(No Model.)

W. J. BROWN, Jr.

MACHINE FOR SETTING STAPLES.

No. 382,025. Patented May 1, 1888.

Fig. 1.

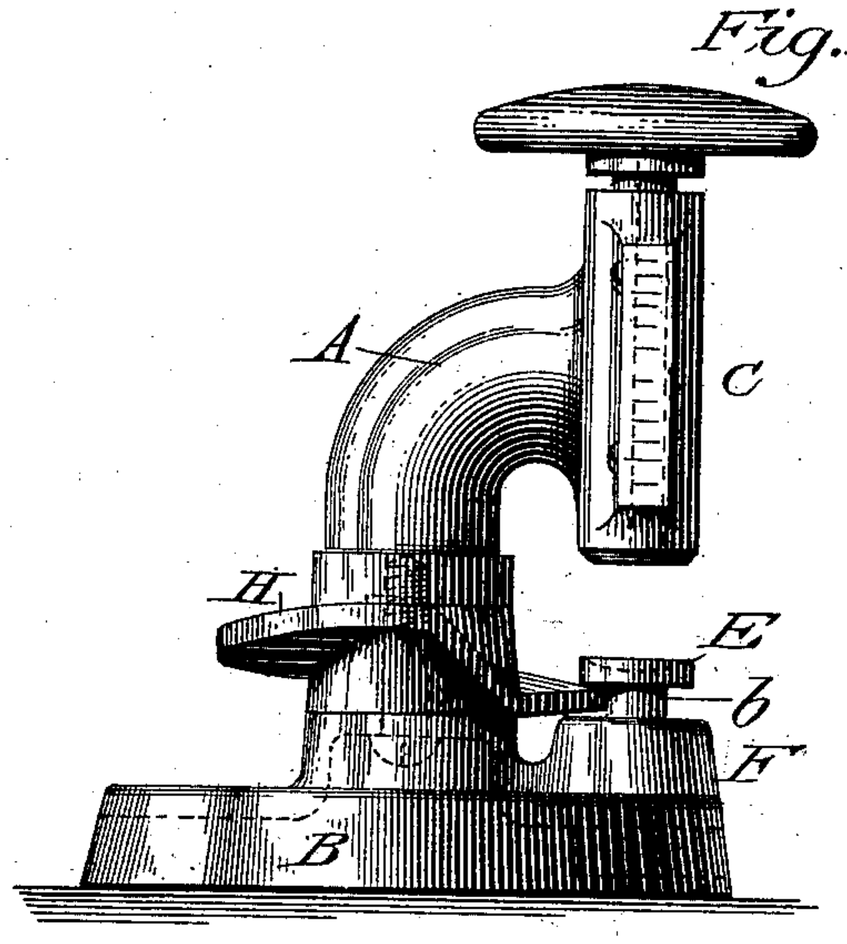

Fig. 5.

Fig. 3.

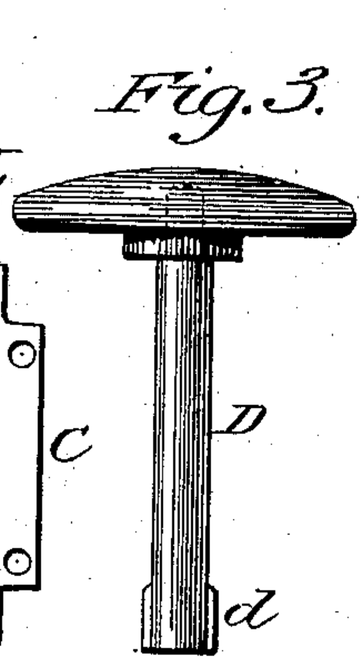

Fig. 2.

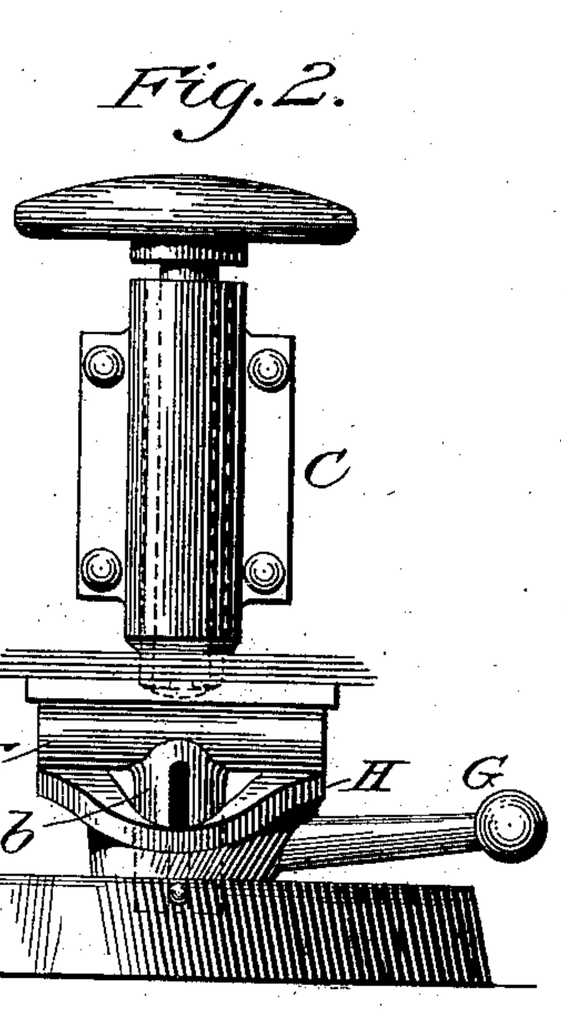

Fig. 4.

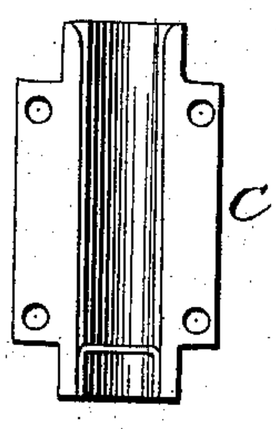

Fig. 6.

Witnesses.
H. A. McMurray.
H. V. Buckley.

Inventor:
Wm. J. Brown Jr.
by his atty H. A. McMurray

UNITED STATES PATENT OFFICE.

WILLIAM J. BROWN, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE WIRE STAPLE COMPANY, OF SAME PLACE.

MACHINE FOR SETTING STAPLES.

SPECIFICATION forming part of Letters Patent No. 382,025, dated May 1, 1888.

Application filed October 30, 1886. Serial No. 217,569. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. BROWN, Jr., a citizen of the United States, residing in the city of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Inserting and Clinching Metallic Staples, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to machines for simultaneously inserting metallic staples into paper or other material and clinching the same on the under side thereof, in which a staple is inserted into a grooved or channeled staple-case, ejected therefrom by means of a sliding driver, and driven thereby through the paper or other material to be operated upon, and the legs of the staple bent up by contact with a slotted or concave-faced clinching-anvil; and my improvements in such machines consist in novel mechanism, hereinafter fully described, for adjusting the inserting and clinching devices relatively to each other, so as to clamp the papers between them, and also to adapt the machine to fasten varying thicknesses of paper or other material.

In the drawings, Figure 1 is a side elevation of such a machine containing my improvements; Fig. 2, a front view thereof; Fig. 3, a view of the driver; Fig. 4, a vertical sectional view of the staple-case, showing a staple in place therein; Fig. 5, a top view thereof; and Fig. 6, a front view of the device, partly in section, with the clinching-anvil in position to compress the papers against the under side of the staple-case.

In machines for inserting and clinching metallic staples by a single blow experience has demonstrated that it is absolutely essential that the end of the staple-case should rest on the top surface of the papers to be fastened, and various devices—such as a spring under the anvil or a movable staple-case—have been adopted for this purpose in order that the papers should be clamped between the inserting and clinching mechanisms, and in order, also, that the machine might be used for varying thicknesses of papers. My improvements relate solely to such clamping and adjustment, and that end is attained by the cam movement which constitutes the essential feature of my present invention.

The frame of a machine to which my invention is applicable is here represented by a stand or base, B, and an angle-arm, A, supporting a vertical staple-case, C, which is recessed in the direction of its length, of such character as to admit of a staple being inserted therein and the driver therefor to move up and down therein. Immediately beneath and in a line with the staple-case C is a vertically-adjustable clinching-anvil, E, the face of which is recessed or slotted in order to bend up the staple-legs when forcibly brought into contact therewith. The driver D is a bar or rod with a knob at one end and with wings or lips *d* at the other end to steady it in the recess of the staple-case and to cover the staple-crown more completely, and in this connection it will be noticed that the driver conforms to the shape of the staple-case, as shown in Fig. 5, the body of the driver entering the space *e*, while the wings or lips *d* enter the spaces *a* and cover the whole of the staple-crown.

For convenience of construction the staple-case may be made in two parts or vertical sectional halves, as shown in Fig. 4. The clinching-anvil E is constructed with a spindle, *b*, which is free to move perpendicularly in a socket, F, in the stand B. The upright arm A at its base above the stand B is necked to afford a bearing for the circular vertically-moving cam H, which encircles it, the projecting edge of which cam is at all times beneath the clinching-anvil E, and for conveniently operating such cam in the form of machine shown in the drawings an arm, G, Fig. 2, is secured thereto. This cam and the vertically-adjustable clinching-anvil reciprocated thereby form the essence of my invention, the other parts of the device described being well known in the art.

I am well aware that an adjustable anvil is not new, and also that clamping mechanism operated by a cam has been used in shoe-pegging machines; but I do not claim either of these nor any of the elements separately.

The operation is as follows: Papers or other materials to be fastened are placed upon the clinching-anvil, and the cam H, moved around by its lever-arm G, causes the anvil E to rise

and compress the papers between it and the bottom face of the staple-case C. A staple having been inserted in said case C and driven thereout and through the underlying papers by the driver D—the legs thereof being turned up or clinched on the under side of the paper by contact with the recessed face of the anvil—the reverse motion is given to the cam H, which causes a descending movement of the anvil E and releases the paper or material fastened.

I claim as my invention—

1. The combination, in a machine for inserting and clinching metallic staples by a single movement, of a staple-case through which staples are presented and driven, a reciprocating driver moving in said staple-case, an adjustable anvil secured to a spindle or arm, and a revolving cam adapted to operate on said anvil to bring it into greater or less proximity to the mouth of the staple-case and clamp the material to be fastened, substantially as set forth.

2. The frame or base B, with its arm A, staple case C, driver D, adjustable anvil E, and revolving cam H, constituting a staple inserting and clinching device, substantially as described.

In testimony whereof I have hereunto affixed my signature.

WILLIAM J. BROWN, JR.

Witnesses:
H. T. FENTON,
FRANCIS S. BROWN.