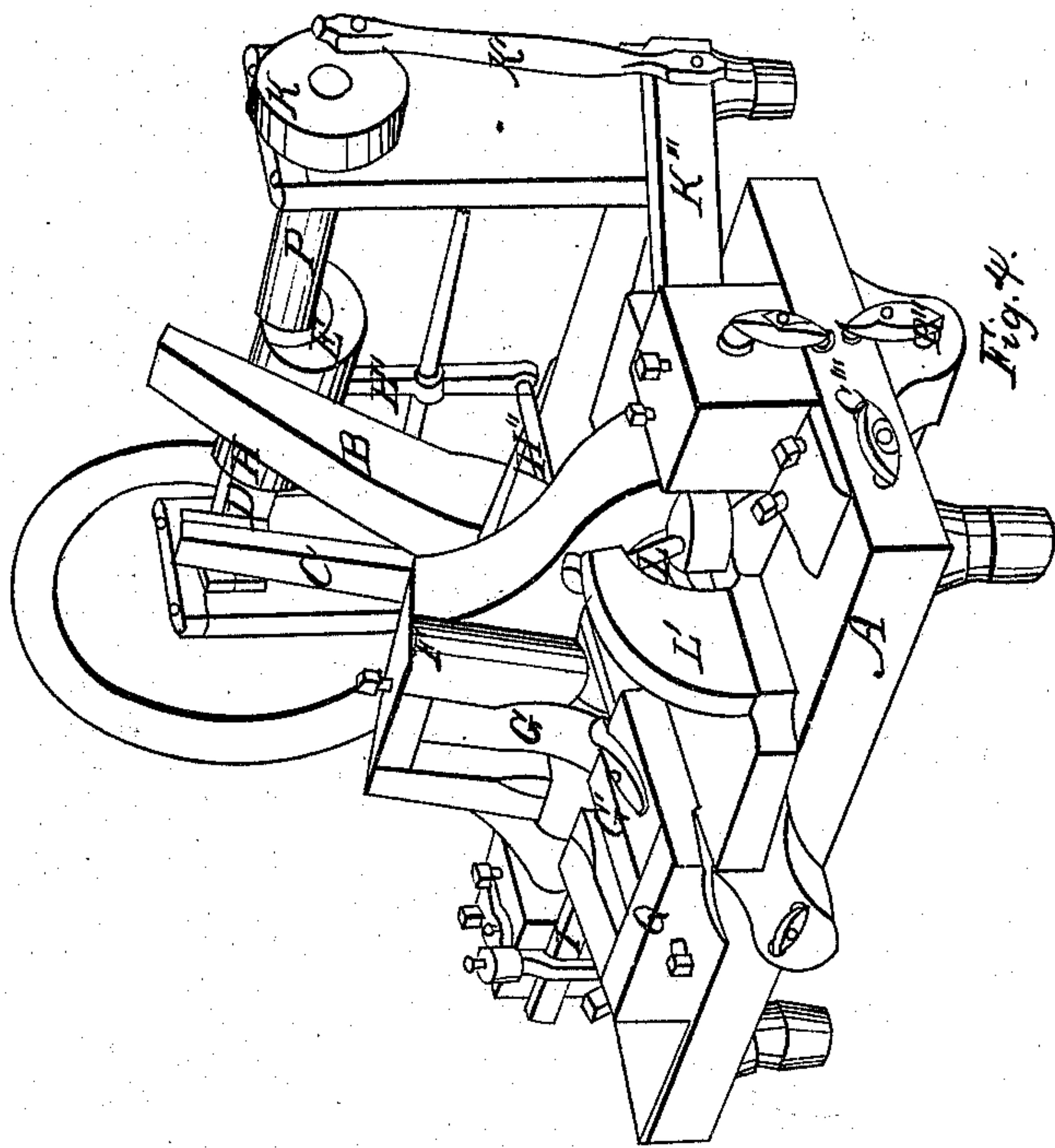


Fig. 4.

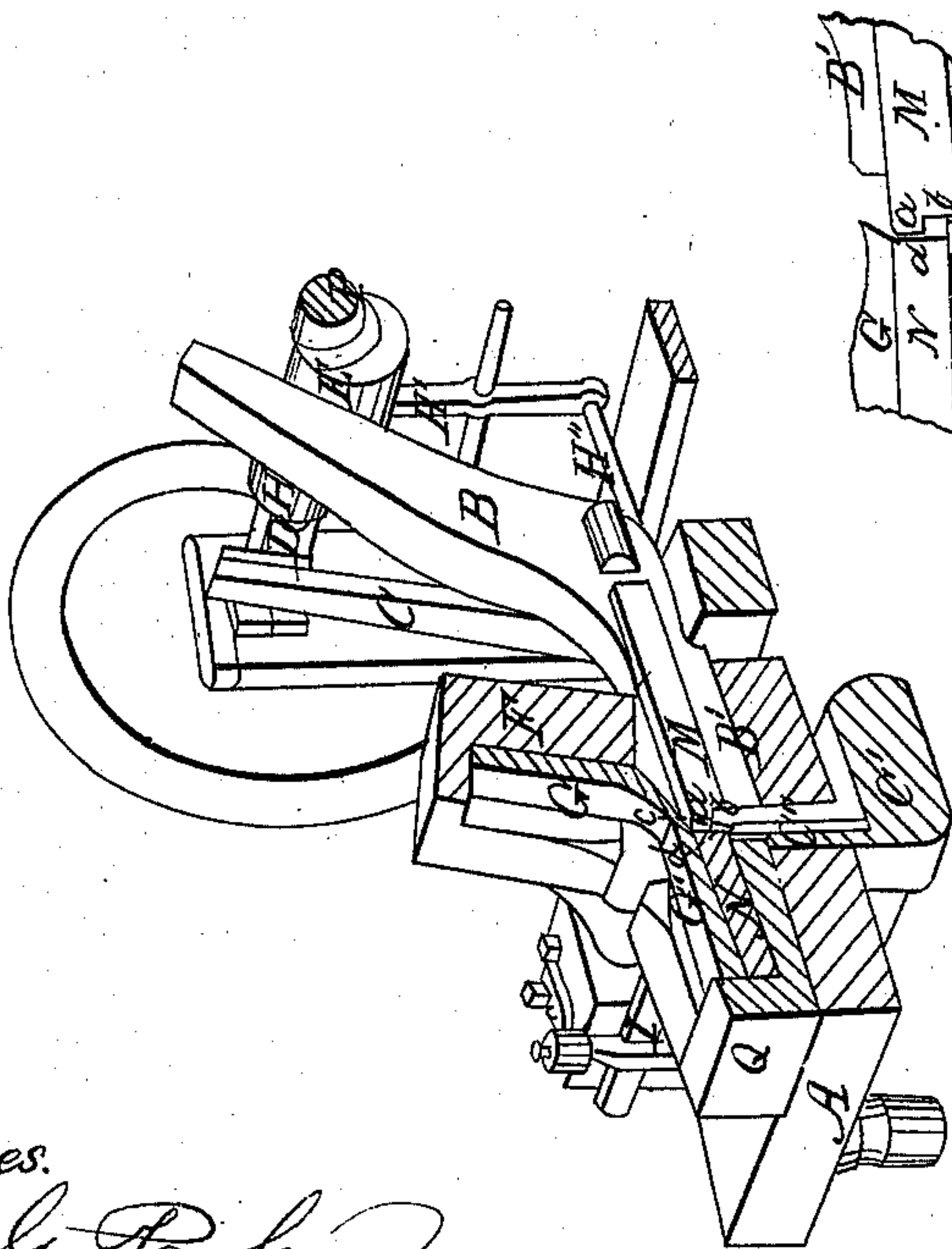


Fig. 3.

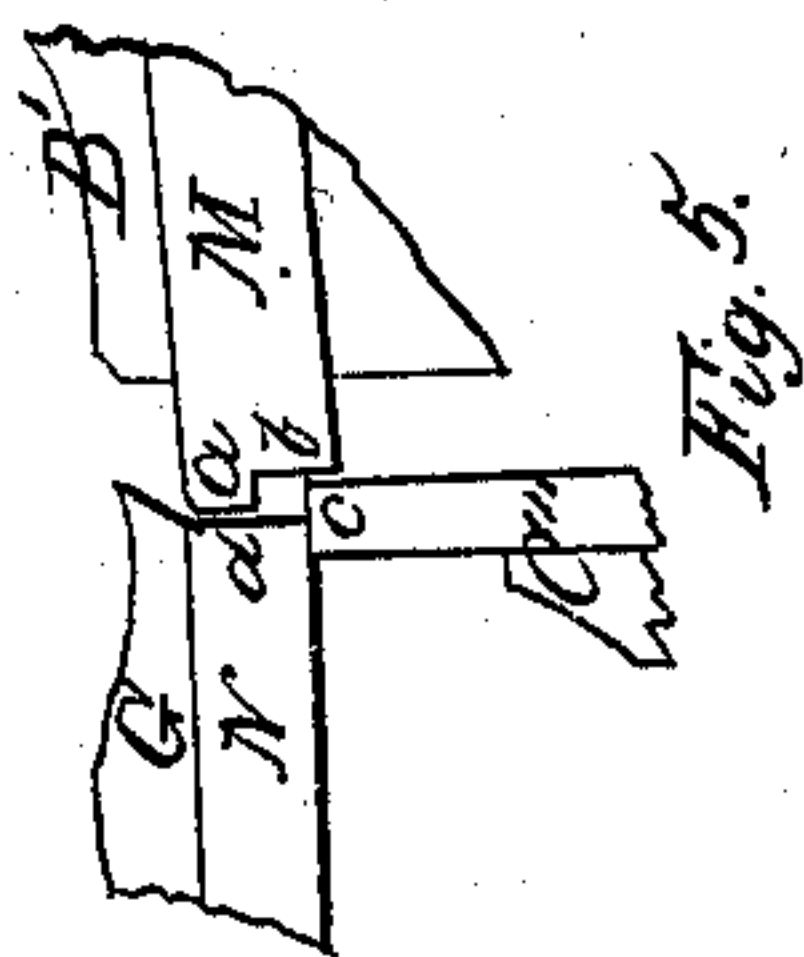


Fig. 5.

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JACOB B. KINGHAM, OF DORCHESTER, MASSACHUSETTS.

Letters Patent No. 90,108, dated May 18, 1869.

IMPROVEMENT IN MACHINES FOR MAKING CUT NAILS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JACOB B. KINGHAM, of Dorchester, in the county of Norfolk, and State of Massachusetts, have invented certain new and useful Improvements in Nail-Machines; and I do hereby declare the following to be a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

To enable others skilled in the art to make and use my invention, I will proceed to describe its nature, construction, and use.

The nature of my invention consists in certain improvements made upon a nail-machine made by me, for which Letters Patent from the government of the United States were granted, October 11, 1864, and numbered 44,637, said improvements relating to the method of holding the nail while the same is being headed.

In the machine which I have already patented, there are two knives in the cutting-jaw, one of which serves, after the nail has been cut, as an upper griper, and in combination with the other griper, holds the nail while being headed.

In my improved machine, the nail is held, while being headed, by three griper, so arranged as to bear equally upon the four sides of the nail.

Drawings.

Figure 1 is a plan.

Figure 2 is a perspective view of a part, the cutting-jaw, header, and lower knife being removed.

Figure 3 is a perspective vertical section through the knives.

Figure 4 is a perspective view of the entire machine.

Figure 5 is an elevation showing the action of the gripping-dies.

The machine represented in the drawings is peculiar only in a device for gripping the nail, all the other parts being identical with the ordinary Reed nail-tool, and therefore do not require a detailed description.

In my machine, I have three gripping-dies—one, N, fig. 3, stationary, situated immediately under the stationary cutter G', and held in position by set-screws in the stationary cutter-bed O; the other two, C'' and M, figs. 2 and 3, being movable.

The die M is peculiar, that is, its end is rebated, so that it has two gripping-faces, *a* *b*, figs. 2 and 3, and its motion is forward and downward.

The lower gripping-die, C'', figs. 2 and 3, vibrates on the centre B'', figs. 2 and 4, so that the gripping-end *c*

vibrates from the position shown in fig. 3, that is, under *d*, to a position directly under the face *a* of the gripping-die M. (See fig. 5.)

The gripping-die M is attached to the lever B B', figs. 2 and 3, which swings upon the pivot C'', figs. 2 and 4, and is actuated by the cam E, on the main shaft of the machine.

The lower die C'' is attached to the lever C C', fig. 3, which swings upon the pivot B'', fig. 4, and is actuated by the cam D, on the main shaft.

The operation of my machine may be set forth as follows:

The nail is cut and passed down, being held by the nipper I in the usual manner, until it comes in contact with the face *c* of the lower gripping-die, said die being in the position represented in fig. 5. Then the die M moves forward and downward, until the faces *a* and *b* gripe the nail firmly, the faces *c* and *d* of the other gripping-dies serving as buttresses, so that the nail is firmly held by a pressure which bears equally upon the planes of its four sides.

While the nail is thus held, the header moves forward and makes the head, which being accomplished, the face *c* of the die C'' moves backward under *d*, shown in fig. 3, and the die M retires, thus leaving the nail, which is now complete, to drop from the machine.

By this arrangement and construction of dies, I have a machine which will run with all the rapidity of the ordinary nail-machine, will clear itself perfectly, and will make a nail with a perfectly square pyramidal shank, the nail thus produced being as perfect in shape as the best hand-made nails, and being perfectly adapted to supply the place of hand-made nails for boat-building, &c.

My gripping and clearing-device, as above described, may be applied to the Blanchard nail-tool, if desirable, but my experiments seem to have demonstrated, that for nail-making, the Reed machine is the best.

Having thus described my invention, I will now proceed to set forth my claim.

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

The combination of the rebated griper M, the vibrating griper C'', and the fixed griper N, all arranged and operating as specified.

JACOB B. KINGHAM.

Witnesses:

A. HUN BERRY,
FRANK G. PARKER.