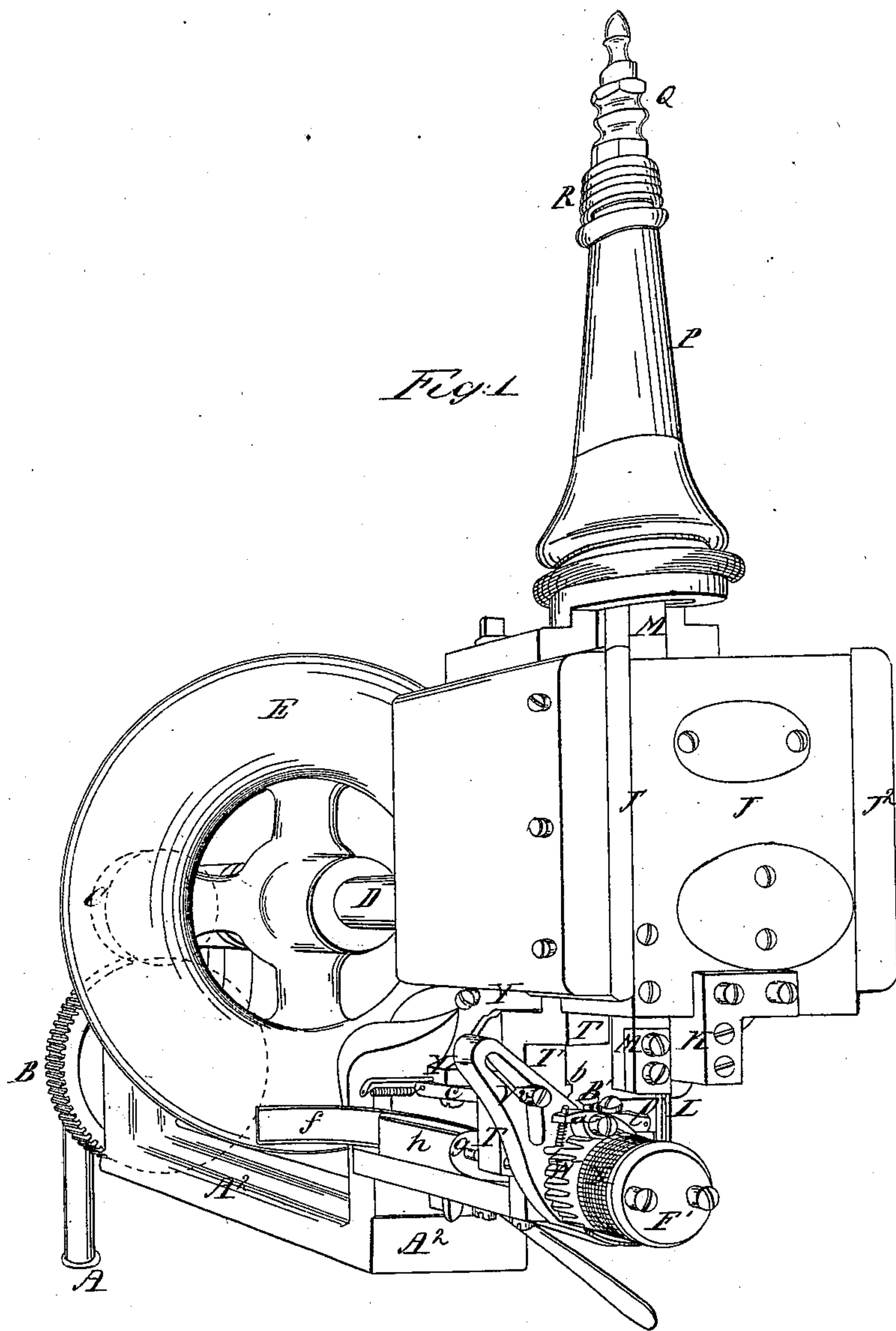


W. R. Landfear,
Shoe-Pegging Machine,
No 70,581, *Patented Nov. 5, 1867.*



Witnesses

Geo W. Adams
William C. Cleveland

Inventor

W. R. Landfear
By his Attorney
Chas. F. Mansbury

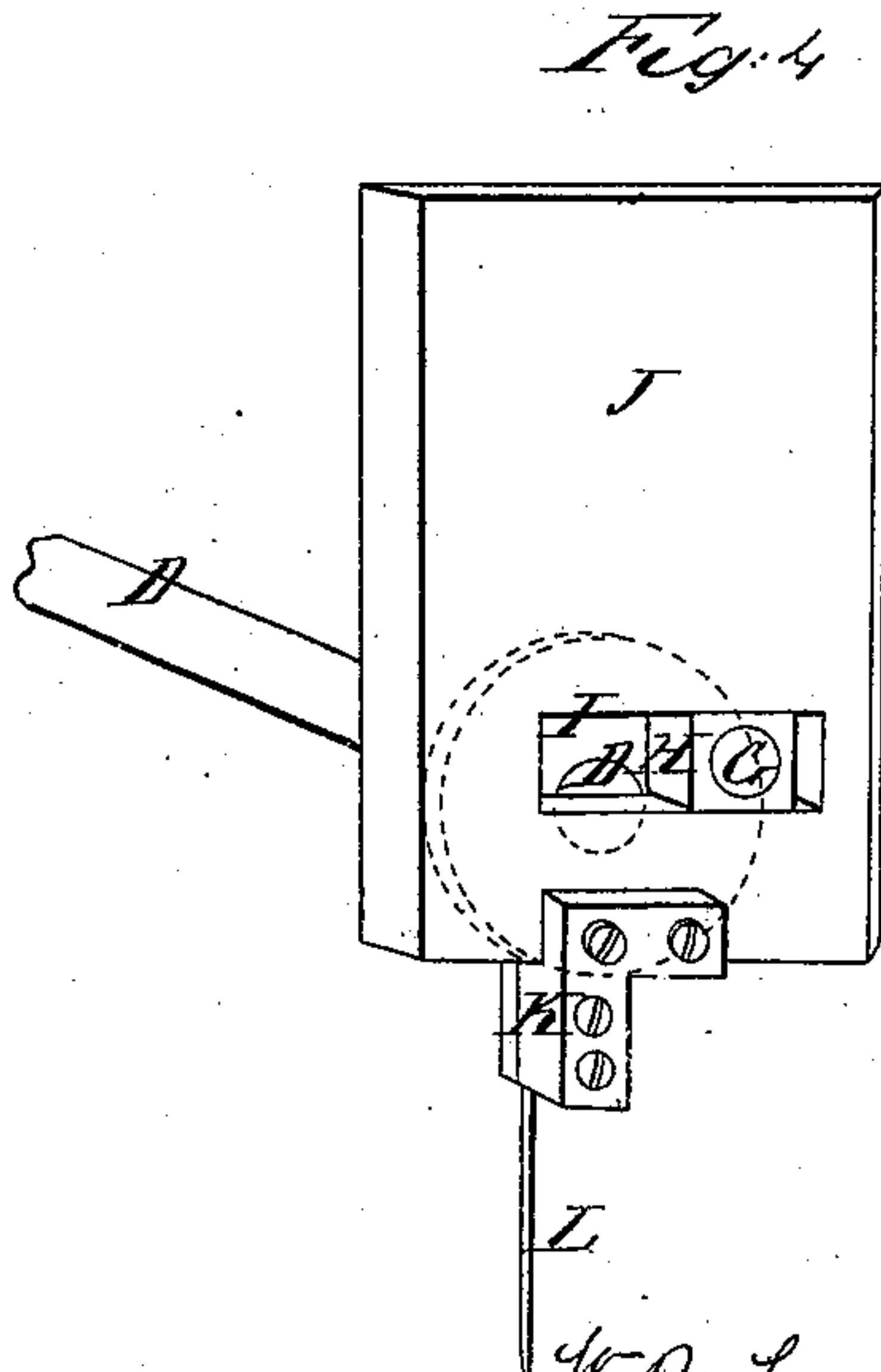
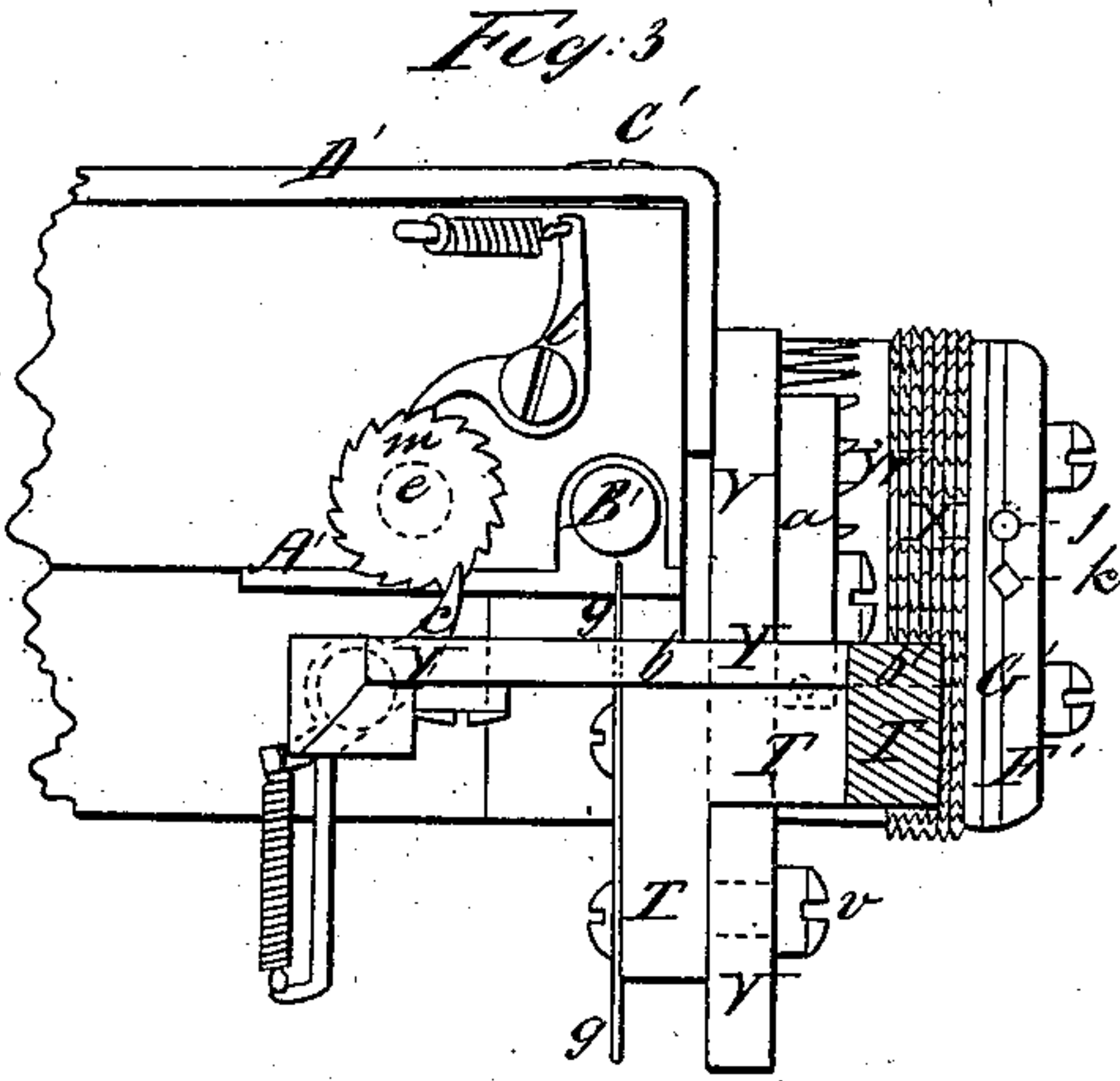
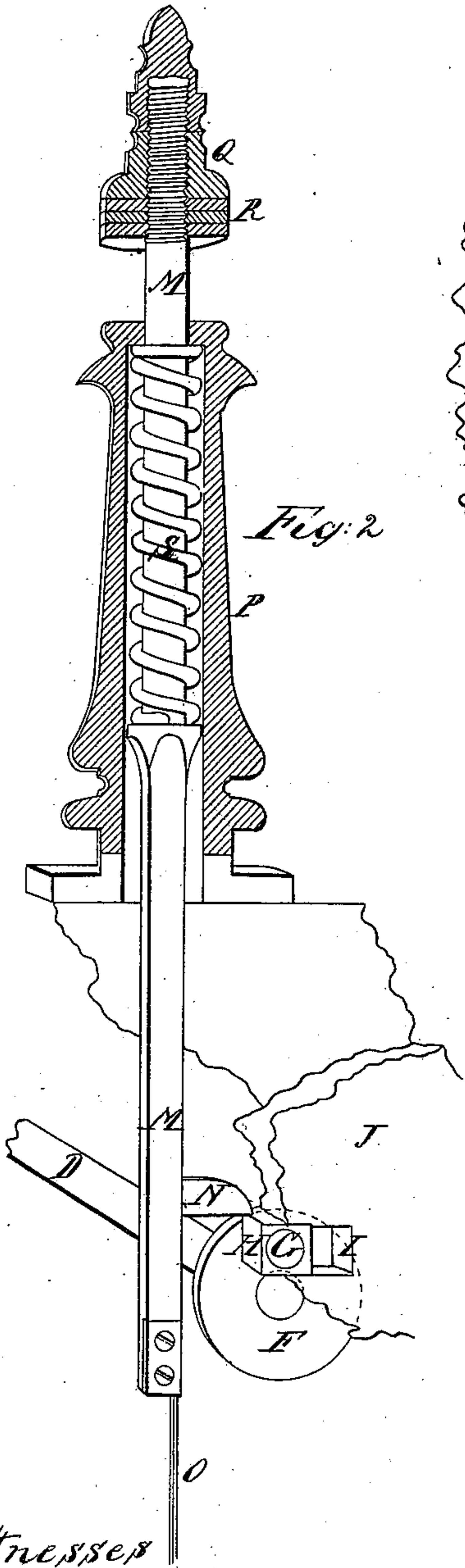
Sheet 2-3 Sheets.

W. R. Landfear,

Shoe-Pegging Machine,

N^o 70,581,

Patented Nov. 5, 1867.

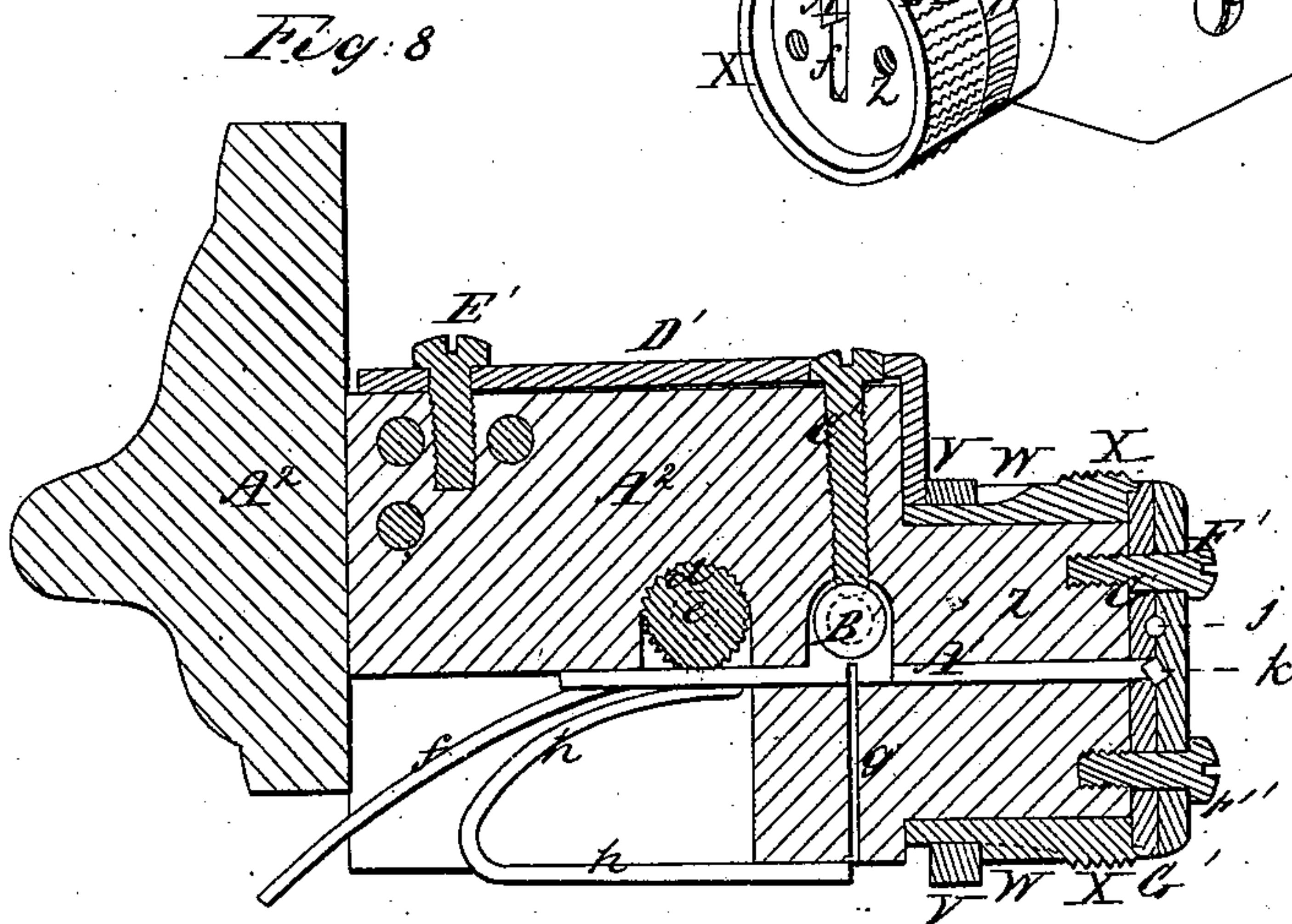
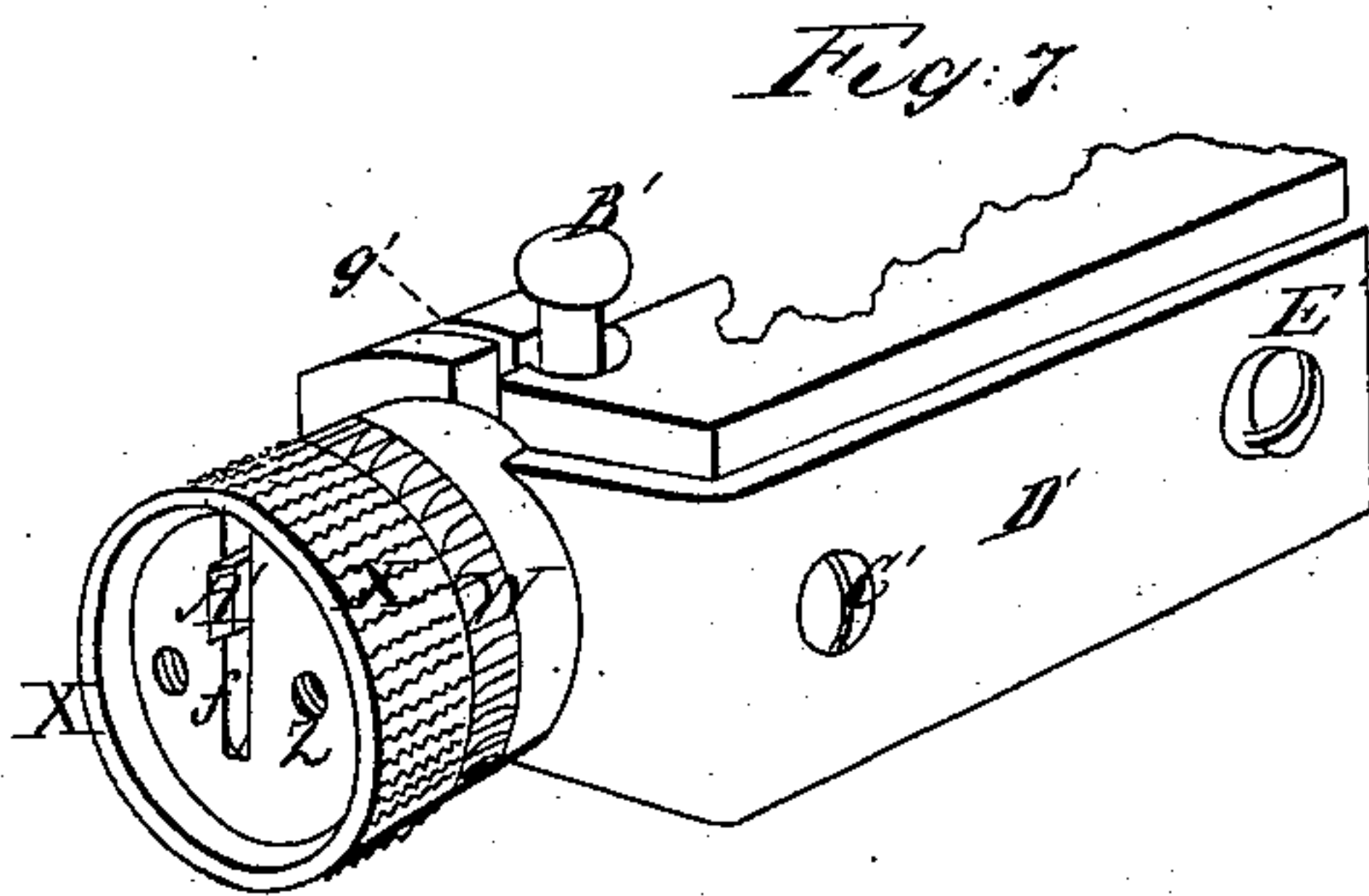
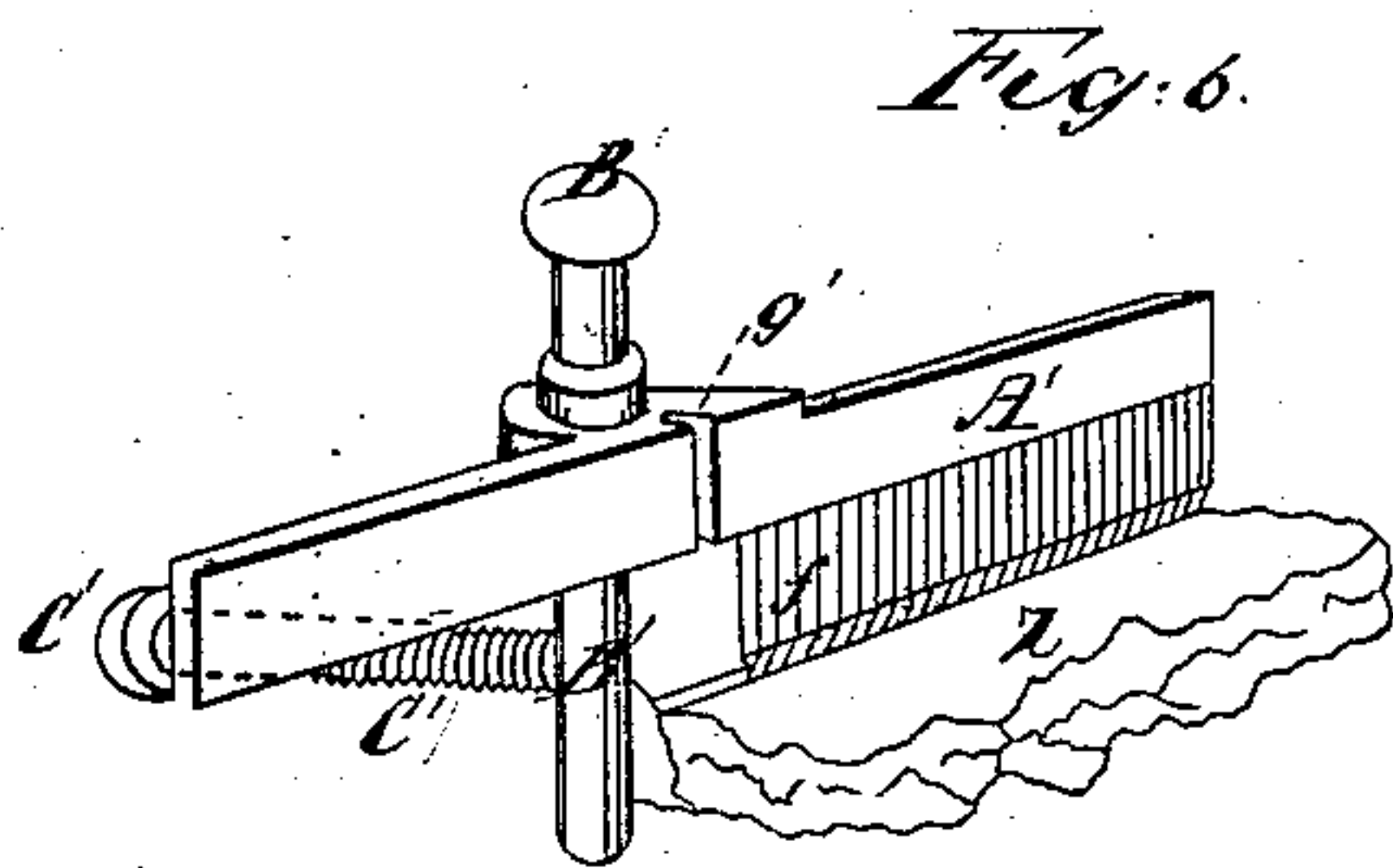
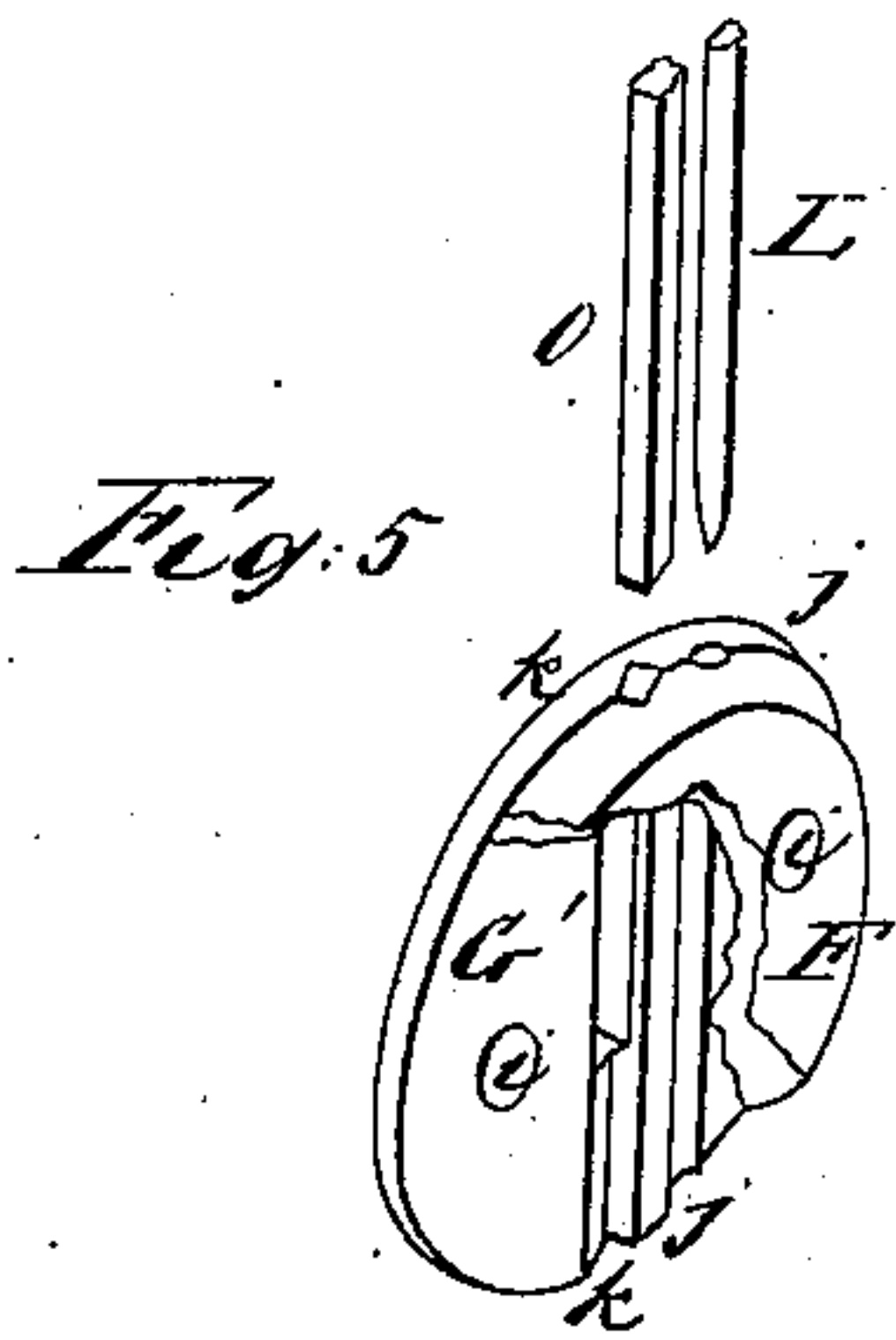


Witnesses
Geo. W. Adams
William C. Cleveland

Inventor
W. R. Landfear
By his Attorney
Chas. F. Stansbury

Sheet 3-3 Sheets.

W. R. Landfear,
Shoe-Pegging Machine,
No 70,581, *Patented Nov. 5, 1867.*



Witnesses:
Geo. W. Adams
William C. Cleveland

Inventor
W. R. Landfear
By his Attorney
Chas. F. Gansbury

United States Patent Office.

WILLIAM R. LANDFEAR, OF HARTFORD, CONNECTICUT, ASSIGNOR BY
MESNE ASSIGNMENTS TO DAVID WHITEMORE.

Letters Patent No. 70,581, dated November 5, 1867.

IMPROVEMENTS IN MACHINES FOR PEGGING BOOTS AND SHOES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM R. LANDFEAR, of the city of Hartford, in the State of Connecticut, have invented certain new and useful Improvements in Machines for Pegging Boots and Shoes; and do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the head of the machine complete, and

Figures 2, 3, 4, 5, 6, 7, and 8, are detailed views of various parts of the machine.

The same letter marks the same part wherever it occurs.

These improvements relate to the machine patented by me September 13, 1864, which belongs to that class of pegging machines in which the boot or shoe is held upon a jack and pressed up against a feeding device, which moves it under the awl and driver at the proper speed for the sole to be perforated and pegged in the well-known mode. They consist in a more direct, secure, and convenient mode of feeding the peg-wood to the driver, an improved device for holding the peg-wood during its passage through the machine to the driver, the application of an adjustable brake to control the movement of the feeding-sleeve, and a new device for guiding the awl and driver, all as hereinafter more fully set forth.

To enable others skilled in the art to make and use my improved pegging machine, I will proceed to describe its construction and operation, referring to the accompanying drawings by the letters of reference marked thereon.

A² marks the bed or frame to which the working parts are attached. This must be placed on a pedestal of suitable height, and power applied either by means of a treadle worked by the operator, or from any suitable prime mover. A marks a pitman which connects the driving power with the gear-wheels B C, the latter of which is on the rear end of the main shaft D, to which the fly-wheel E is attached. To the forward end of shaft D is attached the crank-wheel F, (see figs. 2 and 5,) which is connected by the crank-pin G with the sliding block H, which reciprocates horizontally in slot I in the sliding cross-head J. The cross-head J has a vertical reciprocating motion in guides J¹ J², in obedience to the action of the block H driven by crank-pin G. To the cross-head is attached the awl-stock K, which carries the awl L, and rises and falls with the head J. The driver-stock M works through a groove in the cross-head, and is independent in its movements of the head. It has a toe, N, projecting from it, which is engaged by block H as the crank revolves, and by which the stock M is lifted. When, by the further revolution of the crank, the block H slips out from under the toe N, the driver-stock M is impelled forcibly downwards by the action of the spring S. The driver O is attached to the lower end of stock M. P marks a hollow tube, called a "chimney," in which the driver-stock M moves. The upper end of stock M has a screw-thread on it, and is received by the nut Q. Washers R intervene between the top of the chimney and the lower surface of the nut Q. The object of this arrangement is to adjust the stroke of the driver O, so that it shall drive the pegs either even with the surface of the sole, or above or below that surface, as may be required or preferred. The spiral spring S gives the downward impulse to the driver-bar when it is released from its engagement with block H.

Attached to the rear side of the cross-head J is a bent arm, T, which performs several functions as the cross-head rises and falls. By means of two projections *b b'* it operates lever *y*, (see figs. 1 and 3,) attached to which is pawl *c*, which impels the ratchet-wheel *m* on top of feed-roll *d*, by which the peg-wood *f* is fed into the machine. By means of pin *v*, (see fig. 1,) it operates the slotted lever V, which drives the feed-sleeve or roll. To the bar T is also attached the knife *g*, which severs the pegs from the peg-wood, one peg being cut at each descent of the bar.

The lever V has a collar, (see figs. 3 and 8,) which embraces the rear portion of the feeding-sleeve and moves loosely on it. The slot U in the arm of this lever is of the form represented in fig. 1, so that at the latter part of the downward movement of the head J and bar T, and at the beginning of their upward movement, the lever V will be stationary, but will be raised at the last part of the upward movement of bar T, and depressed at the beginning of its downward movement. A pawl, *a*, attached to the face of lever V, engages the ratchet W on the surface of the feed-sleeve, and drives that sleeve the distance between two teeth at every oscillation of the lever, the movement taking place after the peg-hole has been made, and just before the peg is driven, the effect of the movement being to bring the peg-hole under the driver to receive the peg.

The feeding-sleeve, (see figs. 1, 3, 7, and 8) is a hollow cylinder, which moves on a cylindrical axis, Z, projecting from the frame. The rear belt of this cylinder or sleeve is smooth to engage the brake D', and to receive the collar of lever V, which moves freely on it, as before observed. The middle belt of its surface has the ratchet W cut upon it, which engages with pawl α on lever V, to drive the feed-sleeve by the movement of the latter. The front belt X of the surface of the sleeve is roughened, so that it will take hold of the sole of the boot or shoe, and feed it along by friction as the sleeve moves on its axis. To control the movement of the feed-sleeve, and prevent its turning backwards, when released from contact with the pawl and driver, I employ a brake, D', (see figs. 3, 7, and 8,) which is made to press with greater or less force, as may be required, against the rear belt of the surface of the feed-sleeve, which it partly embraces. The pressure of the brake against the sleeve is regulated by the set-screw E', which can be tightened or loosened as required.

The peg-wood f is inserted in a long strip at the point indicated in figs. 1 and 8. A spring, h , presses it forcibly against the roughened roller d , operated by pawls c and l , and by the rotation of this roller it is driven through a passage in the body of the axis Z of the sleeve, (see figs. 6 and 7,) till it emerges in the square hole k , in which the driver O works, (see figs. 5 and 8.) The peg-wood is held down by a bar, A', placed on top of it. This bar is itself held down by bolt B', which has a collar upon it, resting on the top of bar A'. A set-screw, C', fixes the bolt B' at any desired point, (see fig. 6.)

On the front end of axis Z are attached the plates G' F', by means of screws passing through the holes ii , (see figs. 3, 5, and 8.) The two plates are grooved, as shown, so that when brought together and attached to the axis they form passages $j k$, for the awl L and driver O. The inner plate G' has an oblong opening () in it to allow of the exit of the peg from the passage in the axis Z to the driver-groove k .

The operation is as follows: The boot or shoe to be pegged is placed on a jack and brought up into contact with the roughened face of the feed-sleeve. The awl and driver being both at their highest position, motion is imparted to the machine, and the awl L descends, perforates the sole, and is immediately withdrawn. The feed-sleeve is then rotated by pawl α , and advances the shoe a distance equal to that between the awl and driver. This brings the awl-hole directly under the driver. The space between the knife g and driver-hole k is filled with pegs which have been severed from the strip of peg-wood. By the rotation of roller d , these pegs are successively presented under the driver in hole k . As soon as the peg-hole comes directly under the driver, the toe N of the driver-stock slips from the top of block H, and the driver O descends and drives the peg into the hole prepared for it by the awl. The further rotation of the crank-wheel again drives the awl, and withdraws both awl and driver for a repetition of the operation.

It will be observed that by the arrangement adopted in this machine, I avoid the inconvenient and cumbersome apparatus for the introduction of the pegs under the driver, which was adopted in my original machine, and which with slight modification is used in all the power machines with which I am acquainted—an apparatus on the exterior of the machine, exposed to injury, and in which the distance which intervenes between the knife and the driver necessitates the moving along of a large number of severed pegs. The greater their number, especially where, from imperfect cutting, there is the slightest variation in their size, the greater will be the tendency to uncertainty and want of precision in their presentation under the driver. By enlarging its axis, I not only give greater power and certainty to the operation, but I secure a direct, convenient, protected, and short passage for the severed pegs from the knife to the driver, rendering the machine more compact in structure, and less liable to get out of order.

In the foregoing description, I have included some features common to this machine and the one formerly patented by me. I have also described and represented some features which have been added to the machine by David Whittemore, and are of his invention. It was necessary to describe the machine as it at present exists, in order to illustrate properly its construction and operation, and the relations of my improvements to the perfected machine. I do not, however, claim any other features as of my invention than those hereafter enumerated:

What I do claim, and desire to secure by Letters Patent, is—

1. Passing the pegs severed from the peg-wood from the severing-knife to the driving-bar, through a slot in the axle of the feeding-sleeve, substantially in the manner and for the purpose described.
2. The combination of the bar A', bolt B', and set-screw C', arranged substantially as specified, for securely holding down the peg-wood during its passage through the machine, as set forth.
3. The application of an adjustable brake to control the movement of the feeding-sleeve, in the manner described.
4. The face-plates F' and C', arranged as described, and forming grooves for the passage of the awl and driver in front of the feed-sleeve, as specified.

The above specification of my said invention signed and witnessed at London, this second day of March, A. D. 1867.

W. R. LANDFEAR.

Witnesses:

JOSHUA NUNN, *Deputy Consul United States of America, London.*

T. W. ATKINSON.