No. 634,493. Patented Oct. 10, 1899.

A. BRADLEY.

PLIERS.

(Application filed Feb. 8, 1899.)

(No Model.)

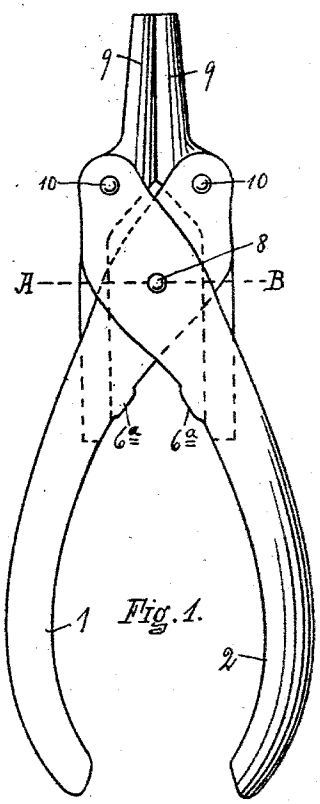


Fig. 1.

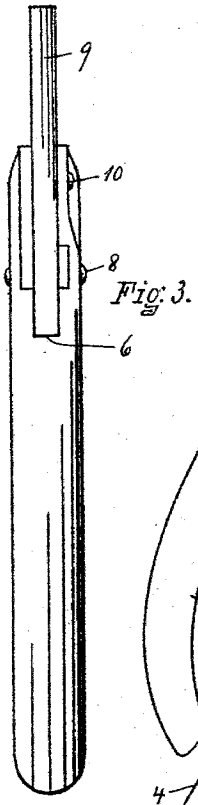


Fig. 3.

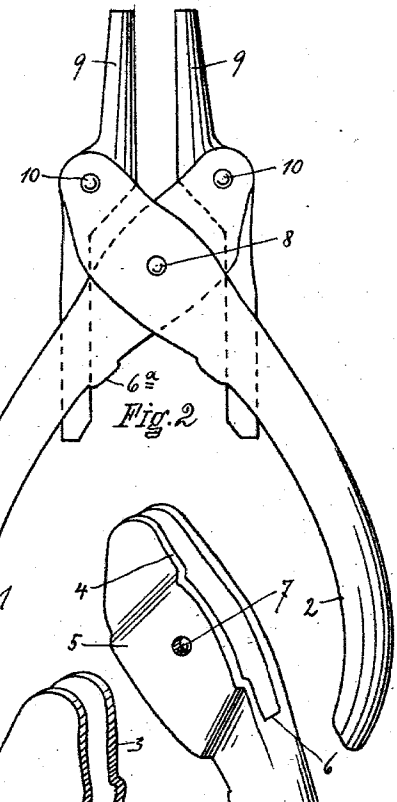


Fig. 2.

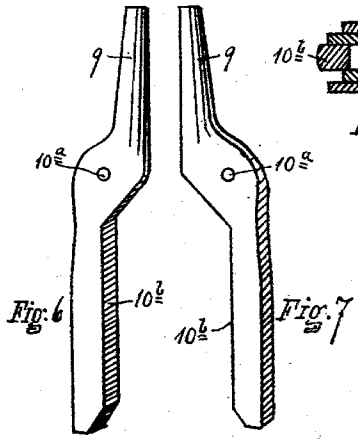


Fig. 6 Fig. 7

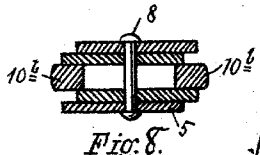


Fig. 8.

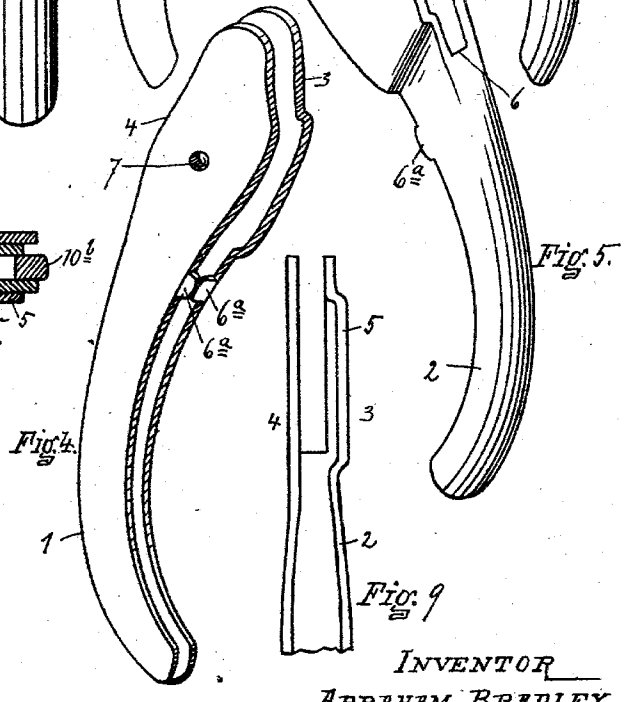


Fig. 4. Fig. 5.

Fig. 9.

WITNESSES
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PLIERS.

SPECIFICATION forming part of Letters Patent No. 634,493, dated October 10, 1899.

Application filed February 8, 1899. Serial No. 704,870. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM BRADLEY, a citizen of the United States of America, and a resident of Utica, Oneida county, New York, have invented certain new and useful Improvements in Pliers, of which the following is a specification.

My invention relates to an improvement in pliers; and it consists in the construction and arrangement of the parts, for the purposes hereinafter pointed out and claimed.

In the drawings, Figure 1 represents a side view of my improved pliers with the jaws closed. Fig. 2 represents a side view of Fig. 1 with the jaws open. Fig. 3 is a side view of Fig. 1. Figs. 4, 5, 6, and 7 represent details of construction. Fig. 8 is a cross-section of line A B, Fig. 1. Fig. 9 represents a side view of one of the handles, broken lines indicating the portion removed.

Having described my invention with reference to the figures illustrated in the drawings, I will now proceed to describe the same, in which description similar numerals will refer to corresponding parts in the several views. I also claim my invention as an article of manufacture.

I form the handles 1 2 of sheet-steel brought into shape by pressure. The substantially parallel walls of each handle 3 4 have in one of the parallel walls an offset 5, which makes each section of the handle so that it can be used without having right and left hand sections, so that each section can be used in the place of either handle No. 1 or handle No. 2. The walls 3 4 in each section of the handles form an abutting shoulder 6. (Best illustrated in Figs. 3 and 5 of the drawings.) This abutting shoulder 6 forms the outside guide for the jaws. The inside guide or abutting shoulder 6^a (illustrated in Figs. 1, 2, 4, and 5) is formed in this instance by turning the metal down into the position shown in Fig. 4, and this shoulder forms the inside guide for the jaws on each section of the handles. The handles have perforations 7, and when placed together are riveted at 8, which forms the fulcrum of the handles. The working portion of the jaws in this instance are made round in cross-section, as illustrated at 9 9, Figs. 1, 2, 3, 6, and 7, and are pivoted to the ends of the handles at 10 10. The jaws below the round working ends are provided with pivot-holes 10^a, Figs. 6 and 7, and extend downwardly from the pivot-holes in substantially lines, as indicated at 10^b 10^b. The lower extension end of each jaw is placed in the handle, and the shoulder 6 acts as an outside guide and 6^a acts as an inside guide for the jaws, so that as the jaws are opened and closed the parallel ends 10^b 10^b slide between the abutting shoulders and the handle. Instead of having an inside abutting shoulder on the handles a rivet may be substituted as the inside abutment in each handle.

I am aware that pliers have been constructed with jaws mounted in handles where the extension ends 10^b 10^b are slotted in the direction of their length and the rivet inserted in the slot for guiding the jaws. My particular invention in this regard consists in having an inner shoulder on each jaw, which acts as a guide, working on the external surface of the jaw itself, rather than in a slot, and in having the jaws round in cross-section.

What I claim as new, and desire to secure by Letters Patent, is—

1. An article of manufacture consisting of pliers, having pivoted jaws, round in cross-section at their front ends, pivoted plier-handles formed of sheet metal, each section of the handles having one of its walls offset at the fulcrum of the handles, and each section of the handles having an outer and an inner wall or guide, formed from the metal of each section of the handles, for guiding the rear portion of the pivoted jaws, the jaws pivoted to the handles in front of the fulcrum, substantially as set forth.

2. An article of manufacture consisting of pliers, having pivoted jaws, pivoted plier-handles formed of sheet metal, each section of the handles having one of its walls offset, at the fulcrum of the handles, and each section of the handles having an outer and an inner wall or guide, formed from the metal of each section of the handles for guiding the rear portion of the pivoted jaws, the jaws pivoted to the handles in front of the fulcrum, substantially as set forth.

Signed by me at Utica, New York, this 4th day of February, 1899.

ABRAHAM BRADLEY.

Witnesses:
EVA M. CHASE,
P. P. SMITH.