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WIRE-FENCE PLIERS.

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To all whom it may concern:

Be it known that I, CLARENCE NEWMAN, a citizen of the United States, residing at Stillwater, in the county of Washington and State of Minnesota, have invented certain new and useful Improvements in Wire-Fence Pliers; and I do hereby 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 pliers and particularly to pliers adapted to be used in connection with wire fencing and the staples holding the wires thereof. As is well known, wire fencing is now used in large quantities particularly in rural districts and a very common form of fencing consists of longitudinally extending strands of wire secured to the spaced posts by staples and strands of lighter wire extending between said longitudinal strands. It is frequently necessary to tighten or otherwise repair this wire fencing when the same has become broken or damaged by cattle or from other causes.

It is an object of this invention to provide pliers by means of which the wire can readily be manipulated and by means of which staples may be drawn from the posts, no matter how deeply or tightly they are driven.

Another object of the invention is the provision of pliers having one of the jaws formed with a chiseled edge extending substantially parallel to the axis of the pliers, pivot and having the cooperating jaw formed as a rounded tapering pointed member, said point being adapted to pass outside of said chiseled edge and to dig into the surface of the member in which the staple is driven so as to enter the bight of the staple.

These and other objects and advantages of the invention will be fully set forth in the following description made in connection with the accompanying drawings in which like reference characters refer to the same parts throughout the different views, and in which:

Fig. 1 is a view in side elevation of the pliers showing the manner of use thereof;

Fig. 2 is a view in front elevation of the pliers showing a staple in section engaged thereby;

Fig. 3 is a fragmentary view in side elevation of part of the device illustrating the operation thereof; and

Fig. 4 is a view in elevation illustrating the use of the device.

Referring to the drawings, the pliers comprise reversely curved handle portions 1 and 2 having flat disk-like portions 3 at one end adapted to overlap and which are connected by a pivot member 4. The disk portions 3 are formed with notches 5 at opposite sides thereof which, when the pliers are opened, are adapted to aline and receive a wire. The adjacent surfaces of the disks 3 are in close engagement so that when the pliers are closed, as shown in Fig. 1, the wire will be sheared off and severed by the adjacent edges of the slots 5. The handles 1 and 2 are provided adjacent the disks 3 with corrugated portions 6 adapted to form a suitable holding means for a wire. The outer end of handle 2 is formed with a comparatively long tapering point 7. At the side of the pivot 4 opposite the handles 1 and 2 the pliers are formed with opposing jaws 8 and 9. The jaw 8 is formed substantially upon the arc of a circle and tapers at its ends to a chisel edge 10 which extends entirely across the jaw for the full width thereof, as shown in Fig. 2, and this edge is substantially parallel to the axis of the pivot member 4. The jaw 9 is circular in cross section and also formed substantially on the arc of a circle. The radius of the curve of jaw 9 is slightly greater than that of the jaw 8 and the end of jaw 9 is adapted to pass outside of the jaw 10. Said jaw 9 is formed with a long tapering point, as clearly shown in Figs. 1 and 2. One side of the jaw 8 is provided with a hammer face 12 which will be found very convenient for driving nails or staples.

It is often necessary or desirable in order to tighten the fencing or to connect a broken strand thereof, to lift or remove the staples which fasten the strands of wire to the fence post. The present pliers are particularly designed to facilitate this operation. In order to remove a staple, such as illustrated as 11 on the drawings in Fig. 3, which staple has been tightly driven into a post 12, to hold a wire 14, the edge 10 of the jaw 8 will be placed against one side of the staple and wire, as illustrated in Figs. 3 and 4, with the jaws of the pliers slightly...
open. It is customary to drive the staples deep into the posts so that a portion of the wire is sunk into the post and the outer surface thereof lies substantially flush with the outer surface of the post. The edge 10 being wide cannot enter into the staple but forms an abutment therefor. The pliers will be disposed in a diagonal position, as shown in Fig. 4, and then closed from this position shown in Fig. 4 to that shown in Fig. 1. The sharp rounded point of the jaw 9 digs into the surface of the post and enters the bight of the staple, the staple being prevented from moving away from said jaw by the edge 10. The jaw 9 thus having been well entered into the staple, the staple can readily be entirely lifted by merely rocking the pliers backward on the jaw 9. The staple is thus quickly and easily drawn and is not bent or mutilated and can again be used for tightening the wire 14. In building and repairing all kinds of wire fences, replacing old broken posts and in removing the same for hog pastures, many staples are required. This is especially true of woven wire fences. It is very necessary to have some sharp pointed device to force or drive into the post behind the wire and staple in order to back the staple out without injury to either the wire or staples. The staples can thus be used again and again. The present tool is especially suited for this purpose and performs the staple and wire lifting operation in a practically perfect manner. The tool thus relieves the operator of the necessity of carrying several tools.

It is important that one side or jaw of the tool be formed with a flat edge to act as an abutment. If both jaws are pointed neither jaw can be made to dig into the post and pass sufficiently far into the staple. If the staple should be so deeply driven that it is difficult to engage the same with the edge 10, the staple and wire held therefor by can be pried out somewhat by using the pointed end 7 of handle 2 when the same can readily be drawn as before described. The wire of the fence can be effectively engaged by the corrugated portion 6 of the handles for pulling thereon and the wire can be cut as desired by the notches 5.

From the above description it is seen that applicant has provided a very simple and efficient form of wire fence tool. The same forms a very convenient tool for drawing staples and the staples can be driven into place and the wire variously manipulated by other portions of the tool. The tool may be easily and inexpensively made and marketed at a very reasonable price. The device has been amply demonstrated in actual use and found to be very successful and efficient for the purpose had in view.

It will, of course, be understood, that various changes may be made in the form, details, arrangement and proportions of the device without departing from the scope of applicant’s invention, which generally stated, consists in a device capable of carrying out the objects above enumerated and such as described and set forth in the appended claims.

What is claimed is:

1. A wire fence pliers having operating handles and having one jaw formed with a straight chisel edge extending across the full width thereof substantially parallel to the axis of said pliers and adapted to abut against the side of a driven staple and having another jaw formed substantially on the arc of a circle, said latter jaw being substantially circular in cross section and having a tapered pointed end disposed centrally of said chisel edge adapted to pass outside thereof and to overlap the same when the pliers are closed so as to dig into the surface in which said staple is driven and enter the bight thereof while the staple is abutted by said chisel edge.

2. A wire fence pliers having operating handles and having one jaw curved substantially on the arc of a circle, said jaw being substantially rectangular in radial cross section and formed with a straight chisel edge extending entirely thereacross and parallel to the axis of said pliers, said edge being adapted to abut against one side of a driven staple, said pliers having another jaw formed substantially on the arc of a circle of slightly larger radius than the first mentioned jaw, said latter jaw being substantially circular in radial cross section and formed with a tapered pointed end disposed centrally of said chisel edge adapted to pass outside of and overlap said chisel edge when the pliers are closed whereby said pointed end will dig into the surface in which said staple is driven and will enter the bight of said staple while abutted by the other jaw.

In testimony whereof I affix my signature.

CLARENCE NEWMAN.