

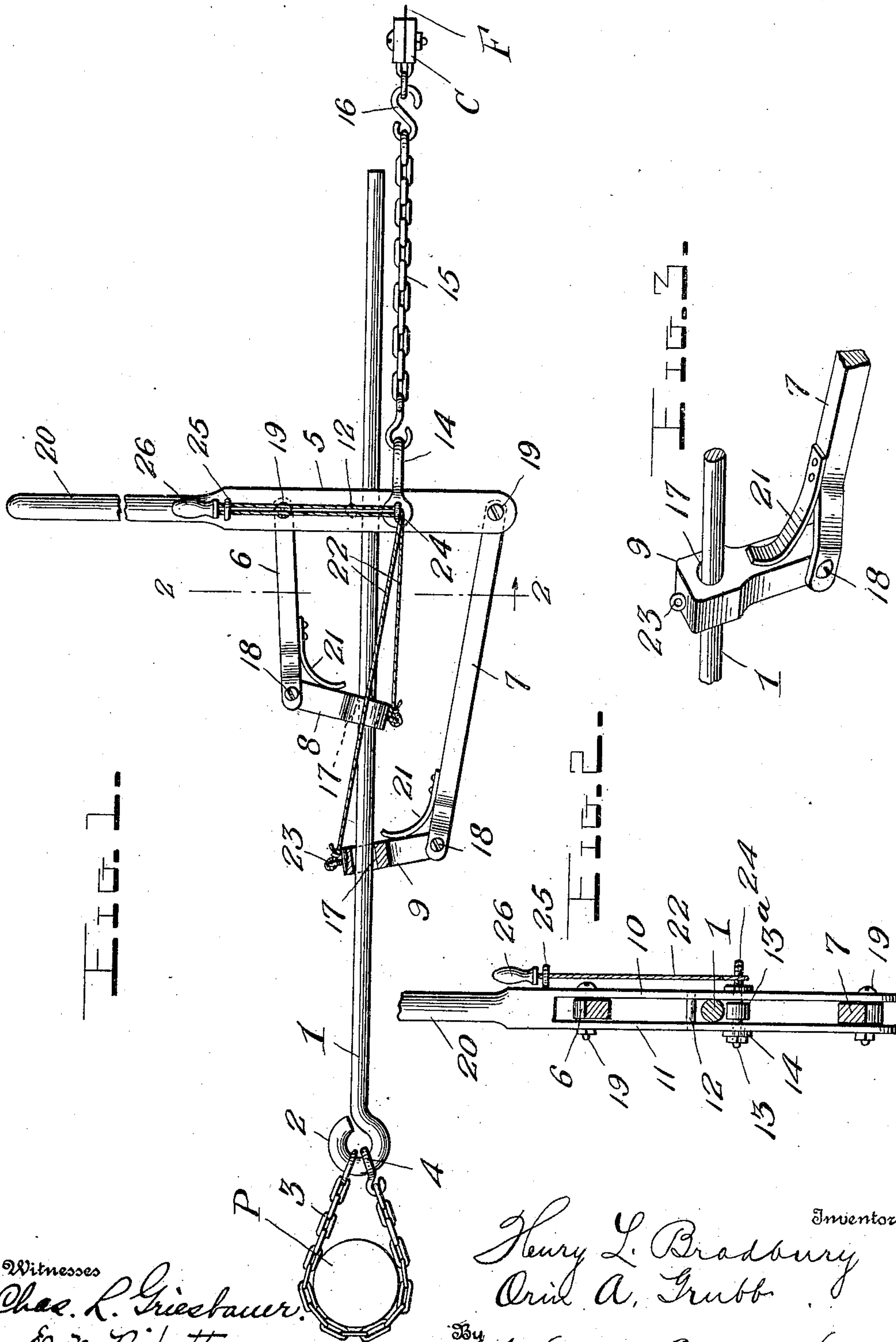
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WIRE STRETCHER.

APPLICATION FILED MAR. 5, 1909.

934,387.

Patented Sept. 14, 1909.



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# UNITED STATES PATENT OFFICE.

HENRY L. BRADBURY AND ORIN A. GRUBB, OF FAIRFIELD, ILLINOIS.

## WIRE-STRETCHER.

934,387.

Specification of Letters Patent. Patented Sept. 14, 1909.

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*To all whom it may concern:*

Be it known that we, HENRY L. BRADBURY and ORIN A. GRUBB, citizens of the United States, residing at Fairfield, in the county of Wayne and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in wire stretchers for stretching wire fencing and performing analagous operations.

The object of the invention is to provide a device of this character which will be simple in construction so that it may be produced at a small cost and will be strong and durable and which will be powerful and effective in operation.

With the above and other objects in view, the invention consists of the novel features of construction and the combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the improved stretcher showing it in use for stretching wire fencing, a part of one of the dogs being broken away and in section to illustrate the gripping action of the same; Fig. 2 is a section taken on the plane indicated by the line 2—2 in Fig. 1; and Fig. 3 is a detail perspective of one of the dogs and the parts which co-act with it.

The invention comprises a body 1 preferably in the form of a rod adapted to have one of its ends suitably anchored or connected to the object to be stretched. As illustrated, one end of said rod is provided with an eye 2 carrying a chain or the like 3 which is passed about a fence post P and has a hook 4 at its free end for engagement with the eye. While this is the preferred manner of anchoring the rod 1, it will be understood that it may be otherwise secured to any stationary support.

Mounted to travel longitudinally upon the rod 1 is a mechanism which is attached to the fence to be stretched or any other load to be moved by the stretcher. This mechanism comprises an oscillatory lever 5 loosely mounted for rocking and sliding movement on the rod and carrying two links 6, 7 which latter in turn carry dogs 8, 9 for engagement with the rod 1. The lever 5 is constructed with an open portion at one end formed by two spaced side portions or plates 10, 11 between

which the rod extends. Said rod is held in the central portion of the open end of the lever by means of two transverse stops 12, 13 in the form of pins or bolts which serve to space apart and unite the plates 10, 11, as clearly shown in Fig. 2 of the drawings. The stop pin 13 is in the form of an eye bolt and arranged upon it is a U-shaped link 14 carrying a chain or the like 15 adapted to be attached to the load. As illustrated in Fig. 1, the chain 15 has a hook 16 at its free end for connection with a clamp C on the wire fencing F which is to be stretched, but it will be understood that the chain 15 may be otherwise connected to a load or suitably anchored when the load or object to be stretched is attached to the bar 1.

Each of the dogs 8, 9 have enlarged inner ends formed with transverse circular openings 17 of greater diameter than that of the rod 1, whereby said dogs may rock to angular positions upon the rod 1 and effectively grip the same, as clearly shown in Fig. 1 of the drawings. When said dogs are disposed in planes at right angles to the longitudinal axis of the rod 1, they may slide freely on the latter but the instant they assume angular positions the diagonally opposite points of the edges of their openings will bite opposite points of the rod 1 to cause the dogs to effectively grip the rod. The reduced outer ends or shanks of the dogs 8, 9 are pivoted, as shown at 18, in the bifurcated ends of the links 6, 7, respectively. These links are of unequal length, as shown in Fig. 1, and they are disposed on opposite sides of the bar 1 substantially parallel therewith and are pivoted, as shown at 19, between the plates 10, 11 of the open end of the lever. The closed end of the lever is preferably shaped to provide a handle 20 so that it may be rocked or oscillated on the rod 1 to alternately actuate the dogs 8, 9. Leaf springs 21 are secured to the links 6, 7 and have their free ends bearing against the dogs 8, 9, whereby the latter are actuated to angular positions, as will be understood upon reference to Fig. 1. To permit the dogs to be readily retracted, that is, moved to positions at right angles to the longitudinal axis of the rod 1, cords or other flexible elements 22 are connected to eyes 23 upon the inner ends of said dogs. Said cords pass through the eye 24 of the eye bolt 13 and through a guide eye 25 upon the handle end of the lever, their free ex-



tremities being united to a hand pawl 26 whereby they may be readily drawn upon to retract or release the dogs.

The operation of the invention is as follows: Assuming the parts to be in the position shown in Fig. 1, when the handle 20 of the lever is swung in one direction, one of the dogs will remain in its angular position in biting engagement with the rod 1 to cause its link to serve as a fulcrum support for the lever while the lever will cause the link of the other dog to move it first to a retracted position and then longitudinally on the rod 1. When the lever is swung in the opposite direction, the last mentioned dog bites the rod in its new position while the first mentioned dog is shifted longitudinally on the rod to a new position. In this manner, the oscillation of the lever will cause the two dogs to be alternately moved longitudinally on the rod to cause the wire fence or other load to be moved in the direction of the anchor and consequently stretched. To permit the lever to work freely, an anti-friction roller 13<sup>a</sup> is provided upon the eye bolt 13 and between the plates 10, 11 of said lever, as shown in Fig. 2.

While the invention has been shown and described as applied to and especially adapted for stretching fence wires, wire fencing and the like, it will be understood that it may be used for analagous purposes and it will be further understood that various changes in the form, proportion, arrangement and details of construction may be resorted to without departing from the spirit and scope of the invention.

Having thus described the invention what is claimed is:

1. A device of the character described comprising a rod, an oscillatory lever movable longitudinally thereon, links pivoted to

the lever on opposite sides of the rod, spring pressed dogs pivoted on the free ends of said links and having openings to receive the rod, said openings being of greater diameter than the rod, whereby the dogs will bite the latter when moved to angular positions thereon, anchoring and load attaching means, one being connected to the rod and the other to the lever, and means for retracting the dogs, said means comprising guides and flexible elements arranged in the latter and connected to the free or inner ends of the dogs.

2. A device of the character described comprising a rod, an oscillatory lever having a handle at one end and spaced members at its other end, links pivoted between the spaced members of the lever and arranged on opposite sides of the rod, spring pressed dogs pivoted on the free ends of the links and adapted to slide upon and grip said rod, a transverse stop pin between the spaced members of the lever, an eye bolt passed adjacent to said transverse stop pin, the rod being arranged between the members of the lever and between said pin and bolt, whereby the lever may move longitudinally on the rod, an anti-friction roller upon the eye bolt between the spaced members of the lever and flexible elements connected to the dogs and passed through the eye of said bolt.

In testimony whereof we hereunto affix our signatures in the presence of two witnesses.

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Witnesses:

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