

No. 656,514.

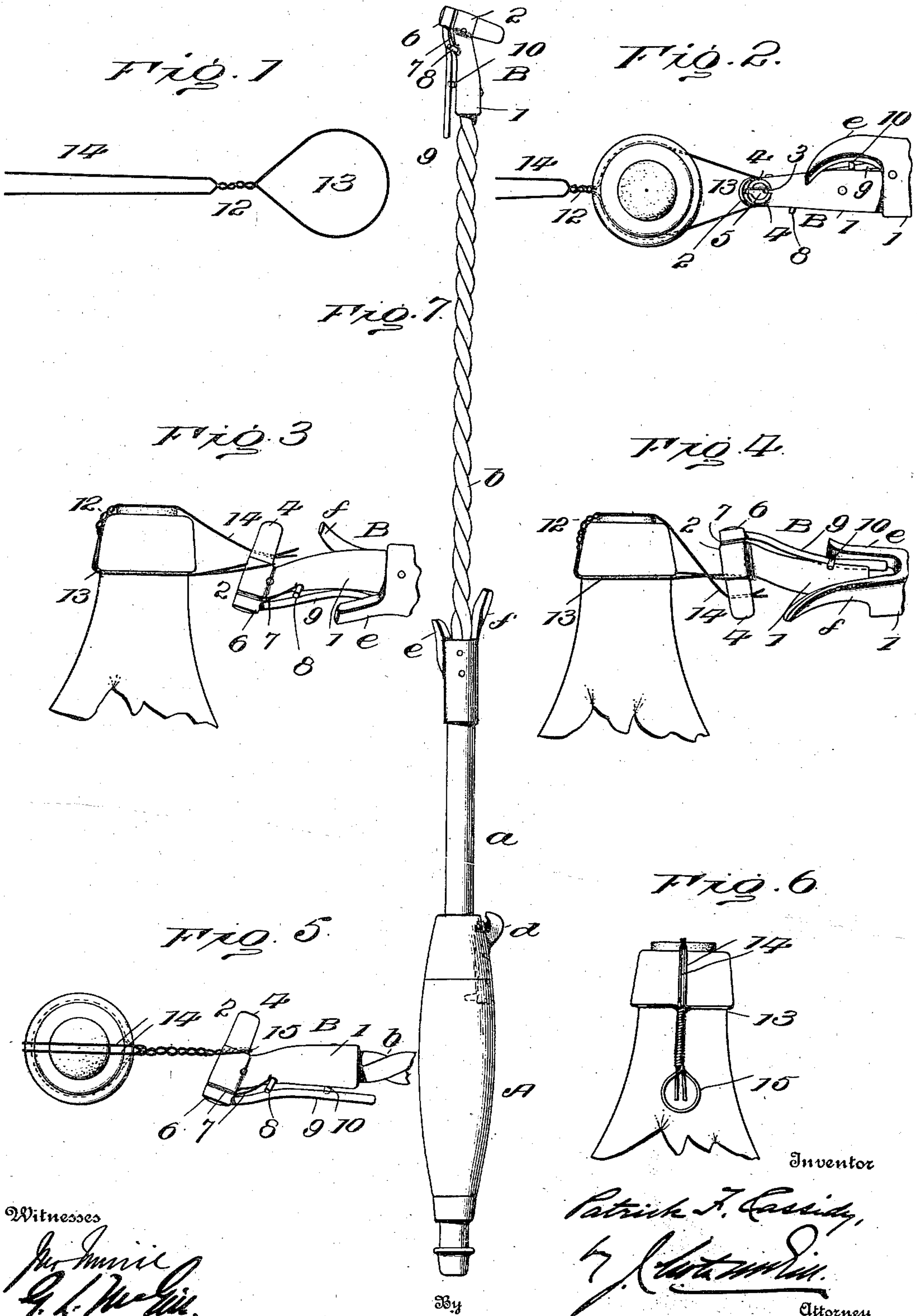
Patented Aug. 21, 1900.

P. F. CASSIDY.  
BOTTLE WIRING TOOL.

(Application filed Apr. 5, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 8.

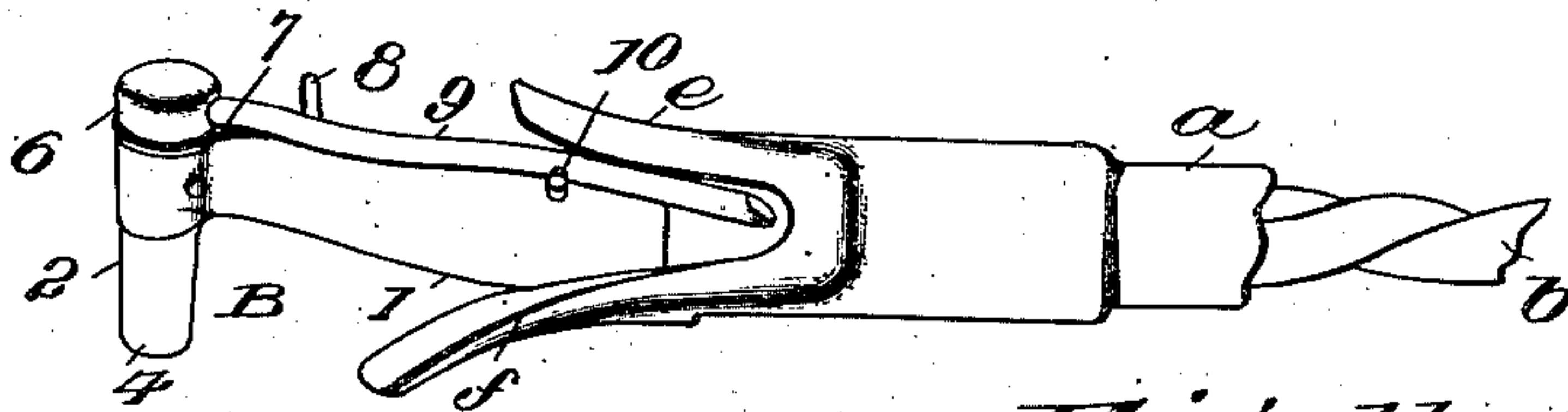


Fig. 11.

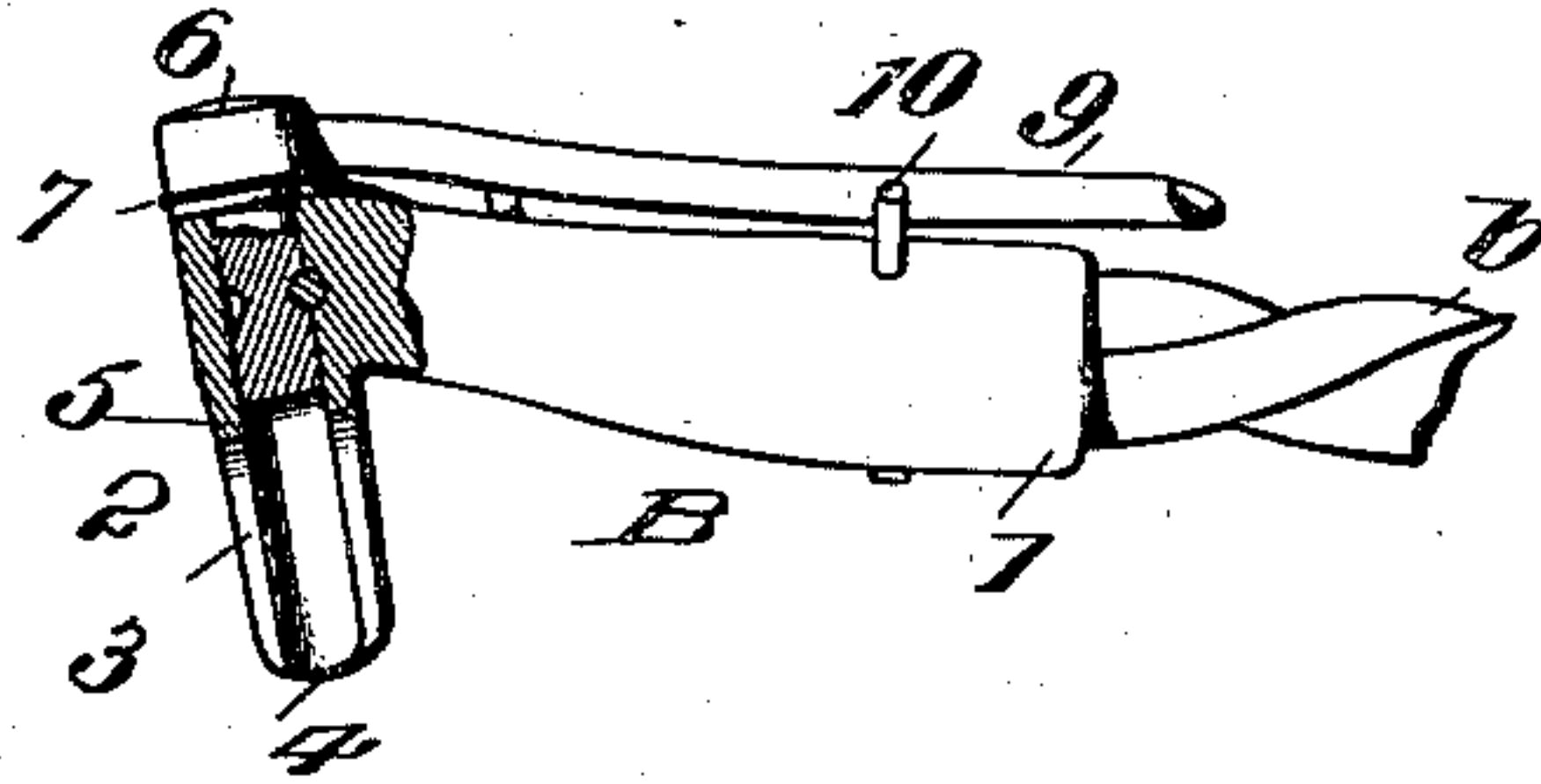


Fig. 9.

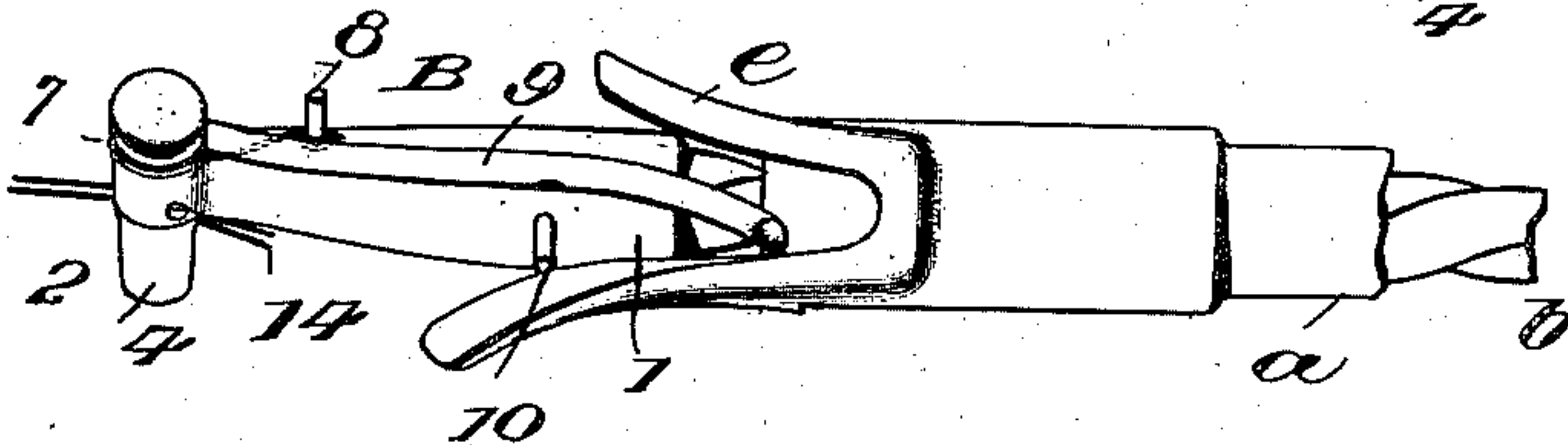


Fig. 12.

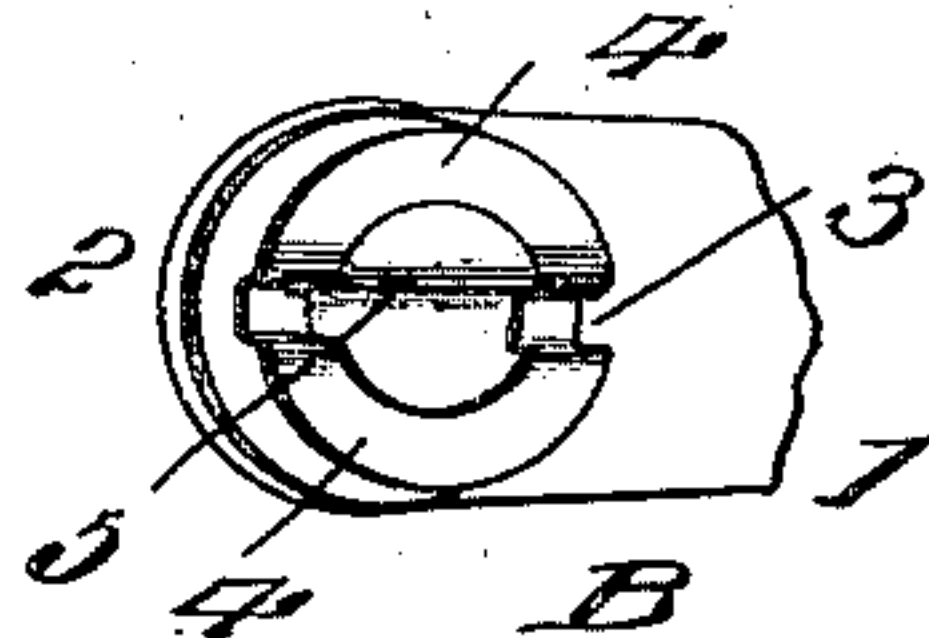


Fig. 10.

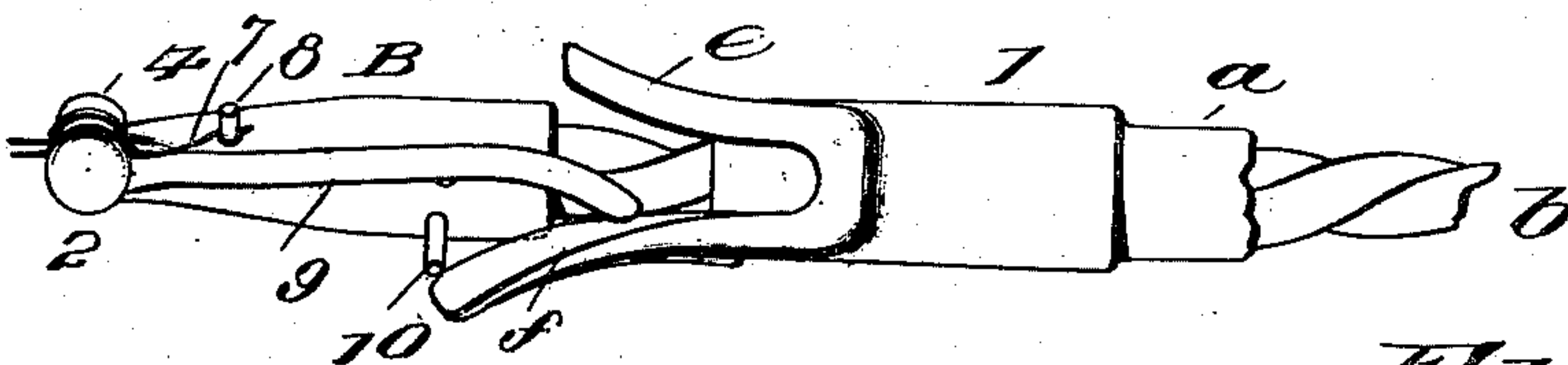
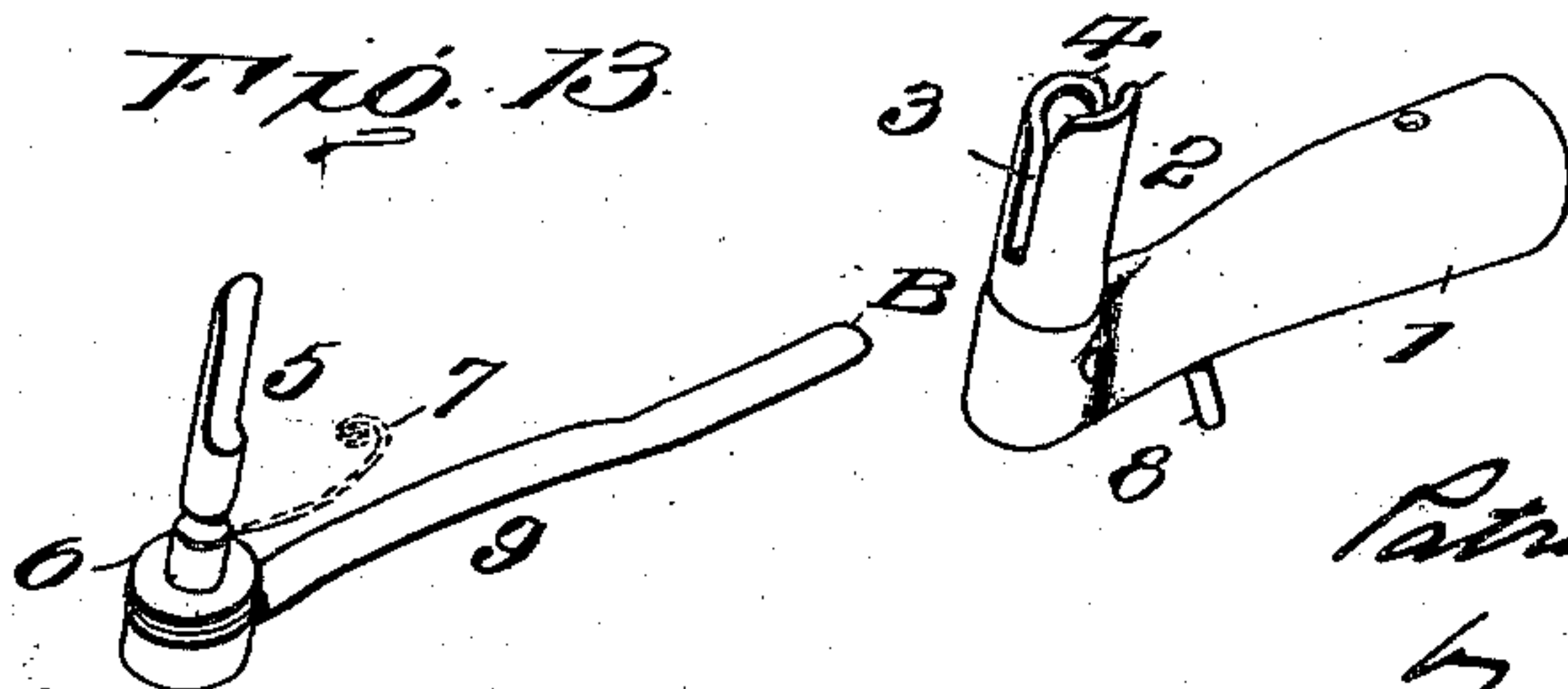


Fig. 14.

Fig. 13.



Witnesses

Indwice  
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Inventor

Patrick F. Cassidy  
By [Signature]  
Attorney.



# UNITED STATES PATENT OFFICE.

PATRICK F. CASSIDY, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO NEIL F. DOHERTY, OF SAME PLACE.

## BOTTLE-WIRING TOOL.

SPECIFICATION forming part of Letters Patent No. 656,514, dated August 21, 1900.

Application filed April 5, 1900. Serial No. 11,749. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK F. CASSIDY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and  
5 useful Improvements in Bottle-Wiring Tools; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use  
10 the same.

This invention relates to a new and improved device for wiring bottles, its object being to provide simple and highly-efficient means for twisting together the sections of a  
15 wire and cutting the free ends thereof in securing a cork or other stopper in a bottle.

In an application for patent filed by me June 26, 1899, Serial No. 721,865, I showed and described an improved method and means  
20 for wiring bottles, the same consisting in its essentials of a single wire bent and twisted to form a loop and two free ends, which latter after being passed over the stopper and brought into engagement with the elongated end of  
25 the loop were with such loop twisted together at one side of the bottle-neck. In said application I showed a suitable device for effecting this twisting of the loop and the ends of the wire, the use of which device formed a  
30 ring at the end of the twisted portion. By my present improvement I contemplate observing the same method as that embodied in my before-noted application for patent; but I now provide means for cutting the ends  
35 of the wire in addition to twisting them together with the loop, so that they will not project after the twisting is completed beyond the ring left in the loop-wire. In this way the wires are prevented from scratching the  
40 hands of those handling the bottles and a neat and secure fastener is obtained.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

45 In the accompanying drawings, Figure 1 is a view of a wire ready to be applied to a bottle-neck. Fig. 2 is a plan view of the top of a bottle-neck with the wire applied and showing a portion of the tool engaging the wire.  
50 Fig. 3 is a side view of the same with the ends of the wire turned over the cork and be-

tween the jaws of the cutter. Fig. 4 is a similar view showing the tool partially turned. Fig. 5 is a plan view showing the twisting of the ends of the wire and the loop completed. 55  
Fig. 6 is a side view showing the wire turned down after the twisting. Fig. 7 is a view of the entire tool, the spiral rod being extended. Fig. 8 is a view showing the twister, the cams, and the cutter-operating lever in the positions they occupy, with the spiral rod entirely inclosed in the sleeve. Fig. 9 is a view showing the rod slightly extended, with a wire inserted between the edges of the cutter. Fig. 10 is a similar view with the twisting-  
60 tool further extended in the position it occupies at the time of cutting the wires. Fig. 11 is a side view of the tool, partly in section, showing the knife. Fig. 12 is an enlarged view of the end of the tool. Fig. 13 shows  
65 the cutter and its lever removed. Fig. 14 is a view of the tool with the cutter omitted.

Referring to the drawings, A designates a handle; *a*, a cylindrical sleeve extending therefrom; *b*, a spiral rod working in said  
75 sleeve, and *d* a catch for locking the rod within the sleeve. On the outer end of sleeve *a* are two cams *e* and *f*, flared in opposite directions.

B is a tool mounted on the end of the spiral  
80 rod for effecting the twisting of the wire strands and the cutting of the free ends thereof. It embodies a sleeve 1, fast on rod *b* and having at its outer end, at an angle thereto, a barrel 2, wherein is formed a slot 3, which  
85 divides the barrel into two jaws 4, the outer ends of which are flared, so as to direct the insertion of a wire into the slot. Within this barrel is a cutter 5, which consists of a curved blade of such contour as to conform to the  
90 inner curved surface of one of the jaws 4, said blade being extended from a rounded head 6, which fits over the normally-lower end of barrel 2. A spring 7, engaging the head 6 and a lug 8 of sleeve 1, tends to hold  
95 the blade projected across the path of the slot between the jaws. A lever-arm 9 is extended from the head 6 of the cutter in the direction of the sleeve 1, and by contacting with the lug 8 its lateral movement under the tension of the spring is limited, its movement in  
100 the opposite direction, when forced laterally



by the cam *e*, being limited by a second lug 10 of sleeve 1, which lug and the cam hold the lever against lateral displacement. When the spiral rod is lowered into its inclosing sleeve *a*, lever 9 will engage cam *e* as the rod is moving in and being thereby moved laterally will turn the cutter-blade axially to leave free the slot between the two jaws. When the wire is inserted between these jaws, precluding the free movement of the blade, and a pull is had upon the handle, causing the turning of the spiral rod, the lever 9 will engage with cam *f*, which exerts a positive action upon the blade, causing it to cut or sever the wire, thus allowing the blade to assume its normal position under the tension of spring 7 during the remainder of the wiring operation. The weight of the spiral rod *b* is such that it will, when the device is held vertically, return to its position within the sleeve and handle, and as this occurs the cutter is moved so as to leave the slot free for the reception of a wire. The wire used for fastening the stopper in a bottle is bent back over itself and twisted at 12 to form a loop 13 and two free ends 14, such loop being considerably larger than the neck of the bottle to which it is to be applied. After a bottle-neck is inserted in this loop the operator places the twisting-barrel 2 within the loop, drawing or elongating the latter, as shown in Fig. 2. Thereupon the free ends of the wire are moved up one side, then across the stopper, and then down the other side and into the slot between the jaws 4, as shown in Fig. 3. The operator then slightly turns the device, as shown in Fig. 4, enough to give a partial twist to the loop and the two ends of the wire. The catch *d* is then pressed to release the rod *b*, and the operator pulls outwardly on handle *A*, causing the rapid turning of the rod. As this begins the lever of the cutter is brought into engagement with cam *f*, which, acting positively on said lever and through it on the cutter, effects the severance of the ends of the wire. It will be noted that the cutting of the ends is within the circumference of that portion of the loop which surrounds the barrel 2. Hence when the twisting together of the ends and the loop is completed these cut ends will be within the ring 15, which is left in the loop when the tool is removed, as seen in Fig. 6.

By means of this device not only does the wire-fastener present a neat appearance, but the ends of the wire are by being within the ring protected, so that they cannot scratch the hands of those who subsequently handle the bottles. To release the cork or stopper the wire may be untwisted by grasping the ring 15 and turning the wire in the direction opposite to that of the twist.

I claim as my invention—

1. A bottle-wiring device comprising a rod, means for axially turning said rod, and a wire-engaging tool carried by said rod constructed and adapted to engage one portion of the wire and hold another portion or portions of such

wire for twisting together all of said portions of the wire during the turning of the rod, as set forth.

2. A bottle-wiring device comprising a rod, means for axially turning said rod, and a wire-engaging tool carried by said rod having a rounded portion and a diametrical slot, the former for engaging a loop in the wire and the latter for receiving the ends of such wire, as set forth.

3. A bottle-wiring device comprising a tool having a hollow rounded portion for engaging a wire loop and a slot for receiving the ends of the wire, means for rotating said tool, a cutter having an axial movement coincident with said rounded portion, and means for moving said cutter across said slot for severing the wire as the tool is rotated, substantially as set forth.

4. A bottle-wiring device comprising a rod, means for axially turning such rod, a wire-engaging tool carried by said rod, means also carried by the said rod for cutting the wire, and means for operating the cutting means as the rod is turned.

5. A bottle-wiring device comprising a rod, means for axially turning such rod, a tool carried by said rod for engaging a loop in the fastening-wire and holding the ends of the latter, a cutter within said tool, and means for operating the cutter during the turning of the rod.

6. A bottle-wiring device comprising a rod, means for axially turning such rod, a tool carried by such rod comprising a barrel for engaging a loop in the fastening-wire and holding the ends of the latter, a cutter within the barrel, and means for operating the cutter during the turning of the rod.

7. A bottle-wiring device comprising a rod, means for axially turning such rod, a wire engaging and holding tool carried by such rod having a slot therein for receiving the ends of the wire, a cutter, and means for moving such cutter across said slot for severing the wire as the rod is turned, as set forth.

8. A bottle-wiring device comprising a rod, means for axially turning such rod, a tool carried by such rod comprising a barrel for engaging a loop in the fastening-wire and having a diametrical slot for receiving the ends of such wire, a cutter within the barrel, and means for operating the cutter during the turning of the rod, substantially as set forth.

9. A bottle-wiring device comprising a rod, means for axially turning such rod, a wire-engaging tool and a wire-cutter carried by said rod, a spring acting on such cutter, a lever extending from the latter, and a cam independent of said rod with which the lever is designed to engage for effecting the cutting operation, substantially as set forth.

10. A hand device of the character described comprising a handle, a sleeve, a spiral rod designed to fit in said sleeve, means for axially turning said rod as it or the said handle is moved longitudinally, a tool carried by said rod for engaging the loop of a fastening-wire



and holding the ends of such wire, a cutter, a lever therefor, and a cam on said sleeve with which such lever engages as the rod is turned, substantially as set forth.

- 5 11. The combination with the spiral rod, the inclosing sleeve therefor, cams on said sleeve, and means for axially turning said rod, of a tool on one end of said rod comprising a hollow  
10 barrel having a slot therein, a cutter-blade within said barrel, a spring tending to hold said cutter-blade across said slot, a lever for

said cutter-blade, and stops for limiting the lateral movements of said lever, substantially as set forth.

In testimony whereof I have signed this 15 specification in the presence of two subscribing witnesses.

PATRICK F. CASSIDY.

Witnesses:

ELIZABETH R. PORTER,  
GEORGE A. FLYNN.