No. 666,311. Patented Jan. 22, 1901.

S. W. HOAG.

COIN CONTROLLED STRENGTH TESTING MACHINE.

(Application filed Apr. 9, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

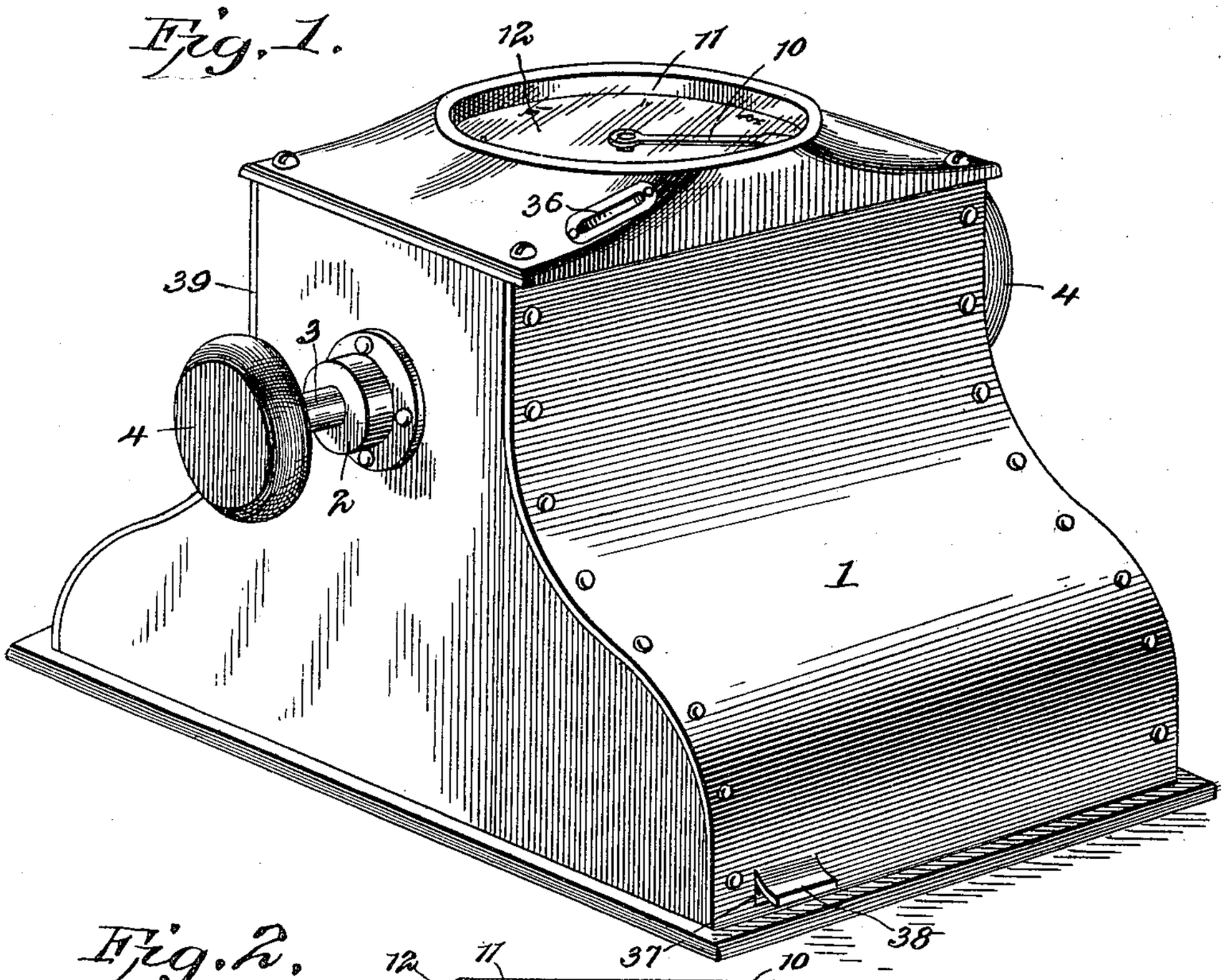
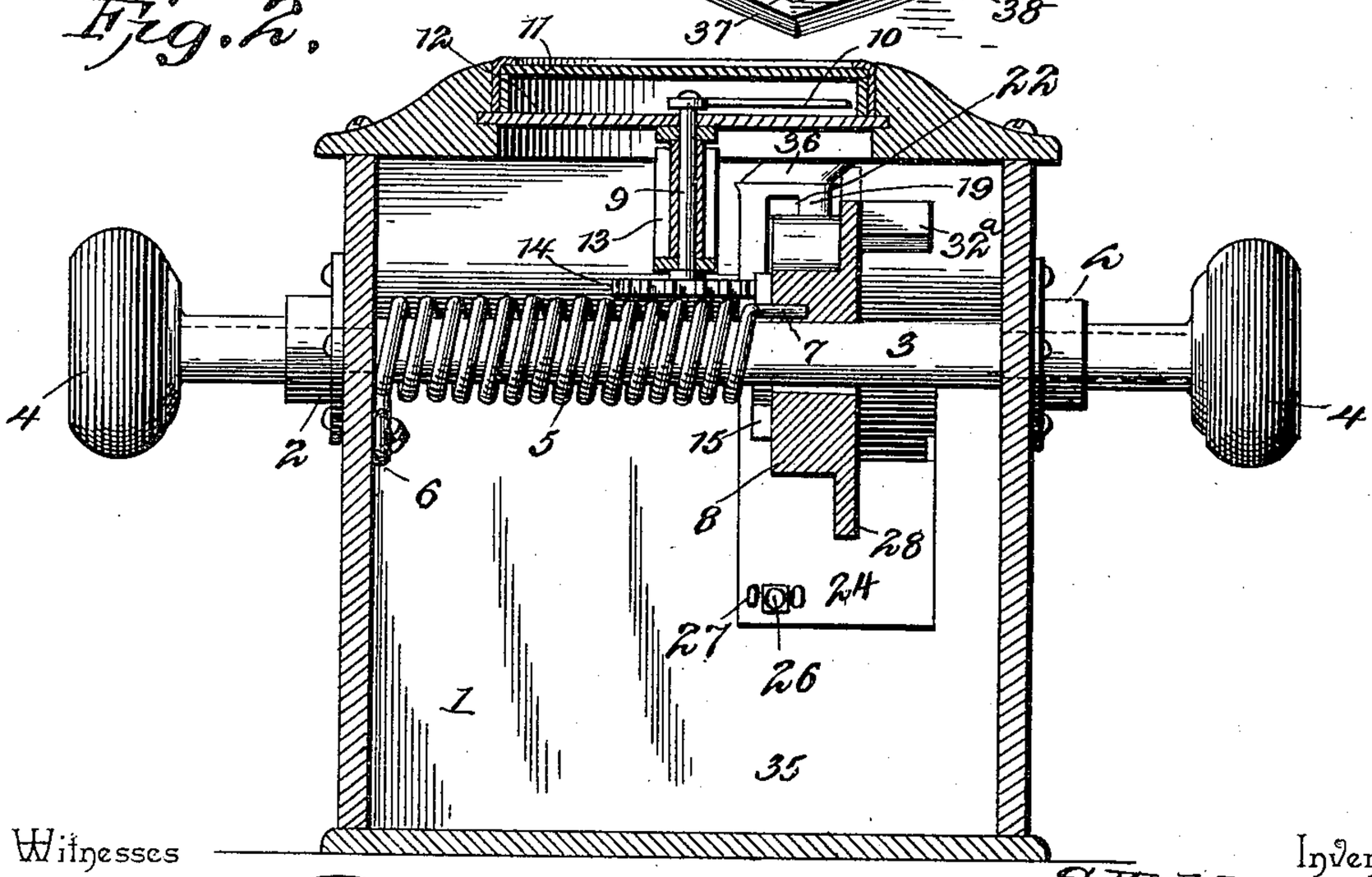


Fig. 2.



Witnesses

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Fig. 5.

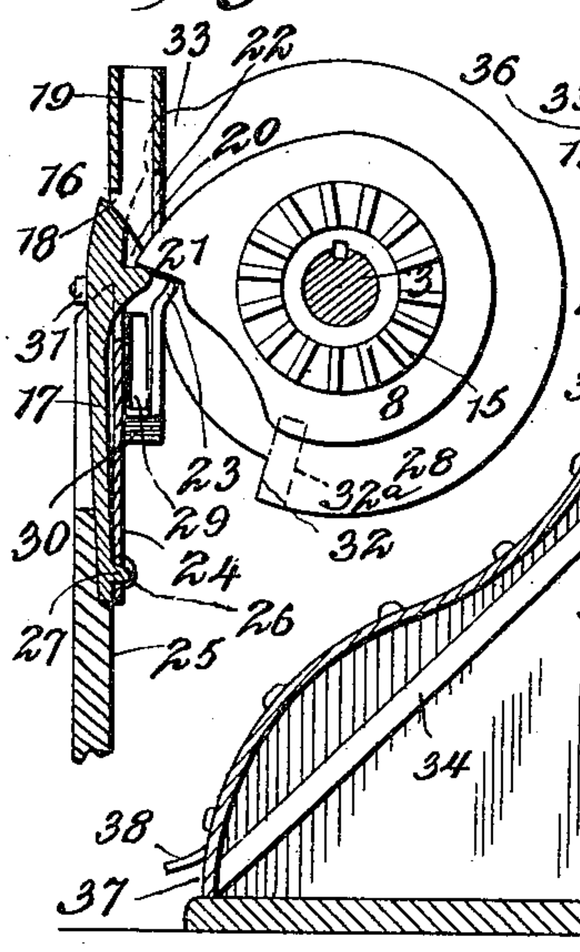


Fig. 3.

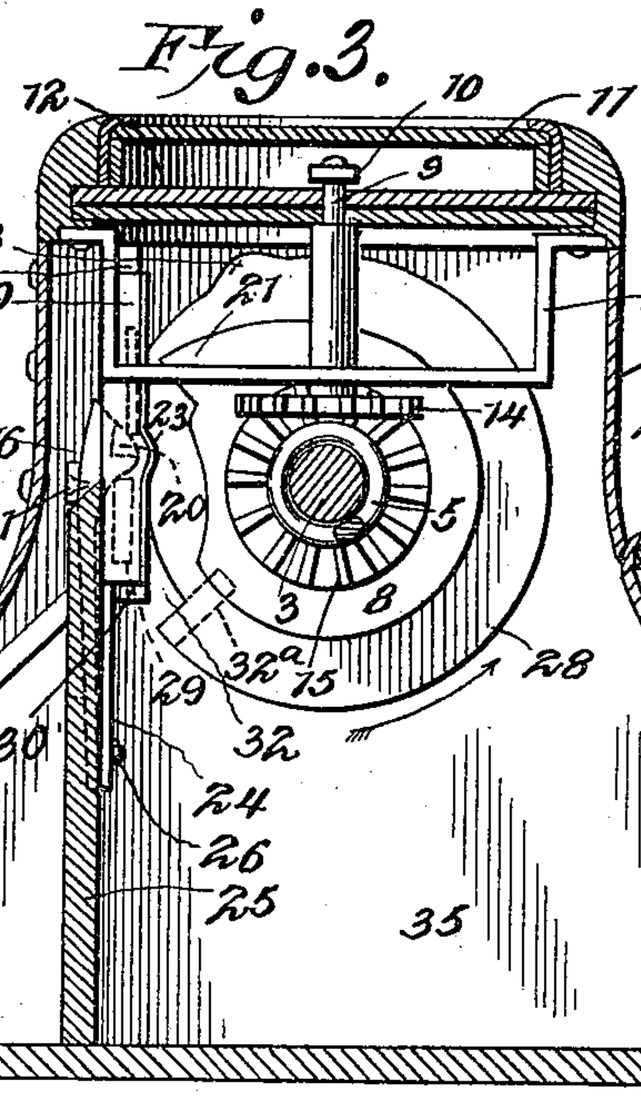


Fig. 6.

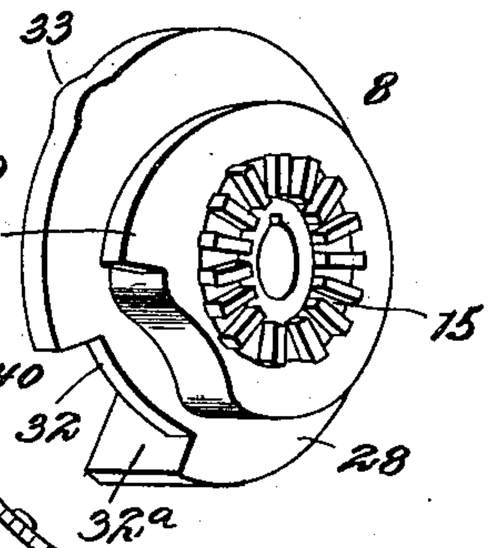
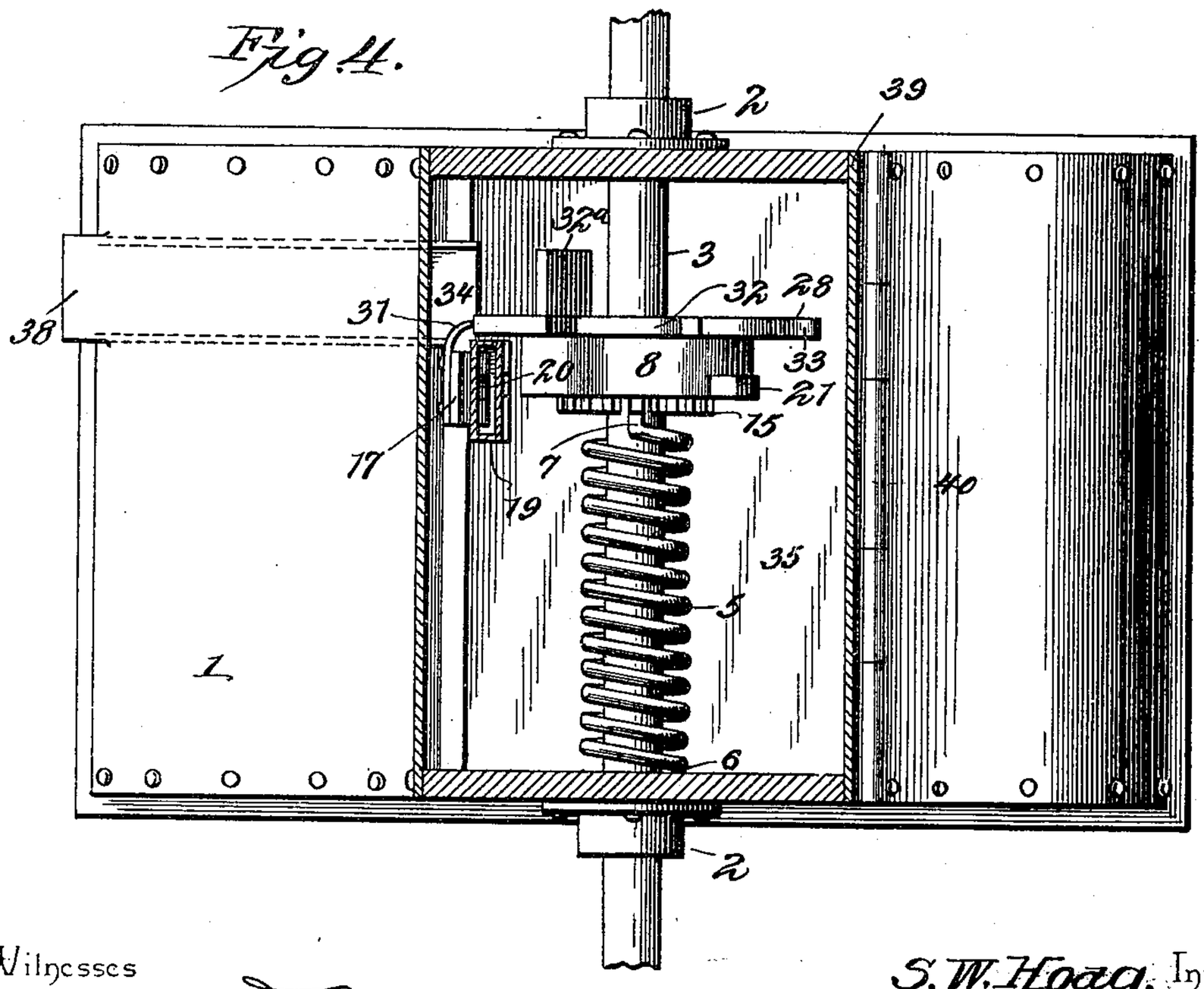


Fig. 4.



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UNITED STATES PATENT OFFICE.

SETH W. HOAG, OF GRAND ISLE, VERMONT.

COIN-CONTROLLED STRENGTH-TESTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 666,311, dated January 22, 1901.

Application filed April 9, 1900. Serial No. 12,189. (No model.)

To all whom it may concern:

Be it known that I, SETH W. HOAG, a citizen of the United States, residing at Grand Isle, in the county of Grand Isle and State of Vermont, have invented a new and useful Coin-Controlled Strength-Testing Machine, of which the following is a specification.

The invention relates to improvements in coin-controlled strength-testing machines.

The object of the present invention is to improve the construction of coin-controlled slot-machines and to provide a simple and comparatively inexpensive one capable of testing the strength of a person and of developing the muscles of the arms and adapted to afford amusement by returning the coin to the operator when a predetermined amount of strength is applied to the machine.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a slot-machine constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a horizontal sectional view. Fig. 5 is an enlarged detail sectional view illustrating the construction for locking the machine out of operation. Fig. 6 is a detail perspective view of the rotary disk.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a casing, preferably tapered, as shown, and provided at opposite sides with bearings 2 for a horizontally-disposed transverse shaft 3, which is extended through both sides of the casing and which carries suitable knobs or grips 4, adapted to be grasped by the operator to rotate the shaft against the resistance of a coiled spring 5. The coiled spring 5, which is arranged longitudinally of the shaft, is disposed on the same, its outer end 6 being secured to the casing and its inner end 7 being connected with a rotary disk or body 8, which is fixed to the shaft, and the said spring may be constructed of any desired strength to obtain the necessary resistance. The horizontal shaft is connected by gearing with a vertical shaft 9, which carries at its upper end a hand or pointer 10, arranged beneath a transparent plate 11 and disposed over a dial 12, which is provided with suitable graduations for indicating the strength exerted on the machine. The vertical shaft is mounted in a suitable hanger 13, and it has a horizontal pinion 14 fixed to its lower end and meshing with a gear 15, consisting of an annular series of cogs formed on one of the side faces of the rotary disk or body 8; but the gearing may be constructed in any other suitable manner, and it will be apparent that as the operating-shaft 3 is rotated the indicating device or mechanism will be operated.

The machine is locked out of operation by the coin-controlled locking device 16, consisting of a yieldingly-mounted shank 17 and a head arranged at the upper end of the shank and tapered, as clearly shown in Fig. 5. The tapered head, which projects from the shank toward the horizontal operating-shaft, extends through an opening 18 at the outer side of an upper vertical coin-chute 19, and it is adapted to support a coin in an elevated position preparatory to the operation of the machine. The head is provided at its inner face with a recess 20, forming a lower horizontal shoulder which is adapted to be engaged by a shouldered cam or projection 21 of the rotary disk or body. The projection or cam is shouldered at one side and beveled at the other to engage the locking device when the shaft is rotated in the direction of the arrow of Fig. 3 and to permit the rotary disk or body to be returned to its normal position after the machine has been operated. The coin-chute 19 is provided at its inner side with a vertical slot 22, arranged adjacent to the rotary disk or body and adapted to permit the shouldered projection or cam to extend through it and engage the locking device. When a coin is deposited in the chute 19, it is supported upon the head of the locking device, and it lies between the slot 22 and the recess 20 and prevents the shoulder of the cam or projection 21 from engaging the shoulder of the recess 20 and enables the disk or body to be rotated, the cam or projection pressing the resilient locking device outward and passing the head without per-

mitting the coin to fall into the lower portion of the chute, the tapering or beveled portion of the cam or projection 21 permitting the locking device and the coin to move inward gradually to their former position. The inner wall of the chute is provided with an offset or bend 23, located adjacent to the projecting portion of the head and permitting the latter to extend beneath the coin to support the same in the upper portion of the chute 20. The front wall of the coin-chute is extended to form a plate 24, secured to a vertical partition or support 25 and having the lower portion or end of the shank 17 secured to it by means of a bolt 26. The bolt 26 passes through the center of the lower end of the shank, and the latter is provided at opposite sides with lugs 27, projecting through apertures of the plate or extension 24 of the front wall of the coin-chute 19. The catch or locking device may be mounted in any other suitable manner, if desired; but the extension or plate of the coin-chute provides sufficient resiliency for the locking device.

The rotary body or disk is provided with a peripheral flange 28, located at one of its side faces and arranged at one side of the coin-chute 19, adjacent to a side opening 29, through which the coin is discharged, and the said coin-chute 19 is provided with an inclined bottom 30, extending downward toward the side opening 29 and adapted to throw the coin outward through the same. The locking device is provided at one side with a laterally-extending arm 31, normally located adjacent to a cut-away portion 32 of the peripheral flange 28. The horizontal operating-shaft is generally designed to make one revolution only, and any suitable means may be employed for locking the same against backward movement when the machine is in its normal condition. This laterally-disposed arm is arranged to be engaged by a beveled approximately segmental lug 33, projecting from the periphery of the flange 28 and adapted as the disk or body is rotated to move the locking device outward and cause the coin to drop into the lower portion of the coin-chute 19. This operation takes place after the projection or cam 21 has passed the locking device as the lug or projection 33 is rotated in rear of the cam or projection 21. While the coin is in the lower portion of the coin-chute 19 during the forward rotation of the horizontal shaft by the operator, it is retained in the chute 19 by the peripheral flange 28, which covers the side opening 29, and if the strength of the operator is sufficient to enable him to make a complete rotation of the shaft and to carry a laterally-projecting deflecting-flange 32^a to a point below the bottom of the chute 19 the coin will be discharged from the said chute 19 and will be deflected by the flange 32^a into a lower outwardly-extending chute 34, which returns the coin to the operator. The deflecting-flange 32^a is adapted when brought into alinement with the chute 34 to form a temporary bridge or chute for connecting the coin-chute 19 and the said chute 34 to permit the coin to pass from one to the other. If, however, the operator be unable to rotate the shaft to this extent, the spring will return the horizontal shaft to its normal position and the recess or cut-away portion 32 of the peripheral flange 28 will be brought to its normal position opposite the side opening 29 of the coin-chute 19 and the coin will be discharged into the compartment 35 of the casing.

The upper coin-receiving chute 19 is located beneath a slot 36 of the top of the casing, which is provided with a suitable mouthpiece, and the lower coin-discharging chute 34 extends from the upper portion of the support or partition 25 to the lower end of the front of the casing, which is provided with an opening 37 and which has a flange 38 located above the same. The back of the casing is provided with a suitable door 39, hinged at its bottom at 40 and having its free edge located beneath the top of the casing, and any suitable means may be employed for locking the door in its closed position.

It will be seen that the slot-machine is exceedingly simple and inexpensive in construction, that it is positive and reliable in operation, and that while affording amusement it will test the strength of a person and develop the muscles of his arms.

What is claimed is—

1. In a machine of the class described, the combination of a casing, a spring-resisted shaft, a coin-chute arranged to receive the coin as it is deposited into the casing, a coin-controlled locking device arranged adjacent to the coin-receiving chute, a discharge-chute adapted to return the coin to the operator, and a deflecting device carried by the shaft and adapted to form a temporary bridge or chute for connecting the coin-chute and the discharge-chute to direct the coin from the former to the latter, substantially as described.

2. In a device of the class described, the combination of a coin-receiving chute, a coin-discharging chute, a shaft, and a rotary body carried by the shaft and provided with an open portion adapted to permit a coin to fall from the coin-receiving chute into the machine, said rotary body being also provided with a deflecting device adapted to direct the coin from one chute to the other to return the said coin to the operator, substantially as described.

3. In a device of the class described, the combination of a coin-receiving chute having an opening, a shaft, a coin-discharging chute extending from a point adjacent to the opening of the coin-receiving chute, a rotary body carried by the shaft and arranged to cover the opening of the coin-receiving chute through a portion of its rotation, and a deflecting device carried by the body and arranged to form a temporary bridge or chute for connecting

the said chutes to direct a coin from one chute to the other, substantially as described.

4. In a device of the class described, the combination of a coin-receiving chute having a discharge-opening, a coin-discharging chute, a coin-controlled locking device arranged at the coin-receiving chute, a rotary body provided with means for engaging the locking device and arranged to cover the opening of the coin-receiving chute during a portion of its rotation, and a deflecting device carried by the rotary body and adapted to form a temporary bridge or chute for connecting the said chutes to direct a coin from one chute to the other, substantially as and for the purpose described.

5. In a device of the class described, the combination of a coin-receiving chute provided at one side with a discharge-opening, a coin-controlled locking device located at the outer side of the coin-receiving chute, a discharge-chute, a rotary body provided with a shouldered cam for engaging the locking device and having a peripheral flange arranged to cover the discharge-opening of the coin-receiving chute during a portion of its rotation, said rotary body being also provided with a deflecting device adapted to direct a coin from one chute to the other, and means for operating the rotary body, substantially as described.

6. In a device of the class described, the combination of a coin-receiving chute having a discharge-opening at one side and provided with inner and outer openings, a coin-controlled locking device projecting through the outer opening and adapted to support a coin, a rotary body provided with a shouldered cam arranged to extend through the inner opening of the chute and adapted to engage the locking device, said rotary body being provided with a peripheral flange arranged to cover the discharge-opening during a portion of its rotation and having a cut-away portion or recess, a deflector carried by the rotary body and arranged to direct a coin from the receiving-chute to cause the same to pass out of the machine, and means for operating the rotary body, substantially as described.

7. In a device of the class described, the combination of a coin-receiving chute, a coin-controlled locking device provided with a laterally-extending arm, a spring-resisted shaft, a rotary body carried by the shaft and provided with a cam to be engaged by the locking device and having a projection arranged to engage the arm of the locking device, and a deflecting device carried by the rotary body, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SETH W. HOAG.

Witnesses:
A. MORTON HIBBARD,
MARION COREY.