

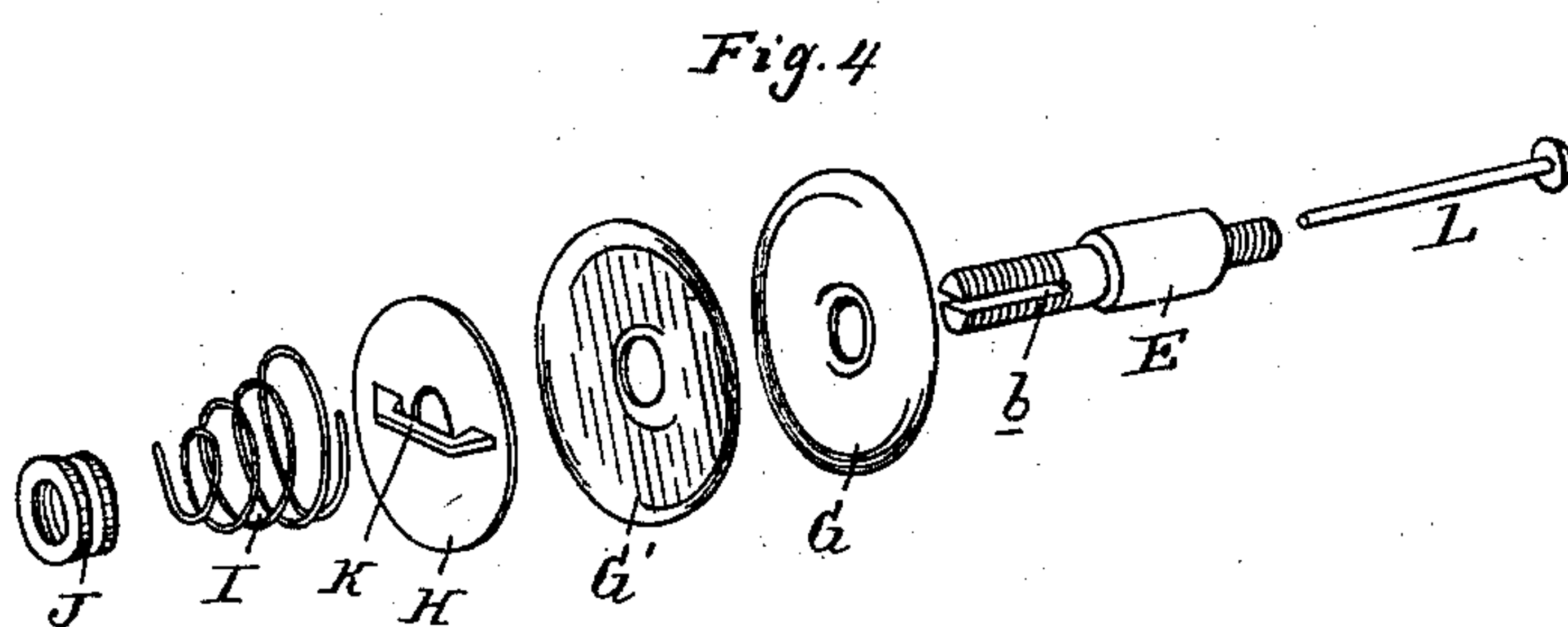
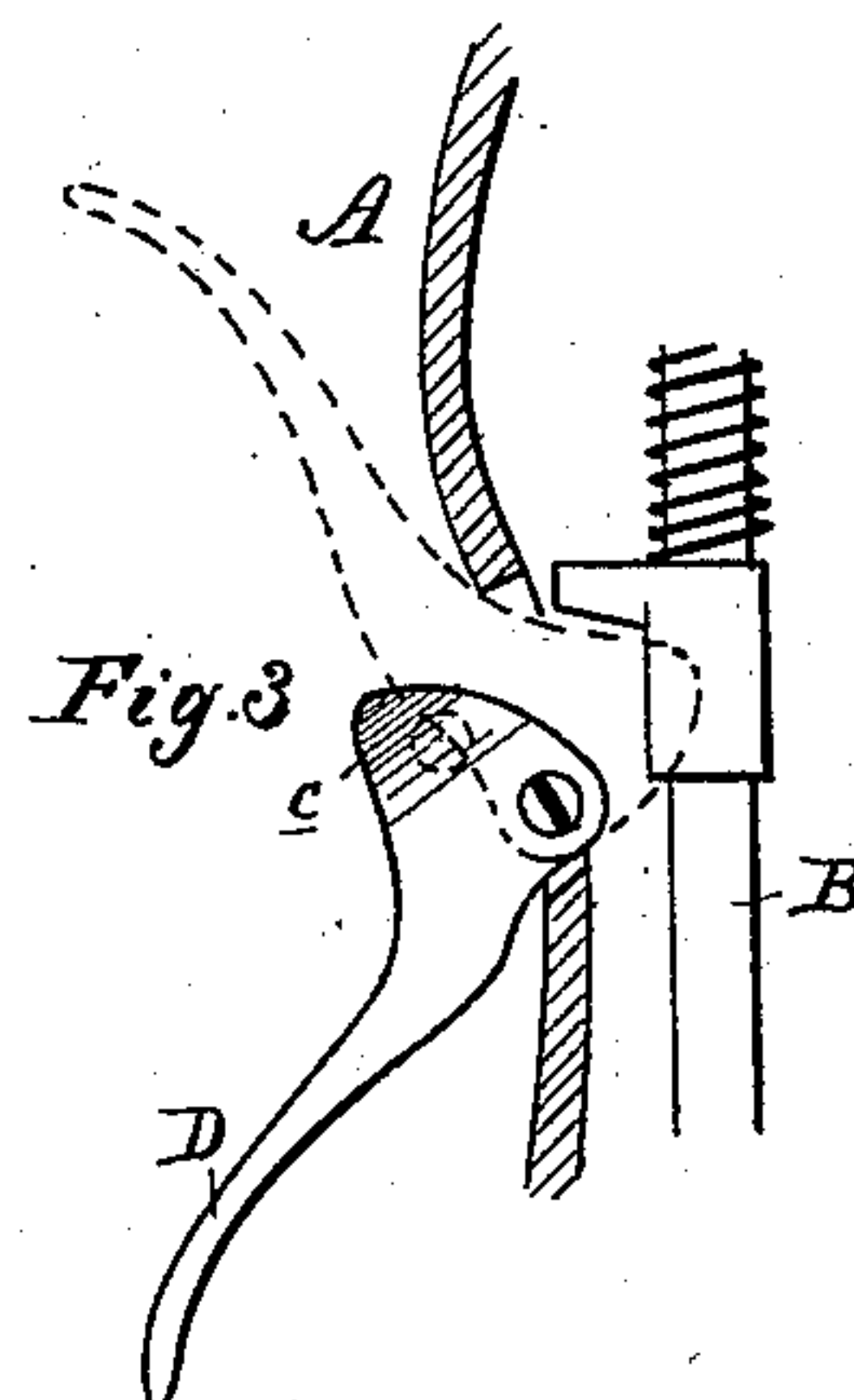
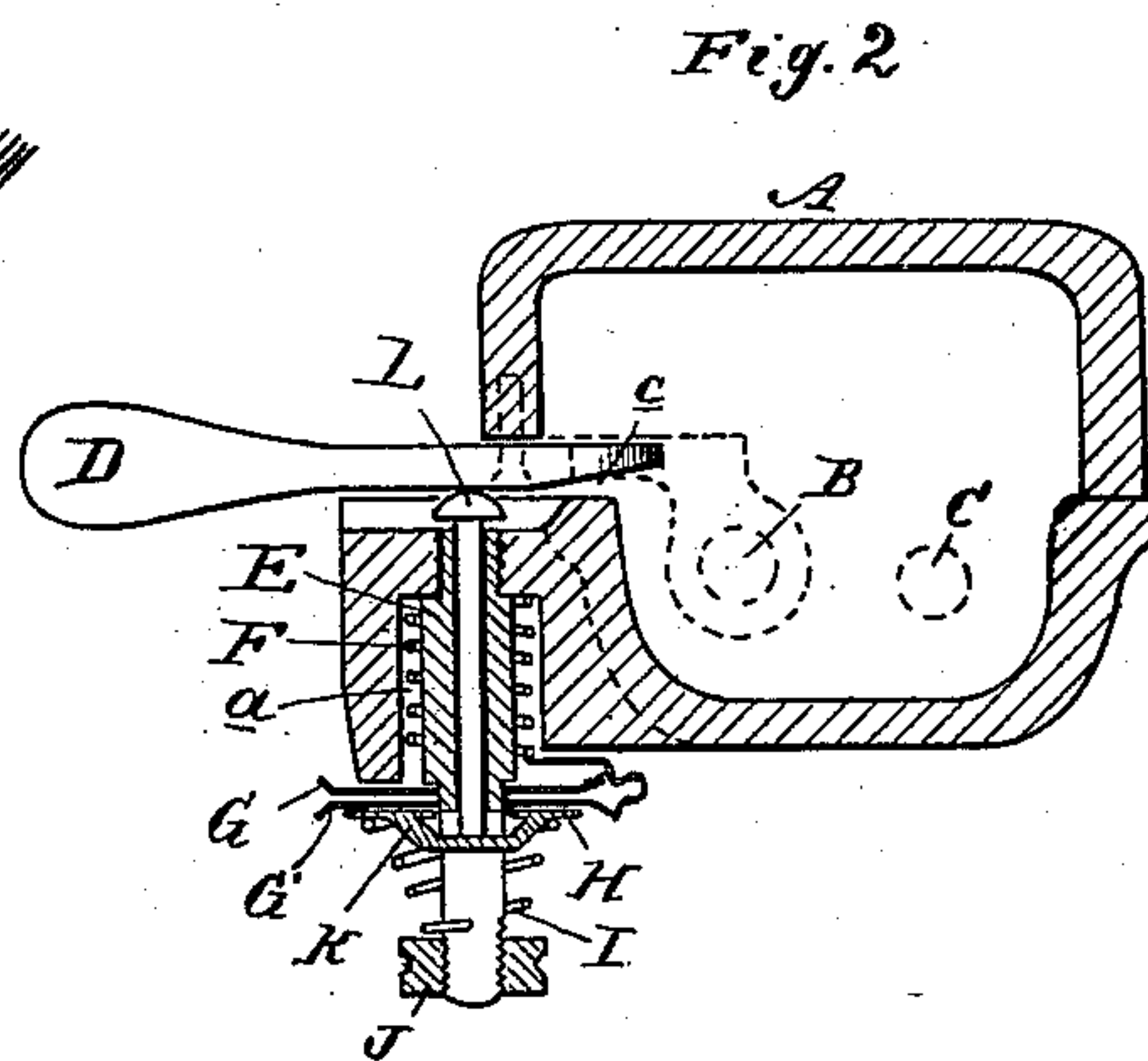
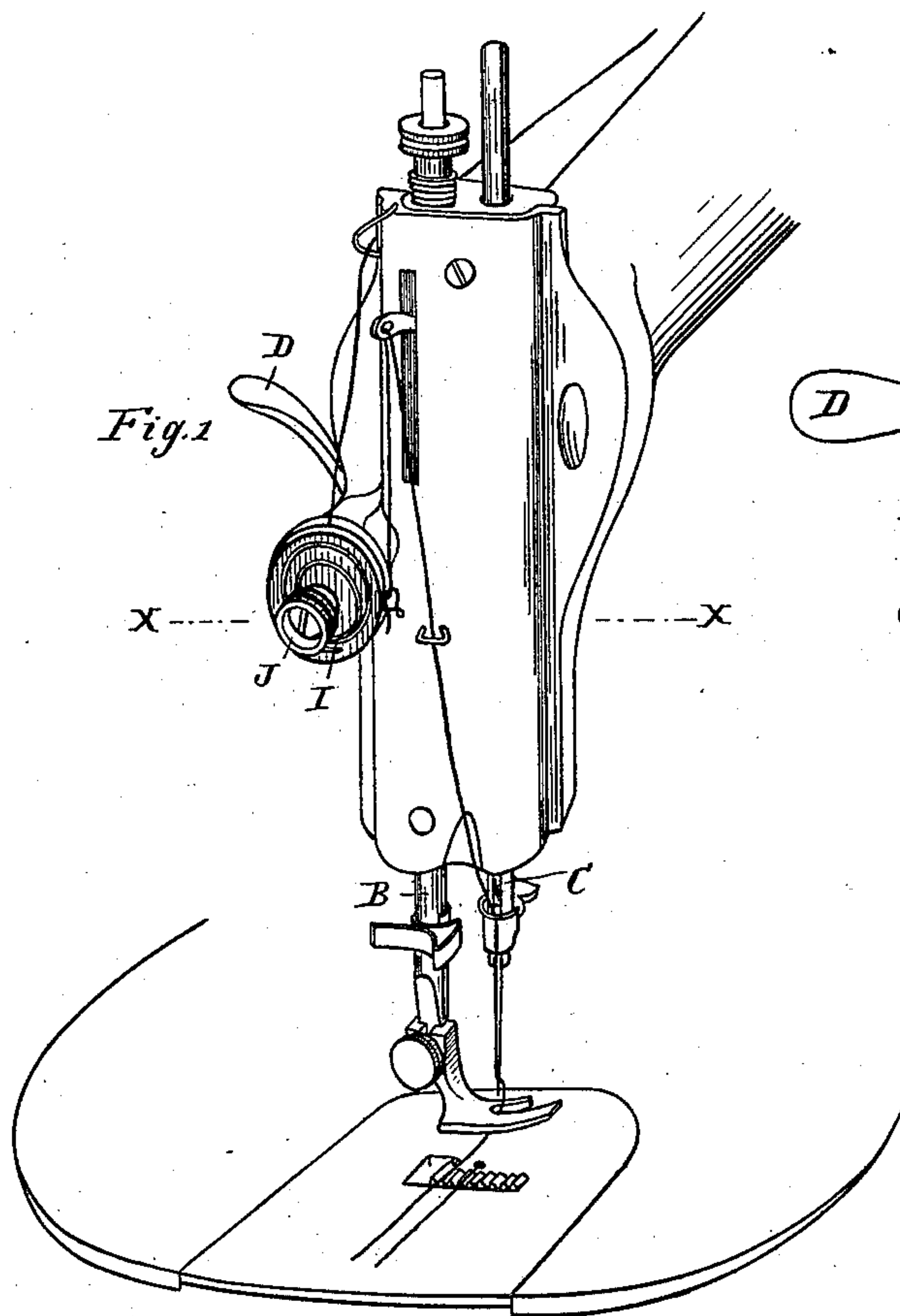
(No Model.)

B. C. BEDELL.

TENSION DEVICE FOR SEWING MACHINES.

No. 359,420.

Patented Mar. 15, 1887.



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BYRON C. BEDELL, OF PORT HURON, MICHIGAN.

TENSION DEVICE FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 359,420, dated March 15, 1887.

Application filed July 1, 1886. Serial No. 206,788. (No model.)

To all whom it may concern:

Be it known that I, BYRON C. BEDELL, of Port Huron, in the county of St. Clair and State of Michigan, have invented new and
5 useful Improvements in Attachments to Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this
10 specification.

This invention relates to certain new and useful improvements in attachments to sewing-machines.

As my invention is especially applicable to
15 that class of machines wherein the tension of the upper thread is controlled and regulated by the compression of the thread between two disks upon the machine-head, I show and describe my improvement in connection there-
20 with.

It is a well-known fact that after having "run up a seam" and it is desired to remove the work the presser-foot has to be raised and a slack given to the thread by pulling upon it
25 before removing the work; otherwise in pulling the work out with the tension on the thread the needle is often bent and has its point "hooked" by striking against the presser-foot.

The object of my invention is to construct
30 a device that will, immediately upon raising the presser-foot, release the tension upon the thread, so that the work can readily be removed without bringing any strain upon the
35 needle.

To this end my invention consists in the peculiar construction and arrangement of the tension device, adapted to be operated by the lever of the presser-foot, all as more fully
40 hereinafter described.

Figure 1 is a perspective view of the head of a sewing-machine provided with my improved tension device. Fig. 2 is a cross-section on the line *x x*, Fig. 1. Fig. 3 is a vertical
45 section through a portion of the head, showing the lever of presser-foot in two positions. Fig. 4 is a detail perspective of the tension device.

In the accompanying drawings, which form
50 a part of this specification, A represents a sewing-machine head, B its presser-foot, and C

the needle-bar. The presser-foot is raised by means of the cam-lever D, these parts being arranged substantially alike in the various classes of machines now manufactured. 55

E is a stud tapped into the bottom of an enlarged recess, *a*, in the head, and around the stud within the recess is placed a coil-spring, F. The outer end of this stud is decreased in size, as shown, and threaded for a portion of
60 its length. Over this end of the stud are slipped the two tension-disks G G', then a washer, H, and coil-spring I, the whole being retained in place by the nut J. Thus far I have described one of the tension devices now
65 in use, and the action or operation of which is well known.

My particular improvement consists in boring a hole through the longitudinal center of the stud E, which communicates with the slot
70 *b* in the outer end of the stud. Across the central opening in the washer H, I form a bridge, K, which latter, when the washer is in place, slips into the slot *b* and moves freely under the action of the tension-springs. 75

L is a headed pin, which I insert through the central bore of the stud, its inner end coming in contact with the bridge of the washer, while its headed end projects into the line of travel of the lever D when such lever is raised
80 or depressed to operate the presser-bar.

Referring to Fig. 2, it will be observed that the inner end of the lever D is upon one face beveled off, as at *c*, and the lever is shown in place as in the position in dotted lines, Fig. 85 3, after having raised the presser-foot. In this position the lever D, coming in contact with the head of the pin L, pushes the latter forward, and it in turn, pushing the washer away from the disk G', necessarily releases such disk from
90 the action of the spring I, and hence the frictional tension on the thread between the disks is destroyed, and the thread is free to be drawn through between them and through the needle without exerting any strain upon the latter. 95

When the lever D is thrown down so as to lower the presser-bar, the head of the pin L slides down the beveled face of such lever, thus leaving the spring I free to perform its functions in re-establishing the tension upon
100 the thread.

What I claim as my invention is—

1. The combination, with the presser-foot, of the tension device, provided with a bridged washer, a hollow stud, and a headed pin passing through said stud and removably engaging the bridge of said washer, and a lever operating said presser-foot and acting directly on the head of said pin, substantially as and for the purpose specified.

2. The combination, with the head A, provided with a recess, *a*, of the hollow stud E, tapped at one end into the bottom of said recess and provided at the opposite end with a

slot, *b*, spring F around said stud within said recess, disks G G' on said stud, the washer H, provided with bridge K, removably engaging the slot *b* of the stud, spring I and nut J on said stud, and the headed pin L, passed through said stud and engaging said bridge, substantially as described, and for the purposes specified.

BYRON C. BEDELL.

Witnesses:

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CHAS. THURMAN.