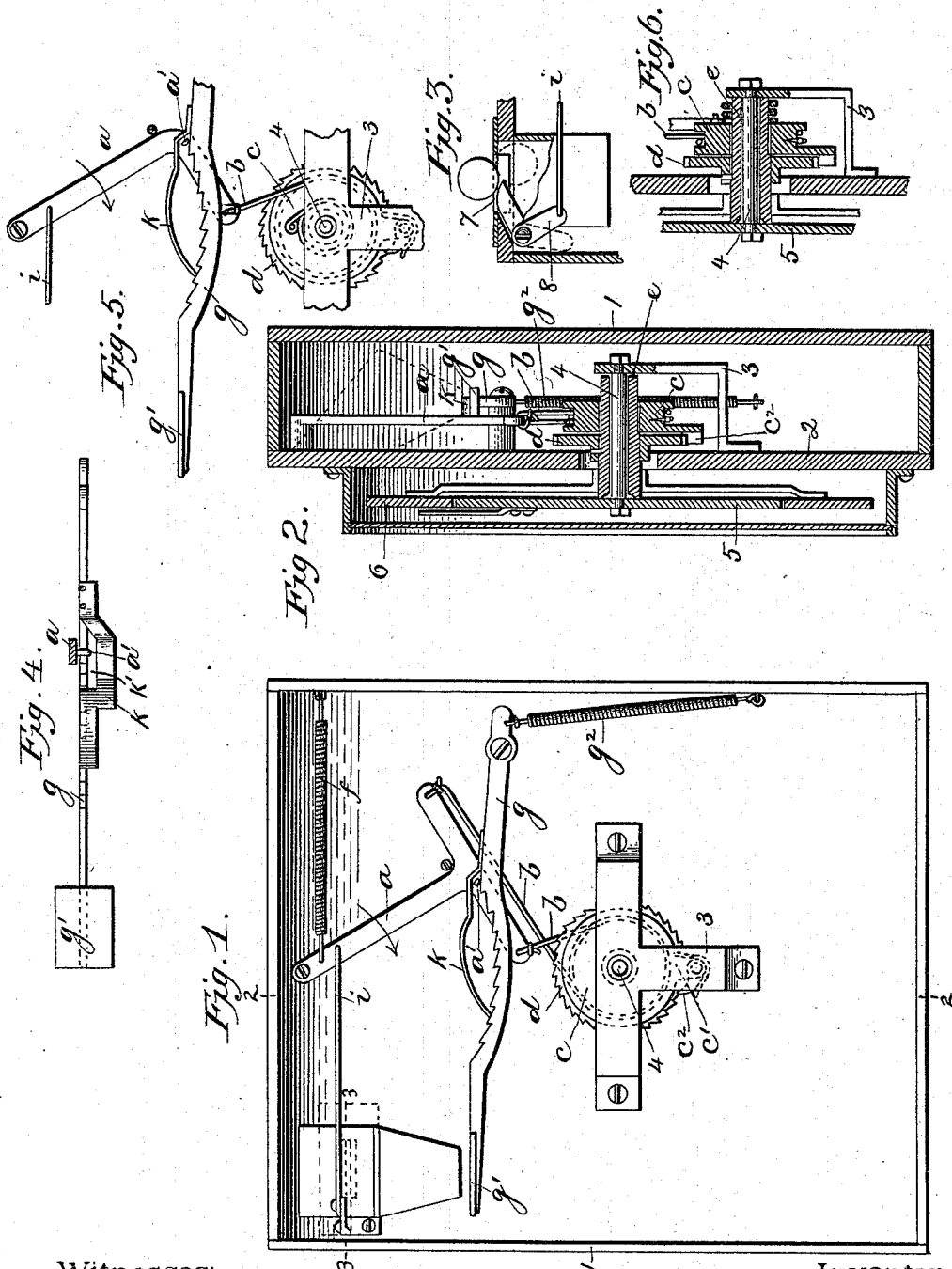


(No Model.)

C. W. DE KNIGHT.
COIN CONTROLLED EXHIBITOR.

No. 528,084.

Patented Oct. 23, 1894.



Witnesses:

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UNITED STATES PATENT OFFICE.

CLARENCE W. DE KNIGHT, OF WASHINGTON, DISTRICT OF COLUMBIA.

COIN-CONTROLLED EXHIBITOR.

SPECIFICATION forming part of Letters Patent No. 528,084, dated October 23, 1894.

Application filed September 29, 1894. Serial No. 524,477. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE W. DE KNIGHT, of Washington, in the District of Columbia, have invented new and useful Improvements in Coin-Controlled Exhibitors; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to coin-controlled apparatus, and has particular reference to that type in which a disk having pictures or other devices exhibited thereon is rotated by the re-action of spring-operated mechanism, power being stored in the spring or springs by the introduction of a coin.

The object of my invention is to improve the construction of this type of apparatus, particularly in the spring-operated mechanism for revolving the disk, and in the devices for tripping the said mechanism to permit it to revolve the disk.

To this end, my invention consists in the construction and combination of parts as hereinafter described and pointed out in the claims.

In the drawings,—Figure 1 is a rear elevation of the mechanism, the rear wall of the casing being removed. Fig. 2 is a section of the complete machine, on line 2—2 of Fig. 1. Fig. 3 is a section on line 3—3 of Fig. 1. Fig. 4 is a plan view of the coin-lever and the guard carried thereby. Figs. 5 and 6 are, respectively, an elevation and section illustrating a modification hereinafter described.

Similar reference letters and numerals indicate the same parts in the several views.

The casing 1 is provided with a front plate 2 which supports a bracket 3. To the latter is secured a journal pin 4 supporting a stationary disk 5. An annular rotative disk 6 is supported by means of arms projecting from a sleeve or hub *e* mounted on the journal pin 4.

Referring to Figs. 1 and 2, *a* indicates a lever pivoted near the upper part of the casing and having its lower end branched as indicated. A cord *b* is wound around a drum or pulley *c* which is freely mounted upon the sleeve *e*, and the ends of the cord are attached to the branched ends of the lever *a*.

Adjacent to said drum and secured to the sleeve *e* is a ratchet wheel *d*, while an arm *c'* carried by the drum *c* has a spring pawl *c*² which engages with the teeth of the wheel *d* so as to rotate it in one direction.

A spring *f* having one end fixed, and its other end connected with the lever *a*, serves to move the latter in the direction the reverse of the arrow in Fig. 1, so as to rotate said drum or pulley in the direction in which the pawl is to revolve or spin the ratchet wheel and the annular disk.

As will be obvious, instead of locating the spring *f* as shown, it may consist of a spring coiled about the sleeve *e* as indicated in Figs. 5 and 6. With such construction, the cord *b* will be connected at one end to the drum and at the other end to the lever *a*, the coil spring having a constant tendency to keep the cord wound on the drum.

In the upper part of the casing there is a slot 7 for the insertion of a coin, and a bell-crank lever 8 in the path of the coin, is connected by means of a rod or wire *i* with the lever *a* so that the introduction of a coin will cause the lever 8 to draw the lever *a* to the left in Fig. 1, through the connection *i* and against the tension of spring *f*.

As represented in Fig. 1, a toothed bar *g* is pivoted at one end and normally held in an upward position by a spring *g*² so that a plate *g'* at its free end will be under the end of the coin-chute. A pin *a'* projecting from the lever *a* is adapted to engage the teeth of the bar *g*. In order that this pin may not engage any of the teeth during its backward movement after being released, I provide a guard as indicated in Figs. 1 and 4. This guard preferably consists of a spring finger *k* permanently attached at one end to the bar *g* and extending over all but one or two teeth toward the free end of the bar, said finger being free at its other end to permit the pin *a'* to pass out from under it when moved to the extreme left in Fig. 1. The finger has a notch or recess *k'* in one edge, as shown in Fig. 4, to permit the bar *g* and finger *k* to rise to normal position when the pin reaches said notch in moving backward.

When a coin is inserted, it causes the bell-crank lever 8 to vibrate the lever *a* in the direction of the arrow in Fig. 1, and against

the tension of spring *f*. By means of cord *b* the drum or pulley is rotated and the pawl *c*² moves freely over the ratchet wheel *d*. At the same time, the pin *a'* moves along the bar *d* and engages a tooth at the left in Fig. 1, and the lever *a* remains at this limit of motion until the coin, dropping upon the plate *g'*, causes the tooth bar *g* to be disengaged from the pin *a'* and the spring *f* is then free to return the lever *a* and cause the cord to rotate the pulley. This movement of the pulley causes the pawl *c*² to rotate or spin the ratchet wheel *d* and the exhibiting disk carried thereby.

When the lever *a* moves as last described, the pin *a'*, riding over the finger *k*, keeps the toothed bar *g* depressed until said pin reaches the recess *k'*.

Having now described my invention, what I claim is—

1. In a machine of the character specified, the combination with the ratchet wheel *d* and a rotary disk, both mounted in the same axial line, of the drum or pulley *c* carrying the pawl *c*², the spring *f* for rotating the drum and disk in one direction, a cord *b* for rotating the drum in the opposite direction, a lever *a* having the cord *b* connected to it, and a lever located in the path of a coin and connected to said lever *a*, substantially as described.

2. In a machine of the character described, the combination with the ratchet wheel *d* and a rotary disk, both mounted in the same axial line, of the drum or pulley *c* carrying the pawl *c*², the spring *f* for rotating the drum and disk in one direction, a cord *b* for rotating the drum in the opposite direction, a lever *a* having the cord *b* connected to it, a

lever located in the path of a coin and connected to said lever *a*, and the toothed bar *g* extending under the coin-chute and adapted to engage a pin carried by the lever *a*, substantially as described.

3. A coin-controlled apparatus, comprising in its construction a toothed bar located in the path of movement of a coin, a lever having a pin or projection adapted to engage the teeth of said bar, and a guard to prevent the engagement of said pin with said teeth when the lever is moving in one direction.

4. A coin-controlled apparatus comprising in its construction a rotative disk, the lever *a* having the pin *a'* and connected with said disk to rotate it, the toothed bar *g* extending into the path of a coin, and the spring finger *k* having a notch or recess *k'* and attached to the bar *g* at one end, substantially as described.

5. A coin-controlled apparatus comprising in its construction the ratchet wheel *d* and a rotary disk, both mounted in the same axial line, the drum or pulley *c* carrying the pawl *c*², the lever *a* having the pin *a'* and having a flexible connection with said drum to rotate it in one direction, a spring for causing the rotation of the drum and a vibration of the lever in the opposite direction, and the toothed bar *g* extending under the coin-chute and having the spring guard *k* attached to it for covering some of its teeth, substantially as described.

In testimony whereof I affix my signature in presence of two subscribing witnesses.

CLARENCE W. DE KNIGHT.

Witnesses:

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