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F. W. HAHN.

WIRE STRETCHER.

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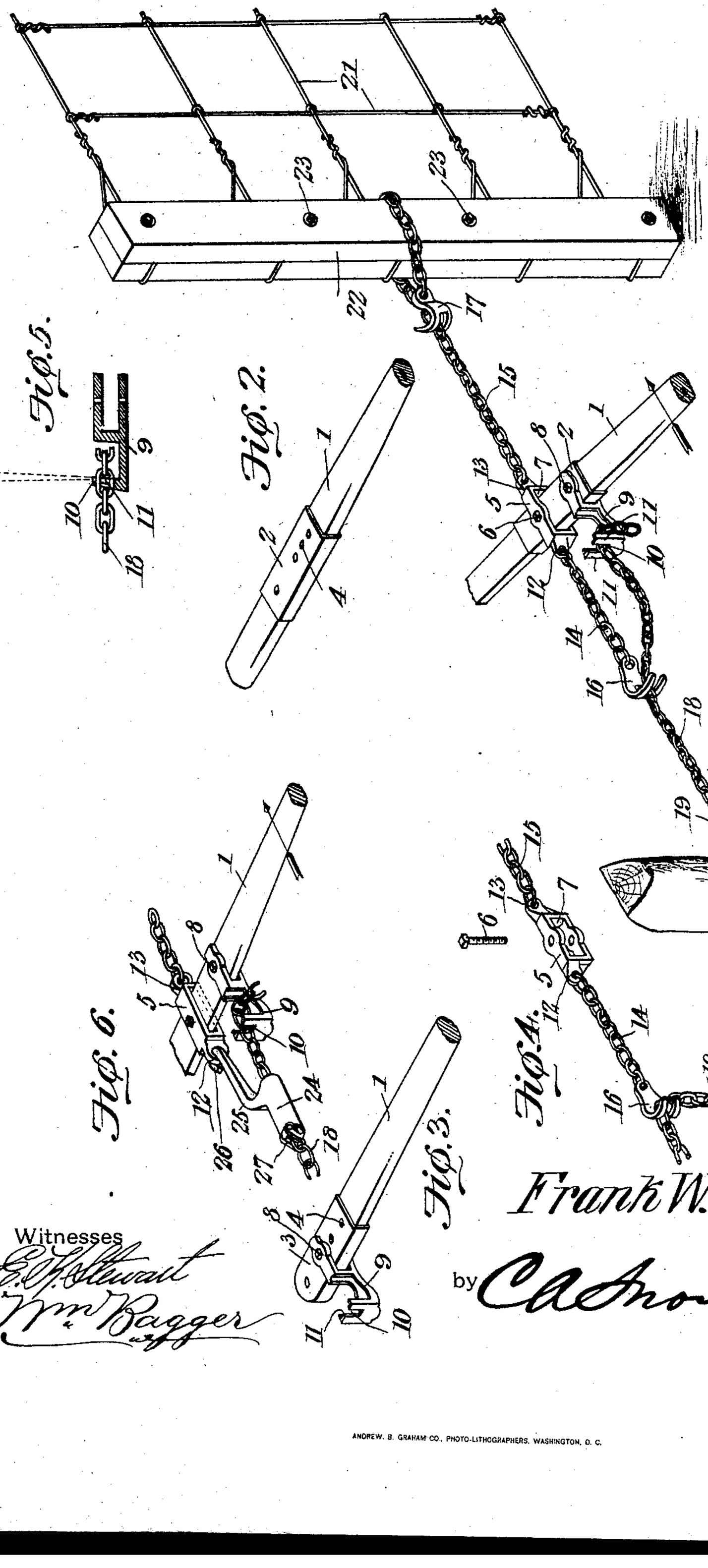


Fig. 1.




Fig. 5.




Fig. 2.




Fig. 6.




Fig. 3.




Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

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## WIRE-STRETCHER.

No. 796,998. Specification of Letters Patent. Patented Aug. 15, 1905.

Application filed May 19, 1905. Serial No. 261,209.

*To all whom it may concern:*

Be it known that I, FRANK W. HAHN, a citizen of the United States, residing at Harvard, in the county of McHenry and State of Illinois, have invented a new and useful Wire-Stretcher, of which the following is a specification.

This invention relates to devices for stretching wires, as in the construction of wire fences, the said device being also applicable to the stretching of fencing material composed wholly or in part of wire woven or otherwise constructed to form a suitable fence fabric.

The objects of the invention are to simplify and improve the construction and operation of this class of devices; and with these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of embodiment of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that the right is reserved to any changes, alterations, and modifications to which recourse may be had within the scope of the invention and without departing from the spirit or sacrificing the efficiency of the same.

In said drawings, Figure 1 is a perspective view illustrating the invention in position for operation. Fig. 2 is a perspective detail view of the operating-lever detached. Fig. 3 is a perspective detail view illustrating a slight modification of the operating-lever with the chain-engaging hook attached thereto. Fig. 4 is a detail view of the lever-housing and parts connected therewith. Fig. 5 is a sectional detail view of the chain-engaging hook. Fig. 6 is a perspective detail view illustrating a modification of the invention.

Corresponding parts in the several figures are indicated throughout by similar characters of reference.

The operating-lever 1 is provided with a sleeve 2, which may be disposed about centrally upon said lever so that the ends thereof will constitute handles whereby the stretching device may be manipulated by two men standing on opposite sides. A cap, as 3, may be substituted for the sleeve, as shown in Fig. 3 of the drawings, when it is desired to use only one operating-handle. The cap or sleeve, as the case may be, is provided with a plurality of apertures 4 4, extending transversely through the body of the lever for the reception of attaching means, such as pins or bolts, for the operating parts, which are now to be described. A housing consisting of a rectangular or approximately rectangular frame 5 is connected with the lever by means of a pin or bolt 6 extending through one of the apertures in the sleeve or cap. The housing is to be of such dimensions that the lever may rock freely therein, and the end walls of said housing are preferably made convex, as will be seen at 7 in Fig. 4 of the drawings.

Pivotally connected with the operating-lever by means of a pin or bolt 8 is a hook member 9, the outer end of which is bifurcated, as shown at 10, the prongs 11 being preferably tilted or leaned inwardly, as shown.

The frame or housing 5 is provided at the ends thereof with hooks or, if preferred, with eyes, as 12 and 13, whereby said frame or housing is connected with chains, as 14 15, the free ends of which are provided with bifurcated hooks, as 16 17. In connection with the device and as an essential part thereof is used an additional chain 18, provided at one end with a bifurcated hook 19. It may be stated that it is not absolutely essential to the successful operation of the device that the hook members 16, 17, and 19 be bifurcated, although experience has proven that this form is preferable. Any hook member which may be described as a chain-engaging hook may be used in place of each of the said bifurcated hooks.

A suitably braced and reinforced tightening-post has been shown at 20, and a portion of fencing (designated 21) is provided at the end thereof with clamping members 22, suitably connected, as by means of bolts 23, to afford means for the attachment of the stretching device.

In the practical operation of the device the frame or housing 5 is connected, by means of the chain 15 and hook 17, with the clamping members 22 by simply looping the chain around said clamping members and causing the hook member 17 to engage between two of the chain-links. The chain 18 is in like manner connected with the stretching-post 20, and said chain is placed in engagement with

the hook members 16 and 9, as will be clearly seen in Fig. 1 of the drawings. It is of course to be understood that the arrangement may be reversed, the chain 18 being connected with the clamping members 22 and the chain 15 with the stretching-post, such an arrangement being a mere reversal, in no wise affecting the construction or operation of the device. When the operating-lever is in the position shown in Fig. 1 of the drawings and the free end of the chain 18 is disposed as tightly as possible with one of its links in engagement with the hook member 9, the prongs 11 of which are tilted inward, so as to prevent accidental disengagement, the lever is moved in the direction of the arrow, thus changing the relative positions of the housing 5 and the hook member 9, and consequently straining the chains 15 and 18 and slackening the chain 14. The lever is now held stationary while the hook member 16 at the end of the chain 14 is advanced upon the chain 18, so as to take up slack in the chain 14, when by moving the lever in a reverse direction the relative positions of the housing 5 and hook member 9 will again be changed, the chains 14 and 15 and the portion of the chain 18 between the hook member 16 and the post 20 being under tension, while the portion of the chain 18 between the hook members 16 and 9 becomes slackened. After the slack has been taken up by advancing the chain 18 with relation to the hook member 9 the operation may be repeated and continued until the desired tension of the fence has been obtained.

Under the modification illustrated in Fig. 6 of the drawings there is substituted for the chain 14, having the hook member 16, a tubular member 24, provided at one end with a bracket 25, terminating in a hook 26, whereby it is connected with the eye member 12 at one end of the housing 5. This tubular member or cylinder constitutes a chain-guide through which the chain 18 is guided before engaging the hook member 9. The tubular member or chain-guide 24 is provided at its front end with a pivoted, preferably bifurcated, chain-engaging hook member 27, riding upon and adapted for automatic engagement with the links of the chain 18, so that when the operating-lever is moved in the direction of the arrow the position of the tubular member or chain-guide upon the chain 18 will be automatically advanced and no slack results except upon the return movement, upon the accomplishment of which the slack between the hook members 27 and 9 must be taken up.

This device, as will be seen, is simple in construction and easily operated, as well as thoroughly efficient for the purposes for which it is intended.

The device is adapted to be operated by one or more men, according to the strain involved.

Having thus described the invention, what is claimed is—

1. In a device of the class described, a lever, a housing pivoted upon said lever and having link-attaching means at the ends thereof, and a chain-engaging member pivoted upon said lever at a distance from said housing.

2. In a device of the class described, a lever having a reinforcing and protecting member, a housing pivoted upon said member and having link-attaching means at the ends thereof, and a chain-engaging member pivoted upon said lever at a distance from said housing.

3. In a device of the class described, a lever having a reinforcing-sleeve, a housing pivoted upon said sleeve and having link-attaching means at the ends thereof, and a chain-engaging member pivoted upon said sleeve at a distance from said housing.

4. A lever, a housing pivoted upon said lever and having link-attaching means at the ends thereof, and a chain-engaging bifurcated hook member pivoted upon said lever at a distance from the housing, the prongs of said bifurcated hook member being tilted in the direction of the pivotal point.

5. A lever, a housing pivoted upon said lever, a chain-engaging member pivoted upon said lever at a distance from the housing, a chain connected with one end of said housing and having a hook at its free end, and a chain-engaging member connected with the opposite end of the housing; in combination with a stake-engaging chain adapted for coöperation with the chain-engaging members connected with the housing and with the lever.

6. In a device of the class described, a lever, a housing pivoted upon said lever, a chain-engaging member pivoted upon the lever at a distance from the housing, a chain connected with one end of the housing and having a hook at its free end, and a tubular chain-guide connected with the opposite end of the housing and having a pivoted chain-engaging member; in combination with a stake-engaging chain adapted for coöperation with the chain-engaging members upon the tubular chain-guide and upon the lever.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK W. HAHN.

Witnesses:

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