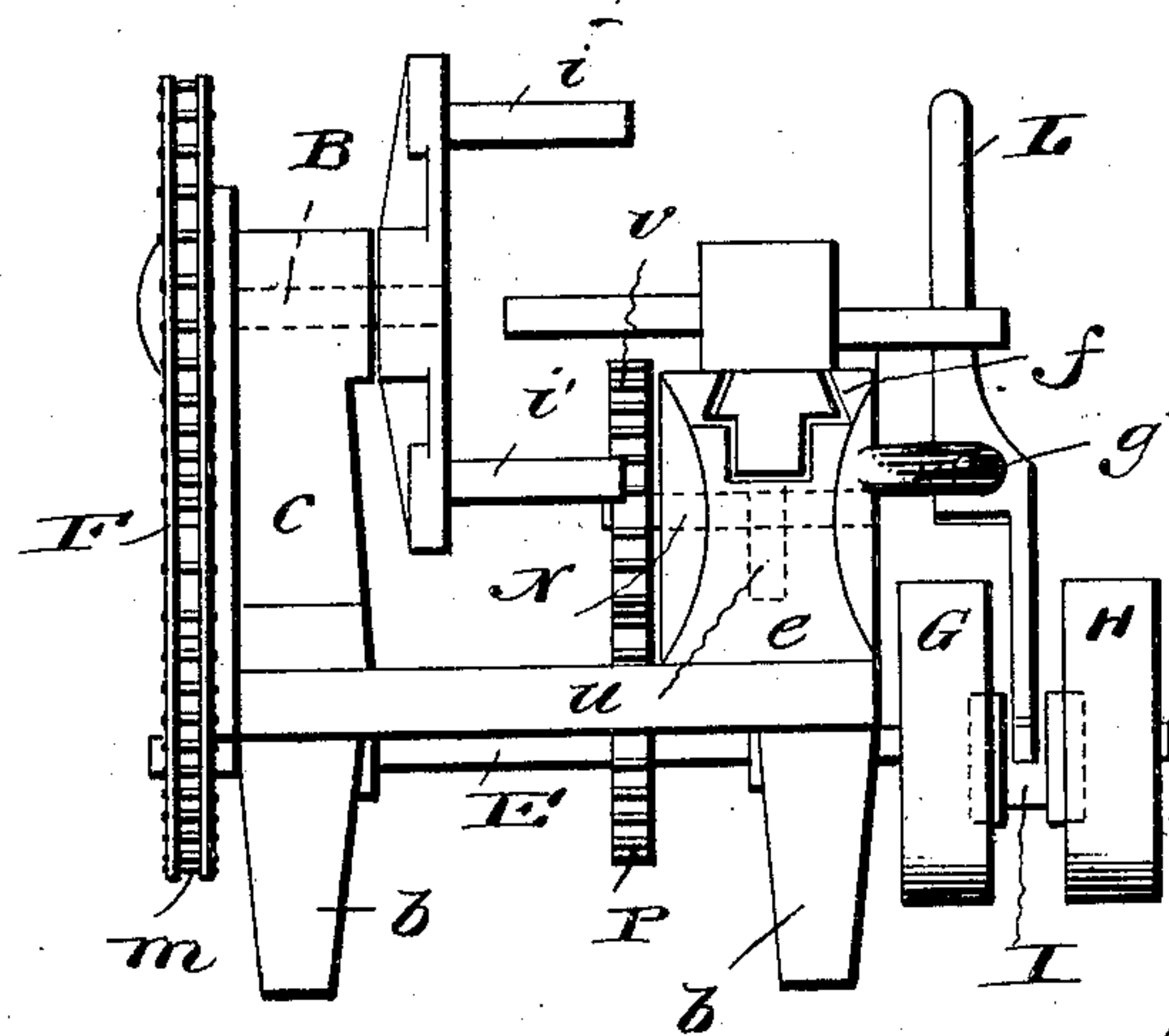
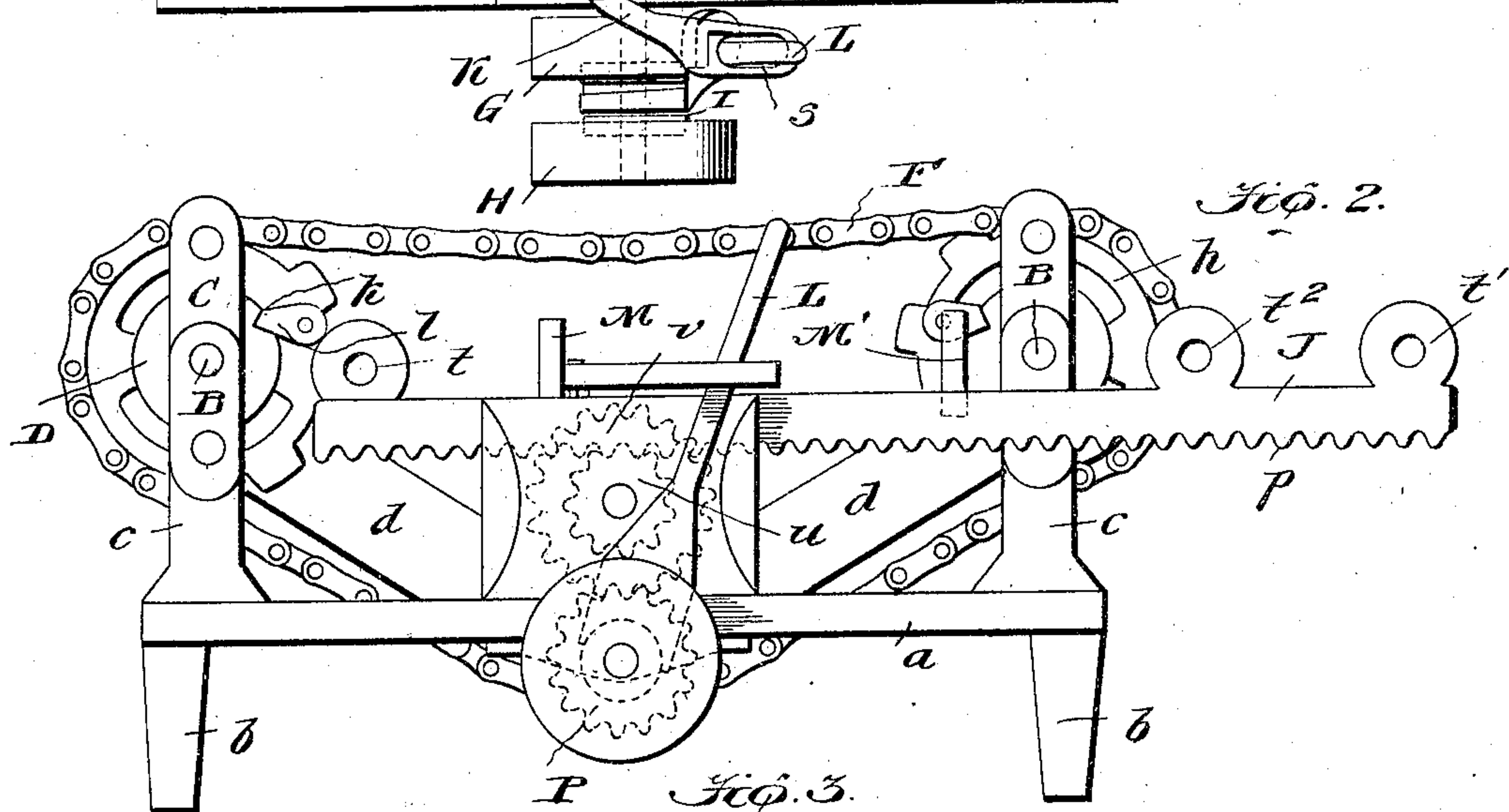
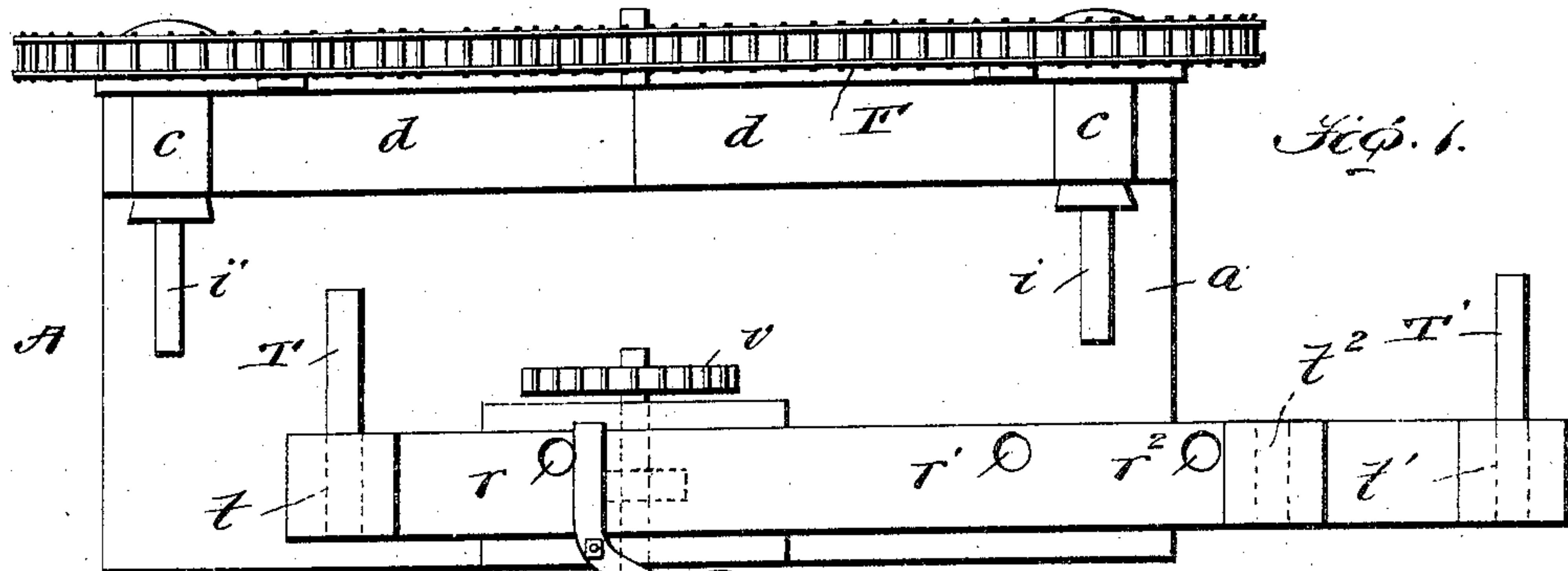


No. 789,808.

PATENTED MAY 16, 1905.

W. T. HUDSON.
CANDY WORKING MACHINE.
APPLICATION FILED DEC. 5, 1904.



Witnesses

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WILLIAM T. HUDSON, OF ATLANTA, GEORGIA.

CANDY-WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 789,808, dated May 16, 1905.

Application filed December 5, 1904. Serial No. 235,582.

To all whom it may concern:

Be it known that I, WILLIAM T. HUDSON, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have invented new and useful Improvements in Candy-Working Machines, of which the following is a specification.

My invention pertains to candy-working machines, and contemplates the provision of a compact and durable machine calculated to work two batches of candy with approximately the same power that it ordinarily takes to work one batch.

Other objects and advantages of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view of the machine constituting the present and preferred embodiment of my invention. Fig. 2 is a side elevation of the same, and Fig. 3 is an elevation of the left end of the machine.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is the main frame of my novel machine. The said frame is preferably of metal, and while it may be of any construction compatible with the purposes of my invention I prefer that it comprise a table *a*, mounted on legs *b*, uprights *c*, rising from the table adjacent to one longitudinal edge and the ends thereof, diagonal braces *d*, interposed between the transverse central portion of the table and the upper portions of the uprights *c*, and a support *e*, rising from the table adjacent to the opposite longitudinal edge thereof with reference to the longitudinal edge first mentioned. As best shown in Fig. 3, the support *e* is provided in its upper portion with a longitudinally-disposed guideway *f* and on its outer side with a lateral bracket *g*, which is bifurcated for a purpose presently set forth.

BB are short transverse shafts journaled in the upper portions of the uprights *c* and having sprocket-gears *h* loose on their outer ends. CC are heads fixed on the inner ends of the said shafts and each bearing grabs *i i'*. In Fig. 1 the two grabs complementary to each

head C are shown as resting one above the other.

DD are disks fixed on the shafts B and having notches *k* in their perimeters designed to be engaged by pawls *l*, carried by the loose sprocket-gears *h*.

E is a primary shaft journaled in the lower transverse central portion of the main frame A and bearing a sprocket-gear *m* at one of its ends, and F is a sprocket-belt arranged on and connecting the sprocket-gears *h* and the sprocket-gear *m*. In virtue of this construction it will be observed that when the primary shaft E is rotated in one direction the pawl *l* of one of the gears *h* will engage the notch *k* in one of the disks D and through the medium of said disk rotate one of the shafts B in a corresponding direction, while when said shaft E is rotated in the opposite direction the pawl *l*, carried by the gear *h* on the other shaft B, will engage the notch *k* in the disk D on the shaft, and thereby rotate the said shaft in the same direction as the primary shaft E. It will also be noted that when the primary shaft E is rotated toward the left, Fig. 2, the shaft B at the left of said Fig. 2 will be turned toward the left and the shaft B at the right of the figure will remain at rest, while when the shaft E is rotated toward the right the shaft B at the right of the figure will be turned toward the right, while the shaft B at the left of the figure will remain idle.

G is a band-pulley loosely mounted on the primary shaft E and designed to receive a crossed band from a motor. (Not shown.) H is a band-pulley which is also loosely mounted on the shaft E and is designed to receive a straight band from the motor mentioned, and I is a clutch keyed or feathered on the shaft E, so as to turn therewith and move longitudinally thereon and designed to engage the pulleys G and H alternately. From this it follows that when the clutch is in engagement with the pulley G the primary shaft will be rotated in one direction, while when the clutch is in engagement with the other pulley, H, the primary shaft will be rotated in the opposite direction; also, that when the clutch is midway between and out of engagement with the pulleys G and H both pulleys

will turn loosely on the shaft, and hence the shaft and all of the working parts connected therewith will rest.

J is a slide-bar movable longitudinally in the guideway f of the support e and having a rack p at its under side and also having apertures r , r' , and r'' , Fig. 1.

K is a bell-crank fulcrumed on the support e so as to swing in a horizontal plane and having an aperture s in its outer arm.

L is a lever fulcrumed in the bracket g of the support e so as to swing in the direction of the width of the machine and having its lower arm bifurcated to engage the clutch I and also having its upper arm disposed in the aperture s of the bell-crank K.

M M' are tappets disposed in apertures of the slide-bar J and designed to engage the inner arm of the bell-crank K.

N is a transverse shaft journaled in the support e and bearing a pinion u , intermeshed with the rack p of the slide-bar J, and also bearing a spur-gear v , and P is a spur-gear fixed on the primary shaft E and intermeshed with the spur-gear v .

It will be readily noticed that motion will be transmitted from the shaft E to the slide-bar J through the medium of the gears P and v , the shaft N, and the pinion u . It will also be noticed that when the slide-bar J is moved toward the right the tappet M, acting against the inner arm of the bell-crank K, will throw the clutch I into engagement with the band-pulley G, and thereby reverse the direction of movement of the said slide-bar J, while when the slide-bar J is moved in the reverse direction, or toward the left, the tappet M', acting against the inner arm of the bell-crank, will throw the clutch into engagement with the band-pulley H, and thereby reverse the slide-bar J, so as to cause the same to again move rectilinearly toward the right. It will further be noticed that incident to the rectilinear movement of the slide-bar J toward the left the shaft B at the left will remain idle and that incident to the rectilinear movement of said slide-bar toward the right the shaft B at the right will remain idle. However, on the movement of the slide-bar toward the right the shaft B at the left will be rotated, and on the movement of said slide-bar toward the left the shaft B at the right will be rotated.

In addition to the features before mentioned the slide-bar J is provided with grabs T T', which extend laterally inward therefrom and three (more or less) transverse apertures t , t' , and t'' to receive the said grabs.

In the practical use of my novel machine the grab T operates in connection with the grabs complementary to the shaft B at the left, and the grab T' operates in connection with the grabs complementary to the shaft B at the right. It will also be noticed that on the movement of the slide-bar J toward the left

its grab T will pass through between the grabs i i' of the shaft B at the left, which shaft B is then idle. On the movement of the slide-bar J toward the right, however, the head C of the shaft B at the left will make two revolutions and recoil the candy. On the said movement of the slide-bar J toward the right its grab T passes immediately over the grab i and not between the grabs i and i' . The movement of the bar J toward the left operates to pull the candy on the grabs complementary to the shaft B at the left, which shaft is then idle, as before described. The movement of said bar J toward the right operates to pull the candy on the grabs complementary to the shaft B at the right, which shaft is then idle, as before described, and on the movement of the bar J toward the left the head C complementary to the shaft B at the right makes two revolutions, and hence its grabs recoil the candy. From this description it will be apparent that incident to the pulling of the batch of candy at one end of the machine the batch of candy at the opposite end thereof is recoiled, and as it only takes about one thirty-second of one horse-power to recoil the candy and one horse-power to pull the same it will be appreciated that my novel machine will work two batches of candy with approximately the same power that it ordinarily takes to work one batch, which is an important desideratum. When it is desired for the machine to have a long pulling stroke, the grab T' is placed in the aperture t' of the slide-bar J, while when a short pulling stroke is desired said grab T' is placed in the aperture t'' . For the same purpose the tappet M' is transferred from the aperture r' to the aperture r'' , and vice versa. The long stroke accumulates more air in the candy, and hence makes it lighter in weight than when pulled by the short stroke. The short stroke is designed especially for use in the pulling of stick-candy, in which but a comparatively small quantity of air is desirable. From this it follows that my novel machine is designed for pulling all kinds of candy.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the said embodiment. I do not desire, however, to be understood as confining myself to such specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

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

1. In a candy-working machine, the combination of a primary driver, two rotary candy-working devices, candy-pulling devices complementary to the rotary candy-working de-

vices, driving connections between the primary driver and the rotary devices for operating the latter alternately by the former, and a driving connection intermediate the primary driver and the candy-pulling devices for operating the latter.

2. In a candy-working machine, the combination of two rotary candy-working devices, means for operating said devices alternately, candy-pulling devices complementary to the rotary candy-working devices, and suitable means for operating said candy-pulling devices.

3. In a candy-working machine, the combination of a primary driver, two rotary candy-working devices, candy-pulling devices complementary to the rotary candy-working devices, a rectilinearly-movable slide-bar carrying the candy-pulling devices, means intermediate the primary driver and the rotary devices for operating the latter alternately by the former, and means intermediate the primary driver and the slide-bar for moving said bar first in one direction and then in the other direction.

4. In a candy-working machine, the combination of a primary driver, two rotary candy-working devices, candy-pulling devices complementary to the rotary candy-working devices, a rectilinearly-movable slide-bar carrying the candy-pulling devices, means intermediate the primary driver and one rotary device for operating said device when the driver is moved in one direction, means intermediate the primary driver and the other rotary device for operating the latter when the primary driver is moved in the other direction, means intermediate the primary driver and the slide-bar for moving said bar, means for moving the primary driver in opposite directions, and means controlled by the rectilinearly-slidable bar for reversing the direction of movement of the primary driver.

5. In a candy-working machine, the combination of a primary driver, two rotary candy-working devices, means intermediate the primary driver and one rotary device for operating said device when the driver is moved in one direction, means intermediate the primary driver and the other rotary device for operating the latter when the primary driver is moved in the other direction, candy-pulling devices complementary to the rotary candy-working devices, a rectilinearly-movable slide-bar carrying the candy-pulling devices, means intermediate the primary driver and the slide-bar for moving said bar, pulleys loose on the primary driver and adapted to be moved in opposite directions, a clutch mounted on the

driver between the pulleys, a lever engaging said clutch, a bell-crank engaging the lever, and tappets on the slide-bar arranged to engage the bell-crank.

6. In a candy-working machine, the combination of a drive-shaft, a main frame in which the shaft is mounted, two rotary candy-working devices, candy-pulling devices complementary to the rotary candy-working devices, a rectilinearly-movable slide-bar carrying the candy-pulling devices, a sprocket-gear fixed on the drive-shaft, sprocket-gears loose with respect to the rotary candy-working devices, ratchet connections between the latter gears and the rotary devices arranged to operate one rotary device when the other is idle, a sprocket-belt connecting the several sprocket-gears, a gear connection between the drive-shaft and the rectilinearly-movable bar for moving the latter, means for moving the drive-shaft in opposite directions, and means controlled by the slide-bar for reversing the direction of movement of the drive-shaft.

7. In a candy-working machine, the combination of a main frame, a primary driver, a rotary candy-working device, a candy-pulling device complementary to the rotary device, a ratchet connection intermediate the primary driver and the rotary device for operating the device when the driver is moved in one direction, and leaving the device idle when the driver is moved in another direction, a driving connection intermediate the primary driver and the candy-pulling device for operating the latter, and means controlled by the candy-pulling device for reversing the direction of movement of the primary driver.

8. In a candy-working machine, the combination of a drive-shaft, a main frame in which the shaft is mounted, a rotary candy-working device, a candy-pulling device, a slide-bar carrying the latter device, a sprocket-gear fixed on the drive-shaft, a sprocket-gear loose with respect to the rotary device, a ratchet connection between the latter gear and the rotary device for turning said device in one direction, a sprocket-belt connecting the sprocket-gears, a gear connection between the drive-shaft and the slide-bar, means for moving the drive-shaft in opposite directions, and means controlled by the slide-bar for reversing the direction of movement of the drive-shaft.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM T. HUDSON.

Witnesses:

J. H. QUEEN,
C. C. WILLIS.