

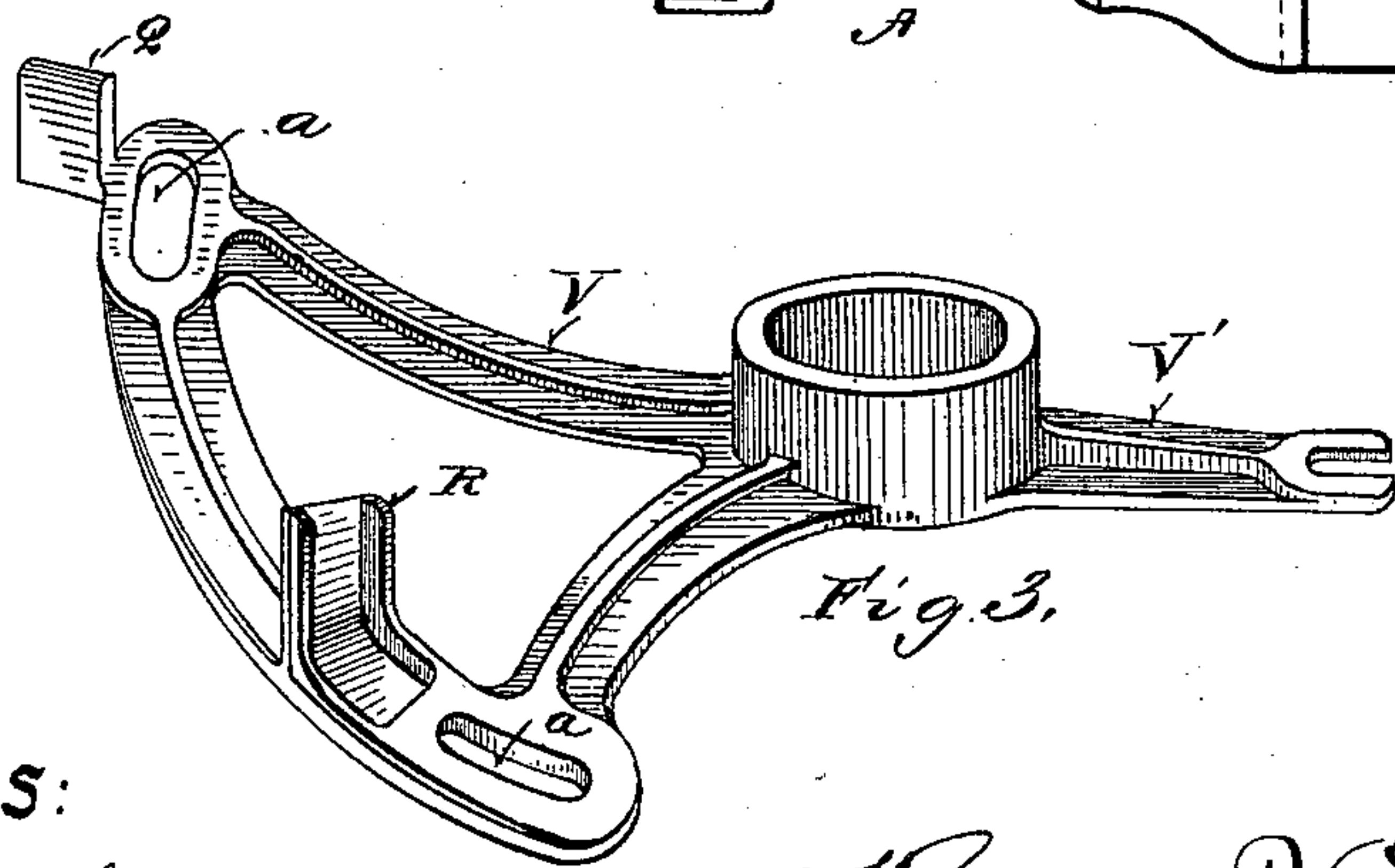
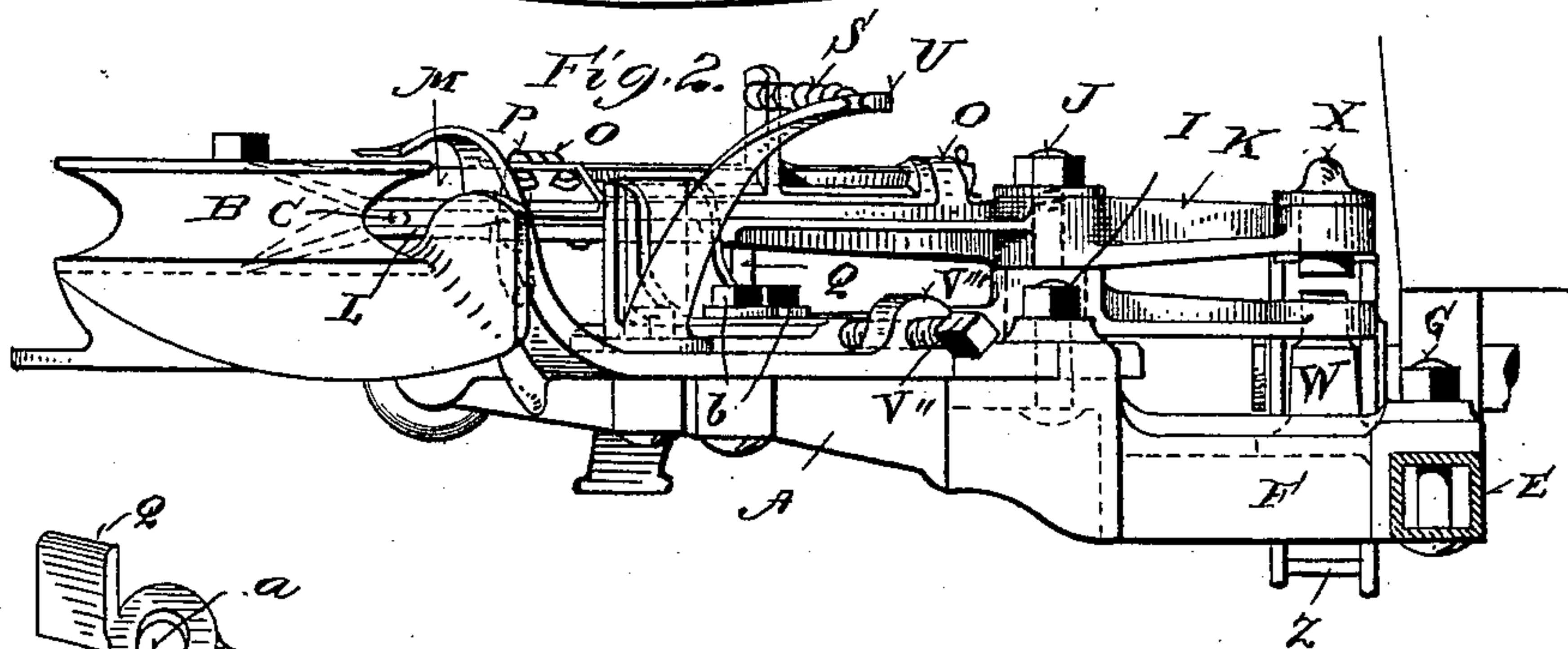
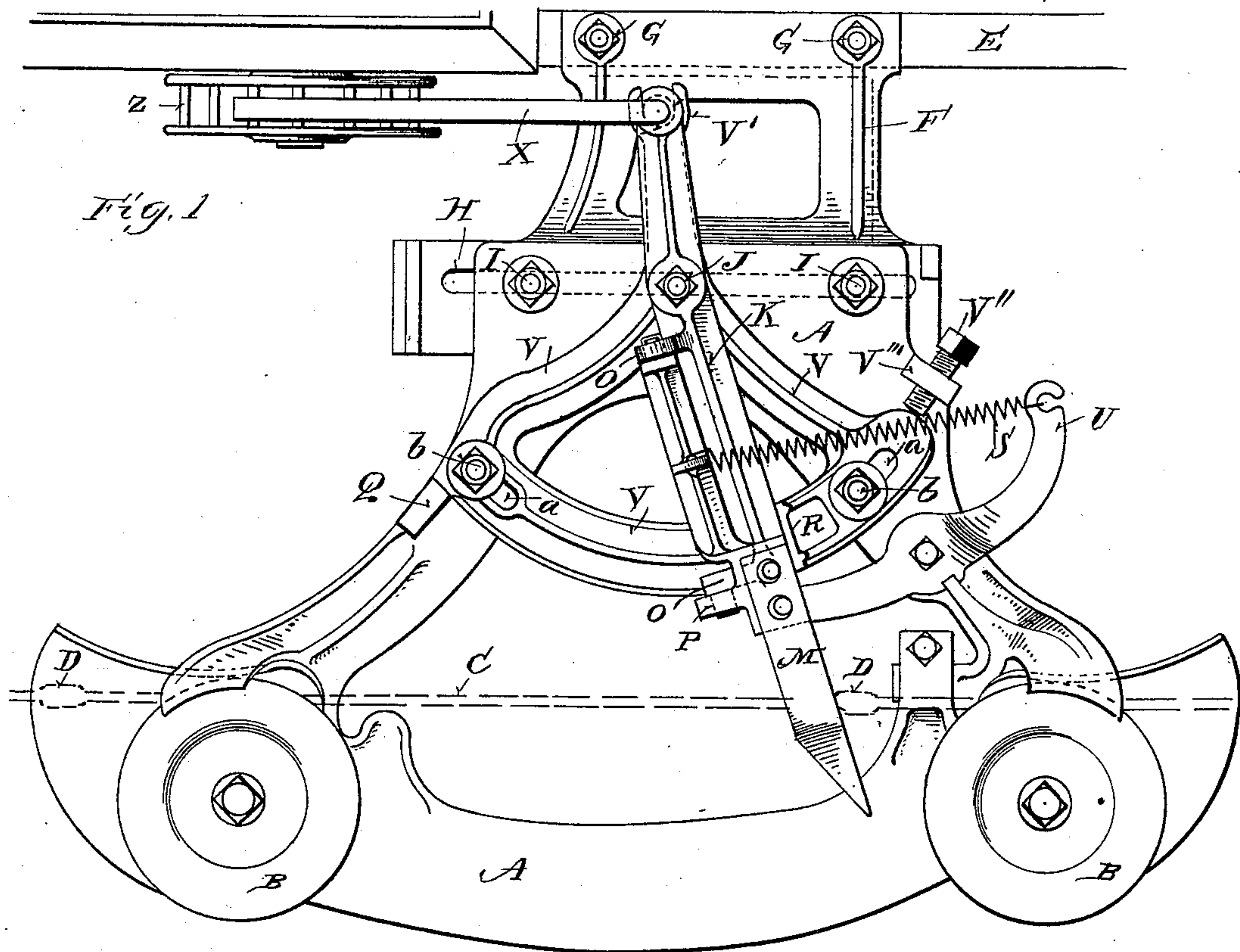
(No Model.)

H. V. DIEHL.

CHECK ROW ATTACHMENT FOR CORN PLANTERS.

No. 584,991.

Patented June 22, 1897.



WITNESSES:

Jos. C. Dawley,
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INVENTOR
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UNITED STATES PATENT OFFICE.

HENRY V. DIEHL, OF SPRINGFIELD, OHIO, ASSIGNOR TO THE FOOS MANUFACTURING COMPANY, OF SAME PLACE.

CHECK-ROW ATTACHMENT FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 584,991, dated June 22, 1897.

Application filed December 12, 1896. Serial No. 615,469. (No model.)

To all whom it may concern:

Be it known that I, HENRY V. DIEHL, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented certain new and useful Improvements in Check-Row Attachments for Corn-Planters, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to certain new and useful improvements in check-row attachments for corn-planters.

The general purpose and object of my invention are to provide an arrangement by which proper relative adjustments may be made of the center and the stops on which is mounted and by which is stopped the lever used to operate the seed-dropping devices by the action of knots or enlargements on the check-row wire coming into contact with such lever. This adjustment of said center is for the purpose of bringing the starting position of the lever to a point to agree with the position of the knots on the wire when the wire is adjusted to different places across the field, in doing which the knots may not come in line, with each adjustment, with the place they occupied in the former position of the wire, and the purpose of this adjustment of the stops is to cause them to stop the lever at the same relative position with respect to the seed-dropping devices, no matter to what point the center of the lever has been adjusted.

In the accompanying drawings, on which like reference-letters indicate corresponding parts, Figure 1 is a plan view of my check-row attachment with the adjacent parts of so much of a corn-planter as is necessary to illustrate the operation and purposes of my invention; Fig. 2, a front elevation of my attachment with a part of the machine-frame in section, and Fig. 3 a perspective view of the lever-bracket.

My assignee, The Foos Manufacturing Company, which is also the assignee of James F. Winchell of the invention set forth and shown in his application, filed May 14, 1896, Serial No. 591,462, and patented January 12, 1897, No. 575,289, has been manufacturing and selling the said Winchell invention. My invention is designed to improve or supplement the

said Winchell invention in the particulars indicated in the preamble above. In the practical field use of the said Winchell invention it developed that the stops S and T should be adjusted with such relation to any adjustment of the center H of the lever G as that the stroke of the inner end of the lever in operating the rod L would commence and end at the same points, so that the knots on the wire would be released by the lever at the same time with respect to the dropping position of the dropping mechanism, no matter at what point the center H might have been adjusted. It is to provide for this proper relative adjustment of the stops with respect to the different adjustments of the center of the lever that my invention is directed. Accordingly I have devised and applied what I term a "lever-bracket," by which the stops are carried. Therefore I employ the same or substantially the same frame A, carrying the sheaves B, which guide the check-row wire C with its knots or enlargements D through the attachment. This frame A, I bolt or screw to the frame E of the machine by means of an intermediate bracket F, bolted to the machine-frame, as shown at G, and slotted, as shown at H, to receive the bolts I of said attachment-frame A. A center or pivot J in the form of a bolt is fastened to the frame A, on which is pivoted the lever K, corresponding with the lever G in said Winchell patent and otherwise constructed as in said patent, having a fixed jaw L and a pivoted jaw M, the latter being carried on a hinge O and having a lug P, adapted to come in contact with the stop Q to open the jaw and release the check-row wire. The stop Q is for this purpose, and this stop R is for the purpose of limiting the other movement of the lever K when drawn upon by the spring S, secured at one end to a projection on the hinged jaw and at the other end to an arm U, fastened to the frame. This spring, as above stated, returns the lever to its position against the stop R and also incidentally acts to close the jaws ready to make contact with the next knot in the check-row wire.

I come now to the lever-bracket, which is shown at V and which is pivoted upon the pivot or stud J along with the lever K and has

its shorter arm V' extended along under the shorter arm of said lever K and bifurcated to fit upon a fixed stud W, projecting from the bracket F. The center of this stud W is coincident with the center of the pitman X, where it engages with the inner end of the lever K. Stops Q and R, before referred to, are projections from this lever-bracket V, as above indicated. Slots *a* in the lever-bracket receive bolts *b*, carried by the attachment-frame A, so that the lever-bracket can be fixed and secured in any position it may assume relatively to the frame A. Now let it be supposed that one row of corn has been dropped, that the check-row wire has been changed to a new position across the field, and in doing so the knots have been shifted a little out of line with the position they last occupied. This new position of the knots would cause them to be reached by the lever K a little later or a little sooner, according as their new position is in one direction or the other out of line with their last position. Now the thing to do is to so adjust the lever and its stops Q and R that the lever will meet the new position of the knots, both as to the first contact with the knots and the releasing of the knots. In the Winchell invention above referred to this is done by shifting the frame A in a right line and shifting the stops S and T at the same time in a right line while the ends of the lever are shifted in the arc of a circle and therefore at a different ratio or differentially. That was objectionable under some conditions. In my device the stops Q and R, like the lever, are adjusted in the arc of a circle and from the same center—namely, the center of the stud W and the pitman connection with the lever, which become the fixed points of the lever-bracket V and the lever K when the bolts *b* are released and the bolts *I* are loosened and the plate A shifted in a right line, carrying the pivot-stud J with it. Thus by means of my lever-bracket I adjust the stops Q and R from a common center with the fixed point of the lever during the time of adjustment. This results in stopping the lever at one extreme and opening the jaw at the other extremity at the same relative time in all of the different positions to which the lever and stops may be adjusted.

The pitman X, with the ratchet-wheel Z,

constitute the operating mechanism for the dropping devices, the latter not being shown. 55

Inasmuch as the return movement of the lever K by the action of the spring S brings it against the stop R with a hammer-like effect, tending to shift the lever-bracket in that direction, I have provided an adjustable stop in the form of a screw V'' in a lug V''' on the frame A. 60

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is— 65

1. In a check-row attachment, the combination with the attachment-frame secured to the machine, operating mechanism, a lever connected to said mechanism and pivoted to said frame, and a lever-bracket having stops and pivoted coincidently with said lever and held at one end coincidently with the connection of said lever and said operating mechanism, said lever-pivot being adjustable to different positions. 70 75

2. In a check-row attachment, the combination with the adjustable attachment-frame having a pivot-stud, a lever, and a bracket-lever mounted on said stud, stops secured to said bracket-lever and operating mechanism connected to said lever and a fastening for the bracket-lever coincident with the connection of the lever with the operating mechanism. 80

3. In a check-row attachment, the combination with the adjustable attachment-frame carrying a pivot-stud, a lever, and a bracket-lever pivoted on said stud, the latter having slots, bolts carried by the frame and fitting in said slots to secure said bracket-lever, stops carried by the bracket-lever, a stud which holds the other end of said bracket-lever and operating mechanism connected to said bracket-lever coincidently with said stud. 85 90

4. In a check-row attachment, the combination with the attachment-plate having a pivot-stud, of a lever and a lever-bracket pivoted on said stud, the bracket having stops to limit the movements of said lever and being adjustable with said lever. 95 100

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

HENRY V. DIEHL.

Witnesses:

OLIVER H. MILLER,
W. M. MCNAIR.