(No Model.) 2 Sheets—Sheet 1.

A. DAVISON.

WIRE STRETCHER.

No. 588,403. Patented Aug. 17, 1897.

Fig. 1.

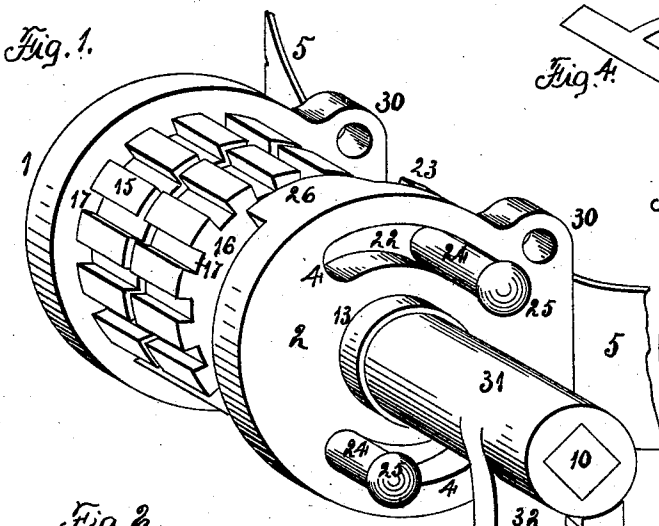


Fig. 4.

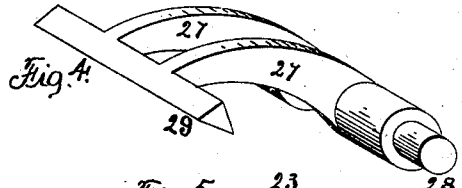


Fig. 5.

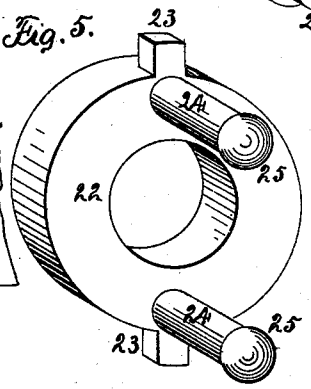
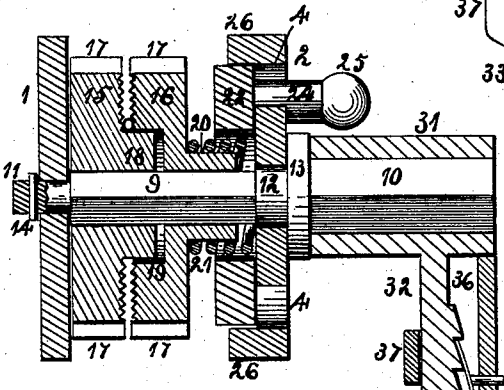


Fig. 2.



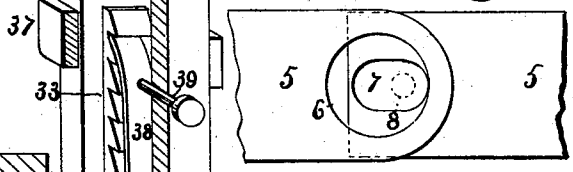
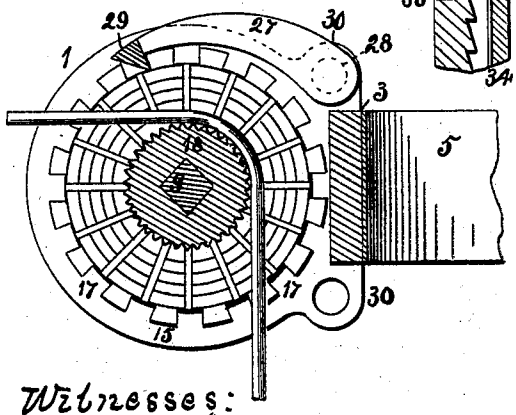


Fig. 6.

Fig. 3.



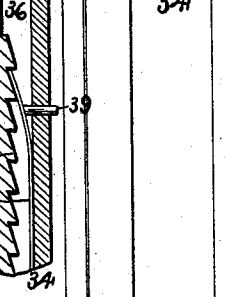
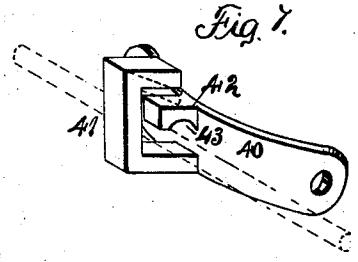
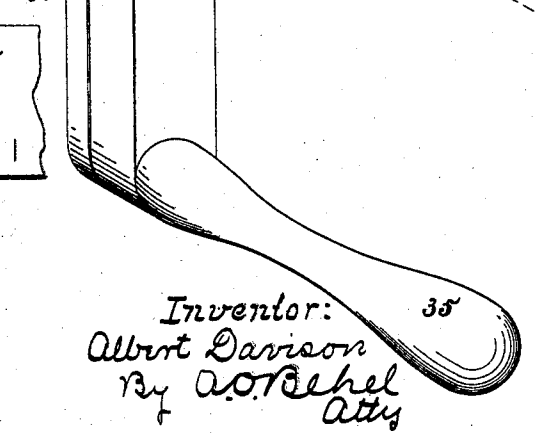


Fig. 7.





Witnesses:
Alice M. Sovereign
E. Behel.

Inventor:
Albert Davison
By A. O. Behel
Atty

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

A. DAVISON.

WIRE STRETCHER.

No. 588,403. Patented Aug. 17, 1897.

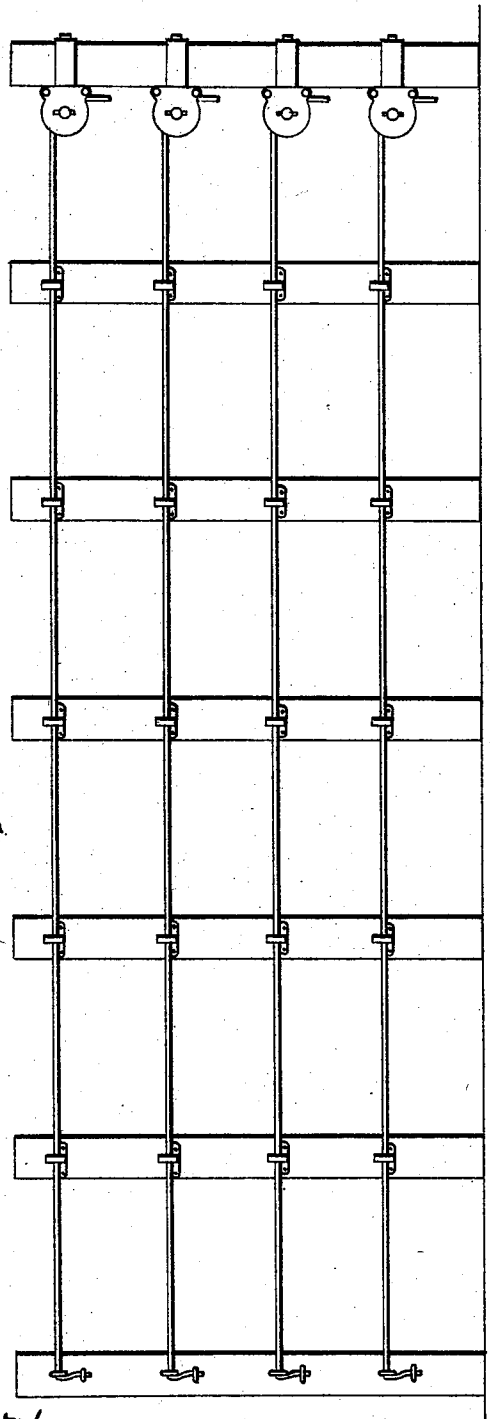


Fig. 8.

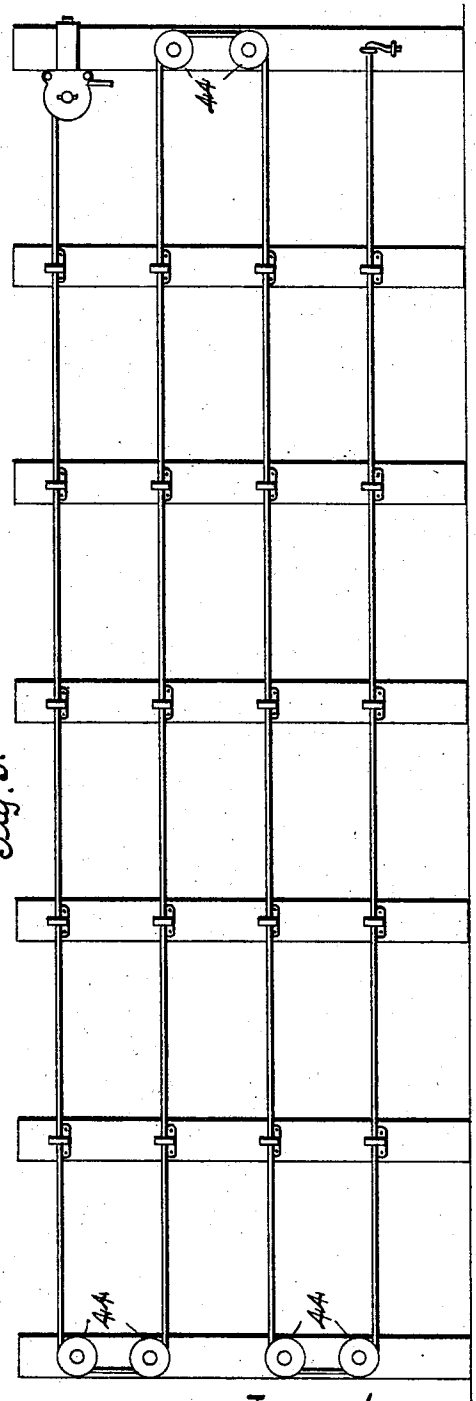


Fig. 9.

Witnesses:
Louis Clark.
E. Bekel.

Inventor:
Albert Davison
By A. O'Bekel
Atty.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ALBERT DAVISON, OF BELVIDERE, ILLINOIS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 588,403, dated August 17, 1897.

Application filed June 22, 1896. Serial No. 596,397. (No model.)

To all whom it may concern:

Be it known that I, ALBERT DAVISON, a citizen of the United States, residing at Belvidere, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in Wire-Stretchers, of which the following is a specification.

This invention relates to that class of wire-stretchers in which the stretcher is secured to a post and remains a fixture in order that the wire may be tightened when necessary.

In the accompanying drawings, Figure 1 is an isometrical representation of a wire-stretcher embodying my improvements, in which the holding-dog has been removed to more clearly show the parts. Fig. 2 is a vertical central section. Fig. 3 is a transverse central section between the serrated disks. Fig. 4 is an isometrical representation of the holding-dog. Fig. 5 is an isometrical representation of the friction-brake. Fig. 6 is an elevation of the connection of the ends of the band which connects the stretcher to a post. Fig. 7 is an isometrical representation of the wire-supporting device connected to the intermediate posts of the fence. Fig. 8 is a representation of a fence having a stretcher applied to each wire and the central shaft turned inward. Fig. 9 is a representation of a fence in which a continuous wire is employed.

The frame of my wire-stretcher consists of two ends 1 and 2, connected by a cross-piece 3. The ends have central openings, and the end 2 has two concentric slots 4. To the cross-piece is connected a band 5, adapted to pass around a fence-post, one end having a larger opening 6 and the other end a smaller opening.

A fastening device for the ends of the band is shown at Fig. 6, consisting of an eccentric portion 7, having a stud 8. This stud is passed through the smaller opening in one end of the band and riveted to the band, and the eccentric portion is located in the larger opening 6. The band may be tightened around the post by turning the eccentric, which will draw upon the end of the band having the opening 6.

A shaft supported by the ends has a central portion 9 and one end 10 of polygonal form. Its other end 11 is rounded, also the central portion 12. A collar 13 is located between the central rounded portion 12 and polygonal portion 10. A pin 14, passing through the rounded end 11, holds the shaft in position to be rotated in its connection with the ends of the frame.

Upon the central polygonal portion of the shaft are located two serrated-faced plates 15 and 16 and rotated thereby. Each plate has its edge provided with notches 17, and their meeting faces are serrated or roughened in any suitable manner. The plate 15 has a hub 18, its periphery grooved in its lengthwise direction. The plate 16 has a central recess 19 to receive the hub 18, and also has a hub 20, around which is placed a spiral spring 21, one end pressing against the outer face of the plate 16 and its other end against the inner face of the end 2, thereby holding the plates together in a yielding manner. A friction-brake is located between the end 2 and plate 16, and consists of a ring 22, having two projections 23, and two studs 24, extending from the outer face of the ring and are located one in each of the concentric slots 4. A knob 25 is placed on the end of each of the studs.

From the inner face of the plate 2 at its edge extend two cams 26, located opposite each other. By moving the studs in the concentric slots 4 the ring 22 will be oscillated, causing the projections to move against the cams, thereby forcing the ring 22 against the outer face of the plate 16, holding it against the plate 15.

A dog (shown at Fig. 4) is composed of two arms 27, supporting projections 28, and a cross-bar 29. The ends of the frame have perforated ears 30, and the dog is held in a pivotal manner by the projections 28 entering one pair of the ears, as shown at Fig. 3. The cross-bar 29 will engage the notches 17 of the plates 15 and 16, holding them from rotation in one direction.

A crank is employed to rotate the shaft carrying the serrated-faced plates, consisting of a tubular portion 31, fitted to receive the polygonal-shaped end 10 of the shaft and having an arm 32 extending at right angles thereto, having its outer face provided with a toothed rack 33. An extensible section 34 is located in contact with the arm 32, having a handle 35 at its end and having a lengthwise

groove 36 formed in its inner face. A loop 37, forming a part of the extensible section, surrounds the arm 32, forming a guide and holding the parts together. A flat spring 38 is securred to the inner face of the extensible section and located in the groove 36, its free end adapted to engage the teeth of the rack 33. A rod 39, having a knob, extends through an opening in the extensible section and connects with the flat spring 38, by means of which the spring may be held out of engagement with the toothed rack.

At Fig. 7 is shown a device for supporting the wires of a fence between its ends in order that the slack of the entire wire may be taken up, and consists of a band 40, having holes through which fastening devices are passed, securing it to a post. From its convex face extends a hook 41 and a projection 42, having its lower face recessed, as at 43. The fence-wire is passed into the hook and seated below the recess of the projection, and the hook is bent down, as shown in dotted line in Fig. 7, the recess serving to hold the wire from lateral movement when raised.

The stretcher is secured to a post, and the fence-wire being secured at one end its other end is passed between the serrated-faced plates, as shown at Fig. 3, and the force of the coiled spring will be sufficient to hold the wire between the plates, and by rotating the plates the wire is drawn up, and the dog will prevent its unwinding. The attendant by pressing down upon the wire in front of the stretcher while it is being stretched will hold the wire between the plates. The extensible section of the crank may be drawn out, thereby lengthening it and giving it greater leverage. The stretcher may be turned bottom side up, in which case the dog will be supported by the other pair of perforated ears.

At Fig. 9 a continuous wire is employed, being secured at one end and passing over rollers 44, its other end connected to the stretcher, and by this arrangement the entire wire of that section of fence may be stretched from one end.

I claim as my invention—

1. In a wire-stretcher, the combination of a frame, a rotary shaft supported thereby, and two serrated-faced plates supported by the shaft and rotated in unison thereby, one made yielding.

2. In a wire-stretcher, the combination of a frame, a rotatable shaft supported thereby, two serrated-faced plates supported by the shaft and rotated in unison thereby, one movable in the lengthwise direction of the shaft and a spring holding the movable plate against the other plate.

3. In a wire-stretcher, the combination of a frame, a rotatable shaft supported thereby, two serrated-faced plates supported by the shaft and rotated in unison thereby, one made yielding and a friction-brake supported by the frame and adapted to force the plates together.

4. In a wire-stretcher, the combination of a frame, a rotatable shaft supported thereby, two serrated-faced plates supported by the shaft and rotated in unison thereby, one made yielding and a crank for rotating the shaft having an extensible section.

5. A support for a fence-wire consisting of a band, a hook extending therefrom, a projection located within the hook having a grooved under face.

6. In a wire-stretcher, the combination of a frame, a rotary shaft supported thereby, two serrated-faced plates supported by the shaft and rotated in unison thereby, means for rotating the shaft, each plate having its periphery notched and a dog capable of engaging the notches preventing the rotation of the plates.

7. In a wire-stretcher, the combination of a frame, a rotary shaft supported thereby, two serrated-faced plates supported by the shaft and rotated thereby, and a crank for rotating the shaft provided with a toothed rack, an extensible section having a slidable connection with the crank supporting a spring adapted to engage the teeth of the rack.

ALBERT DAVISON.

Witnesses:
A. O. BEHEL,
E. BEHEL.