

Sheet 1-25 sheets.

C. W. Kennedy,

Making Staples,

No 101,471,

Patented Apr. 5, 1870.

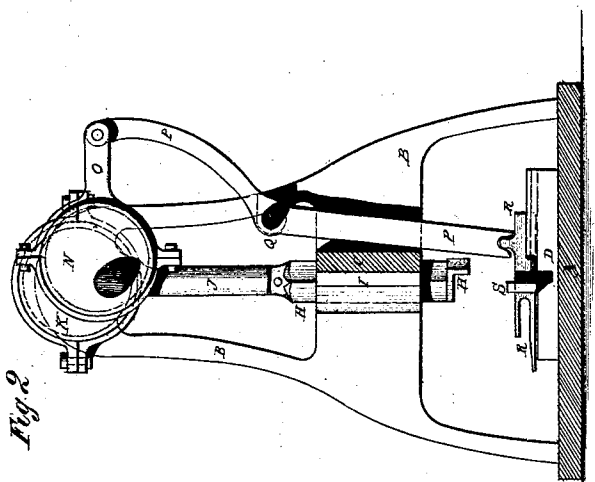


Fig. 2.

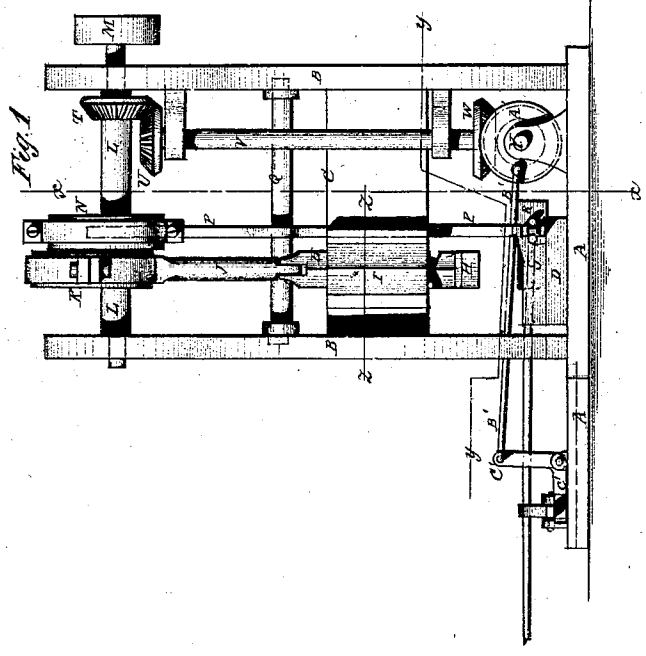


Fig. 1.

Witnesses:
 A. W. Almqvist
 Alex. F. Roberts

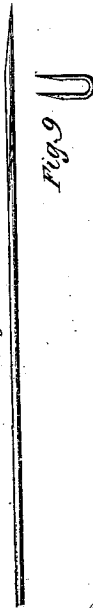
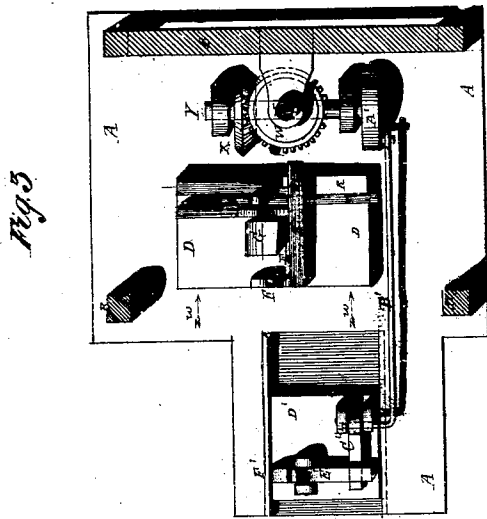
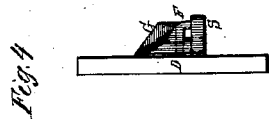
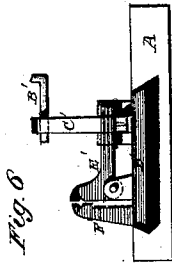
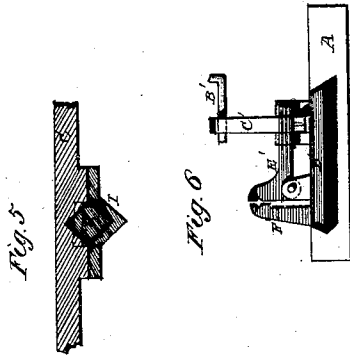
Inventor:
 C. W. Kennedy
 per Messrs
 Attorneys

C. W. Kennedy,

Making Staples,

No 101,471,

Patented Apr. 5, 1870.



Witnesses:
 A. W. Almqvist
 Alex. F. Roberts

Inventor:
 C. W. Kennedy
 per Munn & Co
 Attorneys

United States Patent Office.

CHARLES W. KENNEDY, OF WILLIAMSBURG, NEW YORK.

Letters Patent No. 101,471, dated April 5, 1870.

IMPROVED STAPLE MACHINE.

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, CHARLES W. KENNEDY, of Williamsburg, in the county of Kings and State of New York, have invented a new and useful Improvement in Machine for Making Staples; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1, Sheet I, is a side view of my improved machine.

Figure 2, Sheet I, is a vertical section of the same taken through the line *x x*, fig. 1.

Figure 3, Sheet II, is a horizontal section of the same taken through the line *y y*, fig. 1.

Figure 4, Sheet II, is a detail view of the knife bed, stationary knife-guide, and guard, looking in the direction of the arrows *w w*, fig. 3.

Figure 5, Sheet II, is a detail sectional view of the movable knife and its guide socket, taken through the line *z z*, fig. 1.

Figure 6, Sheet II, is a detail view of the device for feeding the wire forward.

Figure 7, Sheet II, shows the position of the wire when entering the machine.

Figure 8, Sheet II, illustrates the inclination of the cut.

Figure 9, Sheet II, shows a completed staple.

My invention has for its object to furnish a simple, convenient, and effective machine for forming staples, which shall be so constructed as to feed the wire in and form the staples automatically, and at the same time rapidly and well; and

It consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A is the bottom or bed-plate of the machine.

B are the side frames, which are securely attached to the bed-plate A, and which are connected to each other by the cross-bar or plate C.

D is the knife-plate or bed, which is securely attached to the bed-plate A, and to which the stationary knife E, guide F, and guard G are secured.

The knife E is made inclined, as shown in fig. 3, to give the proper inclination to the cut to form the points of the staple.

The guide F has a hole formed through it, through which the wire is fed to the knives.

The guard G is attached to the plate or bed D in such a position as to guard the movable knife H from slipping off the wire while making the cut.

The movable knife H works up and down through the guide I attached to the cross-bar or plate C, and to its upper end is pivoted the lower end of the pit-

man J, the upper end of which is connected with the eccentric K by a strap in the ordinary manner.

The eccentric K is attached to or formed upon the shaft L, which revolves in bearings in the upper part of the side frames B, and to the projecting end of which is attached the pulley M, to which the power is applied.

To the same shaft L is attached another eccentric, N, with which is connected, by a strap, in the ordinary manner, a pitman, O, to the other end of which is pivoted the upper end of the lever P.

The lever P is pivoted to the cross shaft or rod Q, the ends of which are connected with the side frames B.

The lower end of the lever P is notched to receive a projection formed upon the upper side of the slide R, so that the said slide may be moved back and forth by the movement of the said lever P.

The forward end of the slide R is notched, as shown in fig. 2, to take hold of the unformed staple and form or bend it by forcing it through a hole in the flange *s* of the plate D, against which the stationary knife E rests, as shown in figs. 1, 2, and 3.

To the shaft L is attached a bevel-gear wheel, T, the teeth of which mesh into the teeth of the bevel-gear wheel U attached to the upper end of the vertical shaft V, which revolves in bearings attached to the side frame B.

To the lever end of the vertical shaft V is attached a bevel-gear wheel, W, the teeth of which mesh into the teeth of the bevel-gear wheels X, attached to the short horizontal shaft Y, which revolves in bearings attached to the bed-plate A, and to the end of which is attached a crank or crank-wheel, A' to which is pivoted one end of the connecting-rod B', the other end of which is pivoted to the upper end of the elbow lever C'.

The lever C' is pivoted at its angle to the sliding plate D', and its other end or arm extends along said sliding plate D' beneath the arm of the pivoted clamp jaw E'.

The movable jaw E' is pivoted to the sliding plate D' just in front of the stationary jaw F', which is attached to the said sliding plate D'.

In using the machine, the end of the wire from which the staples are to be formed is placed in the jaws E' F' of the clamp, and as the crank or crank-wheel A' is revolved, the lever C' is operated, which closes the movable jaw E' upon the stationary jaw F', clamping the wire between them.

At the same time the revolution of the said crank or crank-wheel A' draws the sliding plate D' forward, and feeds the wire to the knives. As the wire comes to the proper position to be cut, the knife H descends, cutting off the wire with an inclined cut, as shown in fig. 8. In the meantime the revolution of the crank-

wheel A' has released the jaws E' F', and pushed the said jaws and the sliding plate D' back, ready to again grasp the wire and feed it forward for another cut.

As the blank to form the staple is cut from the wire, the slide R moves forward against the middle part of the said blank, forcing it through the hole in the flange S, forming the staple, which drops from the machine in a finished state.

The wire passes into the machine from the reel, and passes out in the form of completed staples, the entire operation being automatic.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

1. The combination of the movable knife H, stationary knife E, guide F, guard G, slide R, and flange or plate S, with each other, and with the bed-plate D, substantially as herein shown and described and for the purpose set forth.

2. The combination of the sliding plate D', stationary jaw F', movable jaw E', and bent or elbow-lever

C', with each other and with the guide F, rod B', stationary knife E, movable knife H, and guard G, substantially as herein shown and described and for the purpose set forth.

3. The improved staple machine formed by the combination of the bed-plate A, side frames B, cross-bar or plate C, knife-bed or plate D, stationary inclined knife E, guide F, guard G, movable knife H, guide I, pitman J, eccentric K, shaft L, eccentric N, pitman O, lever P, slide R, flange S; gear-wheels T U, shaft V, gear-wheels W X, shaft Y, crank or crank-wheel A', pitman B', elbow lever C', pivoted jaw E', stationary jaw F', and sliding plate D', with each other, substantially as herein shown and described and for the purpose set forth.

The above specification of my invention signed by me this 11th day of January, 1870.

C. W. KENNEDY.

Witnesses:

GEORGE W. MADEE,
JAMES T. GRAHAM.