

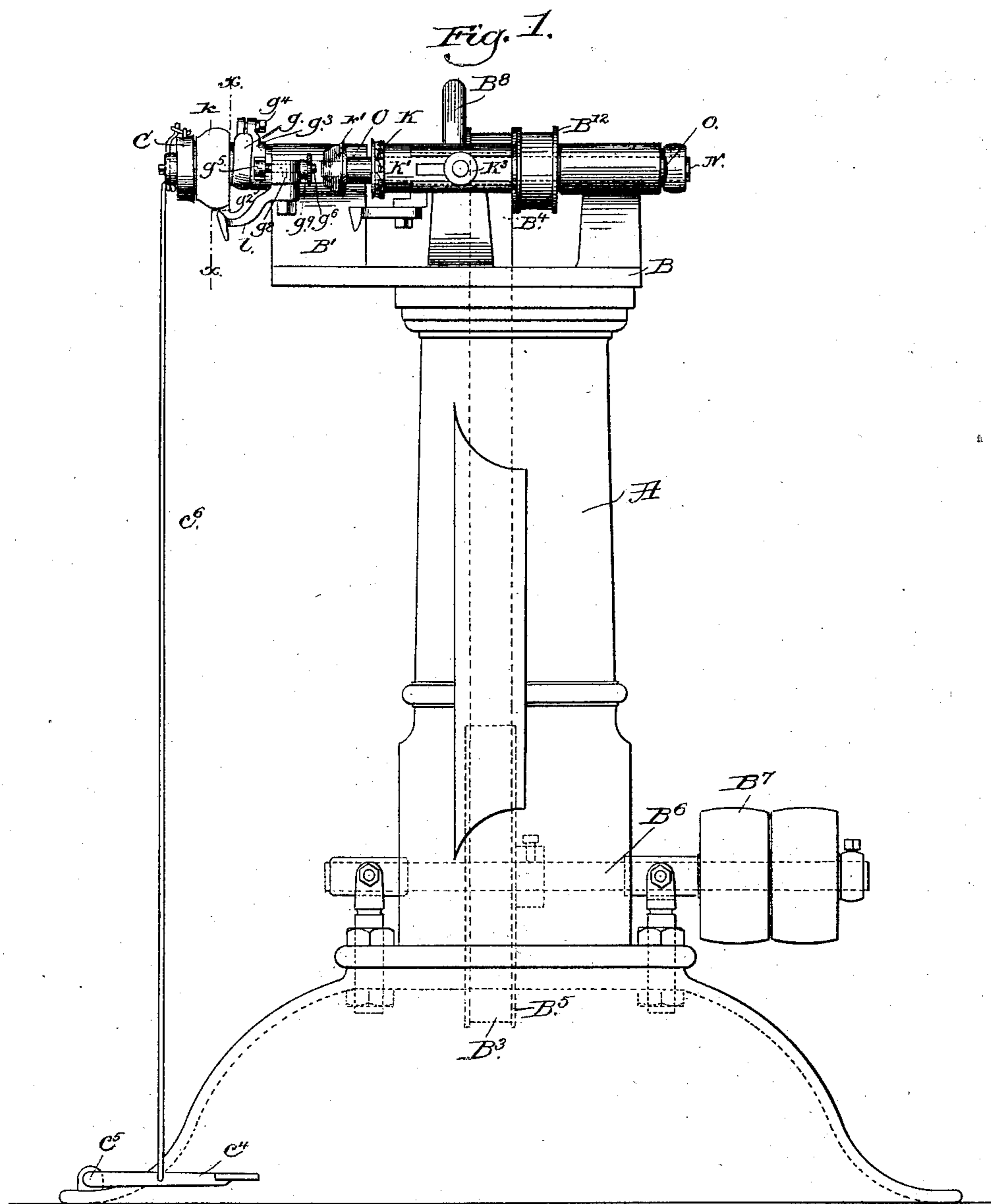
(No Model.)

3 Sheets—Sheet 1.

W. MANLEY.  
HEEL TRIMMING MACHINE.

No. 374,419.

Patented Dec. 6, 1887.



Witnesses.  
John H. Prinkert.  
B. J. Noyes.

Inventor.  
William Manley  
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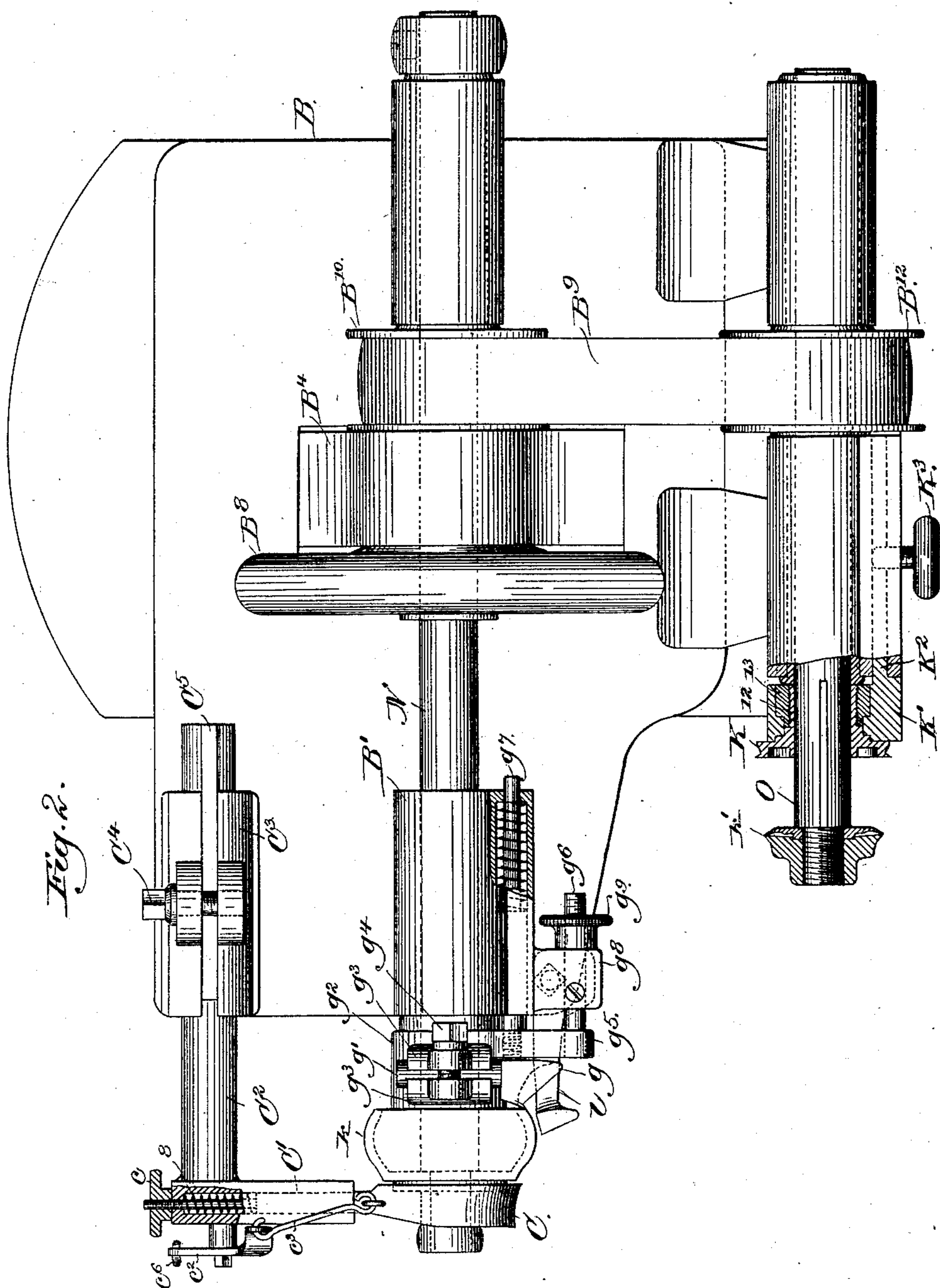
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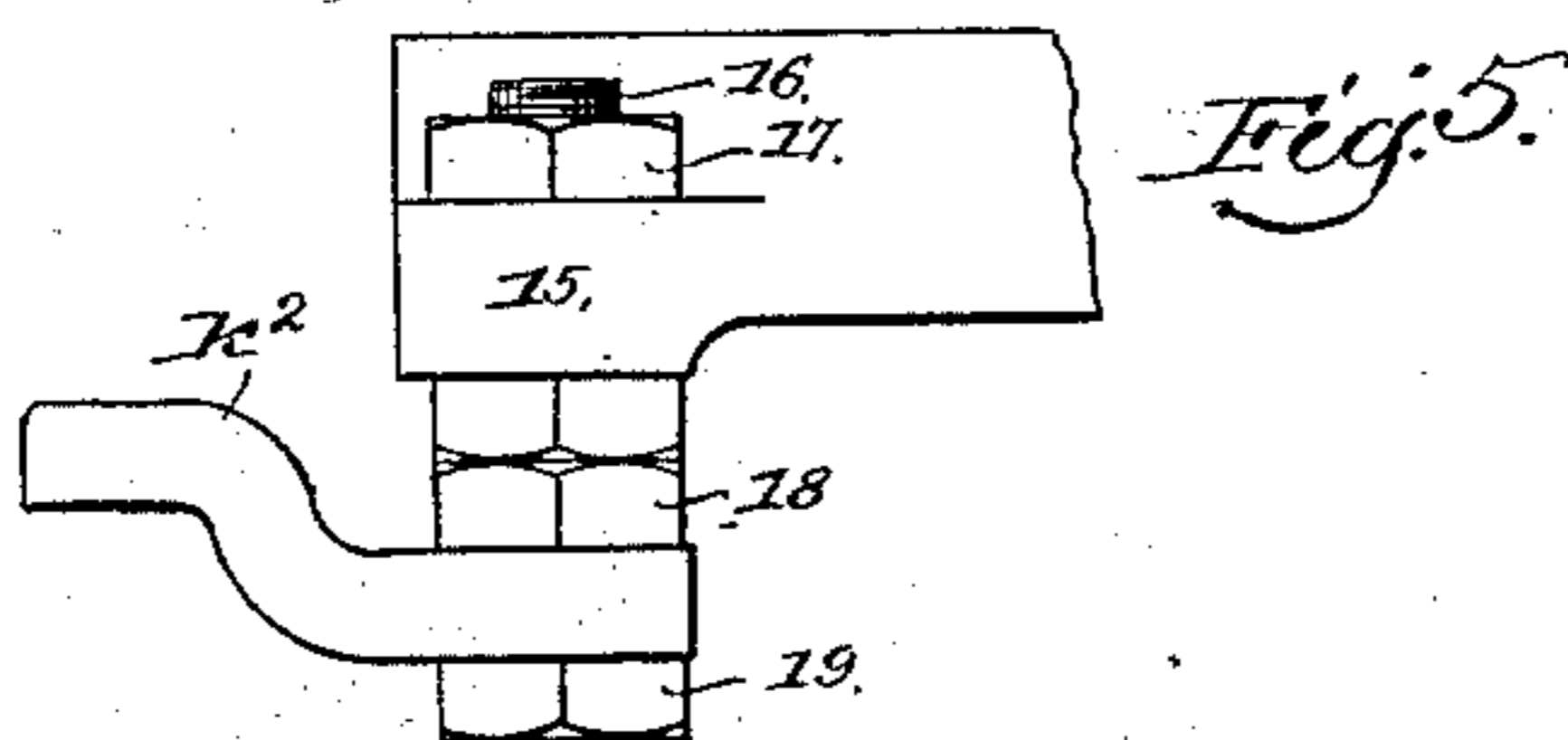


Fig. 5.

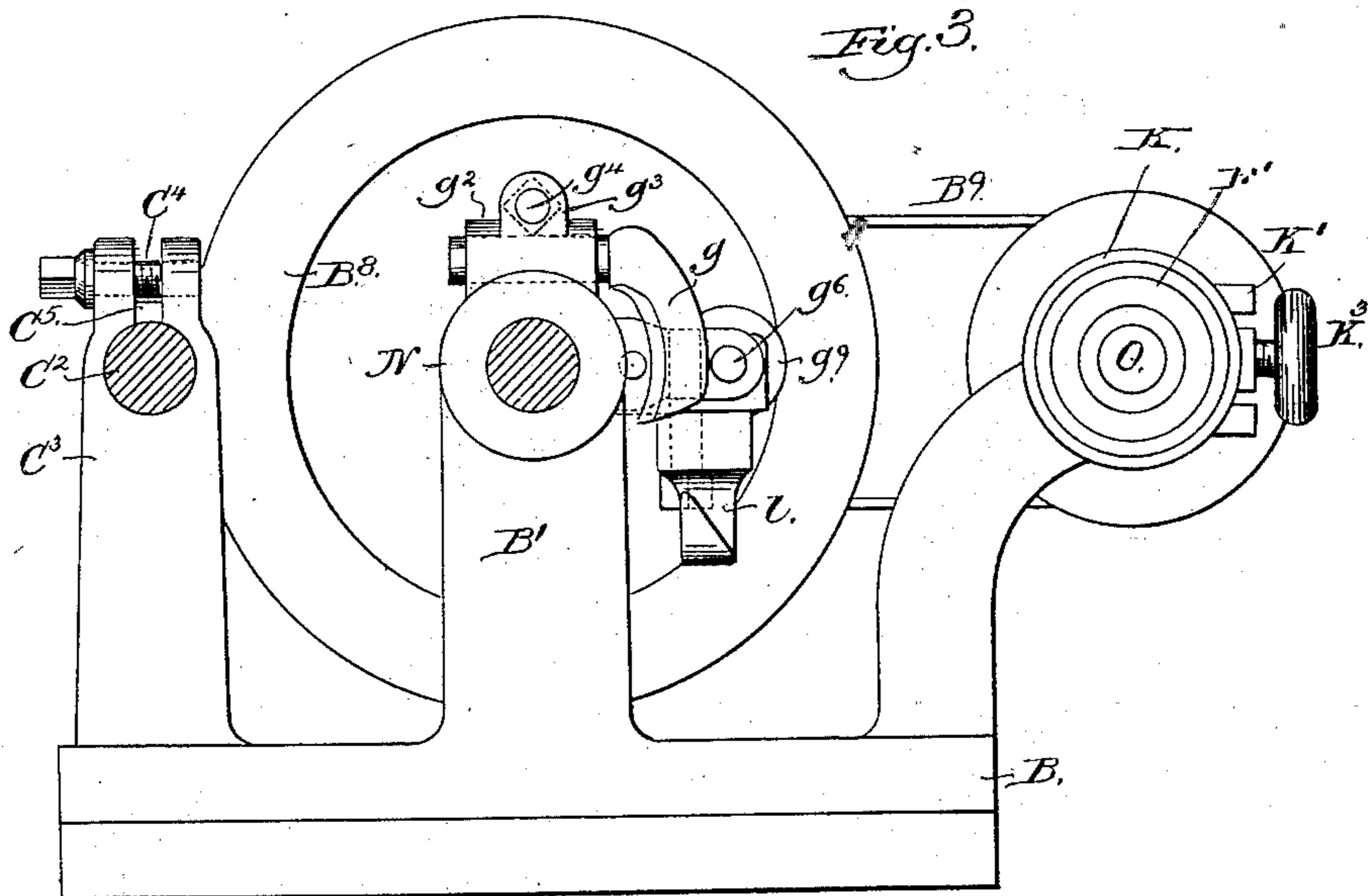


Fig. 3.

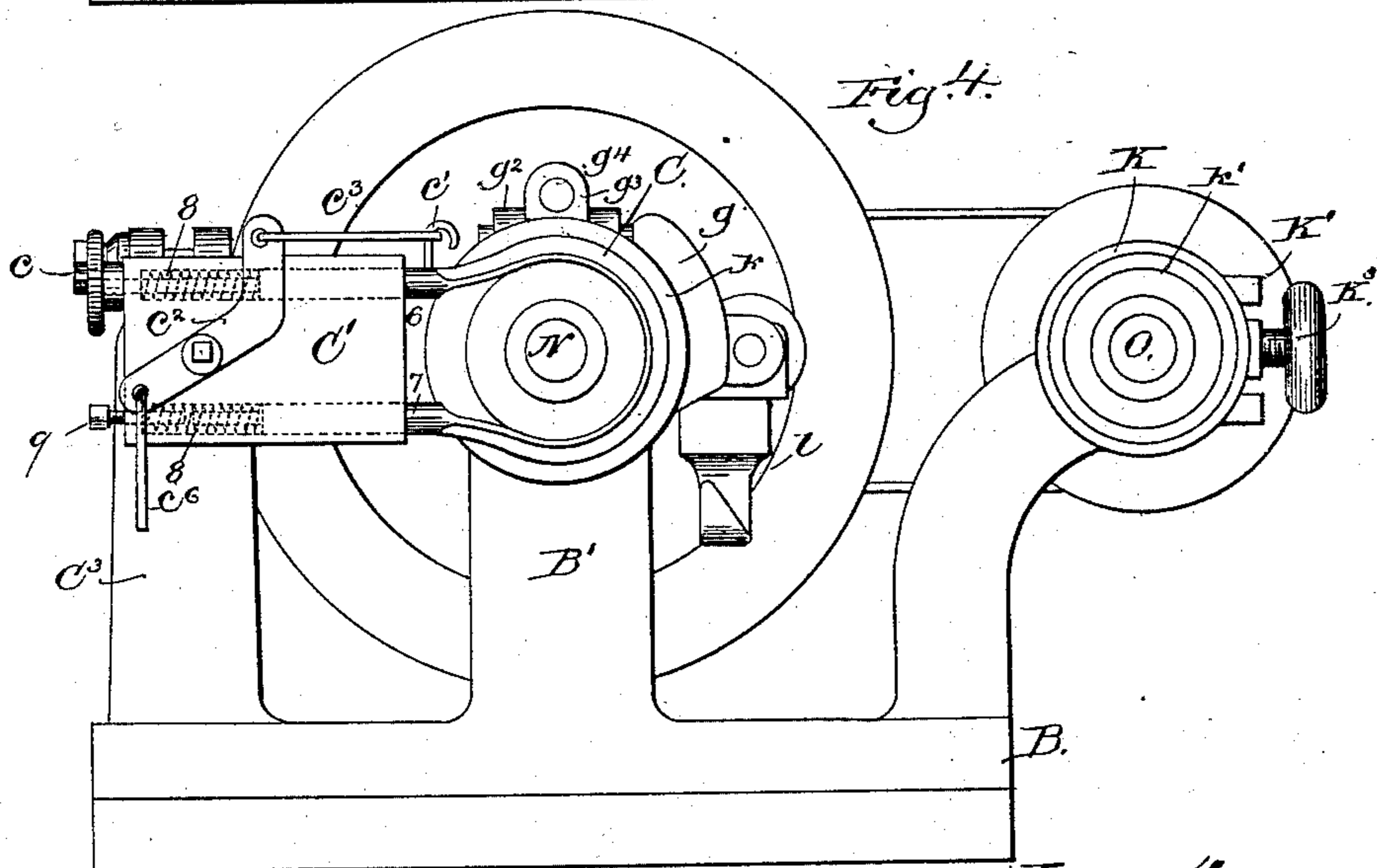


Fig. 4.

Witnesses,  
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Inventor:  
William Manley  
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# UNITED STATES PATENT OFFICE.

WILLIAM MANLEY, OF ROCHESTER, NEW YORK, ASSIGNOR TO JAMES W. BROOKS, TRUSTEE, OF CAMBRIDGE, MASSACHUSETTS.

## HEEL-TRIMMING MACHINE.

SPECIFICATION forming part of Letters Patent No. 374,419, dated December 6, 1887.

Application filed December 15, 1886. Serial No. 221,610. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM MANLEY, of Rochester, county of Monroe, and State of New York, have invented an Improvement in Heel-Trimming Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention is an improvement upon United States Patent No. 322,945, granted to me July 28, 1885, and has for its object to improve the construction of the same in many particulars.

One feature of my present invention consists in a counter-guard with which is combined means for adjusting it with greater ease and accuracy with relation to the heel-trimming cutter. I have also provided a hammering-up tool or wheel for hammering up the rand and heel, the said tool or wheel being secured to the shaft carrying the rand-cutter, and being capable of movement longitudinally upon said shaft toward the rand-cutter, so that either the rand-cutter or the hammering-up tool or wheel may be employed to act upon the heel at the will of the operator, the same heel-rest being employed to support the heel in either instance, which heel-rest is preferably adjustable.

Figure 1 shows in front elevation a heel-trimming machine embodying this invention; Fig. 2, a top view of the machine shown in Fig. 1; Fig. 3, a sectional detail of a portion of the machine, taken on the dotted line *xx*, Fig. 1; Fig. 4, a left-hand end view of the head of the machine shown in Fig. 1, and Fig. 5 a detail to be referred to.

The post or standard A, supporting the frame B, the revolving spindles N O, the heel-trimming cutter *k*, carried by the shaft N, the top-lift support *g*, adjustably connected with the said frame, the heel-rest *l*, also connected with the frame, and rand-cutter *k'*, carried by the spindle O, and the hammering-up tool or wheel K, also carried by the said spindle O, are all substantially as in the patent referred to, to which reference may be had, like letters of reference indicating like parts.

In the present instance of my invention the counter-guard C, as shown, consists of a strip

of metal bent into U shape, or bent to form a loop. The ends 6 7 of the said strip of metal are extended into bearings in a block, C', secured to or forming an integral part of the slide C<sup>2</sup>. The slide C<sup>2</sup> enters the bearing C<sup>3</sup>, made preferably as a split hub pressed together by the screw C<sup>4</sup>. The said slide has a projecting spline, which co-operates with the split hub to prevent rotation of the slide, yet permitting the said slide, with its attached counter-guard C, to be moved toward or from the cutter longitudinally.

The portion of the counter-guard C surrounding the spindle N adjacent to the heel-trimming cutter *k* is of such shape in the direction of its width as to conform to the curves of the counter which is to be borne against it.

The counter-guard C is adapted to be moved toward and from the surface of the spindle N by an adjusting-nut, *c*, applied to the screw-threaded end of the portion 6 of the counter-guard which protrudes through the block C'. A spring, 8, seated within the block C', surrounds the portions 6 7 of the counter-guard, one end of each spring bearing against the block C', while the other end bears against a shoulder formed upon the portions 6 7. To the upper side of the portion 6 of the counter-guard a stud or hook, *c'*, is secured, and to the block C' a bell-crank lever, *c''*, is pivoted, one end of the bell-crank lever being connected with the said hook or stud *c'* by a link, *c'''*, the opposite end of the said bell-crank lever being connected by a treadle-rod, *c''''*, with a treadle, *c'''''*, pivoted at *c''''''* to the base of the machine.

By depressing the treadle *c'''''* the counter-guard is moved for a short distance—as, for instance, one-sixteenth of an inch—to vary the relative distance from each other of the concaved surface of the counter-guard and the cutting-edges of the heel-trimming cutter *k*, a suitable pin, 9, being screwed into the block C', against which the end of the portion 7 of the counter-guard strikes when the treadle is thus depressed. The object of this adjustment of the counter-guard toward and from the cutting-edges of the cutter is to permit the heel to be trimmed to produce a fine or a heavy heel-seat at the will of the operator.

The top-lift rest *g* has a shank, *g'*, mounted

between two clamps or jaws,  $g^3 g^3$ , adjustable with relation to each other by the adjusting-screw  $g^4$ , said clamps or jaws being carried by a frame,  $g^2$ , mounted upon the spindle N. By loosening the adjusting-screw  $g^4$  the said top-lift rest or support may be adjusted toward and from the cutting-edges of the heel-trimming cutter. The frame  $g^2$  has a projection or arm,  $g^5$ , provided with two laterally-extended arms,  $g^6 g^7$ , one of which, as  $g^7$ , passes through the bearing-block B', mounted upon the frame B, and the other, as  $g^6$ , passes through the block  $g^8$ . A spiral spring is seated within the block B', one end of which bears against the interior of the block, while the other end bears against a shoulder formed upon the arm  $g^7$ , said spring normally pressing the arm, and consequently the frame  $g^2$ , toward the heel-trimmer, and an adjusting-screw,  $g^9$ , is turned upon the screw-threaded end of the arm  $g^6$ , and by bearing against the block  $g^8$  limits the movement of the frame  $g^2$  toward the cutter. The heel-rest  $l$  is bolted to the under side of the block  $g^8$ , and may, if desired, be made adjustable by forming the hole as a slot, through which the bolt passes.

The spindle N is rotated by a belt,  $B^3$ , which passes around a pulley,  $B^4$ , fast to it, and also around the belt-pulley  $B^5$ , secured to the drive-shaft  $B^6$  at the base of the machine, which shaft  $B^6$  is rotated in any suitable manner—as by the drive-wheel  $B^7$ . A balance-wheel,  $B^8$ , is also fast to the spindle N.

A belt,  $B^9$ , passes around a pulley,  $B^{10}$ , fast to the spindle N, and also around a pulley,  $B^{12}$ , fast to the spindle O. The rand-cutter  $k'$  is secured to the end of the spindle O, and a heel-rest,  $k^2$ , is bolted to that portion of the frame B in which the spindle O has its bearings.

The hammering-up wheel K has a screw-threaded shank portion, 12, splined to the spindle O, the said shank portion entering an adjustable block,  $K'$ , which is suitably recessed to receive it. A nut, 13, turned upon the screw-threaded shank portion 12 of the hammering-up wheel, fits the recess in the block  $K'$ . The block  $K'$  has a suitable shank,  $K^2$ , which enters a passage cut in that portion of the frame B in which the spindle O rotates. The shank  $K^2$  receives into it a suitable headed stud,  $K^3$ , which is passed through a slot cut in one side of the said bearing portion of the frame, movement of the stud in the direction of the length of the shank causing the hammering-up wheel to be moved toward or from the rand-cutter  $K'$ .

When it is desired to employ the hammering-up wheel, it is moved by the headed stud  $K^3$  against the face of the rand-cutter  $K'$ , said hammering-up wheel being considerably larger than the said rand-cutter, so that the heel bearing upon the heel-rest  $k^2$  will be acted upon by the said hammering-wheel to hammer up the rand and heel-seat.

The heel-rest  $k^2$  may be adjustably connected with the frame in the manner shown in Fig.

5, and in such instance the said frame is provided with a lug, 15, through which passes a screw-threaded bolt, 16, provided with check-nuts 17, 18, and 19, the said heel-rest being interposed between the check-nuts 18 19. The heel-rest  $l$  may also be adjustably connected with the frame or block  $g^8$  in a like manner, if desired.

I claim—

1. In a heel-trimming machine, a rotating shaft and cutter carried by it, combined with the U-shaped counter-guard C, placed around the spindle adjacent to the cutter, and having extended spring-supported arms carried by a suitable supporting-block, substantially as described.

2. In a heel-trimming machine, a rotating spindle and cutter carried by it, combined with a U-shaped counter-guard, C, a supporting-block therefor, and devices, substantially as described, for adjusting said U-shaped counter-guard toward and from the spindle, and the adjustable bar  $C^2$ , carrying the said supporting-block, substantially as described.

3. In a heel-trimming machine, the rotating spindle and cutter carried by it, the counter-guard, and supporting-block therefor, combined with the check-nut  $c$ , for limiting the movement of the said counter-guard in one direction, and the pin for limiting its movement in the opposite direction, substantially as described.

4. In a heel-trimming machine, the rotating spindle and cutter carried by it, the counter-guard and supporting-block therefor, and the check-nut  $c$ , for limiting the movement of the said counter-guard in one direction, combined with the pin for limiting its movement in the opposite direction and a bell-crank lever connected with the counter-guard, and a treadle for moving the said bell-crank lever, substantially as described.

5. In a heel-trimming machine, the rotating spindle and cutter carried by it, combined with the top-lift rest  $g$ , adjustably held in a frame, which frame is mounted loosely upon the spindle and is adjustable toward and from the cutters, substantially as described.

6. In a heel-trimming machine, the rotating spindle and cutter carried by it, combined with the top-lift rest  $g$ , adjustable toward and from the spindle, and the movable supporting-frame for the top-lift rest  $g$ , two arms,  $g^6 g^7$ , the spring surrounding the arm  $g^2$ , and a check-nut,  $g^9$ , turned upon the arm  $g^6$ , substantially as described.

7. In a heel-trimming machine, the combination, substantially as described, of the following elements: a rotary spindle and cutter carried by it, a movable counter-guard, and yielding top-lift rest  $g$ , adjustably held in a frame, which frame is mounted loosely upon the spindle and is adjustable toward and from the cutters, and an independent heel-rest.

8. In a heel-trimming machine, the rotating spindle and longitudinally-movable hammering-up wheel carried by it, combined with

means, substantially as described, for moving said hammering-up wheel while the spindle is being rotated, substantially as described.

9. In a heel-trimming machine, the rotating  
5 spindle and rand-cutter carried by it, and the heel-rest, combined with a hammering-up wheel mounted to rotate with but slide upon the spindle, and means, substantially as described, for moving the hammering-up wheel  
10 longitudinally.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM MANLEY.

Witnesses:

BERNICE J. NOYES,  
FRED L. EMERY.