No. 620,529. Patented Feb. 28, 1899.

T. J. ANDRE.

WIRE STRETCHER.

(Application filed Nov. 11, 1898.)

(No Model.)

Fig. 1.

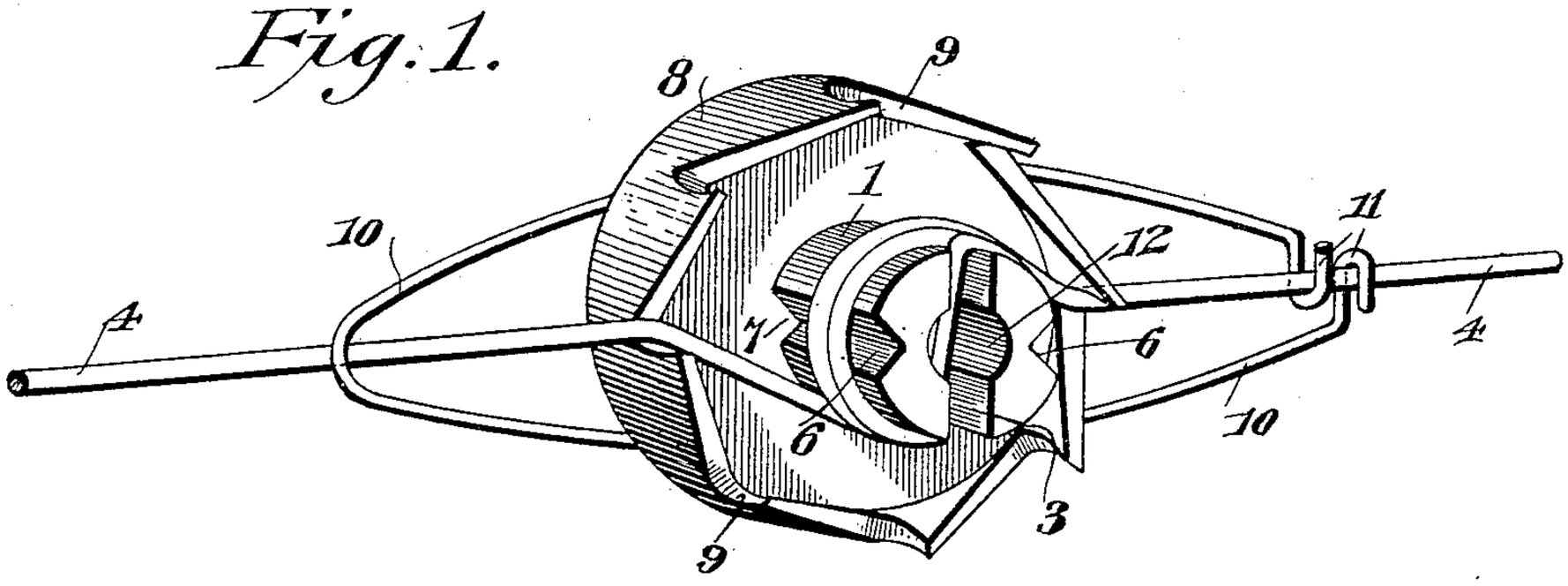


Fig. 5.

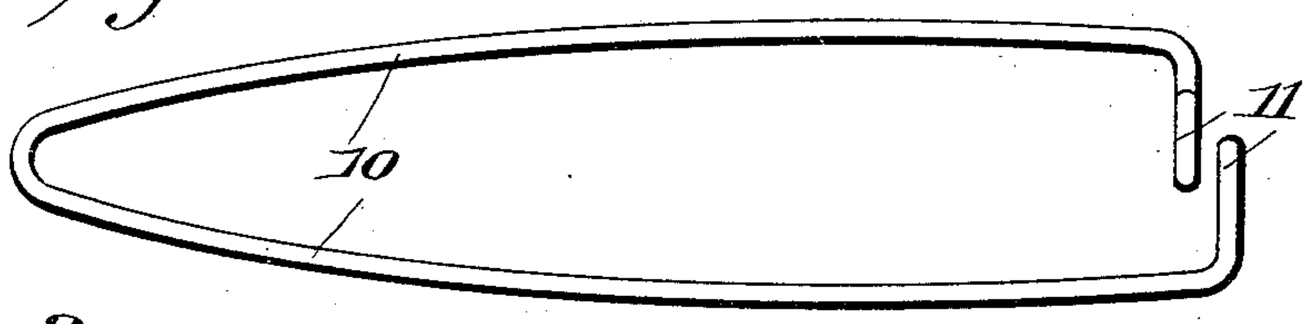


Fig. 3.

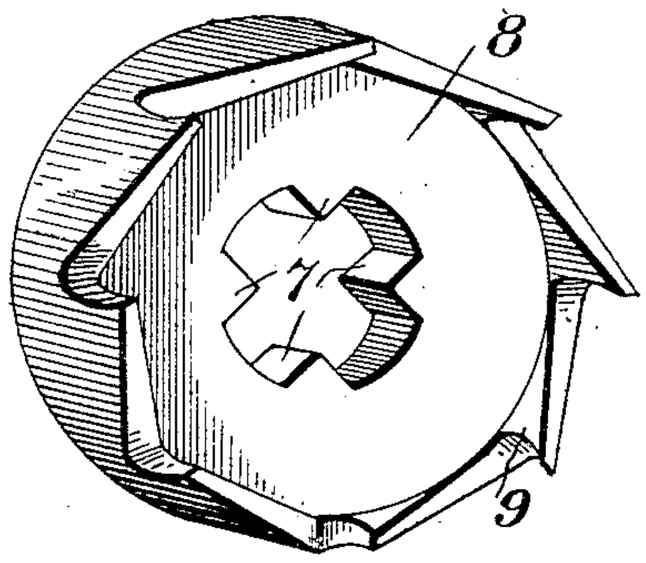


Fig. 4.

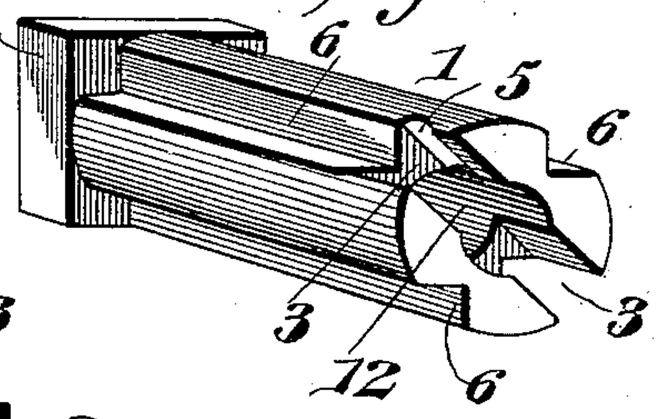
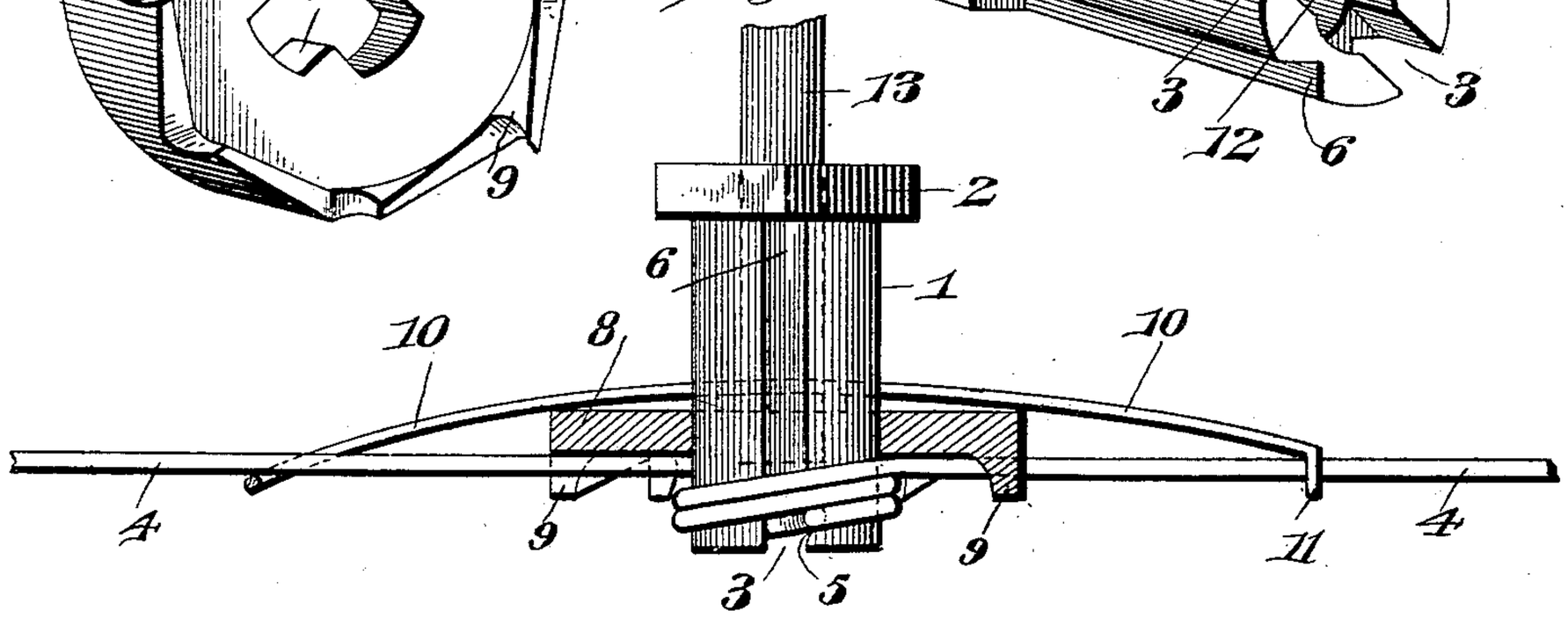


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS J. ANDRE, OF WAUSEON, OHIO.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 620,529, dated February 28, 1899.

Application filed November 11, 1898. Serial No. 696,152. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. ANDRE, a citizen of the United States, residing at Wauseon, in the county of Fulton and State of Ohio, 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 device adapted to be readily applied to a fence-wire at any point between two fence-posts and capable of enabling the same to be readily stretched and maintained at the desired tension.

The invention consists in the construction and novel combination and arrangement of parts, as 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 and shown applied to a fence-wire. Fig. 2 is a horizontal sectional view of the same. Fig. 3 is a detail perspective view of the ratchet-disk. Fig. 4 is a detail perspective view of the shaft. Fig. 5 is a detail view of the spring.

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

1 designates a shaft provided at one end with a wrench-receiving head 2 and having a slot 3 at its other end adapted to engage a fence-wire 4, and the shaft is recessed at opposite sides of the slot, at 5, to prevent the wire from slipping off the shaft and to enable it to be wound around the end thereof when the same is rotated. The sides of the shaft are provided with longitudinal grooves 6, V-shaped in cross-section and adapted to receive tapering projections 7 of a ratchet-wheel 8, whereby the latter is interlocked with the shaft and is adapted to move longitudinally thereof without rotating thereon.

The ratchet-wheel, which is provided at its periphery with ratchet-teeth 9, has a central opening to receive the shaft, and the tapering or triangular projections 7 extend inward toward the center of the opening. The periphery of the ratchet-disk is smooth, and the teeth 9 extend laterally from one of the faces of the wheel in the direction of the slot 3 of the shaft and are pressed toward the same by a spring 10, which retains the teeth in engagement with the fence-wire. When the shaft is rotated, it carries the ratchet-wheel with it, and as the fence-wire is wound around the slotted end of the shaft the ratchet-wheel moves inward on the same against the action of the spring, which has its tension automatically increased as the tension on the fence-wire increases.

The spring 10, which holds the ratchet wheel or disk in engagement with the fence-wire to prevent the shaft from moving backward, consists of an oblong loop open at one end and constructed of resilient material, such as spring-wire. The sides of the spring straddle the shaft, and their ends at the open end of the spring are bent inward and formed into hooks 11, which detachably engage the fence-wire, and the shaft by being interposed between the sides of the spring spreads the same slightly and holds the hooks securely in engagement with the fence-wire. The ratchet-teeth are provided with concave engaging portions which form hooks for engaging the fence-wire, and after the latter has been stretched the spring may be removed, as the hook-shaped teeth will prevent the fence-wire from becoming disengaged from the disk. The spring which engages the fence-wire at its ends bears against the back of the ratchet disk or wheel and effectually prevents the fence-wire from becoming accidentally disengaged from the same while said fence-wire is being stretched.

The shaft, which is provided with a longitudinal bore or opening 12, is adapted to receive a rod 13, designed for temporarily supporting the device while the shaft is being rotated. In manipulating the device the operator holds the rod in one hand to steady the wire-stretcher and rotates the shaft by means of an ordinary wrench or similar tool.

The invention has the following advantages: The wire-stretcher, which is simple and comparatively inexpensive in construction, is adapted to be readily applied to a fence-wire at any point between two fence-posts, and it is capable of being operated by

an ordinary wrench to take up the slack of a wire and to stretch the same to the desired tension. The device is applied to a fence-wire without cutting the same, and the spring which holds the wheel or disk against the fence-wire detachably engages the same and is readily placed in position.

Changes in the form, proportion, and minor details of construction 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 shaft adapted to receive a fence-wire, a ratchet-wheel carried by the shaft and provided with teeth arranged to engage the fence-wire, and a spring engaging the fence-wire and the ratchet-wheel and holding the former in the teeth of the latter, substantially as described.

2. A wire-stretcher comprising a shaft, a ratchet-wheel interlocked with the shaft and adapted to move longitudinally thereof and provided at one side with ratchet-teeth, and a spring bearing against the ratchet-wheel and designed to be connected with a fence-wire whereby the ratchet-wheel is held in engagement with the same, substantially as described.

3. A device of the class described comprising a shaft provided with a longitudinal bore to receive a supporting-rod and having a wrench-receiving head at one end and provided with exterior longitudinal grooves, and a ratchet-wheel arranged on the shaft, provided with projections to engage the said grooves and adapted to receive and hold a fence-wire, substantially as described.

4. A device of the class described comprising a shaft, a ratchet-wheel having teeth for engaging a fence-wire, and a spring extending longitudinally of the fence-wire and detachably connected with the same and holding the ratchet-wheel in engagement therewith, substantially as described.

5. A wire-stretcher comprising a shaft, a ratchet-wheel and a spring consisting of an oblong loop open at one end and provided thereat with means for engaging a fence-wire, substantially as described.

6. A device of the class described comprising a ratchet-wheel, a shaft, and a spring consisting of an oblong loop open at one end and having the terminals of its sides bent inward at the open end of the loop and provided with hooks for engaging a fence-wire, the sides of the loop being spread by the shaft to retain the hooks in their engagement with the wire, 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.

THOMAS J. ANDRE.

Witnesses:
H. H. HAM, Jr.,
F. C. EBERLY.