

(No Model.)

R. C. ELLRICH.

CUTTING PLIERS.

No. 341,136.

Patented May 4, 1886.

Fig. 1.

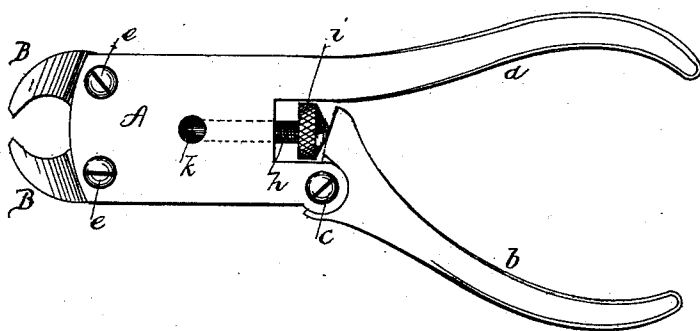


Fig. 2.

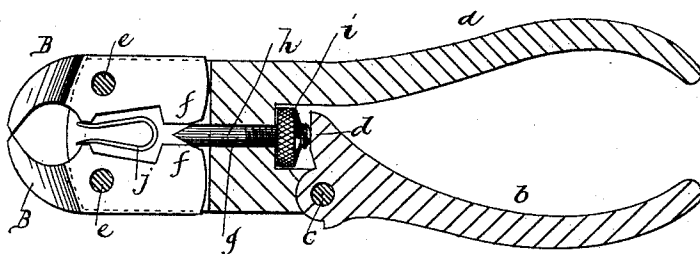
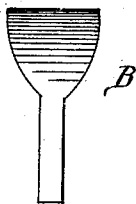


Fig. 3.



Witnesses:
J. Edward Ludington
Geo. M. Finckel

Inventor:
Robert C. Ellrich
by *George Perry*
Att'y

UNITED STATES PATENT OFFICE.

ROBERT C. ELLRICH, OF SOUTHTON, CONNECTICUT.

CUTTING-PLIERS.

SPECIFICATION forming part of Letters Patent No. 341,136, dated May 4, 1886.

Application filed February 2, 1883. Serial No. 190,696. (No model.)

To all whom it may concern:

Be it known that I, ROBERT C. ELLRICH, a citizen of the United States, residing at Southington, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Cutting-Pliers, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to that class of tools, commonly known as "cutting-pliers" or "nippers," which are used for cutting or severing wire, rods, and the like.

15 The object of my invention is to produce a tool of this kind which will be of simple and inexpensive construction, and in which the device for operating the cutting-jaws may readily be adjusted to determine the nearness to which the jaws shall approach each other in the cutting or nipping operation.

20 My invention consists, essentially, in providing a tool having a cutting or nipping jaw or jaws pivoted in a head or frame, with a sliding pin operated by a pivoted handle or lever to force the pin inward between lever-arms of the cutting-jaws, to cause the cutting-edges of said jaws to come together, the said pin being provided with an adjustable gage to limit its inward movement, and consequently enabling the user to determine the nearness to which the cutting-edges shall approach each other, this gage, by reason of its adjustability, also permitting compensation for wear of the cutting-edges.

35 In the accompanying drawings, in the different figures of which like letters of reference designate corresponding parts, Figure 1 illustrates a side view of a tool made in accordance with my invention; Fig. 2, a central longitudinal section taken on a plane at right angles to the direction of the cutting-edges, Fig. 1. Fig. 3 is a view in edge elevation of the cutting-jaw.

45 The letter A designates the head or frame of the tool, one end of which is provided with a fixed handle, *a*, at one side and a movable handle or lever, *b*, pivoted upon a pin, *c*, at the opposite side. This pivoted handle or lever *b* is provided with a shoulder, *d*, for a purpose to be hereinafter explained. In the other end of the head or frame A are two jaws, B, piv-

oted upon pins *e* in such position that their cutting-edges will come together edge to edge. Each of these jaws may have that portion which is provided with the cutting-edge widened or enlarged to afford a longer cutting-edge, as clearly indicated in Fig. 3. The inner ends of the jaws are enlarged or provided with shoulders *f*, for the purpose presently to be explained.

60 The head or frame is provided with a longitudinal hole or opening, *g*, through which a movable rod or pin, *h*, passes. This pin *h* has its inner end—that is, that end which rests between the shoulders *f* on the cutting-jaws—beveled like a wedge, or tapered, and its outer end screw-threaded and provided with an internally-threaded nut, *i*, fitting on said screw-threaded end of the rod or pin. This nut is adjustable and serves as a gage to limit the inward movement of the pin or rod. The shoulder *d* on the pivoted handle or lever *b* acts, when properly operated in the hand, against the outer end of the pin *h* to force said pin inward when required, and the nut *i*, by coming into contact with the end of the head, serves to limit the inward movement of the pin. The opposite sides of the wedge-shaped or tapering end of the pin bear against the shoulders *f* on the pivoted cutting-jaws, so that when said pin is forced inward the inner ends of the jaws are thrown outward and their cutting-edges together. A bent spring, *j*, is placed between the jaws, to bear against them in such manner as to keep the cutting-edges separated when not in use.

90 A small opening, *k*, may be provided in the side of the tool, to enable the user to see the tapered or wedge-shaped end of the pin or the interior of the head or frame, or to remove particles interfering with the operation of the device.

I wish it clearly to be understood that I do not confine myself to the exact form or configuration of parts illustrated, as they may obviously be changed without departing from the scope of my invention, which resides principally in the movable pin *h*, provided with the adjustable gage.

100 It is obvious that one of the cutting-jaws may be fixed.

My invention may also be used in that class

of tools known as "pinchers," in which the jaws are not to cut but simply to hold an object.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In cutting-pliers or the like, the movable pin *h*, for operating the jaws, provided with an adjustable gage, *i*, substantially as described.
2. The head *A* and cutting-jaws pivoted therein, combined with the pin *h*, for operating said jaws, provided with the adjustable gage, substantially as described.
3. The combination of the head or frame, cutting-jaws pivoted therein, the pin *h*, provided with the adjustable gage *i*, and an operating handle or lever pivoted in said frame or head, having a shoulder to act against the pin *h*, substantially as described.
4. In cutting-pliers, the pin *h*, having the wedge-shaped or tapering end to operate the cutting-jaws, and provided with the adjustable gage *i*, for the purpose set forth.

5. The herein-described improved cutting-pliers, comprising a head or frame provided at one end with a fixed and a pivoted handle, a pair of cutting or nipping jaws pivoted in the other end, a spring acting against said jaws to hold them apart, and a pin having a wedge-shaped or tapering end, movable between the jaws at one side of their pivots to close them at their other side, and an adjustable gage, *i*, upon said pin to limit its movement, to determine the nearness to which the jaws shall approach each other at their cutting or nipping ends, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT C. ELLRICH.

Witnesses:

GEORGE TERRY,
GEORGE P. SALISBURY.