

No. 614,519.

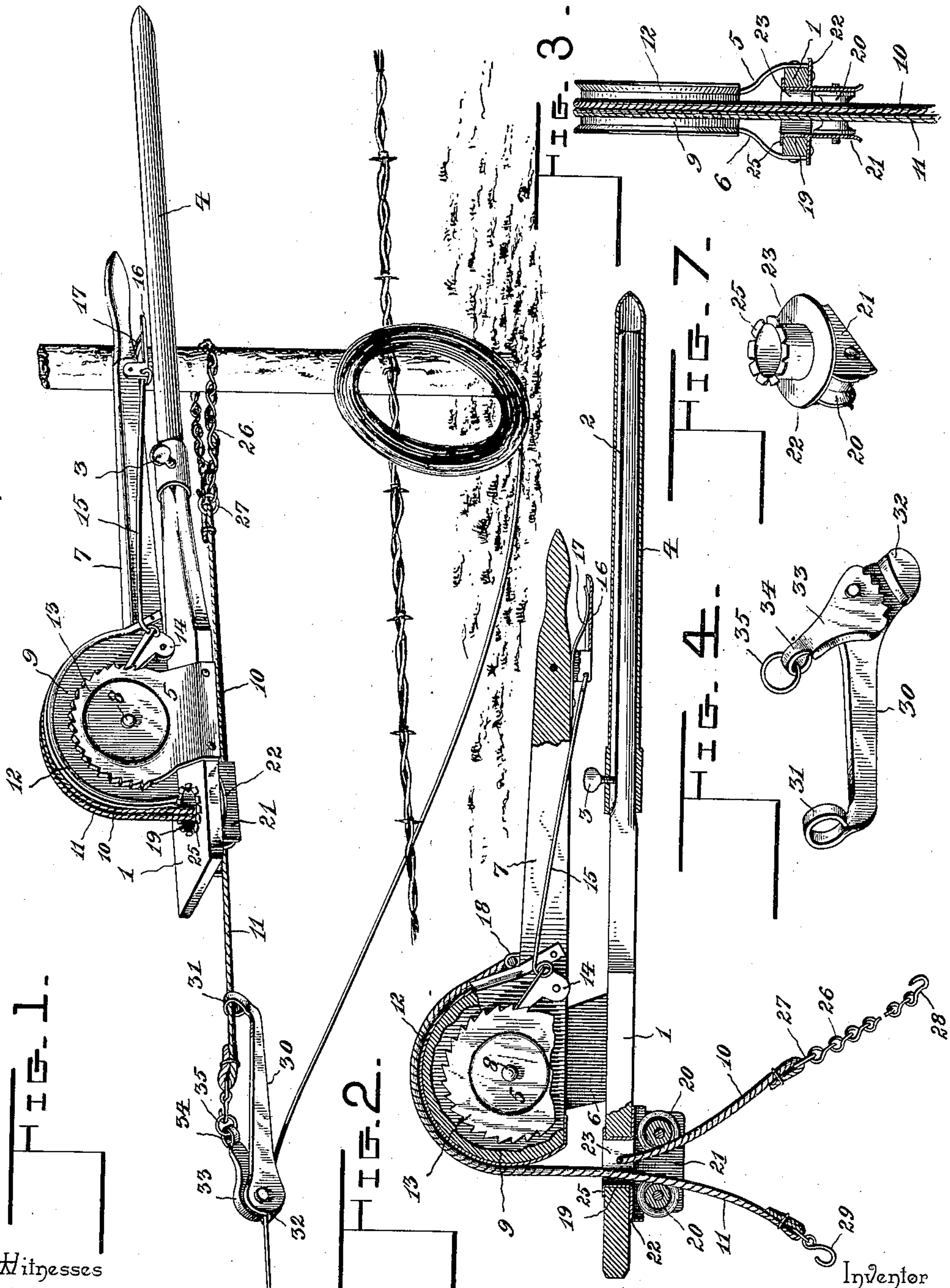
Patented Nov. 22, 1898.

W. F. TRAMM.
WIRE STRETCHER.

(Application filed June 24, 1898.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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J. F. Riley

By *his* Attorneys. *William F. Tramm,*

C. A. Snow & Co.

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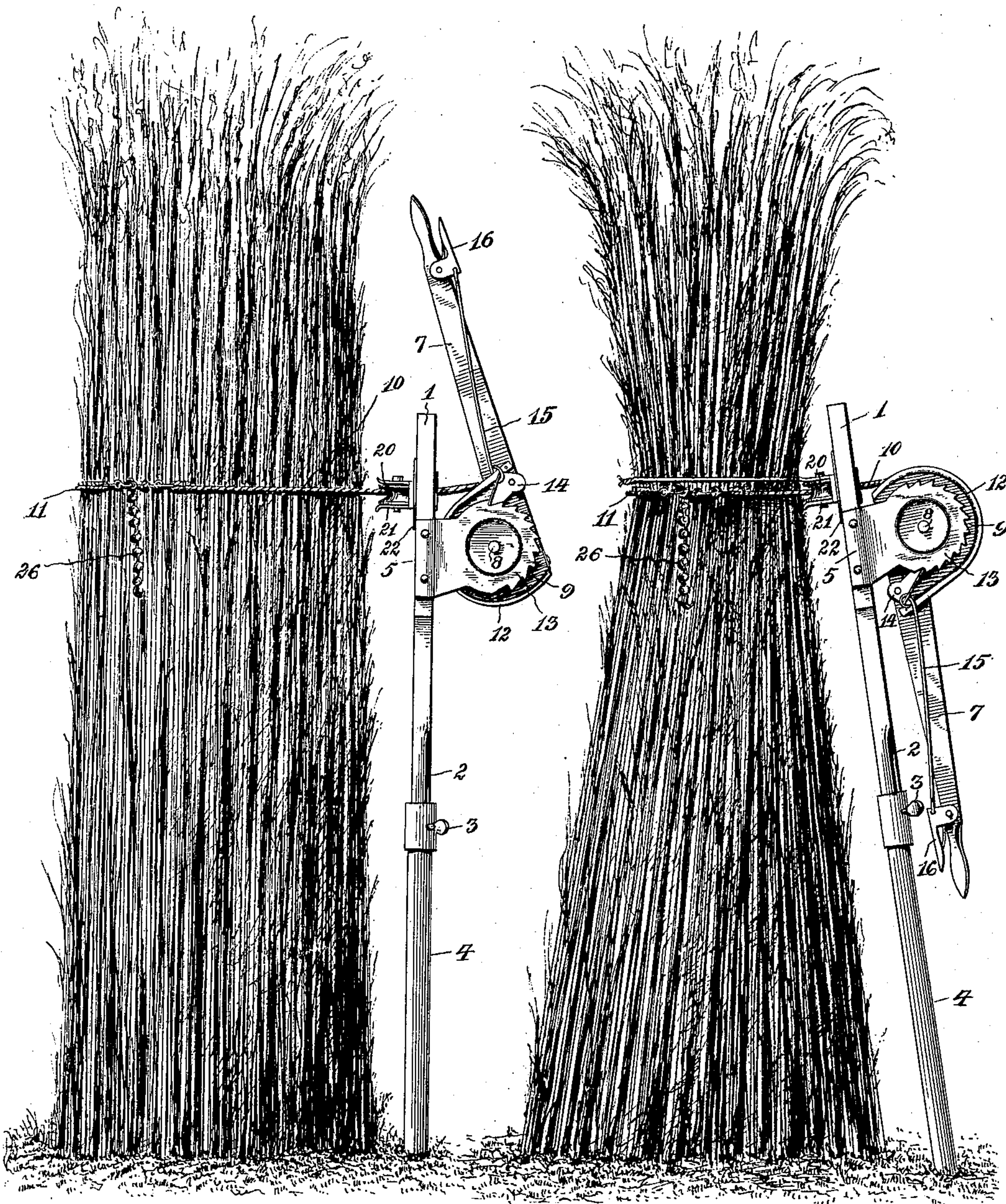


FIG. 5.

FIG. 6.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM F. TRAMM, OF BEECHER, ILLINOIS.

WIRE-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 614,519, dated November 22, 1898.

Application filed June 24, 1898. Serial No. 684,411. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. TRAMM, a citizen of the United States, residing at Beecher, in the county of Will and State of Illinois, have invented a new and useful Combined Wire-Stretcher and Fodder-Binder, of which the following is a specification.

The invention relates to improvements in wire-stretchers and fodder-binders.

10 The object of the present invention is to improve the construction of wire-stretchers and to provide a simple, inexpensive, and efficient device capable of readily stretching a fence-wire to the desired tension and of holding the same securely while the said wire is being stapled or otherwise fastened to a fence-post and adapted to be readily arranged for use as a fodder-binder.

20 A further object of the invention is to enable the device to be readily adjusted to permit fodder to be clamped and bound at the desired point.

25 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.

30 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-post and fence-wire. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is an enlarged detail perspective view of the clamp. Fig. 5 is an elevation showing the device arranged as a fodder-binder, the lever being elevated preparatory to clamping the fodder. Fig. 6 is a similar view showing the shock bound. Fig. 7 is a detail perspective view of the swiveled pulley-block.

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

1 designates a bar having one portion reduced and rounded to form a handle and provided with a longitudinal groove 2, adapted to be engaged by a clamping-screw 3 of a tubular slide 4, which is adapted to vary the length of the bar, for a purpose hereinafter described. The other portion of the bar is flat, and is provided at opposite sides with brackets or ears 5 and 6, between which is ful-

crumed an operating-lever 7. The operating-lever, which is mounted on a pivot 8, has its fulcrumed end 9 enlarged, as shown, and provided with a curved edge to form a head for the reception of a pair of ropes 10 and 11 or other suitable flexible connections. The head of the operating-lever is provided with a peripheral groove 12, which may be formed in the lever or which, as illustrated in the accompanying drawings, may consist of a curved bar or piece secured to the lever and provided at its edges with longitudinal flanges. The ends of the curved bar or piece are provided with tongues or extensions, which are bolted or otherwise secured to the lever.

One of the ears or brackets has its outer portion enlarged and provided with teeth to form a ratchet 13, which is engaged by a dog or pawl 14 for holding the lever at the desired adjustment. The pawl or dog, which is L-shaped, is pivoted at one of its arms and is connected at its angle by a rod 15 with an L-shaped latch-lever 16, fulcrumed on the operating-lever adjacent to the handle or grip thereof and adapted to be readily grasped and operated in grasping the lever. The pawl or dog is normally held in engagement with the ratchet by a spring 17, secured to the adjacent edge of the operating-lever and engaging the inner face of the latch-lever.

The operating-ropes 10 and 11 may be constructed of a single rope, as shown in the accompanying drawings, and be connected by an eye 18 with the operating-lever at the inner end of the straight portion thereof, or separate pieces or branches may be employed, if desired. These operating-ropes extend through an opening 19 of the bar 1 and pass between a pair of sheaves or pulleys 20 of a swiveled pulley block or casing 21 and extend in opposite directions therefrom.

The swiveled pulley block or casing, which has two parallel sides or flanges, is provided with a circular base-plate 22 and a tubular shank 23, and the latter passes through the opening 19 of the bar and engages the opposite face of the latter, being provided with a projecting flange 25; but any other suitable means may be provided for effecting this result. The pulley-block is adapted to rotate on the bar to arrange the sides longitudinally thereof when the device is employed as a wire-

stretcher and to dispose them transversely of the bar in binding fodder.

The rope 10 is provided at one end with a chain 26, which has a ring 27 at its inner end and a hook 28 at its outer end. The chain, as illustrated in Fig. 1 of the accompanying drawings, is adapted to encircle a fence-post, and when used in this manner the hook is engaged with the ring to loop the chain about the post. The other rope 11 is provided with a hook 29, and when the device is employed as a wire-stretcher is connected with a clamp 30 for engaging a fence-wire, as shown in Fig. 1. The operating-lever is elevated preparatory to stretching the fence-wire, and when it is swung in the direction of the bar it draws both of the ropes through the opening 19, thereby exerting a powerful stretching action on the wire and enabling the latter to be readily and quickly drawn to the desired tension.

The clamp 30 consists of a bar provided at its inner end with a transversely-disposed eye 31, and having a flange or lip 32 at its outer end, which forms a fixed jaw which co-operates with a pivoted cam or lever 33. The fixed jaw 32 is arranged at one side of the outer end of the bar, the latter being slightly enlarged at that point, and the cam or lever, which is pivoted at its inner end, is provided with a curved end having serrations or teeth for engaging the fence-wire. The strain exerted on the fence-wire operates to hold the cam or lever in engagement with it; but in order to increase the clamping action of the cam or lever and absolutely prevent a smooth fence-wire from slipping in the clamp the outer end of the cam or lever is provided with an eye 34 and is connected with the outer end of the rope 11. By this arrangement the direct pull or strain on the rope operates to hold the cam or lever in engagement with the fence-wire, and the clamping action is in direct proportion to the strain. By varying the leverage of the pivoted cam or lever any desired clamping action may be obtained. The hook at the outer end of the rope 11 preferably engages a ring 35, linked into the eye 34 of the cam or lever of the clamp, and when the device is employed as a fodder-binder the clamp may be removed from the rope 11 by disengaging the hook from the ring 35 and drawing the rope through the eye 31.

When the device is employed as a fodder-binder, as illustrated in Figs. 5 and 6 of the accompanying drawings, the ropes 10 and 11 are clasped around the shock by hooking the end of the rope 11 into one of the links of the chain or by hooking the outer end of the chain into the ring, which connects the hook 29 to the rope 11. The operating-lever is operated, as shown in Fig. 5, preparatory to binding a shock, and the ropes are arranged at the desired elevation by adjusting the extensible slide 4. By this arrangement the device may be varied in length to suit the height of the shock. By swinging the lever downward the shock is compressed and is se-

curely held while it is bound by wire or cord. The device will not draw or twist the shock to one side, but will press it firmly together from all sides and will enable a bound shock to stand upright for months without leaning to one side or falling down.

The invention has the following advantages: The device, which is simple and comparatively inexpensive in construction, is adapted to be employed as a wire-stretcher and a fodder-binder, and it is capable of readily stretching a fence-wire to the desired tension and of holding the same while it is being stapled or otherwise secured to a fence-post. It is also adapted to be conveniently employed as a fodder-binder, and when used as a wire-stretcher the strain on the wire operates to cause the clamp to engage the same and prevents any accidental disengagement.

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 I claim is—

1. A device of the class described, comprising a bar, an operating-lever fulcrumed thereon, a pair of flexible connections attached to the operating-lever and provided with means for engaging a fence-wire or a shock, and a pulley-block swiveled to the bar and provided with a pair of sheaves or pulleys and adapted to rotate on the bar, substantially as and for the purpose described.

2. A device of the class described, comprising a bar, an operating-lever fulcrumed thereon, a pair of flexible connections attached to the lever and extending through the bar, and guide-pulleys mounted on the bar, substantially as described.

3. A device of the class described, comprising a bar having an opening, an operating-lever, a swiveled pulley-block having guide-pulleys and provided with a tubular shank mounted in the opening of the bar, and flexible connections attached to the operating-lever and extending through the tubular shank and arranged on the pulleys, substantially as described.

4. A device of the class described, comprising a bar provided at opposite sides with ears or brackets, one of the ears or brackets being enlarged and having ratchet-teeth, an operating-lever fulcrumed between the ears or brackets and provided with a head having a peripheral groove, flexible connections arranged in the groove and attached to the lever, a pawl or dog mounted on the lever and engaging the ratchet-teeth, and mechanism carried by the lever for operating the pawl or dog, substantially as described.

5. In a device of the class described, the combination with a flexible connection, of a clamp comprising a bar provided at its inner end with an eye loosely receiving the flexible connection, a fixed jaw mounted on the bar, and a cam or lever coöperating with the fixed jaw and having its outer end attached to

the flexible connection, substantially as described.

5 6. In a device of the class described, the combination of a flexible connection provided with a hook, and a clamp comprising a bar provided at its inner end with an eye loosely receiving the flexible connection, a fixed jaw mounted on the bar, and a cam or lever pivoted to the bar, and cooperating with the
10 fixed jaw, said cam or lever being provided with an eye to receive the hook of the flexible connection, substantially as described.

15 7. In a device of the class described, the combination of a bar, an operating-lever, flexible connections attached to the operating-lever, a swiveled pulley-block mounted on the bar, provided with pulleys and adapted to be arranged either longitudinally or

transversely of the bar, and an extensible section or slide mounted on the bar, and adjustably connected with the same, substantially as described. 20

8. In a device of the class described, the combination of a bar having a groove, a tubular slide mounted on the bar and provided with a clamping device engaging the groove, a lever fulcrumed on the bar, flexible connections attached to the lever, and a swiveled pulley-block, substantially as described. 25

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses. 30

WILLIAM F. TRAMM.

Witnesses:

ALBERT F. TRAMM,
CHARLES TRAMM.