

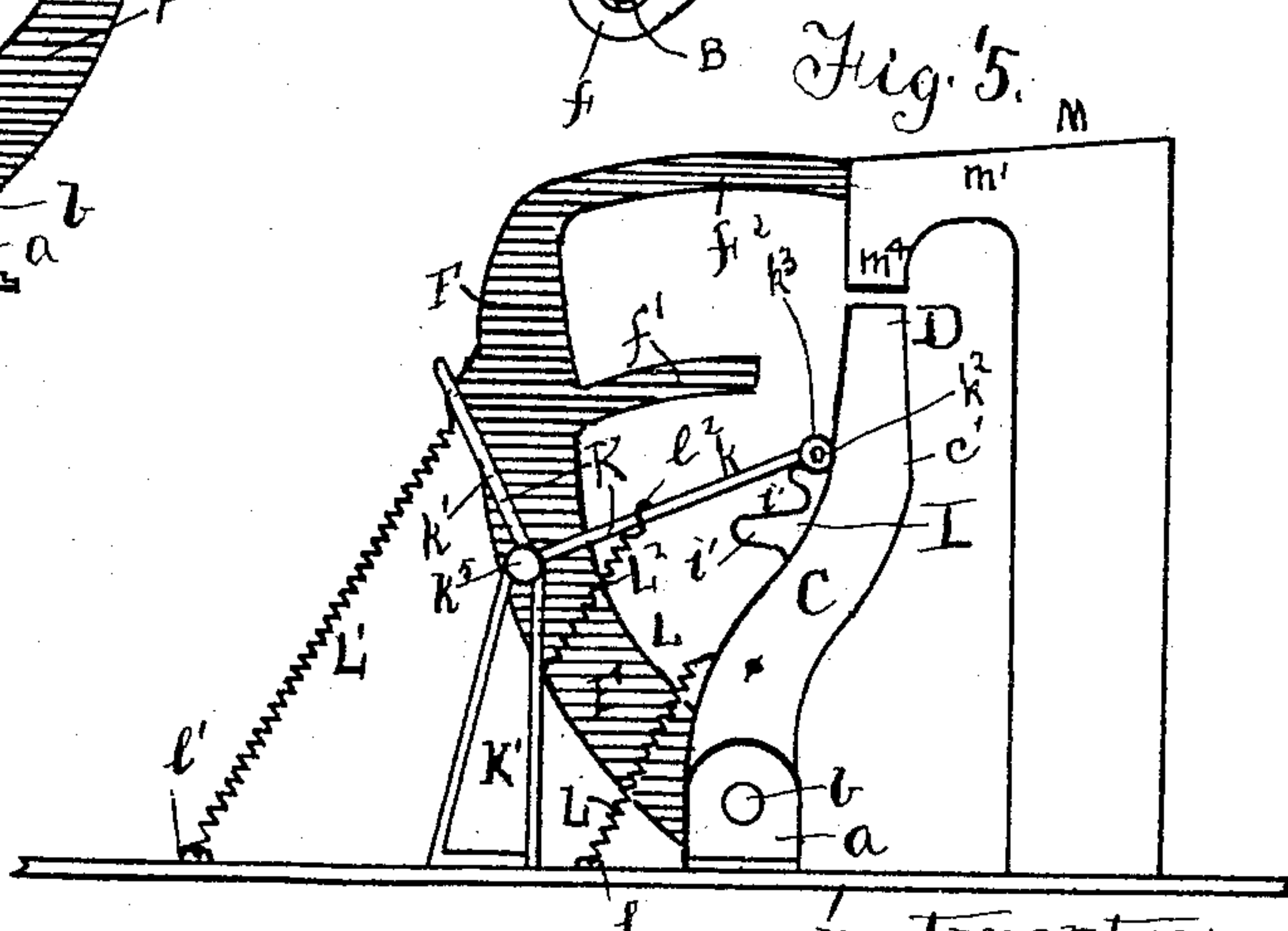
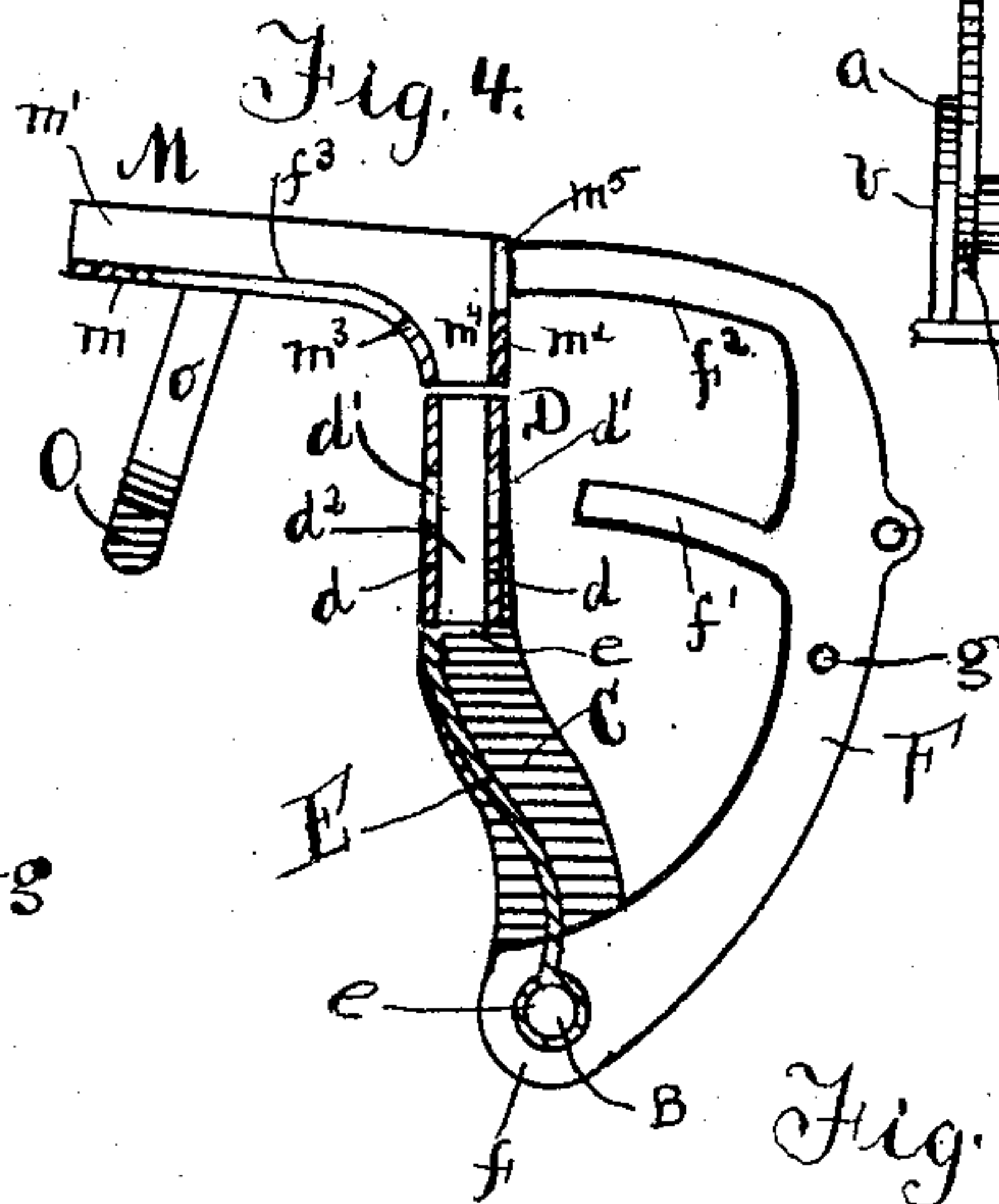
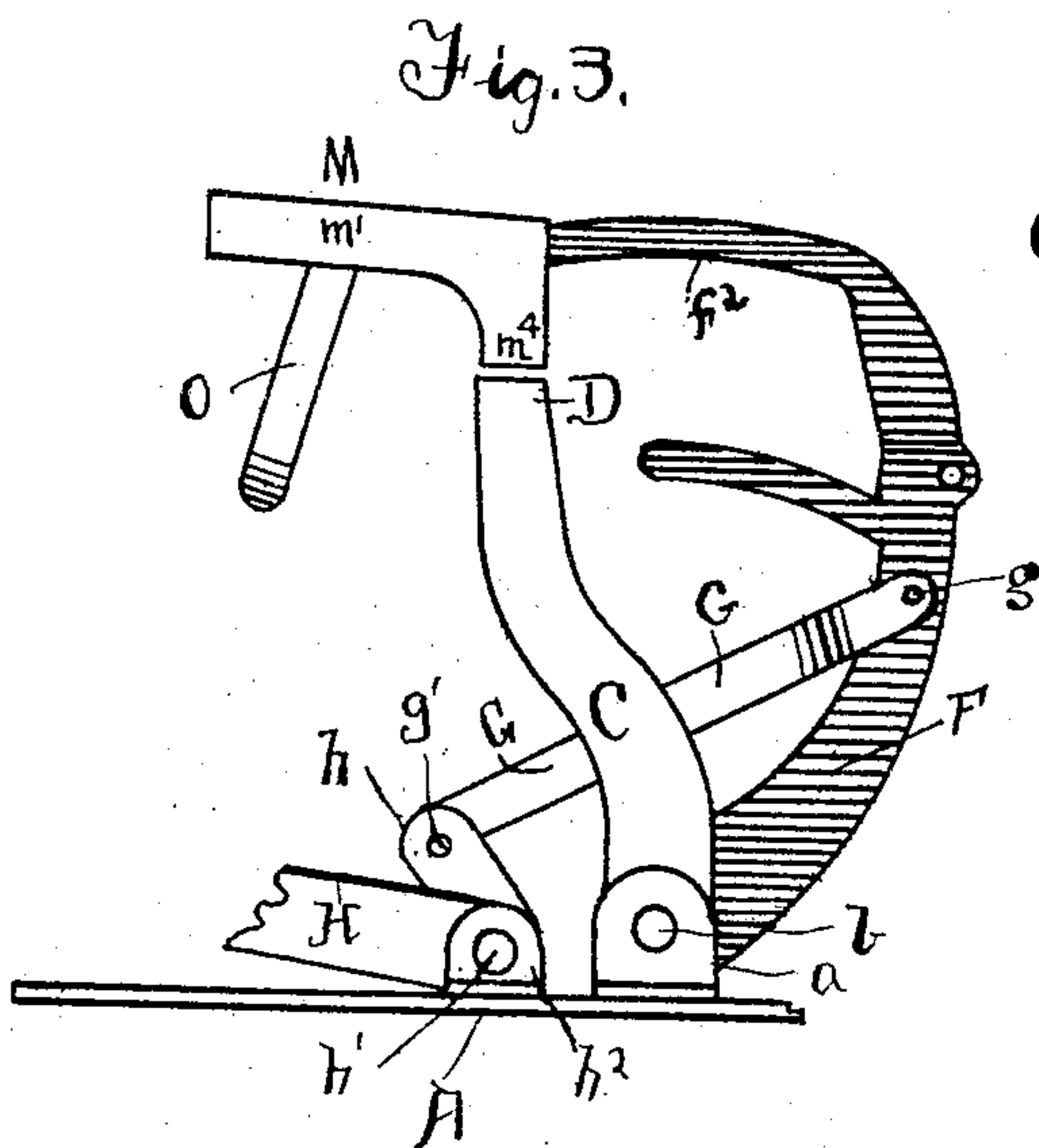
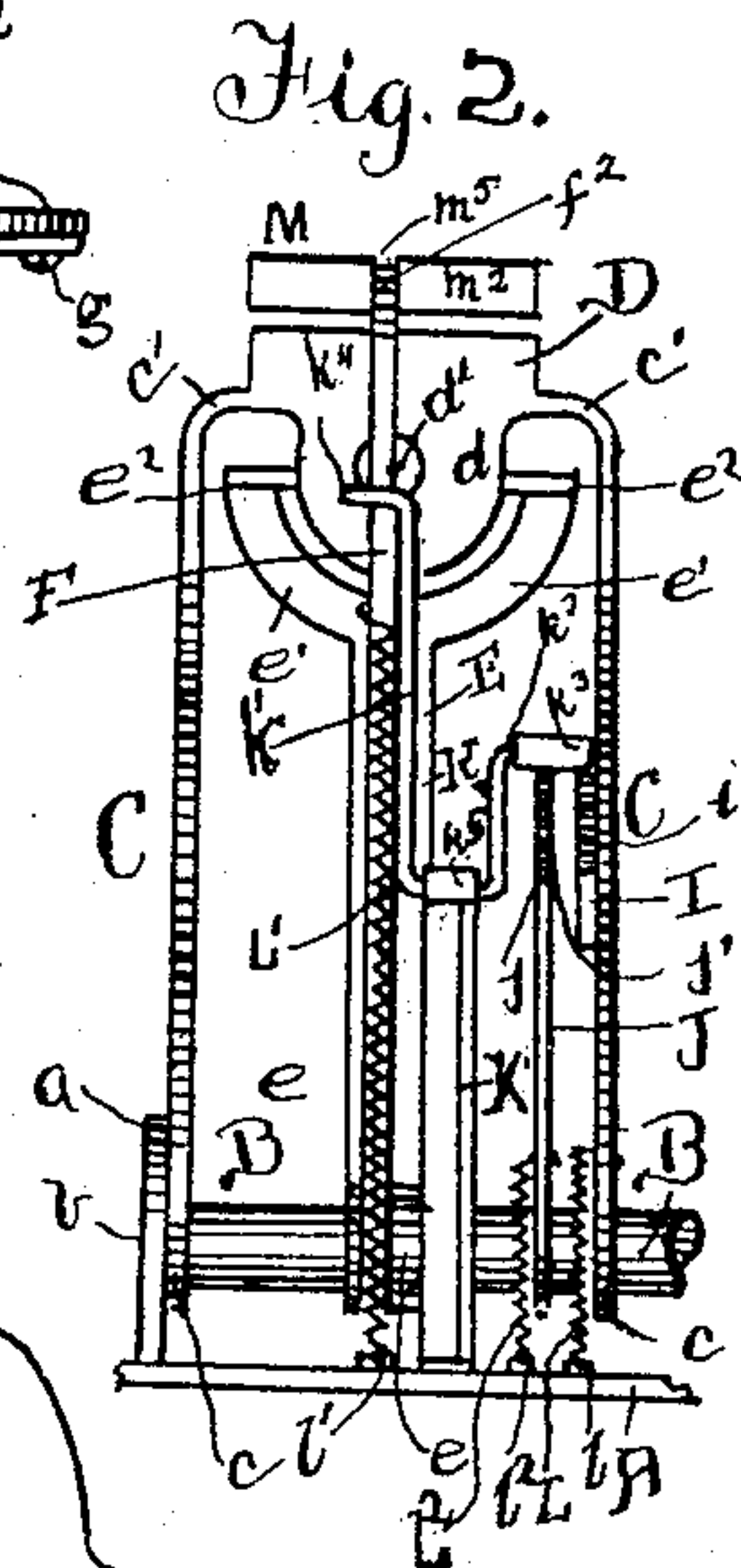
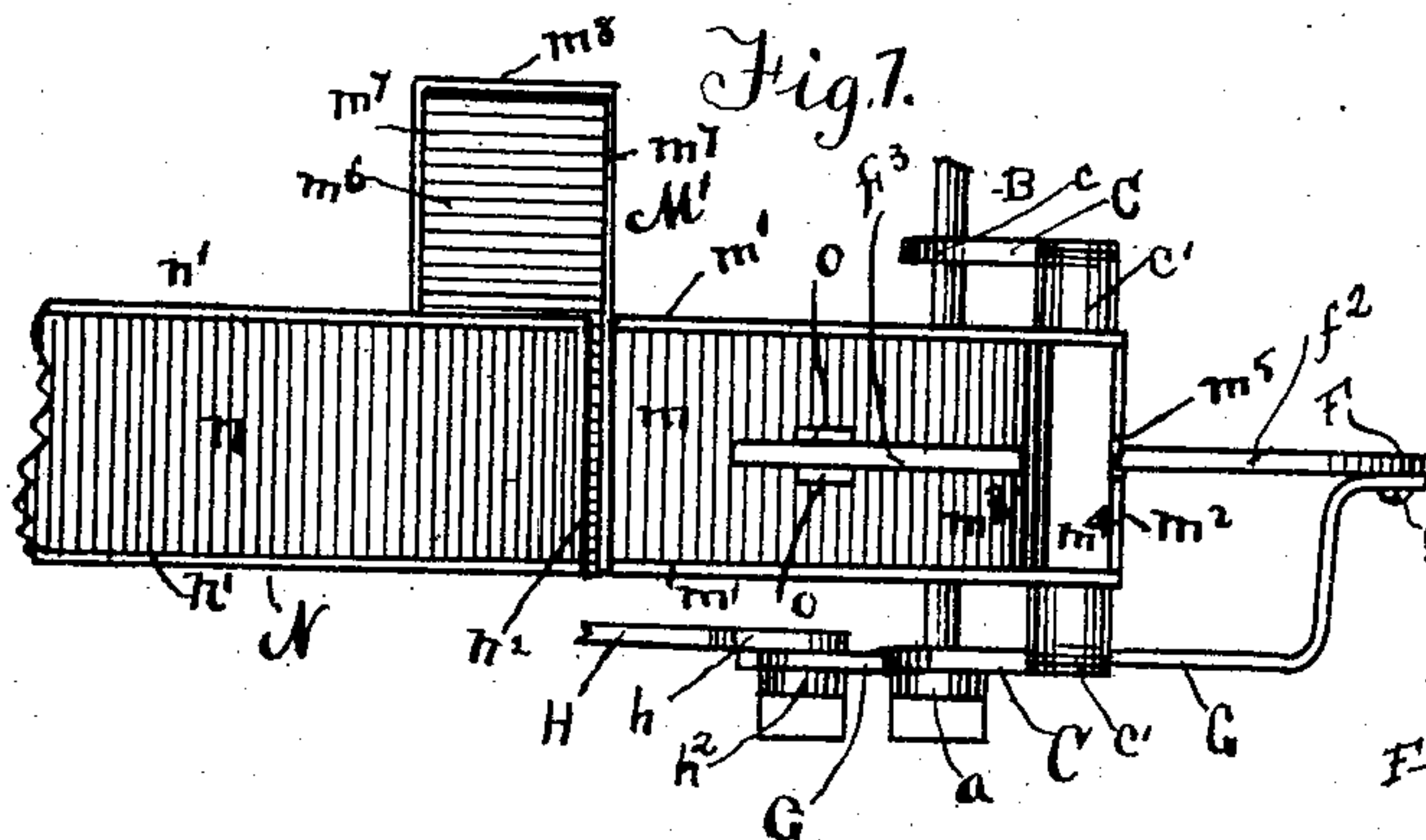
No. 782,795.

PATENTED FEB. 14, 1905.

J. E. PACKARD.  
COIN CONTROLLED MECHANISM.

APPLICATION FILED APR. 14, 1904.

2 SHEETS—SHEET 1.



Witnesses:  
William P. Bond  
Walker Banning.

Inventor.  
John E. Packard  
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Attys.

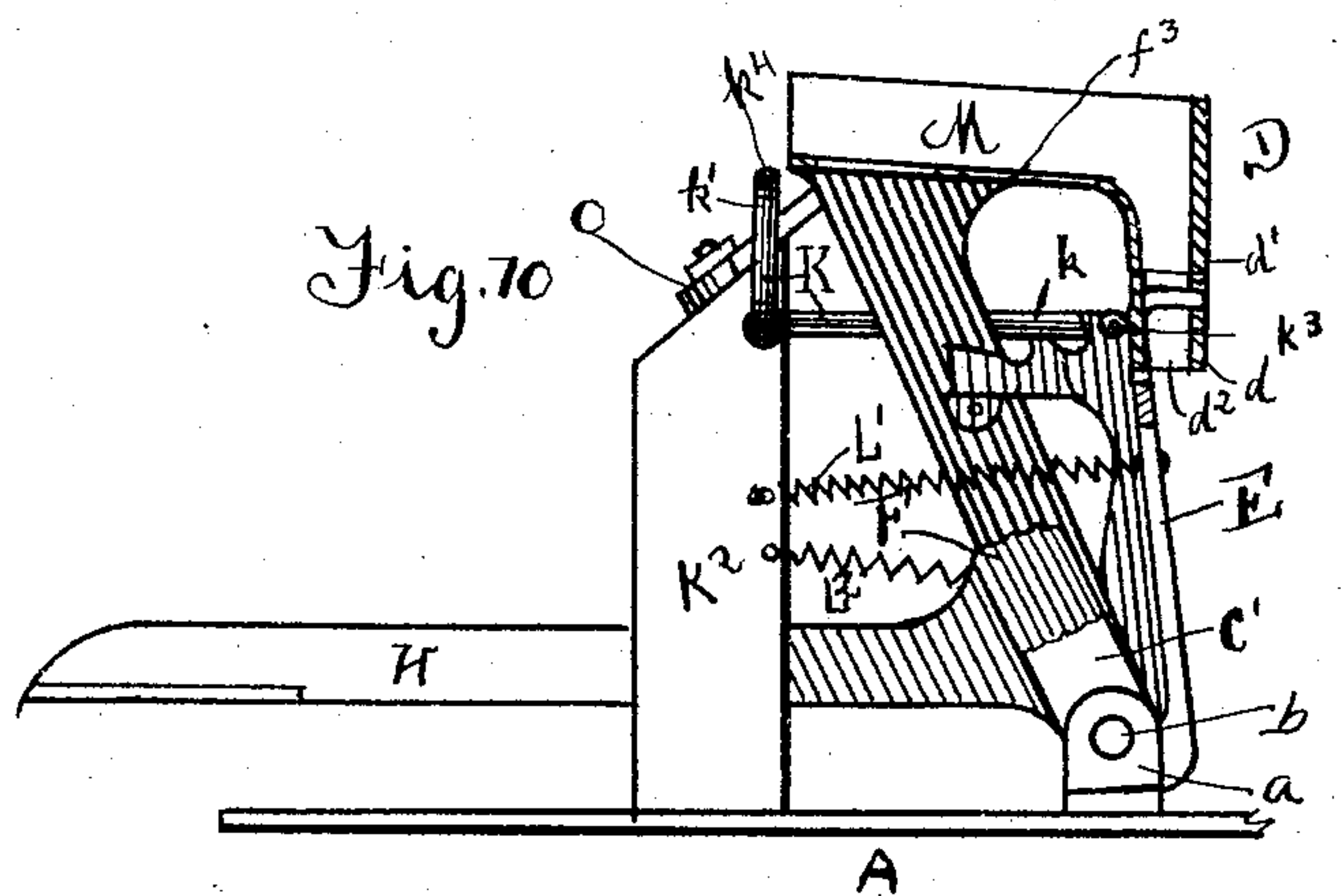
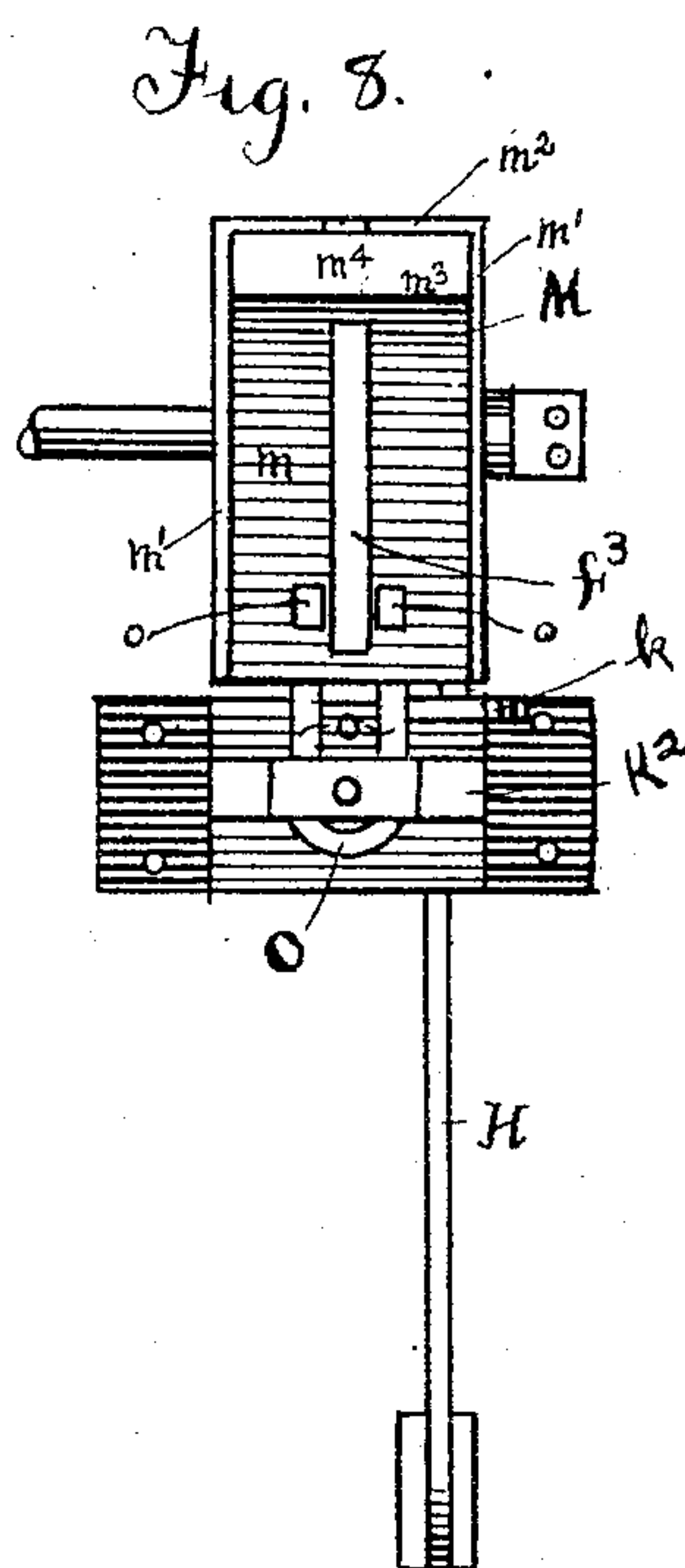
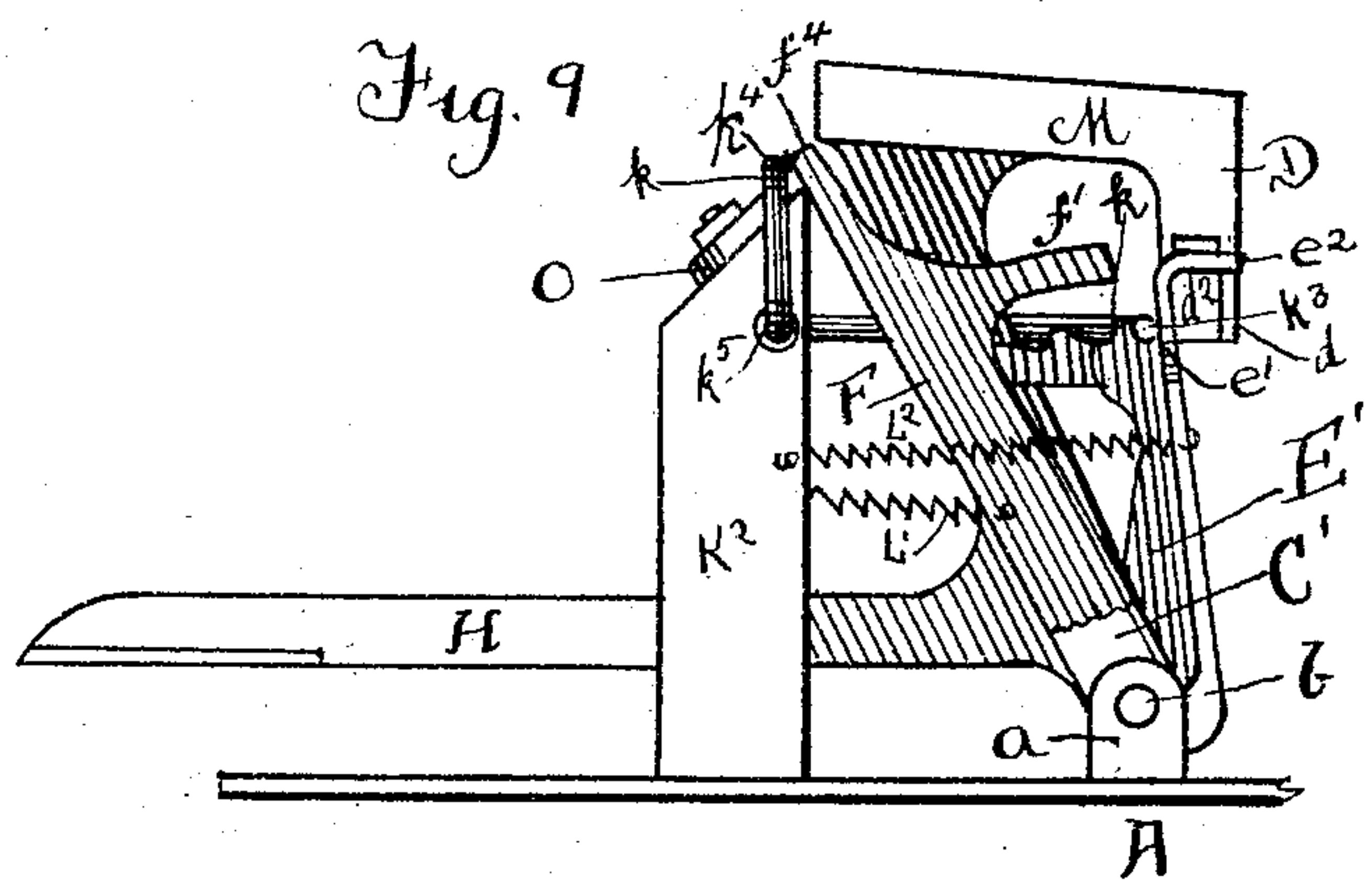
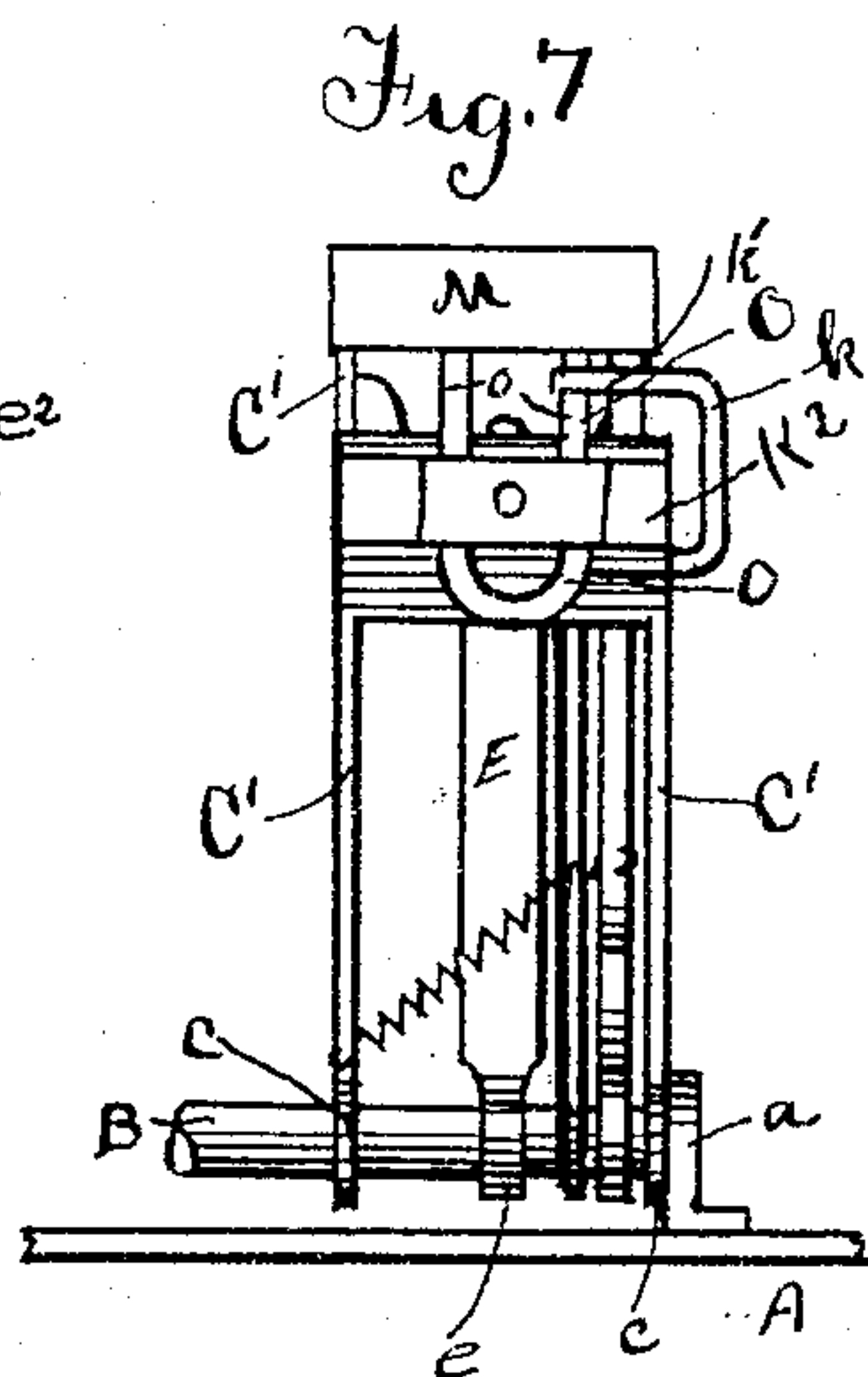
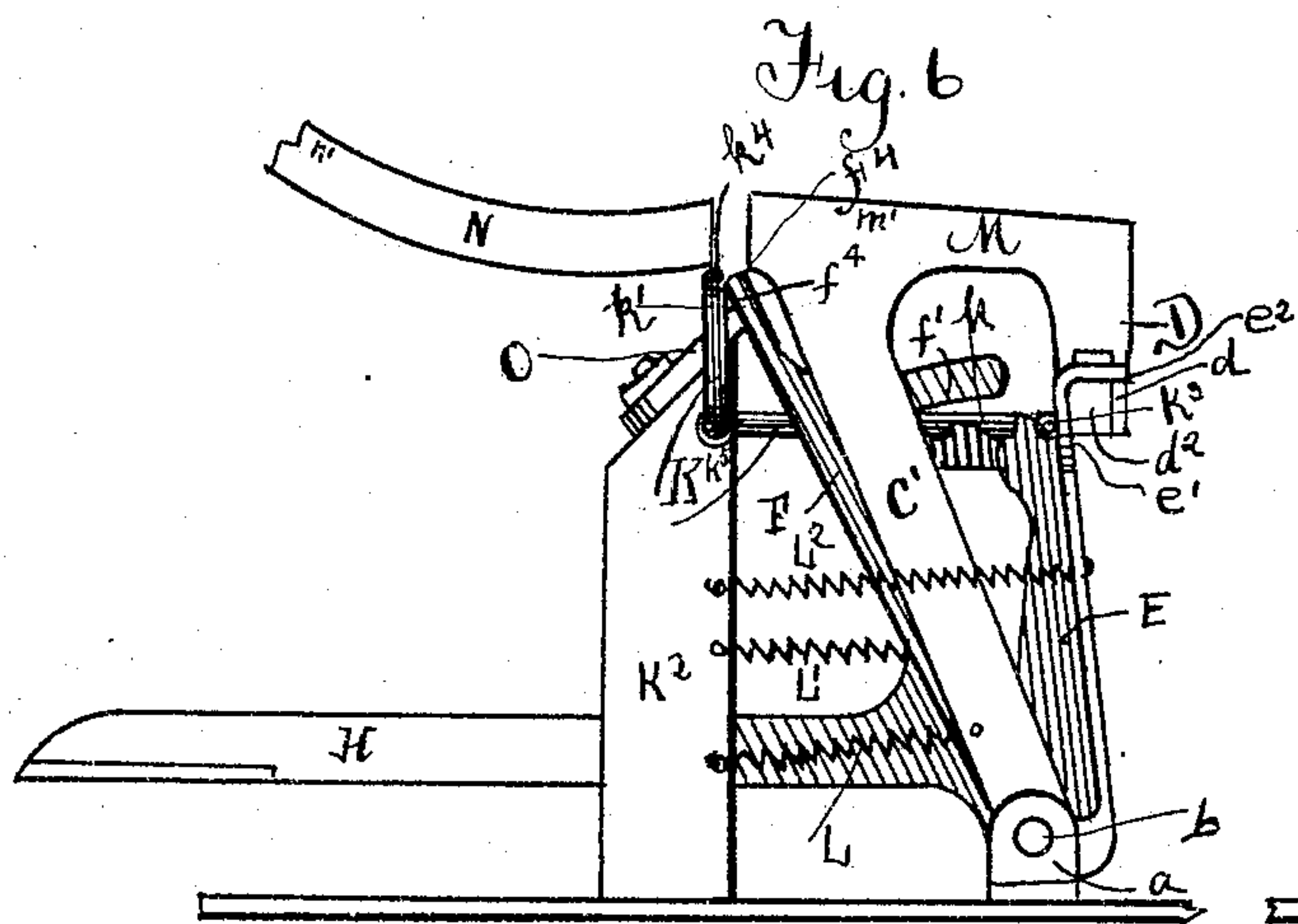
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2 SHEETS—SHEET 2.



Witnesses:  
William P. Bond  
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# UNITED STATES PATENT OFFICE.

JOHN E. PACKARD, OF CHICAGO, ILLINOIS, ASSIGNOR TO MULTI-VENDING COMPANY, OF PIERRE, SOUTH DAKOTA, A CORPORATION OF SOUTH DAKOTA.

## COIN-CONTROLLED MECHANISM.

SPECIFICATION forming part of Letters Patent No. 782,795, dated February 14, 1905.

Original application filed April 22, 1903, Serial No. 153,852. Divided and this application filed April 14, 1904. Serial No. 203,111.

*To all whom it may concern:*

Be it known that I, JOHN E. PACKARD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have  
5 invented certain new and useful Improvements in Coin-Controlled Mechanism, of which the following is a specification, the same being a division of my application, Serial No. 153,852, filed April 22, 1903.

10 The invention relates especially to the receiver or cradle into which a coin is deposited and means for engaging the deposited coin, and thereby rocking a shaft to actuate the discharging mechanism for a purchased article.

15 The objects of the invention are to simplify and improve the construction and operation of the coin receiver or cradle and the means for engaging a coin therein, to have the engagement of the coin operate an oscillating  
20 coin-retainer for the advance of the coin-retainer to rock a shaft to the extent of the limit of the advance of the coin-retainer and with the limit of the advance of the coin-retainer have the coin released and finally deposited,  
25 to furnish a coin-retainer made in two sections one of which is free to oscillate away from the other section and by its forward oscillation rock a shaft, to retain the oscillating section of the coin-retainer in its advanced position for the release and final deposit of the  
30 coin, to effect the movement of the oscillating section of the coin-retainer through the medium of a plunger pressing against a caught coin held by the retainer, and to improve generally the construction and operation of the  
35 several parts which enter into the mechanism as a whole.

The invention consists in the features of construction and combination of parts herein-  
40 after described and claimed.

In the drawings, Figure 1 is a top or plan view of the mechanism of the invention; Fig. 2, an end elevation of the same; Fig. 3, a side elevation; Fig. 4, a sectional elevation of the  
45 coin receiver or cradle and the coin-retainer with the coin-plunger in full elevation; Fig. 5, a side elevation showing the opposite side

to that shown in Fig. 3. Figs. 1 to 5, inclusive, show the preferred form of construction. Fig. 6 is a side elevation showing a modified  
50 form of construction as regards the coin receiver or cradle, the coin-retainer, and the plunger; Fig. 7, an end elevation of the construction shown in Fig. 6; Fig. 8, a top or plan view of the construction shown in Fig. 55  
6; Fig. 9, a side elevation with the support for the receiver or cradle broken away, and Fig. 10 a side elevation with the support for the receiver or cradle and the arm of the plunger broken way. 60

The drawings only show the mechanism for receiving the coin and have the coin furnish the fulcrum for moving the coin-controlled mechanism. The mechanism of the invention is mounted on a base-plate A, adapted to be se- 65  
cured to the bottom of the casing of the vending-machine or to other suitable support. The base-plate has fixedly secured thereto ears *a*, one of which is shown, in which ear is mounted the journal *b* at the end of a rock-shaft B, sup- 70  
ported above the base-plate. A pair of standards C are mounted at their lower ends *c* fixedly on the rock-shaft B, and their upper ends *c'* are inwardly turned and carry a coin-retainer D, having depending from its side walls 75  
*d*, each wall, as shown, having a periphery on the arc of a circle. Each wall *d* has therein a hole *d'*, and between the walls *d* is a space *d''* for the lodgment of a coin deposited in the retainer. An arm E is loosely mounted on 80  
the shaft B by a sleeve or collar *e* at its lower end, and the upper end of this arm E has a fork, the arms *e'* of which are on the arc of a circle furnishing an inner edge concentric with the peripheral edge of the walls *d*, as 85  
shown in Fig 2, and each arm *e'* at its upper end has an inwardly-projecting ledge or lip *e''*, which lips are in line with the coin-space *d''* when the retainer is normal, so that a coin deposited in the space *d''* will rest with its 90  
lower edge on each ledge or lip *e''*, supporting the coin vertically in the coin-space. The retainer D is free to oscillate over the side bars *e'* of the yoke of the arm E, so that when



moved a sufficient distance the space  $d^2$  clears the ledges or lips  $e^2$  for the coin to drop from the retainer.

An arm F is loosely mounted at its lower end  $f$  on the shaft B, so as to be free to oscillate on the shaft as a pivot. This arm F has inwardly projecting therefrom a stem  $f'$ , which is in a horizontal plane with the holes  $d'$ , so that with the advance of the arm F toward the retainer D the stem  $f'$  will enter the hole  $d'$  of the first wall or plate  $d$  and engage the face of the coin in the space  $d^2$  of the retainer, and, as shown in Fig. 4, the upper end of the arm F has a stem  $f^2$  for a purpose hereinafter described. A link G is pivoted at one end to a pin or stud  $g$  on the arm F, and the other end of this link G is pivoted to a pin or stud  $g'$  on an ear  $h$ , upwardly projecting from the actuating-lever H, which lever extends through the wall of the casing to be grasped by the purchaser and depressed for the link G to advance the arm F in the direction of the coin-retainer. The lever H is mounted by a pin or pivot  $h'$  in an ear  $h^2$ , attached to the bottom plate A or other support.

A plate I is attached by pivots or otherwise to the inner face of one of the standards C, and this plate I projects inwardly and has in its edge notches  $i$  and a tongue  $i'$ , as shown in Figs. 2 and 5. An arm J is fixedly attached at its lower end to the rock-shaft B, and the upper end of this arm J has an edge  $j$ , provided with notches arranged in a similar manner to the notches and tongue in the plate I, the plate I and the arm J serving as a means for holding the retainer in its forward or advanced position. A pawl K, having an arm  $k$  and an arm  $k'$ , is mounted in a journal  $k^5$  on the upper end of a post or upright  $K'$ , attached to the base-plate A or other support. The arm  $k$  has its outer end projected laterally to form a pivot or journal  $k^2$ , on which is mounted a roller  $k^3$  to engage the notches of the plate I and the arm J and hold the rock-shaft and retainer in their advanced position, and the arm  $k'$  of the pawl K has its upper end turned laterally to form a stop  $k^4$ , which is engaged with the rear edge of the arm F, so that with the return movement of the arm F the arm  $k'$  will be rocked and raise the free end of the arm  $k$  of the pawl and release the roller  $k^3$  from the notches or notch of the lock-plate and lock-arm, allowing the rock-shaft B and the coin-retainer D to return to normal position. A spring L, attached at one end to a standard C of the coin-retainer and at the other end to an eye  $l$  on the base-plate A, serves to return the retainer to normal position, the spring being expanded with the advance of the retainer and having a sufficient force when expanded to return the retainer after the coin has dropped therefrom. A spring  $L'$ , attached at one end to the arm F and at the other end to an eye  $l'$  on the base-

plate A, serves to return the arm F to normal position with the release of the actuating or main lever H, the spring being expanded with the advance of the arm F to have sufficient force to return the arm after the lever H is released. A spring  $L^2$ , attached at one end to the post  $K'$  and having a hook  $l^2$  at its other end to engage the arm  $k$  of the pawl K, serves to hold the roller  $k^3$  in engagement with the notches and at the same time allow the necessary yield to permit the roller to pass the notches until the tongue or rest  $i'$  is reached.

A coin receiver or cradle M receives the entered coin flatwise therein to be carried forward and deposited in the space  $d^2$  of the coin-retainer. This receiver or cradle M in the construction shown consists of a bottom  $m$ , side walls  $m'$ , and a front wall  $m^2$ , the front wall having therein a notch  $m^3$  for the passage of the stem  $f^2$ , so that with the advance of the arm F a coin or false token retained in the receiver or cradle will be pushed back to the entering end of the receiver or cradle and drop into a receptacle  $M'$ , consisting of a bottom  $m^6$ , side walls  $m^7$ , and an end wall  $m^8$ , in which receptacle the false coin or token will be held and cannot pass to the coin-retainer D and operate the mechanism, the stopped coins or tokens being held in the receiver or cradle by a suitable magnet. The forward end of the bottom  $m$  is downwardly curved to form a slide or guide  $m^3$ , by which the coins of correct denomination will be turned edgewise to pass through a mouth  $m^4$  of the receiver or cradle and enter the coin-retainer D to stand vertically therein and crosswise of the path of travel of the stem  $f'$  of the arm F, so that with the advance of the arm F the end of the stem  $f'$  will engage the face of the coin and move or carry the coin-retainer D away from the support furnished by the ledges or lips  $e^2$  and to its advanced position, where with the initial return of the arm F the coin will drop from the coin-retainer. The coin is entered into the coin receiver or cradle M from a coin-chute N, having a bottom  $n$ , side walls  $n'$ , and an open discharge end  $n^2$ , properly located for the entered coin to slide from the coin-chute N onto the bottom of the coin receiver or cradle and discharge at the end of the receiver or cradle into the mouth  $m^4$  and enter the coin-retainer, as above described. A magnet O is located in the arrangement shown below the coin receiver or cradle M, with its pole-pieces  $o$  entered through the bottom  $m$  of the coin receiver or cradle, with the end face of the pole-pieces flush with the upper ends of the bottom of the coin receiver or cradle, and, as shown, a slot  $f^3$  is formed in the bottom  $m$  of the coin receiver or cradle between the ends of the pole-pieces  $o$  to allow of the advance of the stem  $f^2$  to push a caught false token held by the magnet rearwardly to discharge into the receptacle  $M'$  therefor.

The operation, briefly, is as follows: A coin



is entered into the coin-chute N and slides flatwise down therein and if of the proper denomination and size passes freely through the coin receiver or cradle M and drops edgewise into the coin-retainer D, where it is supported by the ledges or lips  $e^2$  in the space  $d^2$  and in position to be engaged facewise by the end of the stem  $f'$  of the arm F of the plunger. The purchaser after the coin is deposited depresses the actuating-link H, which depression through the link G advances the arm F of the plunger and causes the stem  $f'$  to engage the coin and carry or move forward the coin-retainer D beyond the holding-point of the ledges or lips  $e^2$ , so that with the return of the lever H to normal position the stem  $f'$  will be withdrawn from engagement with the coin in the retainer D, allowing the coin to drop from the retainer into the place of deposit. The retainer is held in its advanced position to drop the coin by the engagement of the pawl K with the notched plate I and is so held until the spring L' returns the arm to normal position or sufficiently far to cause the engagement of the arm F with the end  $k^4$  of the pawl to raise the roller  $k^3$  from engagement with the notch of the plate I, releasing the retainer for the spring L to act and return the retainer to normal position for the reception of the next dropped coin, when the same operation is performed as just described.

A magnetic token entered into the receiver or cradle will be stopped by the action of the magnet O, and with the advance of the arm F the stem  $f^2$  of such arm will strike the edge of the token and push it rearwardly to drop from the receiver or cradle into the receiver M' without passing to the coin-retainer. A false token, such as a washer, which would pass the magnet and drop into the retainer D, would be ineffectual as a means for moving the retainer to actuate the mechanism, as the stem  $f'$  would enter the hole of the washer and pass therethrough without advancing or carrying forward the retainer a sufficient distance to actuate the mechanism, and with the withdrawal of the stem F from the hole of the washer the washer will drop from the retainer without having operated the controlling mechanism. A lead or soft-metal token dropped into the retainer D will be engaged by the stem and a hole punched therethrough, thus preventing the token of soft metal from actuating the controlling mechanism for the same reason that a washer will not actuate such mechanism.

The several elements which enter into the construction of the mechanism of the invention are simple in form and arranged in such coacting relation, as to insure their operation properly with a coin of the correct denomination and to insure a non-operation with a false coin or token. The elements are assembled in close coacting relation, and the retention of the coin in the retainer until the retainer has

passed the stop is assured, and with the passage of the retainer beyond the stop and the initial withdrawal of the stem of the plunger the coin will drop from the retainer, and the retainer is positively advanced through the action of a dropped coin and the stem of the plunger and is held positively in its advanced position by the pawl until the plunger-arm returns to normal position, thus insuring the coin being dropped properly, and the parts are returned to normal position through the action of the respective springs, making the entire operation dependent on the dropping of a coin and the movement of the main or actuating lever from the outside of the casing.

The modified construction shown in Figs. 6 to 10, both inclusive, has the plunger-arm F formed integral with the actuating-lever H for the stem  $f'$  of such arm to be advanced with the raising of the lever H to engage the coin and carry the coin-retainer to its advanced position to actuate the controlling mechanism and then drop the coin. The coin-retainer D with its walls  $d$  are formed integral with the discharge end of the coin receptacle or cradle, and the coin receptacle or cradle is carried on the upper end of arms C', corresponding to the arms C of the construction of Figs. 1 and 5. The stop-arm E' is of the same general construction as the stop-arm E, having at its upper end a fork with side bars  $e'$ , each side bar having a ledge or lip  $e^2$ , as in the former construction. The arm F' is continued upwardly and forms a stem  $f^4$ , which enters the slot  $f^3$  in the bottom of the coin receptacle or cradle M and engages a false token caught by the magnet O and advances such token toward the discharge end of the receptacle or cradle for the false token to enter the mouth  $m^4$  of the receiver or cradle. The advance of the arm F' carries the stem  $f'$  through the openings  $d'$  in the walls  $d$  of the coin-retainer and moves the retainer forwardly a sufficient distance to clear the stop on the arm E', so that with the finish of the stroke the false token advanced by the stem  $f^4$  and entering the mouth  $m^4$  of the coin receiver or cradle will drop into the space  $d^2$ , and as the stop is not in line with the space  $d^2$  the token will drop with the removal of the stem F', descending to the bottom plate A or other receptacle without having operated the controlling mechanism.

The modifications in the mechanism of Figs. 6 to 10 are in respect to an uplifting actuating-arm H instead of a depressible arm, the forming of the plunger-arm direct with the actuating-lever instead of a separate piece connected with the actuating-lever, and the forming of the coin-retainer as a part of the coin receiver or cradle instead of an independent part. The operation of the mechanism shown in Figs. 6 to 10 is essentially the same as that already described for the mechanism of Figs. 1 to 5, as the advance of the plunger-arm en-



gages a coin and moves the coin-retainer and drops the caught coin the same as in the construction of Figs. 1 to 5, and therefore this operation need not be again specifically described.

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

1. In a coin-controlled mechanism, a shaft, a coin-retainer fixedly mounted on the shaft, a coin-stop carried by the shaft and located below the coin-retainer, and a plunger for engaging a coin supported in the coin-retainer for forcing the coin-retainer away from the stop, and rocking the shaft direct from the movements of the coin-retainer, substantially as described.

2. In a coin-controlled mechanism, the combination of a shaft, a coin-retainer fixedly mounted on the shaft, a coin-stop carried by the shaft and located below the coin-retainer, an arm loosely mounted on the shaft and having a stem to engage a coin held in the coin-retainer, means for directing a coin into the coin-retainer, and means for advancing the arm for its stem to engage the coin and force the retainer away from the stop, and rocking the shaft direct from the movements of the coin-retainer, substantially as described.

3. In a coin-controlled mechanism, the combination of a shaft, a coin-retainer fixedly mounted on the shaft, a coin-stop supported on the shaft and located below the coin-retainer, a coin receiver or cradle from which the coin is deposited in the coin-retainer, an arm pivotally mounted on the shaft and having a stem to engage a coin held in the retainer, an actuating-lever operative by the purchaser, and a link connecting the actuating-lever with the pivoted arm, for the movement of the actuating-lever to advance the pivoted arm and cause its stem to engage a coin in the retainer and force the retainer away from the stop, substantially as described.

4. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the standards and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried by the shaft and having at its upper end a fork with ledges located in line with the space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of a coin, and means for advancing the pivoted arm to cause its stem to engage the coin and force the retainer away from the stop-lips of the fork, substantially as described.

5. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the standards and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried

by the shaft and having at its upper end a fork with lips located in line with the space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of a coin, means for advancing the pivoted arm to cause its stem to engage the coin and force the retainer away from the stop-lips of the fork, and means for holding the retainer in its advanced position until the withdrawal of the pivoted arm, substantially as described.

6. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the arms and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried by the shaft and having at its upper end a fork with lips located in line with the space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of a coin, means for advancing the pivoted arm to cause its stem to engage the coin and force the retainer away from the stop-lips of the fork, means for holding the retainer in its advanced position until the withdrawal of the pivoted arm, and means for depositing a coin vertically edgewise in the coin-retainer, substantially as described.

7. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the standards and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried by the shaft and having at its upper end a fork with lips located in line with the space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of the coin, an actuating-lever operative by the purchaser, a link connecting the actuating-lever with the pivoted arm, for the movement of the actuating-lever to advance the arm and cause its stem to engage the coin and force the retainer away from the stop-lips of the fork, substantially as described.

8. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the standards and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried by the shaft and having at its upper end a fork with lips located in line with the space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of the coin, an actuating-lever operative by the purchaser, a link connecting the actuating-lever with the pivoted arm, for the movement of the actuating-lever to advance the arm and cause its stem to engage



the coin and force the retainer away from the stop-lips of the fork, a plate on one of the standards and having a notched edge, and a pawl having an arm carrying a stop to engage the notches of the plate, for holding the retainer in its advanced position until the withdrawal of the pivoted arm, substantially as described.

9. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the standards and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried by the shaft and having at its upper end a fork with lips located in line with the space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of the coin, an actuating-lever operative by the purchaser, a link connecting the actuating-lever with the pivoted arm, for the movement of the actuating-lever to advance the arm and cause its stem to engage the coin and force the retainer away from the stop of the fork, a pawl having an arm carrying a stop to engage the notch of the plate and having an arm carrying a stop for engagement with the pivoted arm, for holding the retainer in its advanced position until the withdrawal of the pivoted arm and for releasing the retainer with a full withdrawal of the pivoted arm, substantially as described.

10. In a coin-controlled mechanism, the combination of a shaft, a pair of standards fixedly mounted on the shaft, a coin-retainer on the upper end of the standards and having depending walls, with a space between the walls and each wall provided with a hole, an arm carried by the shaft and having at its upper end a fork with lips located in line with a space between the walls of the coin-retainer, an arm pivotally mounted on the shaft and having a stem to enter the hole of a retainer-wall and engage the face of the coin, an actuating-lever operative by the purchaser, a link connecting the actuating-lever with the piv-

oted arm, for the movement of the actuating-lever to advance the arm and cause its stem to engage the coin and force the retainer away from the stop of the fork, a pawl having an arm carrying a stop to engage the notch of the plate and having an arm carrying a stop for engagement with the pivoted arm, for holding the retainer in the advanced position until the withdrawal of the pivoted arm and for releasing the retainer with a full withdrawal of the pivoted arm, and springs for returning the coin-retainer and the pivoted arm and for holding the pawl in engagement with the notched plate, substantially as described.

11. In a coin-controlled mechanism, the combination of a shaft, a coin-retainer fixedly mounted on the shaft, a coin-stop carried by the shaft and located below the coin-retainer, an arm loosely mounted on the shaft and having a stem to engage a coin held in the coin-retainer, and force the coin-retainer away from the coin-stop to rock the shaft direct from the movements of the coin-retainer, a coin-receiver above the coin-retainer and having at its discharge end a guide for deflecting a coin into the coin-retainer, substantially as described.

12. In a coin-controlled mechanism, the combination of a shaft, a coin-retainer fixedly mounted on the shaft, a coin-stop carried by the shaft and located below the coin-retainer, an arm loosely mounted on the shaft and having a stem to engage a coin held in the coin-retainer, and a stem at its upper end, a coin-receiver into which the coin is deposited and having at its discharge end a guide for deflecting a coin into the retainer, and means for holding a false token on the bottom of the coin-receiver to be engaged by the stem at the upper end of the pivoted arm and discharged without entering the coin-retainer, substantially as described.

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Witnesses:

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