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H. D. KREITER.

WIRE STRETCHER.

APPLICATION FILED NOV. 5, 1903.

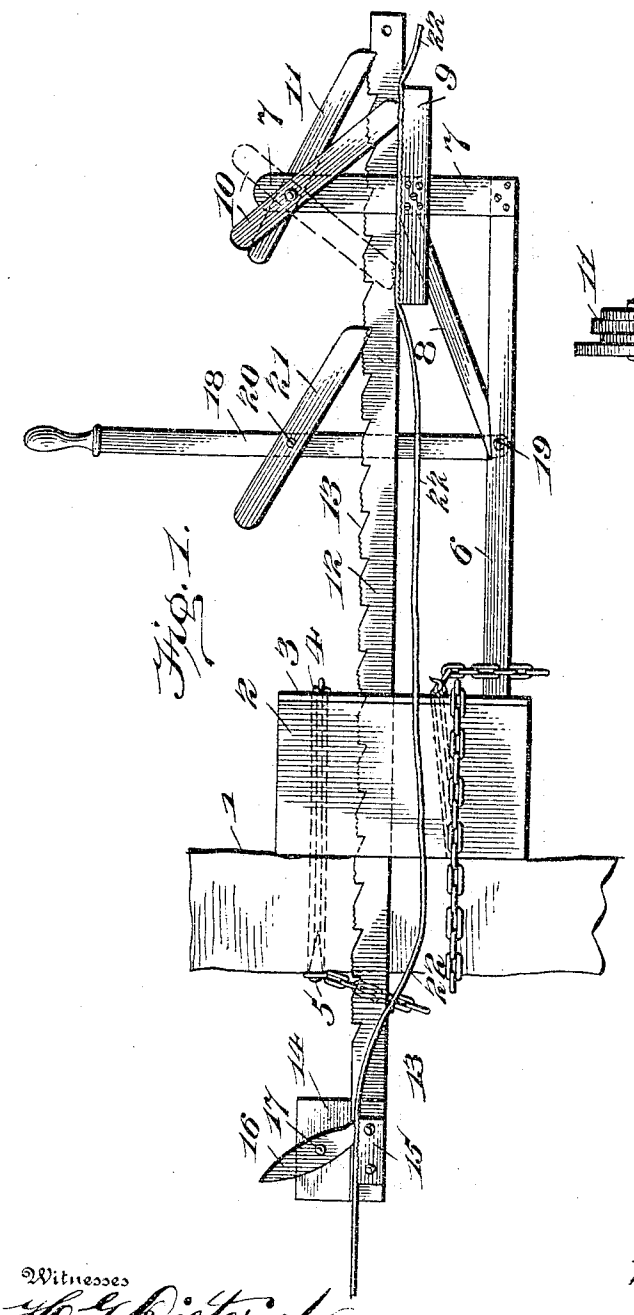

Fig. 1.

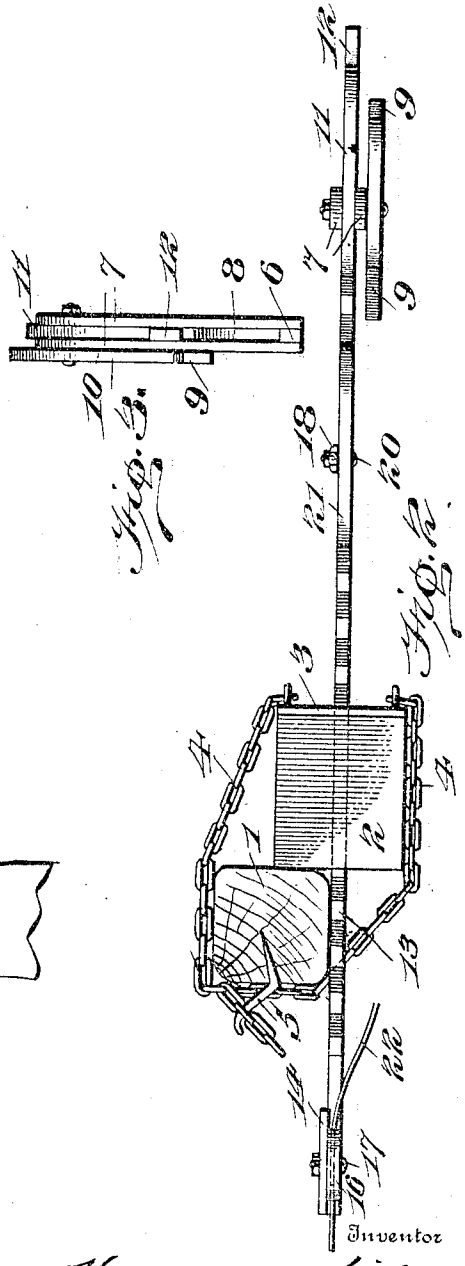

Fig. 3.

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

HENRY D. KREITER, OF EPHRATA, PENNSYLVANIA.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 781,664, dated February 7, 1905.

Application filed November 5, 1903. Serial No. 179,967.

To all whom it may concern:

Be it known that I, HENRY D. KREITER, a citizen of the United States, residing at Ephrata, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to improvements in wire-stretching devices.

The object of my invention is to provide a wire-stretcher of convenient size which shall be easier to operate and give better results than wire-stretchers have heretofore done.

A further object of my invention is to provide means whereby the two ends of a broken wire may be readily brought together for joining.

The novelty in my invention rests chiefly in the simplicity of its parts and their perfect cooperation.

By my improved device wire of any size or shape can be operated on, and if for any reason it is desired to further stretch the wire the operation of the stretcher may be repeated indefinitely without additional adjustment.

For attaching my improved wire-stretcher to the post where the wire is to be stretched a chain is provided, which is properly secured to a suitable part of the device. This chain is furnished with suitable catches, by which the wire-stretcher is firmly held in the proper position.

In order that my invention may be clearly understood, reference will be had to the accompanying drawings, in which like reference-numerals are used to indicate like parts, and in which—

Figure 1 is a side elevation of my improved wire-stretcher shown mounted on a post in position to be operated. Fig. 2 is a plan view of the same, and Fig. 3 is a detail view of the auxiliary ratchet mechanism.

Referring to the drawings, 1 represents the fence-post; 2, a block of wood having a metal plate 3 secured to one of its faces. A chain 4, bolted to the metal plate 3, serves to fasten the block to the post 1 by means of a spike and hook-coupling 5, as clearly shown in Fig. 2 of the drawings. The block 2 has firmly secured to its lower edge a rod or bar 6 of some metal, preferably iron. At the free end of said bar 6 uprights 7 are erected and rigidly supported by a link 8. A plate 9 is also provided, which is furnished with a serrated upper surface and is riveted firmly to uprights 7 in horizontal position. At the upper end of uprights 7 two pawls or dogs 10 and 11 are pivoted, dog 11 being between uprights 7. Dog 10 has its lower end serrated and coöperates with the horizontal plate 9 to grip the wire, which passes between them. Normally the serrated dog 10 serves only as an auxiliary stop when the wire slips through the primary stop device; but when it is desired to hold one end of a broken wire while the other end is stretched to meet it for joining the dog 10 may be turned around to occupy the position shown in dotted lines, in which position (clearly shown in Fig. 1) it serves to resist a strain from left to right.

The primary wire-gripping mechanism consists in the following device: A rack-bar 12 passes through a guideway in block 2 and metal plate 3 and between the uprights 7. The teeth 13 of rack-bar 12 are engaged by dog 11. On the end of rack-bar 12 is mounted a large plate 14 and a smaller plate 15. Plate 15 has its upper surface serrated. A serrated dog 16 is pivoted to plate 14 by a rivet 17 and coöperates with the serrated surface of plate 15 in gripping the wire to be stretched. In order to operate the primary stretching mechanism, a hand-lever 18 is pivoted at 19 to bar 6 and has mounted upon it at 20 a suitable ratchet 21, which is adapted to engage the teeth 13 of rack-bar 12.

The operation of my improved wire-stretcher is as follows: When the block 2 has been firmly secured to the fence-post 1, the wire 22 is set in position between dog 16 and plate 15 and dog 10 and plate 9. The hand-lever 18 is then operated, and through the engagement of dog 21 with rack-bar 12 the latter is caused to move from left to right. When hand-lever 18 reaches the end of its stroke and begins to return, the rack-bar 12 will be held in its shifted position by the engagement

of dog 11 with the teeth 13 thereon. Dog 10 and plate 9 grip the wire as it is stretched and hold it while a new grip is obtained by the primary gripping device. This operation is repeated until the desired tension on the wire 22 is obtained. In the case of pulling together the two ends of a broken wire the operation is the same, with the exception that dog 10 is reversed and holds one end of the wire in position while the other end is stretched to meet it.

Having thus described the construction and operation of my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In a wire-stretching device, the combination with a block, a metal plate secured to one face of said block, chains secured to said metal plate, and coupling means for said chains; of a rod secured to said metal plate, an upright at the end of said rod, means for holding and stretching the wire and a dog pivoted to said upright for retaining said holding means in its shifted position.

2. In a wire-stretching device, the combination with a block, a metal plate on one face of said block, a chain secured to said metal plate, and coupling means for said chain, of a rack-bar passing through said block and plate, wire-gripping means on said rack-bar, a horizontal rod mounted upon the metal plate, uprights at one end of said bar, operating-lever for the rack-bar pivoted to said horizontal rod, and a detent on said upright for holding said rack-bar in shifted position.

3. In a wire-stretching device, the combination with a block, a metal plate on one face of said block, a chain secured to said metal plate, and coupling means for said chain, of a rack-bar passing through said block and plate, wire-gripping means on said rack-bar, a horizontal rod mounted upon the metal plate, uprights at one end of said bar, operating-lever for the rack-bar pivoted to said horizontal rod, a detent on said upright for holding said rack-bar in shifted position, and an auxiliary wire-gripping device on said uprights.

4. In a wire-stretching device the combination with a block, a metal plate on one face of said block, a chain secured to said metal plate, and coupling means for said chain, of a rack-bar passing through said block and plate, wire-gripping means on said rack-bar, a horizontal rod mounted upon the metal plate, uprights at one end of said bar, operating-lever for the rack-bar pivoted to said horizontal rod, a detent on said upright for holding said rack-bar in shifted position, and a reversible auxiliary wire-gripping device on said uprights.

5. In a wire-stretching device, the combination with a block, a metal plate on one face of said block, a chain secured to said metal plate, and coupling means for said chain, of a rack-bar passing through said block and plate, wire-gripping means on said rack-bar, a horizontal rod mounted upon the metal plate, uprights at one end of said bar, operating-lever for the rack-bar pivoted to said horizontal rod, a detent on said upright for holding said rack-bar in shifted position, and an auxiliary wire-gripping device on said uprights, adapted to hold the wire in stretched position while the primary gripper is taking a new hold.

6. In a wire-stretching device, the combination of a block, metal plate and a horizontal rod, and means for fastening same to a fence-post, with a rack-bar, wire-gripping device on said rack-bar, operating-lever on said horizontal rod, a dog on said lever engaging said rack-bar, uprights at the end of said horizontal rod, reversible wire-gripping means on said uprights, and a dog between said uprights engaging said rack-bar.

The foregoing specification signed this 13th day of October, 1903.

HENRY D. KREITER.

In presence of—
GERTRUDE ROMIG,
MINERVA ROMIG.