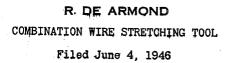
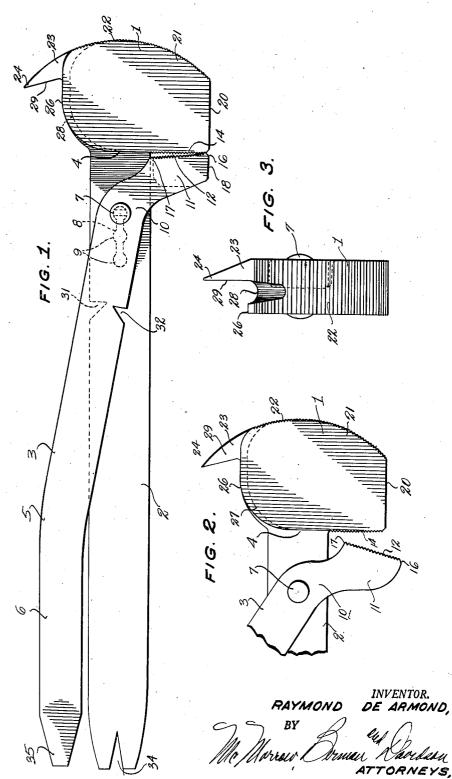
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# UNITED STATES PATENT OFFICE

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# **COMBINATION WIRE-STRETCHING TOOL**

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1 Claim. (Cl. 254-77)

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This invention relates to an improved wire stretching tool and more particularly to a combination tool especially adapted for stretching and holding wire in position in fence building operations.

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The chief object of the invention is the provision of a tool which facilitates the erection of wire fences by making it possible for the user to have both hands free for securing the wire while holding the same in position.

A further object of the invention is the provision of a tool which is capable of use with fence wire of widely different gauges and which does not damage the wire by cutting it in the stretching operation.

Another object is to provide a tool of the kind referred to combining in the same implement several elements for performing a number of different operations in the repair, maintenance and construction of fences, and of general utility 20 rounded portion 26 extends between the rounded otherwise.

The above and other objects are accomplished by the hereinafter described tool which combines a wire stretcher, staple puller, hammer, wire cutter, screw driver, pliers and nail puller 25 be pointed out. The staple pulling point 24 has in a single implement.

The invention will best be understood from the following description of the same taken in connection with the annexed drawings in which:

Figure 1 is a side elevation of the combination 30 tool,

Figure 2 is a side elevation partially broken away, showing the tool with the wire gripping elements thereof in open position, and

Figure 3 is an end view of Figure 1.

Referring more in detail to the drawings, I represents the head of the improved wire stretching tool, and 2 and 3 the handles of the same.

The handle 2 is straight and is formed integrally with the head I. At the region where 40the handle 2 joins the head I a shouldered portion 4 is formed on the head.

The handle 3 is secured to the handle 2 by a pivot 7, which works in a slot 8 having notches pivot 7, the handle 3 is bent at 10 to form the jaw 11, opposed to the shouldered portion 4 of the head 1, and provided with serrations or teeth 12. The portion of the shoulder 4 of head 1 which is opposed to the jaw 11 is also provided 50 with serrations or teeth 14.

The handle 3 has a slight bend at 5 to provide a portion 6 lying parallel to the handle 3, when the jaw 11 is closed upon the portion 4.

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closed upon the portion 4 the teeth 12 of the outer end of the jaw engage the opposed teeth 14 of the portion 4, but the teeth on the inner end 17 of the jaw do not engage the opposed teeth of the head I. This arrangement of the teeth 12 and 14 provides for the accommodation by the tool of wires of widely different gauges. By this means undue damage or cutting of the wire when gripped by the tool is also prevented. 10 The end 16 of the jaw 11 may have a surface 18 coextensive with the surface 20 of the head I, when the jaw is fully closed. The surface 20 may serve the purpose of a striking surface when the tool is used as a hammer.

The head | has a rounded portion 2| formed with serrations or teeth 22 for a purpose later to be made apparent. The curved portion 21 is extended at 23 to form a tapered and pointed member 24 functioning as a staple puller. A portion 21 and the shoulder 4 of the head 1. This rounded portion 26 has a round-bottomed groove 28 formed therein for the reception of a wire passed around the head I in a manner later to a surface 29 co-extensive with a side of the groove 28.

Handles 2 and 3 have opposed, wire-cutting notches 31 and 32 respectively formed therein, as seen in Figure 1. Handle 2 is formed at its free end with nail pulling claw 34, and handle 3 is formed at its end with a screw driver blade 35.

To use the tool as a wire-stretcher, the fence 35 wire is passed over the curved portion 26 of the head I in the groove 28 thereof and bent down along the shoulder 4 to be gripped between the teeth 12 of jaw 11 and teeth 14 on head 1. The handles 2 and 3 are squeezed together, gripping the wire between the teeth 12 and 14, and the teeth 22 of rounded portion 21 of head 1 are brought to bear upon a fence post or other bearing surface.

By rocking the rounded portion 21 on the 9 formed in the handle 2. In the region of the 45 bearing surface, using the handles as a lever, the wire can be brought into the desired position and stretched condition. In this condition of the tool, the handles 2 and 3 can be permitted to rest against the operator's body and the wire thus maintained in position, leaving the operator with both hands free to make other adjustments, such as stapling or otherwise securing the wire in place.

It will be noted that the teeth 22 of the curved The jaw 11 has a slight taper, so that when \$5 portion 21 will prevent slipping of the head 1

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3 from the surface upon which it is brought to bear.

The surface 29 of staple pulling point 24 helps in guiding and retaining the wire in the groove 28.

In using the tool as pliers, the pivot 7 is adjusted in one of the notch 9, which permits the jaw 11 to open a sufficient distance to accommodate a nut or other object between the teeth 12 and 14. In this manner various sizes of nuts, 10 whether round or having flattened sides can be operated upon.

Wire may be cut by inserting the same in the notches 31 and 32 and closing the handles 2 and 3.

The nail puller 34, screw driver 35, and staple puller 24 are used in the conventional manner of employment of such devices, and the tool can perform the functions of a hammer by using the combined handles 2 and 3 as a hammer 20 handle and the head I as a hammer head.

It will thus be seen that the invention provides a tool of simple design and rugged construction, especially useful in erecting wire fences, and also capable of performing a wide 25variety of generally useful functions.

Having thus clearly shown and described the invention, what is claimed and desired to secure by Letters Patent is:

A wire-working tool comprising a head, a 30 handle integral with said head, said head pro-

viding a shoulder at one side of said handle and having a rounded outer surface opposite said handle and a rounded end surface at one side of said handle, a second handle having a jaw on one end thereof, means pivotally connecting said second handle to said head-attached handle so that said jaw is opposed to said shoulder at the side of said head-attached handle opposite said rounded end surface, whereby a wire may extend along said rounded end surface and said shoulder and be clamped between said shoulder and said jaw and said rounded outer surface may provide a fulcrum for stretching said wire, said rounded end surface having a wire-positioning 15 groove therein and said rounded outer surface, said shoulder and said jaw being serrated.

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