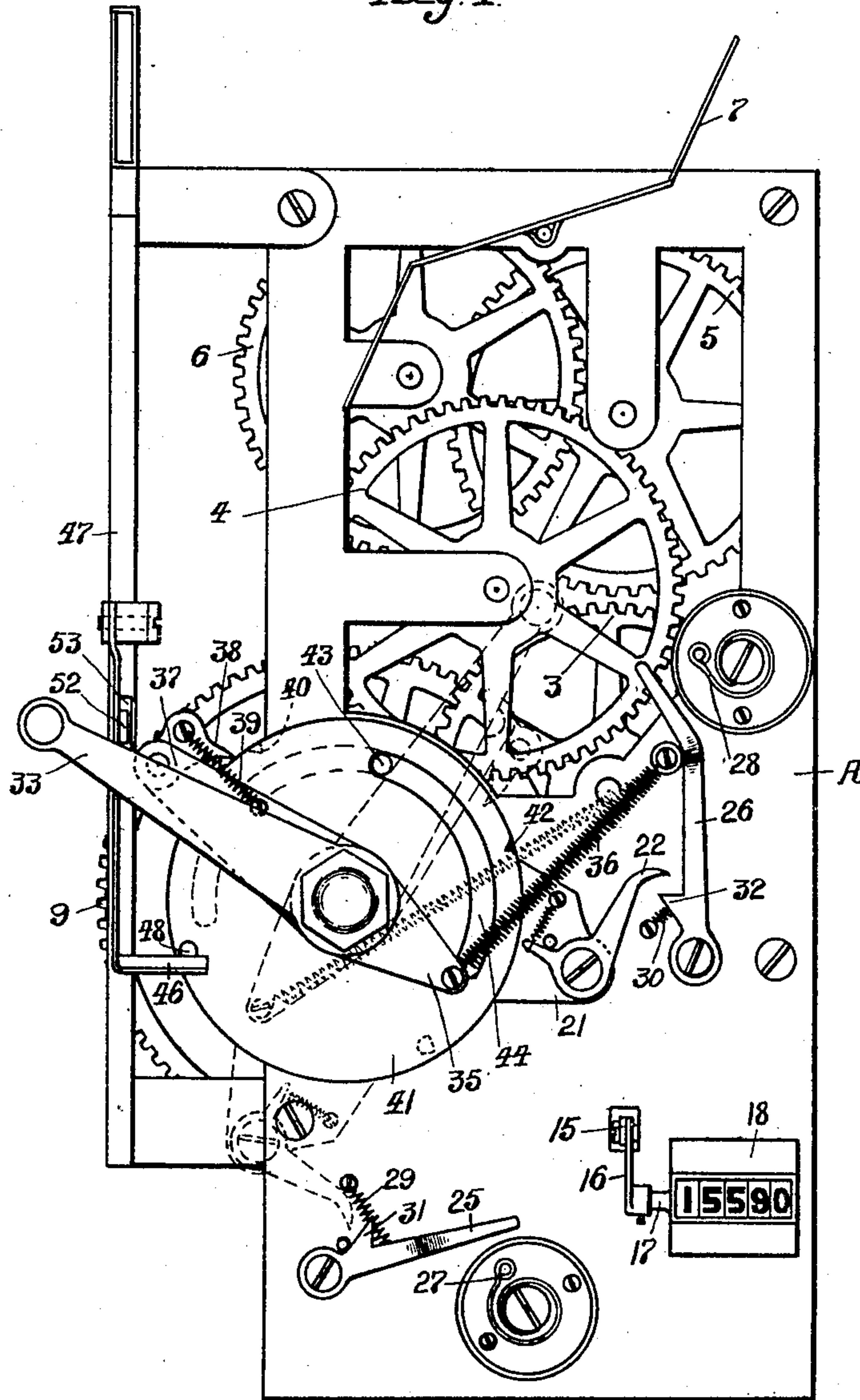


J. C. FREDELL.
COIN CONTROLLED MECHANISM.
APPLICATION FILED OCT. 25, 1906.

913,278.

Patented Feb. 23, 1909.
2 SHEETS—SHEET 1.

Fig. 1.



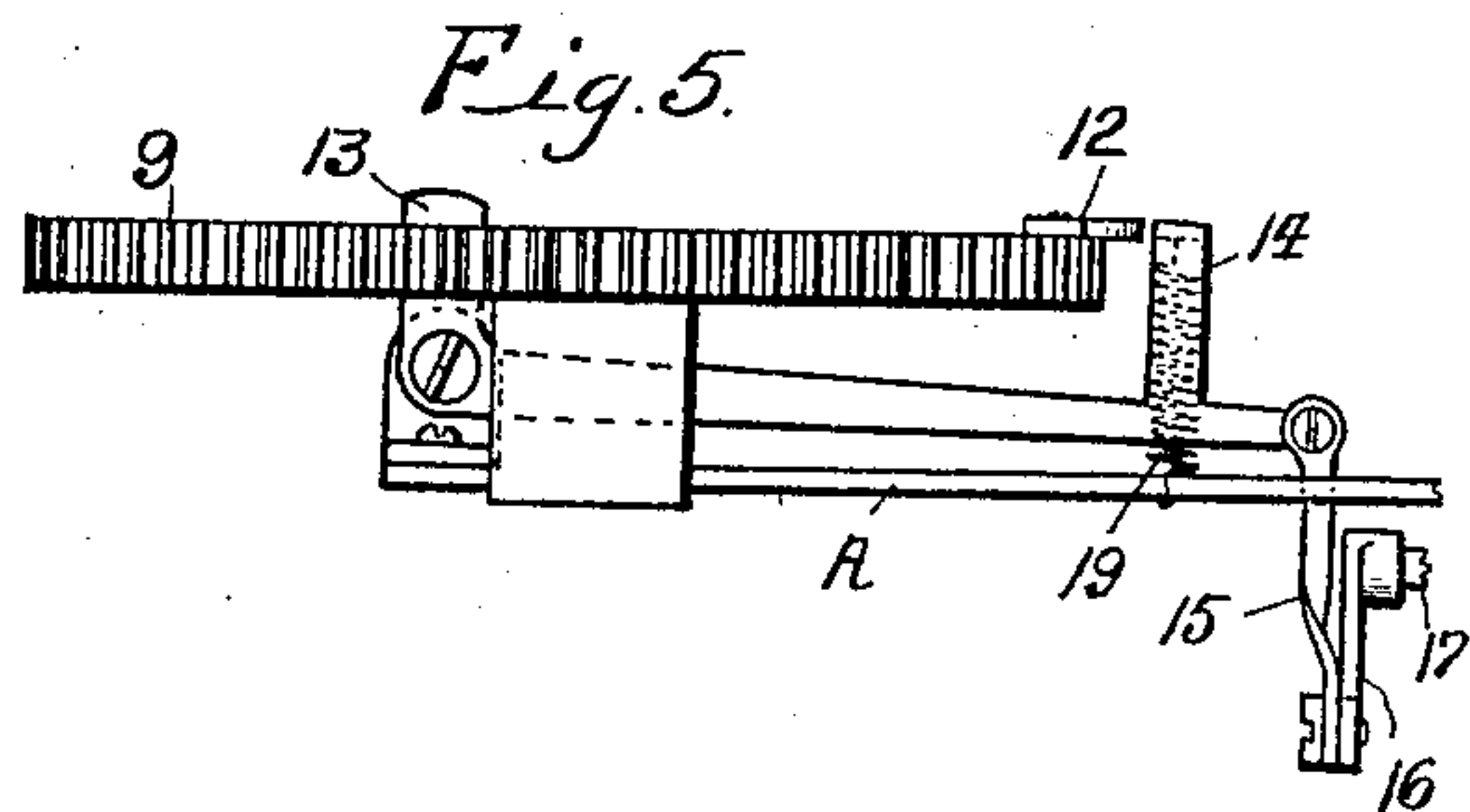
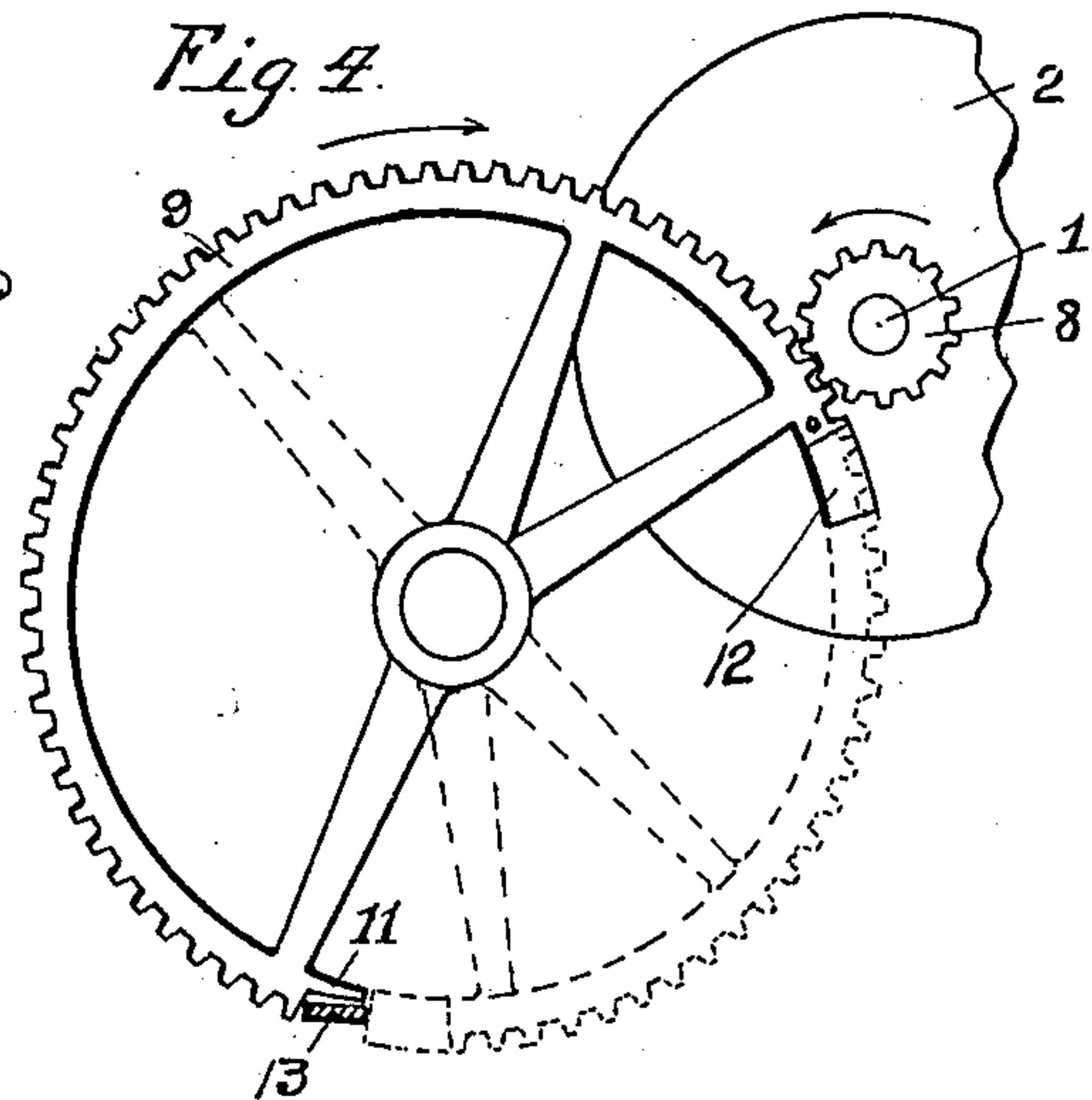
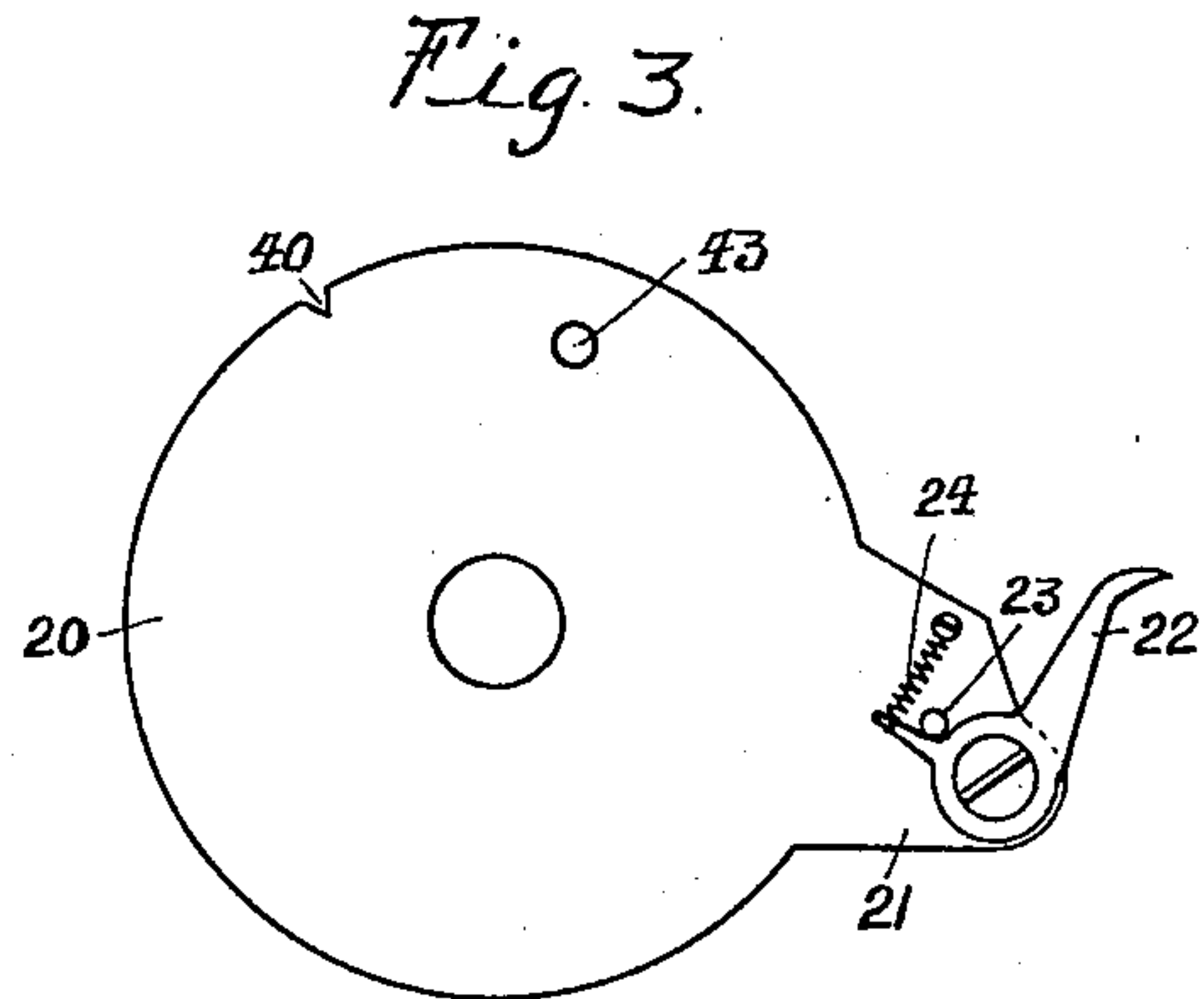
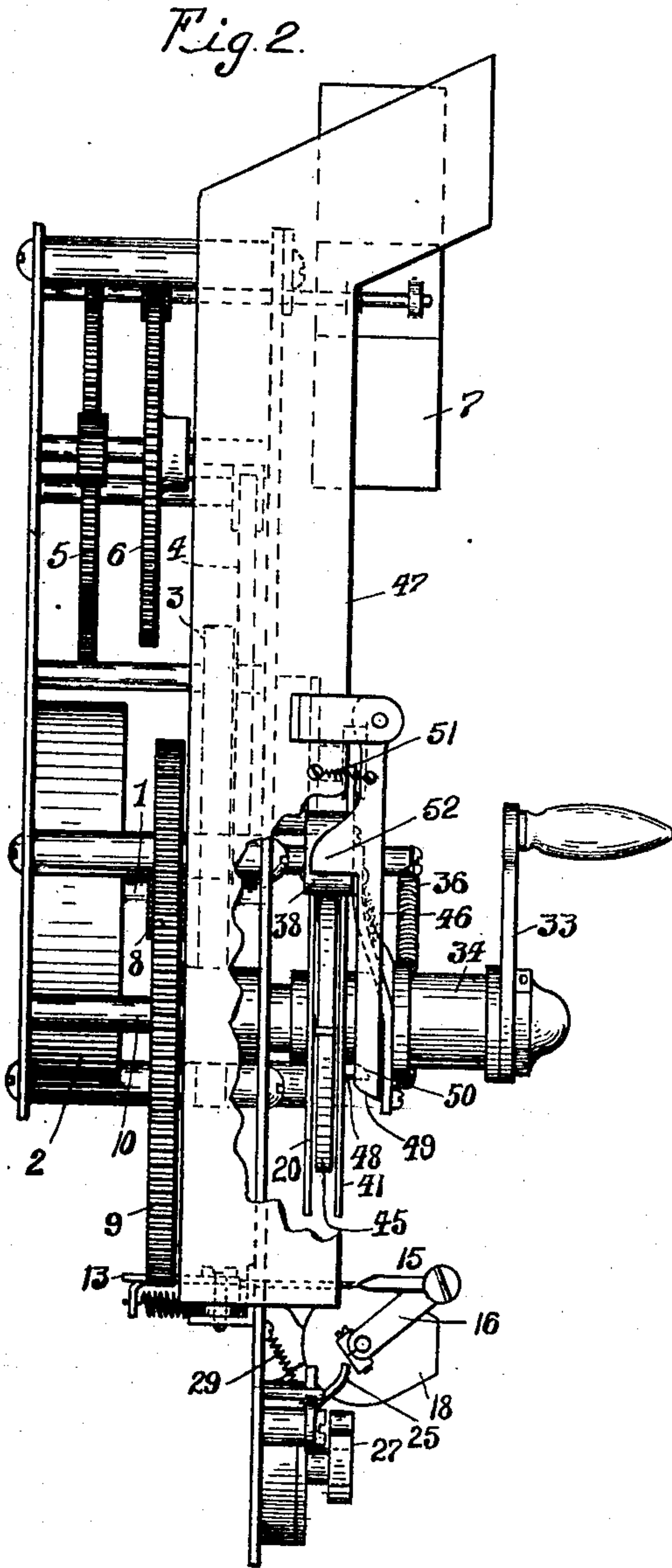
Witnesses:
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H. M. Cole

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Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN C. FREDELL, OF SOUTH BEND, INDIANA.

COIN-CONTROLLED MECHANISM.

No. 913,278.

Specification of Letters Patent.

Patented Feb. 23, 1909.

Application filed October 25, 1906. Serial No. 340,560.

To all whom it may concern:

Be it known that I, JOHN C. FREDELL, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Coin-Controlled Mechanism, of which the following is a specification.

This invention relates to coin controlled mechanism for intermittently and electrically operated devices.

In a patent granted to John C. Fredell, Sept. 4, 1906, numbered 830,217, there is disclosed an electrically controlled optical appliance which embodies a shutter opened and closed by electro magnets.

The present invention has for an object to provide a coin controlled manually operated means for storing power in a motor which effects the closing of the circuits controlling the shutter electro magnets.

Other and further objects will appear in the following description and will be more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is an elevation of my invention. Fig. 2 is a side elevation. Fig. 3 is a detail view of the contact operating disk. Fig. 4 is a detail view of the sector connected to the spring shaft. Fig. 5 is a top view of the sector showing its relation to the registering mechanism.

Referring more particularly to the drawings, A indicates a frame upon which is mounted a spring shaft 1. This shaft has one end of a volute spring 2 secured thereto and carries a gear 3 to which it is connected by a pawl and ratchet (not shown) permitting the shaft to be turned in the direction of winding the spring, without rotating the gear 3. If, however, the spring shaft rotates under the action of the spring 2, the gear 3 rotates and through the medium of a reducing gearing 4, 5, 6, connects with a fan blade 7 which acts as a governor for the motor spring 2. Motor shaft 1 also carries a pinion 8 with which meshes a sector 9 mounted on a coin controlled shaft 10 journaled in frame A. The ends 11 and 12 of the sector are each adapted to engage one arm 13 of a bell crank lever, the other arm 14 being connected by a link 15 with an arm 16 on the shaft 17 of the registering mechanism 18. The bell crank lever is held in one position by a coil spring 19 which is connected to the arm 14 and to the frame A.

Rigidly secured to the shaft 10 is a disk 20 which carries an extension 21 on which is pivotally mounted a trip 22 yieldingly held against a stud 23 on the extension 21 by means of a spring 24. The trip 22, when the disk is rotated by the manually operated means to be hereafter described, passes over a pair of spaced movable contacts 25 and 26 adapted to respectively engage contacts 27 and 28 and thus close the circuits to the shutter controlling electro magnets. The movable contacts 25 and 26 are normally held away from their fixed contacts, by means of springs 29 and 30 respectively and each has an inclined face 31 and 32 with which the trip engages on its return movement, thereby causing the making of the circuits.

The manually operated means for storing power in the spring motor and at the same time shifting the trip 22, comprises a crank handle 33 loosely journaled on the coin controlled shaft 10 and connected by a sleeve 34, arranged about the said shaft, with a two armed member. One arm 35 of said member has connected to it, one end of a coil spring 36, the other end of the coil spring being connected to the frame A. The other arm 37 of the two armed member carries a dog 38 which lies on the periphery of the disk 20, being held thereagainst by a spring 39, the disk being provided with a notch 40 in which the dog is adapted to enter to establish connection between the crank handle and the disk and thereby rotate the sector and store power in spring 2.

To prevent the dog 38 entering into connection with the disk 20, a disk 41 is journaled upon the coin controlled shaft 10. This disk is provided with a notch 42 which, when alined with notch 40, permits dog 38 to enter notch 40, but which prevents the dog entering the notch 40 when said disk 41 is in any other position. The disk 41 normally lies in the position shown in Fig. 1 and has its movements limited by a lug 43 which projects from the disk 20 into an arcuate slot 44 in the disk 41. A volute spring 45, positioned between the two disks, is secured at one end to the shaft 10 and at its other end to the disk 41. This spring 45 tends to hold the disk 41 so that the notch 42 is alined with notch 40. The disk 41, however, is held away from this position by means of a trip 46 pivoted to one side of a coin chute 47 and engaging below a lug 48 on the disk 41, one face of the lug 48 and one face of the

trip being beveled at 49 and 50 respectively to permit the trip to be forced out of the path of the lug when the disk is moved to place the spring 45 under tension. The trip 46 is normally held in one position by a spring 51 and is provided with an inclined finger 52 which extends into the coin chute 47 through a slot 53 in the wall of the chute.

The operation of the invention is as follows:
 10 Assuming the parts to be in the position shown in Fig. 1 and a coin to be dropped into the coin chute 47, the finger 52 is engaged and moves the trip 46, against the action of its spring 51, out of the path of the lug or pin 15 48 on disk 41. The disk 41, being now freed, moves under the action of its spring 45 so as to align its notch 42 with the notch 40 on the disk 20. If the crank handle 33 is now turned its dog will enter notches 40 and 42, 20 thus establishing connection between the handle and the two disks which are now moved with the handle. The disk 41 is thus returned by the crank handle to its original position, the inclined face of its lug engaging 25 the inclined face of the trip 46, moving the latter out of the path of the former so that the trip may engage behind the lug and hold the disk 41 against returning. The disk 20 being also moved carries the trip 22 past the 30 movable contacts 25 and 26, the trip yielding as it passes each contact, thus not operating the contacts on its movement in this direction. As the disk 20 moves with the handle 33, the sector 9 is also moved, thus rotating 35 the spring shaft 1 and storing power in the spring 2. When the sector reaches the end of its movement in this direction its end 12 engages the arm 13 of the bell crank lever and operates the registering mechanism 18.
 40 The crank handle is now released and returns to its original position under the action of spring 36. The motor spring now acts on the sector to return the contact operating disk or member 20 to its original position, 45 the action of the spring being controlled by the fan governor 7. The trip 22, on the return movement of the disk 20, first engages the inclined face on movable contact 25 then the like face on contact 26 moving them into 50 engagement with their contacts 27 and 28 and thus first energizing the magnet controlling the opening of the shutter and then energizing the magnet controlling the closing, the time occupied by the trip 22 in moving 55 from contact 25 to contact 26 being about three minutes. As the sector reaches its original position its end 11 engages the arm 13 of the bell crank lever and returns it to its original position if it has not been returned 60 by the spring 19. The arm 13 also acts as a stop for the sector.

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

65 1. In a coin controlled mechanism, the

combination with a shaft, of a crank handle journaled on the shaft, a disk secured to the shaft, a dog secured to the crank handle and adapted to engage the disk, and a normally locked disk controlling the engagement of the 70 dog with the disk first named.

2. In a coin controlled mechanism, the combination with a shaft, of a crank handle journaled on the shaft, a disk secured to the shaft, a dog secured to the crank handle and 75 adapted to engage the disk, a disk journaled on the shaft and controlling the engagement of the dog with the first named disk, a spring acting to move said second named disk to permit the first named disk to be engaged by 80 the dog, and locking mechanism for the second named disk.

3. In a coin controlled mechanism, the combination with a shaft, of a crank handle journaled on the shaft, a disk secured to 85 the shaft, a dog secured to the crank handle and adapted to engage the disk, a disk journaled on the shaft and controlling the engagement of the dog with the first named disk, a spring acting to move said second 90 named disk to permit the first named disk to be engaged by the dog, and a trip normally locking said second named disk.

4. In a coin controlled mechanism, the combination with a shaft, of means for oper- 95 ating said shaft, a sector arranged to be operated by the shaft, a spring, means for winding said spring, and means connecting said winding mechanism and sector, whereby the operation of the sector winds the spring. 100

5. In a coin controlled mechanism, the combination with a motor, of a shaft, a sector carried by the shaft and geared to the motor, movable contacts, a trip carried by the shaft and engaging the contacts, and 105 locking means for the shaft.

6. In a coin controlled mechanism, the combination with a shaft, of a sector carried by the shaft and geared to the motor, a crank handle journaled on the shaft, a dog carried 110 by the crank handle, a disk secured to the shaft and adapted to be engaged by the dog, and means controlling the engagement of the dog with the disk.

7. In a coin controlled mechanism, the 115 combination with a shaft, of a crank handle journaled on the shaft, a spring acting to move the crank handle in one direction, a pawl carried by the crank handle, a disk secured to the shaft and adapted to be engaged 120 by the pawl, a pin projecting from one face of the disk, a disk journaled on the shaft provided with an arcuate slot, and movable to a position to permit the dog to engage the first named disk, a spring acting to move the disk 125 in one direction, and a trip controlling the spring moved disk.

8. In a coin controlled mechanism, means for operating the shaft, means for locking the shaft normally against movement, a pair of 130

fixed contacts, a pair of movable contacts arranged to cooperate with the fixed contacts a disk on the shaft provided with a projection and a dog on the projection to yieldably engage the movable contacts when the disk is moved in one direction and to engage and force the movable contacts into engagement with the fixed contacts upon the return movement of said disk.

9. In a coin controlled mechanism, a shaft, means for operating the shaft, a second shaft, a connection between the shafts, disks upon the second mentioned shaft, means for controlling the disks, a pair of fixed contacts, a movable contact cooperating with each fixed contact, and means for operating the movable contacts upon operation of one of said disks.

10. In a coin controlled mechanism, a shaft,

means for operating the shaft, a second shaft, a connection between the shafts, disks upon the second mentioned shaft, means for controlling the disks, a pair of fixed contacts, a movable contact cooperating with each fixed contact, means for operating the movable contacts upon operation of one of said disks, an oscillating member carried by the second disk, a registering mechanism, and means whereby the registering mechanism may be operated upon operation of said oscillating member.

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

JOHN C. FREDELL.

Witnesses:

GEORGE OLTSCHE,
G. M. COLE.