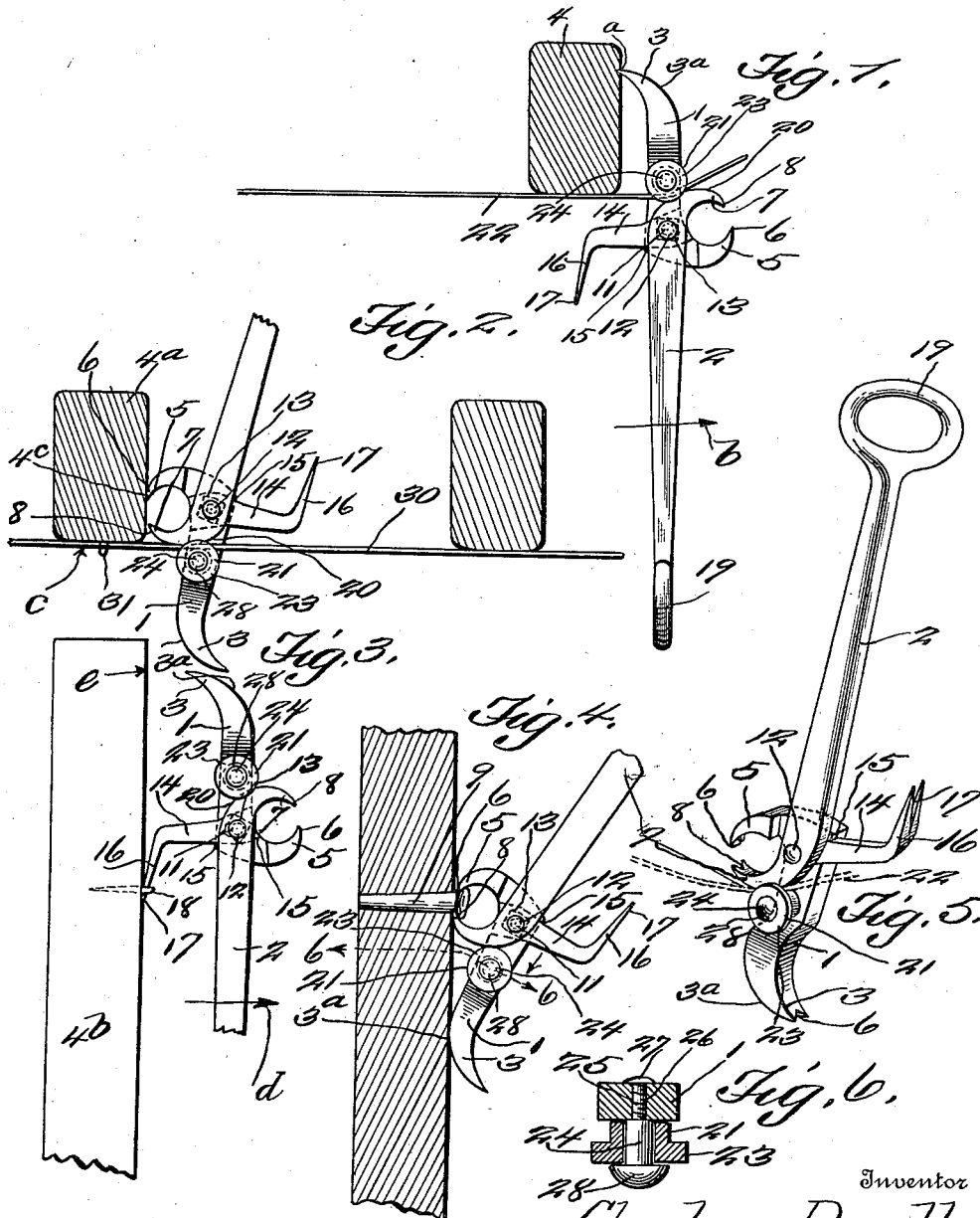


C. PUCALL.
WIRE STRETCHER.
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1,009,175.

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Witnesses

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CHARLES PUCALL, OF CHEBOYGAN, MICHIGAN.

WIRE-STRETCHER.

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To all whom it may concern:

Be it known that I, CHARLES PUCALL, a citizen of the United States, residing at Cheboygan, in the county of Cheboygan and State of Michigan, have invented a new and useful Wire-Stretcher; 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 a new and useful wire stretcher, adapted for stretching wires, especially fence wires, when constructing wire fences and also stretching loose wires of fences already erected.

The main object of the invention, is not only to provide a novel wire stretcher, but to produce a device having various tools for extracting staples and nails, during the construction of wire fences.

A further feature of the invention is the provision of a collar to be coöperated with by a cam end of a lever for clamping the wire when stretching the same.

A further feature of the invention is the adjustability of the collar, whereby different wearing surfaces may be presented adjacent the wire.

A further feature of the invention is to arrange the staple extracting tool so that the same may be removed, so as to render the wire stretcher less clumsy.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a plan view of a wire stretcher constructed in accordance with the invention, and showing the same coöperating with a fence post for stretching a fence wire, during the construction of a fence. Fig. 2 is a plan view of the main portion of the wire stretcher for tightening the fence wire of a fence which is erected. Fig. 3 is a plan view of the wire stretcher, showing the removable staple extracting tool in readiness to extract a staple. Fig. 4 is a plan view of the wire stretcher, showing the nail extracting drawers in the act of withdrawing a nail. Fig. 5 is a view in perspective of the wire stretcher, showing the cam lever and the collar gripping a fence wire, shown in dotted lines. Fig. 6 is a sectional view on line 6—6 of Fig. 4, illustrating the fact that the collar is adjustably

mounted upon a stud of one of the parts of the wire stretcher.

Referring more especially to the drawings, 1 and 2 designate the two members of the wire stretcher. The member 1 terminates in a curved end 3 at one end, adapted to engage a fence post 4, as shown in Fig. 1, so as to provide a fulcrum for the wire stretcher, while the other end of the member 1 terminates in a hooked end 5 having claw teeth 6 and constituting a jaw to coöperate with the jaw 7 of the member 2. The jaw 7 is also provided with claw teeth 8, which together with the claw teeth 6, when the members 1 and 2 are arranged as shown in Fig. 4, constitute means for drawing nails 9 from the fence post 10. The members 1 and 2 are pivoted together as at 11, by means of the bolt 12 and the nut 13. The bolt 12 not only pivots the two members 1 and 2 together but also secures the tool 14 in the recess 15 of the member 1, between the members 1 and 2. The tool 14 terminates in an angular end 16 having claw teeth 17, designed for the purpose of extracting staples from fence posts, as shown at 18 in Fig. 3. The member 2 terminates in a handle 19, by which the wire stretcher may be manipulated.

The jaw 7, not only coöperates with its opposite jaw for extracting nails and the like, but is so shaped, that the outer curved portion 20 thereof coöperates with the collar 21 of the member 1, so as to grip the wire, whether it be a telephone, telegraph or fence wire or the like 22. The collar 21 is provided with an annular flange 23, to overlap the jaw 7 partially, so as to hold the jaw 7 in proper relation with the collar. It is to be observed that the jaw 7 constitutes means for performing two functions. The collar 21 is mounted upon a cylindrical stub 24 having a restricted shank 25, which is threaded into the member 1, as shown at 26. Not only is the shank threaded into the member 1, but it is also riveted, as shown at 27. The stud 24 is provided with a head 28, between which and the member 1 the collar 21 is arranged. Upon the examination of the drawing it will be seen that the collar 21 is freely adjustable or rotatable about the stud 24. This collar is rendered adjustable in this manner, so as to present different wearing

surfaces opposite the outer curved portion 20 of the jaw 7, in order to obviate the collar 21 from becoming flat at various points, at which the wire engages when being gripped, as will be seen in Fig. 1.

When it is desired to stretch fence wires, during the first construction of the fence, the curved end 3 is placed in engagement with the fence post 4 as shown in Fig. 4, after which the wire 22 is placed between the collar 21 and the curved portion 20 of the jaw 7. Subsequently, after the parts are so arranged, a movement or pulling action in the direction of the arrow *b* is imparted to the member 2, using the point *a* as a fulcrum. When the member 2 is so actuated, the wire 22 is not only stretched, but a firm gripping action is insured on the wire by the collar and the jaw 7.

When it is desired to tighten fence wires of fences which are erected, by stretching the wire 30, the wire stretcher is arranged as shown in Fig. 2, with the jaw 5 in engagement with the fence post 4^a, thus forming a sliding fulcrum for the wire stretcher. When the wire stretcher is thus arranged, the wire is placed between the collar 1 and the jaw 7 as shown in Fig. 2. After the wire 30 is stretched sufficiently tight, another staple may be driven into the post 4^a at the point indicated by the arrow *c*, after which the old staple 31 may be withdrawn, or further embedded in the post, just as desired.

When extracting staples from a fence post, the tool 14 is arranged with its claw end in engagement with the staple as seen in Fig. 3, which is the first step in extracting the staple, and by forcing the member 2 in the direction of the arrow *d*, the staple will be started from the fence post. To complete the extraction of the staple 18, the curved end 3 is brought into engagement with the fence post 4^b, at the point marked *e*, then the member 2 is further forced in the direction of the arrow *d*.

The curved end 3 of the member 1 not only acts as a fulcrum for the wire stretcher, when stretching wires, as shown in Fig. 1, but also constitutes a fulcrum for the wire stretcher when extracting nails as shown in Fig. 4, by the curved portion 3^a coming in contact with the fence post 10, as in Fig. 4. The claw teeth 6 of the curved end 3 are also used for extracting tacks and the like. The collar 21 acts as a stop, in addition to its other functions to limit the jaw 7, with relation to the jaw 5. When it is desired to render the wire stretcher less clumsy, the tool 14 may be removed.

From the foregoing it will be noted that by the provision of a device of this nature, wire fences may be easily and more readily constructed, and furthermore fence wires may be tightened, or otherwise repaired.

Furthermore it will be observed there has been produced a novel, simple and efficient device, and one which has been found to be practicable in every respect.

The invention having been set forth, what is claimed as new and useful is:

1. In combination, a pair of members pivoted together, one terminating in a curved portion at one end and a nail extracting jaw at the other extending in opposite directions, while the other member terminates in a handle at one end, with an additional nail extracting jaw at the other to cooperate with the first jaw, and a revolvably adjustable collar carried by the member having the curved portion for cooperating with the second jaw to grip a wire.

2. In combination, a pair of members pivoted together one terminating in a curved portion at one end and a nail extracting jaw at the other extending in opposite directions, while the other member terminates in a handle at one end, and an additional nail extracting jaw at the other to cooperate with the first jaw, and a rotatably adjustable collar carried by the member having the curved portion, for cooperating with the second jaw to grip a wire, the collar having an annular flange to overlap the second jaw, the member having the curved portion having a removable tool secured between the members by their pivot.

3. In a wire stretcher, a pair of members pivoted together, one having a stud thereon provided with a rotatable flanged collar, while the other is provided at one end with a cammed end adapted to cooperate with the collar for gripping a fence wire therebetween, the member having the collar having a recess at the point where the members are pivoted, and a tool arranged in the recess between the members and secured in position by the pivot.

4. In a wire stretcher, a pair of members, means for pivoting the members together, one of the members terminating in a curved portion acting as a fulcrum for the wire stretcher, while the other end terminates in an opposite direction in a nail extracting jaw, the other member having a handle at one end, and terminating in a nail extracting jaw at the other to cooperate with the first jaw, the member having a curved portion having a stud riveted and threaded thereto, a flanged collar rotatably mounted on the stud to cooperate with the second jaw, so as to grip a fence wire, the flange of the collar overlapping the second jaw and constituting means to guide and temporarily hold the second jaw when clamping a wire, the member having a curved portion having a recess adjacent the pivot of the members, and a tool arranged in the recess and between the members and secured therein by the pivot means, the tool constituting

a staple extractor, the collar acting as a stop to limit the second jaw relative to the first jaw, the curved portion acting as an additional fulcrum for the wire stretcher, when
5 the coöperating jaws are extracting nails and the like.

5. In a wire stretcher, a pair of members pivoted together one terminating in a nail extracting jaw at one end, while the other
10 member terminates in an additional nail extracting jaw at one end to coöperate with the first jaw, the first jaw constituting a fulcrum member for the wire stretcher, and a
15 revolubly adjustable collar carried by the member having the first jaw for coöperating with the second jaw to grip a wire.

6. In a wire stretcher, a pair of members

pivoted together, one terminating in a curved portion at one end and a nail extracting jaw at the other end extending in opposite directions, while the other member
20 terminates in a handle at one end with an additional extracting jaw at the other to coöperate with the first jaw, the first jaw constituting a fulcrum member for the wire
25 stretcher.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES PUCALL.

Witnesses:

FAYE SPENCE,
M. W. BENJAMIN.

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