Jan. 28, 1941. B. F. FINCH 2,230,030

TOOL

Filed Feb. 24, 1939

FIG - 1 -

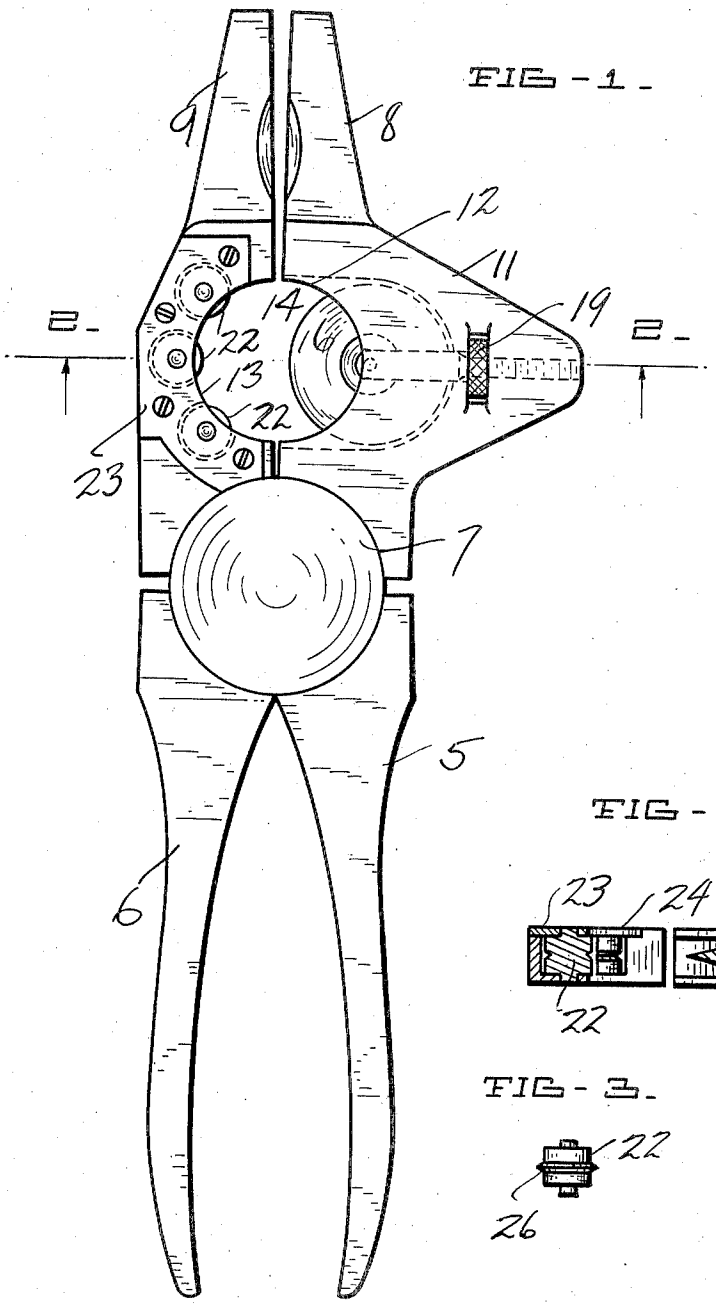



FIG - 2 -

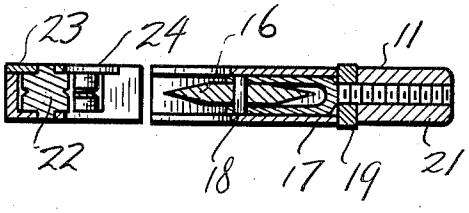
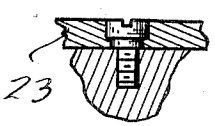



FIG - 3 -




FIG - 4 -




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Patented Jan. 28, 1941 2,230,030

# UNITED STATES PATENT OFFICE

2,230,030

## TOOL

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Application February 24, 1939, Serial No. 258,277

2 Claims. (Cl. 30—101)

This invention relates to improvements in tools and has particular reference to a combined cutting and gripping tool.

The principal object of this invention is to produce a tool which will have general utility, one which is particularly adapted to cut small objects, such as pipes, rods, bolts, and the like, and a device which is economical to manufacture.

A further object is to produce a device of this character which will cut the above-mentioned objects with a minimum amount of effort and which will produce a clean cut.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawing forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Fig. 1 is a side elevation of my tool;

Fig. 2 is a cross sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 shows a modified form of roller; and

Fig. 4 is a fragmentary cross sectional view, showing the manner in which the roller bearing plate is held on the body of the pliers.

There are many instances when a person, particularly an electrician, desires to cut armored cable, either partly therethrough or entirely therethrough. This is usually accomplished by using a hack saw, which is a crude method and knicks the wire when only the armor is being cut; and as a result of these knicks, the wire often breaks.

In the accompanying drawing wherein for the purpose of illustration is shown a preferred embodiment of my invention, it will be noted that I have devised a pair of pliers wherein handles 5 and 6, pivoted as at 7, control the movement of gripping jaws 8 and 9. Between the gripping jaws 8 and 9 and the pivot 7, I form an offset 11 having a concave face 12, which together with the concave face 13, forms an opening 14 through the tool. Within the offset 11 I position a cutting wheel 16 which is mounted in a yoke 17 through the medium of a pivot pin 18; and this yoke is adjusted by rotating a nut 19 which travels upon the screw 21 formed integral with the yoke 17. Positioned in alignment with the cutter 16 is a series of rollers 22 rotatably mounted by a retainer plate 23. These rollers 22 may be provided with a V groove 24 or may be provided with a cutting edge 26. In the first instance, the groove 24 permits the edge of the cutter 16 to enter the periphery of the rollers 22, thus enabling the user to cut a bar completely in two, or even a small wire. When the rollers, having the cutting edge 26 are used, they co-operate with the cutter 16 to make a clean cut in the material being operated upon.

In use the tool is clamped over the cable or other material to be cut, and a slight pressure on the handles 5 and 6 brings the cutter into engagement with the outer surface. Then by rocking the pliers back and forth, the pressure will cause the cutter to enter the material and gradually cut therethrough, the depth of the cutting depending upon the adjustment of the nut 19.

It is to be understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that various changes relative to the material, size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described my invention, I claim:

1. In a device of the character described, the combination with a pair of pliers having opposed arcuate shaped portions forming a circular opening therethrough, rollers mounted in said arcuate shaped portions, one of said rollers having a sharpened edge to act as a cutting element, and means for adjusting said sharpened roller edge with relation to the periphery of one of said arcuate shaped portions.

2. A tool of the character described, comprising a pair of pliers having gripping jaws at their outer ends, opposed arcuate shaped portions between the gripping jaws and the pivot forming a circular opening, rollers mounted in one of said jaws and extending slightly into the arcuate shaped portion, an off-set portion carried by the other jaw opposite the arcuate shaped portion and having a recess extending therefrom, said off-set having a circular opening communicating with the recess and the outer end thereof, said off-set having a transverse slot intersecting the opening, a yoke within said recess, a cutter roller mounted in said yoke, and a threaded rod passing through the opening and upon which is mounted a thumb nut within the transverse slot, whereby the cutter roller may be extended any desired distance into the arcuate shaped portion.

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