

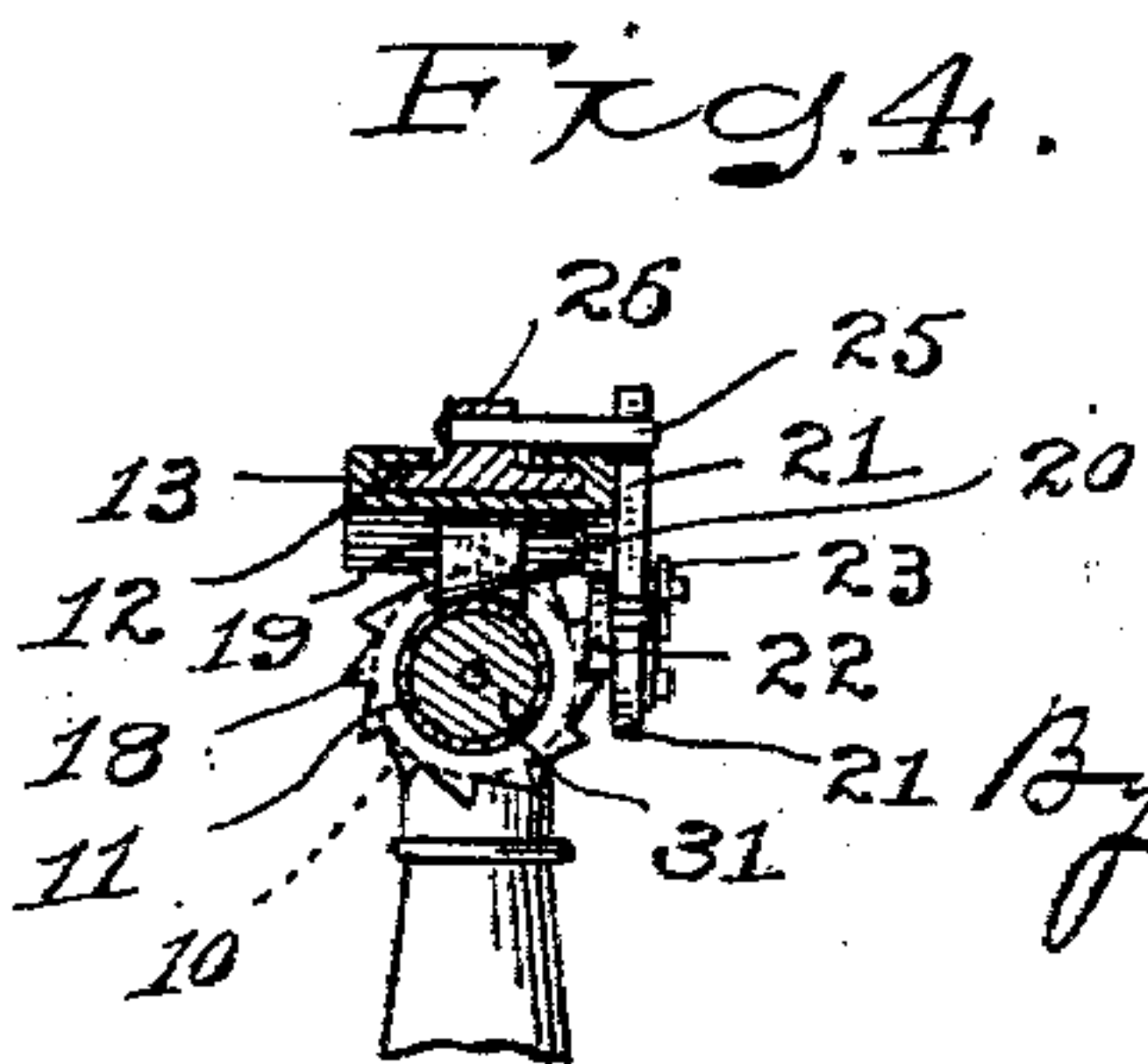
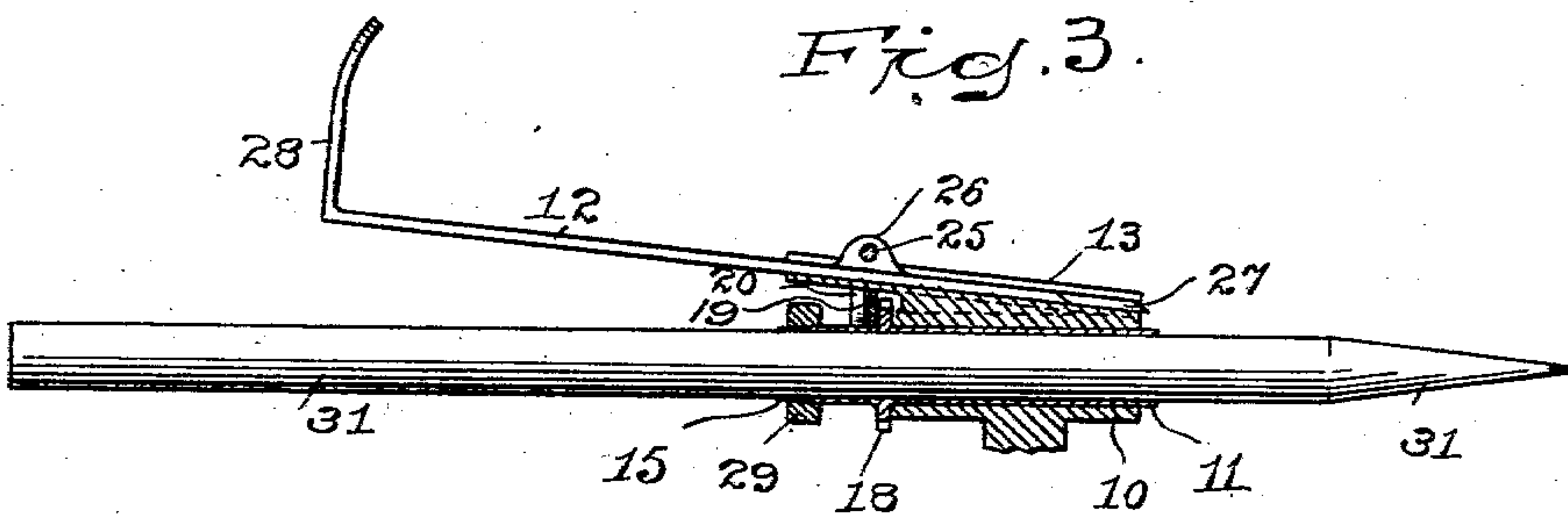
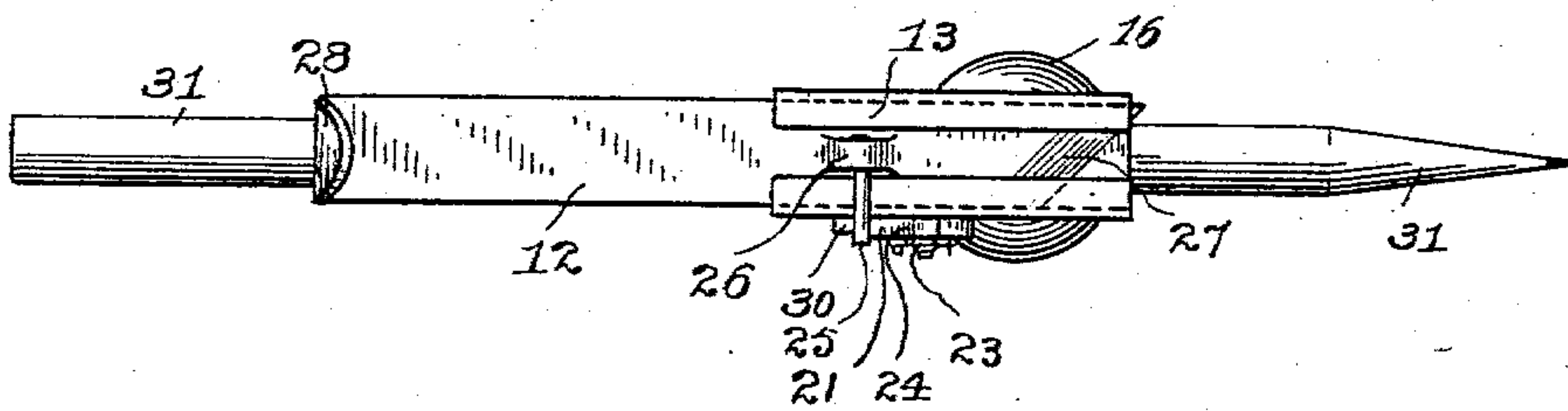
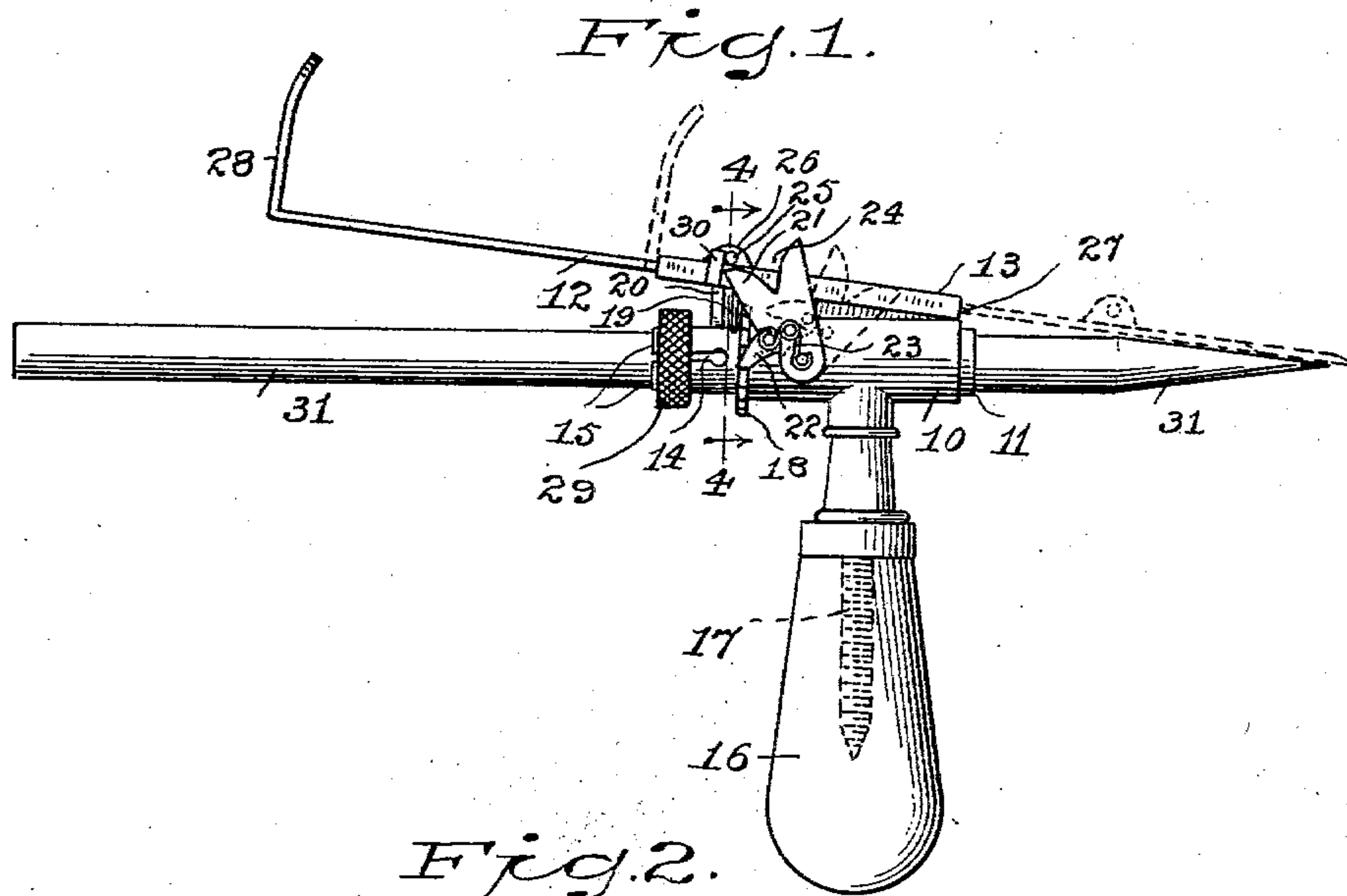
No. 720,821.

PATENTED FEB. 17, 1903.

W. E. KROUSE.
PENCIL SHARPENER.

APPLICATION FILED NOV. 21, 1902.

NO MODEL.



WITNESSES.

H. F. Lamb.

S. W. Atherton.

INVENTOR.

Walter E. Krouse

A. M. Wooster
Atty.

UNITED STATES PATENT OFFICE.

WALTER E. KROUSE, OF BRIDGEPORT, CONNECTICUT.

PENCIL-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 720,821, dated February 17, 1903.

Application filed November 21, 1902, Serial No. 132,238. (No model.)

To all whom it may concern:

Be it known that I, WALTER E. KROUSE, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Pencil-Sharpener, of which the following is a specification.

My invention has for its object to provide a simple, inexpensive, durable, and thoroughly practical sharpener for lead-pencils, one that may be used as a hand-tool, that is not attached in place or which may, if preferred, be permanently attached in place, as to a desk or table, the special requirement, however, being to produce a tool of this character which is in no danger of getting broken or out of repair under the ordinary conditions of use, but which will stand considerable rough usage and still be ready to do good work whenever it is required and will, moreover, put an even point on a pencil having a lead out of center.

With these and other objects in view I have devised the simple and novel pencil-sharpener of which the following description, in connection with the accompanying drawings, is a specification, reference characters being used to indicate the several parts.

Figure 1 is a side elevation of my novel pencil-sharpener as in use; Fig. 2, a plan view thereof; Fig. 3, a longitudinal section, and Fig. 4 is a transverse section on the line 4-4 in Fig. 1.

My novel pencil-sharpener consists, essentially, of a body 10, a rotary pencil-carrier 11, and a reciprocating cutter 12. The cutter is adapted to slide in a way 13, which lies at an acute angle to the pencil-carrier. The way and the body may be formed from sheet metal in one or more pieces or may be cast, if preferred. The pencil-carrier is tubular in form to adapt it to rotate in a central longitudinal opening in the body. It is preferably made of sheet metal, is externally beveled at its rear end to adapt it to receive a slide 29, and is provided with one or more slots 14, so as to separate the metal at the rear end into springs 15, the free ends of which are adapted to grip a pencil, which I have indicated by 31, when forced inward by the slide. In practice the rear end of the pencil-carrier may be externally threaded, if preferred, and slide

29 may be internally threaded and serve as a nut. The body is shown as provided with a handle 16, secured thereto by means of a screw 17. (Shown only in dotted lines in Fig. 1.) Should it be desired to attach the tool permanently in place, the handle may be removed and the tool secured to a desk or table by means of the screw. Other fastening devices, as a clamp, may be used, if preferred, but are not illustrated, as they form no portion of my present invention. The carrier is provided with a ratchet-wheel 18, which lies against the rear end of the body, the carrier being shown as retained in place in the body, but left free to rotate therein by means of a plate 19, which depends from the under side of the way.

20 denotes a spring which may be secured to the way or to plate 19 and bears against the pencil-carrier to retain it by frictional contact in any position in which it may be placed.

21 denotes a lever pivoted to the body and carrying a pawl 22, which is adapted to engage the teeth of the ratchet-wheel and move the latter forward, carrying the pencil-carrier with it one tooth at each actuation of the lever. A spring 23, carried by the lever, retains the pawl in operative position and causes it to engage a tooth of the ratchet-wheel at each backward movement of the lever and carry the ratchet-wheel forward and to slip backward over a tooth of the ratchet-wheel at each forward movement of the lever. The special design of the lever is of course not of the essence of my invention. I have shown the lever as provided with a notch 24, which is engaged by a pin 25, extending outwardly laterally from the cutter, the cutter being shown as provided with a central lug 26, to which the pin is attached. At the forward end of the cutter is an oblique edge 27 and at the rear end a handpiece 28 for convenience in operation.

30 denotes a stop on the outer side of the way, which may or may not be provided and which serves to limit the outward movement of the cutter in use, as clearly shown in Fig. 1.

The operation is as follows: The cutter is withdrawn to substantially the position shown in full lines in Fig. 1, slide 29 removed, and the pencil pushed into the carrier from the

rear until in the required position for sharp-
 ening. This position may be determined by
 moving the cutter forward until the edge
 touches the wood of the pencil, the pencil be-
 5 ing moved in or out until the edge engages it
 at about where it is desired to have the tip
 commence—that is, the point where the cut-
 ter commences to remove wood. In commenc-
 ing with a new pencil it is better to change
 10 the position of the pencil once and not at-
 tempt to complete the tip during one rotation
 of the pencil. Having adjusted the pencil in
 the carrier, the slide is moved to place there-
 on and clamps springs 15 against the pencil,
 15 causing them to grip the pencil firmly. The
 operator then pushes the cutter forward from
 the position shown in full lines in Fig. 1 to
 the position shown in dotted lines. As the
 cutter moves forward pin 25 will engage the
 20 notch in the lever and will swing it forward
 from the position shown in full lines in Fig.
 1 to substantially the position shown in dot-
 ted lines, the pawl moving backward over one
 of the teeth of the ratchet-wheel. When the
 25 cutter is moved backward, it will swing the
 lever from the position shown in dotted lines
 toward the position shown in full lines and
 will through the engagement of the pawl with
 a tooth of the ratchet-wheel carry the latter
 30 forward one tooth and with it the pencil-car-
 rier and the pencil, so that at the next for-
 ward movement of the cutter a new shav-
 ing of wood will be removed from the pen-
 cil close to where the last shaving was re-
 35 moved. In practice the ratchet-wheel may
 be provided with ten or twelve teeth, more
 or less, so as to complete a rotation of the
 pencil in ten or twelve forward movements
 of the cutter, each removing a shaving from
 40 the wood of the pencil. It is of course well
 understood that it is a serious objection to
 most of the pencil-sharpener now in use
 that they will not make good points except
 when the pencil-lead is exactly in the center
 45 of the wood; but if the lead is out of center
 they remove the wood on one side well down
 on the lead, leaving wood on the opposite side
 nearly to the end of the lead, so that in use
 the lead breaks quickly. In using my novel
 50 pencil-sharpener, however, should the lead
 be out of center the operator first uses the
 tool in the usual manner, taking care not to
 cut into the wood too deeply on the side on
 which the lead is nearest the periphery, then

turns the carrier forward until the side on 55
 which the lead is farthest from the periphery
 is in position to be engaged by the cutter,
 and then adjusts the pencil specially and
 makes the necessary cuts, each forward move- 60
 ment of the cutter of course removing a shav-
 ing of the wood of the pencil. These special
 cuts may be made wholly independently of
 the ordinary feeding action of the lever, pawl,
 and ratchet-wheel, it being of course obvious 65
 that the carrier may be turned forward at
 any time, the pawl slipping over the teeth of
 the ratchet-wheel, and that each backward
 movement of the cutter will move the carrier
 forward one tooth.

Having thus described my invention, I 70
 claim—

1. A pencil-sharpener consisting of a body,
 a pencil-carrier adapted to rotate therein, a
 cutter adapted to slide at an angle to the
 body and mechanism intermediate the cutter 75
 and the carrier whereby the latter is rotated
 at each return movement of the cutter.

2. A pencil-sharpener consisting of a body,
 a pencil-carrier adapted to rotate therein and
 carrying a ratchet-wheel, a cutter adapted to 80
 slide at an angle to the body and having a
 projecting pin, a lever carried by the body
 and adapted to be engaged by the pin and a
 spring-controlled pawl upon the lever which
 is adapted to engage the ratchet-wheel and 85
 rotate the carrier one actuation at each re-
 turn movement of the cutter.

3. A pencil-sharpener consisting of a body,
 a pencil-carrier adapted to rotate therein and
 carrying a ratchet-wheel, a cutter adapted to 90
 reciprocate in a way lying oblique to the body
 and mechanism intermediate the cutter and
 the ratchet-wheel whereby the latter is actu-
 ated at each reciprocation of the cutter.

4. A pencil-sharpener consisting of a body, 95
 a pencil-carrier adapted to rotate therein, a
 cutter adapted to slide at an angle to the body,
 mechanism intermediate the cutter and the
 carrier whereby the latter is rotated at each
 reciprocation of the cutter and a spring bear- 100
 ing upon the carrier and holding it by fric-
 tion in any position in which it may be placed.

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

WALTER E. KROUSE.

Witnesses:

A. M. WOOSTER,
 S. W. ATHERTON.