

H. SMITH.
PLIERS.

No. 184,734.

Patented Nov. 28, 1876.

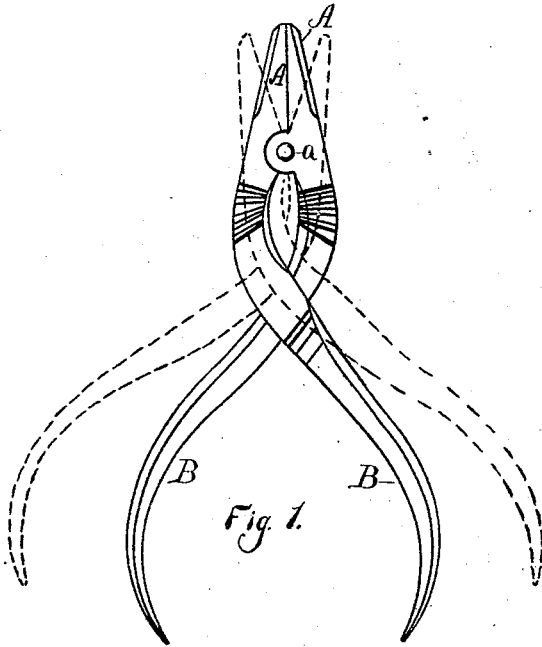


Fig. 2.

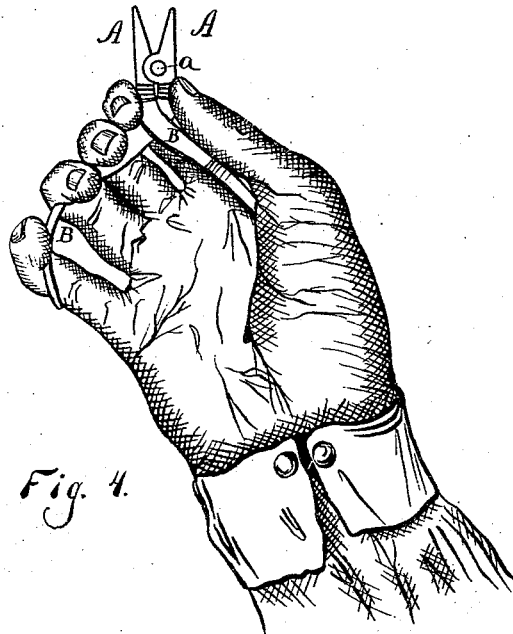
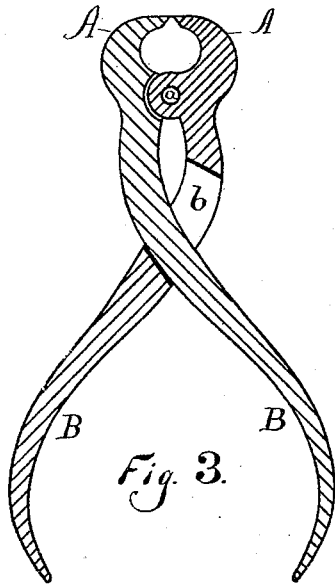
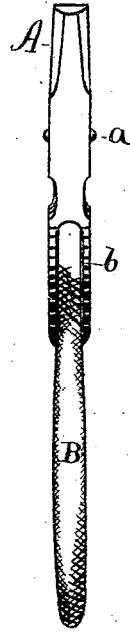


Fig. 4.

Witnesses.
H. N. Gale.
Geo. Gowdy

Inventor.
Henry Smith
By James Shepard Atty

UNITED STATES PATENT OFFICE.

HENRY SMITH, OF WEST MERIDEN, ASSIGNOR TO O. W. STOW, OF PLANTSVILLE, CONNECTICUT.

IMPROVEMENT IN PLIERS.

Specification forming part of Letters Patent No. 184,734, dated November 28, 1876; application filed April 24, 1876.

To all whom it may concern:

Be it known that I, HENRY SMITH, of West Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Pliers and Cutting-Nippers, of which the following is a specification:

My invention relates, first, to pliers or nippers in which the handles cross each other at a point wholly back of the joint; and, second, to the handles having an opening formed in one of them back of the joint, and the other handle passing through said opening, the walls of which answer as a stop for the jaws, all as hereinafter described.

In the accompanying drawing, Figure 1 is a front elevation of a pair of pliers which embody my invention. Fig. 2 is a side elevation of the same. Fig. 3 is a longitudinal section of a cutting-nipper which embodies the same invention, and Fig. 4 is a view showing said pliers held by a hand in position for operation.

The jaws A A are substantially the same as in other pliers, and are hung on a pin or rivet, *a*, as shown. The joint at the pin *a* may be of any well-known form that can be easily formed when the parts are detached, and I prefer to make the joint in semicircular lips and corresponding depressions, as shown, the same being well known as a very strong and desirable joint for all purposes to which it can be adapted.

In pliers, nippers, and other tools having gripping-handles, to all of which my invention is applicable, it is necessary to cross the handles or jaws, so that the latter may be closed by forcing the handles together.

It has been customary to cross the parts of such tools at the pin or joint, and therefore the style of joint herein shown could not be employed in such tools. I cross the handles B B back of the joint, so that no portions of either handles or jaws cross each other at any

point between the pins and outer ends of the jaws. This may be effected by offsetting the handles to one side, and letting one pass by the side of the other; but I prefer to form an opening, *b*, Figs. 2 and 3, in one part, through which the opposite handle passes, the opening being of such size that the parts may be practically finished when detached, and then put together and secured by the pin *a*. The broken lines in Fig. 1 indicate the position of the parts when fully open.

By my invention the two halves may be provided with the best style of joint, and practically finished when detached, thereby producing a good article at a small cost.

The end of the opening *b* in one handle may answer the purpose of a stop, as shown in Fig. 3, to prevent the cutting-edges of nippers being forced against each other, and by crossing the handles back of instead of at the joint, the jaws may be opened by pressure upon the handles between the pin and point of crossing with the thumb and first finger, as shown in Fig. 4, and closed by pressure between the palm of the hand and the other three fingers, thereby rendering it wholly unnecessary to place the fingers between the handles either for opening or closing the jaws.

I claim as my invention—

1. As a new article of manufacture, pliers or nippers in which the handles cross each other at a point wholly back of the joint, substantially as described, and for the purpose set forth.

2. The handles B B, having an opening, *b*, formed in one of them back of the joint, and the other handle passing through said opening, the walls of which serve as a stop for the jaws A A, substantially as described.

HENRY SMITH.

Witnesses:

GEORGE W. SMITH,
JOHN E. DURAND.