No. 664,655. Patented Dec. 25, 1900.

J. C. LARY.

STAPLING DEVICE.

(Application filed Oct. 11, 1899.)

(No Model.)

FIG. 1.

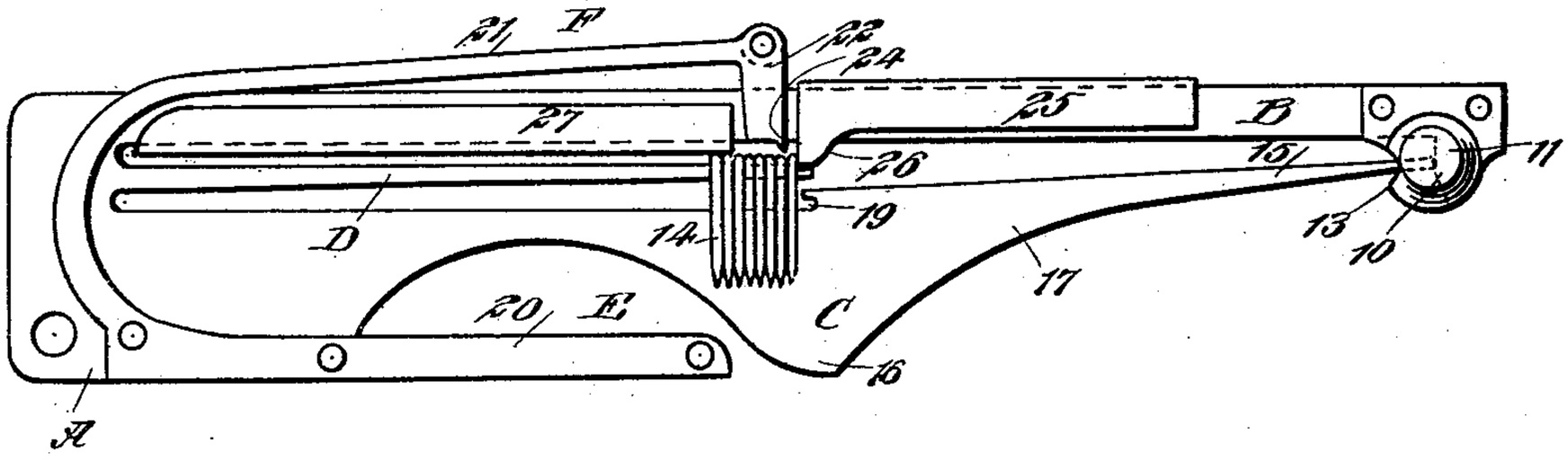


FIG. 2.

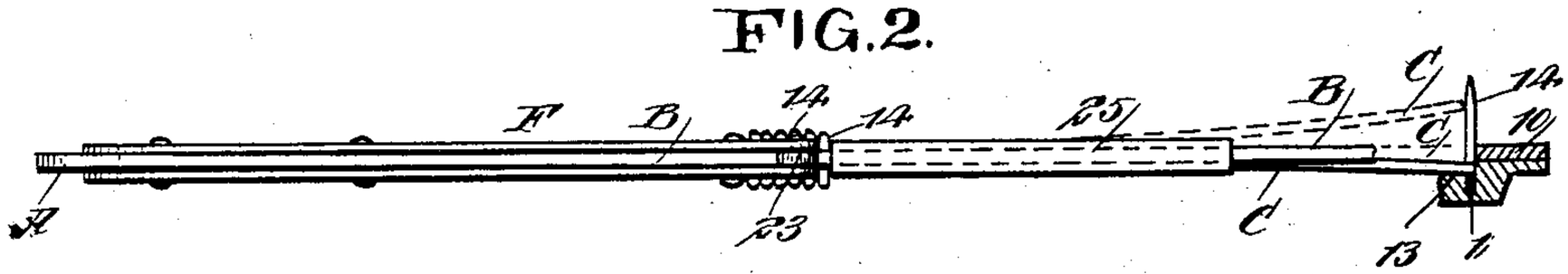


FIG. 3.

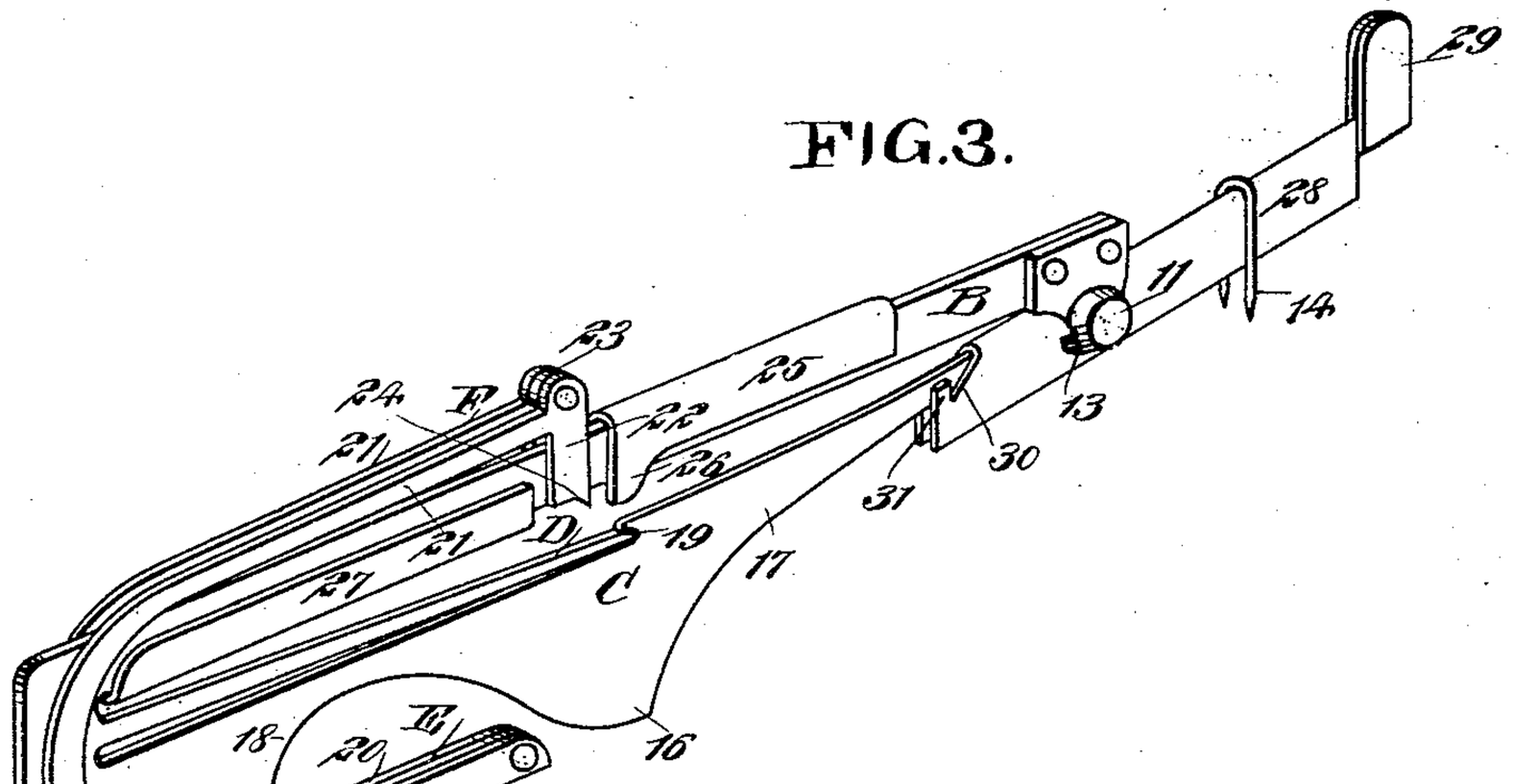
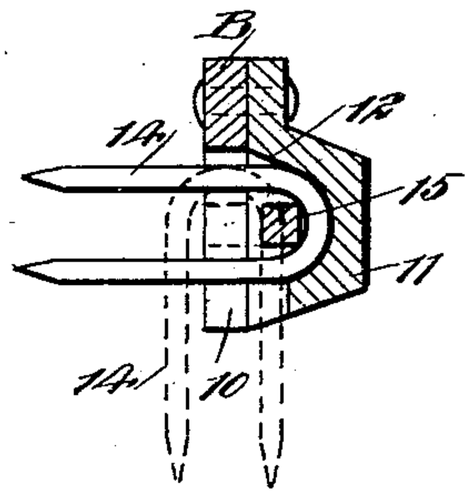


FIG. 4.



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STAPLING DEVICE.

SPECIFICATION forming part of Letters Patent No. 664,655, dated December 25, 1900.

Application filed October 11, 1899. Serial No. 733,256. (No model.)

To all whom it may concern:

Be it known that I, JOHN CURTIS LARY, of Clintonville, in the county of Bourbon and State of Kentucky, have invented a new and Improved Stapling Device, of which the following is a full, clear, and exact description.

One object of my invention is to provide a device for setting staples in position to be driven, especially in wire-fence construction, and for fixing the staples in place in a convenient and expeditious manner without the slightest danger of injuring the hands or the fingers.

Another object of the invention is to so construct the device that it may carry a number of staples of any desired size and to provide means whereby the staples may be delivered one after the other to the fixing-section of the device and automatically placed in position to be driven.

A further object of the invention is to provide a magazine or collecting device upon which staples may be placed in any desired quantities and from which collecting devices the staples may be quickly and readily transferred to the setting device in the field.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the improved device, illustrating the staples in position thereon. Fig. 2 is a plan view of the device, the forward portion thereof being in section. Fig. 3 is a perspective view of the device, illustrating one of the collecting-magazines connected therewith; and Fig. 4 is a section taken practically through the head of the device, the view being on an enlarged scale.

The body A of the device is of greater length than width and comprises a longitudinal upper arm B, a lower main-spring member C, located below the said arm and capable of being sprung from one side to the other, as shown in full and dotted lines in Fig. 2, a carrying member consisting of a spring or tongue D, located between the arm B and the main spring C, extending from the back of the body to a point at or near the center of the same, and the construction of the body is completed by the addition of a foot E at its lower rear portion and a spur 10, which extends downward from the forward or free end of the arm B. A head 11 is located at one side of the free or forward end of the arm B, the said head extending down below the said arm at one side of the spur 10, as shown in Figs. 1 and 4. The head is provided with a narrow vertical chamber 12 in its inner face, the end wall of which chamber is concaved, so as to accommodate the curved or bent portion of a staple 14, and the said head is further provided at about the central portion of its inner or rear side with a transverse recess 13, communicating with the chamber 12. This chamber and the recess 13 are adapted to receive the reduced forward end 15 of the main spring C, and this main spring C is provided with a downwardly-extending point 16 at or near the central portion of its lower edge and with an upwardly and outwardly curved edge 17 at one side of the point, as shown in both Figs. 1 and 3. This construction enables the operator to grip the main spring while allowing the staples to move freely over the said spring. The staples 14 are hung in any desired number upon the carrying spring or tongue D, as shown particularly in Fig. 1, and the free end of the said carrying spring or tongue is capable of being carried downward to an engagement with the upper edge of the main spring, or the said free end of the carrying spring or tongue D may be sprung into a recess 19 produced in the upper edge of the said main spring, as shown in Figs. 1 and 3.

A releasing device F is employed in connection with the body. This releasing device consists of two members of the same construction, each member being practically U-shaped, and one arm 20 of each member of the releasing device is bolted or secured to the foot E and to the rear portion of the body, as is particularly shown in Fig. 3, while the other or upper section 21 of each member of the releasing device extends upwardly and forwardly above the upper edge of the arm B. Each upper section 21 of the releasing device is provided at its forward end with a downwardly-extending head 22, and the

heads are suitably spaced by a washer 23, so that the said heads may straddle the arm B. Each head 22 is provided with a spur 24 at its bottom forward portion. The object of the heads 22 is to force the tongue D downward so that a staple may pass from the tongue onto the forward portion of the main spring C, and the spurs 24 are intended to pass between the forward staple and the other staples carried by the tongue, thus permitting the forward staple only to escape when the tongue D is depressed, the other staples being retained on the tongue.

A gage 25 is constructed to straddle the arm B in front of the heads 22 of the releasing device F, and at the rear end of the gage 25 downwardly-extending lugs 26 are formed. The gage may be slid on the arm B, so as to be carried to or from the heads 22 of the releasing device F. After the staples have been placed upon the tongue D the gage is adjusted so that the space between the forward staple on the said tongue and the next following staple may be entered by the spurs 24 of the heads of the releasing device when the said heads are depressed.

The device is adapted to carry staples of different sizes, and the space between the tongue D and under edge of the arm B is of sufficient width to accommodate any size of staple used in the construction of wire fences. When small staples are employed, such staples are liable to slide too freely on the tongue D and not remain in proper position for delivery. To prevent such an occurrence an antirider 27 in the nature of a bifurcated guide is adjustably placed upon the arm B and extends from a point near the inner side edges of the heads 22 of the releasing device to a point near the rear end of the tongue D. Thus it will be observed, through the medium of the antirider 27 or auxiliary gage, the space between the under edge of the arm B and opposing edge of the tongue D may be made as narrow as occasion may require.

In the operation of the device, the staples being in the position shown in Fig. 1, the forward end of the device is slightly inclined and the upper members of the releasing device F are forced downward, thus depressing the free end of the tongue D and permitting the forward staple to slide upon the forward end of the main spring C and pass down to the recess 13 in the head. Upon pressing the free end of the main spring inward, as shown in full lines in Fig. 2, the head of a staple will be forced into the chamber 12, the normal position of the main spring being beneath the arm B, as shown in dotted lines in the same figure. When the bow portion of the staple is brought in engagement with the curved wall of the said chamber in the head, the limbs of the staple will be carried to a horizontal position, and the staple in this position may be readily carried over the wire and set in position for driving by simply tapping upon the outer surface of the head 11, which is practically a driving or fixing head, as through the medium of this head the staple is fixed in position on the wire, and when the head is subjected to blows from any suitable instrument the staple carried by the head may be driven to place. After the staple is fixed in position on the wire the device may be withdrawn, the spring C moving away from the head to release the said main spring from the staple.

It is often necessary to recharge the device, and this may be accomplished in the field without difficulty by employing a magazine or collecting-arm 28, which is likewise bifurcated to fit over the free or outer portion of the main or conducting spring C, as shown in Fig. 3. This magazine or collecting-arm 28 is provided with a handle 29 at its outer end and a downwardly-inclined recess 30 near its rear end, terminating adjacent to projections 31. The staples 14 are made to straddle the magazine or collecting-arm, and the outermost staple enters the recess 30. Thus the staples are prevented from shifting on the collecting-arm or magazine when the same has been filled, and any number of these collecting-arms or magazines may be carried to the field. When the staples on the device are to be replenished, a magazine or collecting-arm is placed upon the free end of the main or collecting spring C, the said spring having been carried to one side of the arm B, and the tongue D is carried downward and its free end made to enter the recess 19 in the conducting member C, as shown in Fig. 3. By tilting the free end of the device upward the staples will slide from the magazine or collecting-arm onto the conducting member C of the device and from thence upon the tongue D, and when the tongue has received its proper quantity of staples it is released from engagement with the conducting member C, and the gage 25 may again be adjusted, if such adjustment be required, to bring the forward staples in proper relation to the heads 22 of the releasing device.

It is evident that the device can be operated by hand and that a glove may be worn on the hand, if desired, without interfering with the proper manipulation of the device, and such a covering for the hand is especially desirable when the staples are used in connection with barbed wire.

The peculiar formation shown in Figs. 1 and 3 is given to the lower edge of the main spring C in order that the said edge of the spring may be conveniently gripped by the hand at each side of its center, since the said main spring, and in fact all portions of the device, are operated by hand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a stapling device, a spring conducting member, a carrying member movable to and from the conducting member, the conducting member being arranged to receive

staples from the carrying member, and a head adapted to receive a staple and in which the staple is carried to driving position.

2. In a stapling device, a carrying member adapted to hold staples, a conducting member adapted to receive staples from the carrying member, the carrying member being movable to and from the conducting member and the conducting member being capable of side movement, a releasing device for the staples, and a head arranged to receive the staples, in which head the staples are carried to driving position by the action of the conducting member, as set forth.

3. In a stapling device, a spring conducting member, a carrying member movable to and from the conducting member, means for locking the two members together, and a head in which the free end of the conducting member enters, as and for the purpose set forth.

4. In a stapling device, a spring conducting member, a carrying member movable to and from the conducting member, a releasing device having movement to and from the carrying member, said releasing device being provided with a head having a spur arranged to enter between the staples located on the carrying member, and a chambered fixing-head in which the free end of the conducting member enters, the said chamber being so formed that a staple carried into the same by the conducting member will be brought to driving position, as described.

5. In a stapling device, a conducting member capable of side movement, and a head adapted to receive staples from the conducting member, the said head having a chamber in which the conducting member enters, the chamber of the head being so shaped that a staple will be carried to driving position by the side movement of the conducting member, as set forth.

6. In a stapling device, the combination, with a spring conducting member, a spring carrying member having movement to and from the conducting member, there being a locking engagement between the two said members, and a releasing device consisting of spring-arms and heads carried by the arms, which heads are provided with spurs arranged to enter spaces between staples located on the carrying member, of a gage, and a support for the said gage, the gage being adjustable upon its support and located adjacent to the free end of the carrying member of the device, as described.

7. In a stapling device, the combination, with a spring conducting member, a spring carrying member having movement to and from the conducting member, a locking engagement between the two said members, and a releasing device consisting of spring-arms and heads carried by the arms, which heads are provided with spurs arranged to enter spaces between staples located on the carrying member, of a gage and a support for the said gage, the gage being adjustable upon its support and located adjacent to the front end of the carrying member of the device, and a second gage located on the said support, facing the upper edge of the carrying member, the said second gage being adapted to control the width of the space above the carrying member in which the bow portions of the staples located on said member are adapted to have movement.

8. In a stapling-machine, a magazine or collecting arm for staples, consisting of a bifurcated body having a handle at one end at an angle to the body, a recess at the opposite end, and projections adjacent to the said recess, for the purpose described.

9. The combination, with the conducting member of a stapling machine and the carrying member of the same, of a magazine or collecting arm, comprising a bifurcated body arranged to fit over the conducting member of the said device, the said body being provided with a handle at its outer end at an angle to the body, and an inclined recess near the opposite end, together with projections located at the foot of the said recess, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN CURTIS LARY.

Witnesses:
THOS. C. WHALEY,
ROBT. S. THOMPSON.