No. 639,815. Patented Dec. 26, 1899.

W. S. KING.

WIRE STRETCHER.

(Application filed Sept. 15, 1899.)

(No Model.)

Fig. 1.

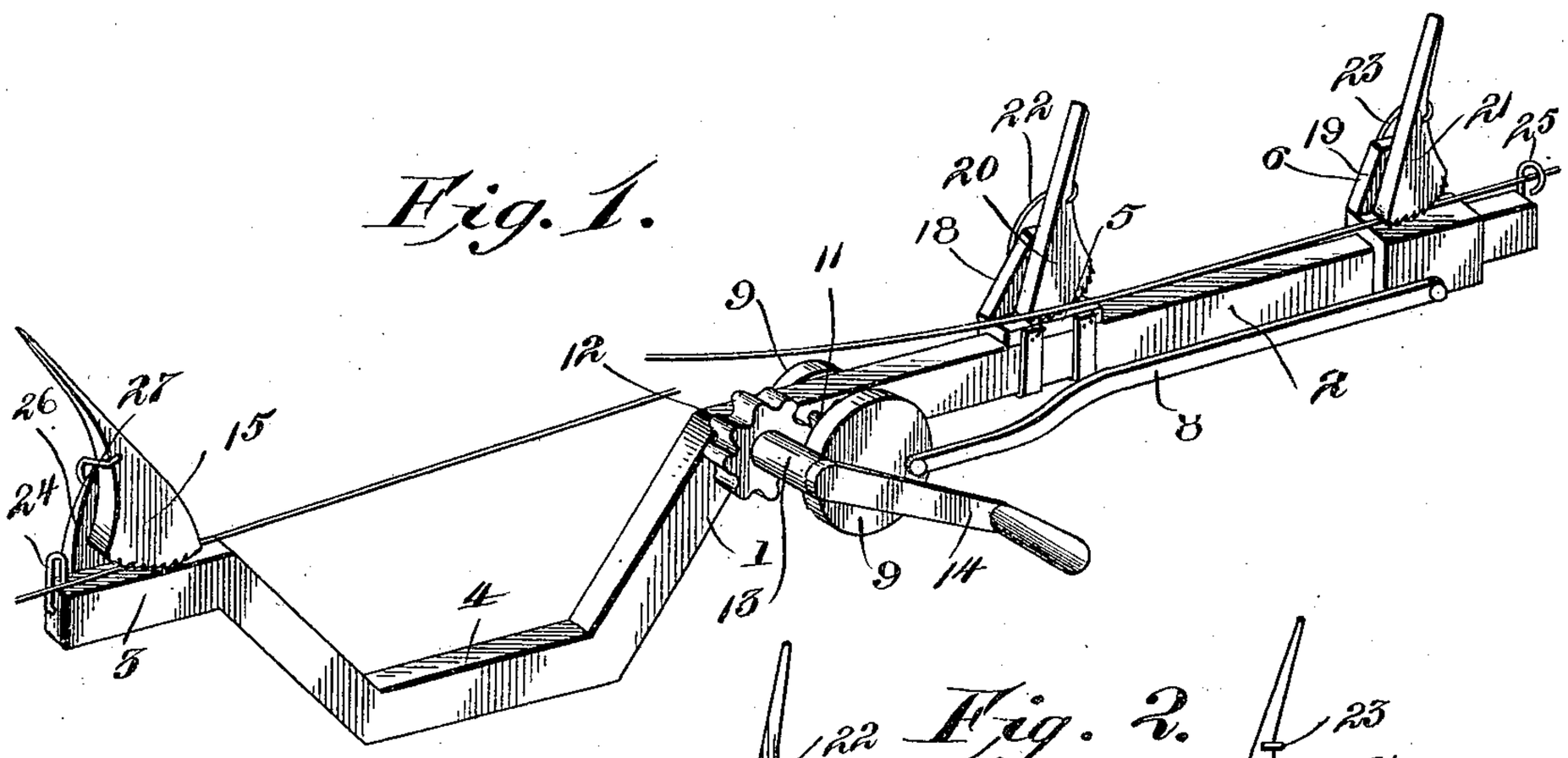


Fig. 2.

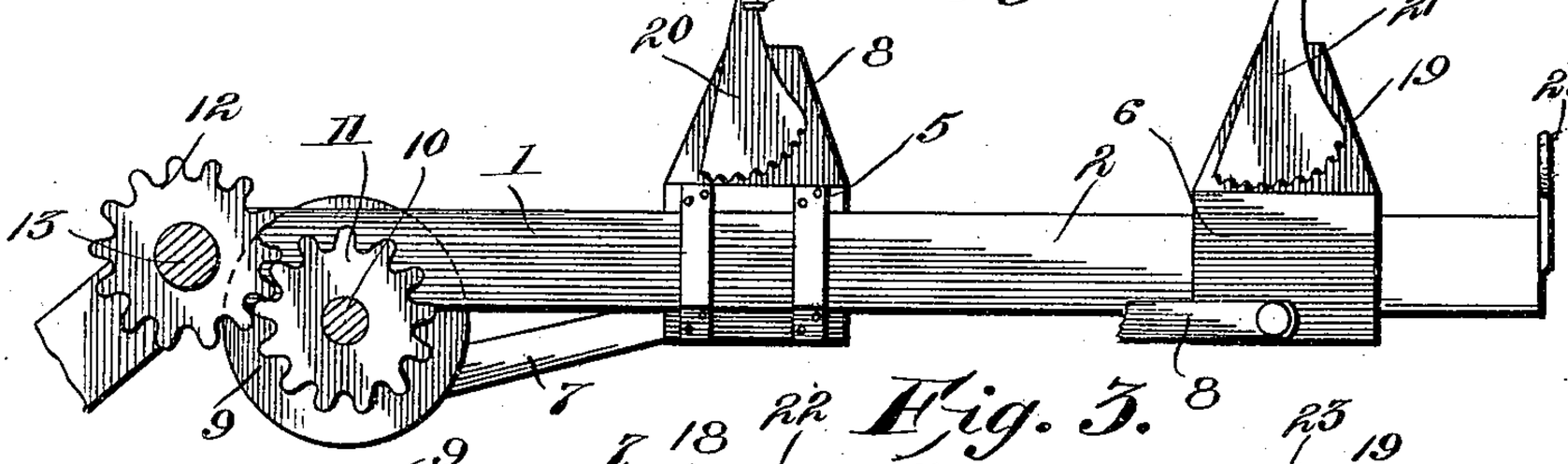


Fig. 3.

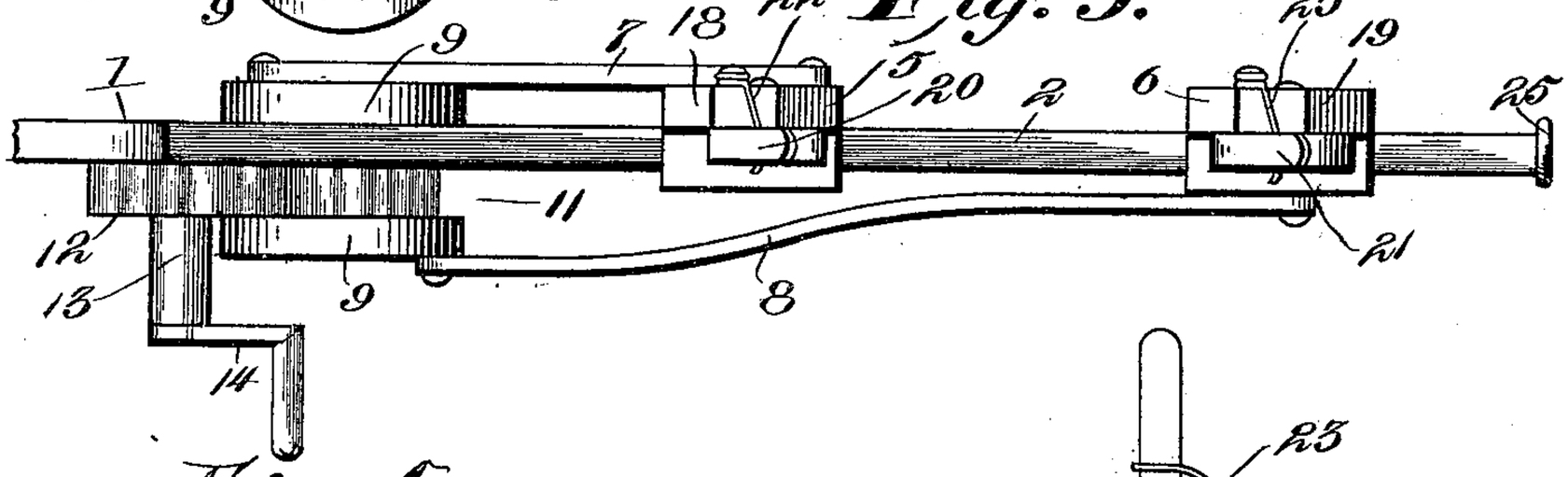


Fig. 4.

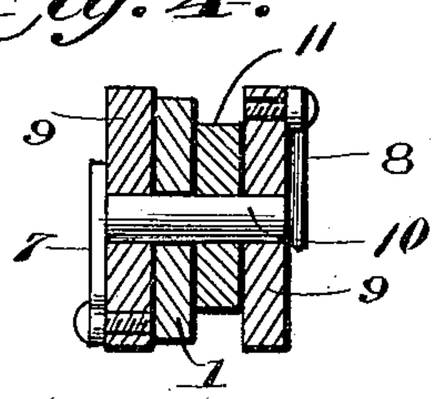
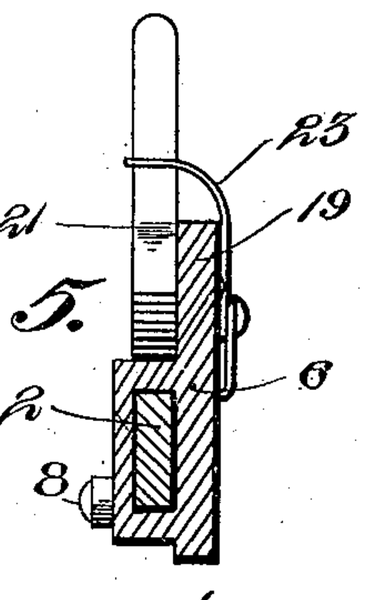


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM S. KING, OF RICHMOND, KENTUCKY, ASSIGNOR OF ONE-HALF TO RICHARD A. BARLOW, OF SAME PLACE.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 639,815, dated December 26, 1899.

Application filed September 15, 1899. Serial No. 730,612. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. KING, a citizen of the United States, residing at Richmond, in the county of Madison and State of Kentucky, have invented a new and useful Wire-Stretcher, of which the following is a specification.

The invention relates to improvements in wire-stretchers.

The object of the present invention is to improve the construction of wire-stretchers and to provide a simple, inexpensive, and efficient one designed for stretching telegraph, telephone, and fence wire and the like, capable of operating on wires of different sizes, and adapted to hold the same when stretched while it is being spliced.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a wire-stretcher constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of a portion of the same. Fig. 3 is a plan view of a portion of the wire-stretcher. Figs. 4 and 5 are transverse sectional views.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a longitudinal frame or bar having straight end portions 2 and 3 and provided with an offset or bent portion 4, having oppositely-inclined or angularly-disposed sides and a straight connecting portion and providing an open space to enable an operator to work to advantage in splicing a wire after the same has been stretched. The straight portion 2, which forms a guide, receives a pair of sliding clamps 5 and 6, which are connected by oppositely-disposed pitmen 7 and 8 with crank-disks or eccentrics 9 of a transverse shaft or spindle 10, which is operated by gearing, whereby the slides are drawn together for stretching a fence or other wire. The crank-disks are mounted on the spindle at opposite sides of the bar or frame, and the said spindle or shaft carries a pinion 11, which meshes with a pinion or gear 12 of an operating-shaft 13, which is provided with a crank-handle 14 or other suitable means for partially or entirely rotating the shaft 13 to produce the desired stretching action on a wire. When the gearing is operated, the sliding clamps are simultaneously moved in opposite directions and are adapted to engage one end of a wire, while the other end of the wire is held by the end clamp 15. This movement of the sliding clamps is adapted to stretch the adjacent end or portion of the wire successively, for as one of the sliding clamps moves in the direction of the end clamp 15 the other sliding clamp will be carried backward and will automatically obtain a fresh hold on the wire as soon as it reaches the limit of its backward movement and again starts forward.

The sliding clamps consist of casings or boxes rectangular in cross-section to conform to the configuration of the guiding portion of the frame or bar and have upwardly-extending flanges 18 and 19, upon which are pivotally mounted cam-levers 20 and 21. The cam-levers, which are provided with teeth for engaging the wire to be stretched, are held in such engagement by springs 22 and 23, secured to the levers and to the flanges or projecting portions of the boxes or casings.

The ends of the frame or bar are provided with guides 24 and 25, and the end clamp 15 consists of a spring-actuated hand-lever fulcrumed on a flange or extension 26 of the adjacent end of the bar or frame and provided with corrugations or teeth similar to the other levers for engaging the wire. The lever of the end clamp 15 is engaged by a spring 27, similar to those heretofore described, secured to the flange or projection 26 and engaging the lever above the pivotal point. The end clamp is adapted, after the two portions of a wire have been stretched, to engage one portion thereof, the other portion being held by the outer sliding clamp, and the said portions of the wire may then be readily spliced over the offset portion of the frame or bar. The guides at the ends of the frame or bar consist of eyes or hooks having openings to enable a wire to be readily introduced into and removed from them, and the wire-stretcher is capable of operating in any position. The ends of a broken wire or the end portions of

two wires may be stretched or brought together for splicing by placing one portion of the wire in the end clamp 15 and the other portion in the sliding clamps, and a continuous operation of the gearing will produce a continuous stretching of the wire, and the latter will be securely held by the clamps until spliced.

The invention has the following advantages: The device, which is simple and comparatively inexpensive in construction, possesses great strength and durability and is adapted for operating in any position on fence-wire, telegraph and telephone wire, and the like and is capable of engaging wires of different sizes.

The inner ends of the pitmen, which are located at opposite sides of the frame or bar, are connected with the crank-disks or eccentrics at diametrically opposite points, and the gearing is capable of exerting a great leverage on the wire, which is gradually and easily stretched to the desired tension. The spring-actuated clamping-levers are automatic in their operation and are capable of firmly gripping a wire and of effectually preventing the same from slipping through the clamps. The wire to be stretched is placed in the sliding clamps, and when the gearing is operated the wire will be continuously stretched by the simultaneous movement of the sliding clamps in opposite directions.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A wire-stretcher, comprising a frame or bar, sliding clamps mounted thereon and adapted to engage wires, a pair of crank-disks or eccentrics mounted on the frame and connected with each other, pitmen connecting the sliding clamps with the crank-disks or eccentrics, and means for operating the latter, substantially as described.

2. A wire-stretcher, comprising a frame, sliding clamps mounted thereon, crank-disks or eccentrics connected with each other, pitmen connecting the sliding clamps with the crank-disks or eccentrics, and gearing for operating the crank-disks or eccentrics, substantially as described.

3. A wire-stretcher, comprising a frame, sliding clamps mounted thereon, a shaft, crank-disks or eccentrics mounted on the shaft and connected with the sliding clamps, a pinion fixed to the said shaft, a gear-wheel meshing with the pinion, and a handle connected with the gear-wheel for operating the same, substantially as described.

4. A wire-stretcher, comprising a frame, sliding clamps mounted thereon, crank-disks or eccentrics located at opposite sides of the frame and connected with each other, pitmen extending from the crank-disks or eccentrics to the sliding clamp, a gear-wheel connected with the eccentrics, and a pinion or gear meshing with the said gear-wheel and provided with a handle, substantially as described.

5. A wire-stretcher, comprising a frame or bar, sliding clamps mounted thereon and each composed of a box or casing and a spring-actuated cam-lever, gearing mounted on the frame or bar, and eccentric connections between the gearing and the sliding boxes or casings, whereby the sliding clamps are simultaneously moved in opposite directions, substantially as described.

6. A wire-stretcher, comprising a frame, sliding clamps mounted on the same at one end thereof, gearing carried by the frame, eccentric connections between the gearing and the sliding clamps, and a clamp mounted on the other end of the frame, said frame having an offset portion or bend, substantially as described.

7. A wire-stretcher comprising a frame, a pair of sliding clamps mounted on the frame and arranged to reciprocate and adapted to automatically engage and release a fence-wire, whereby the same will be successively and continuously stretched, a shaft, crank or eccentric connections between the sliding clamps and the shaft, adapted to move the former simultaneously in opposite directions, and means for operating the shaft, substantially as described.

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

WILLIAM S. KING.

Witnesses:
L. T. WILSON,
H. G. WALLACE.