

No. 629,113.

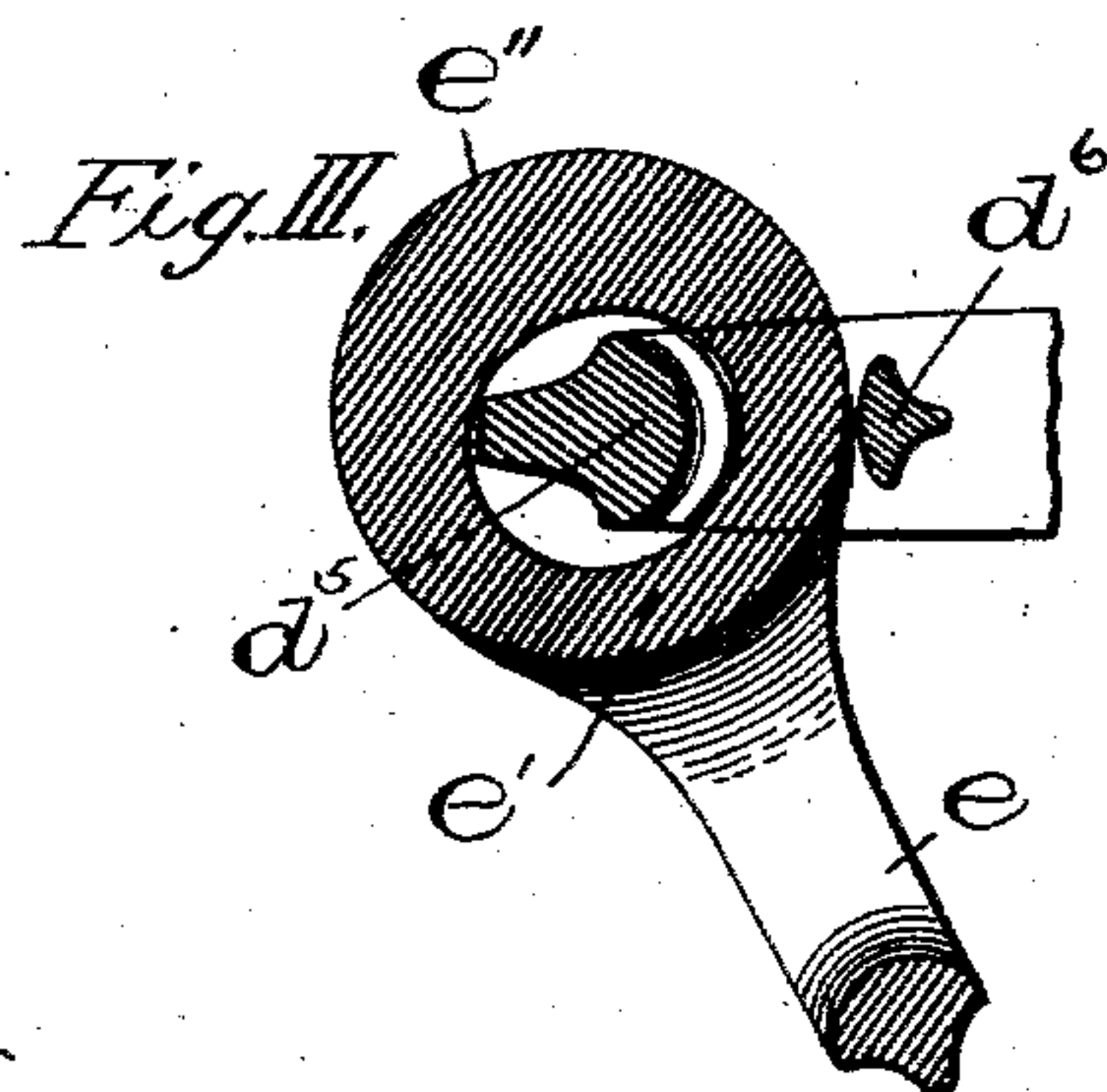
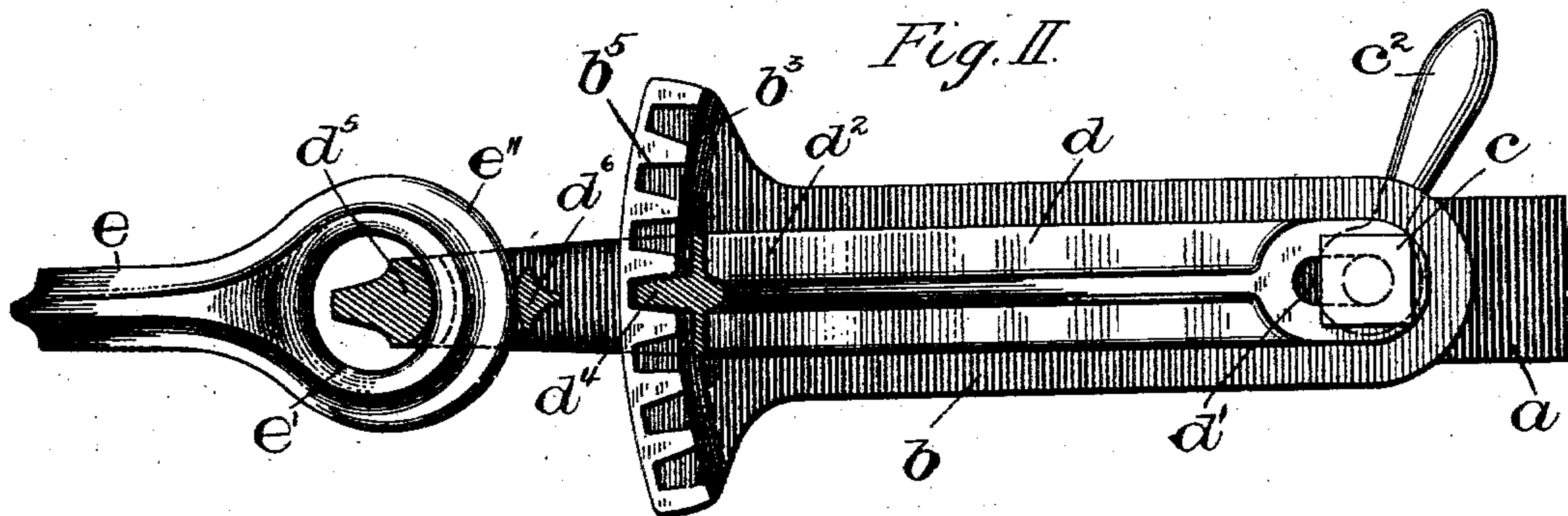
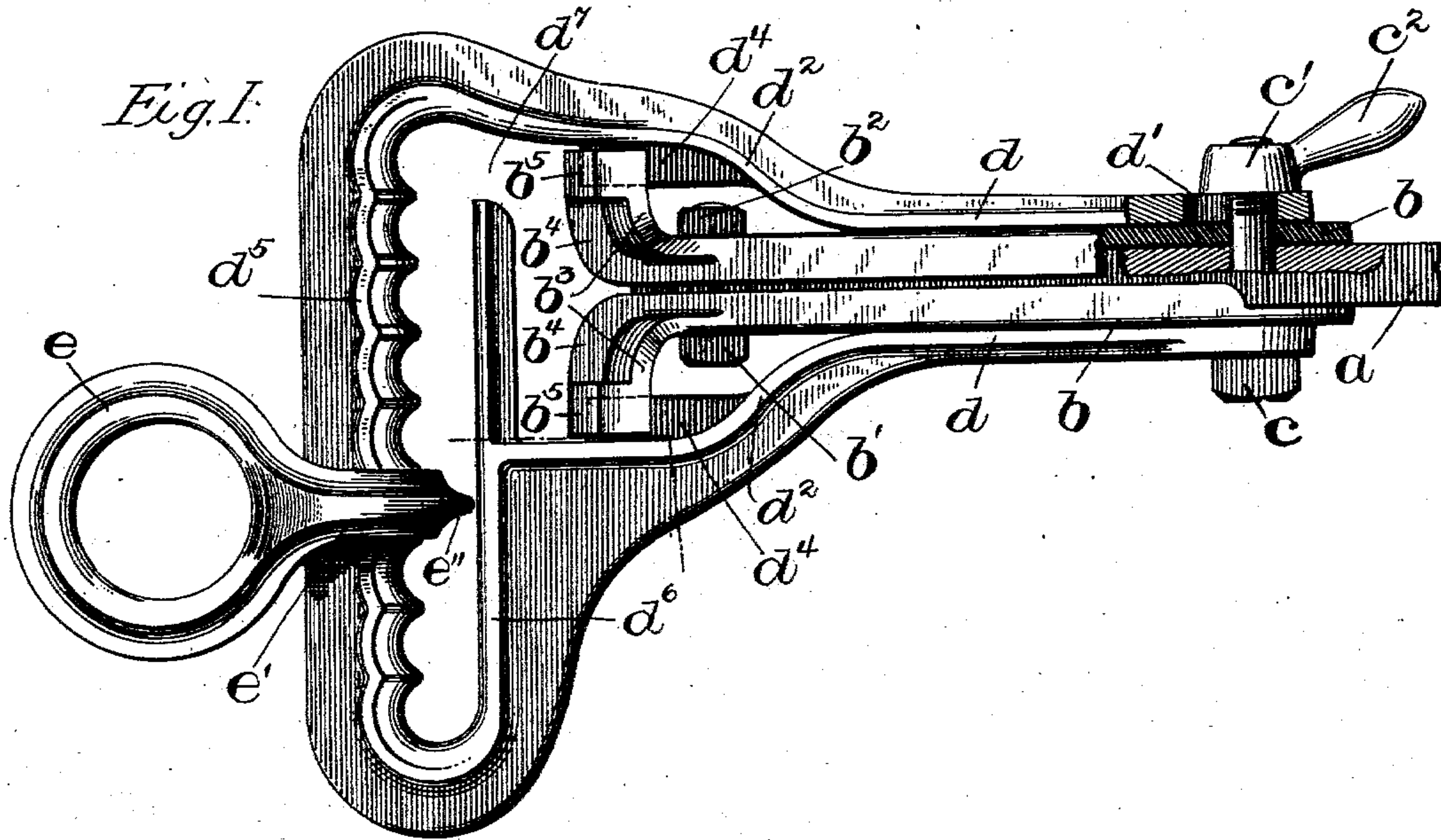
Patented July 18, 1899.

S. D. POOLE.
PLOW CLEVIS.

(Application filed Apr. 8, 1899.)

2 Sheets—Sheet 1.

(No Model.)



Witnesses:
W. B. Burdette
Osgood H. Howard

Inventor
S. D. Poole
by J. M. A. Howell
Att'y

No. 629,113.

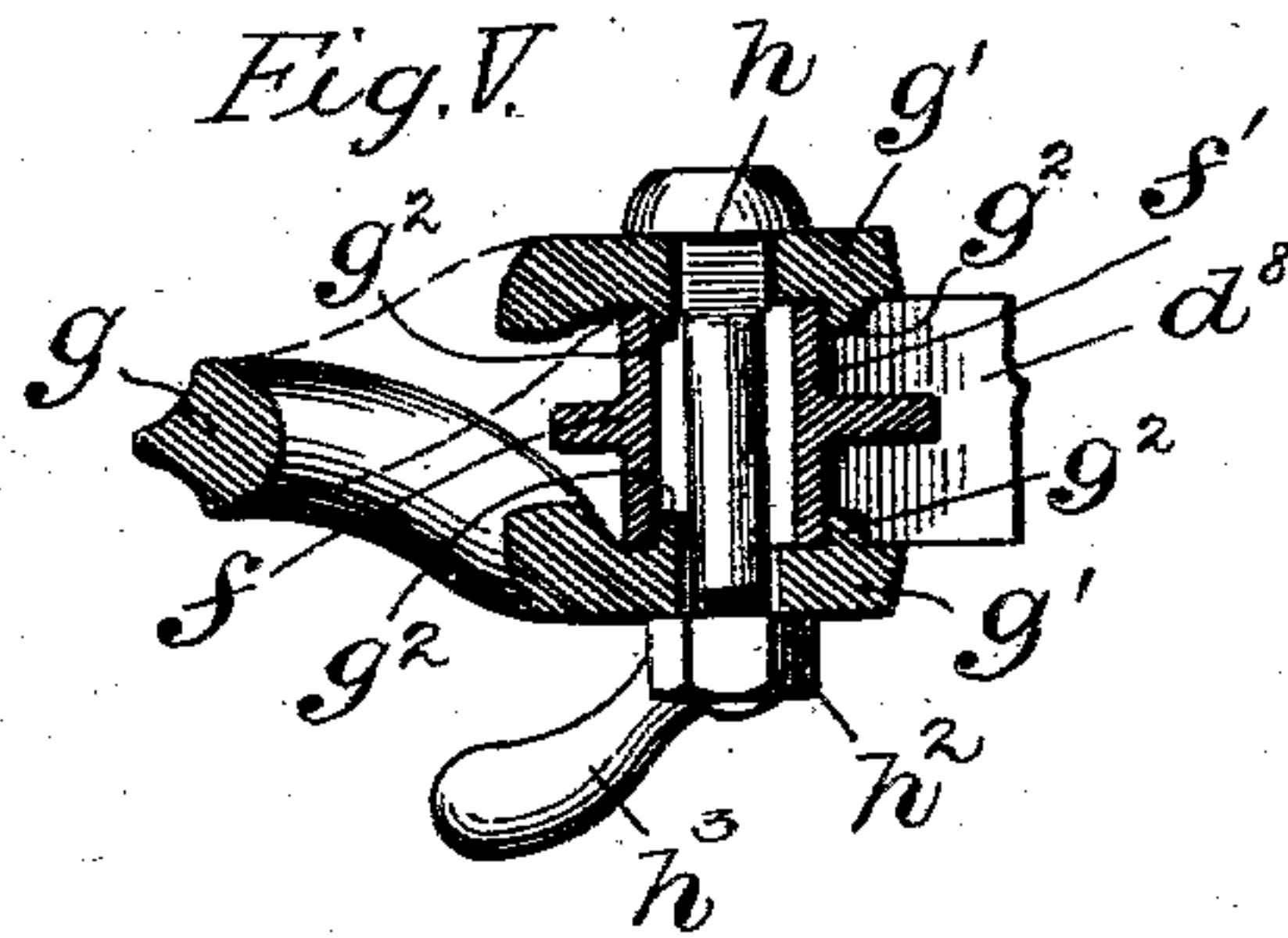
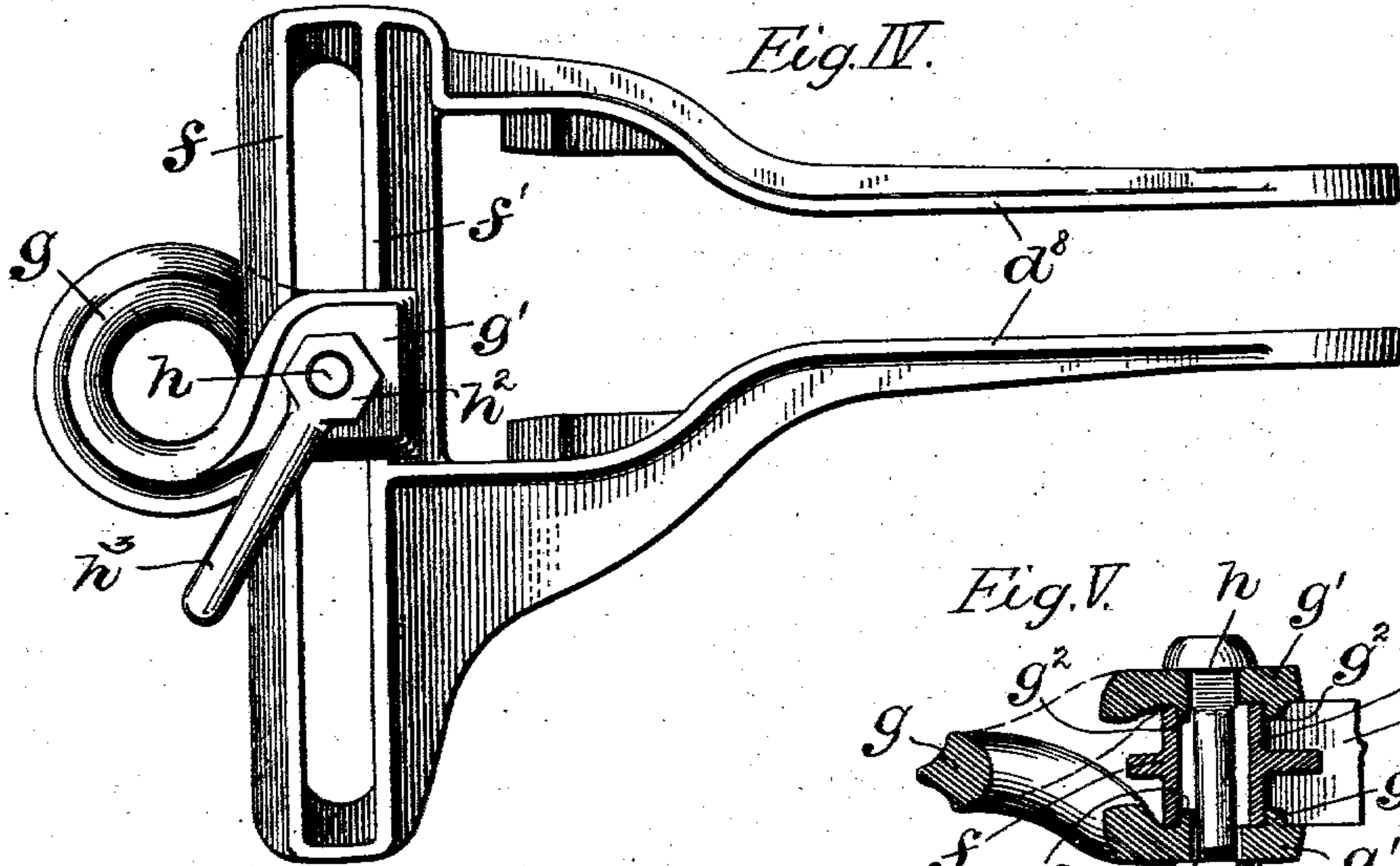
Patented July 18, 1899.

S. D. POOLE.
PLOW CLEVIS.

(Application filed Apr. 8, 1899.)

2 Sheets—Sheet 2.

(No Model.)



Witnesses;
Chas. B. Burdine.
Chas. H. Moore

Inventor
S. D. Poole
by John C. Dowell
Att'y

UNITED STATES PATENT OFFICE.

STALEY D. POOLE, OF MOLINE, ILLINOIS, ASSIGNOR TO THE DEERE & COMPANY, OF SAME PLACE.

PLOW-CLEVIS.

SPECIFICATION forming part of Letters Patent No. 629,113, dated July 18, 1899.

Application filed April 8, 1899. Serial No. 712,307. (No model.)

To all whom it may concern:

Be it known that I, STALEY D. POOLE, a citizen of the United States, residing at Moline, in the county of Rock Island and State of Illinois, have invented certain new and useful Improvements in Plow-Clevises; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

This invention relates to clevis constructions for plows or similar machines, the object being to provide improved means for securing the desired adjustments to regulate
15 the width and depth of the furrow, convenience in manipulation of parts, strength and durability, and also reliability of the adjusting means being desiderata which have been kept in view in evolving the invention.

20 With the above-stated objects in view the invention consists in certain novel features of construction and combinations of parts the essential elements of which are recited in the appended claims and several forms of embodiment of which are illustrated in the accompanying drawings and specifically described hereinafter.

Figure I represents one complete form of clevis construction in top plan view with some
30 of the parts partially broken away, so as to appear in section. Fig. II shows a sectionalized side elevation of the same, the section being taken on line II II of Fig. I. Fig. III shows a cross-section of the front portion of the clevis structure illustrated in Figs. I and
35 II, the parts appearing in a different adjustment than that shown in said figures. Fig. IV shows a top plan view of members of a clevis structure having a different arrangement for securing lateral adjustments. Fig.
40 V shows a section taken on the line V V of Fig. IV.

In Figs. I and II the reference-letter *a* designates a steel plow-beam, to the opposite sides
45 of which are applied flanged plates *b*, the flanges of the same taking over the upper and lower edges of the beam and said plates being clamped to the latter by means of a bolt *b'* and a nut *b²* at the front end of the beam
50 and also being engaged by a bolt *c*, which

passes through the beam and the plates near the rear end of the latter. Said flanged plates are considerably widened at their forward ends and there formed with outstanding
55 flanges *b³*, curved transversely of the plates in the arc of a circle and reinforced by webs *b⁴*, racks *b⁵* being formed on these flanges and partaking of the curvature of the latter, with their teeth pointing rearwardly. Arms *d* extend along the plates *b* and are formed at
60 their rear ends with longitudinal slots *d'*, through which the bolt *c* passes, said bolt constituting a pivot for these arms and the slots permitting longitudinal play of the latter, but means being provided in the form of a clamp-
65 ing-nut *c'* for holding the arms against longitudinal movement, said nut engaging the bolt *c* and being formed with a handle *c²*, whereby it can be conveniently manipulated. The
70 said arms *d* are formed to lie closely against the plates *b* for a distance from their slotted portions and thence are curved outwardly, as shown at *d²*, so as to pass by the racks *b⁵*, said
75 arms being formed on their inner sides with teeth or lugs *d⁴* to engage said racks. These teeth or lugs are in the form of webs spring-
80 ing from the inner sides of the arms and shaped at their forward ends in conformity with the spaces between the teeth of the racks which said lugs are designed to oc-
85 cupy. The two lugs thus provided on the arms are directly opposite each other, and it will be understood that when they are engaged or interlocked with the racks *d⁵* no
90 pivotal movement of the arms *d* can take place with respect to the plow-beam. However, the angular relation of the arms *d* to the plow-beam can be readily changed within
95 the range of the racks *b⁵* by simply releasing the clamp-nut *c'* and sliding the arms *d* rearwardly, whereby the lugs *d⁴* are disengaged from the racks, after which the arms can be
100 swung to the desired position. The arms will then be drawn forward, so as to interlock the lugs *d⁴* with the racks, and the nut *c'* will be tightened to prevent accidental disengagement of the lugs from the racks. It is to be noted in this connection that a draft on the arms *d* in a forward direction tends to maintain the engagement between the lugs *d⁴* and

the teeth of the racks, giving added assurance of maintenance of the adjustment.

The arms d constitute parts of a clevis member which is completed by a front portion 5 elongated transversely of the plow-beam in the form of a loop comprising a corrugated front bar d^5 and a plain rear bar d^6 , the latter extending part way across the widened space between the forward portions of the arms d , 10 leaving an opening d^7 , by which said space and the interior of the loop are connected for a purpose which will hereinafter appear. The corrugated bar d^5 has a transverse convex curvature throughout its length, and the 15 rear bar d^6 extends opposite all of the corrugations of the bar d^5 .

The structure is completed by a draft-clevis in the form of two rings e and e' at right angles to each other, one for coupling with single or double tree and the other, e' , being especially formed for engagement with the corrugated bar d^5 . This latter ring has a gradually-increasing thickness from its point of 20 joinder with the other ring, so as to provide a double cam edge e'' for engagement with the bar d^6 , and the interior of said ring is made somewhat oblong, the object being to provide for engagement of this ring with the corrugations of the bar d^5 by forward turning of 25 the draft-clevis and for disengagement by rearward turning thereof, as illustrated in Fig. III. When turned slightly back from the position to which it would naturally drop in the absence of a forward draft, the double-ring clevis can be slid along past the ridges 30 of the corrugated bar d^5 , so as to position it for engagement with any one of the corrugations, and when opposite the desired corrugation forward turning of the clevis will engage 35 the inner portion of the cam-formed ring with that corrugation by reason of the engagement of the cam edge e'' with the bar d^6 , as clearly shown in Fig. II. The ring reaches the corrugated bar d^5 in the assemblage of parts by being 40 first passed over one of the arms d and slid along the same and through the opening d^7 .

It will be seen that the construction above described provides for lateral adjustment to 45 regulate the amount of land the plow is to take at each furrow without necessitating manipulation of any clamping device and that the draft on the clevis in plowing maintains the adjustment, while at the same time a new relation of parts can be quickly obtained by 50 turning the double-ring clevis rearwardly and sliding it along the corrugated bar. Of course while I have here shown the lateral elongation of one of the clevis members as on the left-hand side of the plow-beam its position 55 may be reversed, if desired, without change in the construction of parts and without destroying any of their functions.

While, as above stated, one advantage of the form of construction shown in Figs. I, II, 60 and III for securing lateral adjustment resides in the fact that no clamping device is required to be manipulated, yet it is within

the scope of my invention to construct a clevis member as a modification of that shown in Fig. I, in which modified construction the laterally-adjustable draft clevis is arranged to 70 be clamped at its different positions. Such a construction is illustrated in Fig. IV, wherein the reference-letter d^8 designates arms corresponding in all particulars with the arms d , 75 (shown in Fig. I,) but which are compounded with a different form of elongated front portion, the same being in the form of a closed loop with plain sides f and f' , the latter entirely bridging the widened space between 80 the arms d^8 . The draft-clevis g is in the form of a twisted ring with end portions in the form of plates g' fitting above and below the bars $f f'$ and formed with flanges or lugs g^2 , extending alongside said bars, so as to prevent any pivotal movement of the draft-clevis. The latter is connected with the other 85 clevis member by means of a bolt h , which passes through the plates g' and the space between the bars f and f' , the said plates being formed with square openings, with one of which a squared portion of the bolt engages to prevent its turning with relation to the 90 clevis, the head of the bolt bearing against the outer side of the plate around such opening. A clamping-nut h^2 is applied to the threaded end of the bolt and is formed with a handle h^3 , whereby it may be manipulated and forced into contact with the other of the 95 plates g' , with the effect of clamping the draft-clevis at any position to which it may be brought by sliding it along the bars f and f' . 100

The parts illustrated in Figs. IV and V are to be assembled with parts similar to those shown in Figs. I and II, whereby vertical adjustments are obtained to regulate the depth 105 of the furrow.

Of course it is to be understood that the invention herein disclosed is capable of embodiment in other forms than those illustrated in the accompanying drawings and specifically described. 110

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is— 115

1. In a plow or like machine, the combination with the beam, of plates secured on opposite sides of the same and formed at their outer ends with outstanding flanges curved transversely of the beam in the arc of a circle and having rack-teeth on the rear sides; and a clevis member having arms extending on opposite sides of the beam over said plates and formed with teeth to engage the racks of the latter, the arms of said clevis member being pivoted to the beam and plates with provision for longitudinal movement, substantially as and for the purpose described. 120 125

2. In a plow or like machine the combination of the beam and a clevis member pivoted thereto so as to swing vertically, with provisions for longitudinal movement and also for clamping of the clevis at different adjustments, one of the parts having fixedly asso- 130

ciated with it a vertically - extending arc-shaped rack and the other having fixedly associated with it a tooth or lug, and these members being relatively disposed for interlocking by forward longitudinal movement of the clevis with respect to the beam; the clevis member having a forward portion beyond the interlocking arc-shaped rack and tooth or lug and elongated transversely of the beam; together with a clevis member engaged with said elongated portion with provisions for adjustment to different positions longitudinally thereof, substantially as described.

3. In a plow or like machine, the combination with the beam, of a clevis member having arms extending on opposite sides of the beam and a transversely-elongated front portion in the form of a loop comprising a front

bar corrugated along its inner edge and a rear bar confronting the corrugations and extending partially across the space between the clevis-arms, a limited opening being provided beyond the extremity of the said rear bar of the loop to connect the interior of the latter with the space between the arms of the clevis member; together with a clevis member having a ring encircling the corrugated bar of the loop with provision for engagement with and disengagement from the corrugations by turning of the ring, substantially as described.

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

STALEY D. POOLE.

Witnesses:

BURTON F. PEEK,
FRED H. COOPER.