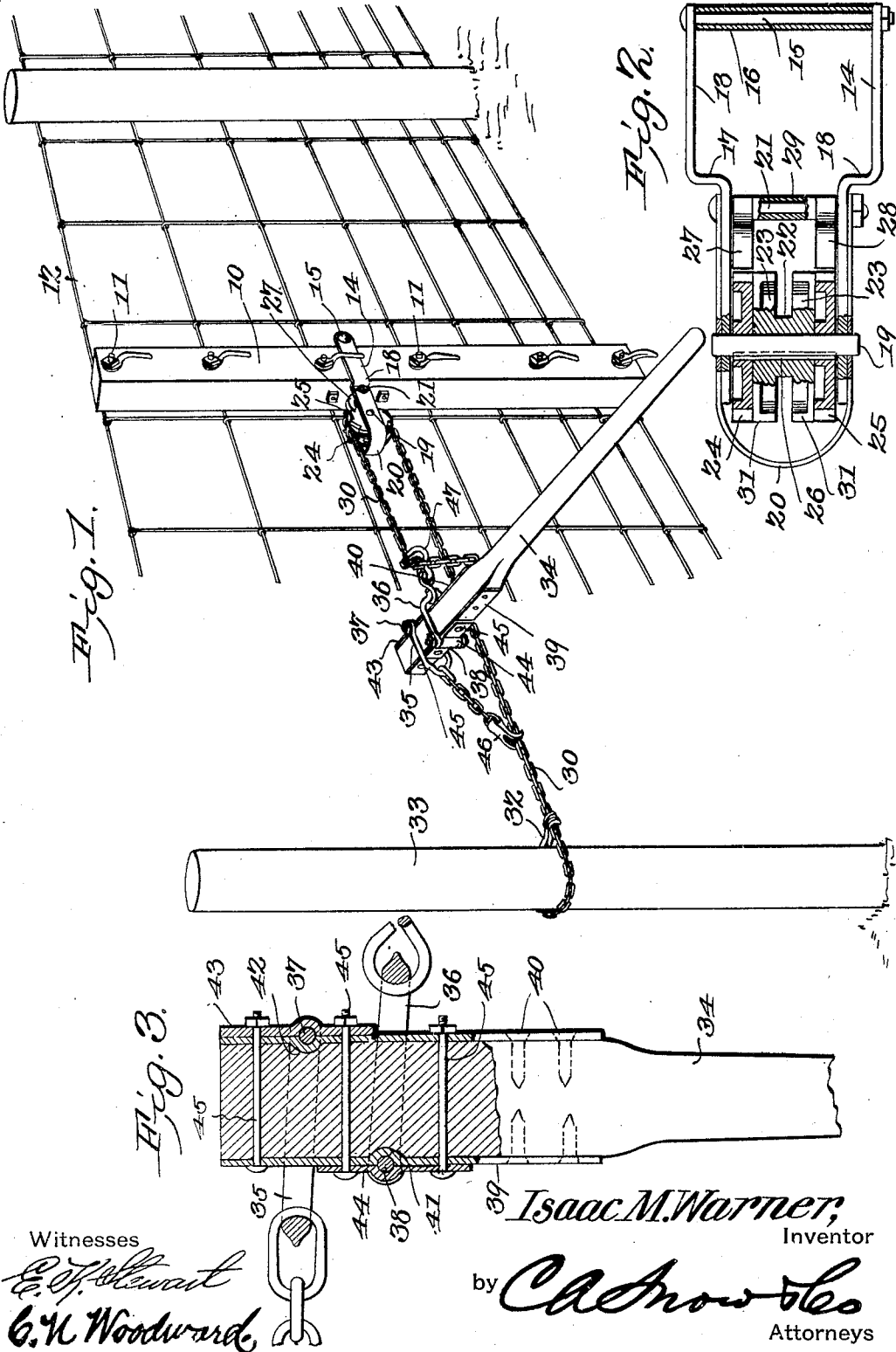


No. 810,099.

PATENTED JAN. 16, 1906.

I. M. WARNER.
WIRE FENCE STRETCHER.
APPLICATION FILED OCT. 5, 1905.



Witnesses

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UNITED STATES PATENT OFFICE.

ISAAC M. WARNER, OF HARVARD, ILLINOIS, ASSIGNOR TO FRANK C. BOISE, OF UNION CITY, MICHIGAN.

WIRE-FENCE STRETCHER.

No. 810,099.

Specification of Letters Patent.

Patented Jan. 16, 1906.

Application filed October 5, 1905. Serial No. 281,440.

To all whom it may concern:

Be it known that I, ISAAC M. WARNER, 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-Fence Stretcher, of which the following is a specification.

This invention relates to devices for stretching wire fences, more particularly woven-wire fences, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation, it being understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention within the scope of the appended claims.

Figure 1 is a perspective view of the improved device applied. Fig. 2 is a plan view, enlarged and partly in section, of the combined chain-grip and ratchet-wheels. Fig. 3 is a sectional detail, enlarged, of the operating-lever.

In the improved device is comprised a bar 10, having means, such as bolts 11, for clamping to the fence, (represented at 12.) Bearing upon opposite sides of the bar 10 are arms 13 14, coupled rearwardly of the bar by a bolt 15, having a roller 16 thereon and serving as a spacer to maintain the arms at a certain predetermined distance apart and prevent them binding upon the bar 10. The arms 13 14 are extended inwardly, as at 17 18, for bearing against the face of the bar 10 opposite the face which the bearing-roller 16 engages, the object to be hereinafter explained. Journaled through and projecting beyond the contracted side portions of the members 13 14 is a shaft 19, and engaging the shaft outside the members 13 14 is a U-shaped guard or stay 20, the stay being further supported

by a transverse bolt 21, passing through the side members adjacent to the inwardly-extending portions 17 18. Mounted upon the shaft 19 is a combined chain-grip and ratchet member consisting of a contracted central portion 22, having spaced peripheral recesses 23 for receiving the links of a chain and with ratchet members 24 25 at the sides, the ratchet members being constructed separately from the other parts and arranged to bear against the sides of the central portion 22. The members 22, 24, and 25 are rigidly coupled to the shaft 19, as by a key 26, so as to rotate therewith and with each other. The bolt 21 is utilized to carry spaced pawls 27 28 for engaging the ratchet-teeth 24 25 and maintained in spaced position by a spacer-tube 29. By this means when a chain, as at 30, is passed around the central portion 22, with its links bearing in the recesses 23, the teeth-like projections 31 between the recesses come between the links and effectually prevent the chain from slipping, no matter how severe the strains may be applied.

The chain employed is of the ordinary welded-link form and when disposed around the gripping member every alternate link lies in the recesses, while the remaining alternate links rest in the space between the recesses, with the ends of the recess engaging links bearing against the projections 31. The chain is thus firmly held from slipping when disposed around the grip member and will be carried around with the same when rotated.

The intermediate recessed portion 22 being in one piece and the ratchet portions being in separate pieces and all the pieces rigidly coupled to the shaft 19 can be inexpensively manufactured and combined, and when one part is broken or worn can be easily renewed without the necessity for discarding the whole device. Thus the "life" of the device is materially lengthened and the value and efficiency thereby correspondingly increased.

The inward projections 17 18, bearing against one face of the clamp-bar 10, and the bolt 15 and its roller 16, bearing against the opposite of the bar, with the weight of the chain-grip and ratchet members all at one side of the bar, exert a downward force thereon, and thus "pinch" the frame of the grip-

ping member fast to the bar and cause the latter to remain upon the bar at any desired point without other fastening means.

The chain 30 is provided with a terminal grab-hook 32, whereby the chain may be secured to one of the posts, as at 33, in advance of the one over which the fence is for the time being being stretched.

A straining-lever 34 is a feature of the invention and is provided with two clips 35 36, spaced apart and formed in U shape, with clamp-bolts 37 38 coupling their ends, the bolts bearing against opposite sides of the lever. The lever 34 is provided with wear-plates 39 40 upon its opposite edges and with recesses 41 42 to receive the bolts 37 38 and with caps 43 44 over the bolts opposite the recesses, the caps and wear-plates secured in place by clamp-bolts 45. Coupled to the clip 35 is a grab-hook 46, and coupled to the clip 36 is a grab-hook 47.

The chain 30 is connected to the post 33 or other stationary object or structure by inclosing the same and coupling the grab-hook 32 to one of the links in the body of the chain and the chain passed around the grip member 22 and coupled to the grab-hook 47, while the grab-hook 46 is coupled to the chain between the lever and the post 33. This places the lever in position so that when moved in one direction a strong leverage will be exerted upon the chain to draw the ends toward each other and rotate the grip member by the action, and thus draw the clamp-bar 10, together with the fence 12, coupled thereto, toward the post 33, and thus stretch the fence. When the "stroke" of the lever is completed, the strain is released; but the length of chain between the post 33 and the clamp member will not be released, as the combined action of the recesses 22, projections 31, and the ratchets and pawls hold the chain wherever the movement of the lever leaves it. The grab-hook 47 is then replaced in an advanced position and the action repeated, and so on, as often as required. By this means the fence may be intermittently stretched to any required extent within the range of the lever movement, the clamp member 10 being moved along the fencing material as required.

The device is simple in construction, can be inexpensively manufactured, is strong and durable, and operates efficiently for the purposes described.

Having thus described the invention, what is claimed is—

1. In a fence-stretching device, a clamp member having means for attachment to the fence material to be stretched, spaced bars disposed opposite sides of said clamp member and extended inwardly and contracted intermediate their ends for bearing upon one face of said clamp member, a bolt coupling said spaced bars and bearing upon the opposite face of said clamp member, a clamp-bolt coupling the contracted portions of said spaced bars, a shaft journaled through the contracted portions of said spaced bars and extended beyond the same, a grip member having spaced peripheral recesses for receiving the links of a chain and carried by said shaft-ratchets rotative with said grip member, pawls carried by said clamp-bolt and engaging said ratchets, a U-shaped guard, embracing said side members at their contracted ends and provided with apertures for receiving the extended ends of said shaft and through which the pawl-carrying clamp-bolt passes, means for connecting one end of said chain to a stationary structure and means for applying a strain to said chain to cause rotation of said chain-grip and ratchets.

2. In a fence-stretching device, a clamp member having means for connecting to the fence material to be stretched, a frame movably disposed upon said clamp member, a grip member having spaced peripheral recesses for receiving the links of a chain and rotatively mounted in said frame, ratchets rotative with said grip member, pawls carried by said frame and engaging said ratchets, a chain having means at one end for detachably coupling to a stationary structure and bearing around said grip member, a lever having reversely-disposed clips movably arranged thereon, a grab-hook attached to one of said clips for engaging said chain between the lever and the stationary structure, and a grab-hook connected to the other clip for engaging the chain between the lever and chain-grip member.

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

ISAAC M. WARNER.

Witnesses:

H. D. CRUMB,
R. G. EHLE.