

C. H. RAINS.
WIRE STRETCHER.
APPLICATION FILED OCT. 17, 1912.

1,063,063.

Patented May 27, 1913.

Fig. 1

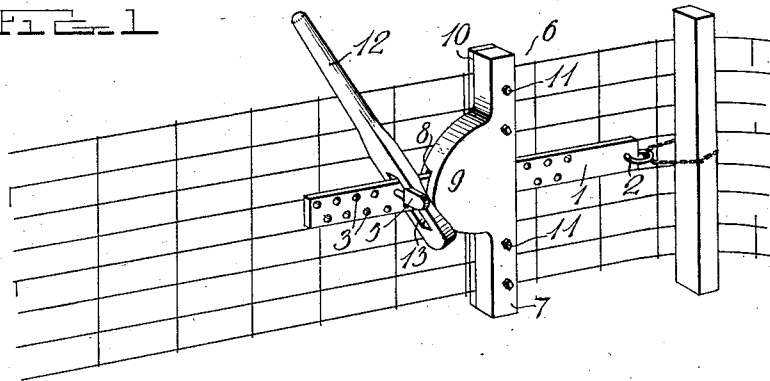


Fig. 4

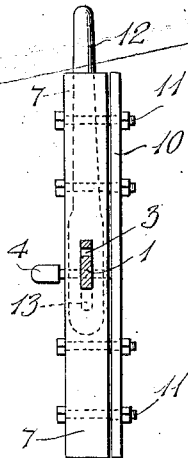


Fig. 2

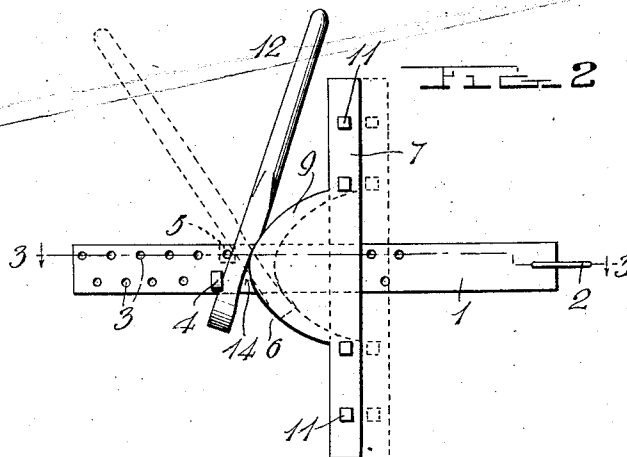
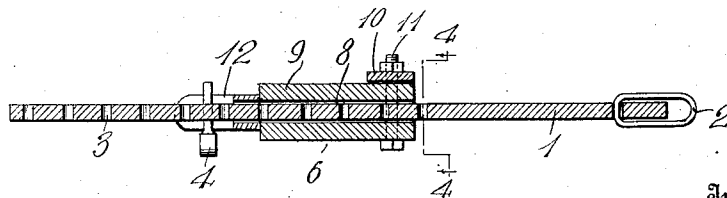


Fig. 3



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UNITED STATES PATENT OFFICE.

CHARLES H. RAINS, OF EICHORN, ILLINOIS.

WIRE-STRETCHER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES H. RAINS, a citizen of the United States, residing at Eichorn, in the county of Hardin and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers; and I do 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 improvements in wire stretchers.

One object of the invention is to provide a wire stretcher having an improved construction and arrangement of operating lever and cam, whereby the operator may release the former at any moment when he needs to otherwise employ his hands, and it will not fall out of place.

Another object is to provide a wire stretcher which will be simple, strong, durable and inexpensive in construction, efficient and reliable in operation and well adapted to the purpose for which it is designed.

With these and other objects in view, the invention consists of certain novel features of construction, and the combination and arrangement of parts as will be more fully described and claimed.

In the accompanying drawings; Figure 1 is a perspective view of my improved wire stretcher showing the same in operative position for stretching a fence; Fig. 2 is an enlarged side view of the stretcher showing in full and dotted lines the manner in which the stretching lever is operated; Fig. 3 is a horizontal section thereof taken on the line 3—3 of Fig. 2; Fig. 4 is a vertical cross section of the same taken on the line 4—4 of Fig. 3.

In the embodiment of the invention, I provide a fulcrum bar 1 which may be of any suitable length and which is provided at one end with a link 2 by means of which the same may be attached to a post or other fixed object toward which the wire or fence is stretched. In the fulcrum bar 1 near its opposite edges are upper and lower rows of holes 3 to receive pins 4 and 5. The holes 3 of one row are arranged opposite to the spaces between the holes of the other row whereby very short or close adjustments may be obtained.

Slidably mounted on the fulcrum bar 1

is a fence or wire clamping mechanism 6 comprising a main vertically disposed clamping bar 7 having therein midway between its ends a transverse rectangular passage 8 through which the bar 1 passes loosely. On the inner side of the bar 7 is a semi-elliptical shaped lever engaging cam 9 through which the rectangular passage 8 also extends and through which the fulcrum bar 1 also passes. Along one side of the bar 7 is a plate 10 which is secured to the bar 7 by bolts 11 and between which and said bar is adapted to be firmly clamped or gripped the wire or fence to be stretched.

Slidably and loosely mounted on the fulcrum bar 1 is a stretching lever 12 in the lower end of which is formed a slot 13 through which the fulcrum bar 1 passes. The slot 13 is of considerably greater length than the width of the fulcrum bar 1 to permit the lever to be freely rocked on said bar in the operation of stretching the fence. The corners of the ends of the slot 13 are beveled or rounded to prevent the same from cutting into the edges of the fulcrum bar should said corners be brought into forcible engagement with the latter. The inner edge of the lower end of the lever 12 is preferably recessed to a slight extent as shown at 14 to form a seat for the rounded face of the cam 9 against which the lever bears.

In the operation of the device the link 2 on the fulcrum bar 1 is firmly secured to a post or other object and the clamping mechanism 6 securely fastened to the fence or wire to be stretched. When thus arranged one of the pins 4 or 5 is engaged with the pin hole 3 which is nearest to the stretching lever, said pin thus forming a fulcrum for the lever 12 upon which the latter is rocked in the proper direction for forcing the clamping mechanism toward the post or other support to which the stretching bar 1 is attached thereupon stretching the fence as far as possible by this movement of the lever. After the clamping mechanism has been thus shifted and the fence stretched and while the lever is in position, the other pin is engaged with the pin hole nearest the lever in the other row of holes, whereupon the lever is swung in the opposite direction using the last pin as a fulcrum while its recessed edge 14 rocks over the nose of the cam 9 as clearly indicated in full and dotted lines in Fig. 2 of the drawing. This oper-

ation of the lever and shifting of the pins 4 and 5 to the successive pin holes is repeated until the wire or fence has been stretched to the proper tension.

5 During the operation of stretching a fence with this improved device, if an occasion should arise where an operator needs the use of both hands it is quite possible for him to let go of the lever 12. If the latter be
10 then positioned so that he may insert both pins 4 and 5, the lever stands as seen in Fig. 5; but if it should so happen that the fence is under considerable tension and the lever for an instant stands vertical, if he releases
15 his grip thereon it will simply return to the dotted position in this view. This possibility follows from the fact that the extremity or nose of the cam 9 is rounded on less than a circle, the corresponding edge
20 of the lever 12 is recessed as at 14, and the slots through the cam and lever are of such shape that the former must slide on the bar 1, while the lever must slide but may rock.

25 From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion

and the minor details of construction may 30 be resorted to without departing from the principle or sacrificing any of the advantages of the invention as claimed.

Having thus described my invention, what I claim is: 35

In a wire stretcher, the combination with a fulcrum bar having two rows of holes disposed through it in staggered relation to each other, and means for connecting it with a fixed object; of a clamping mechanism including a bar at right angles to said fulcrum bar and provided at its mid-length with a laterally projecting cam, the bar and the cam being pierced with a slot for sliding engagement with the fulcrum bar, a pair of 40 pins for insertion in said holes, and a lever having a slot adapted to loosely embrace said fulcrum bar so that the lever may rock thereon, one of its edges being recessed for engagement with the nose of said cam. 45 50

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES H. RAINS.

Witnesses:

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