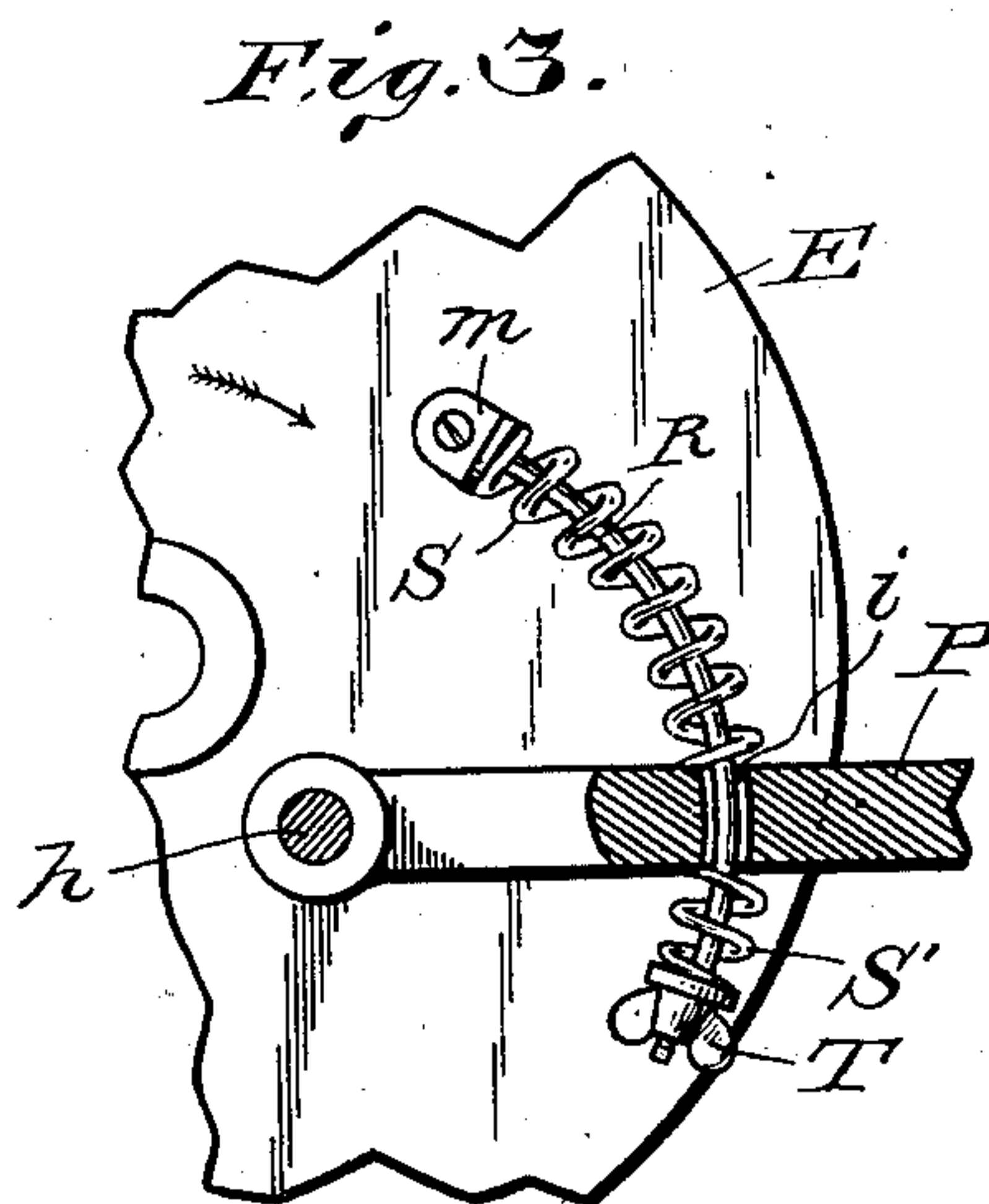
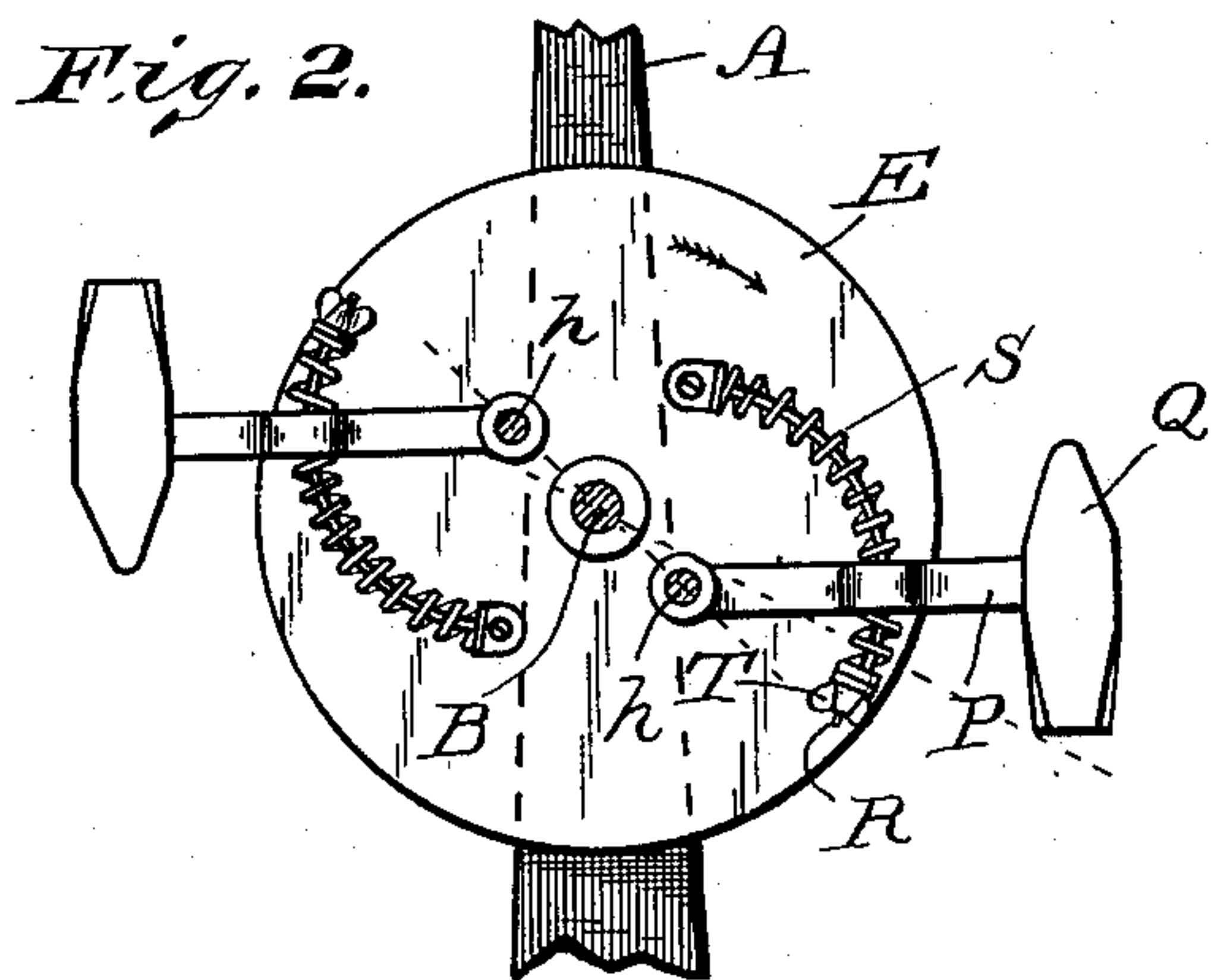
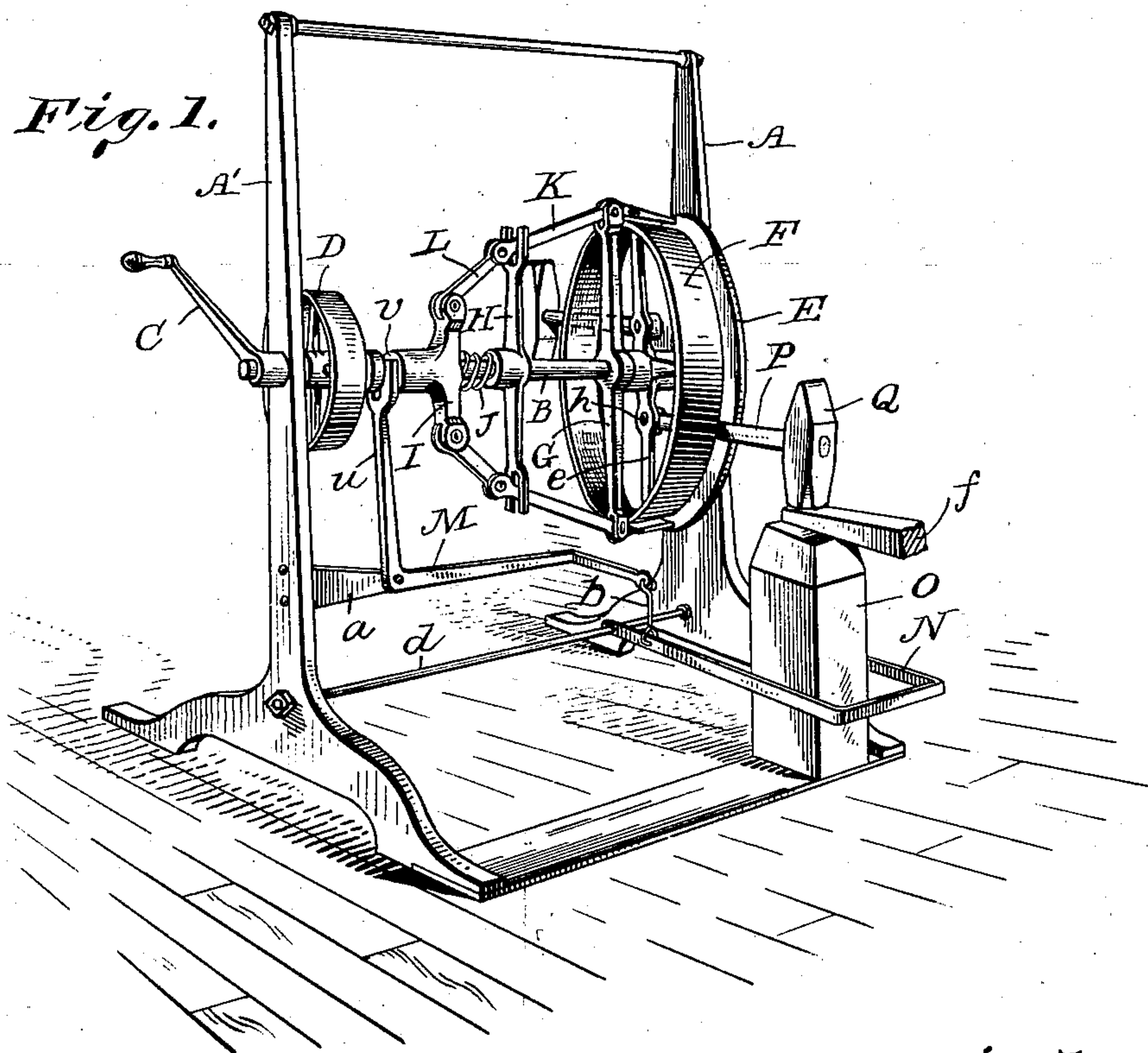


No. 655,028.

Patented July 31, 1900.

W. SNELLER.
ROTARY DRAW BLOCK HAMMER
(Application filed Mar. 24, 1900.)

(No Model.)



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WILLIAM SNELLER, OF IONIA, KANSAS, ASSIGNOR OF ONE-HALF TO JOHN G. MCCLUN AND LEONARD VIERGIVER, OF CAWKER CITY, KANSAS.

ROTARY DRAW-BLOCK HAMMER.

SPECIFICATION forming part of Letters Patent No. 655,028, dated July 31, 1900.

Application filed March 24, 1900. Serial No. 10,031. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SNELLER, a citizen of the United States, residing at Ionia, in the county of Jewell and State of Kansas, have invented certain new and useful Improvements in Rotary Draw-Blow Hammers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to that class of hammers in which the hammer proper is attached to a helve that is pivoted to a rotating wheel or an arm, and the object is to improve such hammers, so that a draw-blow may be given thereby and also be rendered adjustable, so as to be adapted to work on various degrees of thickness of metal upon a fixed anvil.

The invention consists in a hammer-helve provided with a spring having a bearing upon the top of the helve and supported by the wheel or the arm to which the helve may be pivoted and means whereby the tension of the spring may be varied and also whereby the angularity of the helve and particularly the hammer may be varied.

The invention consists also in improved mechanism whereby to operate the hammer; and it consists, further, in the parts and combination and arrangement of parts particularly described hereinafter and pointed out in the claims.

Referring to the drawings, Figure 1 represents a perspective view of my machine complete; Fig. 2, a side elevation of a portion of the machine, showing the hammers as preferably mounted and the spring and adjusting means as preferably constructed; and Fig. 3 a fragmentary view showing the manner in which the helve is preferably constructed and connected with the spring.

In the drawings, similar letters of reference throughout the several views designate similar parts.

In construction I provide a suitable base or foundation part upon which is mounted a

pair of posts or standards, as A and A', in which a shaft B is suitably journaled. Near the post A is a disk or circular plate E and a friction-wheel F, suitably connected rigidly together, with a space between them and rotatably mounted upon the shaft B, together comprising a hammer-carrying head. Adjacent to the wheel F is a clutch mechanism adapted to engage the wheel and comprising, preferably, a pair of oppositely-disposed radial arms G, secured rigidly to the shaft B. A little removed therefrom are a pair of similarly-disposed guide-arms H, also secured to the shaft B through the means of a suitable hub. On the shaft B is a sliding cross-head I, between which and the hub of the arms H is seated a coiled spring J. Levers *k* are pivoted to the arms G and at one end are adapted to frictionally engage the periphery of the wheel F, while at the opposite end they are each connected by a link L to the cross-head I. A lever M, having a bifurcated arm *u*, engages an annular groove *v* in the body of the cross-head I and is suitably supported pivotally, as by a bracket *a*. A treadle N is suitably supported as by a rod *d* pivotally and is connected by a link *b* with the lever M. The anvil O is conveniently arranged with respect to the hammers, so that its top surface is somewhat below the plane of the shaft B.

The hammer-helve P is pivotally connected at its end opposite the hammer upon a wrist-pin *h*, secured to the plate E and also to an arm *e* of the wheel F and extending from one to the other, being situate at a suitable distance from the shaft B. Usually two hammers are employed in a machine. A curved bar R is attached at one end by a suitable headpiece *m* to the plate E (and, if desired, also to the wheel F or to this alone) and extends through a guideway with which the helve is provided, which is preferably an aperture *i* in the helve, situate, preferably, closer to the hammer Q than to the pin *h*. The free end of the bar has screw-threads, on which is a screw-threaded adjusting-nut T. A coiled spring *s* of suitable length encircles the bar R and is seated between the helve and the headpiece *m*, while at the opposite side of the helve (being the lower side in use)

is a shorter spring S' , similarly formed and mounted and seated between the helve and the adjusting-nut. The helve is so mounted between the springs that it extends outwardly from the pin h at an oblique angle to an imaginary line drawn transversely through the shaft B and the pin h , so that when the face of the hammer Q rests fairly upon the anvil the pin h shall be in a position somewhat below the shaft B and toward the hammer or a short distance below a line drawn through the shaft B and the bottom of the hammer. In this construction the cushion-springs retain the hammer normally in a fixed position relatively to the hammer-carrying head comprising the plate E and wheel F , except when the hammer is delivering its blow. By means of the nut T and short cushion-spring S' (which spring, however, may be dispensed with, if desired) the positions of the hammer relatively to the anvil may be varied as may be desired and the degree of draw or drag of the blow varied to accommodate various thicknesses of metal f to be drawn out.

The shaft B is provided with a hand-crank C or a belt-wheel D , or both, secured to the shaft, by which to apply power to the machine.

Obviously the minor details of construction may be varied within the scope of my invention.

In practical use the shaft B is suitably put in rotative motion, the hammers remaining at rest. A piece of metal to be acted upon is heated, as a bar f , (or a plow-lay,) and placed upon the anvil. The treadle is pressed down, causing the arms K to engage the wheel F frictionally, which in turn carries the hammer or hammers around until a blow is struck, the spring S preventing the hammer from bounding off the work and assisting in causing it to draw the metal out, so as to elongate it and reduce its thickness as the hammer is drawn therefrom slidingly by reason of the pin h passing under the shaft B , the plate E moving in the direction of the arrow. More or less "draw" may be given by varying the tension of the spring s accordingly.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hammering-machine, the combina-

tion of the rotating shaft, the hammer-carrying head carried by the shaft, the helve pivoted in said head, the hammer attached to the helve, the guideway in the helve, the curved bar supported by said head and extending through the guideway, the spring mounted upon the curved bar and pressing upon the top of the helve, the adjusting-nut on the curved bar at the opposite side of the helve, and the anvil. 55 60

2. In a hammering-machine, the combination with the hammer-carrying head having the hammer-helve pivoted therein, of the guideway in the helve, the bar supported by such head and extending through the guideway, the spring carried by such head and seated against the helve, and the adjusting-nut on the bar. 65

3. In a hammering-machine, the combination of the rotating plate and its axial shaft, the wrist-pin secured to the plate, the helve connected to the wrist-pin, the guideway in the helve, the headpiece secured to the rotating plate, the curved bar secured to the headpiece and extending through the guideway, the spring seated between the headpiece and the helve, the nut on the free end of the curved bar, the spring between the nut and the helve, the hammer on the helve, and the anvil. 70 75 80

4. In a hammering-machine, the combination of the frame, the anvil, the rotating shaft, the crank, the friction-wheel, the clutch devices, the lever connected to the clutch devices, the treadle connected to the lever, the rotating plate on the shaft carried by the friction-wheel, the wrist-pins, the pivoted helves provided with the guideway, the curved bar supported between the rotating plate and the friction-wheel and extending through the guideway, the cushion-springs engaging the helve, the hammer on the helve, and the adjusting-nut on the curved bar, substantially as set forth. 85 90 95

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM SNELLER.

Witnesses:

J. W. TUCKER,
M. MEIBERGER.