

No. 712,780.

Patented Nov. 4, 1902.

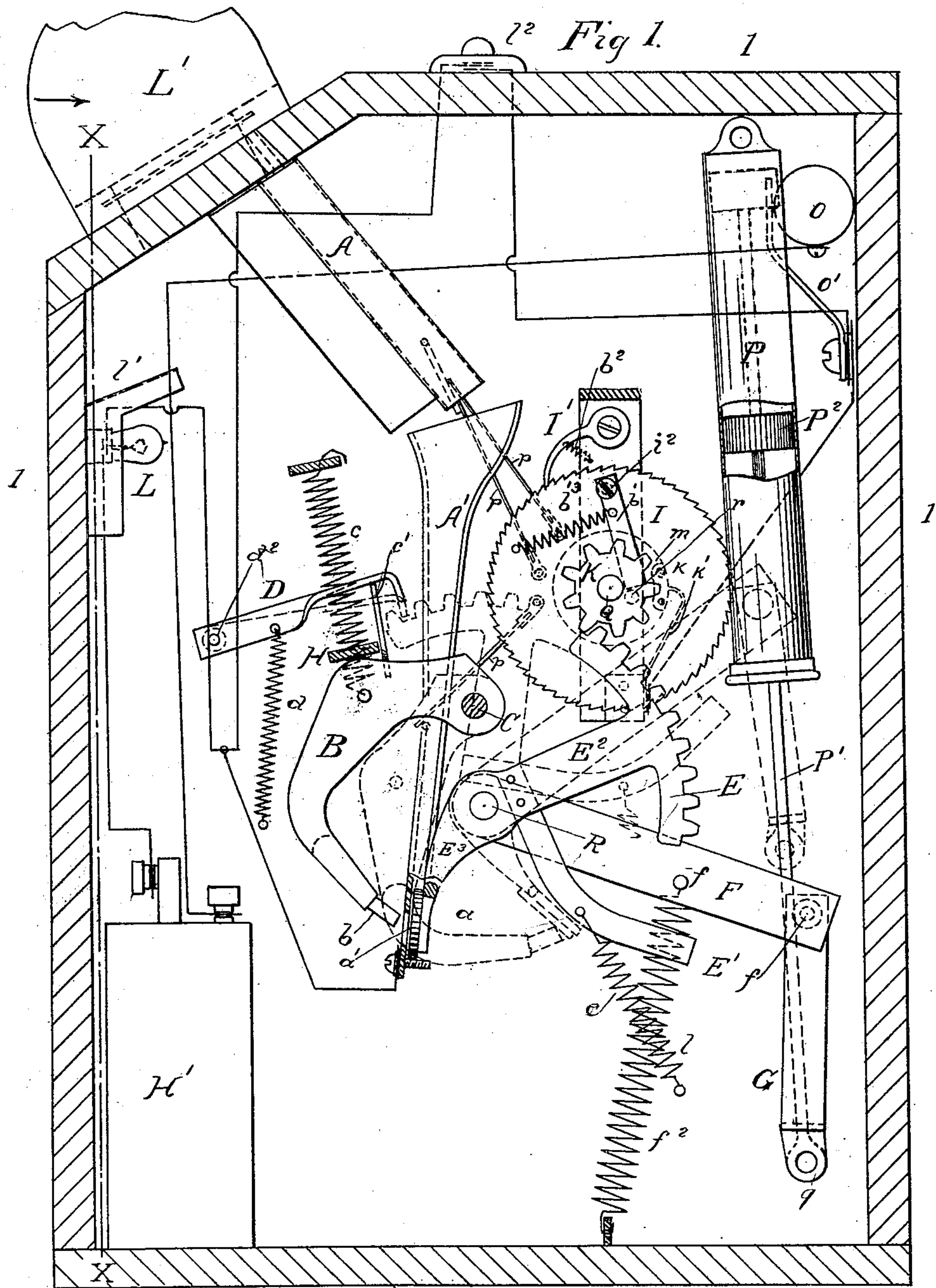
F. DUWE.

COIN CONTROLLED STEREOPTICON.

(Application filed Aug. 6, 1901.)

(No Model.)

3 Sheets—Sheet 1.



WITNESSES:

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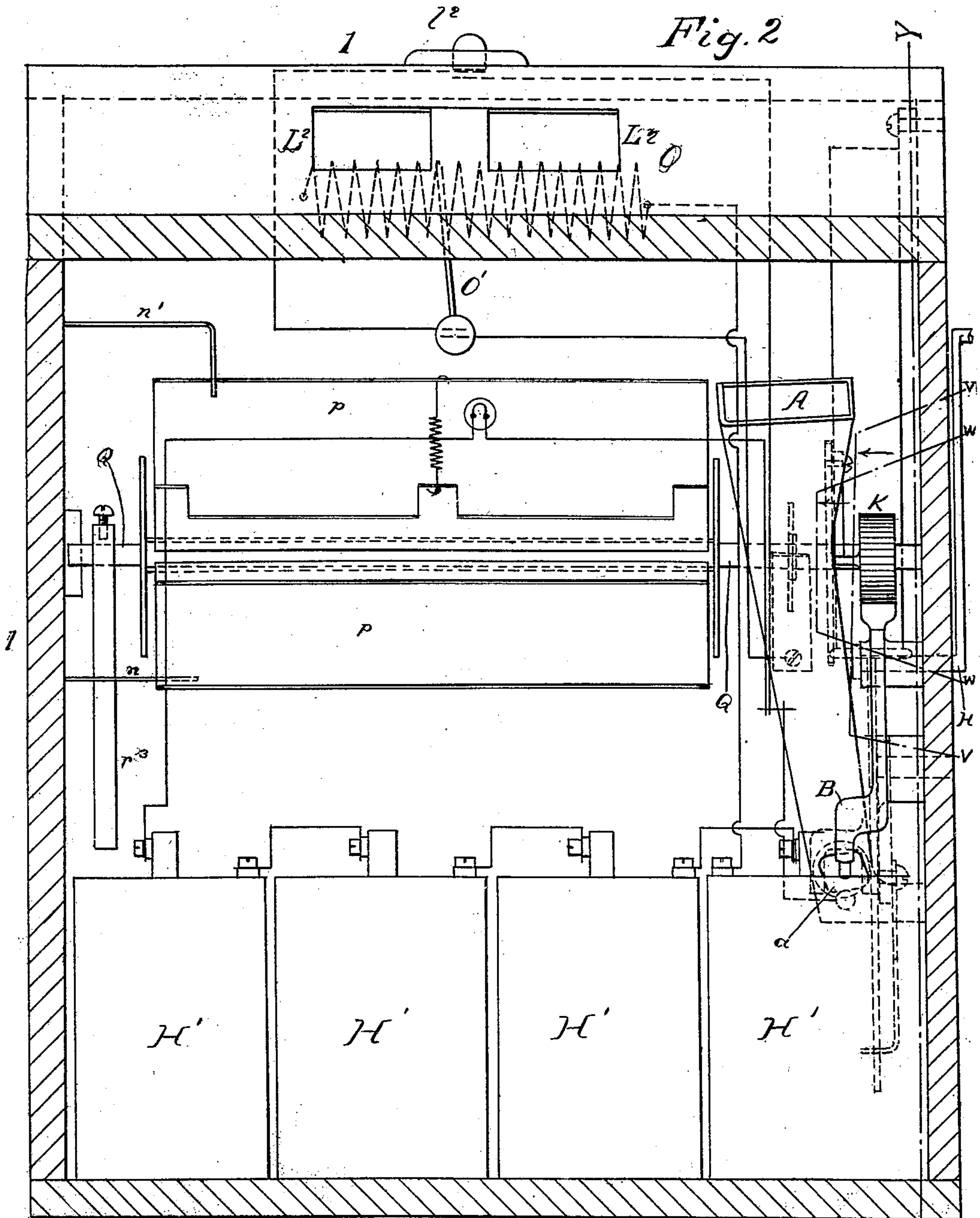
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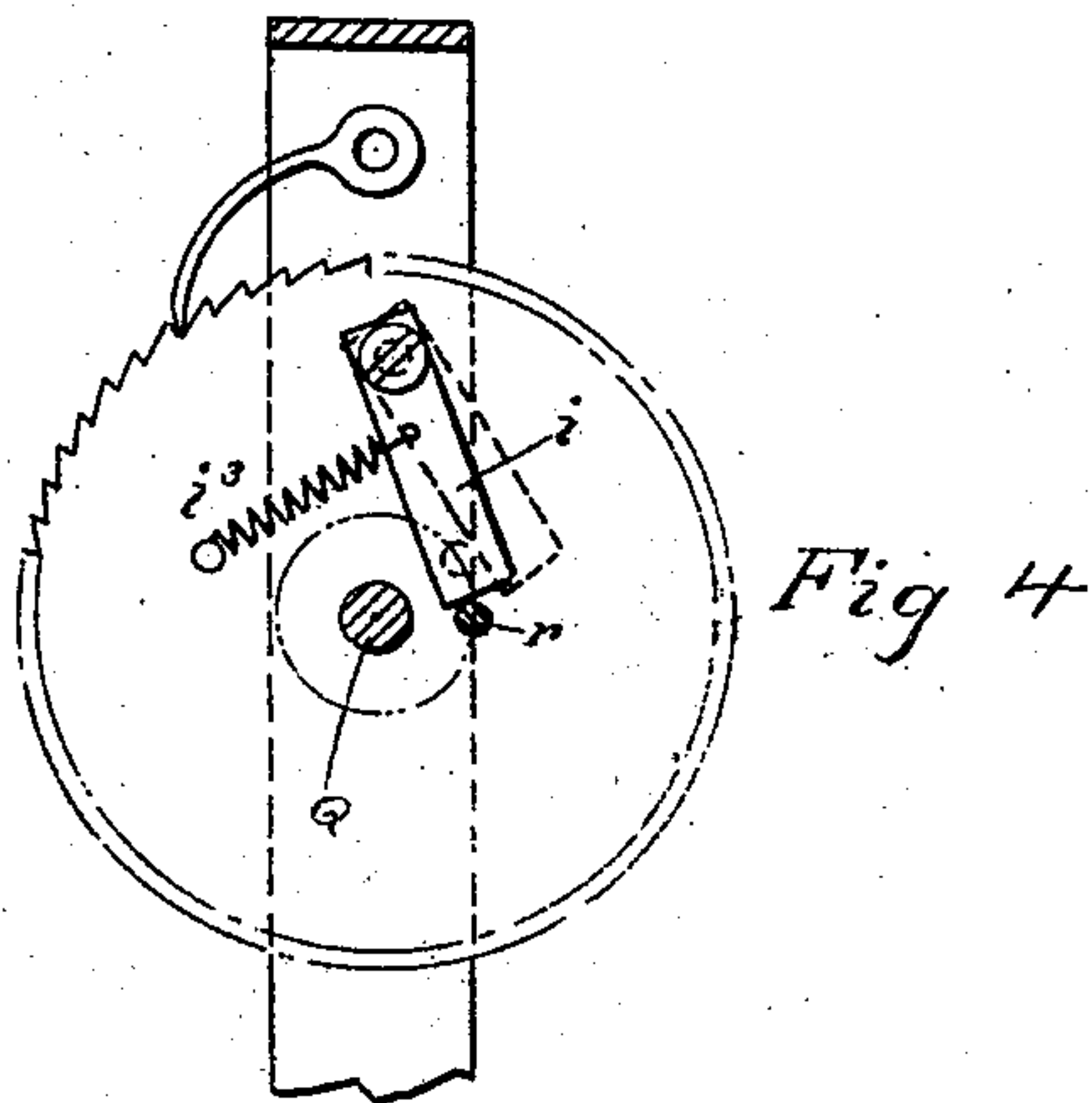
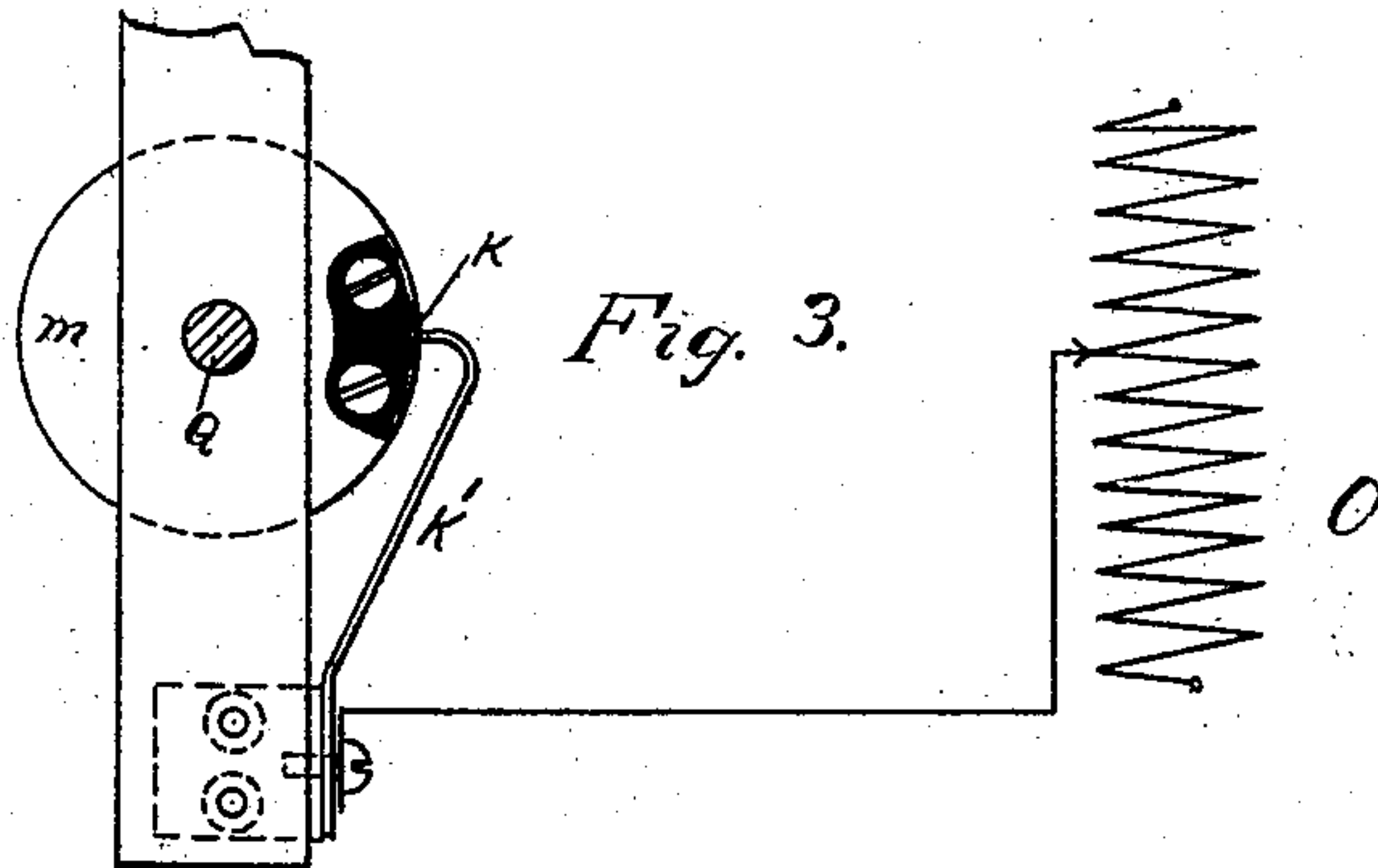
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UNITED STATES PATENT OFFICE.

FRANCIS DUWE, OF NEW YORK, N. Y.

COIN-CONTROLLED STEREOPTICON.

SPECIFICATION forming part of Letters Patent No. 712,780, dated November 4, 1902.

Application filed August 6, 1901. Serial No. 71,024. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS DUWE, a citizen of the United States, and a resident of New York, county of New York and State of New York, have invented certain new and useful Improvements in Coin-Controlled Stereopticons, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which
10 similar characters of reference indicate corresponding parts.

This invention relates to improvements in coin-controlled stereopticons.

The object of the invention is to produce an
15 inexpensive device by means of which a series of pleasing pictures will be displayed to view one after another under a strong light.

The nature of the invention will be fully understood from the following general description and the annexed drawings and will be
20 subsequently pointed out in the claims.

Figure 1 of the accompanying drawings is a vertical sectional view of my device, taken on the line $y y$ of Fig. 2. Fig. 2 is another
25 vertical sectional view taken on the line $x x$ of Fig. 1. Fig. 3 is a sectional view taken on the line $w w$ of Fig. 2. Fig. 4 is a sectional view taken on the line $v v$ of Fig. 2.

The device is inclosed in a case. In this
30 case are properly mounted the chutes A and A' to conduct a coin deposited therein down to opposite the opening a in the lever E³, as illustrated by $a a'$ E³ of Fig. 1.

B designates a bent lever pivoted at C. Upon this lever are formed the tine b and the
35 pin c' , and to this lever is attached the handle H, which extends outside of the case 1. The spring c is arranged to hold this lever in normal position.

40 The lever E³, which is pivoted at R, is an extension of the spoke E² of the segmental spur-wheel E. Upon this spoke E² is fastened the lever E', which is held in normal position by the spring e . The segmental wheel E,
45 as is illustrated, is mounted on the pivot R. Upon this pivot is also revolubly mounted the lever F, which is formed with the pin f , which extends at right angles from its surface and is arranged and adapted to be engaged by the
50 lever E'. The spring f^2 holds this lever in normal position. The connecting-strap G is pivotally attached by one end to the lever F

at f' and by the other end to the piston-rod P' by the pivot 9.

P designates an air-cylinder, in which moves
55 the piston P², actuated by the piston-rod P'.

The shaft Q extends through the whole breadth of the case and is journaled on opposite walls of the case, as illustrated. Upon this shaft is mounted the pinion K, which
60 meshes with the segmental wheel E. The ratchet-wheel I is also mounted upon this shaft, and between the pinion and the ratchet-wheel on the same shaft is mounted the disk m . The pawl I', held in normal position by
65 the spring b^2 , engages the ratchet-wheel I. At i^2 upon this ratchet-wheel is pivoted the pawl i , which engages the pin r of the pinion K. This pawl i is held in normal position by the
70 spring i^3 . The lever-pawl D, pivoted at d^2 , is adapted to engage the segmental wheel E and is held in normal position by the spring d . On the shaft Q are also pivotally mounted a series of picture-cards p , which as the shaft
75 moves around, falling on the wires n and n' , show their pictured faces to the spectator in regular order as he looks down through the glasses L². In the example of my invention here given I have illustrated two glasses, one
80 for each eye of the spectator, and in that case there are to be two pictures just alike on the card; but there might be only one glass and one picture on each card if it were found more
85 available. The bar r^3 is fastened on the shaft Q to act as a counterpoise.

H' designates an electric battery, which is connected by proper electric conductors with the electric light L, the push-button l^2 , the variable-resistance coil O, and the disk m . The light L may be an incandescent light of
90 any approved form and proper size. The reflector l' throws its light down upon the picture-cards p . The push-button l^2 is of the common and well-known form. The variable-resistance coil O is a helical coil of conducting
95 wire wound around a non-conducting core. The lever o' is pivoted and connected, so that it may be swung from one end of the coil to the other, but not breaking its electrical connection with the coil by its motion. It is evi-
100 dent that the nearer this lever is to the end next the source of supply the less of the coil is traveled by the current, which is after passing through so much of the coil diverted by

the lever, and so as the resistance is decreased the less will be the intensity of the current conveyed by the lever; but if the lever be swung in the opposite direction, so as to expose a greater portion of the coil to the current, the resistance will increase in the same proportion and the intensity of the current will be increased in the same ratio. This part of the apparatus is used to vary the intensity of the said light, with which it is, as aforesaid, connected, for the more intense the current passing through the light the brighter the light will be, and the less intense the current the dimmer the light. The disk *m* is formed with a piece of non-conducting material *k*, on which the point of the spring *k'* rests when the mechanism is at rest. As above set forth, all these parts affected by electric action are properly connected to each other and to the batteries *H'* by suitable electric conductors. In the example of my invention here given a four-cell battery is shown. These may be of any approved and adaptable size and construction. The number and size of the batteries may, however, be varied as circumstances may seem to require.

The operation and use of my device are as follows: When a coin, as *a'*, has been deposited in the chute *A*, it slips down into the chute *A'*. This conducts it down to opposite the opening *a* in the lever *E³*, as shown in Fig. 1. If then the operator turns the handle *H*, it carries the point *b* of the lever *B* forward against the coin. This turns the lever *E³* upon its bearing. This being integral with the spoke *E²* and the segment *E* moves them also in the same proportion as it moves. At the same time the lever *E'*, being rigidly attached to the spoke *E²*, moves upward, and engaging the pin *f* on the lever *F* carries that lever upward also. This lever *F*, being attached to the piston-rod *P'* of the cylinder *P* carries it and the piston *P²* upward also until all these moving parts assume the position shown in dotted lines in Fig. 1. The pinion *K* is loosely mounted on the shaft *Q* together with the ratchet-wheel *I* and disk *m*, and as the segment *E* moves it turns the pinion, the ratchet-wheel, and the disk in the opposite direction. This motion causes the pin *r* to leave the end of the pawl *i*, and, completing a full revolution, pushes the pawl out of its way and assumes its normal position. Then the spring *i³* draws the pawl back into its normal position against the pin, the pawl *I'*, engaging the ratchet-wheel *I*, holds it in position, and the disk *m* between them is held in position. At the same time the point of the pawl-lever *D*, engaging the segment *E*, holds it in position. While all these parts are so held, the point of the spring *k'* rests on the non-conducting plate *k* of the disk *m*. The electric circuit is not then closed, the light does not shine, and the whole mechanism stands still. As soon as the operator releases the handle *H* the spring *c*, drawing it upward to its normal position, brings the pin *c'* against the lever

D and disengages it from the segment *E*. Immediately the springs *e* and *f²* begin to draw the segment *E*, the lever *E'*, the lever *E³*, and the lever *F* back to their normal positions. Then the segment *E*, engaging the pinion *K*, begins to turn the shaft *O*. This carries all the mechanism mounted on the said shaft with it. As soon as the disk *m* begins to turn it carries the non-conducting plate *k* from under the end of the spring *k'*. Then the end of the spring coming upon the metal of the disk closes the electric circuit, and the light, if the push-button *l²* be pressed, begins to shine and illuminate the pictures. The piston *P²*, as before stated, moves in the cylinder *P* and is connected by the piston-rod *P'* to the strap *G*, which also connects the said piston-rod with the lever *F*. When the lever *F* moves, it also moves the piston *P²* in the cylinder *P*, and as it, with the pin *f*, engages the lever *E* also moves that lever in its return motion as it is drawn downward by the spring *f²*. The lever *E'*, being rigidly attached to the spoke *E²*, moves the segment *E*, which in turn moves the pinion *K* and the shaft *Q*. These parts are so connected that they thus all move together; but when they start on the return motion the cylinder is filled with air, the resistance of which, bearing on the piston, retards the motion of all the said mechanism connected therewith, and so the shaft is turned slowly and the pictures slowly displayed, one after another. As there are only the same number of teeth in the segment that there are in the pinion the pinion will only make one revolution and carry around and display the cards only once for each coin, for when the pinion and the shaft *Q* have made one revolution all the parts will have assumed their normal positions. As soon as the lever *H* begins to move back to its normal position the coin falls out into the floor of the case or into a receptacle provided for it, so as soon as the parts have assumed their normal position the mechanism will be ready for another coin, and the operation may be repeated.

I do not confine myself strictly to the construction herein set forth and shown, as it is evident that under the scope of my invention I am entitled to slight structural variations.

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

1. The combination with an inclosing case; a chute within said case, to receive and convey coins; a lever formed and arranged to receive said coins; a segmental wheel mounted on bearings in said case, and integral with said coin-receiving lever; a pawl-lever arranged to engage said segmental wheel, and a spring holding said pawl in normal position; an arm upon said segmental wheel, and a spring attached to said arm and holding said segmental wheel in normal position; a shaft journaled in said case; a pinion mounted on said shaft, and meshing with said segmental

wheel; a pawl limiting the motion of said pinion, and a spring holding said pawl in normal position; pictures arranged on said shaft to be displayed by the revolution thereof; a
 5 straight lever pivoted by one end in said case; an air-cylinder, a piston in said cylinder, and piston-rod attached to said piston; a metallic strap pivotally connecting said piston-rod and said straight lever; and a spring holding
 10 said straight lever in normal position; and said cylinder-piston, piston-rod and straight lever arranged to retard the motion of said mechanism, of a handle and a lever, integral with each other, and the lever pivoted and
 15 arranged to move said coin-receiving lever, and to release said coins, a spring holding said handle and its integral lever in normal position; means for illuminating said pictures; and means for viewing the same; all
 20 substantially as and for the purposes set forth.

2. The combination with an inclosing case; a chute within said case to receive and convey coins; a lever formed and arranged to receive said coins; means for moving said lever and releasing said coins; a segmental
 25 wheel mounted on bearings in said case, integral with the coin-receiving lever; and moved thereby a spring and pawl engaging

said segmental wheel; a spring holding said segmental wheel in position; a shaft jour- 30
 naled in said case; a pinion on said shaft meshing with said segmental wheel; a circuit-closing wheel composed in parts of conducting material, and in part of non-conduct- 35
 ing material, also mounted on said shaft, and revolving therewith; a spring working on said circuit-closing wheel to close and break said circuit; pictures arranged on said shaft to be displayed by the revolution thereof; and means for viewing said pictures; of an elec- 40
 tric battery; an electric light connected therewith and arranged to illuminate said pictures; a variable-resistance apparatus, arranged to increase and decrease the intensity of said light; and electrical conductors, connecting 45
 the said parts together, all substantially as shown and specified.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 20th day of July, 50
 1901.

FRANCIS DUWE.

Witnesses:

DAVID MORRIS,
 BELLE PATERSON.