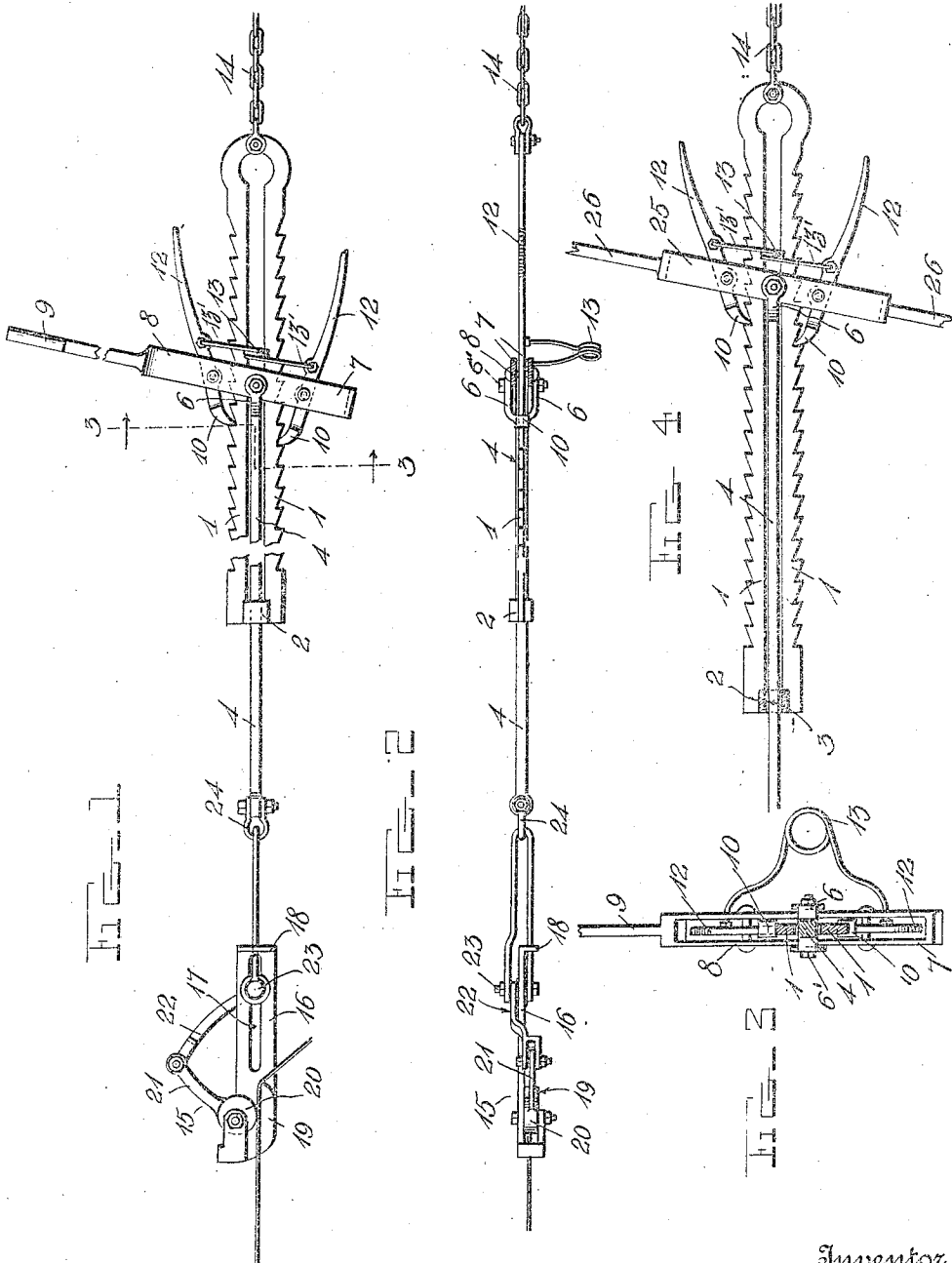


J. R. WADE.
WIRE STRETCHER.

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938,029.

Patented Oct. 26, 1909.



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UNITED STATES PATENT OFFICE.

JAMES R. WADE, OF MILLFIELD, OHIO.

WIRE-STRETCHER.

938,029.

Specification of Letters Patent.

Patented Oct. 26, 1909.

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To all whom it may concern:

Be it known that I, JAMES R. WADE, a citizen of the United States, residing at Millfield, in the county of Athens and State of Ohio, 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.

The object of the invention is to provide a wire stretcher which will be simple, strong and durable in construction, efficient and reliable in operation, and well adapted to the purpose for which it is designed, means being provided whereby the stretcher may be readily attached to a post or other fixed object and quickly and firmly connected with the wire to be stretched.

With these objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and particularly pointed out in the appended claim.

In the accompanying drawing, Figure 1 is a side view of the wire stretcher, showing the same in position for use; Fig. 2 is a plan view of the stretcher showing the operating lever in section; Fig. 3 is a vertical sectional view taken immediately in front of the pawls and operating lever; and Fig. 4 is a side view of the stretcher showing a modified form of operating lever.

Referring more particularly to the drawings, 1 denotes a pair of rack bars, which are spaced apart and arranged parallel with each other and are integrally connected together at their opposite ends. The teeth of the rack bars are formed on the outer edges thereof and project outwardly therefrom. The forward end of the bars 1 are connected together by an integrally formed neck, 2, in which is arranged a longitudinally disposed rectangular passage, 3, through which is adapted to work a rectangular stretching bar, 4, said bar being adapted to slide between the parallel rack bars, which, together with the neck, 2, serve to hold and guide said stretching bar in an operative position.

The inner end of the stretching bar 4 is bifurcated or provided with rearwardly projecting apertured attaching ears or lugs, 6,

between which is pivotally connected the lower slotted end, 7, of an operating lever, 8, on the upper or outer end of which is formed a handle, 9, by means of which the lever is rocked back and forth on its pivoted connection with the apertured lugs, 6, of the stretching bar. The rack bars 1 project through the slotted end, 7, of the lever and in said slotted end 7 adjacent to each toothed edge of the rack bars is pivotally mounted an operating pawl, 10, one end of which is extended rearwardly to form a handle, 12, by means of which the pawls 10 are disengaged from the teeth of the rack bar. The pawls 10 are normally held in engagement with the teeth of the rack bars by means of a coiled spring, 13, having a pair of arms 13' which project laterally from the side of the stretcher, and one of said arms pivotally connected with one of the pawls, 10, and the other arm is pivotally connected with the other pawl, 10, between the pivotal connection of said pawls and their handles. To the rear end of the rack bars is connected an anchor chain 14, by means of which said ends of the rack bars are securely connected to a post, tree or other rigid support.

To the forward end of the stretching bar is connected a suitable wire clamp or grip, 15, which is adapted to be quickly and firmly engaged with the wire to be stretched. The clamp 15 is here shown as consisting of a base plate, 16, having formed therein a longitudinally disposed guide slot, 17, and on its inner end is formed a guide eye, 18. On the outer end of the base plate, 16, adjacent to one edge of the same is formed a laterally projecting wire clamping plate, 19, with which is adapted to be engaged a cam-shaped wire grip, 20, which is eccentrically mounted on the forward end of the plate, as shown and is adapted to co-act with the plate, 19, to firmly clamp and grip the wire to be stretched. The cam grip 20 is provided with an integrally formed operating handle, 21, to the free end of which is pivotally connected the inner end of an operating bar, 22, the opposite end of which is pivotally connected to a bolt 23, which is slidably mounted in the slot, 17, of the base plate, and to said bolt is pivotally connected one end of a loop-shaped link, 24, the opposite end of which is loosely connected to the forward end of the stretching bar, whereby when the latter is operated to stretch the wire, the eccentrically mounted cam-shaped wire grip

will be drawn down into firm engagement with the wire to clamp the same against the plate, 19.

In Fig. 4 of the drawing is shown a slightly modified form of operating lever, 25, said lever being shown in this instance in a double form, being provided with oppositely projecting operating handles, 26, whereby the same may be manipulated by two persons when the stretcher is employed in connection with very heavy grades of wire.

In operation, the anchor chain is secured to a post or other fixed support, after which the clamp or wire grip 15 is engaged with the wire to be stretched, the stretching bar having been previously drawn out from between the rack bars to its extended position. The operating lever is now rocked backwardly and forwardly on its pivotal connection with the inner end of the stretching bar, thereby engaging first one and then the other of the pawls with the teeth on the opposite edges of the rack bars, thus drawing the stretching bar inwardly in a step-by-step movement, thereby stretching the wire to the desired extent and holding the same while being stapled or otherwise secured to the fence post.

Having thus fully described my invention, what I claim as new and desire to secure by Letters-Patent, is:

A wire stretcher comprising a pair of

spaced apart parallel toothed bars with an integral neck recessed in their forward ends and provided with an opening therein, a stretching bar slidably movable in said opening of the neck and in the space between the bars, said stretching bar having apertured ears at its rear end which extend outwardly beyond the space of the bars, a slotted lever interposed between the toothed bars and apertured ears of the stretching bar, a pivot bolt inserted through said apertured ears, and through the lever and also through the space between the bars, so as to permit of the stretching bar having longitudinal and vertical play in the space of the toothed bars, pawls having operating arms arranged above and below the toothed bars and pivoted to the lever, said pawls being adapted to alternately engage the teeth of the bars, when operated by the lever, a spring having a central coil and provided with a pair of oppositely disposed projecting arms which extend above and below the toothed bars, and said arms having their terminals pivoted to the operating arms of said pawls, substantially as specified.

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

JAMES R. WADE.

Witnesses:

O. C. HOWARD,
ROBERT LOVE.