

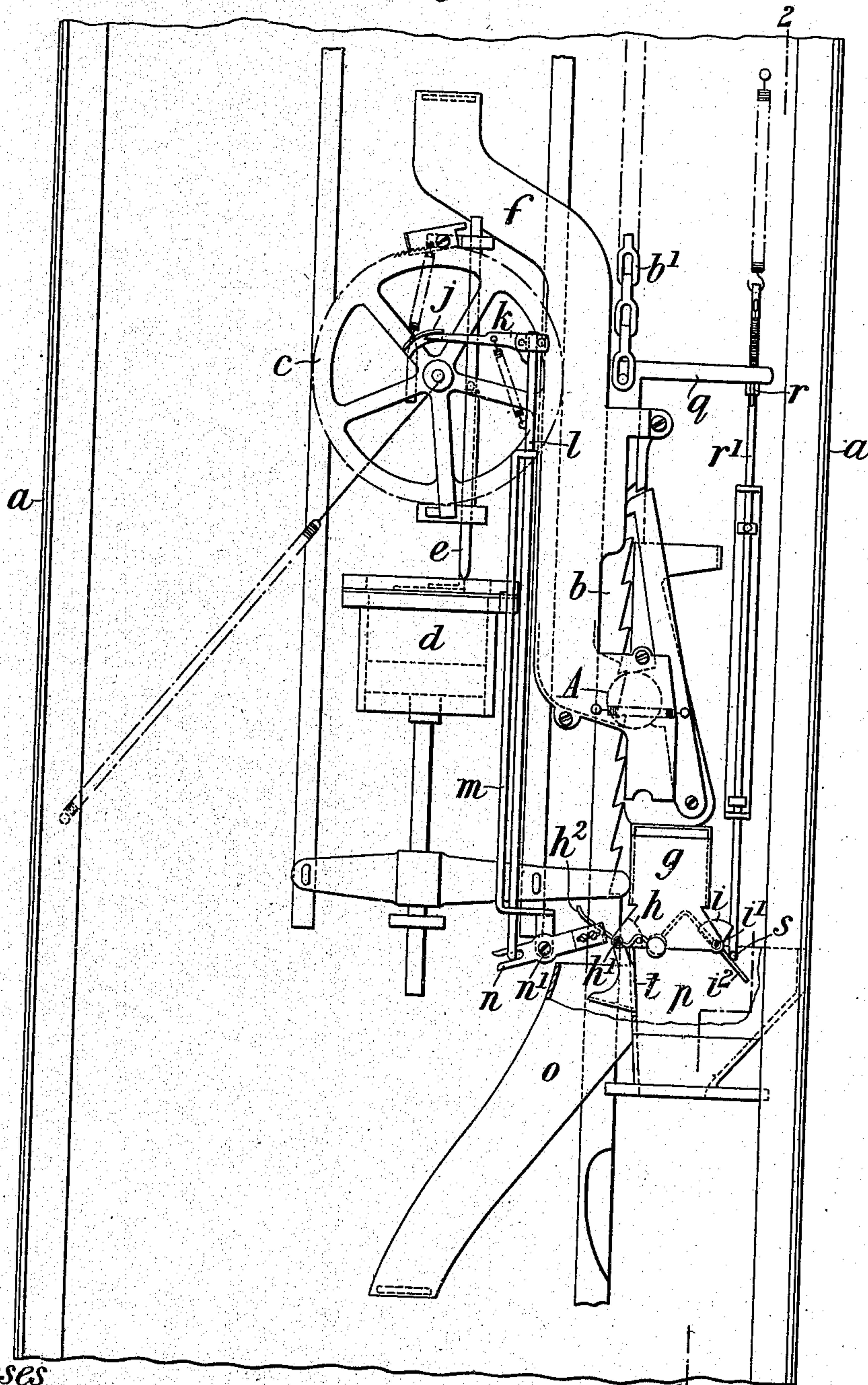
A. C. SAVAGE.  
 COIN FREED PUNCH BALL MACHINE.  
 APPLICATION FILED JUNE 1, 1908.

900,126.

Patented Oct. 6, 1908.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses.

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2 SHEETS—SHEET 2.

Fig. 2.

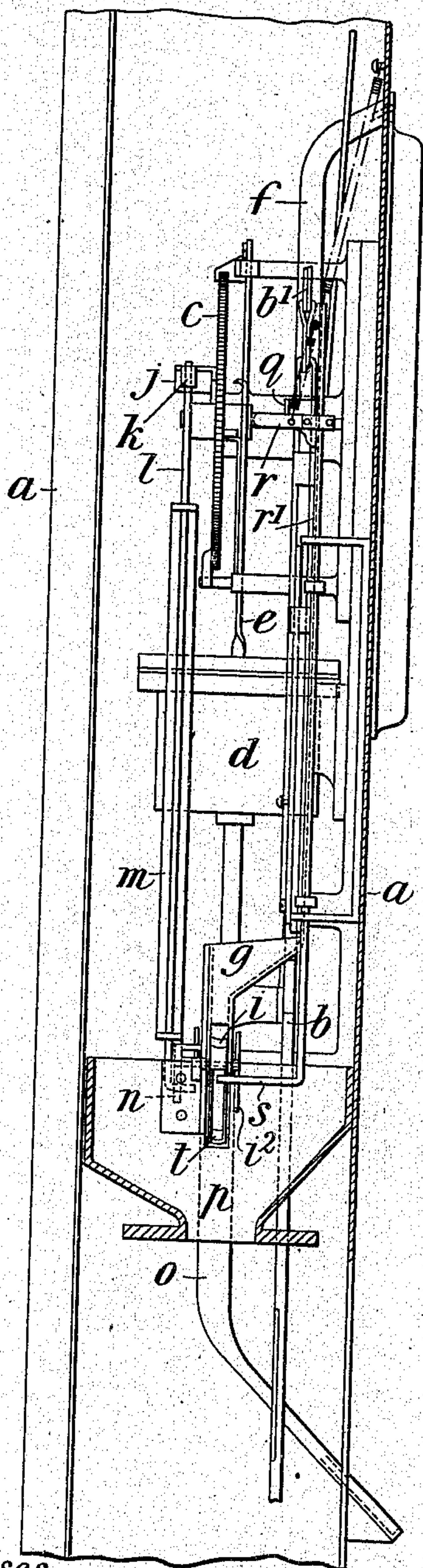


Fig. 3.

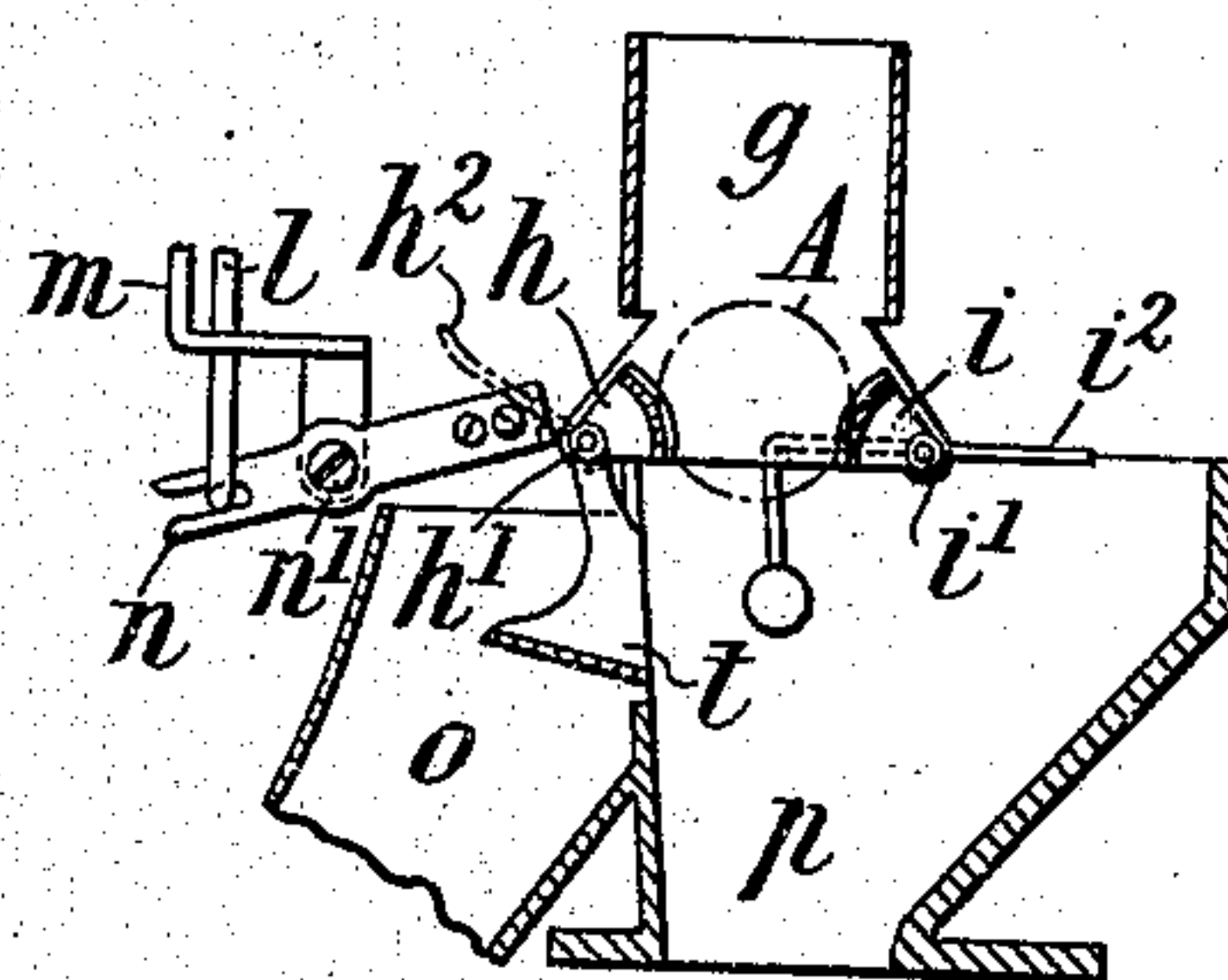
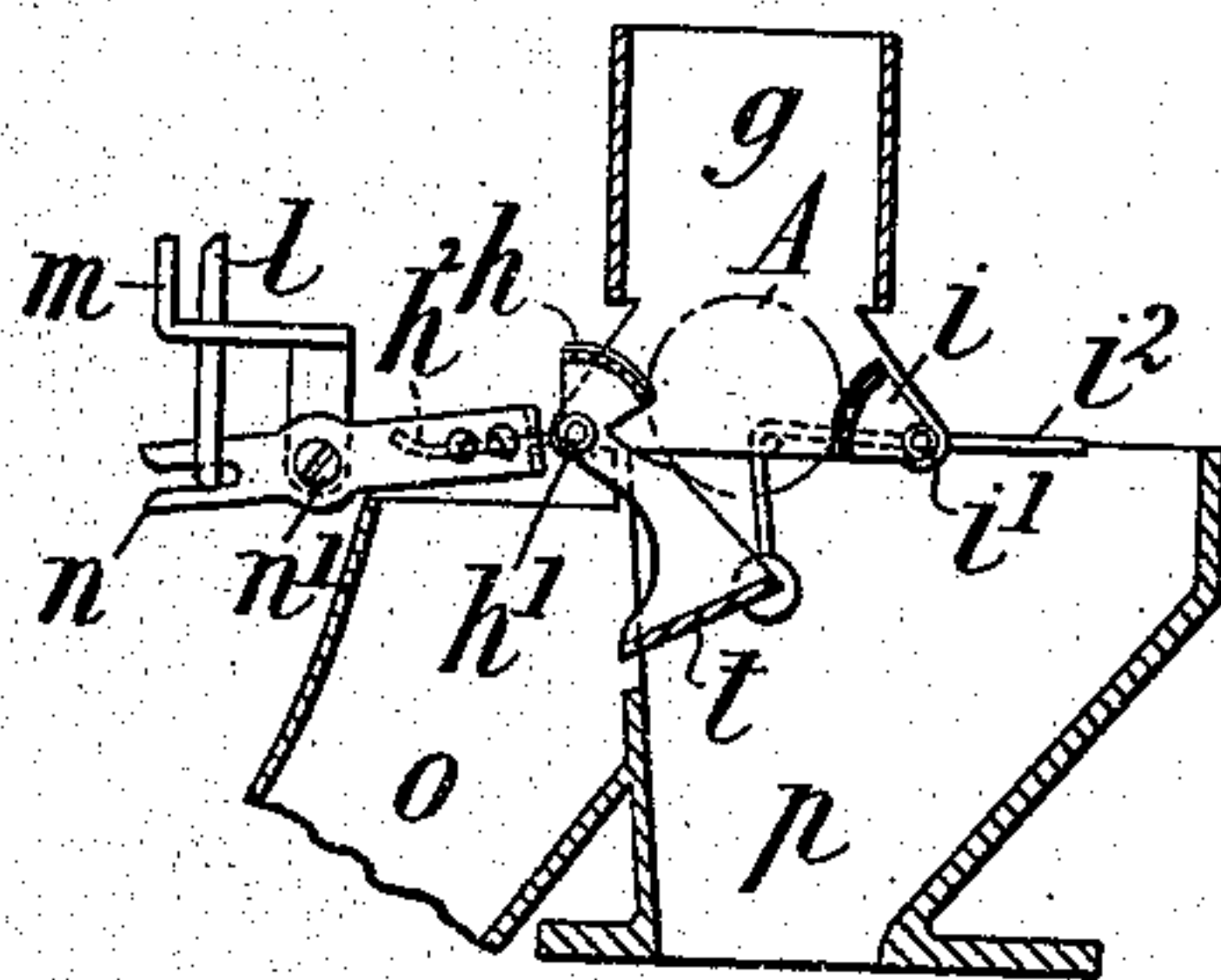


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## COIN-FREED PUNCH-BALL MACHINE.

No. 900,126.

Specification of Letters Patent.

Patented Oct. 6, 1908.

Application filed June 1, 1908. Serial No. 435,980.

*To all whom it may concern:*

Be it known that I, ALICK CLAUDIUS SAVAGE, a subject of the King of Great Britain, residing at Appold street, Finsbury, London, England, have invented new and useful Improvements in or Relating to Coin-Freed Punch-Ball Machines, of which the following is a specification.

This invention relates to punch ball machines of the kind for which a British patent was granted to H. S. Mills No. 27054 of 1903, and has for its object to provide novel means for causing the return of the coin on a blow of predetermined force being given.

According to my invention I employ a money bucket, of the well-known Everitt type, provided with two cams one discharging into the coin receptacle and the other into a chute leading outside the apparatus.

The ratchet wheel of the punch-ball machine, which wheel is caused to turn when the punch-ball is struck, is provided with a cam which is adapted to operate an arm on a vertical rod provided with springs and sliding in a fixed bracket in the machine; should the force of the blow be sufficient to cause the wheel to turn to the predetermined extent the lower end of the vertical rod actuates a pivoted lever and causes one of the cams of the money bucket to turn and thereby discharge the coin into the chute leading outside the apparatus.

The vertically sliding ratchet bar or rod to which the punch-ball is connected by a cord or the like carries an arm adapted to bear against a tappet on a spring-actuated vertical rod sliding in a fixed bracket in the casing. The said rod has an arm at its lower end which operates the other cam of the money bucket and should the blow struck be insufficient to cause the ratchet wheel to turn to the predetermined extent the coin passes to the coin receptacle of the machine.

In the accompanying drawing:—Figure 1 is a rear view with the cover removed of the mechanism of coin-freed strength testing machines of the kind described in the specification of former patent No. 27054 of 1903 but having my improvements applied thereto. Fig. 2 is a section on the line 2—2, Fig. 1. Fig. 3 is a sectional view of the coin bucket and of the mechanism connected therewith, and Fig. 4 is a view of the same device but showing the parts in another position.

*a* represents the case of the machine, *b* is the vertically sliding ratchet-bar or rod to which the punch-ball, not shown in the drawing, is attached by means of the chain *b*<sup>1</sup> and *c* is the ratchet-wheel which is actuated on the impact of the punch-ball with the so-called impact board, also not shown in the drawing, through the pneumatic device *d* and rod *e* in connection therewith. All these parts are of known construction.

*f* is the usual coin chute and *g* is the bucket which, as hereinbefore described, is of the well-known Everitt type but which is provided with the two cams *h* and *i*, the said two cams being hinged to the two opposite sides of the discharge opening of the bucket *g* at the points *h*<sup>1</sup> and *i*<sup>1</sup> respectively.

*j* is the cam or tappet piece which is provided upon the ratchet-wheel *c* and *k* is the arm with which the said cam piece is designed to operate as hereinafter described and which is fixed upon the upper end of the rod *l* mounted in the fixed bracket *m* and engaging at its lower end with one end of the lever *n* pivoted at *n*<sup>1</sup> and having its other end in engagement with the arm *h*<sup>2</sup> upon the cam *h* of the money bucket *g*.

*o* is the chute which extends from the money bucket to the outside of the apparatus and *p* is the ordinary coin receptacle.

*q* is the arm which is carried by the upper end of the ratchet-bar *b* and *r* is the tappet piece provided upon the spring-actuated rod *r*<sup>1</sup>, the lower end of which is formed with an arm *s* designed to make contact with an arm *i*<sup>2</sup> upon the cam *i* of the money bucket *g* for the purpose hereinafter described.

The apparatus operates as follows, that is to say, assuming that a coin *A* is introduced into the chute *f* in the usual way and the punch-ball is pulled downwards into the operative position so as to raise the ratchet-bar *b* the coin falls into the money bucket *g* in which it is retained by means of the two cams *h* and *i* as indicated in Fig. 3, the cam *i* being turned into the position shown in that figure by the lifting of the rod *r*<sup>1</sup> by its spring due to the raising of the arm *q* out of contact with the tappet *r*. If the ball be now punched so as to cause it to strike against the impact board the pneumatic device *d* transmits the force of the blow to the ratchet wheel *c* in the known manner. Should the blow given to the ball be sufficient to cause the ratchet wheel to turn to such an extent



that the cam *j* comes into contact with the upperside of the arm *k* and raises it, the rod *l* is lifted so as to tilt the cam *h* and bring it into the position shown in Fig. 4 in which position the coin *A* is permitted to pass through the discharge opening in the money bucket *g* and is deflected by means of the guide-plate *t* integral with the cam *h* into the discharge chute *o* by means of which it is conveyed outside the apparatus.

If the blow given to the punch-ball is not sufficient to turn the ratchet-wheel *c* so as to cause it to raise the arm *k* to the necessary extent the cam *h* is not tilted into the position shown in Fig. 4 and the coin is discharged from the money bucket into the coin receptacle by the lifting of the cam *i* into the position shown in Fig. 1, this being effected by the rod *i'* which is forced downwards by the arm *g* on the ratchet bar *b* when the latter is released on the punch-ball or bag striking the impact platform in the usual way.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. In a coin actuated machine, the combination with a coin receiving chute, of a coin receptacle, and a coin delivery chute, a pair of pivoted cams interposed between the coin receiving chute and the said receptacle and delivery chute located in the path of and adapted to support the coins, and independent mechanism for rocking said cams, to deliver the coin into said receptacle or said delivery chute, substantially as described.

2. In a coin actuated mechanism, the combination with a coin receiving chute, of a pair of pivoted cams, having opposite portions for engaging the edges of a coin, and supporting the same, a coin receptacle, and a delivery chute located below said cams, and independent mechanisms for rocking said cams to deliver the coin into said receptacle or said delivery chute, substantially as described.

3. In a coin actuated mechanism, the combination with a coin receiving chute, of a pair of oppositely disposed, movable devices adapted to receive and support a coin, the distance between said devices being less than

the diameter of the coin, independent mechanisms connected to said movable devices, and a coin receptacle and a delivery chute located below said movable devices, substantially as described.

4. In a coin actuated machine, the combination with a coin receptacle, and a delivery chute having portions adjacent to said receptacle, a pair of pivoted segmental cams arranged above said delivery chute and receptacle, and adapted to engage the edges of coins and support the same, when in normal position, the distance between the opposed surfaces of said cams being less than the diameter of the coins, and independent mechanisms for rocking said cams, and a coin chute for conducting coins to said cams, substantially as described.

5. In a coin actuated machine, the combination with a coin receiving chute, a pair of pivoted cams having opposed surfaces, arranged below said chute in relation thereto to engage the edges of coins and support the same, a coin receptacle and a delivery chute below said cams, independent actuating mechanisms for said cams, a rotary part having a projection thereon for operating one of said actuating mechanisms, and a longitudinally movable bar, having a part for operating the other of said actuating mechanisms, substantially as described.

6. In a coin actuated machine, the combination with a coin receiving chute, a pair of pivoted cams having opposed surfaces, arranged below said chute in relation thereto to engage the edges of coins and support the same, a coin receptacle and a delivery chute below said cams, independent levers, for operating said cams to release the coin supported thereby, independent trip rods for actuating said levers and a tappet piece carried by each of said trip rods, and adapted to be operated by parts of the machine during the operation thereof, to deposit the coin in the said receptacle or in the delivery chute, substantially as described.

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Witnesses:

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