

No. 690,925.

G. J. CAPEWELL.
NIPPERS.

Patented Jan. 14, 1902.

(Application filed Mar. 11, 1901.)

(No Model.)

Fig. 2

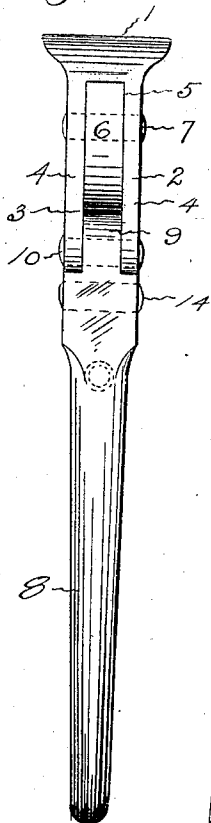


Fig. 1

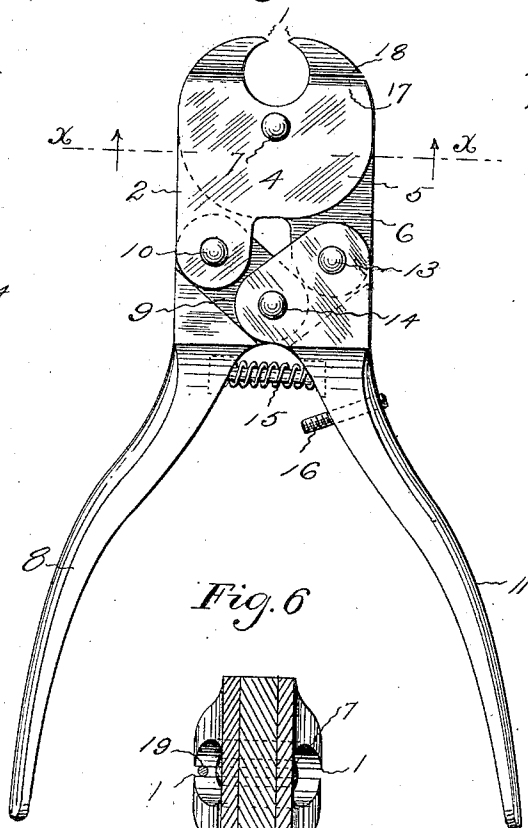


Fig. 3

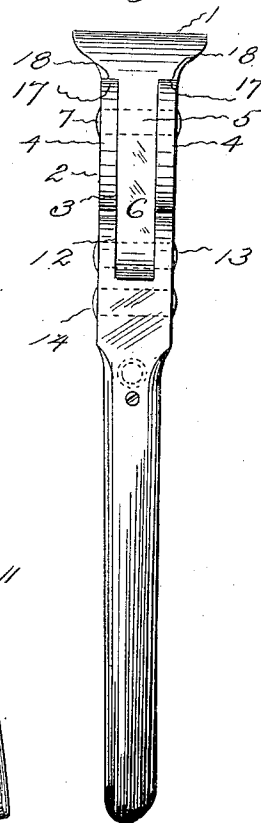


Fig. 6

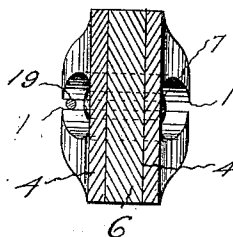


Fig. 4

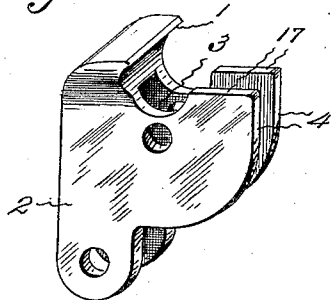
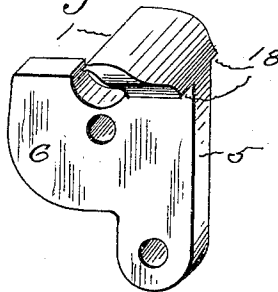


Fig. 5



Witnesses

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NIPPERS.

SPECIFICATION forming part of Letters Patent No. 690,925, dated January 14, 1902.

Application filed March 11, 1901. Serial No. 50,542. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. CAPEWELL, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Nippers, of which the following is a specification.

This invention relates to those cutting-nippers which have pivoted jaws that are closed by a powerful toggle action when the handles are pressed together. Full cutting effect cannot be obtained near the outer edges of the jaws of the nippers of this nature in common use on account of the yielding of the joints—an inherent defect of their construction.

The object of this invention is to so construct and arrange the parts of nippers of this class that there will be no springing or side-wise twisting when the outer edges of the jaws are being used for cutting, whereby the full force of the toggle action may be exerted at any point from end to end along the jaws, thus increasing their durability and efficiency.

In the embodiment of the invention that is illustrated by the accompanying drawings the shank of one jaw has a mortise, and occupying this mortise is the tenon-like shank of the other jaw. A pin passes through the shanks and holds the tenon in the mortise. One end of one handle has a tenon that fits in the mortise of the jaw-shank and fits in a mortise in one end of the other handle, which handle-mortise also receives a part of the tenon of the jaw-shank. Pins pass through the parts and pivot the handle-tenon in the jaw-shank mortise and in the handle-mortise and pivot the jaw-shank tenon in the handle-mortise. A spring presses the handles apart and normally keeps the jaws open.

Figure 1 of the views shows a side elevation of a nipper that embodies the invention. Fig. 2 shows a view of one edge of the same nipper. Fig. 3 shows a view of the other edge. Fig. 4 shows in perspective one of the jaws. Fig. 5 shows in perspective the other jaw; and Fig. 6 shows a transverse section of the jaws, taken on the plane of the broken line xx of Fig. 1 looking in the direction indicated by the arrows.

The views show the cutting-jaws 1 as formed integral with their shanks; but of course the

jaws could be made adjustable or removable with relation to their shanks in the usual manner. The shank 2 of one jaw has a mortise 3, that extends entirely through the shank and so divides it so as to form two cheek-pieces 4. The shank 5 of the other jaw is formed as a tenon 6 to fit the mortise 3. The cheek-pieces of one jaw-shank and the tenon of the other jaw-shank are made so wide that when the tenon is inserted in the mortise and there held by the jaw pivot-pin 7 the tenon extends to the back edge of the mortised shank and the cheek-pieces extend to the back edge of the tenon-shank, so that, as illustrated in Fig. 6, the cheek-pieces closely embrace the tenon and form a wide bearing area, which will prevent any lateral twisting of the tenon-shank with relation to the mortise-shank. The handle 8 has a tenon 9 formed at one end to fit the mortise 3. This handle-tenon is pivotally held in the shank-mortise by a pin 10. The handle 11 has a mortise 12 in one end to receive the tenon 6, the shank-tenon being pivotally held in the handle-mortise by a pin 13. The handle-tenon also fits into the handle-mortise 12 and is there retained by the link pivot-pin 14, which is more remote from the jaw pivot-pin than either of the pins that connect the ends of the handles with the jaw-shank. A spring 15 normally thrusts the handles apart and tends to keep the jaws open, and a stop-screw 16 is employed to limit the movement of the handles toward each other. The ends 17 of the cheek-pieces are made to engage with the shoulders 18 of the tenon-shank to limit the opening movement of the jaws. With this construction the jaws must always move toward each other with their cutting edges parallel. All of the strain tending to spring or twist the parts—as, for instance, when a piece of wire 19 is being cut near the outer edges of the jaws, as illustrated in Fig. 6—is borne by the wide cheek-pieces of the mortised jaw-shank, that closely embrace the tenon of the other jaw-shank, and no strain comes upon the pivot-pin. This being the case, the full force of the toggle action may be exerted along the entire edges of the jaws, so that metal may be cut by the jaws near their outer edges just as well as near the middle. This not only increases the efficiency of the nipper, but also adds to its

durability, for although the jaws are pivotally connected (a simple and cheap construction) the jaws always move with their edges parallel, and thus are not liable to become
5 nicked or broken at the outer ends of their edges.

I claim as my invention—

10 A nipper, consisting of a pair of cutting-jaws, the shank of one jaw having a mortise that divides it so as to form two cheek-pieces that extend the full width of both jaws, and the shank of the other jaw having a tenon that fits the mortise and also extends the full
15 width of both jaws between the cheek-pieces, the cheek-pieces embracing the tenon to the back edge of the tenon-shank and the tenon fitting between the cheek-pieces to the back

edge of the mortised shank, a jaw pivot-pin holding the tenon between the cheek-pieces, a handle having a tenon fitting the mortise in
20 the shank, a pin pivotally holding the handle-tenon in the shank-mortise, a handle having a mortise, a pin pivotally holding the shank-tenon in the handle-mortise, and a link-pin more remote from the jaw pivot-pin than
25 either of the pins connecting the ends of the handles with the jaw-shanks, pivotally holding the handle-tenon in the handle-mortise, substantially as specified.

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Witnesses:

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