(No Model.)

M. C. JOHNSON.

Cutting Pliers.

No. 232,975. Patented Oct. 5, 1880.

Fig: 1.

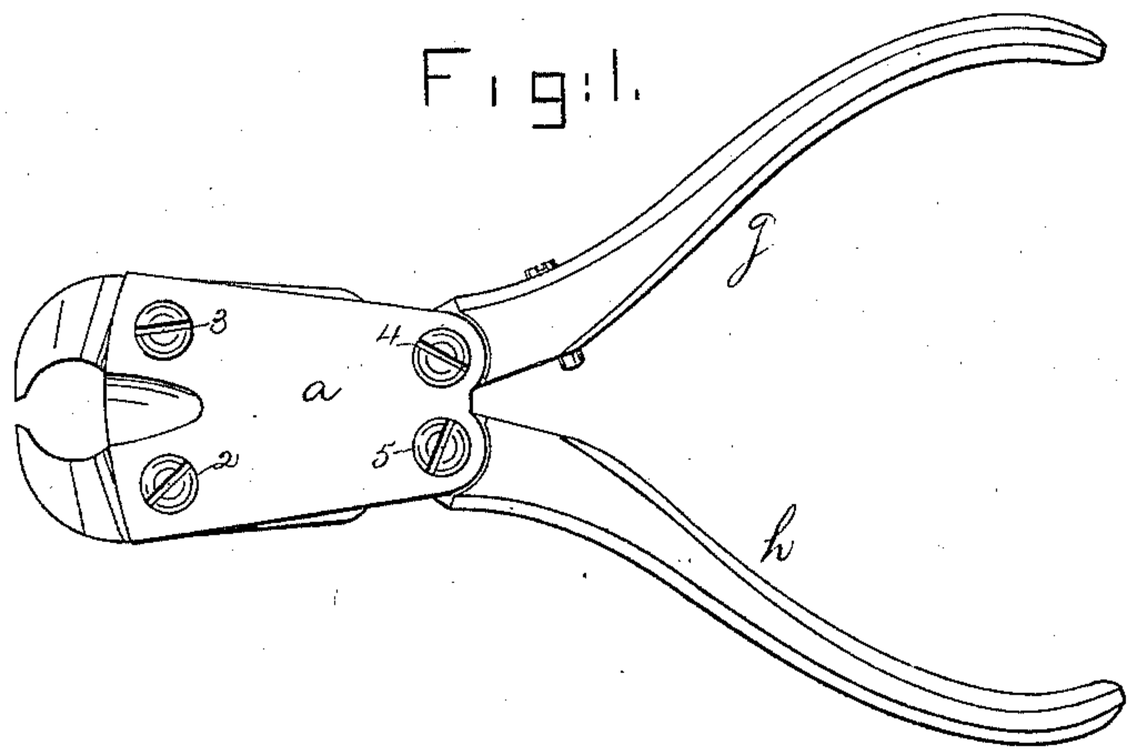
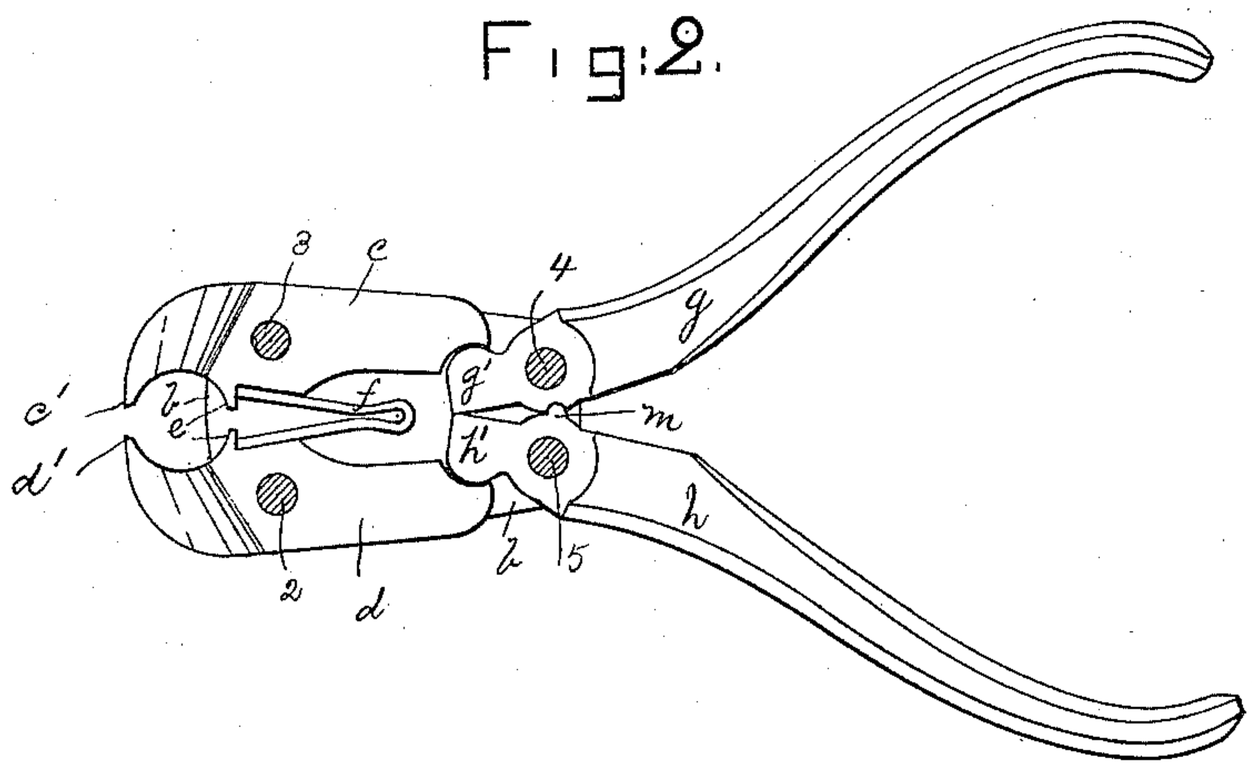


Fig: 2.



WITNESSES -

A. Reynolds.

L. F. Connor.

INVENTOR -

Moses C. Johnson.

by Crosby Gregory Attys.

UNITED STATES PATENT OFFICE.

MOSES C. JOHNSON, OF MILFORD, CONNECTICUT, ASSIGNOR TO HENRY G. THOMPSON, OF SAME PLACE.

CUTTING-PLIERS.

SPECIFICATION forming part of Letters Patent No. 232,975, dated October 5, 1880.

Application filed June 2, 1880. (No model.)

To all whom it may concern:

Be it known that I, MOSES C. JOHNSON, of Milford, county of New Haven, State of Connecticut, have invented an Improvement in Cutting-Pliers, of which the following description, in connection with the accompanying drawings, is a specification.

This invention relates to cutting-pliers, and is an improvement on that class of pliers represented in United States Patent No. 209,677, dated November 5, 1878, granted to T. G. Hall, to which reference may be had. In that invention either of the two hand-levers may be turned on its pivot without turning the other, and the tool-body formed by the face or covering plates is permitted to vibrate or turns more or less with relation to the handles, and the central space between the cutting-faces of the jaw-levers, when the pliers are taken in the hand to be used, drops more or less out of line with the central line of the handles, making, as it were, a loose joint midway between the ends of the pliers.

One of the objects of my invention is to construct a stiff pair of pliers, or pliers in which the hand and jaw levers shall each be compelled to move positively in an opposite direction to the movement of its fellow, or a pair of pliers in which the tool-body shall not of itself swing or vibrate upon the pins or studs holding the hand-levers.

In the patent above referred to the end of wire or other thing cut off by the cutters drops into and injures the spring that opens the jaw-levers. This I obviate by providing each jaw-lever with a lip to cover or bridge the space between the jaws as the jaw-levers are closed.

My invention consists in the combination and arrangement of parts for effecting these ends, as hereinafter specified and claimed.

Figure 1 represents, in side elevation, a pair of cutting-pliers containing my improvements; and Fig. 2, a like view with one of the body or side plates removed.

The body of the pliers is composed of two side plates, *a b*. These side plates are fixed together by the screws 2 3 4 5. Of these screws, those 2 3 serve as the fulcra of the jaw-levers *c d*, having at their ends the usual cutters or cutting-surfaces *c' d'*. Each of these jaw-levers has a lip, *l*, and the end of one meets the end of the other lip just as or just before the two cutting-edges *c' d'* separate the wire or other metal end to be cut off by them, thus closing the space between the said jaw-levers and side plates, in which is placed the spring *f*, and preventing the entrance into said space of hard pieces of wire or other articles that would clog the pliers. These lips also serve another essential purpose—viz., that of holding the ends of the spring from displacement and obviating the employment of a separate pin or stud to hold the said spring at one end, as heretofore common.

The screws 4 5 serve as the fulcra for the hand-levers *g h*, having short arms *g' h'*, to act upon the ends of the longer arms of the jaw-levers and turn them on their fulcra to close the jaws and bring the cutting-edges together. The spring *f* opens the jaws the instant the clasping pressure on the hand-levers is relaxed.

In order to move the jaw-levers equally at all times and prevent the jaw-levers and body of the pliers turning on the handles, I have provided one hand-lever with a prong, *m*, having a rounded end that enters a rounded notch in the opposite lever. This one prong and its notch are always in engagement, and so connect the two levers that the body of the pliers cannot vibrate on the screws 4 5, but, on the contrary, the two levers may turn each on its own pivot, both levers always turning the same distance, but in exactly opposite directions. This connection between the two hand-levers, as described, insures a stiff pair of pliers, that can be handled more readily and accurately than the old form of cutting-pliers referred to, and which are more positive as to the movement of the cutting-jaws.

I am aware, in bolt-cutters, where the short ends of the hand-levers are jointed with the long ends of the cutting jaw-levers, that a series of teeth or cogs have been interposed to cause the hand-levers to be geared together; but in such bolt-cutters one single tooth and notch would not operate to always keep the two hand-levers locked together as to their

movement in unison, as is the case with my one prong, *m*, rounded at its end and inserted within a rounded notch.

I claim—

The body composed of the side plates, *a b*, the independent fulcra 2 3 4 5 for the jaw-levers and hand-levers, the jaw-levers provided with cutting-edges and with lips *e*, and the hand-levers having short arms *g' h'*, and a prong and notch always in engagement, as described, combined with the V-shaped spring, held, as described, by the lips of the jaw-levers, all as and for the purpose set forth.

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

MOSES C. JOHNSON.

Witnesses:

SAML. LLOYD,

GEO. E. FRISBIE.