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H. PADEN.

WIRE STRETCHER.

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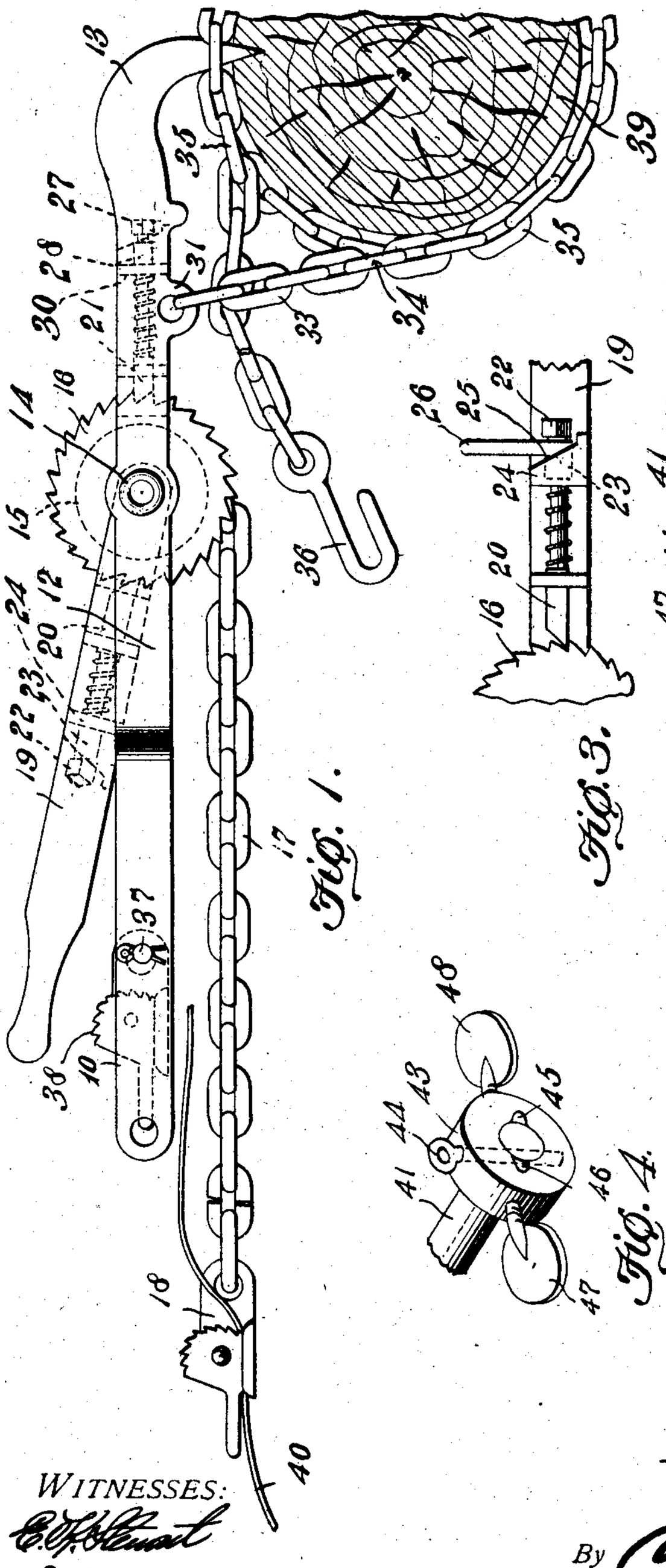

Fig. 1.

Fig. 4.

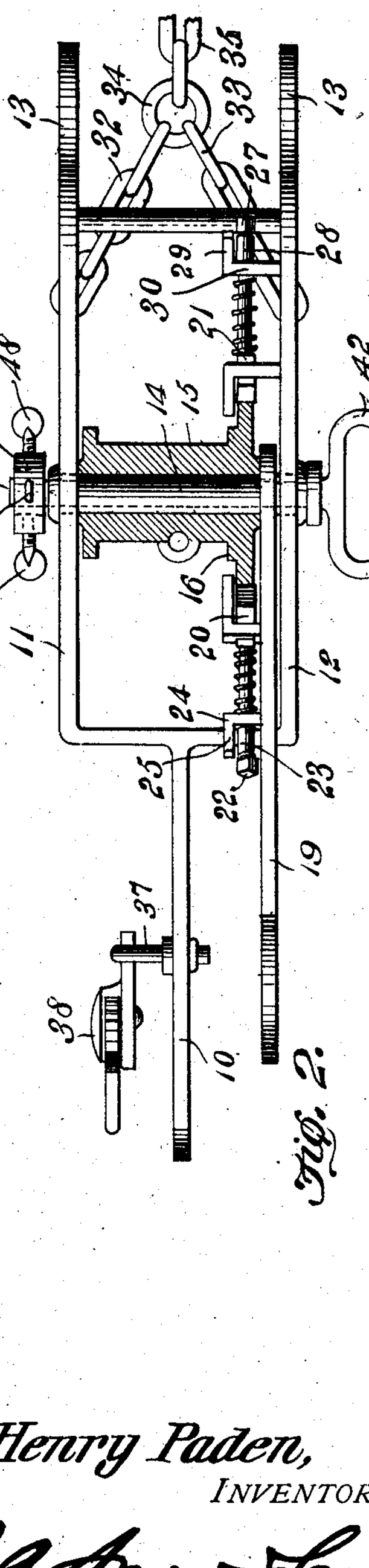

Fig. 3.

Fig. 2.

WITNESSES:

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HENRY PADEN, OF BERLIN, KENTUCKY.

WIRE-STRETCHER.

No. 835,080. Specification of Letters Patent. Patented Nov. 6, 1906.

Application filed March 8, 1906. Serial No. 304,987.

To all whom it may concern:

Be it known that I, HENRY PADEN, a citizen of the United States, residing at Berlin, in the county of Bracken and State of Kentucky, have invented a new and useful Wire-Stretcher, of which the following is a specification.

This invention relates to wire-stretchers, more particularly to devices for stretching the strand-wires of wire fences, and has for its object to improve the construction and increase the efficiency of devices of this character.

With these and other objects in view, which will appear as the nature of the invention is better understood, the invention consists in certain novel features of construction as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which corresponding parts are denoted by like designating characters, is illustrated the preferred form of the embodiment of the invention capable of carrying the same into practical operation.

In the drawings, Figures 1 is a side elevation of the improved device applied and without the wire-twister. Fig. 2 is a plan view of the same, partially in section and with the wire-twister arranged therein. Fig. 3 is an enlarged detail of one of the spring-actuated pawls, together with its locking-cam mechanism. Fig. 4 is an enlarged perspective view of the twister attachment.

The improved device comprises a frame with an arm 10 at one end and forked to form sides 11 12, with the terminals of the sides bent into pointed hooks, one of which is shown at 13.

A tubular shaft 14 is mounted for rotation through the spaced sides, and on this tubular shaft a drum 15 is journaled, the drum having a ratchet-wheel 16 at one end. A chain 17 is connected at one end to the drum and with a wire-grip device 18 of approved construction at the free end. An operating-lever 19 is arranged to swing from the tubular shaft 14 adjacent to the ratchet-wheel and provided with a spring-actuated pawl 20 for engaging the teeth of the ratchet-wheel. A spring-actuated stop-pawl 21 is connected to a side member 12 and operating to prevent backward movement of the ratchet-wheel. The pawl 20 is provided with a head 22 and with a cam-sleeve 23, rotating on the stock of the pawl between the head and a bracket 24, through which the pawl operates, the bracket having a cam-face 25, over which an arm 26 on the collar 23 operates when disposed in one position to move the pawl endwise and hold it disengaged from the ratchet-teeth when required.

The spring-pawl 21 is also provided with a head 27, a cam-collar 28, a cam-face 29 upon a bracket 30, attached to the member 12 and through which the pawl operates, the cam-collar adapted to move the pawl 21 out of engagement with the ratchet-wheel when disposed in one position. By this means the drum and its ratchet-wheel may be released when required, as hereinafter explained.

The side members 11 12 are provided with loops between the shaft 14 and the hooked ends 13, one of which is shown at 31, and into which short chains 32 33 are connected and united at their free ends to a ring 34 and from which a longer chain 35 leads, terminating in a chain-hook 36.

The member 10 is provided with a swivel 37, to which a wire-grip 38 is movably connected. With a device thus constructed the operation is as follows:

The relatively long chain 35 is wrapped about the post (represented at 39) toward which the wire is to be stretched and one of the hooks 13 passed through one of the links of the chain and driven into the post, as represented in Fig. 1. By this means the frame, with its drum and ratchet mechanism, is firmly coupled to the post. The chain 17 is then coupled by its wire-grip mechanism 18 to the wire to be stretched and indicated at 40. Then by operating the lever 19 the drum 15 will be rotated and the chain wound thereon and the wire stretched toward the post.

In attaching the grip mechanism 18 care should be taken to provide surplus wire enough to reach past the post when the grip mechanism is at the nearest point to the drum, so that the wire may be stapled or otherwise fastened to the post.

If the distance which the wire is to be stretched is greater than the length of the chain 17, the frame, with its drum and ratchet, is coupled to the post by looping the chain 35 around the post and coupling the terminal hook 36 to one of the links of the chain, thus spacing the stretching mechanism at a distance from the post, the distance being controlled by the length of the chain 35. The grip mechanism 18 is then coupled to the wire and the latter stretched toward the drum,

and when the limit of the movement of the chain 17 is reached the wire is coupled to the grip mechanism 38 upon the frame member 10 to hold the wire in its partially-stretched position until the chain 17 can be released and the gripping mechanism 18 engaged with the wire at a new point. The grip mechanism 38 is then released and the wire stretched for another distance, and so on as often as may be required until it is in position to be attached to the post.

If two wires are to be drawn toward each other, one end is connected to the frame member 10 by the grip member 38 and the other end of the wire connected to the grip member 18 upon chain 17, care being taken that sufficient surplus of wire shall be provided, so that when stretched the ends shall overlap to provide for twisting or otherwise connecting the ends.

Mounted for rotation through the tubular shaft 14 is a stub-shaft 41, having a turning handle 42 at one end and a collar 43 on the other end, the handle being at one side of the spaced frame members and the collar at the other side.

The collar 43 is detachably connected to the shaft 41, as by a pin 44, and provided with recesses 45 46, communicating with the interior of the collar. The collar is provided with the set-screws 47 48, adapted to bear upon the ends of the wires which may be inserted into the recesses 45 46.

When two wires are to be stretched toward each other and coupled after the stretching is completed, the overlapping ends of the wires are bent laterally and inserted into the recesses 45 46 and secured therein by the set-screws 47 48. Then by rotating the shaft 41 by its handle 42 the wires are entwisted and firmly coupled, as will be obvious. By this simple arrangement a simply-constructed and efficient wire-stretching device is produced whereby without structural changes a single wire may be stretched for attachment to a post. Two wires may be stretched toward each other until their ends overlap, and then the overlapped ends twisted to couple them together.

The device may be constructed in any required size, may be inexpensively manufactured, and will operate effectually for the purpose described.

What I claim is—

1. In a wire-stretcher, a supporting-frame, wire-gripping means carried by said frame, a tubular shaft disposed in said frame, a drum mounted for rotation upon said shaft, means for operating said drum, a flexible member connected to said drum and with a wire-gripping means at the free end, a rod mounted for rotation in said tubular shaft and with means for gripping the ends of the wires when brought within reach of the same, and means for rotating said rod to cause said wire ends to be twisted.

2. In a wire-stretcher, a supporting-frame, wire-gripping means carried by said frame, a tubular shaft disposed in said frame, a drum mounted for rotation upon said shaft, means for operating said drum, a flexible member connected with said drum and with a wire-gripping means at the free end, a rod mounted for rotation in said tubular shaft, a collar having spaced recesses and secured to said rod, means for clamping the ends of the wires in said recesses, and means for rotating said rod.

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

HENRY PADEN.

Witnesses:
E. W. McATEE,
W. W. BILKLEY.