

No. 815,755.

PATENTED MAR. 20, 1906.

D. C. SMITH.
WIRE SPLICER.

APPLICATION FILED AUG. 15, 1904.

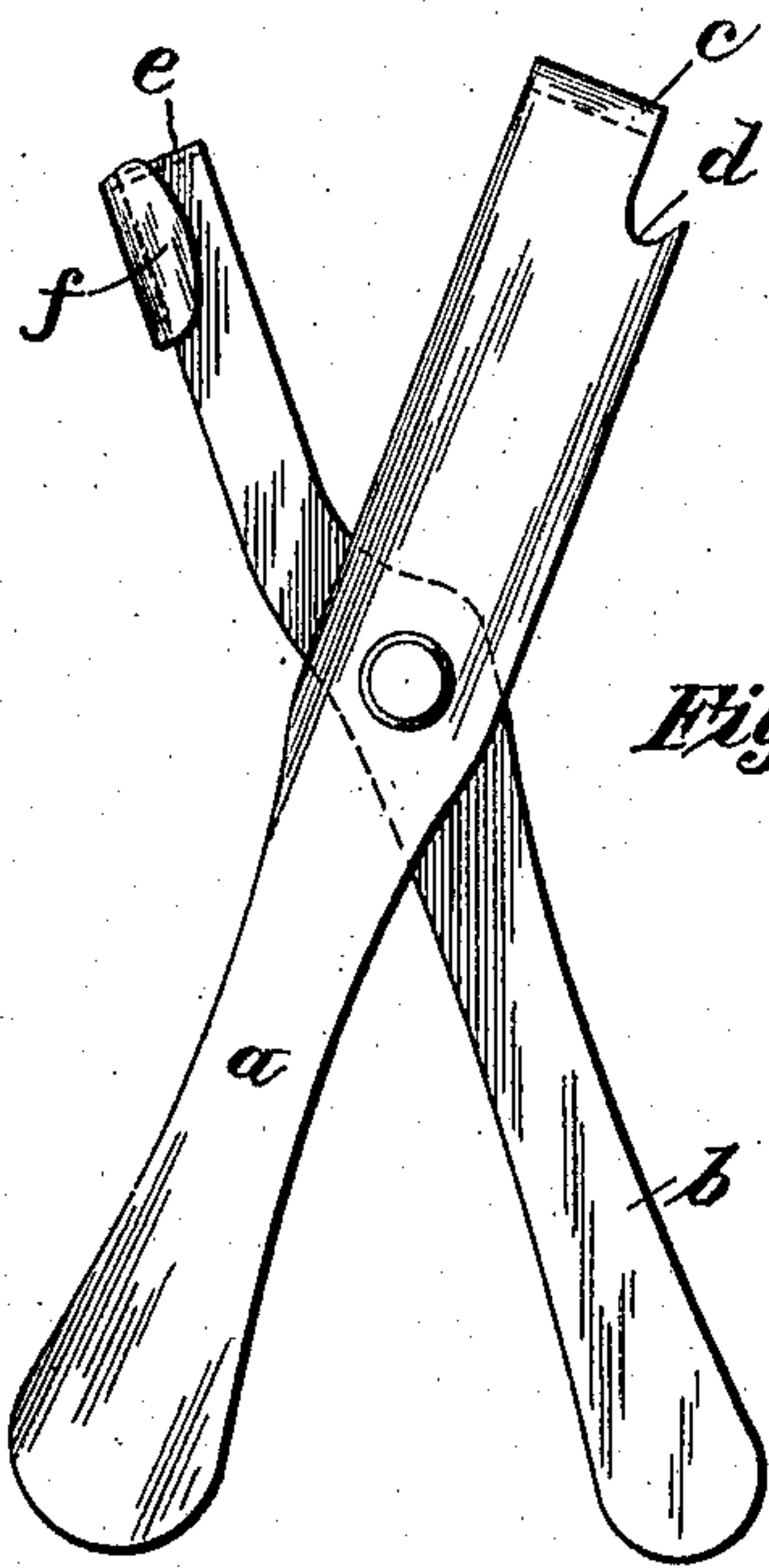


Fig. 1.

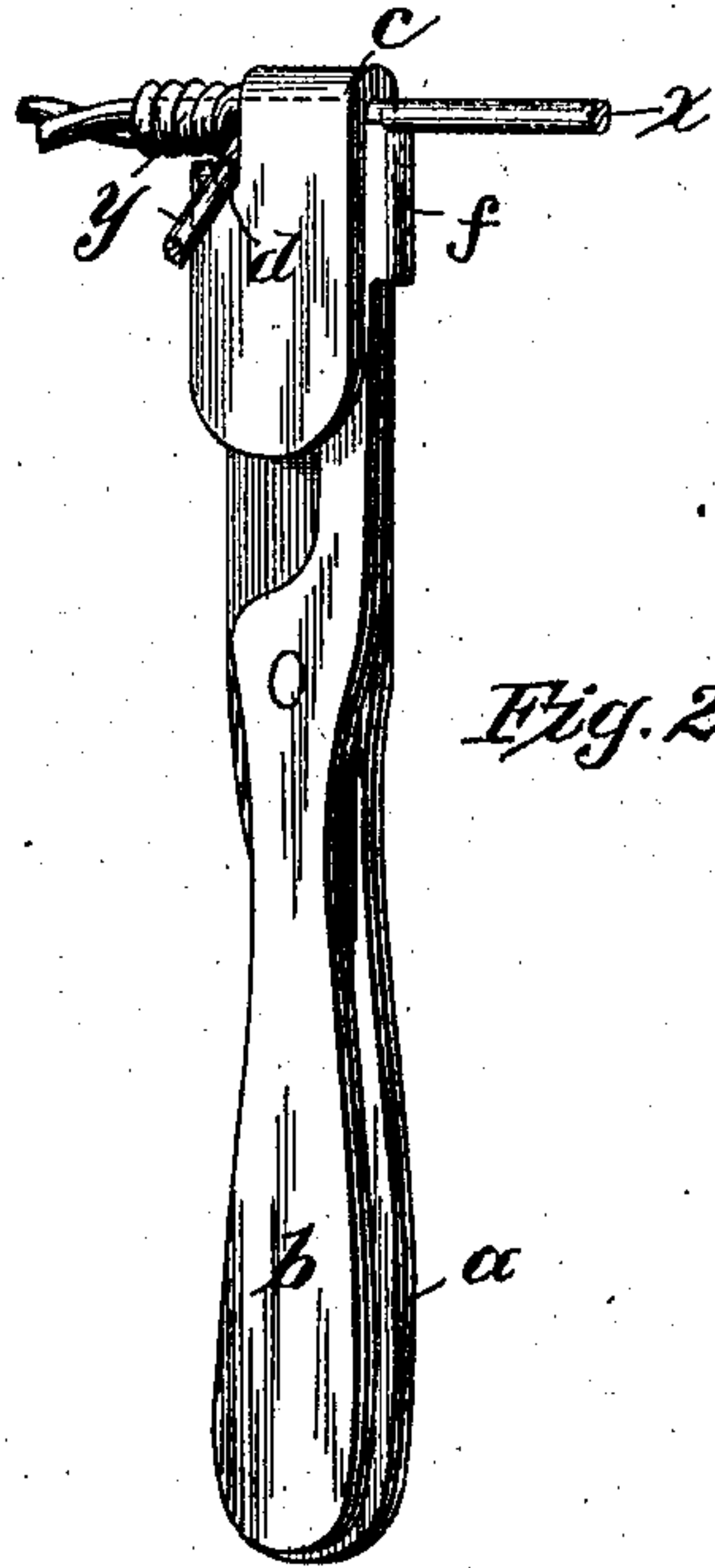


Fig. 2.

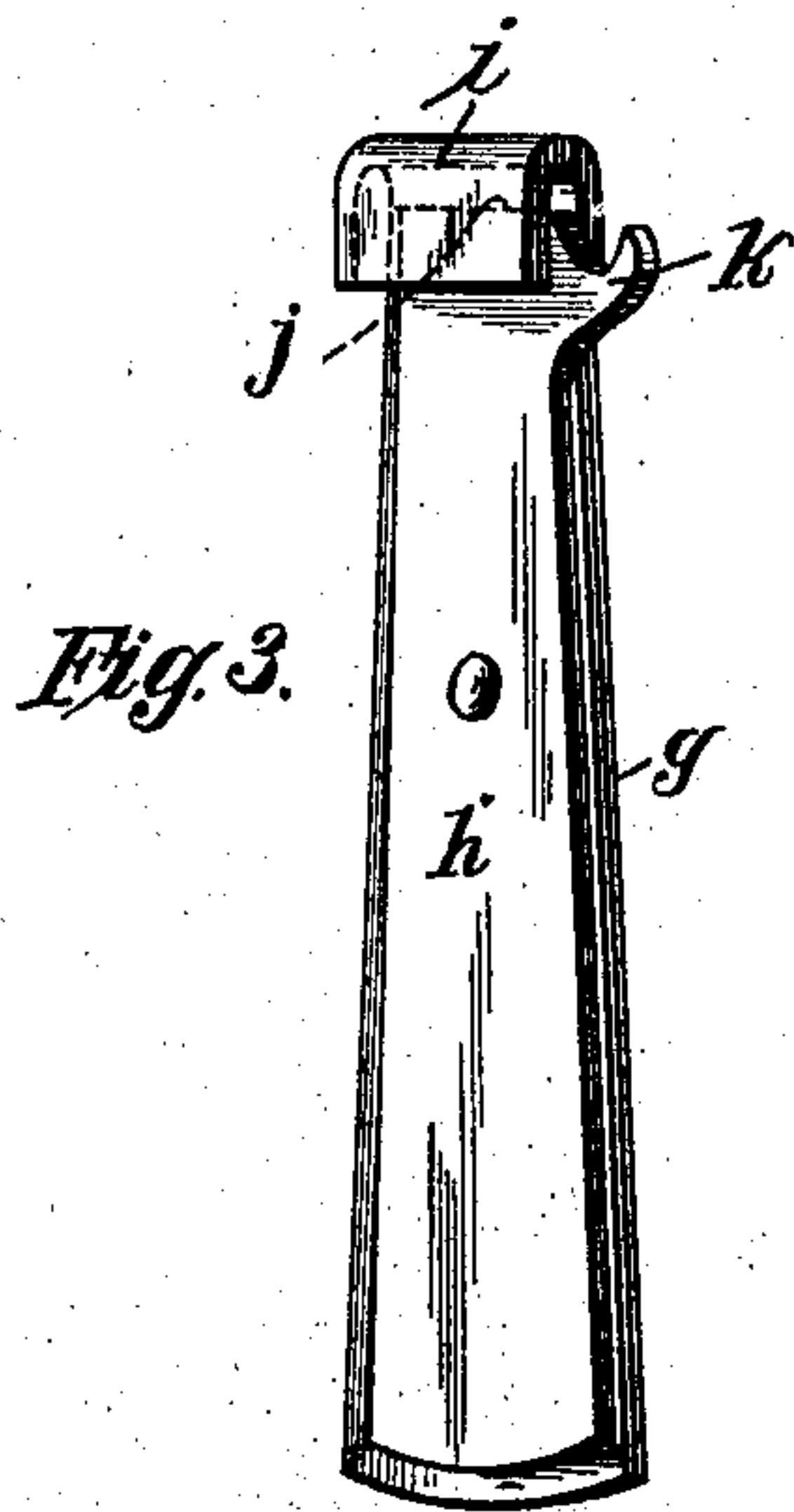


Fig. 3.

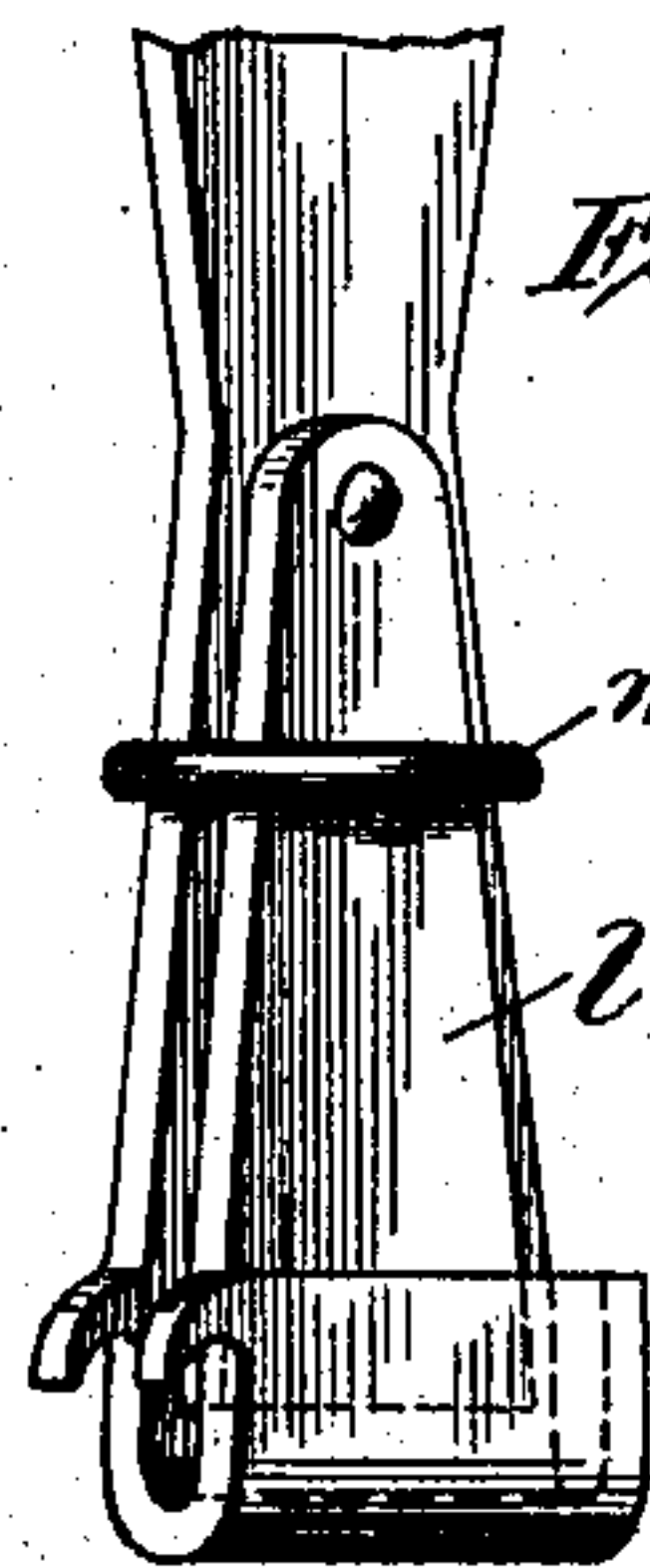


Fig. 4.

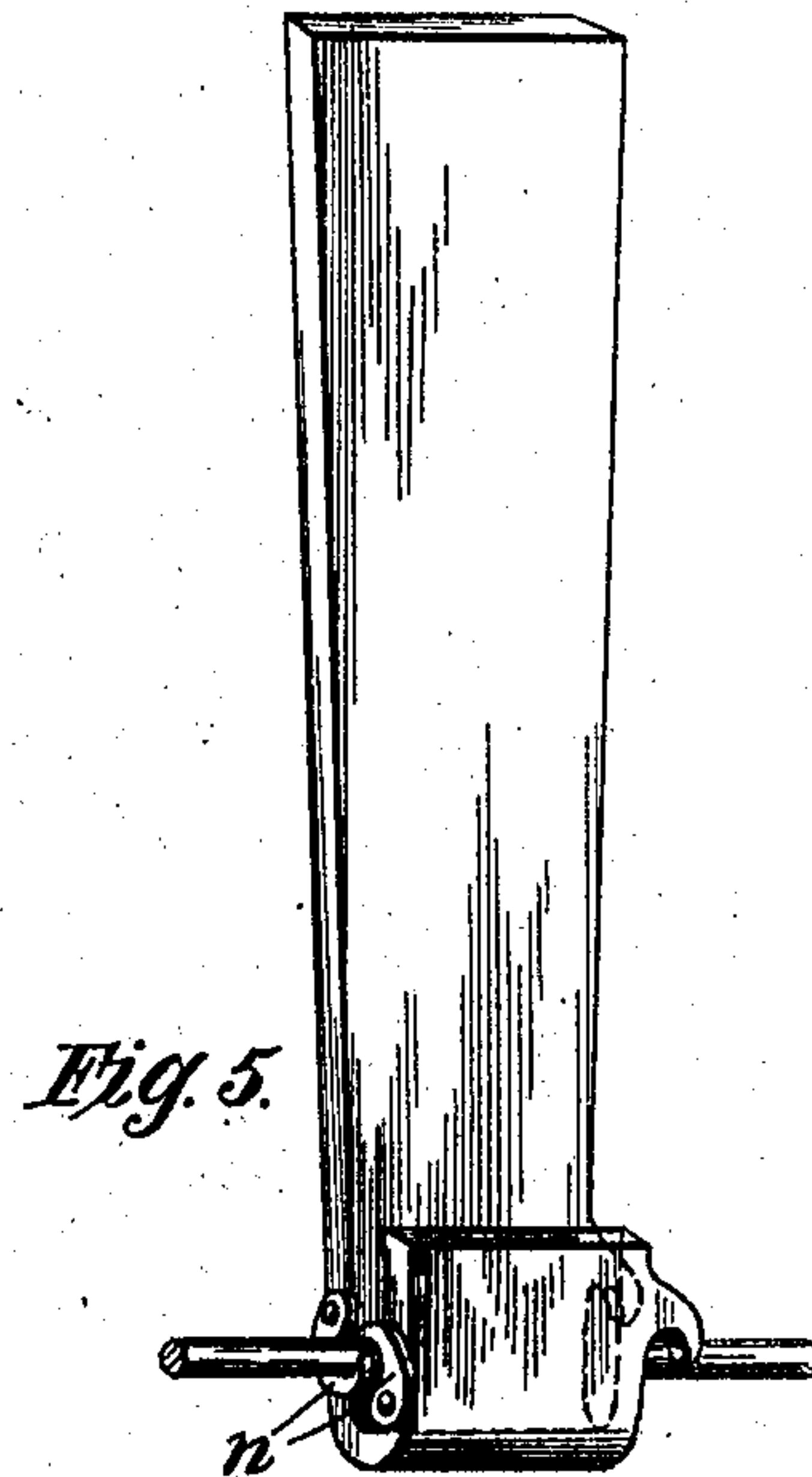


Fig. 5.

Witnesses:

W. S. Austin
Louis J. Scudder

Inventor

Darius C. Smith

By

William C. Smith & Son
his Attorneys.

UNITED STATES PATENT OFFICE.

DATUS C. SMITH, OF NEW YORK, N. Y.

WIRE-SPLICER.

No. 815,755.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed August 15, 1904. Serial No. 220,838.

To all whom it may concern:

Be it known that I, DATUS C. SMITH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Wire-Splacers; 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 the same.

This invention relates to implements used by linemen, wire-fence builders, and others for splicing or joining adjacent ends of wires, for coiling wire stays around fence-strands, and for similar purposes.

There is a common type of splicer comprising a flat shank having a return-bend or hook for holding on the dormant wire, by which is meant the wire around which another is to be wound, and having lateral notches, shoulders, or projections at the side of the hook for engaging the wire to be wound and coiling it about the dormant wire as the tool is carried around the latter. This implement is simple, convenient, and of great utility, but has the defect of tending to swing off the dormant wire owing to the resistance of the wire that is being coiled or wound thereon, requiring considerable force to maintain the strand or dormant wire seated in the hook. In case of heavy and stiff wires this defect becomes vital.

The object of the present invention is to improve the type of splicer here referred to by providing means for locking the dormant wire firmly within the hook of the implement, so that no force is required to hold the hook on said wire; but the operator has merely to give the tool the requisite number of turns for effecting a coil of the wire to be wound. This object is attainable by various means, of which several are shown in the accompanying drawings, forming a part of this specification, and illustrating different specific embodiments of my invention.

Figure 1 shows a splicer composed of two pivoted members open or in position to allow the hook to catch on the wire around which another is to be wound. Fig. 2 shows the same splicer in operation with its members closed and engaging the wires, looking at the opposite side of the tool to that seen in Fig. 1. Fig. 3 shows another splicer composed of two pivoted members. Figs. 4 and 5 show implements of other constructions embodying the invention.

In each illustrated embodiment of the invention the general type of the implement is the same, comprising, broadly, a shank or handle having a hook for holding the dormant wire, a lateral shoulder or shoulders or coiling device for engaging the wire to be wound, and means for locking the dormant wire in the hook.

In Figs. 1 and 2 the splicer consists of two pivoted members *a* and *b*, one of which has a return-bend or hook *c* formed with notches *d* in both parts, which provide coiling-hooks or shoulders for engaging the wire to be wound, while the other member, which is somewhat shorter and is pivoted to the former on an axis transverse to the flat hook, has its free end *e* adapted to pass within the hook and form a stop for locking the dormant wire in place. The end *e* has also a longitudinal flange or shoulder *f* adapted to abut the longitudinal edge of member *a* for limiting the position of the stop and the relative movements of the two members when they are closed together.

The operation of the tool is shown in Fig. 2. While the pivoted members are open, as in Fig. 1, the wire *x* is engaged by the hook *c*. Then the handles of the tool are brought together, so that the stop *e* passes in the hook and locks said wire in place. Then the end of the wire *y*, which is to be coiled or wound around the wire *x*, is engaged by one of the shoulders or small coiling-hooks *d*, and the splicer is given a suitable number of turns around the dormant wire *x* to effect the coil. It is understood, of course, that the two wires which are being connected are held in proper position during the joining operation. For example, in the case of splicing the free ends of two wires an initial twist may be given by hand or they may be overlapped a short distance and held by a clamp or pincers, while their ends are coiled one around the other, or in the case of attaching a wire stay to the strand-wire of a fence the latter wire is naturally held taut and the stay may be held by the hand or otherwise. The resistance of the wire which is being coiled or wound forces the dormant wire firmly against its seat in the bend of the hook *c* at the side of the hook next the shoulders *d*, while at the opposite side of the hook the wire is supported by the stop *e*. Inasmuch as the two members *a* and *b* are pivoted, as described, on an axis transverse to the dormant wire, there is no force exerted on the stop *e* tending to force it out

or to separate the handles. The two handles when held together, as in Fig. 2, constitute a convenient grip for the hand, and the operator has merely to carry the implement a suitable number of times around the dormant wire. One or the other of the shoulders or coiling-hooks *d* is used, according to the direction in which the implement has to be turned to splice the wires or according to whether a right-hand or left-hand coil is to be made.

The splicer shown in Fig. 3 is similar, comprising likewise two pivoted members *g* and *h*, one of which has a hook *i*, while the other has its end *j* adapted to pass within the hook and form the stop for locking the dormant wire in place. Instead of the two shoulders or coiling-hooks on the hook *i* a single hook *k* is formed on the longitudinal edge of member *h*, which will serve to engage and coil a wire in either direction or to make either a right-hand or left-hand coil. The mode of engaging the wires and effecting a union is the same as already explained.

In Fig. 4 is shown a splicer consisting of a shank having a hook for engaging the dormant wire, shoulders for engaging the wire to be wound, and a short removable stop *l* in the hook held in place during operation by a ring *m*.

In Fig. 5 a similar splicer is shown having little hooks *n* at one side to fall over and hook in the dormant wire after it is placed within the hooked end of the splicer.

The same principle is involved in each construction, and it is obvious that the invention may be embodied in various devices of the same general character. In another application filed concurrently herewith, Serial No. 220,837, I have illustrated several single-piece devices embodying the same principle.

By making the implement so that sufficient space is left between the bend of the main hook and the stop to accommodate two wires instead of one it may serve well as a clamp for holding the two wires while one wire is being coiled around the other by another implement.

I claim as my invention and desire to secure by Letters Patent of the United States—

1. A wire-splicer comprising a shank having a return-bend or hook for holding or seating the dormant wire therein, a lateral shoulder or projection for engaging the wire to be coiled or wound around the dormant wire, and means for opposing the strain exerted upon the dormant wire by the coiling operation and holding the dormant wire firmly seated in the hook.

2. A wire-splicer comprising a shank having a hook for holding or seating the dormant wire therein, a lateral shoulder or projection for engaging the wire to be coiled or wound around the dormant wire, and a movable stop adapted to be opposed to the seat in the

hook to form an abutment for holding the dormant wire seated within the hook.

3. A wire-splicer comprising two pivoted members, one of which has a return-bend or hook for holding or seating the dormant wire therein, while the other moves in or between the inner faces of said hook when the members are closed together and forms a stop for locking the dormant wire in the bend of the hook, one of said members having a shoulder or hook for engaging and coiling the wire to be wound.

4. A wire-splicer comprising two pivoted members, one of which has a return-bend or hook for holding or seating the dormant wire therein, with a lateral shoulder or shoulders at one side of said hook for engaging and coiling the wire to be wound, while the other member is adapted to move within the hook and form a stop or abutment for the dormant wire to hold it in place.

5. A wire-splicer comprising two pivoted members, one of which has a hook for holding or seating the dormant wire therein, with a lateral shoulder or shoulders at one side of said hook for engaging and coiling the wire to be wound, while the other member is adapted to move into said hook at its opposite side, to form a stop or abutment to hold the wire in place, and one of said members having a flange, stop or shoulder adapted to limit relative movement of the two members.

6. A wire-splicer comprising a shank having a return-bend or hook for holding or grasping the dormant wire, and a shorter member pivoted to said shank on an axis transverse to the hook or bend and adapted to move within the bend to form a stop or opposed seat for locking the dormant wire in place therein.

7. A tool for use in manipulating wire comprising two pivoted members one of which has a return-bend or hook overlying the other which is shorter to provide a wire-space in the hook and adapted to move into and out of said hook for locking the wire or wires therein and permitting insertion or withdrawal thereof.

8. A wire-splicer comprising a shank having a hook for grasping or holding the dormant wire, a lateral coiling device, and a movable stop adapted to be brought into a position opposed to the seat in the hook and form a rigid seat for the dormant wire.

9. A wire-splicer comprising a shank having a return-bend or hook, provided with a lateral coiling device, and having a movable stop adapted to close the entrance to the hook for holding the dormant wire seated therein during the coiling operation.

In testimony whereof I affix my signature in presence of two witnesses.

DATUS C. SMITH.

Witnesses:

J. P. DUNNING,

W. H. ROBERTSON.