

(No Model.)

2 Sheets—Sheet 1.

A. BRUMWELL & M. E. DOOLITTLE.

CABLE GRIP.

No. 435,275.

Patented Aug. 26, 1890.

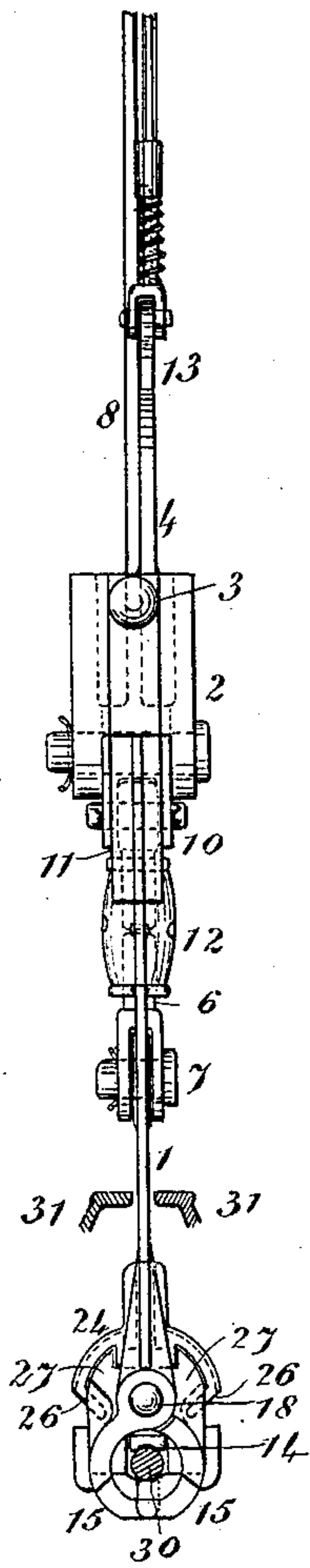


Fig. II.

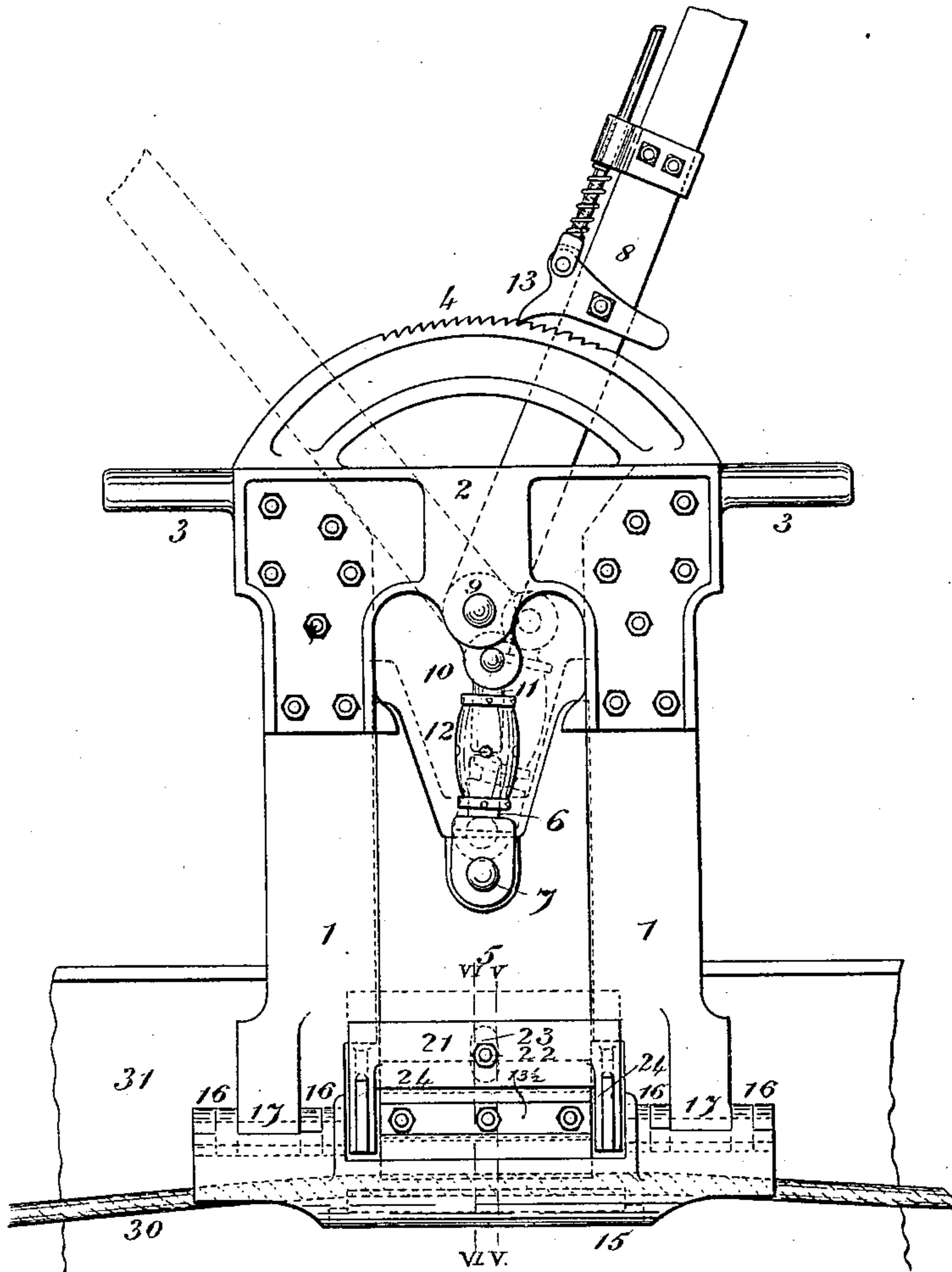


Fig. I.

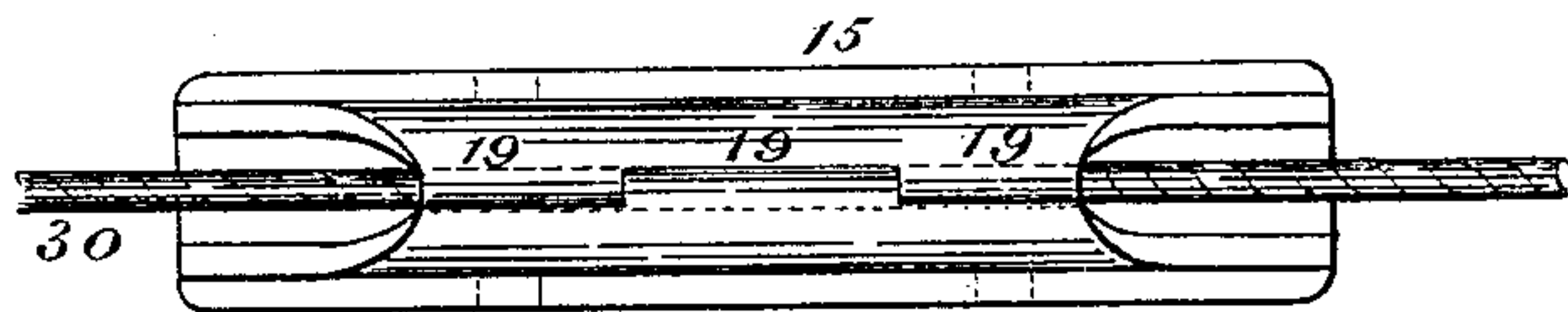


Fig. III.

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2 Sheets—Sheet 2.

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CABLE GRIP.

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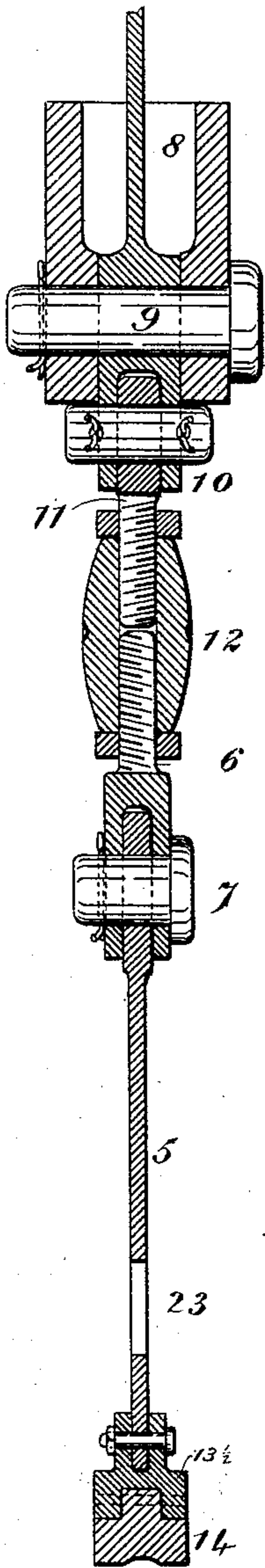


Fig. IV.

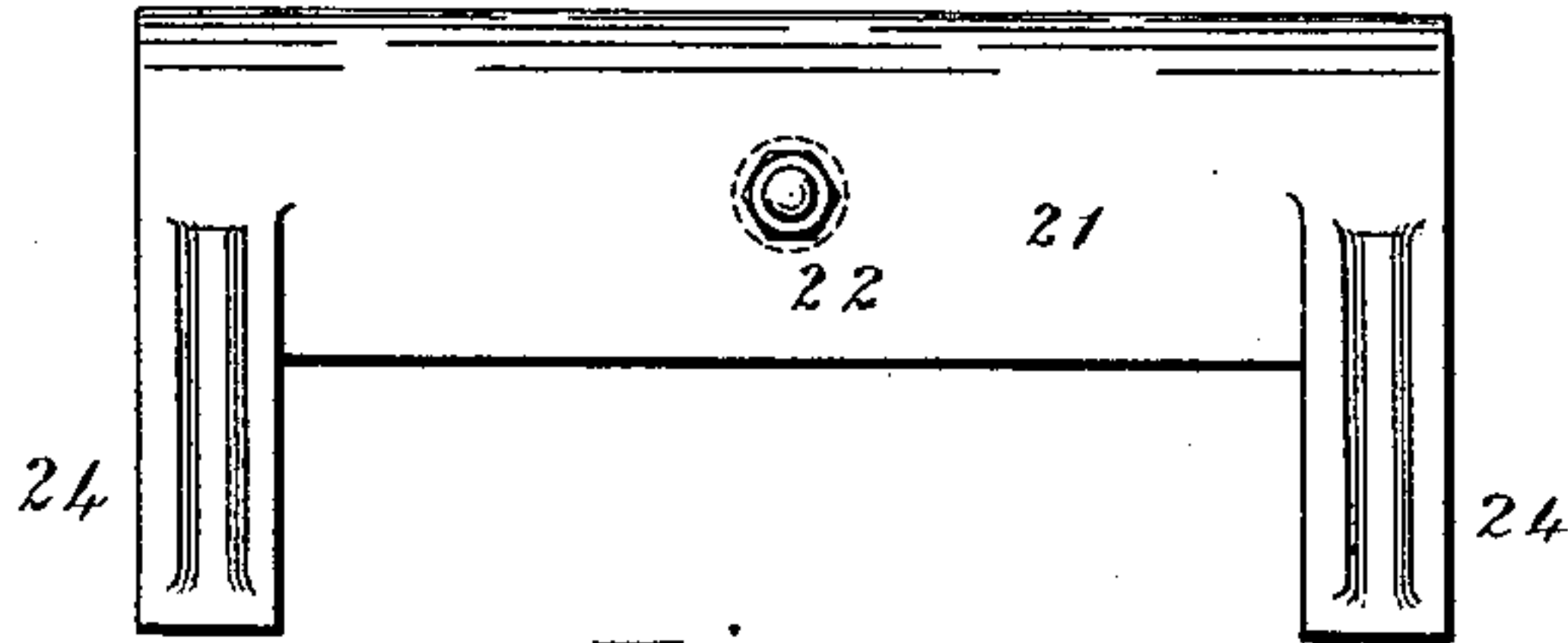


Fig. IX.

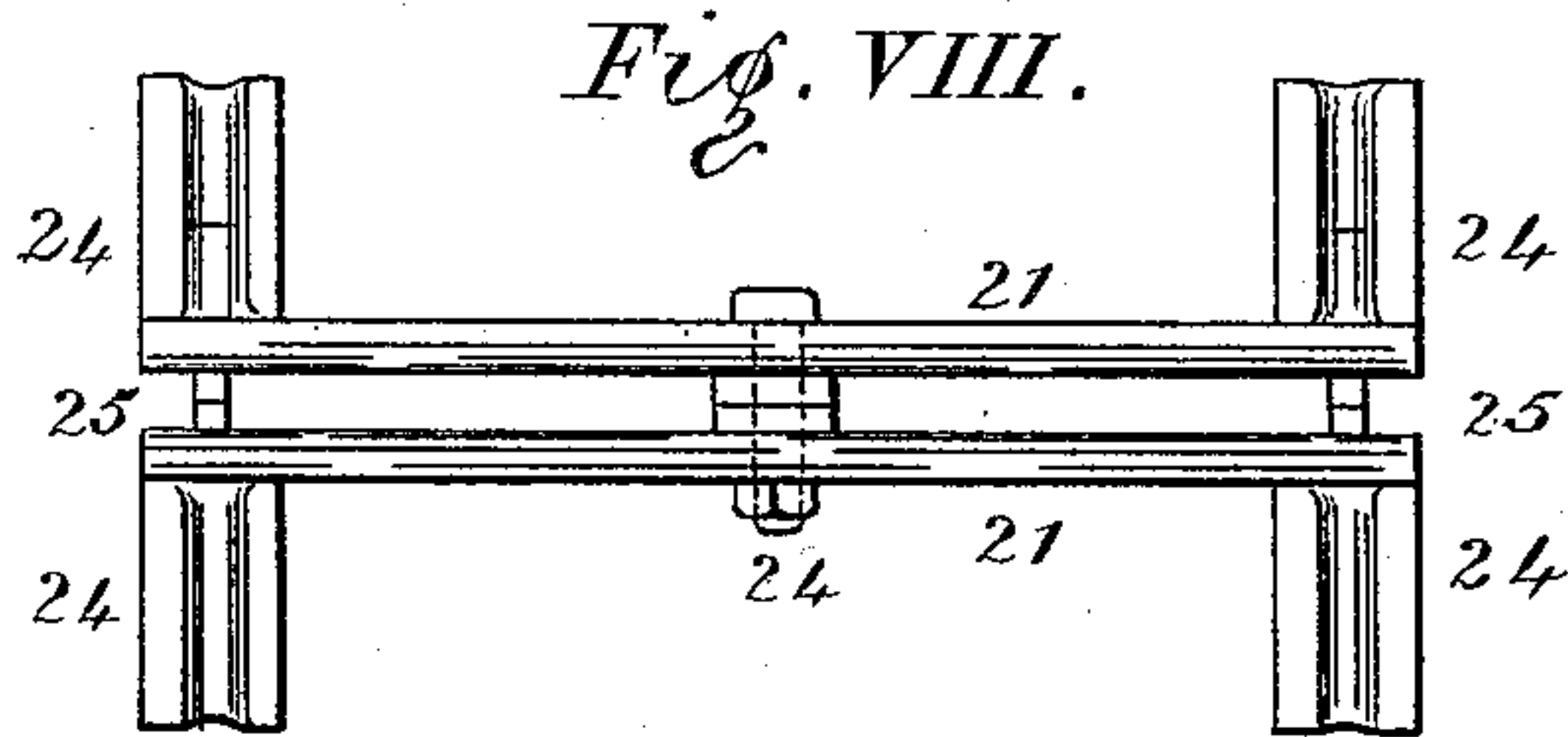


Fig. VIII.

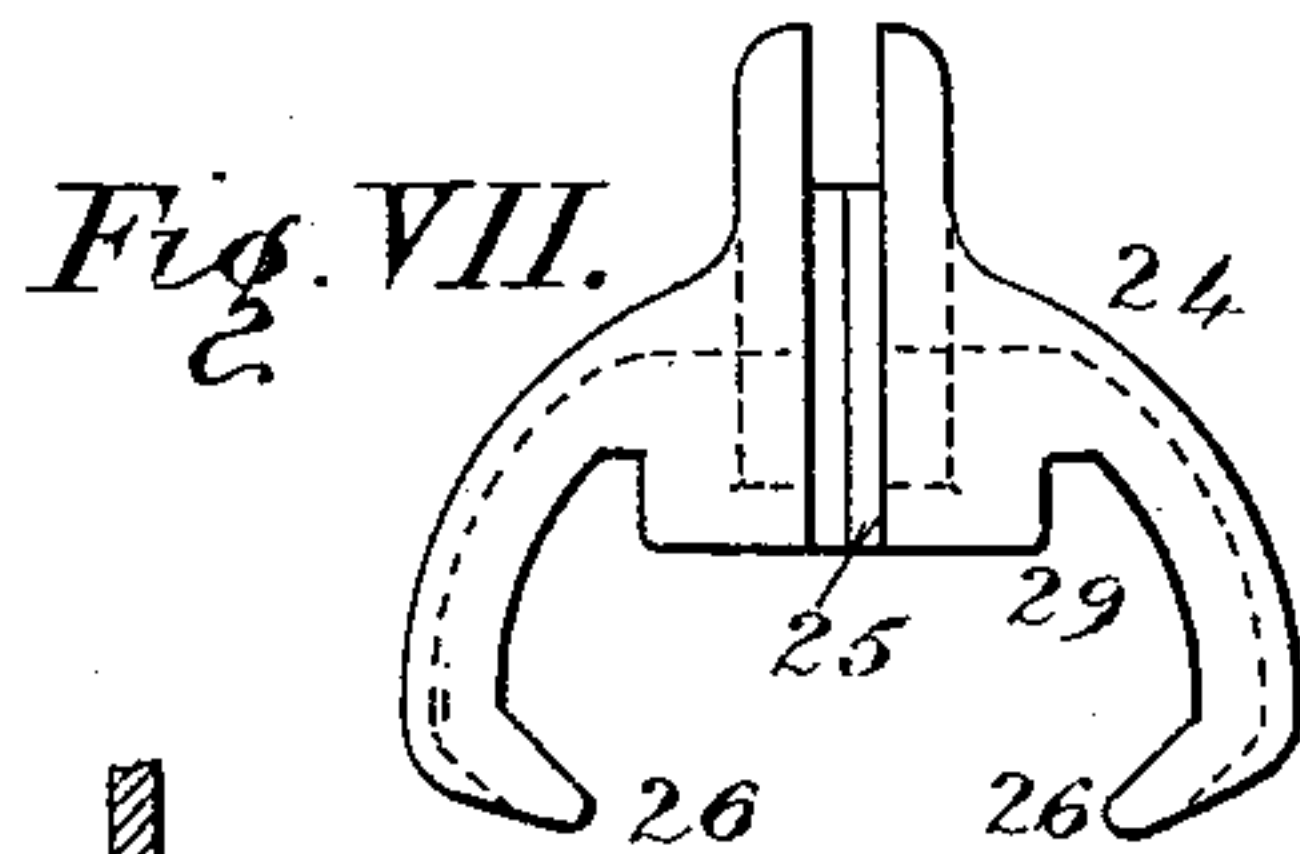


Fig. VII.

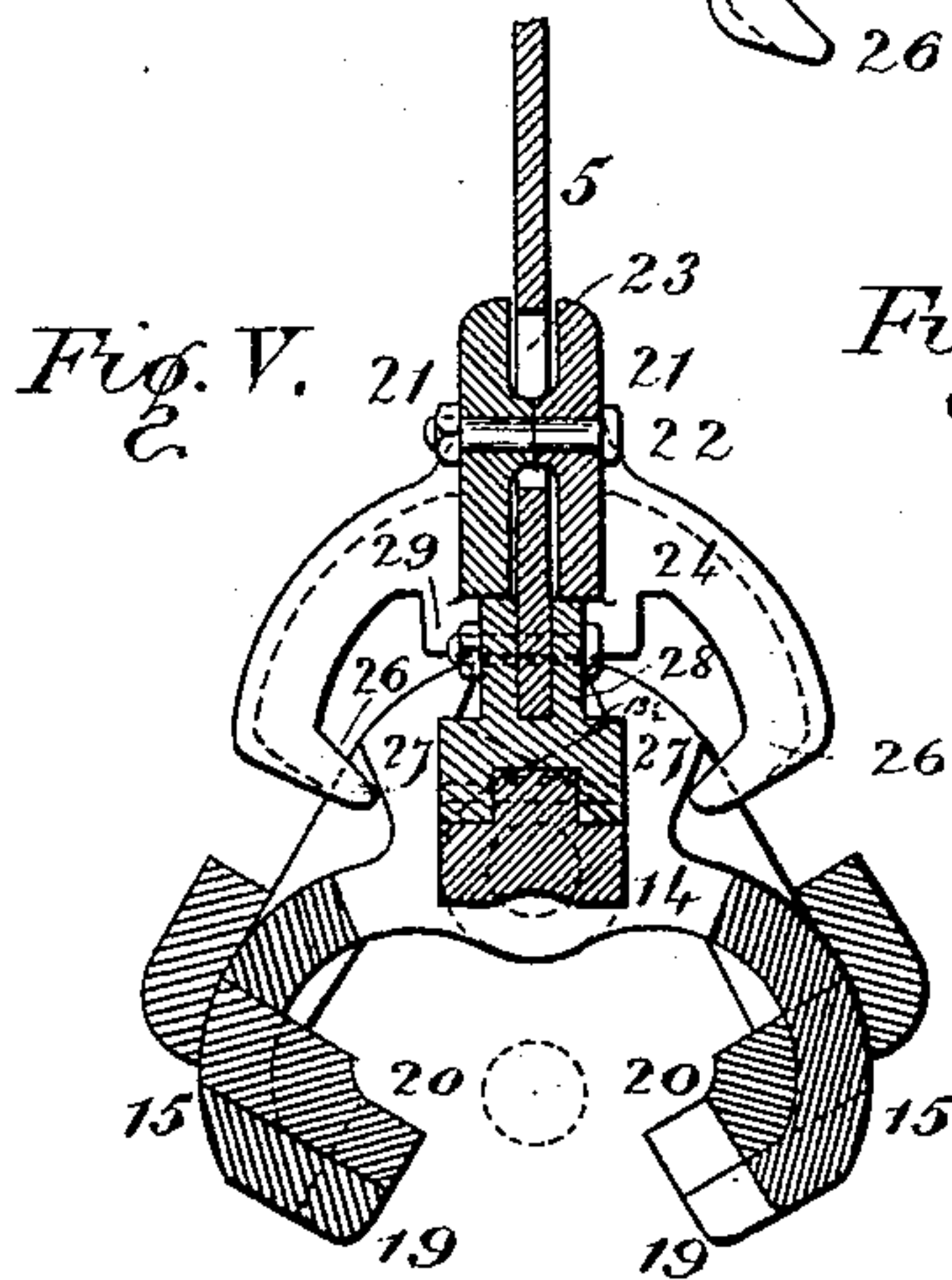
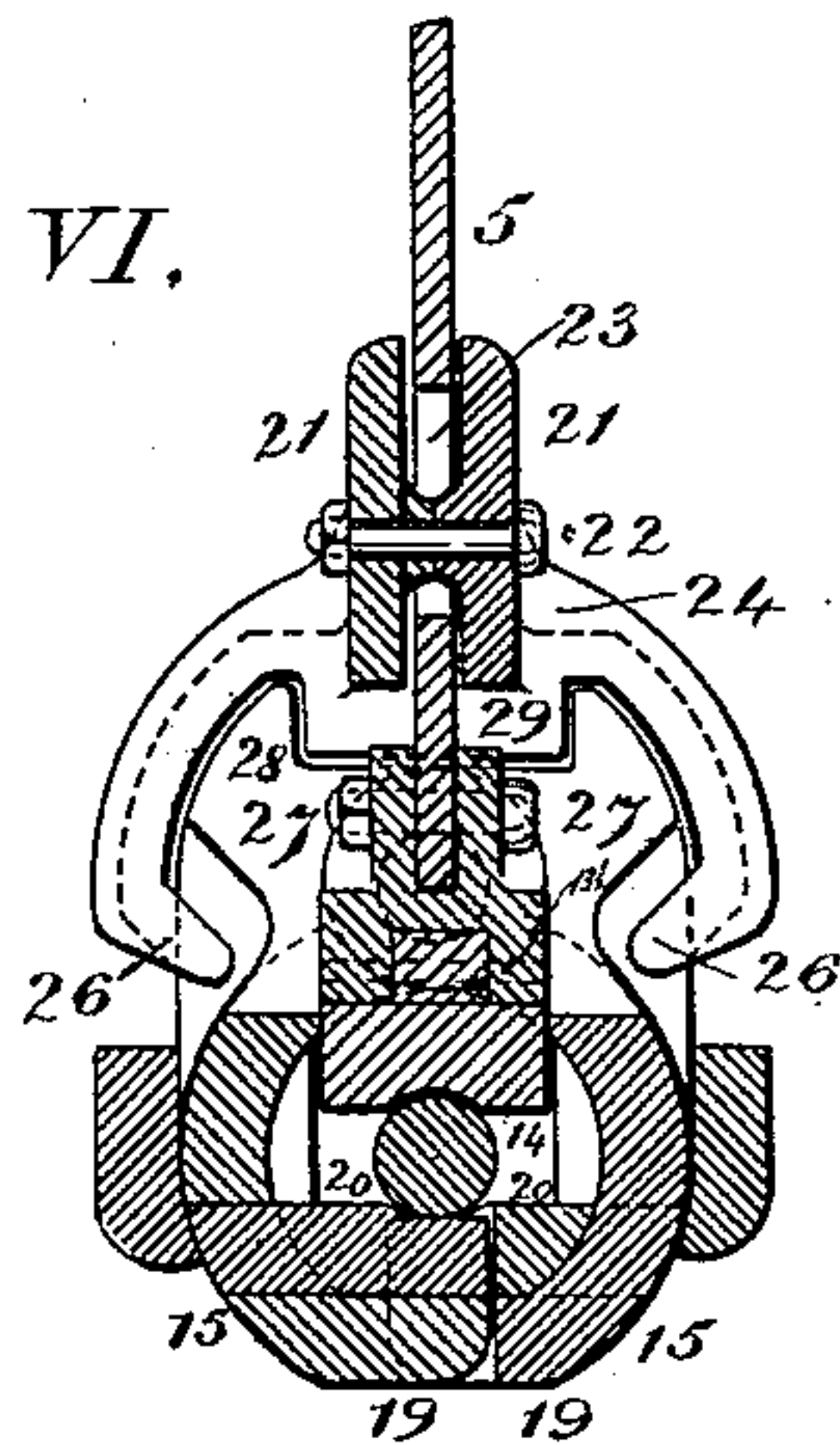


Fig. V.

Fig. VI.



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UNITED STATES PATENT OFFICE.

ALFRED BRUMWELL AND MERRITT E. DOOLITTLE, OF KANSAS CITY, MISSOURI, ASSIGNORS OF ONE-THIRD TO JESSE M. THOMPSON, OF SAN FRANCISCO, CALIFORNIA.

CABLE-GRIP.

SPECIFICATION forming part of Letters Patent No. 435,275, dated August 26, 1890.

Application filed September 10, 1889. Serial No. 323,554. (No model.)

To all whom it may concern:

Be it known that we, ALFRED BRUMWELL and MERRITT E. DOOLITTLE, both of Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Cable-Grips, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

Our invention relates to various improvements in the construction and operation of a cable-grip; and our invention consists in features of novelty hereinafter described, and pointed out in the claims.

Figure I is a side elevation of our improved device. Fig. II is an end view showing the jaws of the grip in their closed position. Fig. III is a bottom view. Fig. IV is a vertical section showing the upper die and the various parts by which it is operated. Fig. V is a vertical section taken on line V V, Fig. I, showing the jaws opened. Fig. VI is a vertical section taken on line VI VI, Fig. I, showing the jaws closed. Fig. VII is an end view of the yoke by which the jaws are operated. Fig. VIII is a top view of the yoke. Fig. IX is a side elevation of the yoke.

Referring to the drawings, 1 represents the main frame of the grip, at the upper end of which is secured the head 2, with its supporting-pins 3 and rack 4.

5 represents the sliding body-sheet suitably secured between the sections of the main frame.

6 represents a screw-threaded rod or bolt pivoted to the body-sheet at 7.

8 represents the operating-lever, which is fulcrumed to the head 2 at 9. A portion 10 of the operating-lever extends below the fulcrumed point 9, and to this extension is pivoted a screw-threaded rod or bolt 11, similar to the bolt 6, secured to the body-sheet, with the exception that the threads run in the opposite direction.

12 represents a screw-threaded sleeve screwed onto the free ends of the bolts 6 11. By this means the sliding body-sheet may be adjusted in its relation to the operating-lever to compensate for wear in the dies, &c.

13 represents the usual pawl that holds the operating-lever in the position desired.

At the lower end of the sliding body-sheet 5 is secured a die-holder 13 $\frac{1}{2}$, to which is secured a die 14, which moves up and down in a vertical line as the body-sheet is moved by the operating-lever.

15 represents the jaws, which are pivoted to the lower end of the main frame by means of lugs 16 on the upper side of the jaws, lugs 17 on the lower end of the main frame, and a rod 18, which passes through each of the lugs. The jaws are formed with interlocking portions 19, which prevent any possible chance of the cable slipping out of the jaws until the operator wishes to release the same. 20 represents dies suitably secured to the jaws 15.

We will now describe our means for opening the jaws and the means whereby they are held in their closed position.

21 represents plates adjustably secured to the sliding body-sheet by means of a bolt 22 passing through the plates and through a slot 23 in the body-sheet. These plates extend in a lateral direction beyond the sides of the body-sheet and serve the double purpose of a guide for the lower end of the body-sheet and a support for two yokes 24, one of each of the yokes being secured to the ends of the plates. (See Figs. VIII and IX.) The yokes are provided with grooves 25, into which the main frame extends, thus forming a vertical guide for the yokes.

26 represents incurved fingers on the yokes, said fingers having bearing with inclined ears 27 on the grip-jaws. The ears 27 have recesses 28 on their upper sides.

29 represents locking-blocks on the yokes 24, which are permitted to pass into the recesses 28 of the jaws when it is desired to hold the jaws in their closed position.

30 represents the cable and 31 a section of the conduit.

In this form of grip we get a direct pressure on the cable in a vertical line drawn through the center of the body-sheet.

To operate this grip, the pawl 13 is released from the notch in the rack and the lever thrown forward sufficient to separate the upper and lower dies, thus allowing the cable to

slip through. Should it become necessary to drop the cable, a still further movement of the lever forward lifts the body-sheet 5, bringing the upper edge of the die-holder 13½ in contact with the lower edge of the plates 21 of the yoke, which in turn picks up and carries with it the yoke and locking-block until the locking-block is lifted clear of the ears on top of the jaws, between which it rests when the jaws are closed. At this point the fingers on the yoke come in contact with the inclined ears on the jaws, and as the body-sheet is continued in its upward movement the jaws are caused to rock or revolve on their pivots, thereby closing the jaws at the top and opening at the bottom, which releases the cable and it drops out of its own gravity. To pick up the cable, a gipsy or some other well-known device can be used. After raising the cable to the grip the lever is thrown back, which lowers the body-sheet 5, the jaws simply closing by their own weight, and also the yoke and locking-block fitting in place by the natural laws of gravitation.

25 We claim as our invention—

1. In a cable-grip, a yoke formed with inwardly-projecting fingers for the purpose of opening the jaws of a grip, substantially as described, and for the purpose set forth.

30 2. In a cable-grip, pivoted jaws with inclines, in combination with a yoke having inwardly-projecting fingers, substantially as described, and for the purpose set forth.

3. In a cable-grip, a main frame, in combination with a vertically-sliding body-sheet, a die-holder, a yoke having inclined fingers, and pivoted jaws in engagement with said fingers, substantially as described, and for the purpose set forth.

40 4. In a cable-grip, the combination of a main frame with a centrally-placed vertically-sliding body-sheet and removable die-holder, means for operating the body-sheet, a yoke with inwardly-projecting-fingers, and pivoted jaws with inclines, substantially as described, and for the purpose set forth.

5. In a cable-grip, the combination of a main frame, a sliding body-sheet secured to the frame, jaws pivoted to the frame, ears on the jaws, yokes having connection with the

body-sheet, fingers on the yokes for opening the jaws, and blocks on the yokes for holding the jaws in a closed position, substantially as described, and for the purpose set forth.

6. In a cable-grip, the combination of the main frame, a sliding body-sheet, means for raising and lowering the body-sheet, plates 21, secured to the body-sheet by a slot-and-bolt connection, and means in connection with said plates for opening and closing the jaws of a grip, substantially as described, and for the purpose set forth.

7. The combination, with the frame 1 and the sliding body-sheet, of the gripping-jaws having the inclined ears 27, yokes having pin-and-slot connection with said body-sheet, embracing said ears and having inwardly-projecting fingers adapted to engage the inclines of said ears for operating the jaws, and a die-holder secured to said body-sheet between the jaws, substantially as set forth.

8. In a cable-grip, the combination, with the pivoted jaws and the sliding body-sheet carrying a die, of yokes having pin-and-slot connection with said body-sheet and provided with fingers for operating the jaws, substantially as set forth.

9. In a cable-grip, the combination, with a pair of jaws hinged together at their upper sides and adapted to gravitate together, of inclined ears on the said jaws adapted to be separated by the closing of the jaws, and yokes embracing said ears and having inwardly-projecting fingers adapted to engage said ears and force them together when said yoke is raised, substantially as set forth.

10. In a cable-grip, the combination, with a pair of hinged or pivoted jaws having the inclined ears 27, of vertically-movable yokes having inwardly-projecting fingers adapted to engage said ears for operating the jaws, and a die-holder arranged between said jaws and adapted to be operated independently of said yokes, substantially as set forth.

ALFRED BRUMWELL.
MERRITT E. DOOLITTLE.

In presence of—

JAS. E. KNIGHT,
D. C. PRUDDEN.