F. G. FARNHAM.

Pliers for Attaching Shoe and Glove Fastenings.

No. 212,206. Patented Feb. 11, 1879.

Fig. 1.

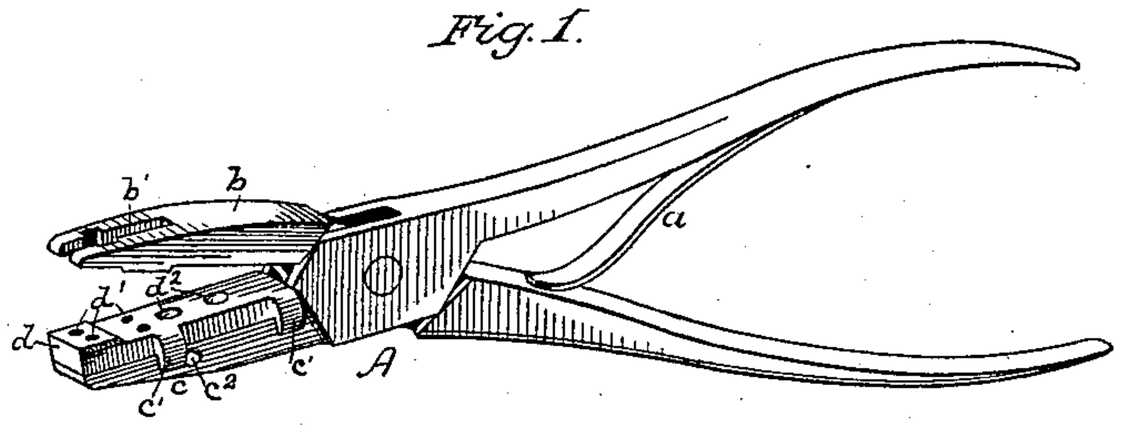


Fig. 2.

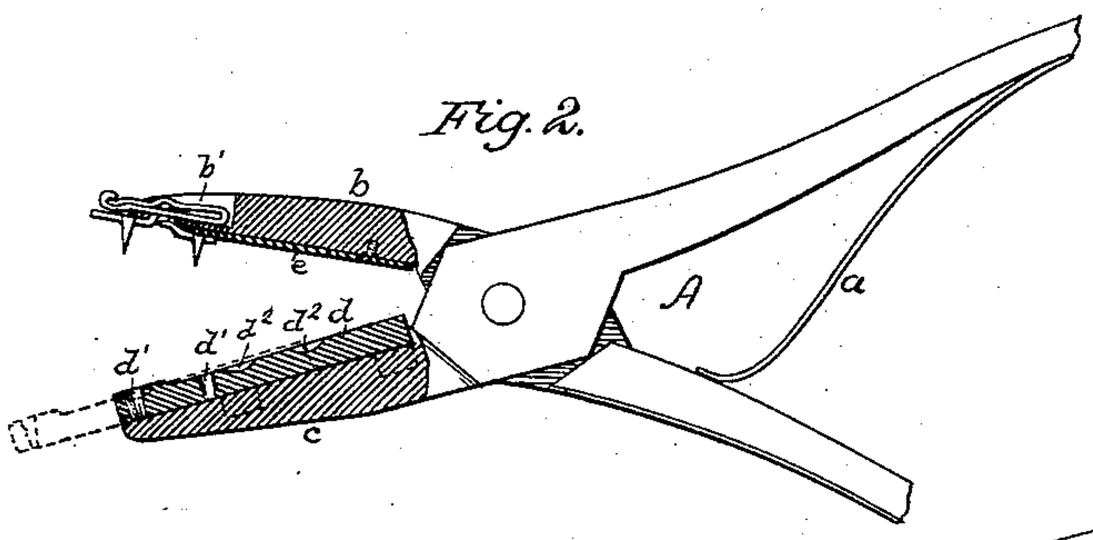


Fig. 3.

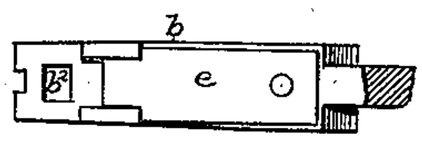


Fig. 4.

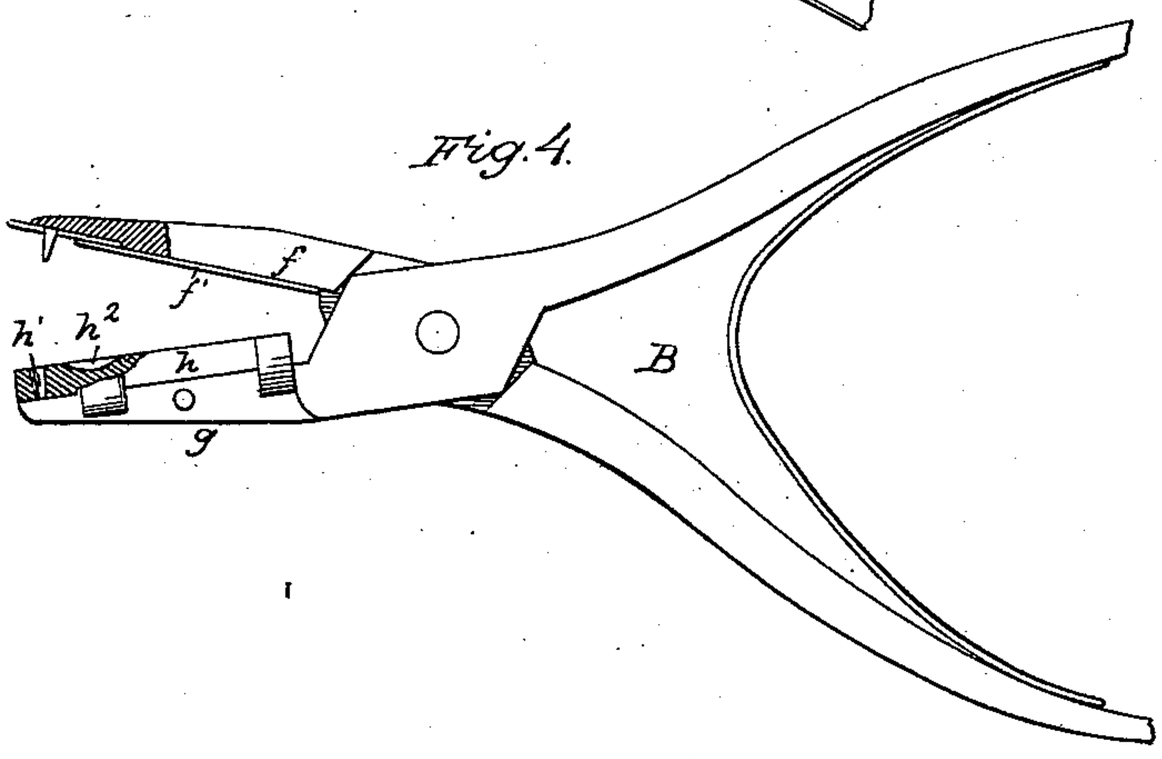
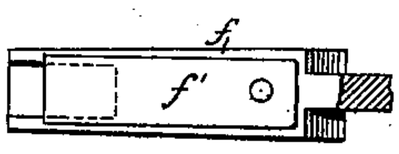


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANK G. FARNHAM, OF HAWLEY, PENNSYLVANIA.

IMPROVEMENT IN PLIERS FOR ATTACHING SHOE AND GLOVE FASTENINGS.

Specification forming part of Letters Patent No. **212,206,** dated February 11, 1879; application filed March 13, 1878.

To all whom it may concern:

Be it known that I, FRANK G. FARNHAM, of Hawley, in the county of Wayne and State of Pennsylvania, have invented a new and useful Improvement in Pliers for Attaching Shoe and Glove Fastenings; and I do hereby declare the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The object I have in view is to produce means for attaching to a glove or shoe the fastening for which I have obtained several Letters Patent in a more expeditious manner and more correctly than can be done with the common appliances; and my invention therein consists in providing one jaw of a pair of pliers with a laterally-sliding plate, having holes and depressions, and limited in its movement on said jaw by a suitable stop, in combination with the other jaw, having means for holding one or both parts of the fastening, as fully hereinafter explained.

In the drawings, Figure 1 represents a perspective view of the pliers for attaching the lever-carrying portion of my fastening. Fig. 2 is a sectional view of the jaws of the pliers open, showing in dotted lines the sliding plate moved outwardly; Fig. 3, a view of the inside of the upper jaw of the pliers, showing a spring to hold the hasp when these pliers are used for attaching the hasp portion of my fastening. Fig. 4 shows a part of the pliers used especially for attaching the hasp portion of my fastening. Fig. 5 is a view of the inside of one of these jaws of these last pliers, showing the spring to hold the hasp.

A represents a pair of pliers, Figs. 1, 2, and 3, of general ordinary form, and preferably having a spring, *a*, to throw the jaws apart when the pressure is removed from the handles. The upper jaw, *b*, of these pliers has a deep groove, b^1, formed on the outside of the same, at the end thereof, and extending from the end centrally along the jaw for a short distance. This groove is about the same width as the lever of my fastening, and is intended to receive such lever, as shown in Fig. 2. A rectangular hole, b^2, is made through the jaw *b*, in the bottom of the groove b^1, and the lever of the fastening is threaded up through this hole, and then turned down into the groove, to secure that portion of the fastening to jaw *b*. The lower jaw, *c*, of the pliers is of the same length as the upper jaw, and upon it is mounted the sliding plate *d*. The sides of the jaws *c* are beveled inwardly from the face of the same, and the sliding plate is secured thereto by lugs c^1, which hang down from both sides of such sliding plate and bear against the inclined portions of the jaw *c*. A pin or projection, c^2, situated on one or both sides of the jaw *c*, between the lugs c^1, limits the movements of the sliding plate. The face of the sliding plate is raised a little at the end, as shown, to accommodate the bend in the base-plate of the lever portion of my fastening, and through this plate are formed four small holes, d^1, arranged in two pairs, one pair being on the raised end, into which the prongs on the base-plate sit when the glove is pierced and the sliding plate is in the first position, as shown in full lines in Fig. 2. In the face of the sliding plate *d*, inwardly from the holes d^1, are formed two rounded depressions, d^2, the same distance apart as the two sets of holes. These depressions, when the plate *d* is moved out, receive the prongs on the base-plate of the fastening, and bend them inwardly over the washer to secure the fastening.

My pliers are used in the following manner: I first take the lever portion of my fastening and thread the lever up through the hole b^2, and then turn it down into the groove b^1, sliding it along, as in fastening a glove, so as to hold the fastening firmly to the jaw *b*, the base-plate being on the under side of such jaw and the prongs projecting downwardly from the same. The pliers are then taken in one hand and the glove or other article in the other, and the edge of the glove is inserted between the jaws, the sliding plate being in its first position. The jaws of the pliers are then brought together, and by this movement the prongs are forced through the flap of the glove into the holes d^1. The jaws of the pliers being separated, a washer (or two) is placed over the prongs and the sliding plate moved to the second position. The jaws are again brought together, and the prongs, entering the de-

pressions d^2, are bent over the washer, thus completing the attachment of this portion of the fastening to the glove.

For the purpose of using these pliers to attach the hasp portion of the fastening, I place on the inside of the upper jaw a leaf-spring, *e*, under the end of which the hasp is held, as shown in Fig. 3. This spring holds the hasp in such a position that the two prongs on the same will enter the inner pair of holes, d^1, when the glove is pierced, and will be bent over a washer by the inner depression, d^2, when the sliding plate is moved to the second position. But I have found it more convenient in practice to have a separate pair of pliers to handle the hasp; and it will be seen, since the manner of securing both portions of my fastening is the same, that these pliers embody the same idea and principle of operation as the first pair, and need only differ from them in the means for holding the fastening and in having only one pair of holes (since the hasp has but two prongs) and one rounded depression in the sliding jaw. These pliers (lettered B) are shown in Figs. 4 and 5. The upper jaw, *f*, of the pliers has a flat groove on its under side, in which to slide the hasp under the leaf-spring f', which spring operates like the leaf-spring *e* on the other pliers. The end of this spring f', as well as the end of the spring *e*, may be rounded a little to allow the hasp to be readily pushed under the same. The lower jaw, *g*, has the sliding plate *h* mounted and secured thereon in the same manner as the sliding plate *d* is secured to its jaw *c*, and this sliding plate *h* has a single pair of holes, h^1, near its end, and a single rounded depression, h^2. The operation of these pliers will be readily understood from what has already been explained in regard to the operation of the pliers A.

I am aware that a sliding plate has been used in pliers for attaching buttons to articles of clothing, and I hereby disclaim the broad invention of the same.

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

In pliers for attaching glove and other fasteners, a jaw provided with a laterally-sliding plate having holes and depressions, and limited in its movement on said jaw by a suitable stop, in combination with another jaw having means, substantially as described, for holding one or both parts of the fastening.

This specification signed and witnessed this 26th day of February, 1878.

FRANK G. FARNHAM.

Witnesses:

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