(No Model.) 2 Sheets—Sheet 1.

G. DELAGNEAU.

STAPLE SETTING IMPLEMENT.

No. 389,922. Patented Sept. 25, 1888.

Fig. 1.

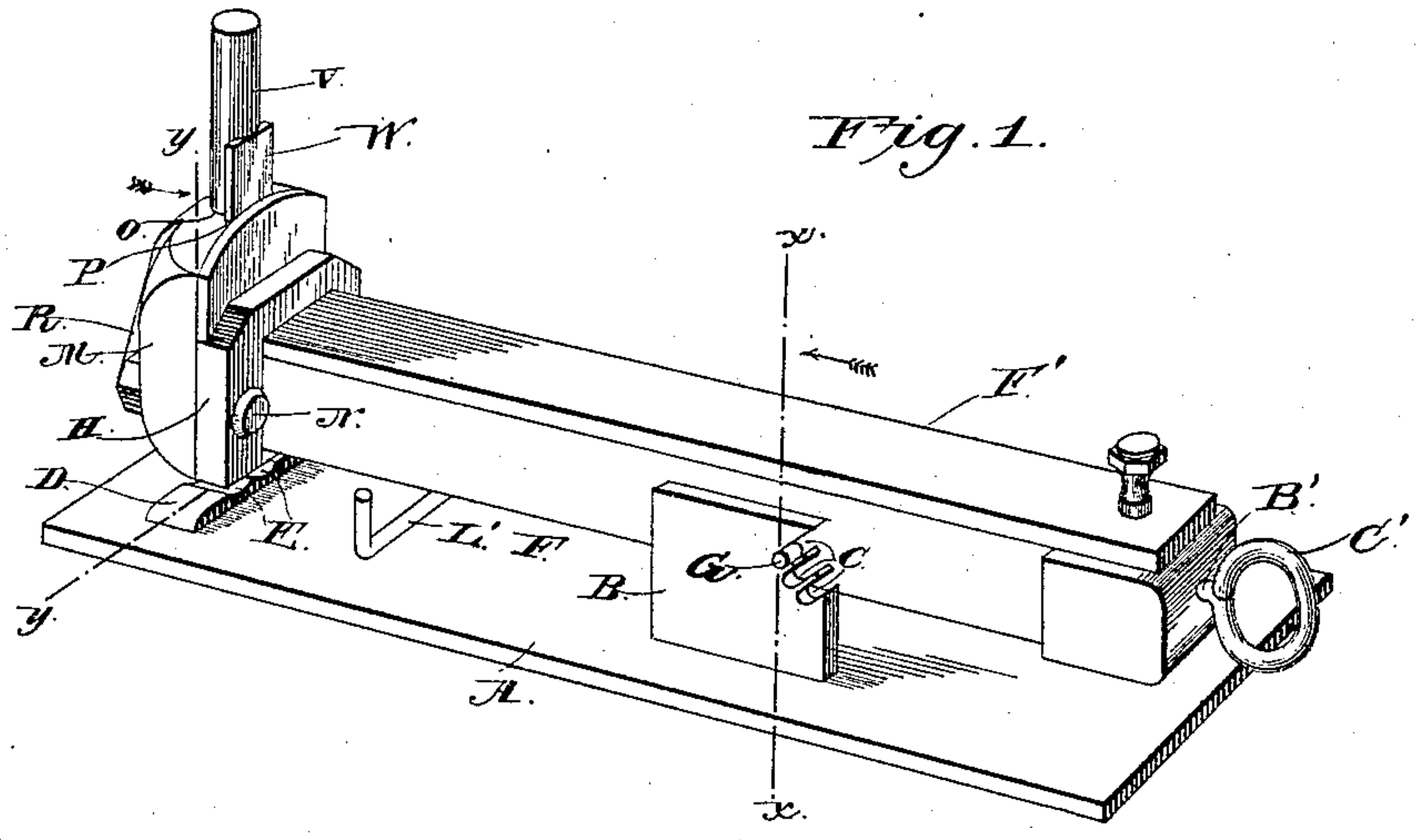
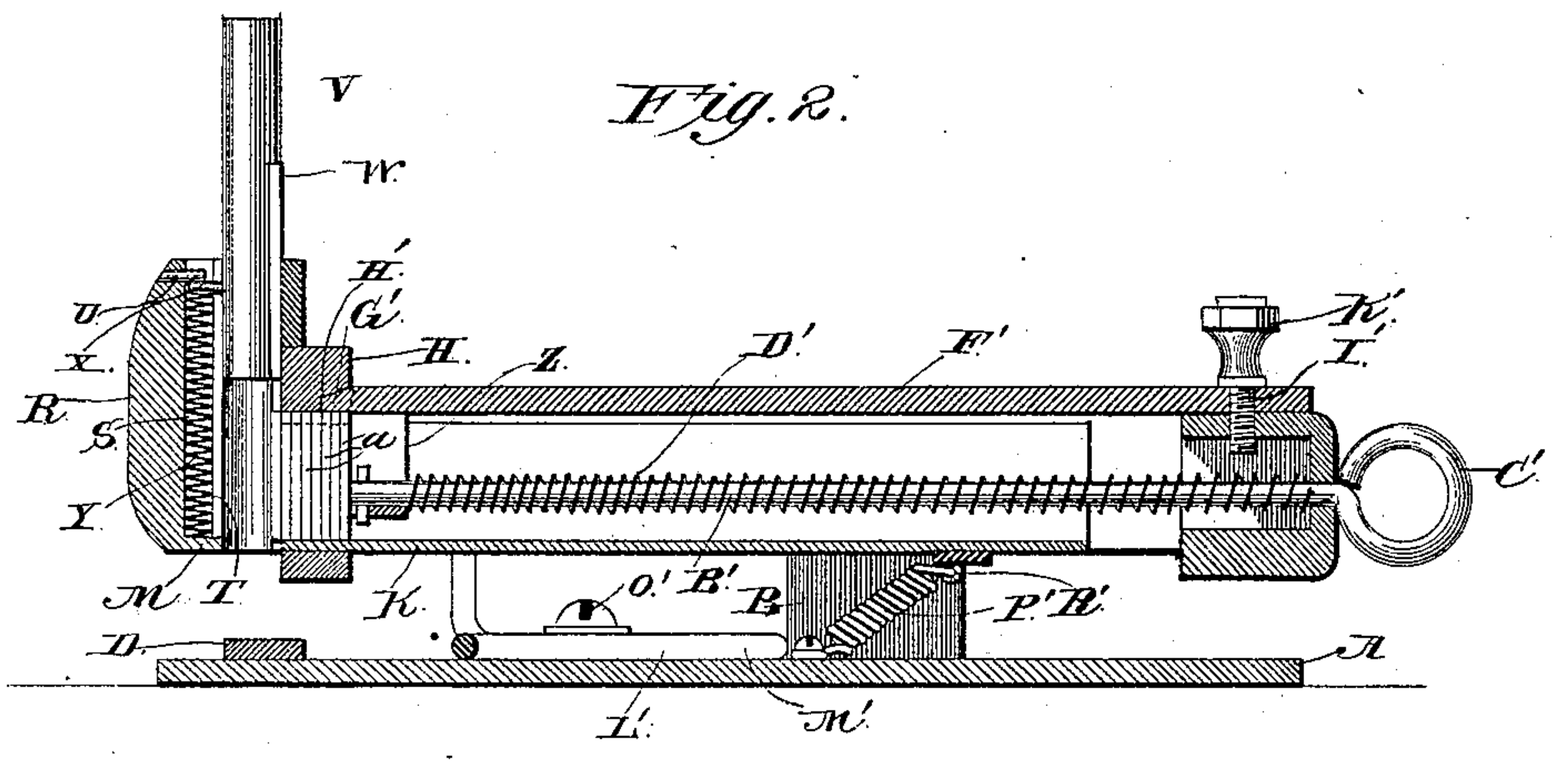


Fig. 2.



Witnesses
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E. G. Siggers

Inventor
George Delagneau

By his Attorneys
C. A. Snow & Co.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

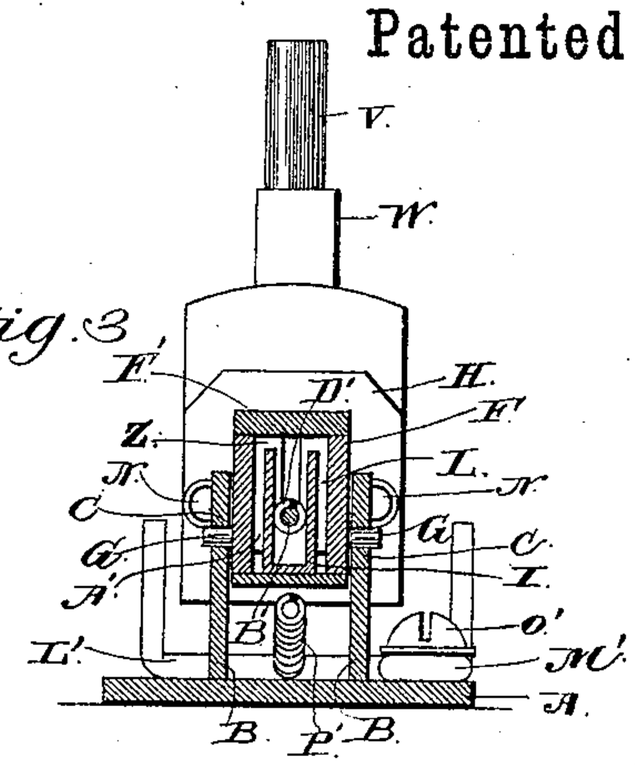

Fig. 4.

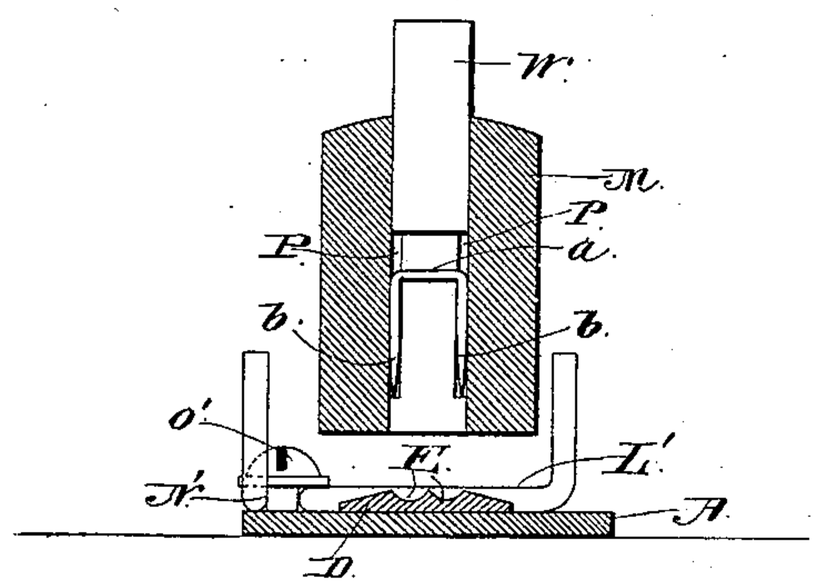

Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE DELAGNEAU, OF HASTINGS, NEBRASKA.

STAPLE-SETTING IMPLEMENT.

SPECIFICATION forming part of Letters Patent No. 389,922, dated September 25, 1888.

Application filed April 6, 1888. Serial No. 269,823. (No model.)

To all whom it may concern:

Be it known that I, GEORGE DELAGNEAU, a citizen of the United States, residing at Hastings, in the county of Adams and State of Nebraska, have invented a new and useful Improvement in Machines for Securing Leather, of which the following is a specification.

My invention relates to an improvement in machines for securing leather; and it consists in the peculiar construction and combination of devices, that will be more fully set forth hereinafter, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of a leather-fastening machine embodying my improvement Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a vertical transverse sectional view taken on the line *x x* of Fig. 1. Fig. 4 is a similar view taken on the line *y y* of Fig. 1. Fig. 5 is a sectional view of two pieces of leather, showing the same secured together by means of my improved fastening device.

A represents a bed-plate, of suitable size and shape, and B represents a pair of standards or plates, which project vertically from the upper side of the bed-plate, at a suitable distance from one end of the same. The said standards or plates B are provided at their rear upper corners with series of openings C, arranged one above the other, as shown.

On the upper side of the plate A, near the front end thereof, is an anvil, D, which is arranged transversely on the bed-plate, and is provided on its upper side with a pair of concave recesses, E, the said recesses being arranged side by side.

F represents a hollow longitudinal arm, which is rectangular in cross-section, and is open on its upper and lower side, the rear end of the said arm being closed. At a suitable distance from the rear end of the hollow arm the same is provided with a pair of trunnions, G, which project from opposite sides thereof, and are adapted to be inserted in either of the openings or recesses C of the standards B, so that the hollow arm may be fulcrumed to the said standards at any desired height from the bed-plate. To the front end of the hollow arm is secured a plate, H, which is provided with an opening that registers with the longitudinal opening in the hollow arm, and to the lower side of the said plate is secured a longitudinal guide, K, the said guide being U-shaped in transverse section and extending nearly throughout the entire length of the hollow arm, the sides of said guide being parallel with the sides of the hollow arm, and thereby forming vertical longitudinal slots L between the sides of said guide and the opposing sides of the hollow arm.

M represents a head, which is secured to the outer side of the plate H by means of bolts N. The said head is provided with a vertical cylindrical opening, O, which is at right angles to the bore of the hollow arm, and communicates with the same. At the inner side of the opening O, and communicating therewith, are vertical grooves P. In the front side of the head M is formed a vertical offset, R, in which is a vertical opening, S, that communicates with the opening O through a vertical slot, T. The upper end of the head has a transverse pin, U, which extends across the opening S.

V represents a vertically-movable plunger-rod, which is arranged in the opening O, and is provided on its rear side with a flat vertical plate, W, the edges of which project beyond the sides of the plunger-rod and form flanges, which work in the grooves P. From the front side of the plunger-rod projects a pin, X, which extends through the slot T into the opening S, and a coiled extensile spring, Y, is arranged in the said opening S and bears under the said pin, the function of this spring being to normally raise the plunger-rod in the head, as will be readily understood.

Z represents a piston or presser-foot, which is substantially in form of the letter M, and is thereby provided with slotted arms A′, which are arranged astride of the sides of the guide I, the outer sides of the said arms being arranged in the slots L between the guides and the sides of the hollow arms.

B′ represents a rod, which is attached to the presser-foot, is arranged longitudinally between the sides of the guide, extends through an opening in the closed rear end of the hollow arm, and is provided with a ring or handle, C′, at its outer end, by means of which it may be grasped.

D′ represents a coiled extensile spring,

which is arranged on the rod B′, has one end bearing against the rear end of the hollow arm, and has its front end bearing against the rear side of the presser-foot. The function of the said spring is to normally move the presser-foot forward in the hollow arm, as will be readily understood.

F′ represents a plate, which is provided at one end with a projecting ear, G′, which engages an opening, H′, in the plate H. Near the rear end of the plate F′ is an opening, I′, which is coincident with a threaded opening in the rear end of the hollow arm. When the said plate F′ is placed on the upper side of the said arm, so as to cover the same, the ear G′ being in engagement with the opening H′, the clamping-screw K′ is passed through the opening H′ and engages the threaded opening in the rear end of the arm, so as to lock the plate F′ on the upper side of the arm, as will be readily understood.

Before applying the plate F′ to the upper side of the hollow arm any desired number of U-shaped clamps or fasteners *a*, made of wire and having their ends *b* pointed, are arranged astride the sides of the guide I, the arms of the said fasteners or clamps being arranged in the slots L, and the rod B′ being drawn rearward against the tension of its spring, so as to cause the presser-foot to bear against the rearmost of the series of fasteners. The foremost of the said fasteners is forced by the pressure of the spring into the grooves P, where it is directly in the path of the plate W.

From the foregoing description it will be understood that the hollow arm and the U-shaped guide therein constitute a magazine for the fasteners.

L′ represents a gage, which is formed from a single piece of wire, having the right-angled arm M′ provided with a longitudinal open slot, N′. A clamping-screw, O′, passes through this slot and engages the threaded opening in the base-plate, the function of this screw being to clamp the gage to the bed-plate with the front side of the gage at any desired distance from the anvil.

P′ represents a coiled retractile spring, which has one end connected to a hook or keeper, R′, on the under side of the hollow arm, at a suitable point in front of the trunnions G, and the lower end of said spring is secured to the bed-plate, as shown. This spring P′ keeps the lower end of the head M of hollow arm normally bearing on the upper side of the anvil.

My invention is particularly designed for securing leather straps or other pieces of leather together, and for enabling broken harness to be readily repaired, and the operation of my invention is as follows: Having charged the magazine with clamps or fasteners *a*, as before described, the straps or pieces of leather which are to be fastened together are overlapped, and the same are guided by the gage over the anvil. The operator then strikes the plunger-rod a blow with a hammer or mallet, thus causing the said plunger-rod to descend violently with sufficient force to carry the fastener *a*, which is arranged in the groove P, as before stated, downward, and force the arms of the said fastener through the pieces of leather. As the points of the said arms of the fastener strike the concaves in the upper sides of the anvil, they are bent inward toward each other and clinched on the under side of the leather, as shown in Fig. 5. The leather is then slipped forward on the anvil a suitable space, and the operation before described is repeated, thereby causing another fastener to be driven through the parts or pieces of leather, and this operation is repeated until a seam of sufficient length has been formed. By reason of the openings or recesses C of standards B the hollow arm may be vertically adjusted, as before stated, according to the thickness of the pieces of leather on which the machine operates, so as to cause the bottom of the head to rest squarely on the upper side of the leather.

A leather-fastening device thus constructed will be found of great utility by leather-workers and by persons who own or use harness or leather straps or belts, as by means of the said machine broken pieces of leather or straps may be very readily united.

If preferred, a lever may be employed to operate the plunger; or the latter may be provided at its upper end with a knob, whereby the plunger may be operated by hand.

I do not wish to be limited to form, proportion, or minor details of construction, as such may be changed at will without departing from the spirit of my invention.

Having thus described my invention, I claim—

1. The combination of the bed-plate having the ears or standards, the hollow arm pivoted to said ears or standard and having the longitudinal guide I, the presser-foot arranged in the hollow arm and traveling on the guide, the rod attached to the presser-foot and extending through an opening in the rear end of the hollow arm, the spring to normally force the presser-foot forward, the head secured to the front end of the hollow arm and having the vertical opening O, and the grooves P, communicating therewith, said opening O being arranged opposite and communicating with the bore of the hollow arm, the vertically-movable plunger arranged in the opening O, and having the plate or flange W in the grooves P, the spring Y in an opening, S, of the head, and engaging a stud projecting from the plunger to normally raise the said plunger, and the anvil arranged on the bed-plate, substantially as described.

2. The combination of the bed-plate having the anvil and the standards B, the arm pivoted to the standards B, and having the head at its free end, the plunger arranged in the said heads, and the spring P′, connecting the arm and the bed-plate, substantially as described.

3. The combination of the bed-plate having the standards B, provided with a series of openings, C, the arm having the trunnions or

pivots adapted to engage either of the said openings, and thereby support the arm at any desired vertical adjustment, said arm having the head at its outer end and the vertically-movable plunger in the said head, and the spring P′, connecting the arm and the bed-plate, substantially as described.

4. The combination of the bed-plate A, having standards B, the arm pivoted to the standards and having the head at its outer end, the vertically-movable plunger in said head, and the gage L, secured to the bed-plate, said gage being made from a single piece of wire, and having the arm M′ provided with the open slot N′, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE DELAGNEAU.

Witnesses:
W. B. CUSHING,
JAY CHERRY.