

(No Model.)

2 Sheets—Sheet 1.

C. SCHRAUBSTADTER, Jr. & C. R. SCHILLING.
LEAD CUTTER.

No. 460,035.

Patented Sept. 22, 1891.

Fig. I.

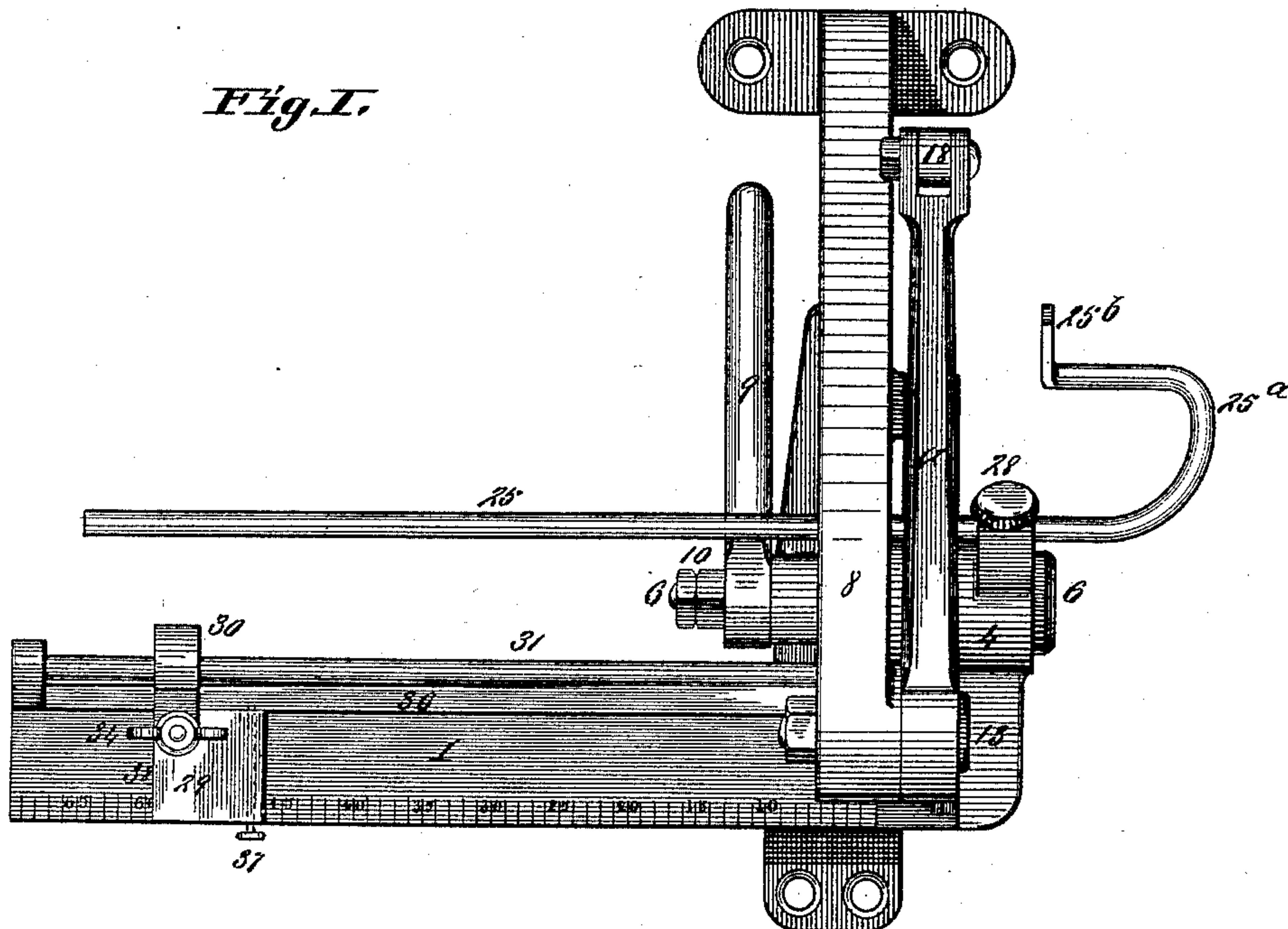
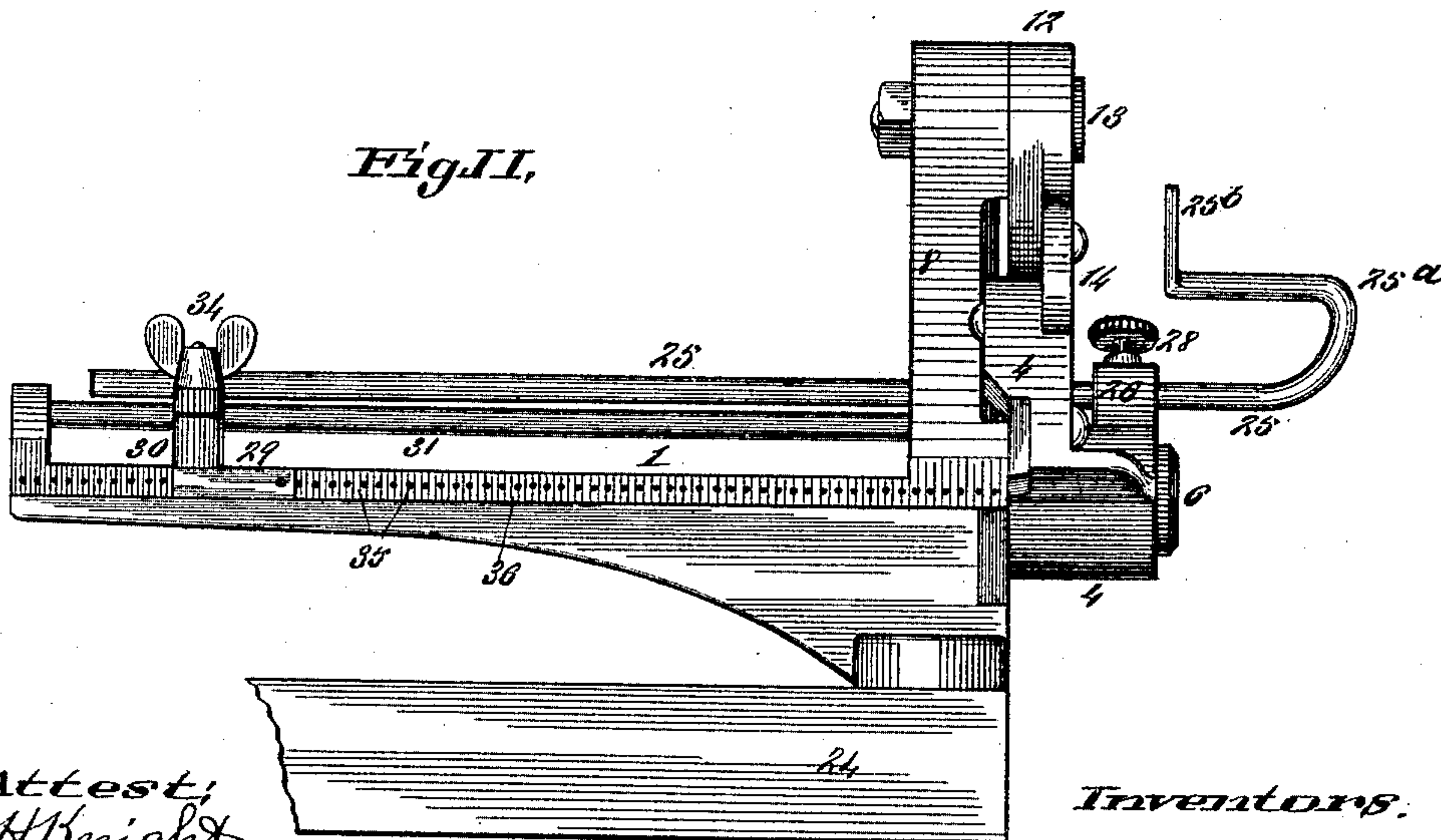


Fig. II.



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Fig. III.

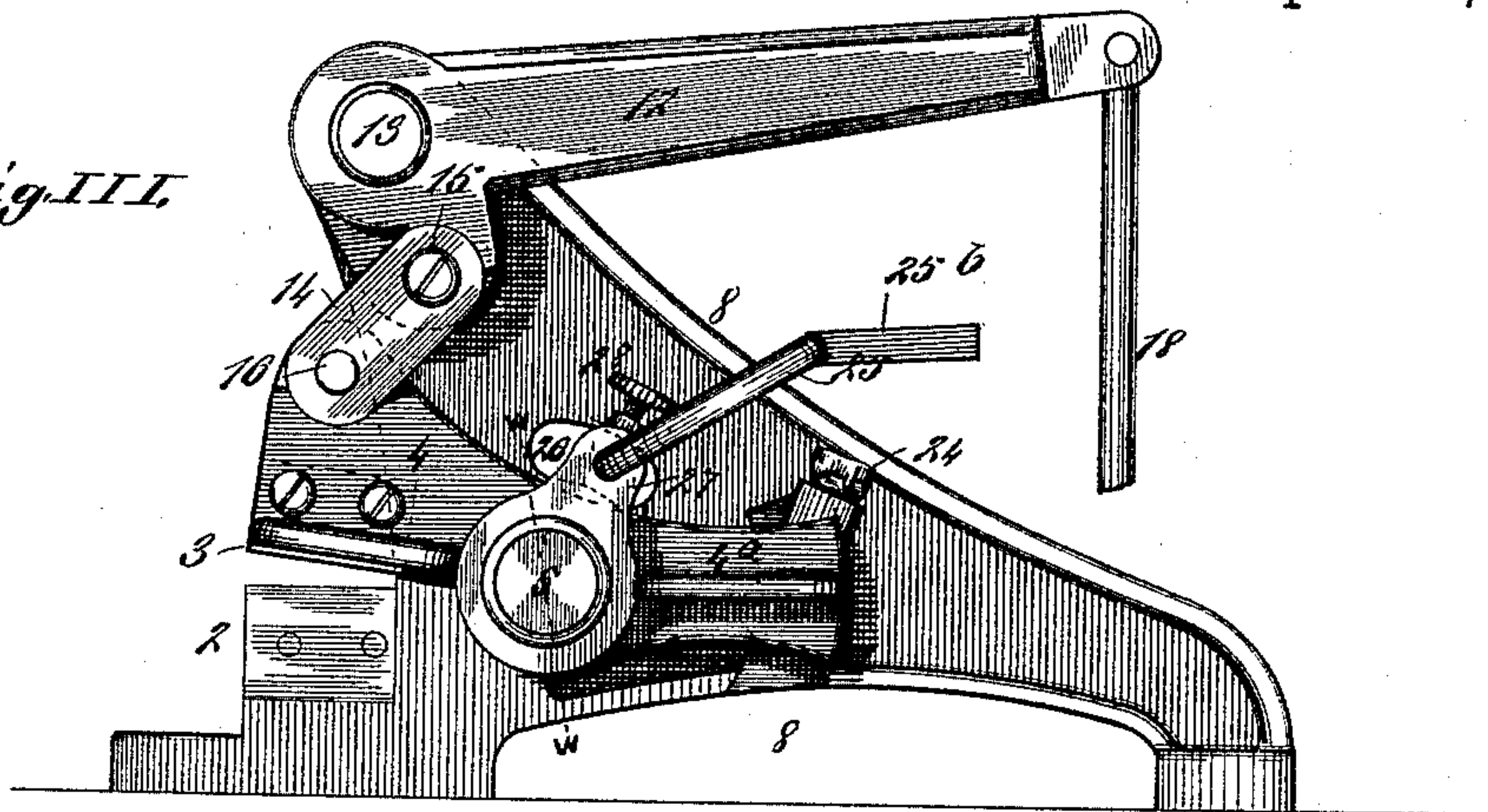


Fig. IV.

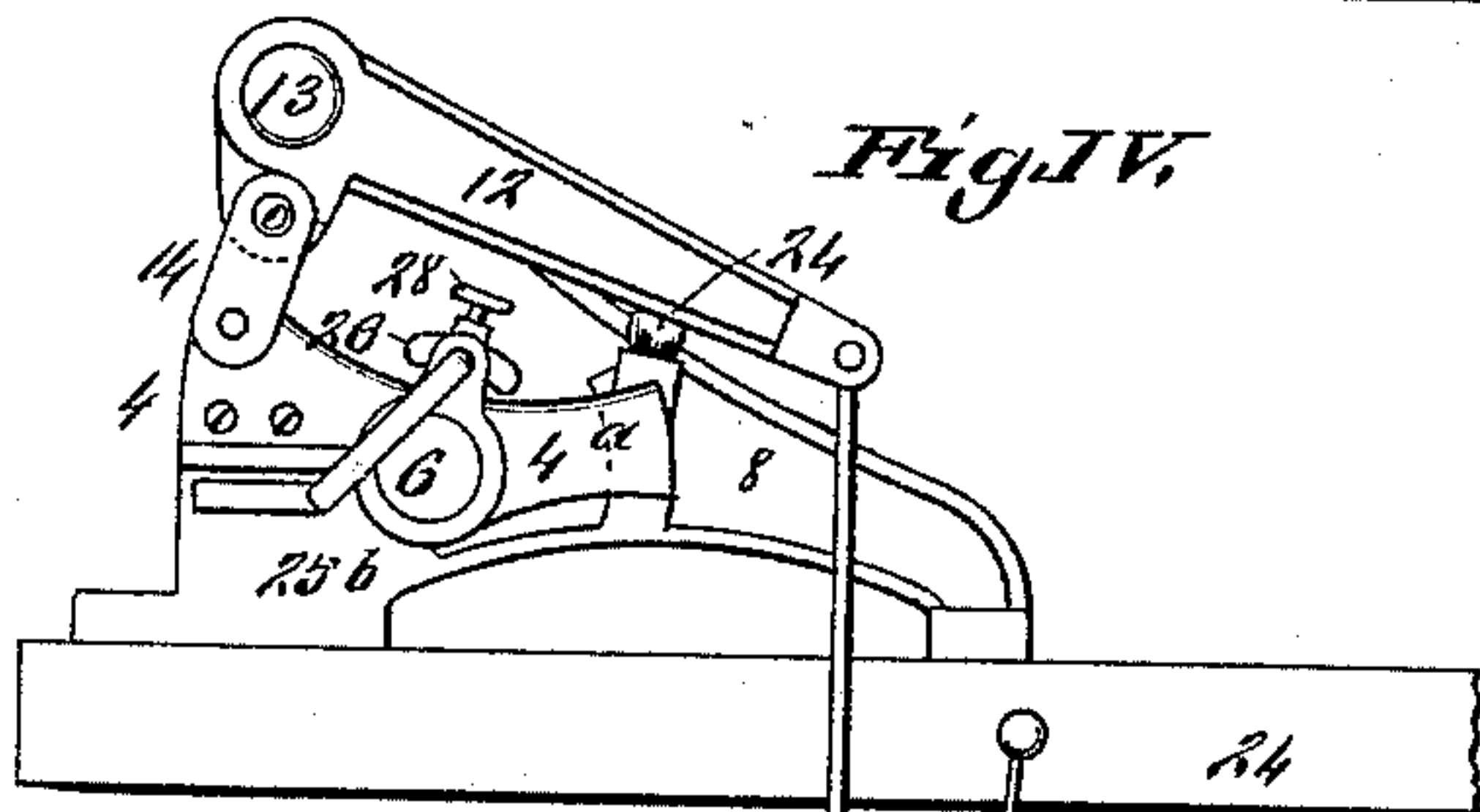


Fig. V.

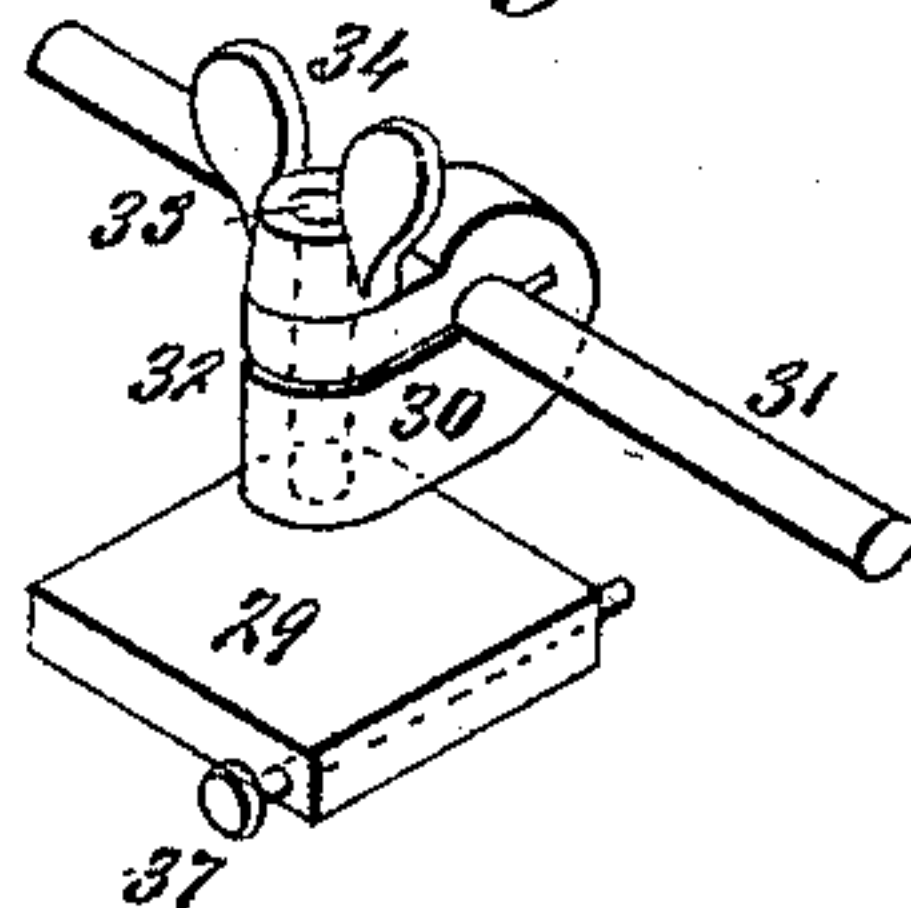


Fig. VI.

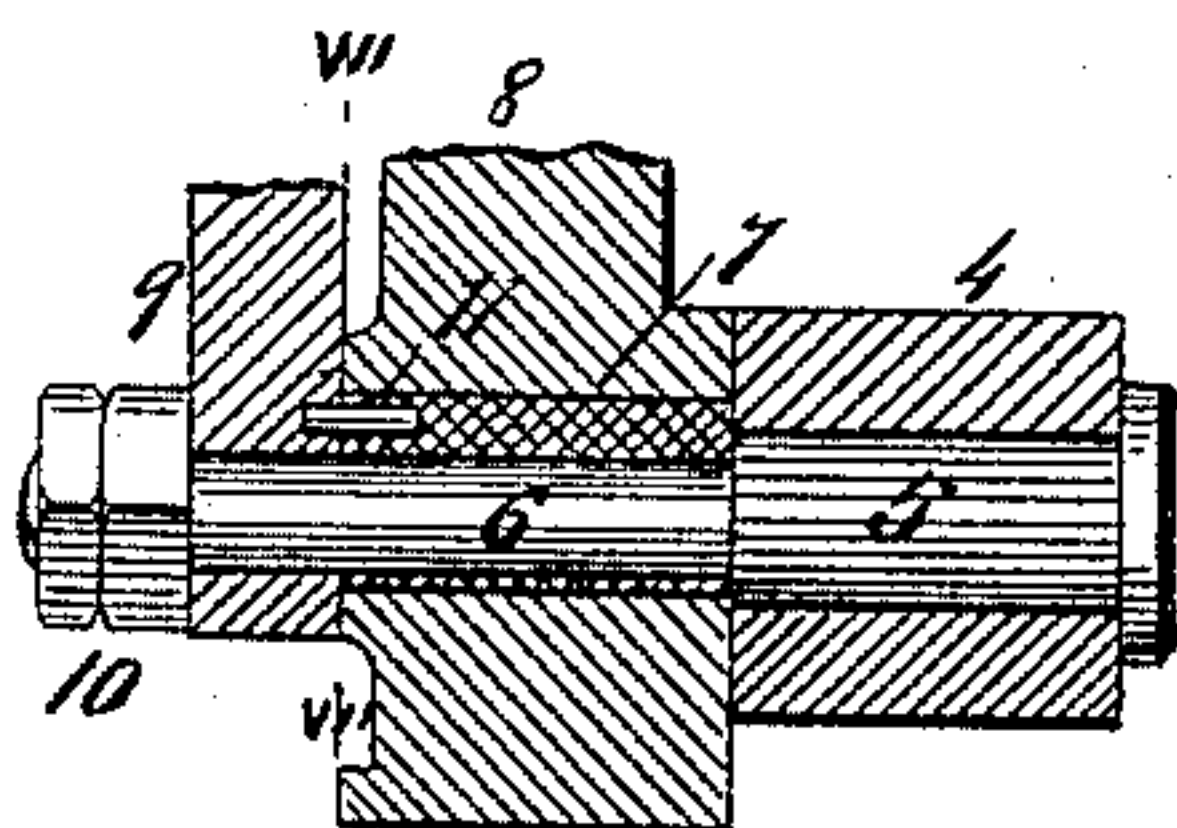
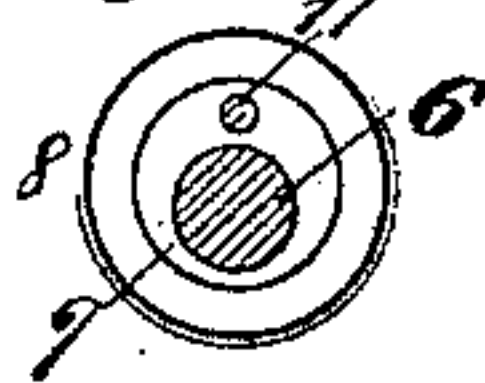


Fig. VII.



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UNITED STATES PATENT OFFICE.

CARL SCHRAUBSTADTER, JR., AND CHARLES R. SCHILLING, OF ST. LOUIS,
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LEAD-CUTTER.

SPECIFICATION forming part of Letters Patent No. 460,035, dated September 22, 1891.

Application filed May 26, 1891. Serial No. 394,233. (No model.)

To all whom it may concern:

Be it known that we, CARL SCHRAUBSTADTER, Jr., and CHARLES R. SCHILLING, both of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Lead-Cutters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to a device known as a "lead-cutter," and designed to be used for the purpose of cutting lead strips or plates, cutting stereotype-plates, cutting brass strips or plates, and for cutting other like articles.

Our invention consists in features of novelty hereinafter fully described, and pointed out in the claims.

Figure I is a top or plan view of our improved device. Fig. II is a front elevation. Fig. III is an end view. Fig. IV is an end view on a smaller scale and showing the treadle for operating the device. Fig. V is a detail perspective view of the inside gage. Fig. VI is an enlarged detail vertical section taken on line VI VI, Fig. III. Fig. VII is a vertical transverse section taken on line VII VII, Fig. VI.

Referring to the drawings, 1 represents the graduated plate upon which the article to be cut is placed and along which it is moved to the knife.

2 represents the fixed blade of the knife, and 3 the movable blade. The latter is secured to a head 4, journaled on the enlarged end 5 of an arbor or bolt 6, which passes through an eccentric 7, journaled in the main frame or arm 8. (See Figs. VI and VII.) On the inner end of the arbor 6 is a lever 9, held upon the arbor by means of nuts 10. The lever is connected to the eccentric, so as to turn the latter, preferably by means of a pin 11. The head 4 has an extension 4^a beyond the arbor 6, and this extension bears against a chafing-surface 8^a on the arm or frame 8, so as to prevent the horizontal movement of the outer end of the lever in a direction away from the fixed knife, thus to a great extent removing the strain from the point of bearing between the head and the arbor, due to the tendency of the movable knife to move horizontally away from

the fixed knife when the machine is in operation.

12 represents a lever pivoted to the arm or frame 8 at 13 and connected to the outer end of the head 4 by means of a link 14, pivoted to the lever at 15 and to the head at 16 and forming a toggle-joint between the lever and head. The outer end of the lever is connected by a rod to a treadle 17. The rod is made in two parts 18 and 19. Secured to the part 18 is an upper socket 20 and a lower socket 21, in which the part 19 of the rod loosely fits.

22 is a set-screw fitting in one of the sockets, preferably the socket 21, and which serves to connect the two parts of the rod together. By this arrangement the rod may be lengthened and shortened at will by loosening the set-screw, adjusting the parts, and then tightening the set-screw again.

23 represents a spring connecting the socket 21 to the bed-plate 24, upon which the arm or frame 8 rests. The tendency of this spring is to lift the outer end of the lever 12 and thus open the knife automatically.

24 represents an arbor or other elastic bumper placed on the outer end of the arm 4^a of the head 4, and against which the lever 12 impinges as the knife closes, thus serving to stop the movement of the parts at the proper time.

When soft materials are being cut, it is desirable to have the blade 3 move substantially parallel to the blade 2, and this is accomplished by moving the lever 9 to turn the eccentric 7, with its deepest or thickest part undermost, in the reverse position to that shown in Figs. VI and VII, and in the cutting of hard metals it is desirable to have a shearing action, and this is accomplished by turning the eccentric, through means of the lever 9, with its deepest or thickest part up, or into the position shown in Figs. VI and VII, this movement of the eccentric changing the vertical position of the center of the head 4, as will be clearly understood.

25 represents an outside gage consisting of a rod passing through an opening 26 in the head or frame 8 and through a protuberance 27 on the head 4, where it is held to any adjustment by means of a set-screw 28. The outer end 25^a of the rod is bent substantially

as shown in Figs. I and II, forming a lip 25^b, against which (when the gage is turned to using position, as shown in Fig. IV) the material to be cut impinges. When it is desired to use this outside gage, it is turned from the position shown in Figs. I, II, and III to the position shown in Fig. IV, with the lip 25 in line with the blades of the knife, the material to be cut being moved each time until it comes against the lip 25^b. The gage may be shifted so as to obtain any desired length of cuts through means of the set-screw 28. When it is not desired to use this outside gage, it is moved from the position shown in Fig. IV to the position shown in Figs. I, II, and III.

29 represents an inside gage, which acts in conjunction with the scale on the blade 1. This gage is made in the form of a block (see Figs. I and V) secured by a clamp 30 to a supporting-rod 31. This clamp has a slit 32, which permits it to be tightened on the rod 31 by means of a pin 33, projecting upwardly from the gage 29 through the clamp and provided with a thumb-nut 34 on its threaded upper end. The pin passes loosely through the clamp 30, and it will be observed that by tightening the thumb-nut 34 the gage 29 will be brought up firmly against the clamp, as well as the clamp being tightened on the rod 31, and thus the turning of the gage is prevented when the thumb-nut is tightened.

35 represents a row of perforations in the vertical wall 36 of the plate 1 to receive a pin 37 in the gage 29. The perforations 35 correspond to the scale on the plate, so that when the pin enters the perforations the gage is necessarily accurately adjusted to the scale.

By loosening the thumb-nut 34 the gage 29 may be turned a quarter-revolution, so as to bring its side 38 against the shoulder 36, and thus increases the capacity of the device to cut long and short pieces, for when the gage is turned to the position shown in Fig. I the gage will move the piece being cut up very close to the knife, and when the gage is moved to its extreme outer position and the side 38 turned against the shoulder 36 a longer piece of material can be placed on the plate 1 than could be if the gage were not capable of being turned this quarter of a revolution.

We claim as our invention—

1. In a lead-cutter, the combination, with a fixed knife, of a movable knife, a pivoted head to which the movable knife is secured, a pivoted lever connected to the head, a treadle, a two-part rod connecting the lever

to the treadle; sockets on one part of the rod through which the other part of the rod loosely passes, a set-screw on one of the sockets, and a spring 23, substantially as and for the purpose set forth.

2. In a lead-cutter, in combination with a fixed knife, a movable knife, a head to which the movable knife is secured, an arbor on which the head is journaled, an eccentric through which the arbor passes and which loosely fits in its supporting-arm, and a lever connected to the eccentric, substantially as and for the purpose set forth.

3. In a lead-cutter, in combination with a fixed knife, a movable knife, a head to which the movable knife is secured, an arbor having an enlargement upon which the head is journaled, an eccentric through which the arbor passes and which is journaled in its supporting-arm, and a lever on the arbor and connected by a pin to the eccentric, substantially as and for the purpose set forth.

4. In a lead-cutter, in combination with a fixed knife, a movable knife, a head to which the movable knife is secured, a vertically-adjustable bearing on which the head is journaled, and means for moving the bearing, substantially as set forth.

5. In a lead-cutter, in combination with a fixed knife, a movable knife, a head to which the movable knife is secured and which is provided with an extension 4^a, a lever for operating the head, a pivoted link connecting the lever to the head, and an elastic bumper on the extension of the head, substantially as and for the purpose set forth.

6. In a lead-cutter, an adjustable pivoted gage 29, substantially as and for the purpose set forth.

7. In a lead-cutter, a gage pivoted to a sliding clamp, substantially as and for the purpose set forth.

8. In a lead-cutter, the combination of a graduated plate having a perforated shoulder and a movable gage having a pin 37, substantially as and for the purpose set forth.

9. In a lead-cutter, the combination of a graduated plate, a rod 31, a gage 29, having a pin 33, a clamp 30 fitting on said rod and through which said pin passes, and a thumb-nut on the pin above the clamp, substantially as and for the purpose set forth.

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CHARLES R. SCHILLING.

In presence of—

THOMAS KNIGHT,
A. M. EBERSOLE.