(No Model.)

# T. F. VANDEGRIFT.

## PLIERS.

No. 449,250. Patented Mar. 31, 1891.

FIG. 1.

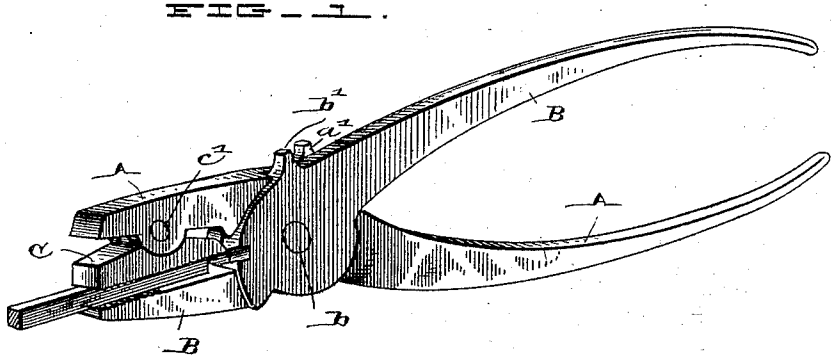



FIG. 2.

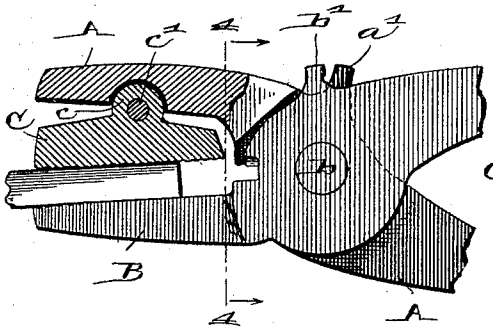



FIG. 3.

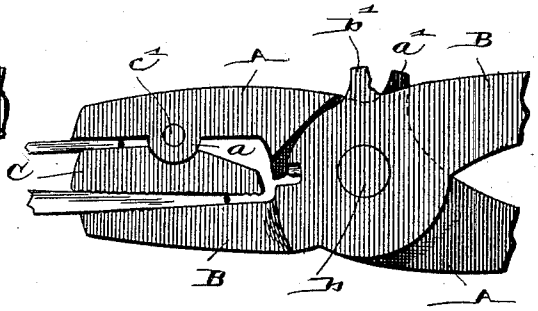
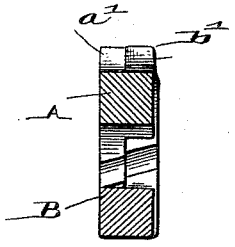



FIG. 4.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

THEODORE F. VANDEGRIFT, OF NOAH, ASSIGNOR TO THE VANDEGRIFT MANUFACTURING COMPANY, OF SHELBYVILLE, INDIANA.

## PLIERS.

SPECIFICATION forming part of Letters Patent No. 449,250, dated March 31, 1891.

Application filed December 2, 1890. Serial No. 373,301. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE F. VANDEGRIFT, a citizen of the United States, residing at Noah, in the county of Shelby and State of Indiana, have invented certain new and useful Improvements in Pliers, of which the following is a specification.

The principal object of my invention is to produce pliers in which one of the jaws has an automatically-adjustable face, whereby the device to be held may be gripped throughout the length of the jaws on both sides, instead of at a single point only.

A further object is to produce in a single tool double pliers, and I also prefer to include in the same tool cutting-pliers, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a perspective view of a pair of pliers embodying my said invention; Fig. 2, a detail elevation, partly in section, showing the jaws of said pliers as they appear when holding an article whose sides are parallel; Fig. 3, a detail elevation, similar in outline to Fig. 2, showing the jaws as they appear when holding an article whose sides are inclined in relation to each other, and also holding a second article between the pivoted face-plate and the jaw proper, to which it is attached, thus showing how said pliers may be used as double pliers; and Fig. 4, a transverse sectional view looking toward the right from the dotted line 4 4 in Fig. 2.

In said drawings the portions marked A and B represent the two jaws of the pliers, and C the pivoted automatically-adjustable face-plate.

The jaws A and B are in themselves similar to the jaws of ordinary pliers in most particulars, and are secured together by an ordinary pivot *b*. The jaw A is provided with ears *a a*, between which a similar ear *c* on the pivoted face-plate extends, and a pivot *c'* connects them together. I prefer to make these pliers of a form to embody two pairs of cutting-pliers, one of which is produced by the formation at the throat of the jaws in an ordinary and well-known manner, and the other of which is produced by means of two upward projections *a'* and *b'*, which extend off at substantially right angles from the jaws at a point thereon alongside the pivot *b*. These two pairs of cutting-pliers are of course preferably of different sizes, so as to be adapted to cut wires or such like articles of different diameters.

The face-plate C is pivoted, as above described, to the jaw A by means of the ears *a a c* and pivot *c'*. It works freely on its pivot within the limit of its movement, and is thus adapted to automatically adjust itself to fit throughout its whole length against one side of any device whose sides are bounded by righ lines and whose opposite is gripped by the jaw B. By this means a long grip can be obtained on any article of this character, instead of a short grip, at a single point, as has been the case with ordinary pliers, and important advantages are obviously thus obtained. There are also many occasions when it is desired to hold two articles, like two rods or bars of metal, in parallel relation, in order that they may be soldered or brazed or welded together, and the double use of this device, as illustrated in Fig. 3, enables this to conveniently be done, and dispenses with the use of two or more separate tools, which have heretofore been necessary to such an operation. The embodying of additional cutting-pliers in the same implement is also of considerable advantage, and adds materially to the value of the tool as a convenient and labor-saving device.

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

1. The combination, in pliers, of the two jaws and a face-plate pivoted centrally to one of said jaws, with its body somewhat apart from said jaw, whereby the pliers are constituted double pliers, substantially asset forth.

2. The combination, in pliers, of the two gripping or holding jaws, the face-plate pivoted to one of said jaws, and projections forming cutting-pliers, whereby combined automatically-adjustable gripping and cutting pliers are provided in a single instrument, substantially as shown and described.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 29th day of November, A. D. 1890.

THEODORE F. VANDEGRIFT. [L. S.]

Witnesses:

CHESTER BRADFORD,

OSCAR HAND.