

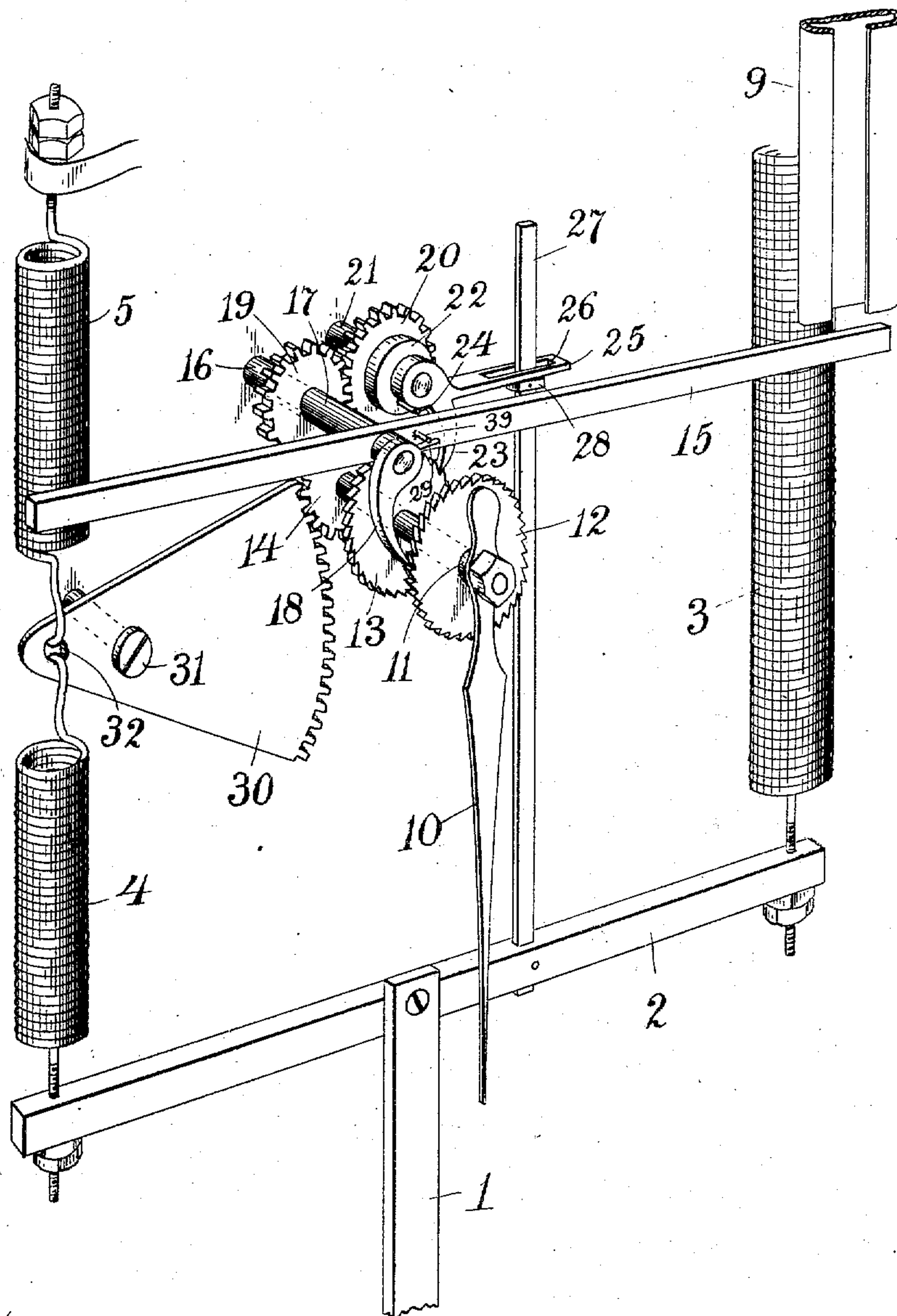
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G. A. MOORE.
COIN OPERATED WEIGHING MACHINE.

APPLICATION FILED SEPT. 21, 1903.

NO MODEL.



Witnesses;
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UNITED STATES PATENT OFFICE.

GEORGE ALBERT MOORE, OF NEW YORK, N. Y.

COIN-OPERATED WEIGHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 772,426, dated October 18, 1904.

Application filed September 21, 1903. Serial No. 173,974. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ALBERT MOORE, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Coin-Operated Weighing-Machines, of which the following is a full, clear, and exact description.

The drawing forming part of this specification is a perspective view of the operative part of my mechanism.

The vertical rod 1 is designed to be connected with the platform of the weighing-machine in the usual manner and to have the cross-bar 2 fixed to its upper end. From the extremities of this cross-bar rise the tension-springs 3 4, by which said bar, and hence the scale-platform, is resiliently supported. The spring 4 is preferably but half the length of the spring 3 and is put tandem with a similar spring 5, they being made to engage the eye 32 of the toothed segment 30, which is pivotally supported on a suitable spindle 31. Said toothed segment meshes with the pinion 14, fixed upon the shaft 11, whose outer end carries the dial-pointer 10, and the spring 5 being suitably held at its upper end the descent of the scale-platform and the cross-bar 2 elongates the springs and causes the segment-teeth to rise through an arc proportional to the weight upon the platform. This travel of the segment imparts to the dial-pointer, through the pinion and shaft above described, the angular variation which designates the weight of the person standing upon the platform.

To lock the pointer from movement except upon the introduction of a designated coin, I provide the shaft 11 with a ratchet-wheel 12, normally engaged by the dog 18. The pointer, and hence the shaft, pinion, and toothed segment, being thus locked from motion, when anyone steps upon the scale-platform without the insertion of the coin the springs 3 and 4 are the only ones elongated, the spring 5 being wholly unaffected; but when through the introduction of the coin in a manner to be hereinafter described the dog 18 is disengaged from the ratchet-wheel 12 and the spring 4 permitted to share its tension with the spring 5 then the pointer immediately swings to the section of the dial which designates the per-

son's weight. Said dog 18 is pivoted upon the outer end of the fixed spindle 16, upon which spindle is also pivoted the rocking lever 15, whose right-hand end is located close beneath the lower end of the coin-chute 9. From said dog projects the small pin 29, and from said lever projects a similar pin 39 just over the former pin. The impact of a coin upon said end of the lever 5 rocks the latter downward through a considerable arc and by the contact of the pin 39 with the pin 29 swings the dog 18 out of engagement with the ratchet-wheel 12. The rocking lever being pivotally supported near its center, but with its left-hand end slightly the heavier, swings quite slowly back to its initial position, and the dog 18 being equally retarded in its return to re-engage the ratchet-wheel 12 the pointer has ample time in which to settle quietly at its proper weight-indicating position.

As thus far described there is nothing to prevent a lighter person from stepping upon the scale-platform just before the first one gets off and having his weight also indicated by the pointer. To prevent this, I provide the second dog 23, engaging the ratchet-wheel 13, also fixed upon the shaft 11 and having its teeth oppositely facing. This second dog is pivoted upon the end of the spindle 21 and is provided with an arm 25, slotted at 26. Through this slot rises the post 27 from the cross-bar 2 and having the shoulder 28 located to slightly raise the arm 25 when there is no depression of the scale-platform, and thereby hold the dog 23 from engagement with its ratchet-wheel 13.

The rocking lever 15 is rigidly connected with the sleeve 17, mounted on the spindle 16, and said sleeve has fixed upon it a spur-gear 19, meshing with a similar gear 20, rotatable on the spindle 21. The latter gear has a hub 22, carrying the pin 24, located to come into contact with the under side of the dog 23 when the gear 20 is turned in a direction opposite to the hands of a clock—a direction which is given thereto when the rocking lever 15 has its right-hand end depressed. Consequently when said lever is thus tilted by the descent of a coin from the coin-chute the contact of the pin 24 moves the dog 23 out of engagement with the ratchet-wheel 13, and so retains

it until the rocking lever has slowly returned to its initial position. In this manner the introduced coin moves both dogs out of the way of the ratchet-teeth until the pointer has had
 5 time to settle into its indicating position, after which both dogs are permitted to return to lock the pointer from movement in either direction. When, however, the person on the scale-platform steps off, then the post 27 rises
 10 and by the impact of its shoulder 28 against the arm 25 releases the dog 23 from its hold on the ratchet-wheel 13, and so permits the pointer to return to zero.

It is necessary to employ the two pins 29
 15 39 in place of having the rocking lever 15 and dog 18 rigid with each other in order that said dog can freely engage the ratchet-teeth as the pointer returns to zero.

What I claim as my invention, and for which
 20 I desire Letters Patent, is as follows, to wit:

1. In a coin-operated machine, the combination with operating mechanism, indicating mechanism, and a lock for the latter, of a resilient device between the operating and indicating mechanism, and a resilient device between said indicating mechanism and a fixed support, whereby the operating mechanism imparts a strain to the first-named resilient device alone when the indicating mechanism is locked, but distributes the strain between
 25 both resilient devices, and operates the indicating mechanism, when the latter is unlocked.

2. In a coin-operated machine, the combination with operating mechanism, indicating mechanism, and a lock for the latter, of a spring between the operating and indicating mechanism, and a similar spring between the indicating mechanism and a fixed support, whereby the operating mechanism tensions the first-named spring alone when the indicating mechanism is locked, but tensions both springs and operates the indicating mechanism when the latter is unlocked.

3. In a coin-operated mechanism, the combination with operating mechanism, indicating mechanism, and a lock for the latter, of a pivoted member constructed to turn the indicating mechanism, a tension-spring between
 30 said pivoted member and the operating mechanism, and a similar spring between said member and a fixed support, whereby the first-named spring alone is tensioned when the indicating mechanism is locked.

4. In a coin-operated machine, the combination with operating mechanism, rotary indicating mechanism, and a lock for the latter, of a toothed segment pivotally supported, a pinion rigid with the indicating mechanism
 35 and meshing with said segment, a tension-spring connected with the operating mechanism and with said segment, and a similar spring connected with the same part of said segment and with a fixed support.

5. In a coin-operated machine, the combi-

nation with operative mechanism, a dial-pointer, and a lock for the latter, of a pinion rigid with said pointer, a toothed segment meshing with said pinion and having an eye near its pivotal point, a tension-spring connected with the operating mechanism and said eye, and a similar spring connected with said eye and a fixed support.

6. In a coin-operated machine, the combination with operating mechanism, rotary indicating mechanism having a suitable supporting-shaft, and a resilient connection between said operating and indicating mechanism, of two oppositely-faced ratchet-wheels fixed on said shaft, a pair of fixed spindles located parallel with said shaft, intermeshing gears loose on said spindles, a dog rigid with one of said gears and normally engaging one of said ratchet-wheels, a substantially horizontal intermediately-supported rocking lever having its rocking axis coincident with the spindle supporting said dog, engaging devices between said lever and dog, a dog normally engaging the other of said ratchet-wheels and pivotally supported by the spindle supporting the other of said gears, and engaging devices between the last-named dog and gear.

7. In a coin-operated machine, the combination with operating mechanism, rotary indicating mechanism and a resilient connection between them, of two oppositely-faced ratchet-wheels, a dog for each wheel, a coin-oscillated rocking lever, a sleeve rigid with the latter, a spur-gear on said sleeve, a similar gear meshing with the said gear, a pin projecting from the second-named gear and constructed to contact with one of said dogs and disengage it from its ratchet-wheel when said lever is depressed, a pin projecting from the other dog, and a pin projecting from said lever into the path of the last-named pin.

8. In a coin-operated machine, the combination with the forcibly-operated rod having the cross-bar at its upper end, and the tension-spring supporting one end of said bar, of a shorter tension-spring connected with the other end of said bar, a toothed segment supporting the upper end of said shorter spring, a similar spring connected with said segment at the same point as the other short spring, and having a fixed support at its other end, a pinion meshing with said segment, a shaft on which said pinion is fixed, a dial-pointer on said shaft, two oppositely-faced ratchet-wheels fixed on said shaft, a dog for each wheel, and coin-operated means for moving both dogs out of engagement with said wheels.

In testimony that I claim the foregoing invention I have hereunto set my hand this 17th day of September, 1903.

GEORGE ALBERT MOORE.

Witnesses:

O. C. JENSEN,
 FRED BENSON.