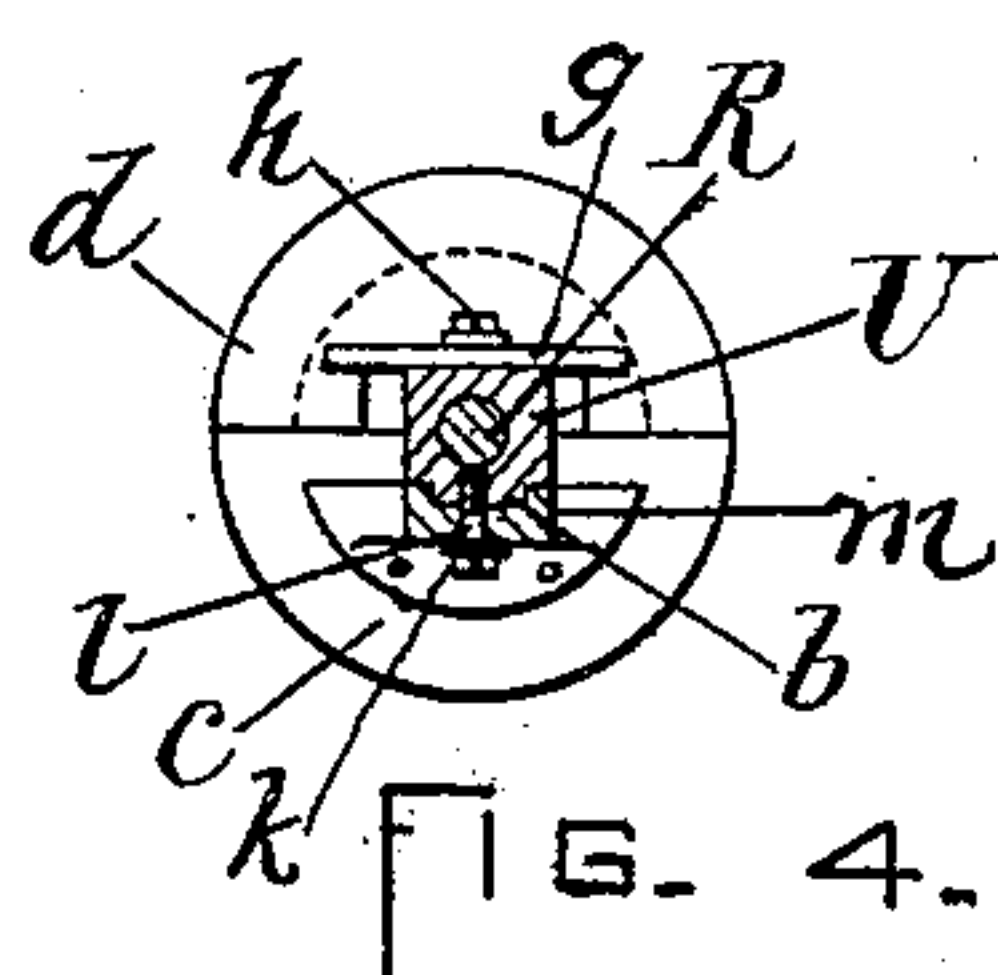
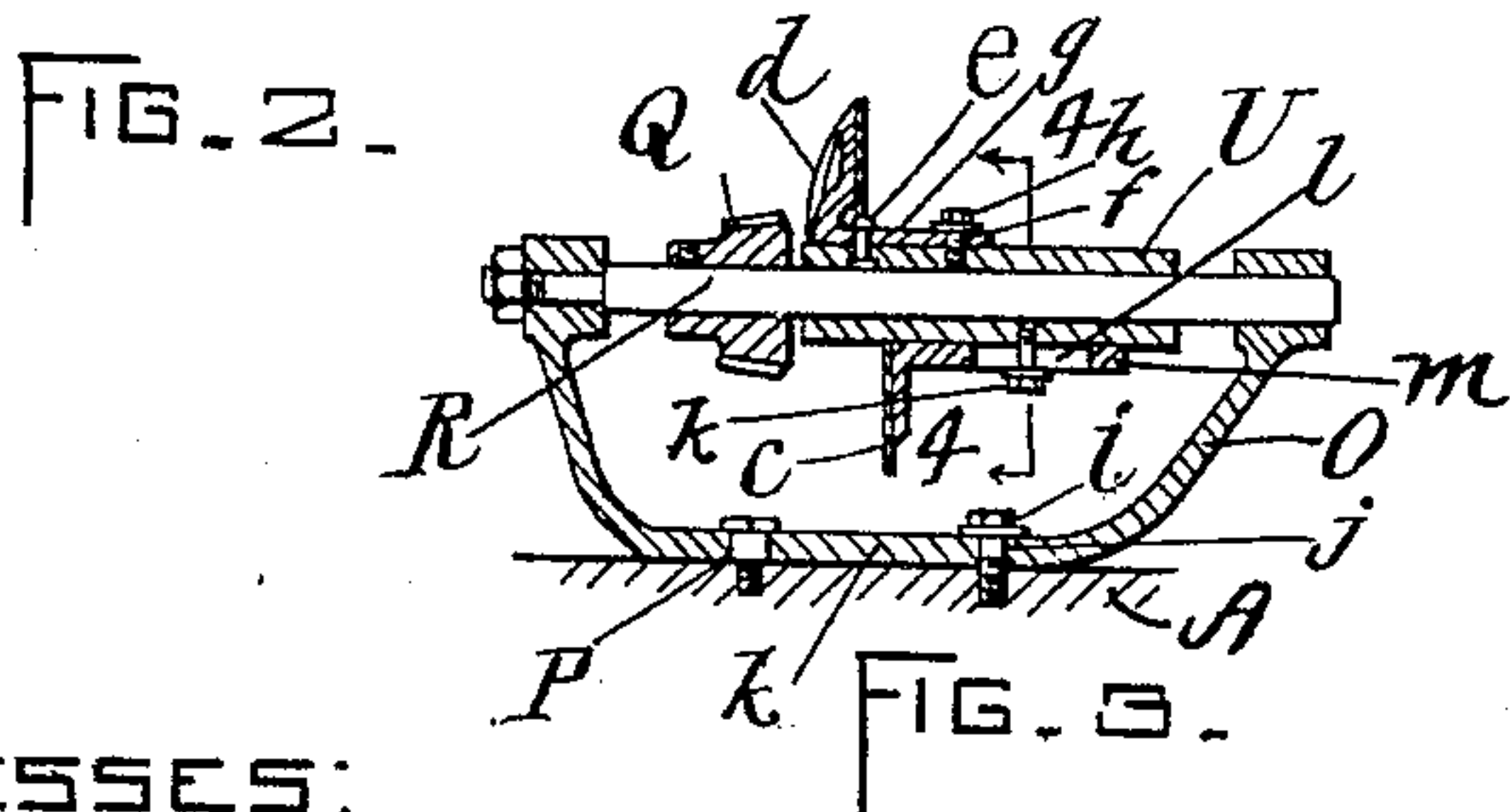
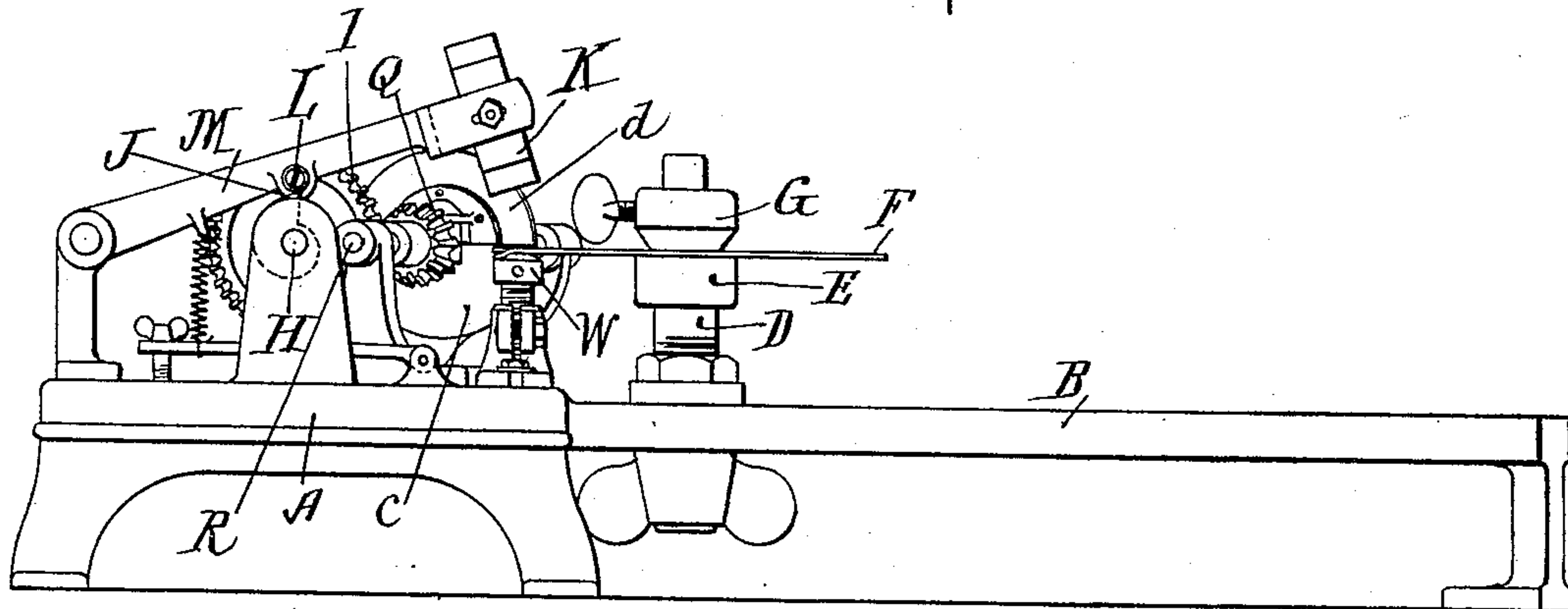
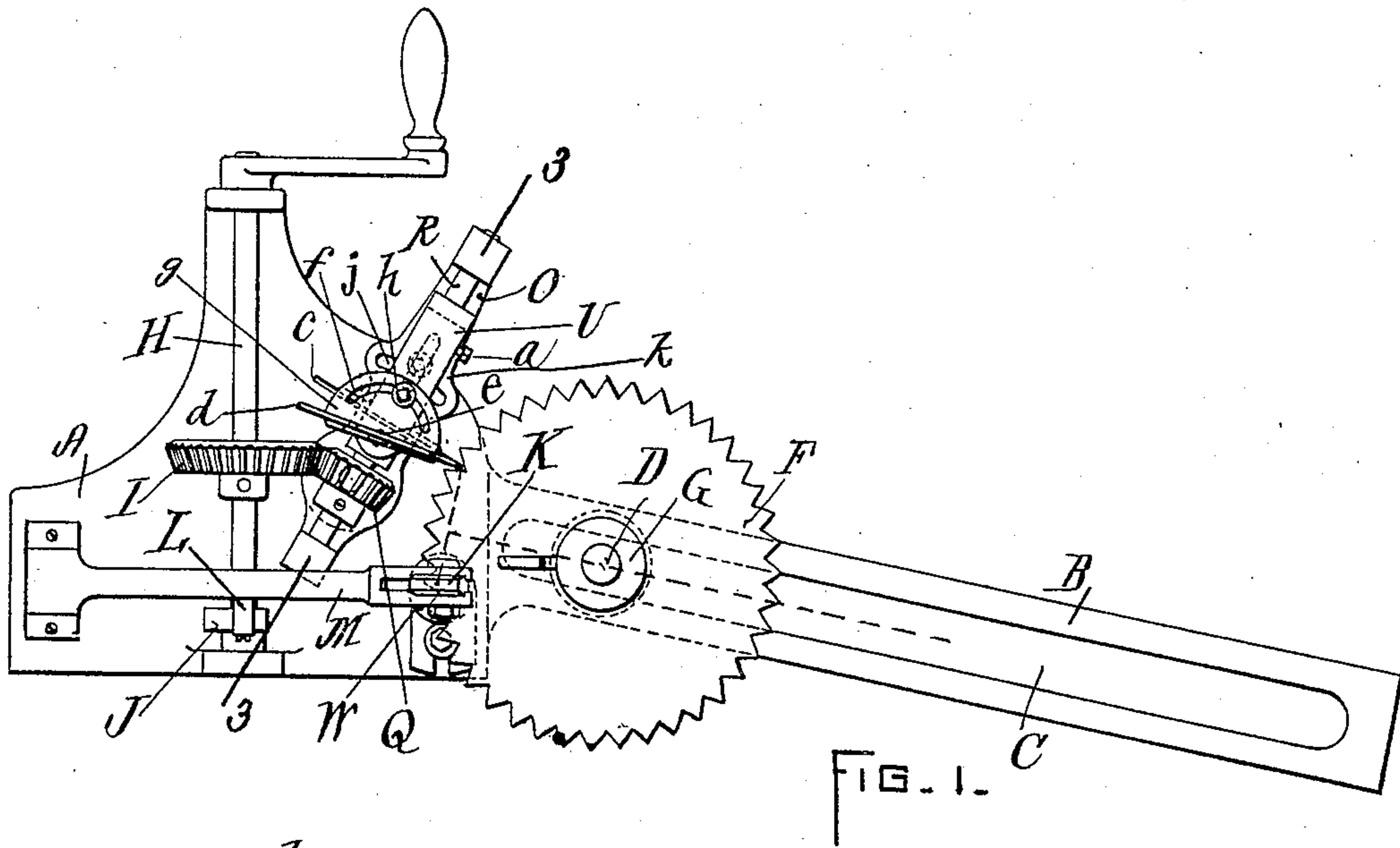


No. 835,449.

PATENTED NOV. 6, 1906.

B. G. LUTHER.
SAW SETTING MACHINE.
APPLICATION FILED DEC. 24, 1904.



WITNESSES:

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BENJAMIN G. LUTHER, OF WORCESTER, MASSACHUSETTS.

SAW-SETTING MACHINE.

No. 835,449.

Specification of Letters Patent.

Patented Nov. 6, 1906.

Application filed December 24, 1904. Serial No. 238,220.

To all whom it may concern:

Be it known that I, BENJAMIN G. LUTHER, a citizen of the United States, residing at Worcester, in the State of Massachusetts, have invented a new and useful Improvement in Saw-Setting Machines, of which the following is a specification.

The object of my invention is to provide an improved machine for setting the teeth of a circular saw in which the teeth of the saw are fed to the anvil by means of an inclined feeding-disk; and it consists in imparting to the rotary tooth-feeding means two revolutions to one of the hammer-raising means, whereby the inclined-feeding disk may be made to act upon a single tooth and less angular pitch will be required in the said disk than heretofore.

My invention also consists in the inclination of the shaft of the feeding-disk, whereby sufficient room is obtained for the required multiplying gears, and whereby the feeding-disk may be caused to rotate in a radial plane of the saw.

My invention also consists in the improved construction of the tooth-feeding device and in the pivoted shaft-holding means whereby the tooth-feeding disk is made adjustable toward or from the periphery of the saw.

In the accompanying drawings, Figure 1 represents a top view of the machine. Fig. 2 represents a side view of the same. Fig. 3 represents a detail vertical section taken in the line 3 3, of Fig. 1. Fig. 4 represents a section taken in the line 4 4, of Fig. 3.

In the drawings, A represents the bed-frame of the machine provided at one side with the rigid slotted arm B, and in the slot C of the said arm is placed the saw-holding stud D, which is made adjustable along the said slot. The stud D is provided with the collar E, upon which the saw F rests, and loosely above the supporting-collar E is placed the adjustable tapering collar G for centering and holding the saw. Upon the driving-shaft H is placed the bevel-gear I and the cam J, which latter serves to raise the spring-actuated hammer K by acting upon the roller-stud L at the side of the shank M of the said hammer. Upon the bed A of the frame is pivoted the adjustable shaft-bearing frame O at the point P, which is located directly under the periphery of the pinion-gear Q, secured to the shaft R, the said shaft being journaled in the said bearing-frame O. The pinion-gear Q engages with the gear I,

of twice its diameter, whereby the said pinion will make two revolutions to one revolution of the said gear. Upon the shaft R is also secured the rectangular block U by means of the screw *a*, the said block being provided at one side with the rib *b*, which forms a guide for the axially-adjustable segment-disk *c*, which disk upon the revolution of the shaft R serves to hold the teeth of the saw in a fixed position over the anvil W for the action of the hammer K thereon, the said teeth being fed forward by the action of the angularly-adjustable segment-disk *d*, which is pivoted to the side of the block U at the point *e* in the plane of the said disk and made angularly adjustable upon the said block by means of the clamping-screw *h*, which passes through the circular slot *f* in the attached base-plate *g*. The adjustable segment-disk *c* is clamped to the block U by means of the screw *k*, which passes through the slot *l* in the base *m* of the said disk.

The frame O, which carries the shaft R, is clamped in its angularly-adjusted position by means of the clamping-screw *i*, which passes through the circular slot *j* in the base *k*, and by means of such adjustment the rotary tooth-feeding disks may be brought nearer to or carried away from the periphery of the saw.

The machine is adapted for setting the teeth of both splitting and cutting-off saws, and by changing the inclination of the segment-disk *d* from one end of the segment-disk *c* to the other the teeth of the saw may be fed in either direction as required, and the said segment-disks may be so adjusted relatively to each other as to feed saw-teeth of different sizes, the block U, upon which the segment-disks are secured, being also capable of adjustment along the shaft R, the axis of which is set obliquely to the pivot-axis of the hammer K. The slot C of the arm B is made to extend in a direction approximately perpendicular to the middle of a horizontal line extending from the periphery of the segment-disk *c* to the tooth-setting face of the anvil, as shown by the dotted lines in Fig. 1, and by reason of the oblique direction of the slot C the machine is made adapted for operation upon saws of both large and small size with a single adjustment of the saw relatively to the feeding-disk and the anvil.

I claim as my invention—

1. In a saw-setting machine, the combi-

nation of means for holding the saw, the anvil, the hammer, the driving-shaft, the cam upon the said shaft, the obliquely-directed shaft, the gear-pinion upon the said shaft engaging with the gear of the driving-shaft, with the feeding-disk located upon the said oblique shaft which makes twice the number of revolutions of the driving-shaft, whereby the working pitch of the feeding-disk may be reduced so as to operate upon a single tooth of the saw.

2. In a saw-setting machine, the combination of means for holding the saw, the anvil, the hammer, the driving-shaft, the cam upon the said shaft, the oblique shaft geared so as to make two revolutions to one of the driving-shaft, the feeding-disk located upon the oblique shaft, and the pivotal support for

the said shaft, whereby the feeding-disk may be adjusted relatively to the teeth of the saw. 20

3. In a saw-setting machine, the combination of the axially-adjustable segment-disk, adapted to hold the teeth of the saw in a fixed position, the shaft for the said segment-disk and the disk-holding block secured to the shaft, with the angularly-adjustable segment-disk pivoted to the side of the block in the plane of the said tooth-holding disk, and adapted for reverse angular adjustment upon the said block, whereby the teeth of the saw may be fed in either direction, as required. 25 30

BENJAMIN G. LUTHER.

Witnesses:

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