

(No Model.)

M. D. CONVERSE.
PIVOTED TOOL.

No. 584,924.

Patented June 22, 1897.

Fig. 3.

Fig. 1.

Fig. 2.

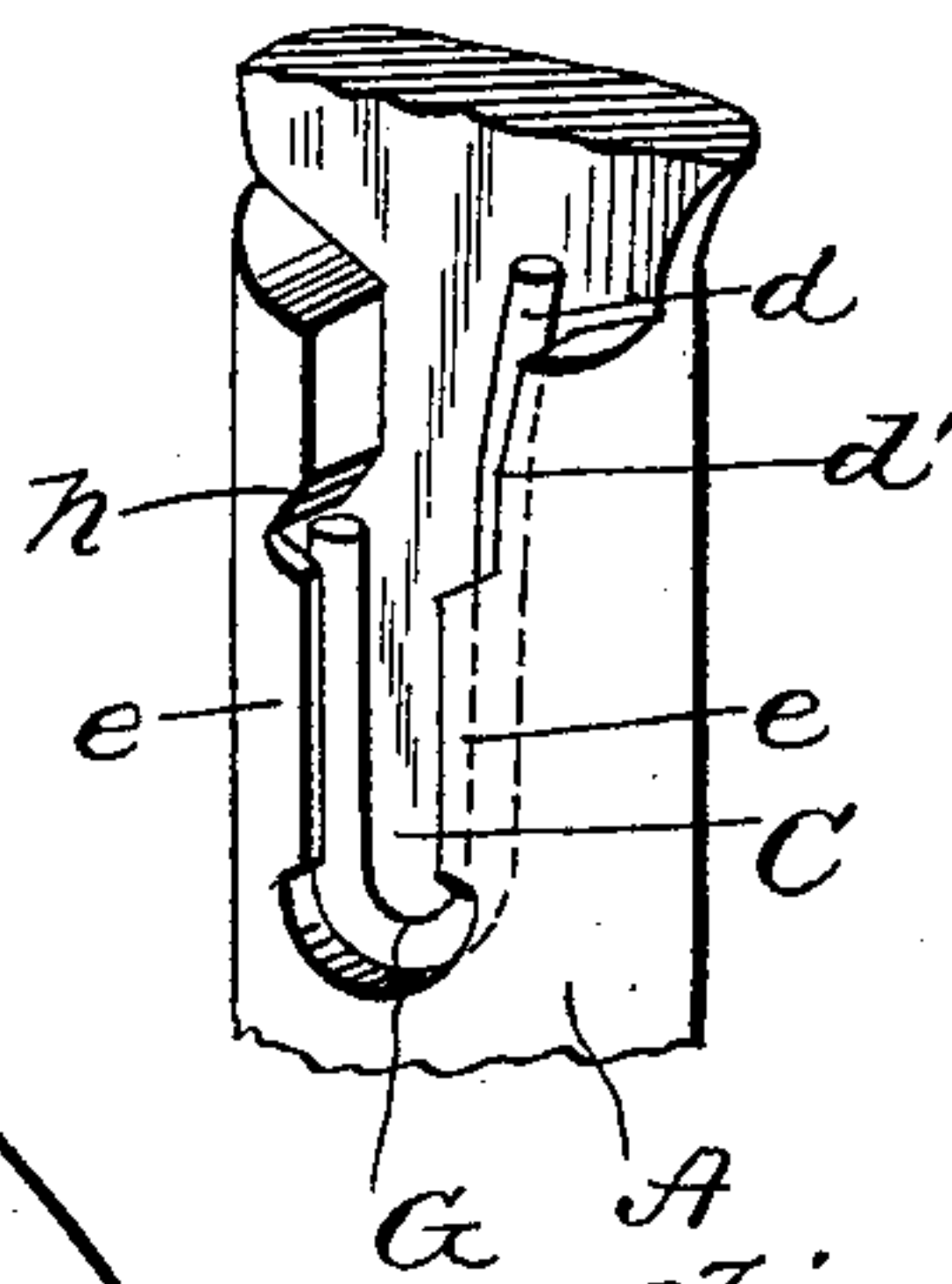
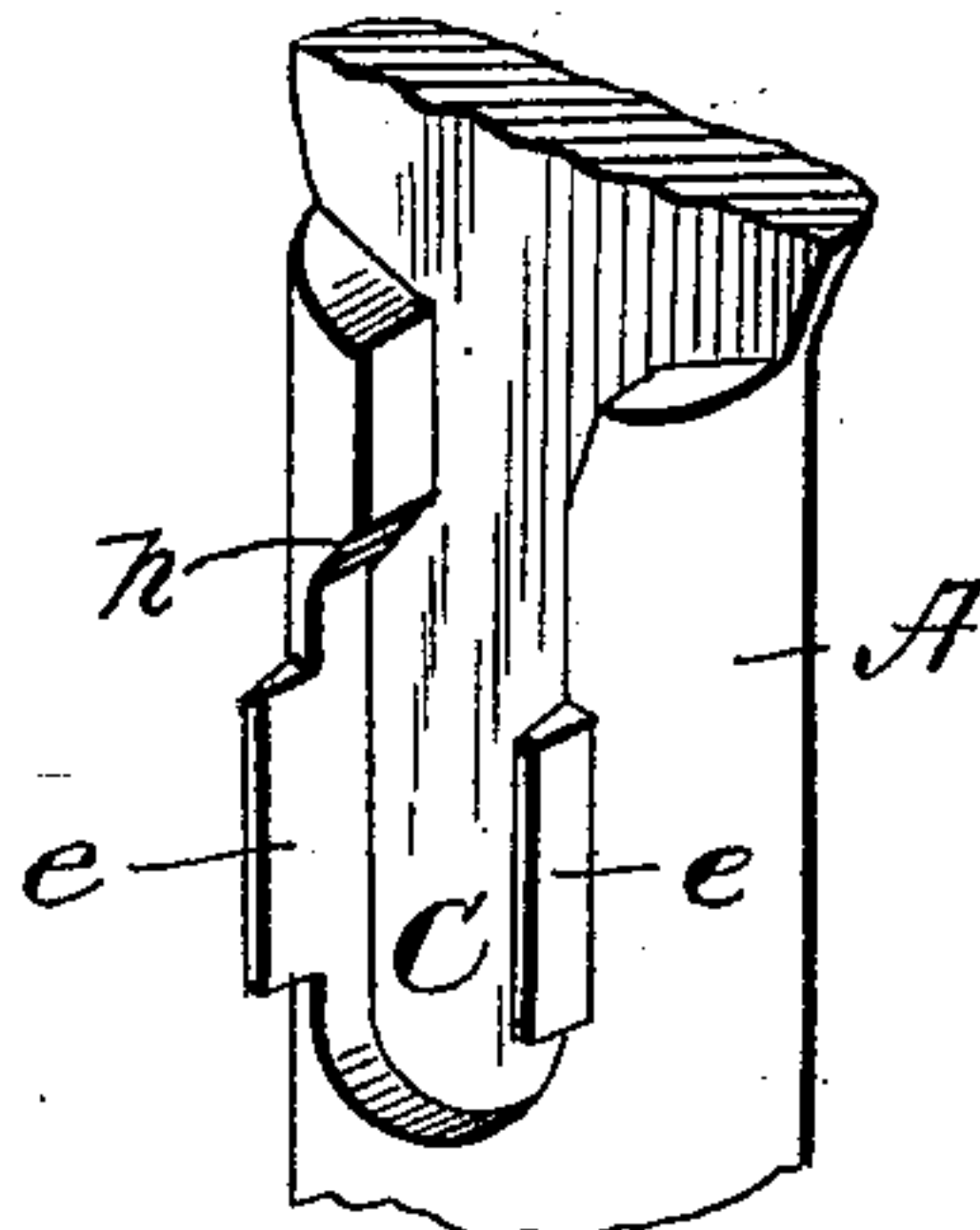
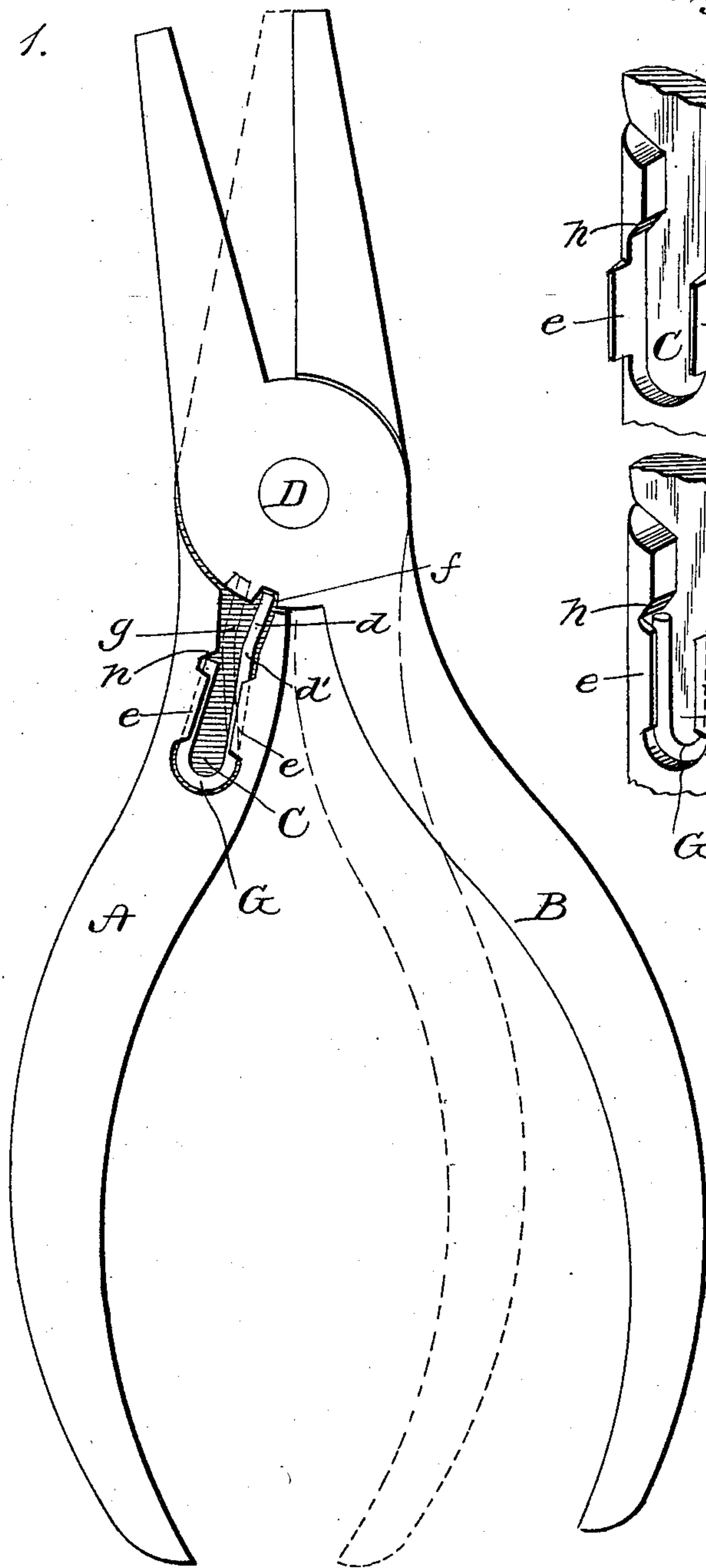


Fig. 4.

Witnesses
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MASCHIL D. CONVERSE, OF NEW YORK, N. Y., ASSIGNOR TO THOMAS F. STEVENSON, OF SAME PLACE.

PIVOTED TOOL.

SPECIFICATION forming part of Letters Patent No. 584,924, dated June 22, 1897.

Application filed April 12, 1897. Serial No. 631,880. (No model.)

To all whom it may concern:

Be it known that I, MASCHIL D. CONVERSE, a citizen of the United States, residing in the city, county, and State of New York, have invented new and useful Improvements in Pivoted Tools, such as pliers, nail-pullers, shears, and implements of analogous sort, of which the following is a specification.

My invention relates more especially to improvements in such of this class of tools as are usually constructed with springs for opening or closing the pivoted parts; and the object of my invention is to provide such tools with such a form of spring and adapted means for retaining the same that the former may be easily applied in the manufacture and that while accessible is yet well protected when in place against derangement from extraneous causes and may also readily and at trifling cost be replaced by a new one should it fail in any way, which object I attain by the devices hereinafter fully described and claimed.

In the drawings, Figure 1 is a side elevation of my invention as it would appear applied in common spring-pliers. Fig. 2 is an edge view of part of the arm of the pliers, showing one form of part of my invention before the spring is inserted. Figs. 3 and 4 are exaggerated perspective views illustrating other features of my invention.

Details of the several figures will hereinafter be more fully described.

Like letters indicate corresponding parts in the several figures.

A and B are the respective arms or halves of a pair of pliers, and D is the pivotal bolt or rivet securing the same.

C is a depression in the side of the arm A, having a shoulder at *h* and the lips *e e* on either side of said depression.

d is a spring (usually made of round spring-wire) bent to a form like the letter J, resting flatwise in said depression, with its free end engaging the notch *f* in the circumference of the hub portion of and to actuate the part B of the pliers and with its other curved confined end just under and in contact with the shoulder *h* and held in place by lips *e e*, which are turned down over the same for a portion of its length and along the margin of the de-

pression C. This spring is slightly kinked or bent away from the side of its curved portion, as shown at *d'*, to give a slight opposing stiffness at this point and a better angle contact for the end of the spring with notch *f*.

In practice the depression C and spring-retaining lips *e e* may be cast or forged to the forms shown in Figs. 1 and 4 before inserting the spring, which can afterward be readily sprung into place under them, or these lips *e e* may be cast or forged to the form and position shown in Figs. 2 and 3 and bent inward over the spring after the latter is inserted.

g, in Fig. 1, shows in dotted lines the position of spring *d* when the pliers are closed, as represented in dotted outlines.

The spring, by contact of its confined end with the shoulder *h*, is kept from working forward too far into the notch *f* and from thus interfering by binding or friction on the bottom of said notch with the free action of the part B.

Those skilled in the art will clearly understand from the foregoing description that my invention provides an efficient spring and ready means for putting the same in place originally and for inserting a new one, if required, and at the same time, by means of the depression C, provides protection for the spring against breakage from external accidental causes.

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

The herein-described improvement in pivoted tools of the class referred to, comprising a depression provided with a shoulder, *h*, in the side of an arm of the tool, a notch, *f*, in the adjacent hub portion of the opposite arm, and a suitable J-shaped spring with a kink, *d'*, held in place in said depression by retaining-lips, *e e*, the free end thereof engaging notch *f*, and its curved, confined end in contact with said shoulder, *h*, substantially as and for the purposes shown and described.

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Witnesses:

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