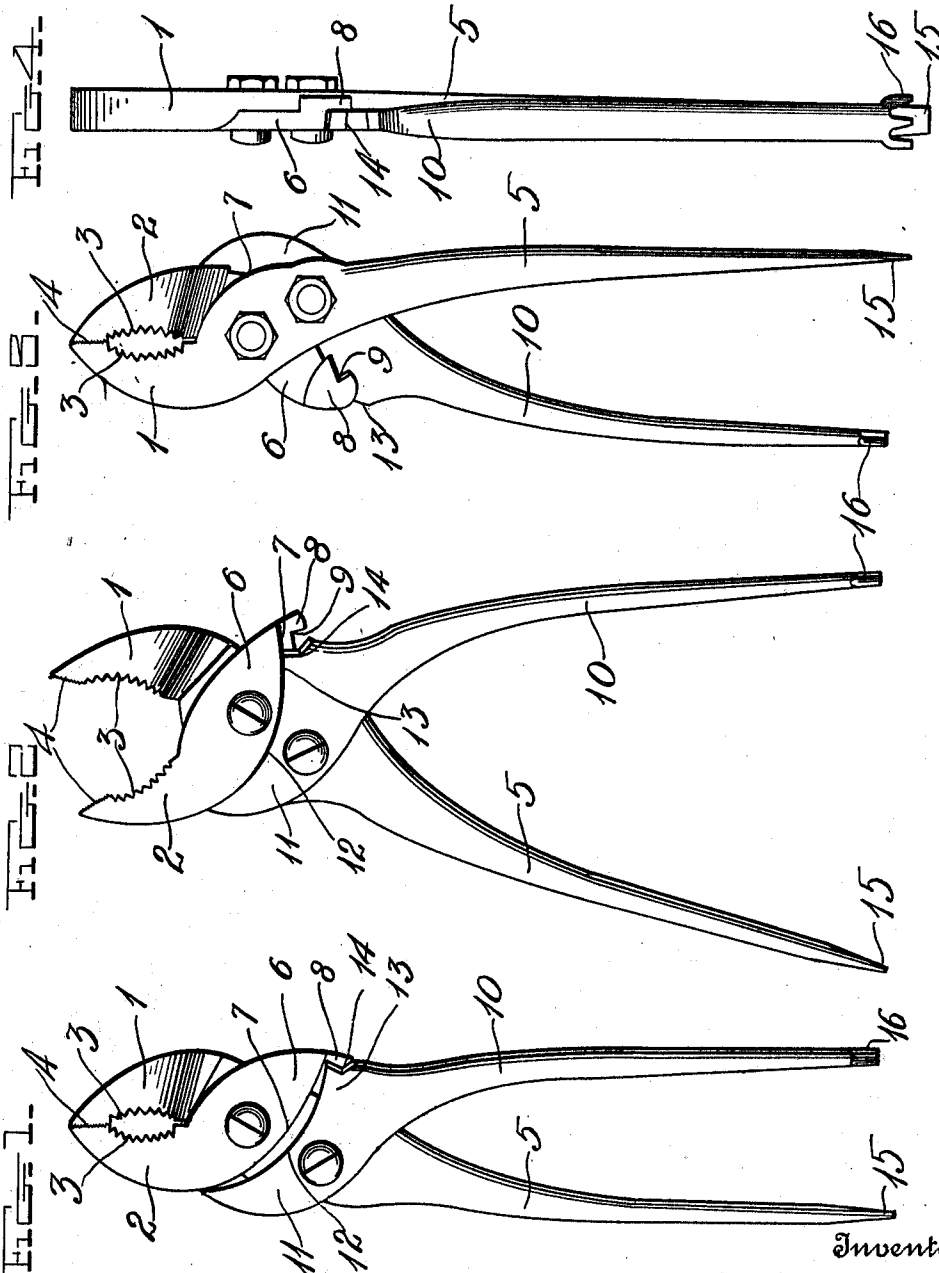


C. A. UHRNELL.
PLIERS,
APPLICATION FILED NOV. 7, 1910.

993,128.

Patented May 23, 1911.



Witnesses
J. R. Pierce.
O. B. Hopkins

Inventor
C. A. Uhrnell.
by *H. B. Wilson & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

CARL A. UHRNELL, OF STAMFORD, TEXAS.

PLIERS.

993,128.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed November 7, 1910. Serial No. 591,103.

To all whom it may concern:

Be it known that I, CARL A. UHRNELL, a citizen of the United States, residing at Stamford, in the county of Jones and State of Texas, have invented certain new and useful Improvements in Pliers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in pliers.

One object of the invention is to provide a pair of pliers having an improved construction of jaw operating mechanism whereby the jaws are opened wide by a comparatively slight movement of the handles, and whereby a more powerful grip is imparted to the jaws by the handles.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawings: Figure 1 is a side view of a pair of pliers showing the jaws in closed position; Fig. 2 is a similar view showing the jaws open; Fig. 3 is a side view of the opposite side of the pliers from that shown in Figs. 1 and 2; Fig. 4 is an edge view of the tool.

Referring more particularly to the drawings, 1 and 2 denote the jaws of the pliers, said jaws having on their opposing or working faces inner curved pipe or rod gripping surfaces 3 and outer flat wire gripping surfaces 4. The surfaces 3 and 4 are serrated or provided with suitable teeth whereby a firm hold may be obtained on the objects gripped. The jaw 1 is formed integral with one of the handles 5 of the tool while the jaw 2 is pivotally connected to the inner portion of the jaw 1. On the inner end of the jaw 2 is formed a cam projection 6 said projection and outer edge of the jaw being provided with a curved bearing surface 7. On one side of the projection 6 is formed an offset lug 8 having a notch 9 which forms one member of a wire cutter hereinafter described. The outer portions of both jaws 1 and 2 are of greater thickness than the inner portions and said outer portions are offset in opposite directions as shown. Formed on the outer end of the other handle 10 of the tool is a segmental operating cam

11 which is pivotally connected to the inner portion of the jaw 1 as shown. The cam 11 has a curved outer edge 12 which is adapted to engage the adjacent curved edge or bearing surface 7 of the pivoted jaw 2 and cam projection 6. When the handle 10 is opened or moved away from the handle 5 one end 13 of the cam 11 will engage the adjacent surface of the cam projection 6 thereby forcing the projection outwardly and thus opening the jaw 2. When the handle 10 is closed or brought toward the handle 5 the outer end or point of the cam 11 will engage the outer curved edge or bearing surface 7 of the pivoted jaw 2 thereby closing said jaw into forcible engagement with the object gripped. As clearly shown in Fig. 2, the contacting concaved edge of the cam 11 of the handle 10 is of such a curvature as to snugly receive the convexed edge of the jaw 2 when the handles are separated and when the latter are closed or moved in the opposite direction, the end of the said cam bears upon the convexed surface of the jaw 2 beyond its pivotal connection. By means of the leverage obtained from the projecting end of the cam 11 when engaged with the jaw 2 said jaw may be engaged with an object with great pressure. In the edge of the cam 11 adjacent to the projection 6 on the jaw 2 is formed a notch 14 which constitutes the other member of the wire cutter and is adapted to coact with the notch 9 when the handles are closed together thereby severing a wire when engaged therewith. On the outer end of the handle 5 is formed a screw driver 15, while on the outer end of the handle 10 is formed a series of prongs 16 whereby said end of the handle is adapted for various uses such as drawing staples and twisting wire.

My improved pliers may be employed for various purposes and are particularly adapted for use as hoof nippers or for purposes of a similar nature.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention as defined in the appended claim.

Having thus described my invention what I claim is:

In a pair of pliers, a stationary jaw, a handle formed integrally therewith, a loose
5 jaw pivotally attached to said stationary jaw and having a convexed bearing surface, a loose handle pivotally attached to the integral handle and having a concaved edge for snugly receiving the convexed edge of the
10 loose jaw when the jaws are opened, the end of the loose handle being adapted for

engagement with the convexed edge of the loose jaw when the loose handle is moved toward the stationary handle.

In testimony whereof I have hereunto set
my hand in presence of two subscribing witnesses. 15

CARL A. UHRNELL.

Witnesses:

GEO. S. LINN,

T. A. WILLIAMS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
