

(No Model.)

2 Sheets—Sheet 1.

H. O. ROCKWELL.
DEVICE FOR PICKING UP LIVE WIRES.

No. 575,311.

Patented Jan. 12, 1897.

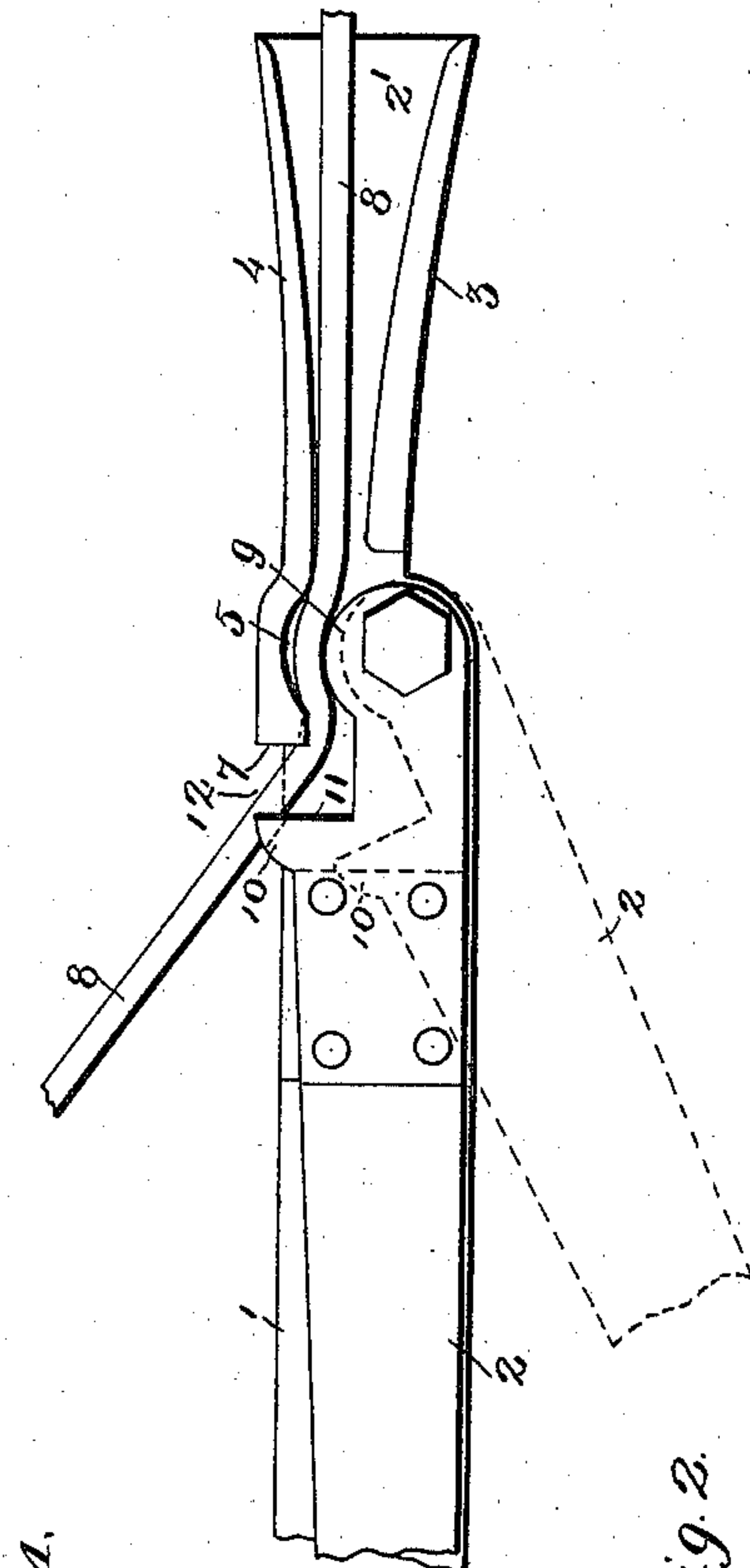


Fig. 1.

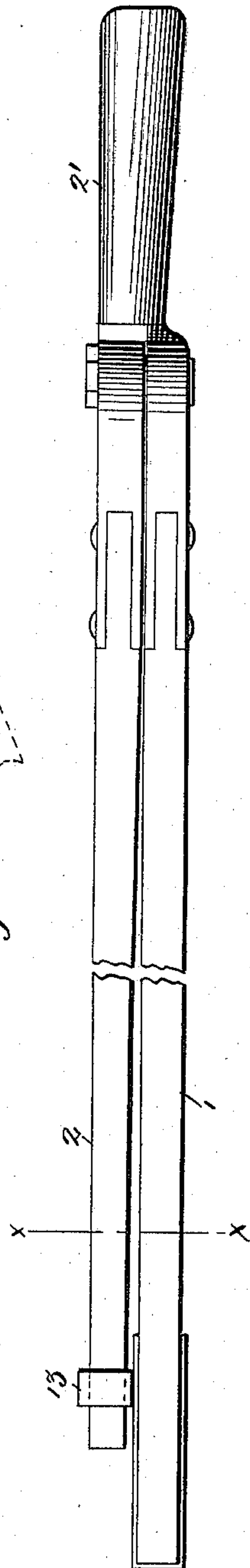


Fig. 2.

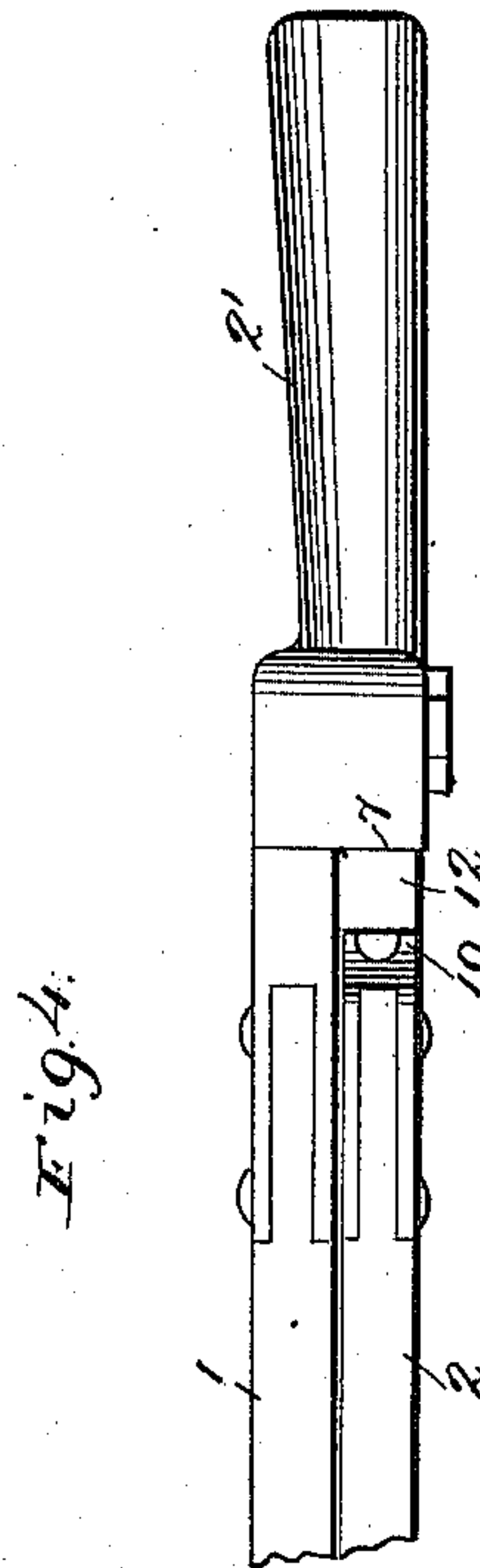


Fig. 3.

Fig. 4.

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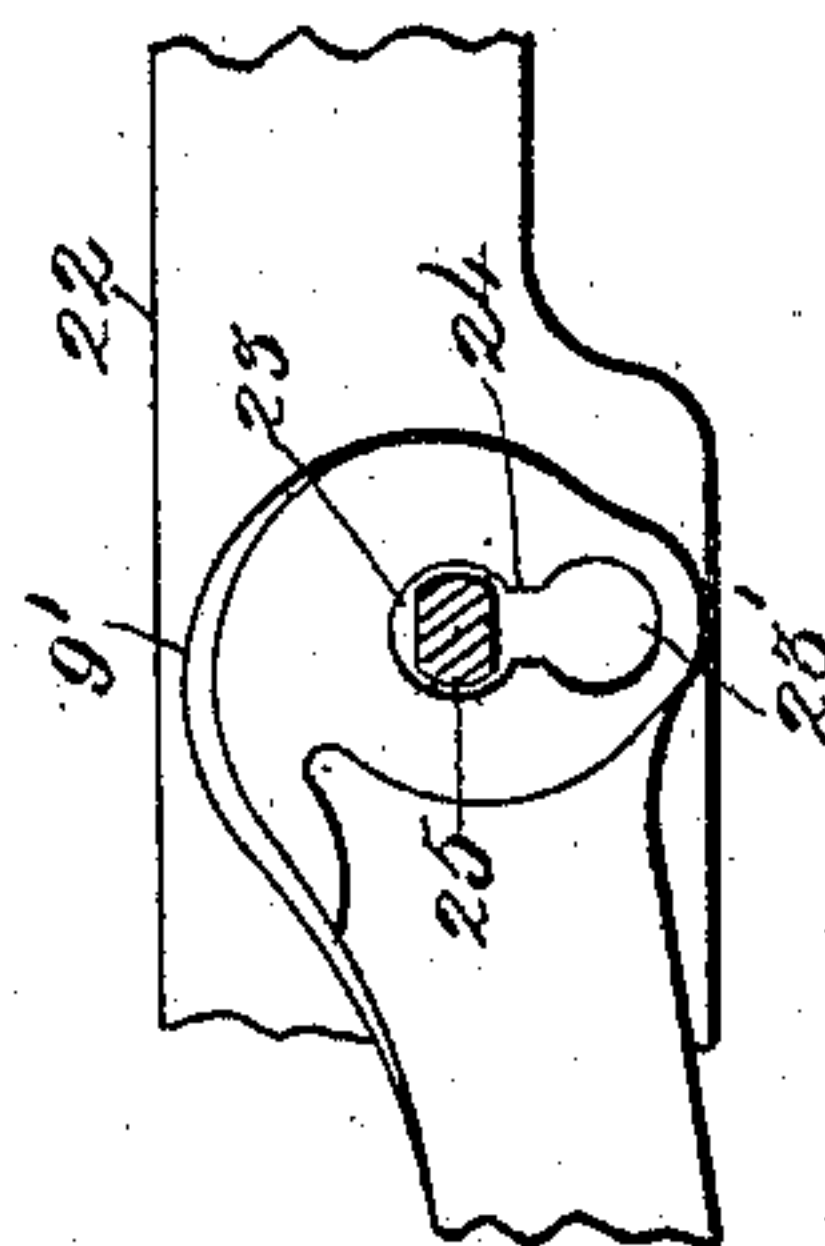
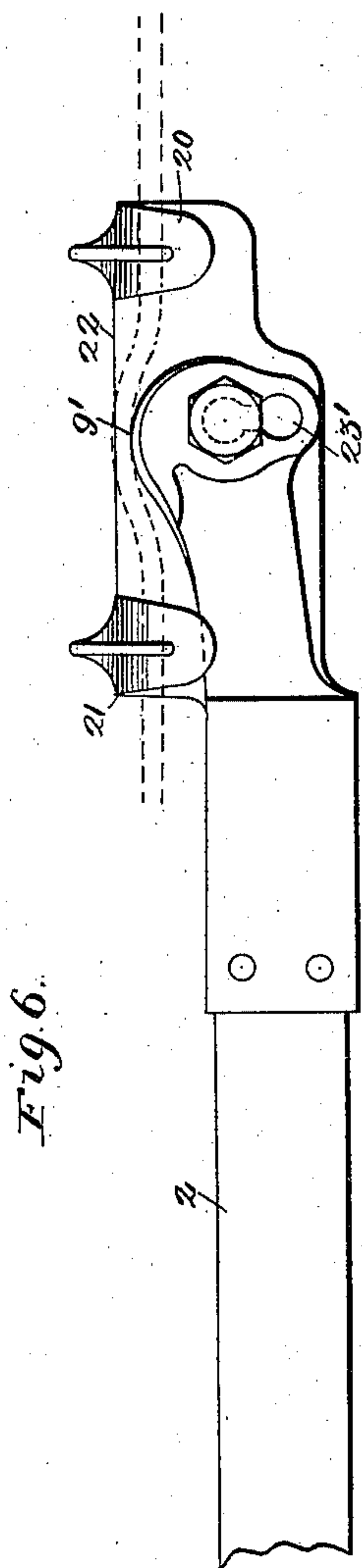
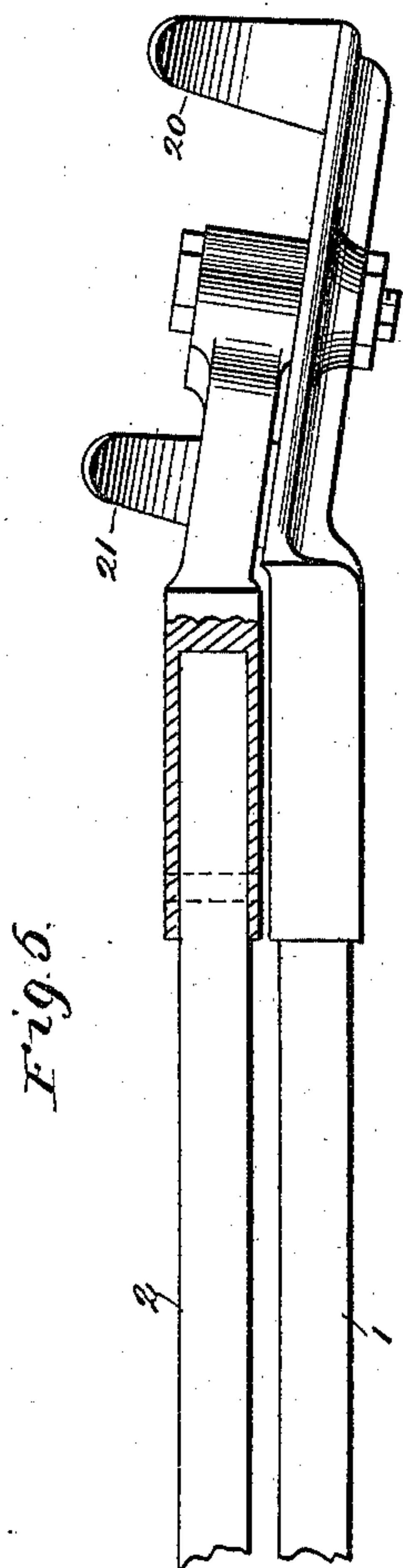
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UNITED STATES PATENT OFFICE.

HERBERT O. ROCKWELL, OF ST. LOUIS, MISSOURI.

DEVICE FOR PICKING UP LIVE WIRES.

SPECIFICATION forming part of Letters Patent No. 575,311, dated January 12, 1897.

Application filed April 16, 1896. Serial No. 587,819. (No model.)

To all whom it may concern:

Be it known that I, HERBERT O. ROCKWELL, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Devices for Picking up Live Wires, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in devices for picking up live electric wires; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a plan view of my improved tool. Fig. 2 is a view from one side thereof. Fig. 3 is a section on *x x* of Fig. 2. Fig. 4 is a view of the side opposite that shown in Fig. 2 with parts broken away. Fig. 5 is a side view of a device having a modified form of gripping device. Fig. 6 is a plan view thereof, and Fig. 7 is a detail showing means for shifting the pivotal point between the two levers.

The object of my invention is to construct a suitable tool or device for picking up the ends of live trolley-wires or other wires heavily charged with electricity, and thus avoiding the serious accidents occasioned by persons seizing the live ends of broken trolley and other overhead wires, so common in large cities.

In detail the device may be described as follows:

Referring to the drawings, and particularly to Figs. 1 to 4, inclusive, 1 and 2 represent, respectively, two levers pivoted at their ends to one another, the longer lever 1 having an extension beyond the pivotal point in the shape of a scoop 2', expanding from the pivotal point of the levers outwardly and bounded by the lateral upturned walls 3 and 4, respectively. The inner end of the wall 4 has formed thereon a concave depression 5, about the terminal edge or end 7 of which the end of the live wire 8 can be bent or kinked and seized, as subsequently to be explained. About the pivotal point of the jaw 2 and on the side adjacent to and opposite the depression 5 is a cam-surface or eccentric 9. At a suitable distance from the cam-surface and

forming a part of the casting constituting the base of the lever 2 is a finger or toe 10, between the rear wall 11 of which and the terminal edge 7 of the wall 4 is left a sufficient space or opening 12 for the free passage of the wire 8. In picking up the end of a live wire the lever 2 is swung open, as indicated in dotted lines in Fig. 1, the wire is scooped up between the walls 3 and 4, and the device passed along the wire until the free end of the latter projects slightly beyond the end 7 of the wall 4 of the scoop. This being done, the lever 2 is then closed, as seen in full lines in Fig. 1, whereupon the cam-surface 9 of the lever 1 forces or presses the wire into the depression 5 and the toe 10 bends the free end about the corner formed by the end of the concave depression 5 and terminal wall or edge 7. The wire is thus firmly gripped by the levers and cannot be withdrawn. The lever 2, when closed, is locked into position by the loop 13, pivoted to the adjacent surface of the lever 1 and adapted to swing about the free end of the lever 2. The parts being thus locked, the device can be suspended above the ground by a cable or rope 14, carried by the lever 1, which can be tied or secured to any object in the street, such as a pole, wall of a building, or the like. When thus suspended, the grounding of the end of the broken wire is thus temporarily prevented, the parts being left suspended until the lineman can repair the break on the main wire.

The body portion of the levers 1 and 2 is composed of wood or other non-conducting material, each being secured to the basal casting of the lever, as indicated, that is, each casting is forked, the wooden portion of the lever being inserted between the members of the forks and riveted, as seen in the drawings.

In the modification illustrated in Figs. 5 to 7, inclusive, the scooped extension 2' is practically absent, a bent wall or loop 20 being substituted therefor, the said loop guiding the wire, which latter is subsequently kinked and gripped by passing between the cam-surface 9' of the lever 2 and the loops or walls 20 and 21, carried by the lever 1. In the case of thin wire, where it is necessary to form a sharper kink to properly grip the same, the relative position of the pivotal connection between the

levers is shifted so as to bring the surface of the cam 9' nearer the edge 22, disposed between the loops 20 and 21 of the lever 1.

The shifting of the relative position of the pivotal point is accomplished by forming two enlarged openings 23 23' in the lever 2 at either end of the narrow passage 24 and forming the section of the pivotal pin 25 oblong, whereby upon the turning of the pin in one position in the opening 23 it will hold the parts pivoted about said opening and whereby upon turning of the pin so as to freely pass through the narrow passage 24 the lever 1 may be shifted so as to bring the pin 25 into the opening 23', when the pin can be turned in the latter opening in proper position to hold the parts pivoted about said opening. This method of shifting the relative position of the pivotal point, however, is not herein claimed, as it is not new.

Having described my invention, what I claim is—

1. In a device for picking up live wires, suitable levers pivoted to one another at one end, a scoop forming an extension of one of said levers for initially seizing the wire, means for gripping the wire after the same has been seized, and suitable means for locking the levers after the same have been closed and the wire gripped, substantially as set forth.

2. In a device for picking up live wires, suitable levers pivoted to one another at one end, a scoop forming an extension beyond the pivotal point of one of said levers, and suitable means for kinking and firmly gripping the wire after the end of the same has been scooped up or raised from the ground, substantially as set forth.

3. In a device for picking up live wires, suitable levers pivoted to one another at one end, a scoop forming an extension of one of said levers, said scoop expanding outwardly from the pivotal point of the levers to the free end of the scoop, a concave depression along one of the walls of the scoop, a cam or eccentric formed about the pivotal point of the second lever and located approximately opposite the concave depression of the scoop, a toe formed on the short lever and located at a suitable distance from the end of the concave depression to allow for the free passage of the wire between the toe and said end of the depression, whereby upon the closing

of the levers, the wire will be gripped between the cam-surface and depression and bent about the end wall of the concave depression, and means for retaining the levers in a locked position after once closed, substantially as set forth.

4. In a device for picking up live wires, a long lever having a scoop at one end, lateral walls for said scoop, a short lever pivoted to the first lever at the base of the scoop, and means carried by the short lever for gripping the wire after the same has been scooped up, substantially as set forth.

5. In a device for picking up live wires, a long lever, a scoop at one end thereof, a short lever pivoted to the long lever at the base of the scoop, means carried by the short lever for gripping the wire, means for locking the levers together after the same have been closed and the wire gripped, and a cord or rope secured to the long lever for suspending the device at any convenient point, substantially as set forth.

6. In a device for picking up live wires, suitable levers pivoted to one another at one end, means forming a part of one of the levers for initially picking up the wire, and suitable means carried by the levers for kinking and gripping the wire, substantially as set forth.

7. In a device for picking up live wires, suitable levers pivoted to one another at one end, means forming a part of one of the levers for initially picking up the wire, and suitable means carried by the levers for kinking the wire to different degrees according to the nature or thickness of the wire to be operated on, substantially as set forth.

8. In a device for picking up live wires, suitable levers pivoted to one another at one end, a cam disposed about the pivotal point of one of the levers, means for shifting the relative position of the pivotal point between said levers, whereby a variable kink may be made in the wire bent between said cam and walls carried by the opposite lever, substantially as set forth.

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

HERBERT O. ROCKWELL.

Witnesses:

ALFRED A. MATHEY,
EMIL STAREK.