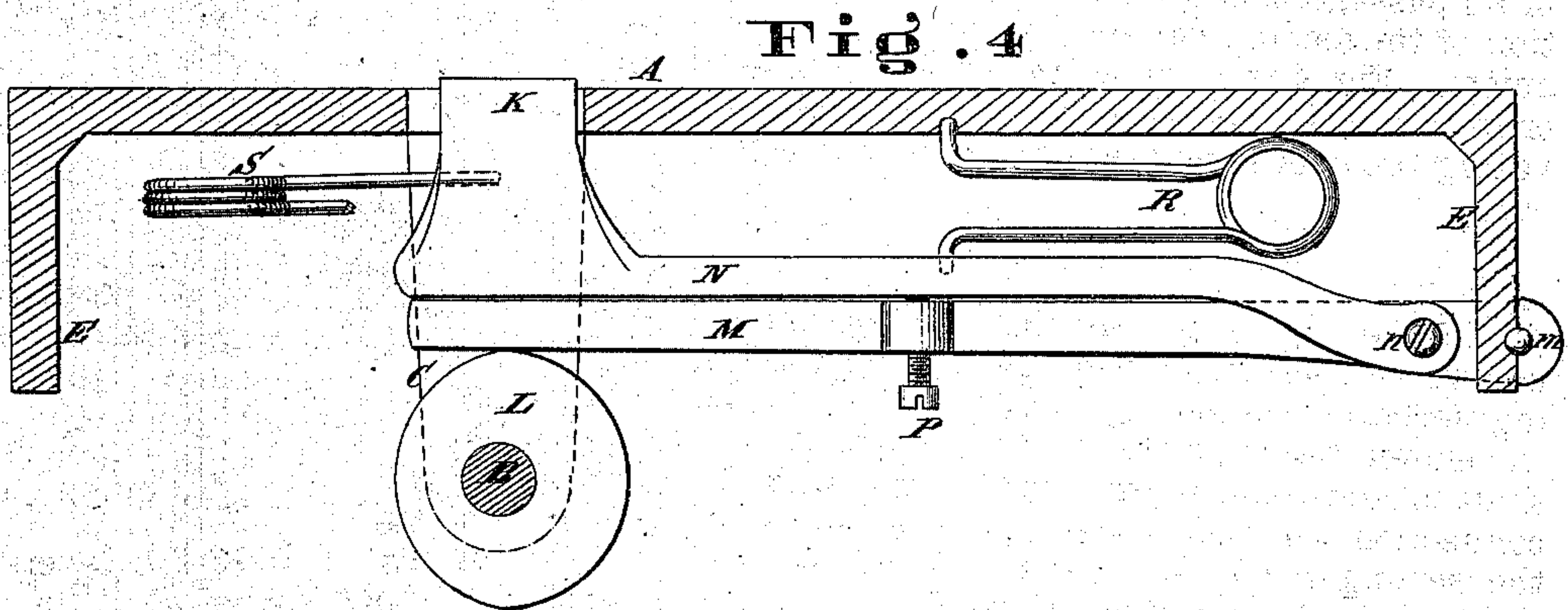
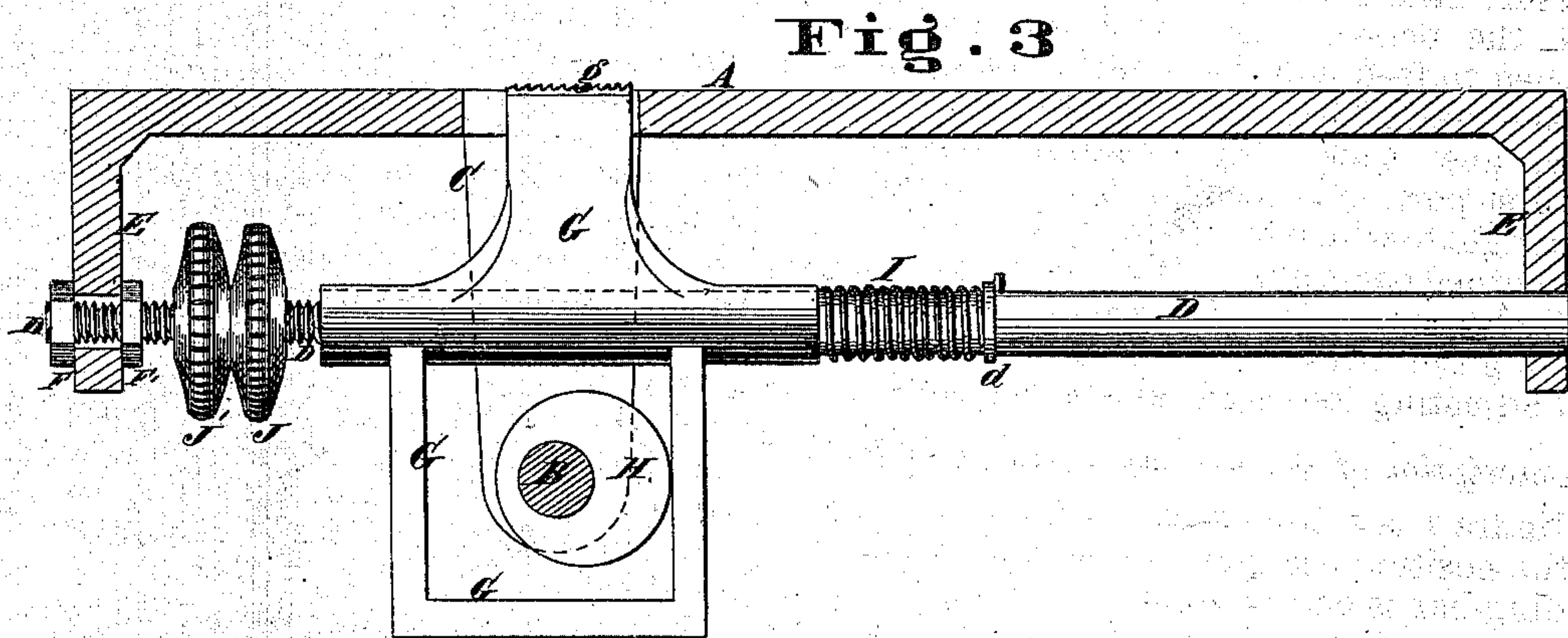
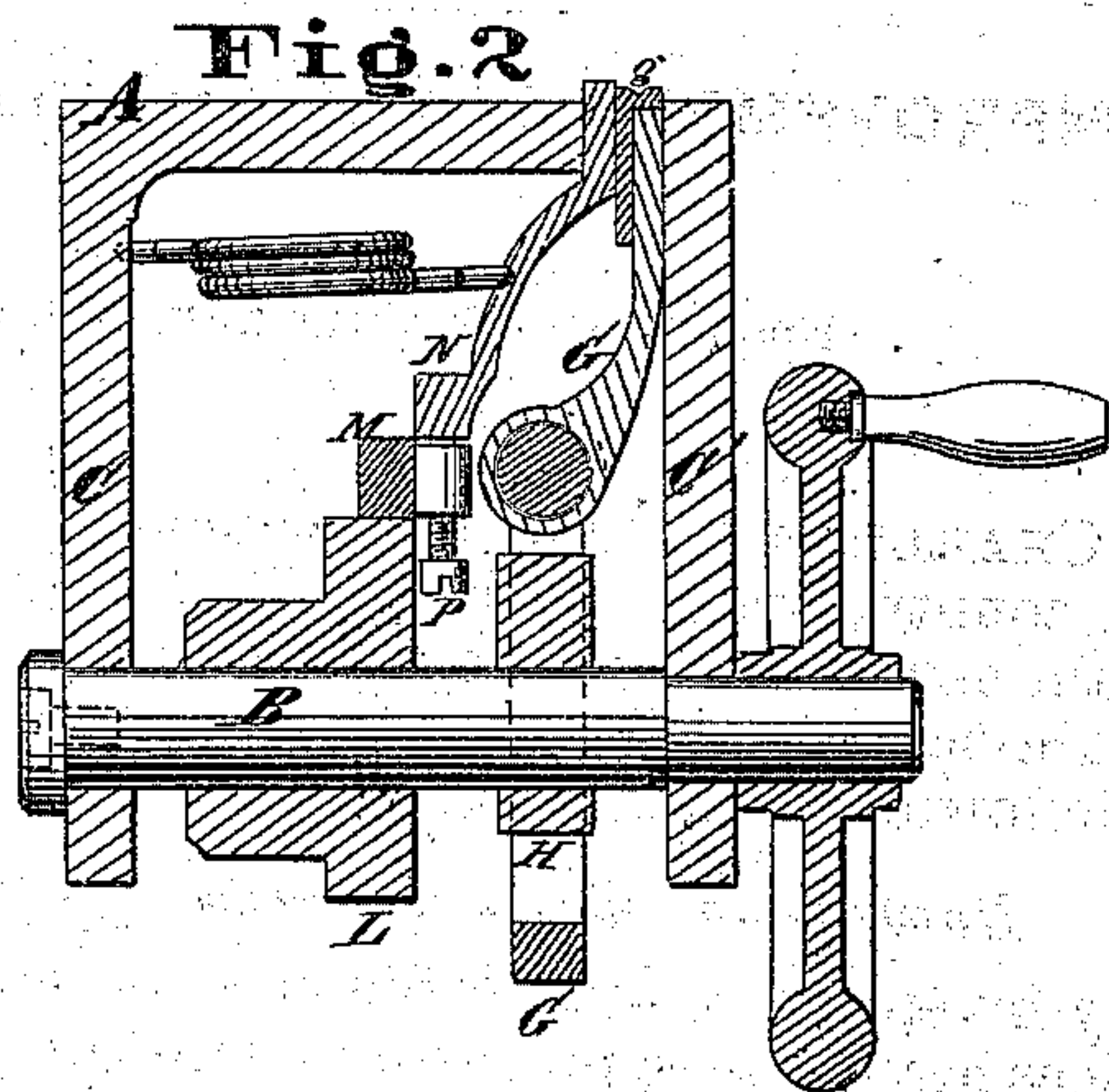
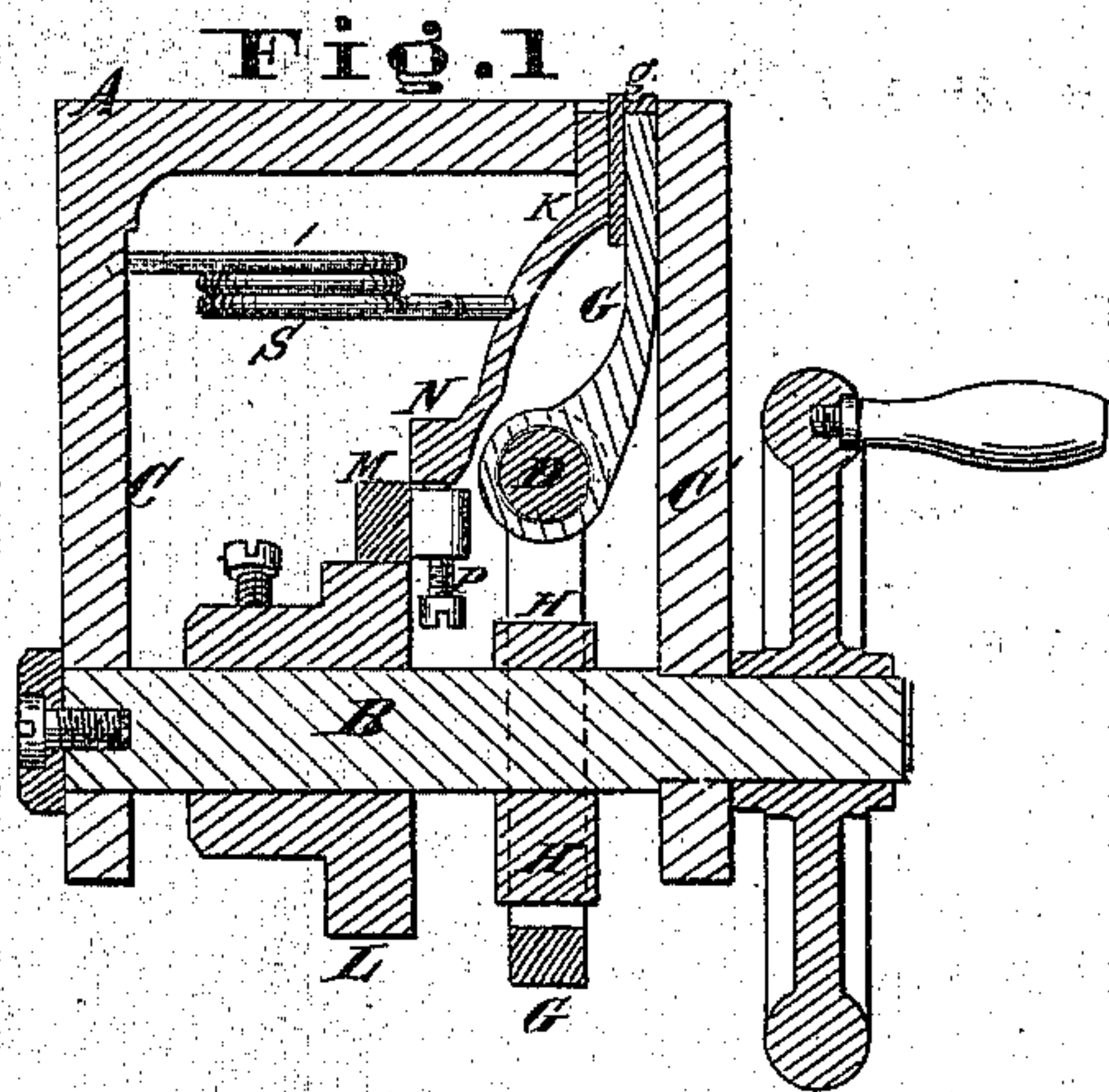


CHARLES BEUTTEL.

Improvement in Feeding Mechanisms for Sewing Machines.

No. 115,155.

Patented May 23, 1871.



Attest

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UNITED STATES PATENT OFFICE.

CHARLES BEUTTEL, OF CINCINNATI, OHIO.

IMPROVEMENT IN FEEDING MECHANISMS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. 115,155, dated May 23, 1871.

I, CHARLES BEUTTEL, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Feeding Devices for Sewing-Machines, of which the following is a specification:

Nature and Objects of Invention.

My invention relates to the class of feeding devices having a reciprocating motion and two pressure-bars under the goods, in connection with the pressure-foot over the goods, one toothed to feed and the other to raise up and relieve the goods from the toothed bar as the latter goes back. My invention consists, in the first part, of a peculiar device for varying the height to which the plain bar which relieves the toothed bar is lifted. My invention consists, in the second part, of a peculiar device for varying the throw of the toothed feeding-bar and adjusting its height above the table.

Description of the Accompanying Drawing.

Figure 1 is a cross-section of improved feed in the position occupied by the parts when the feeding-bar is acting upon the cloth. Fig. 2 is a cross-section of the parts when the notched feed-bar is relieved from contact with the goods in its passage backward. Fig. 3 is an elevation of the feeding-bar and its operating mechanism. Fig. 4 is an elevation of the plain bar or lifter and its operating mechanism for elevating the goods and pressure-foot of the feed-bar.

General Description.

A is the top of the sewing-machine table, having an aperture, *a*, through which the feeding mechanism projects. A shaft, B, is journaled in pendent bearings C C' below the table. The shaft is continuously revolved by any suitable connection with the other operative parts of the sewing-machine. A rod, D, located at right angles to and above shaft B, is supported on brackets E E', one end of the same being adjustable in height by means of a slotted or enlarged hole in the bearing E and lock-nuts F F' upon the threaded end of the rod D. The yoke G, the top of which is notched to form the feed-bar, slides upon the rod D, and it receives the necessary reciprocating motion by means of a cam, H, on shaft B. A collar,

d, is secured to the rod D, and between this collar and the yoke G a spiral spring, I, is inserted. This spring serves to keep the yoke G against its operating-cam, except at such times as it rests against the adjusting-nuts J J'. The adjusting-nuts J J' limit the degree of motion of the yoke G, as they prevent its following the cam, and the movement of these nuts, therefore, results in the variation of the degree of motion of the feed-yoke. Two nuts, J J', are used, one, J, to adjust and limit the throw of the yoke, and the other, J', to "lock" the adjusting-nut J. The width of the opening in the yoke is sufficient to permit the throw of the eccentric to the full extent on each side without any movement of the yoke, when the nut J is properly adjusted so that the feed can be entirely stopped by the adjustment of the nut when desirable. The top of the yoke G may be faced with a hardened-steel plate, *g*, in which the notches are cut. K is the lifter, which relieves the goods from contact with the feed-bar *g g'*, to permit of the return of the feed-bar without the backward movement of the goods.

This lifter is operated by the cam L on shaft B, which is of the peculiar shape shown in Fig. 4. The height to which it is lifted above the table may be regulated or adjusted by the following device: A lever, M, which is pivoted at *m*, rests upon the cam L and moves with it. To the lever M a lever, N, is pivoted at N, which carries or forms the lifter K. This lever can be adjusted in position with relation to lever M by means of set-screw P, and by this means the lifter can be made to raise to a greater or lesser distance above the table.

The provisions specified for the adjustment of the lifter and feed-bar are simple and easily operated. They give facility for an immediate change to suit various thicknesses and quality of material operated upon.

Spring R serves to press the levers M N against the cam, and spring S to press the lifter K against the feed-bar, and thus prevent rattling.

Claims.

1. The combination of the feed-bar *g*, yoke G, adjustable rod D *d*, spring I, adjusting-nuts J J', and cams H, connected and operat-

ing substantially in the manner and for the purpose specified.

2. The combination of the lifting-levers M N and cam L, when the levers are adjustable with relation to each other, the parts being connected and operated substantially in the manner and for the purpose described.

In testimony of which invention I hereunto set my hand.

CHARLES BEUTTEL.

Witnesses:

J. L. WARTMANN,
ELITHA F. LAYMAN.