J. E. EBAUGH.

ASSEMBLING SOLDERING TOOL.

APPLICATION FILED JUNE 24, 1913.

1,093,552. Patented Apr. 14, 1914.

Fig. 1.

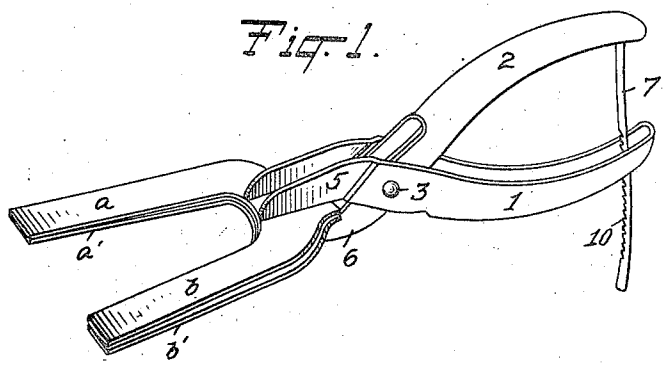


Fig. 2.

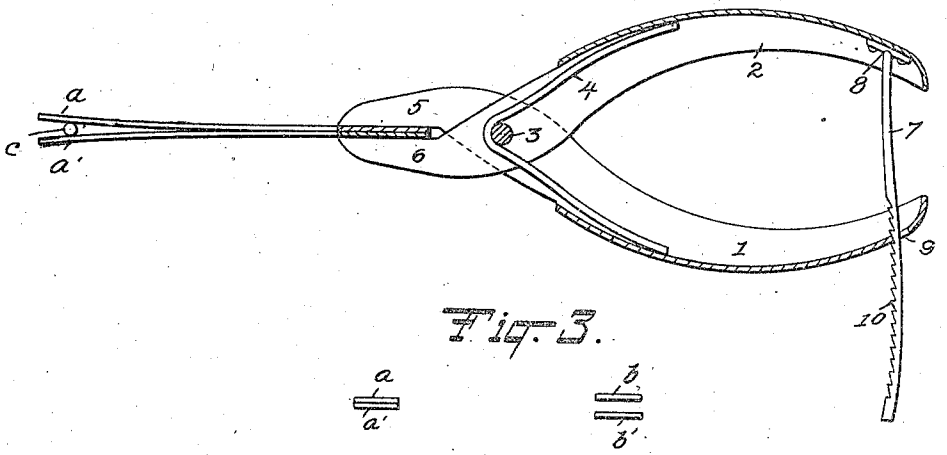


Fig. 3.

Fig. 4.

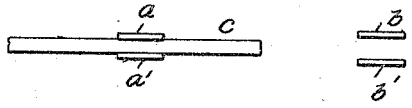
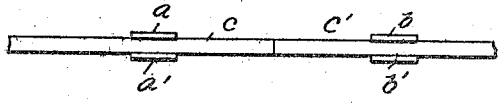


Fig. 5.



WITNESSES

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ASSEMBLING SOLDERING-TOOL.

1,093,552. Specification of Letters Patent. Patented Apr. 14, 1914.

Application filed June 24, 1913. Serial No. 775,481.

To all whom it may concern:

Be it known that I, JOHN E. EBAUGH, a citizen of the United States, and a resident of Shenandoah, in the county of Page and State of Iowa, have invented a new and Improved Assembling Soldering-Tool, of which the following is a full, clear, and exact description.

This invention relates to a tool especially adapted for holding two parts in assembled relation so as to be soldered or otherwise united, the tool being in the nature of pliers designed especially for use by jewelers, opticians and the like for conveniently holding broken parts together while being soldered.

The invention has for one of its objects to improve and simplify the construction of assembling tools of the character referred to so as to be reliable and convenient in use, comparatively inexpensive to manufacture and of durable and substantial design.

A further object of the invention is the provision of a pair of pliers having two pairs of jaws so arranged that one piece of an article can be clamped between one pair of jaws while the other pair remains open for enabling the other part of the article to be placed therein, and when so placed the first pair of jaws will yield while still holding the part of the article when pressure is applied to close the second pair of jaws, there being means for locking the handles of the pliers while the jaws thereof are clamping the parts of the article to be soldered.

With these objects in view, and others as will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be more fully described hereinafter and set forth with particularity in the claims appended hereto.

In the accompanying drawings, which illustrate one embodiment of the invention, and wherein similar reference characters are employed to designate corresponding parts throughout the several views. Figure 1 is a perspective view of the tool with one pair of jaws closed and the other slightly gapping; Fig. 2 is a sectional view thereof showing the initial closing jaws in the position they occupy when the second closing jaws are closed on an article; Fig. 3 is a view of the ends of the jaws, showing the tips of one pair closed and the tips of the other pair open; Fig. 4 is a similar view showing an object or one part of an article clamped in one pair of jaws while the other pair is open; and Fig. 5 shows both pairs of jaws closed on the objects or parts of an article to be connected.

Referring to the drawing, the two parts or sections of the tool are fashioned like an ordinary pair of pliers, except that the jaws are constructed differently. The handles 1 and 2 of the tool sections are pivotally connected by a pivot 3 and the handles are adapted to be sprung apart by a spring 4 suitably arranged between the handles and held in place by the pivot 3. The jaws 5 and 6 of the sections A and B are of U-shaped construction, the tips *a* and *b* of the jaw 5 being arranged to coöperate with the tips *a'* and *b'* of the jaw 6. The members of the jaws 5 and 6 are so shaped that the tips *a* and *a'* are the first parts of the jaws that come into contact when the handles 1 and 2 are pressed toward each other, and in order for the tips or members *b* and *b'* to come into contact the handles 1 and 2 must be pressed closer together to cause the members *a* and *a'* to yield, it being understood that the members of both jaws are slightly resilient.

Figs. 1 and 3 show the gapping relation of the jaw members *b* and *b'* to the closed jaw members *a* and *a'*, and when it is desired to clamp the objects or parts of an article together in a position to be soldered or otherwise secured the pliers are slightly opened so as to separate the jaw members *a* and *a'* sufficiently to enable the object *c*, Fig. 4, to be placed between and gripped by the members *a* and *a'*. The jaw members *b* and *b'* are of course open while the other pair of jaw members grip the object *c*, and another object *c'* is placed between the jaw members *b* and *b'*, and such members are then closed on the object *c'* by pressing the handles 1 and 2 together. In doing this the already closed jaw members *a* and *a'* yield toward each other as shown in Fig. 2 while still holding the object *c*. While the two objects are thus held by the two pairs of jaw members the soldering of the two objects can be accurately performed. It is to be understood that the gripping surfaces of the jaw members can be made of any desired configuration to more firmly hold the articles to be soldered.

In order to lock the pliers with the jaw-

members thereof in article-holding position a spring ratchet bar 7 is anchored at 8 to the handle 2 and slides through an opening 9 in the handle 1, there being teeth 10 in the bar 7 to engage the edge of the opening 9 so as to hold the handles 1 and 2 in any position. By springing the bar 7 laterally its toothed edge can be disengaged from the edge of the opening 9 so that the handle members 1 and 2 will spread apart by the pressure of the spring and open the jaws.

From the foregoing description taken in connection with the accompanying drawings, the advantages of the construction and method of operation and of the device shown will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative, and that such changes may be made when desired as are within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A tool comprising two movably connected elements each consisting of rigidly connected jaws extending in the same general direction, the jaws of one element cooperating with the corresponding jaws of the other element to form two pairs of gripping members, one pair of members being resilient and arranged to close before the other pair of gripping members.

2. A tool comprising two movably connected elements each consisting of rigidly connected jaws extending in the same general direction, the jaws of one element coöperating with the corresponding jaws of the other element to form two pairs of gripping members, one pair of members being resilient and arranged to close before the other pair of gripping members, the said elements being inclined toward each other in such disposition that the tips of each pair of members will contact first in the closing of the jaws.

3. A tool comprising two movably connected elements having handles and each element consisting of two rigidly connected jaws extending in the same general direction, the jaws of one element coöperating with the corresponding jaws of the other element to form two pairs of gripping members, one pair of gripping members being arranged to close before the other pair.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN E. EBAUGH.

Witnesses:
J. P. Nye,
J. A. Cheney.