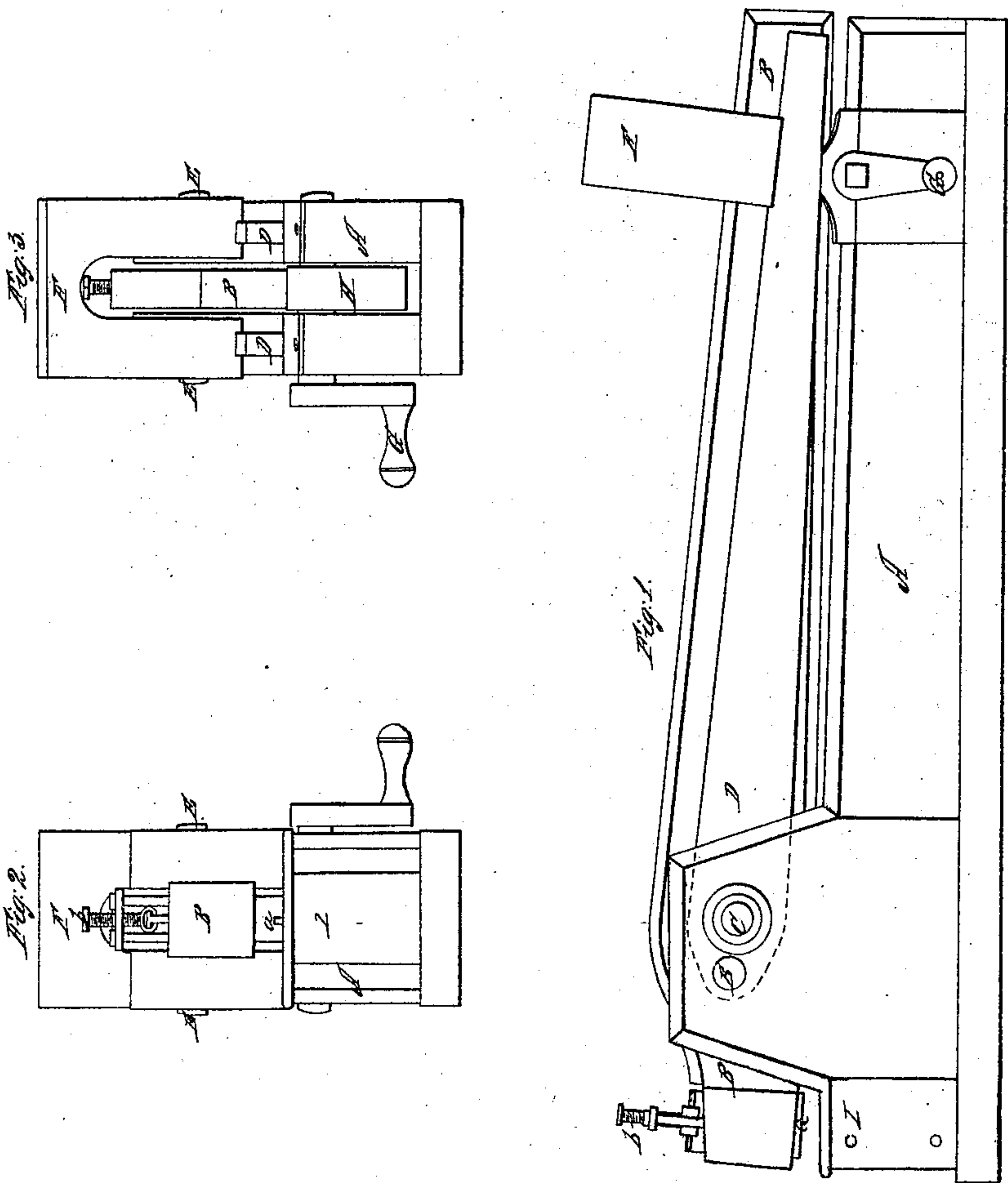


J. H. SWETT.
HANGING THE GRIPPING JAWS OF SPIKE MACHINES.
No. 10,645. Patented Mar. 14, 1854.



UNITED STATES PATENT OFFICE.

JAMES H. SWETT, OF PITTSBURGH, PENNSYLVANIA.

HANGING OF THE GRIPPING-JAWS OF SPIKE-MACHINES IN WEIGHTED LEVERS.

Specification of Letters Patent No. 10,645, dated March 14, 1854.

To all whom it may concern:

Be it known that I, JAMES H. SWETT, of Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful improvements in the method of hanging the gripping-jaws of spike-machines to prevent the breaking up of the machine when two spikes or a spike and blank accidentally get into or between the dies at the same time; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a side view. Fig. 2 represents a view from the front; and Fig. 3 represents a rear view, of so much of a spike machine as is necessary to show the invention.

Similar letters in the several figures denote like parts.

To enable others skilled in the art to make and use my invention, the nature of which relates to the hanging of the gripping jaw in weighted levers or their equivalents so that when any larger amount of metal than the spike which the machine is set for making gets into the dies, said gripping jaw will rise and yield to the metal, I will proceed to describe the same with reference to the drawings.

With the best delivering apparatus known, a spike and blank will sometimes get between the dies at the same time. This may happen but once a day or once a week, but it invariably breaks up the machine when it does happen. To avoid this evil I hang the gripping jaw in weighted levers which allow it to rise when it is exerting greater pressure than it is for the time being set for.

A represents a part of the frame of the machine; B, the gripping jaw, with its trunnions or journals C, supported in suitable bearings in levers D, on each side of it. The fulcrum of the levers D, is at E, and the fulcrum of the gripping jaw at C. The rears of the levers are provided with a weight F, resting on them, which may however if preferred be suspended from them so as to hang below the frame; or instead of weights, springs heavily made may be used, the object

being to prevent the gripping jaw from yielding in the least until it is prevented from making its usual vibration by the failure of the delivery apparatus to throw out the finished spike, before the blank comes into the dies, which with the great rapidity of the working of the machine will happen occasionally. It might be possible to load the gripping jaw itself, so as to give it this yielding property, but in that case a dead weight must be carried and operated constantly, when its advantages would only be called into action probably once a week. With the weighted levers, which never move unless the gripping jaw is overstrained, no such dead weight is carried. India rubber should be placed under the levers where they touch the frame, so that when they come down after they have allowed the gripping jaw to yield, they may not strike with such violence as to endanger the machine.

G, is the wrist pin to which the power for moving the gripping jaw may be applied; H, the cam on its shaft working underneath the rear of the gripping jaw.

a represents the die, and b the set screw for adjusting it; the other half of the die is formed in the anvil block I.

The heading apparatus is not shown, as any well known heading machinery can be applied, and my invention only relates to the gripping jaws.

The trunnions or journals C, it will be readily understood, must have some play in the frame, so as to enable the gripping jaw to rise when overstrained as above described.

Having thus fully described the nature of my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

The so hanging of the gripping jaw in weighted levers or their equivalent, as that when two spikes or a spike and a blank comes in between the gripping jaws at one time, the said jaw may rise and yield to the excess of metal between the dies, and prevent the breaking of any of the parts, substantially as herein described.

JAMES H. SWETT.

Witnesses:

SAML. GRUBB,
A. B. STOUGHTON.