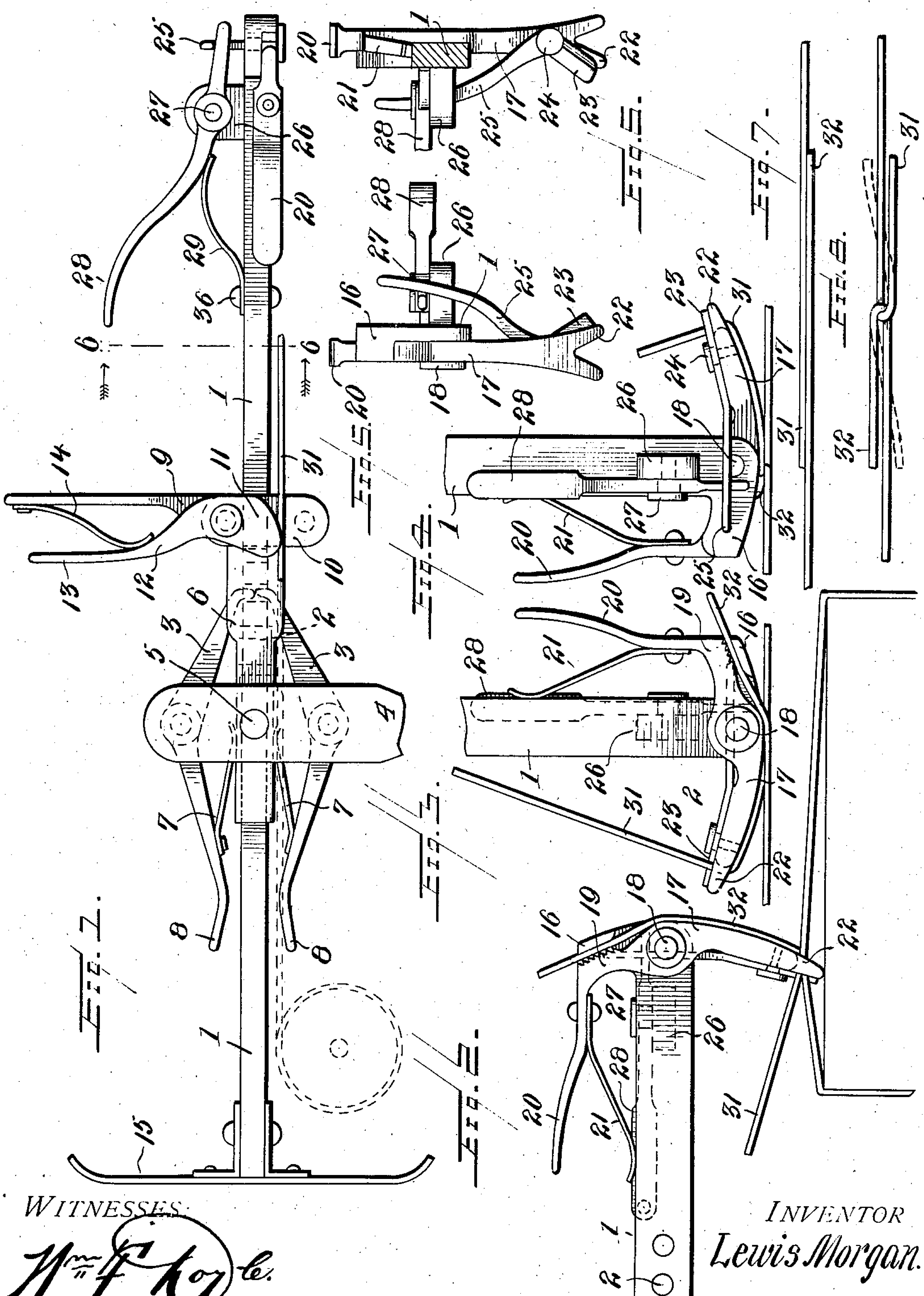
No. 842,325. PATENTED JAN. 29, 1907.

L. MORGAN.

WIRE CONNECTING DEVICE.

APPLICATION FILED JULY 16, 1906.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEWIS MORGAN, OF HOQUIAM, WASHINGTON, ASSIGNOR TO FRANK H. LAMB, OF HOQUIAM, WASHINGTON.

WIRE-CONNECTING DEVICE.

No. 842,325. Specification of Letters Patent. Patented Jan. 29, 1907.

Application filed July 16, 1906. Serial No. 326,437.

To all whom it may concern:

Be it known that I, LEWIS MORGAN, a citizen of the United States, residing at Hoquiam, in the county of Chehalis, State of Washington, have invented certain new and useful Improvements in Wire-Connecting Devices, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a wire-connecting device, and particularly to a hand-operated apparatus whereby the wires may be stretched about the bale or box to be secured thereby and then looped or bent upon each other.

The invention has for an object to provide a novel and improved construction of looping-head whereby the ends of the wire or strand may be bent upon each other while under tension and one wire cut after the bending operation is completed.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings, Figure 1 is a top plan of the tool. Fig. 2 is a side elevation thereof with the stretcher omitted. Fig. 3 is a similar view with the head in position for looping the wires upon each other. Fig. 4 is a similar view of the head in position after bending the loop. Fig. 5 is an end view of the head. Fig. 6 is a vertical section on the line 6 6, Fig. 1. Fig. 7 is a plan of the wires before looping, and Fig. 8 is a similar view after being looped.

Like numerals of reference indicate like parts in the several views of the drawings.

The numeral 1 designates a stretcher-bar, which may be of any desired construction or configuration—for instance, provided with the apertures 2 therethrough adapted to cooperate with the holding-pawls 3, pivotally mounted in the handle 4, which is in turn pivoted at 5 upon the casing 6, mounted to slide on the bar. These pawls are normally held in engagement with the apertures in the bar by means of the springs 7 and are operated by the handles 8 when it is desired to release the pawls. The casing 6 is provided with a gripper-arm 9 at its end next the head, having at its lower portion a block 10, upon which the wire rests, and with the gripping-face 11, carried by the pivoted lever 12, the handle 13 of which is held under tension by the spring 14. This construction and arrangement of stretcher may be varied as found desirable and is merely illustrated as one form convenient for the purpose.

The bar 1 is provided at its inner end with the head-plate 15, secured thereto, and at its opposite end with a laterally-disposed gripping extension or head 16, adapted to hold the opposite end of the wire from that portion held by the gripper 11. Upon this head a lever 17 is pivotally mounted by the pin 18 and provided at its upper portion with the gripping-face 19, adapted to coöperate with the extension 16 of the head. Extending laterally from this face 19 is an operating-lever 20, normally held under tension by the spring 21, carried by the lever and resting upon the upper face of the bar. This head-lever is formed at the opposite side of the bar from the gripper with a guiding crotch or notch 22, through which the opposite ends of the wires to be tied pass. Coöperating with this crotch or recess 22 is a cutter-blade 23, pivotally mounted upon the lever at 24 and provided with an angularly-disposed handle 25, extending upward and to one side of the bar 1. An operating-lever 28 for this handle is carried by the bar and pivotally mounted at 27 upon the lug 26, extending laterally from the bar, the same being provided with a handle held under tension by the spring 29, secured to the side of the bar at 36 and bearing against the lever.

In the operation of the invention the wire 31 is drawn from the reel and the end thereof passed around the package upon which it is to be stretched and tied. The portion 31 is engaged with the gripper of the stretching device and passed through the crotch 22, while the opposite end 32 is engaged by the gripper of the head-lever. The stretching device is then operated to draw the wire tightly about the package with the head in the position shown in Fig. 2. The head is then rocked upon the curved face of the lever into the position shown in Fig. 3, with the bar extending vertically and the wires in parallel planes, as shown in Fig. 7. These wires are then looped upon each other into the position shown in full lines in Fig. 8 by a one-half or partial rotation of the head from the position shown in Fig. 3 to that shown in Fig. 4, thus bending the free ends of the wires upon each other. The cut-off lever is then operated to

sever the end of the wire to the stretcher, while the remaining end is released from the head-gripper. To complete the connecting operation, these ends are tucked or bent under the main wire by any suitable device—for instance, the tucking-tool shown in my companion application, filed July 16, 1906, Serial No. 326,438. This construction and arrangement of parts permits the use of wire directly from a reel, the same being placed so as to feed through the stretcher, and it will be seen that the wire can be quickly stretched and looped into position to hold the same under tension by a simple, efficient, and economical construction of parts. By using the wire from the reel the requirement for a large stock of cut lengths is avoided, although the machine is equally adapted for use with such cut lengths of wire.

Having now described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. A wire-connector comprising a bar having at one end a laterally-disposed gripping device at one side thereof and wire-retaining means at the opposite side, and means carried by the bar for holding the end of the wire from the retaining means.

2. A wire-connector comprising a bar having at one end a laterally-disposed gripping device at one side thereof and wire-retaining means at the opposite side, means carried by the bar for holding the end of the wire from the retaining means, and a cut-off knife movably mounted to coöperate with said retaining means.

3. A wire-connector comprising a bar having a gripping-face upon its head, a gripping-lever pivoted to the bar and coöperating with said face, means carried by the bar for holding the opposite end of the strand under tension, a cut-off knife pivotally mounted upon the opposite end of the lever from the gripping-face, an operating-lever for said cut-off knife disposed upon the side of the bar, and an angularly-disposed handle extending from the knife into the path of said cut-off lever.

4. In a wire-connector, a bar provided at one end with a gripping-face disposed above the center thereof, a lever pivotally mounted upon the bar and having a gripping end opposite said face, an opposite crotched portion of said lever, and an operating-handle from the lever disposed laterally to said gripping-face.

5. In a wire-connector, a bar provided at one end with a head having gripping-face disposed above the center thereof, a lever pivotally mounted upon the bar and having a gripping end opposite said face, an opposite crotched portion of said lever, an operating-handle from the lever disposed laterally to said gripping-face, a tension-spring extending from said head and bearing upon the bar, and a cut-off device carried by the crotched end of said lever.

6. In a wire-connector, a bar provided at one end with a head having gripping-face disposed above the center thereof, a lever pivotally mounted upon the bar and having a gripping end opposite said face, an opposite crotched portion of said lever, an operating-handle from said lever disposed laterally of said gripping-face, a tension-spring extending from said head and bearing upon the bar, a blade pivotally mounted upon the crotched end of the head-lever, an angularly-disposed handle extended from said blade, a cut-off lever mounted upon the bar at one side thereof and disposed in the path of the blade-handle, and a spring carried by the bar to engage said cut-off lever.

7. A wire-connector comprising a bar having at one end a laterally-disposed head, a lever carried by said head for securing a strand thereto, and means carried by the opposite end of said lever for retaining and guiding a parallel strand.

8. A wire-connector comprising a bar having at one end a laterally-disposed head, a lever carried by said head for securing a strand thereto, means carried by the opposite end of said lever for retaining and guiding a parallel strand, and means carried by the retaining end of the lever to sever said parallel strand after the wire has been looped.

In testimony whereof I affix my signature in presence of two witnesses.

LEWIS MORGAN.

Witnesses:

FRANK H. LAMB,

WM. B. OGDEN.