

(No Model.)

J. HARPER.

TOOL FOR GRIPPING AND STRETCHING WIRE.

No. 512,582.

Patented Jan. 9, 1894.

Fig. 1.

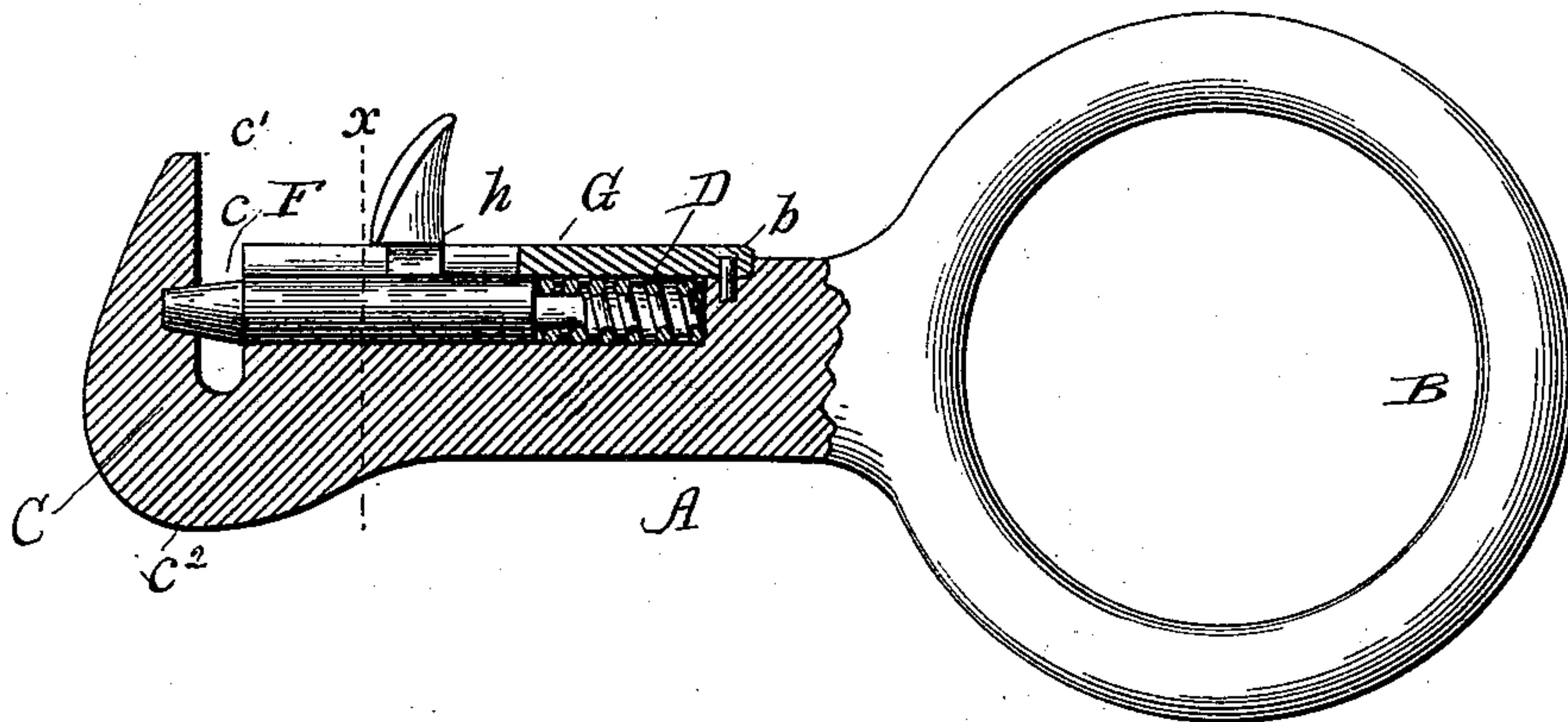


Fig. 2.

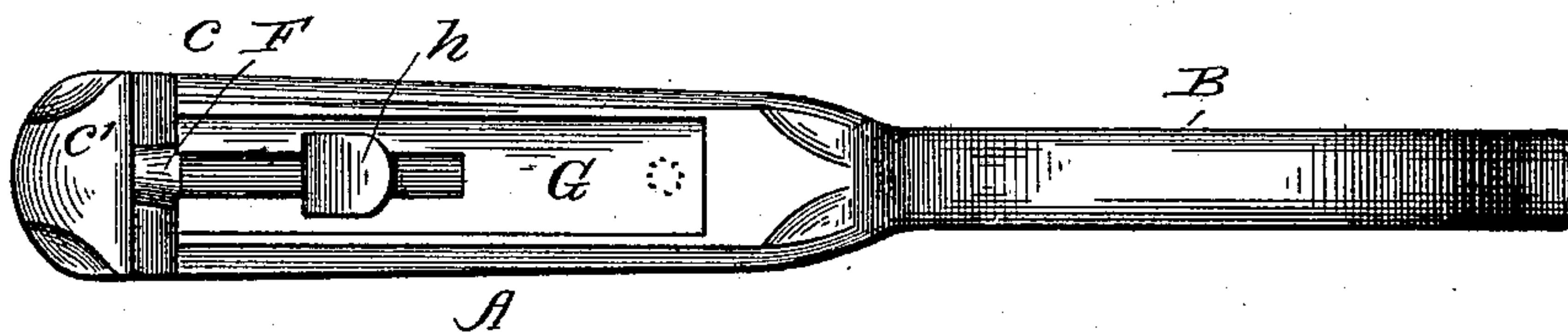


Fig. 3.

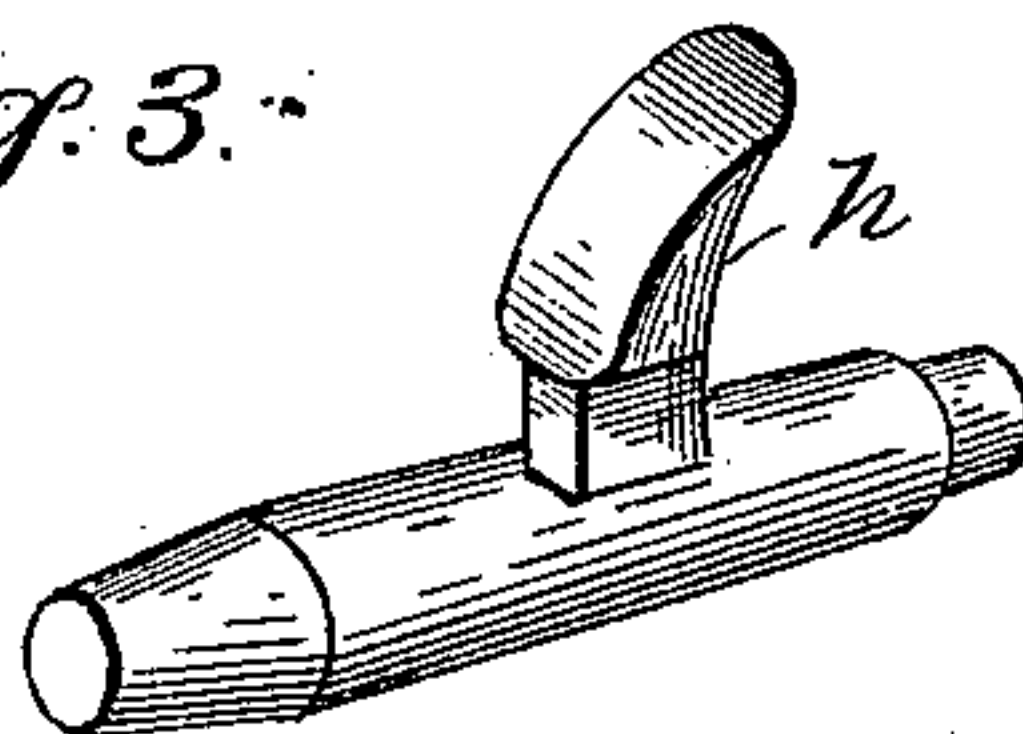
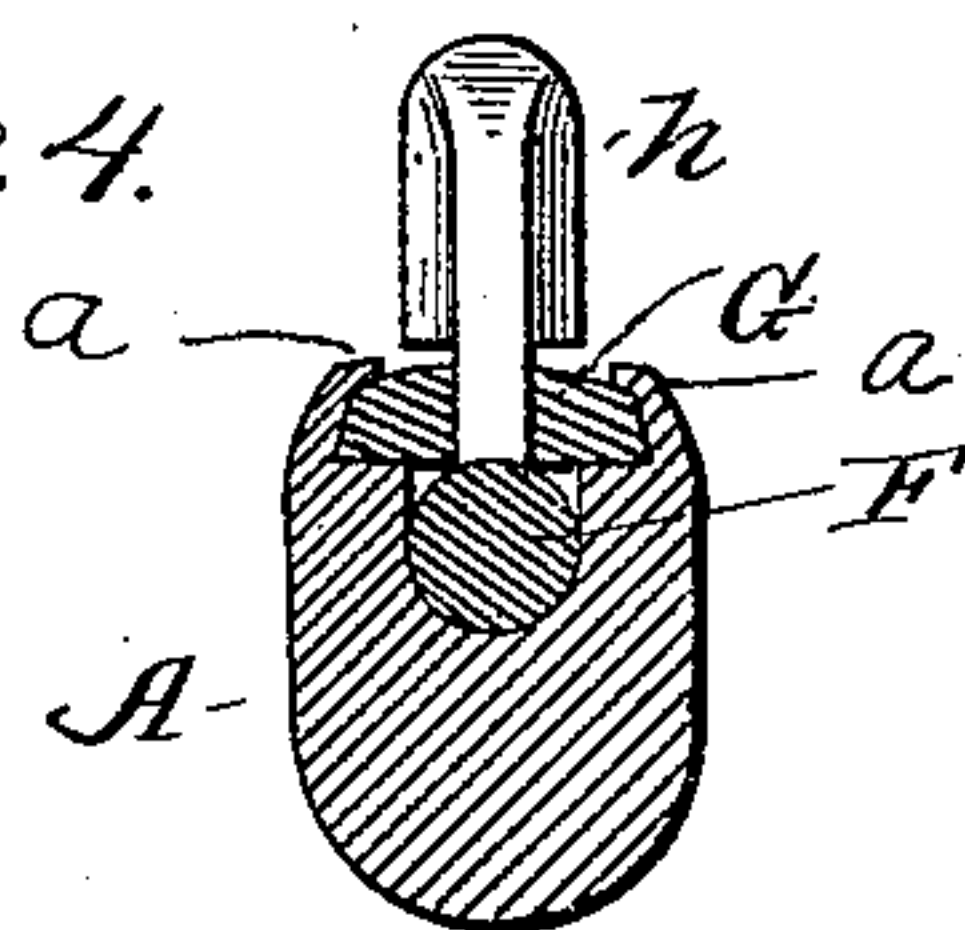


Fig. 4.



Witnesses.
Victor J. Evans.
J. E. Thompson

Inventor.
John Harper
By J. F. Beale
Attorney.

UNITED STATES PATENT OFFICE.

JOHN HARPER, OF FAIRFIELD, IOWA.

TOOL FOR GRIPPING AND STRETCHING WIRE.

SPECIFICATION forming part of Letters Patent No. 512,582, dated January 9, 1894.

Application filed June 3, 1893. Serial No. 476,433. (No model.)

To all whom it may concern:

Be it known that I, JOHN HARPER, a citizen of the United States, residing at Fairfield, in the county of Jefferson and State of Iowa, have invented certain new and useful Improvements in Tools for Gripping and Stretching Wire; 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.

My invention relates to wire working tools, and more particularly to devices for gripping and stretching wire.

The object of my invention is to provide a tool for gripping wire, adapted to be used by hand as a wire grip and stretcher or as a grip in connection with any suitable wire stretching device.

In the accompanying drawings forming a part of this specification:—Figure 1, is a side elevation. Fig. 2, is a top plan view. Fig. 3, is a view of the plunger, and Fig. 4, a cross section on line *x* of Fig. 1.

Referring more particularly to the drawings A, denotes the body of the tool, B, the handle and C, the grip. The body A, is provided with an oblong recess, opening upward and leading forward into a slot *c*, cut at right angles to the same.

a, a, are lips formed on the upper sides of the recess as shown in Fig. 4.

D, is a coiled spring which is placed in said recess and bears against the end wall thereof.

b, denotes a stud affixed to the body A.

G, denotes a cap or cover having a depression formed on its under side which registers with the stud *b*. This cap is oval on top and has beveled edges or sides and a longitudinal slot cut lengthwise as shown in Figs. 2 and 4.

F, denotes a plunger having a trigger *h*, which rides in said slot; the plunger bears against the coiled spring which actuates it to press forward across the slot *c*, its free end registering with and entering a recess formed in the farther or opposite wall of the slot. The handle B, is preferably ring-shaped and

formed integral with the body and on a vertical line tangential thereto, or in a line at right angles to the slot *c*. The grip C, is formed of a slot *c*, cut transversely near the end of the body A, a flat hook or projecting end *c'*, and a rounded shoulder *c''*, projecting on the under side beneath the slot. The slot *c*, is cut below or deeper than the recess and the hook *c'*, projects above the body of the tool. The tool is preferably made of malleable iron, the body, handle, and grip, being made in one piece. The coiled spring is placed in the recess, and the plunger and cap are put in position with the trigger projecting through the slot in the cover or cap of the recess. The lips *a, a*, are then bent over against the beveled side of the cap, as shown in section in Fig. 4.

In operation the tool can be used by hand, in gripping and stretching wire, or when used in combination with a wire stretching device, the handle serves as a purchase for connecting or coupling on the stretcher. To grip the wire the tool is presented at about right angles to the wire or until the slot *c*, is parallel to the same. The plunger is then forced back by pressing the trigger, and the wire allowed to pass into the slot. The trigger is then released, when the plunger is forced back to its normal position by the coiled spring its free end entering the recess in the wall of the slot opposite thus confining the wire in the slot and preventing its upward escape. The tool is then turned until the handle is in the direction of pull which causes the slot to grip the wire firmly at an angle and prevent it slipping lengthwise through the slot. To tighten the grip the tool is twisted to the right which causes the wire to be wound about and under the grip inside of the rounded shoulder *c''*. In taking hold of the wire the elongated hook *c'*, facilitates catching the wire and guiding it to the slot. In stretching lengths of wire at intervals it is not necessary to disengage the grip from the wire at each stretching as by turning the tool back to a position at right angles to the direction of pull the

slot will loosen its grip upon the wire and allow the tool to be passed along the same to the next point of gripping.

Having shown and described my invention,
5 what I claim, and desire to secure by Letters Patent, is—

A tool for gripping wire having a flat hook at one end projecting above a slot running transversely across said end, a rounded shoul-

der under said slot and a spring actuated to plunger crossing said slot substantially as shown and described.

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

JOHN HARPER.

Witnesses:

S. C. CHATHAM,
F. W. BARTLETT.