

B. H. BROOKS.

Machines for Making Staples.

No. 148,547.

Patented March 17, 1874.

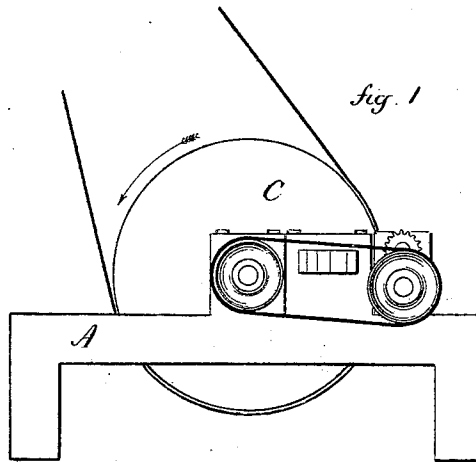


fig. 2

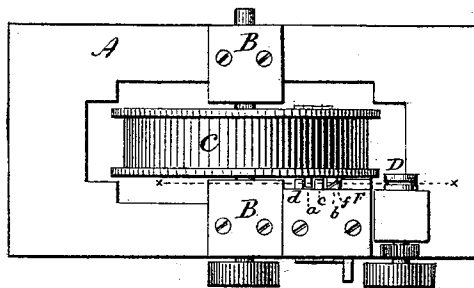


fig. 3

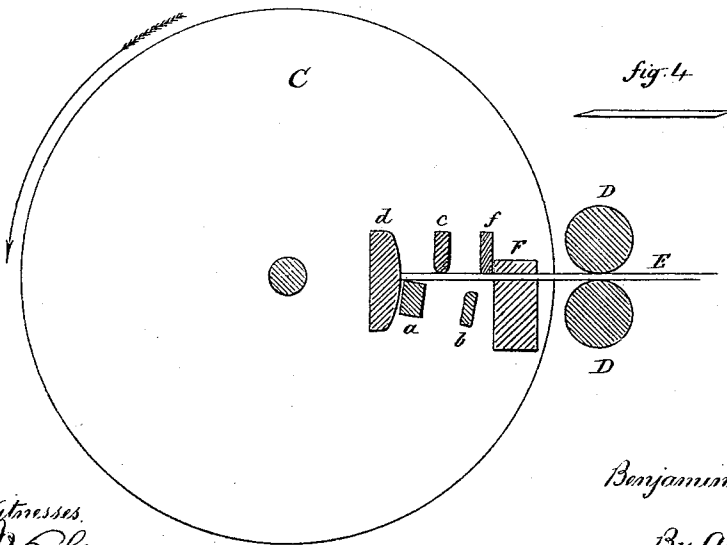


fig. 4

fig. 5



Witnesses,
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IMPROVEMENT IN MACHINES FOR MAKING STAPLES.

Specification forming part of Letters Patent No. 148,547, dated March 17, 1874; application filed July 16, 1873.

To all whom it may concern:

Be it known that I, BENJAMIN H. BROOKS, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Machines for Making Staples; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a side view; Fig. 2, a top view; Fig. 3, a longitudinal section on line *x x*, enlarged; Fig. 4, the blank wire as cut before bending; and in Fig. 5, the staple as completed.

This invention relates to an improvement in machines for making staples for various purposes and of different sizes; and the invention consists in a revolving plate, having upon it two projections, which pass a single stationary projection, corresponding to the space between the two revolving projections, so that the two projections, striking the blank introduced between the stationary projection and the two revolving projections, will bend the two ends onto the stationary projection, and, passing on, will leave the staple complete.

A is the frame, supporting, in suitable bearings B, a wheel or plate, C. This wheel or plate is caused to revolve by the application of power thereto in any convenient manner, (here represented as by a belt applied directly to the periphery, its direction indicated by the arrow.) On this wheel, preferably on its side, are arranged two projections, *a b*, and on the frame of the machine is arranged a projection, *c*, as shown in Figs. 2 and 3, and in such relative position to the two projections *a b* that in revolving one will pass each side of the stationary projection. D D are a pair of feed-rolls, to which a constant revolution is preferably given, and between these the wire or rod E passes, and by their revolution is drawn or forced through a suitable guide, F, beneath the stationary projection *c*, as seen in Fig. 3, its movement arrested by a stop, *d*, on the frame. In order to cut the requisite length from the rod, I make the projection *b* on the

wheel, and a corresponding projection, *f*, on the frame, to serve as cutters, so that as the projection *b* passes the projection *f* it will cut the wire which lies between them; and in order to point the wire, these projections *b f* and their meeting surfaces are made diagonal, as shown in Fig. 2; hence the cut of the wire will be correspondingly diagonal, as shown in Fig. 4; therefore, as the wheel revolves, the projections *a b*, taking the blank cut from the wire, bend the two ends up around the projection or former *c*, into the form substantially as seen in Fig. 5. The wheel continuing its revolution, the staple drops from the former, the next revolution forms another staple in like manner, and so on.

Other projections corresponding to the projections *a b* may be arranged upon the wheel, so that in a single revolution of the wheel as many staples will be formed as there are such projections; and while I preferably arrange these projections upon the side of the wheel, they may be arranged upon the periphery. Both sides of the wheels may be employed, and different-sized staples made at the same time and in the same machine.

If preferred, the blanks may be previously cut and fed singly to the formers; but I believe it to be more economical to cut and bend as described.

While I have represented the projections *a b* as attached to the plate, and the projection or former *c* stationary, it will be readily perceived that substantially the same result may be attained by making the projections *a b* stationary and attaching the former to the wheel so as to revolve with it; I therefore do not wish to be understood as confining myself to attaching the projections *a b* to the wheel and the stationary former.

I claim as my invention—

In combination with the said revolving wheel, projections, and former, the cutter *f* and a suitable feeding device, substantially as described.

BENJAMIN H. BROOKS.

Witnesses:

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JOHN E. EARLE.