

No. 677,189.

Patented June 25, 1901.

C. DUHAMEL.

COUNTER CONTROLLED VENDING MACHINE.

(Application filed Nov. 24, 1900.)

(No Model.)

3 Sheets—Sheet 1.

FIG-5-

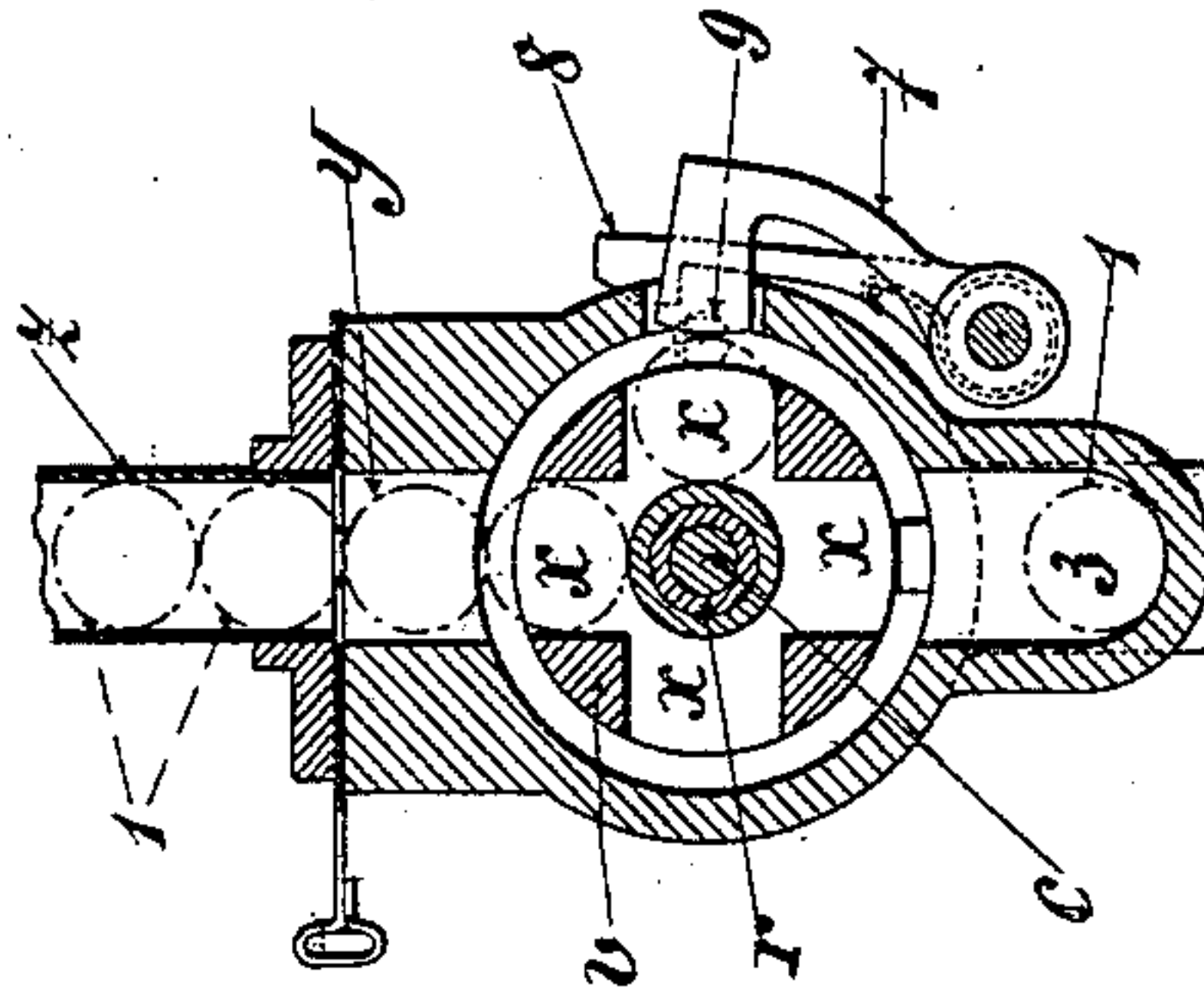
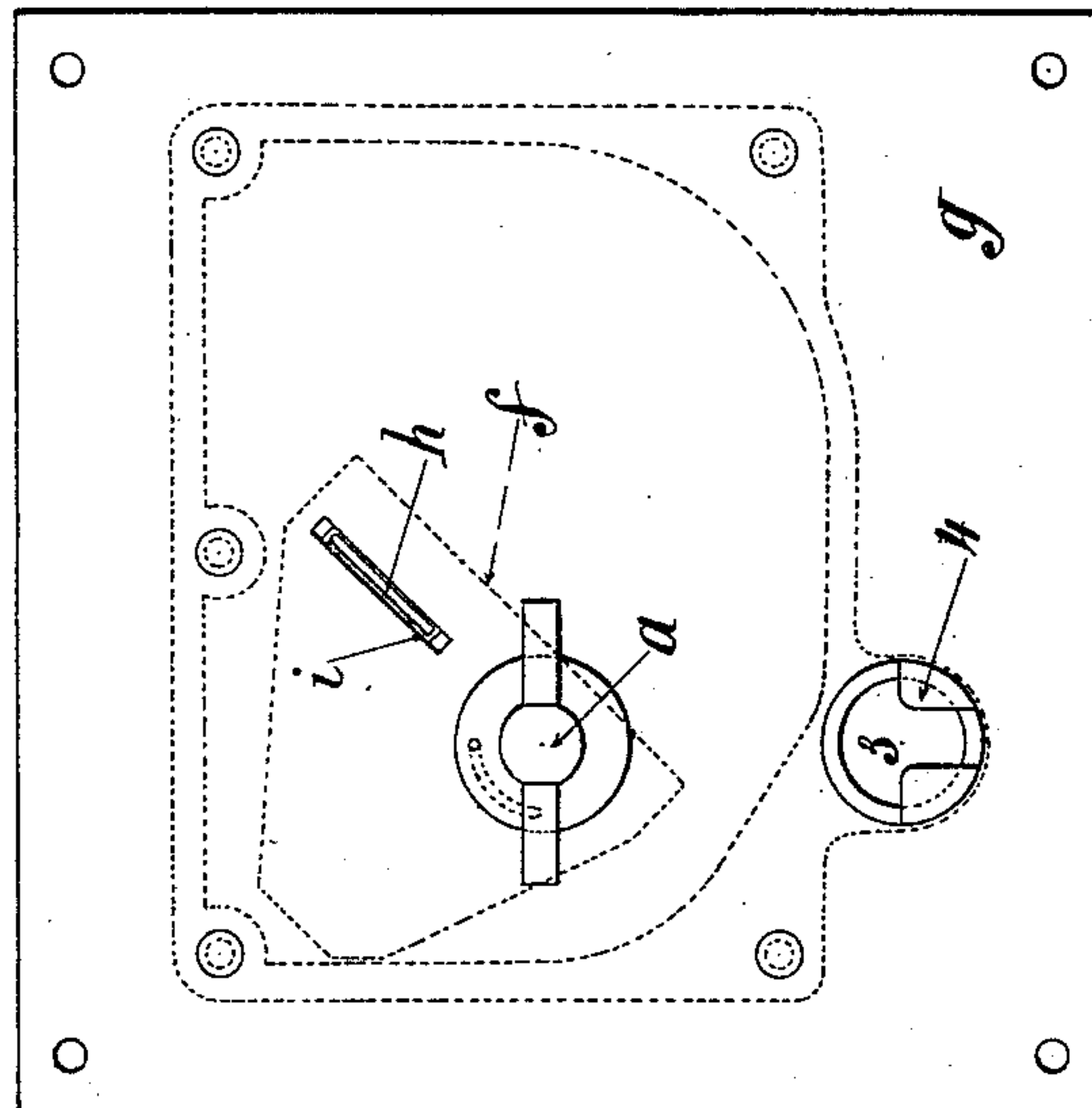


FIG-1-



Witnesses

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FIG- 3 -

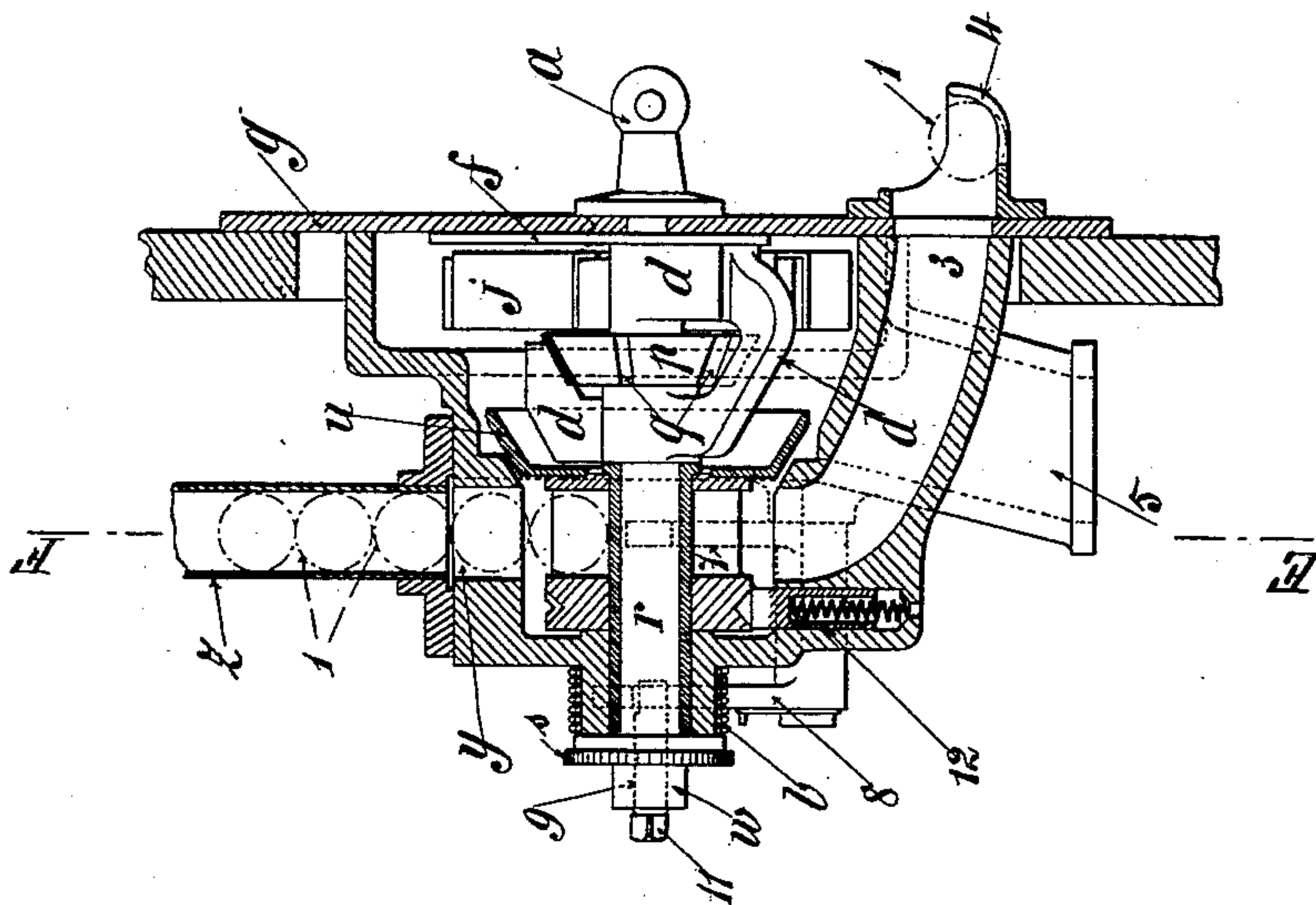
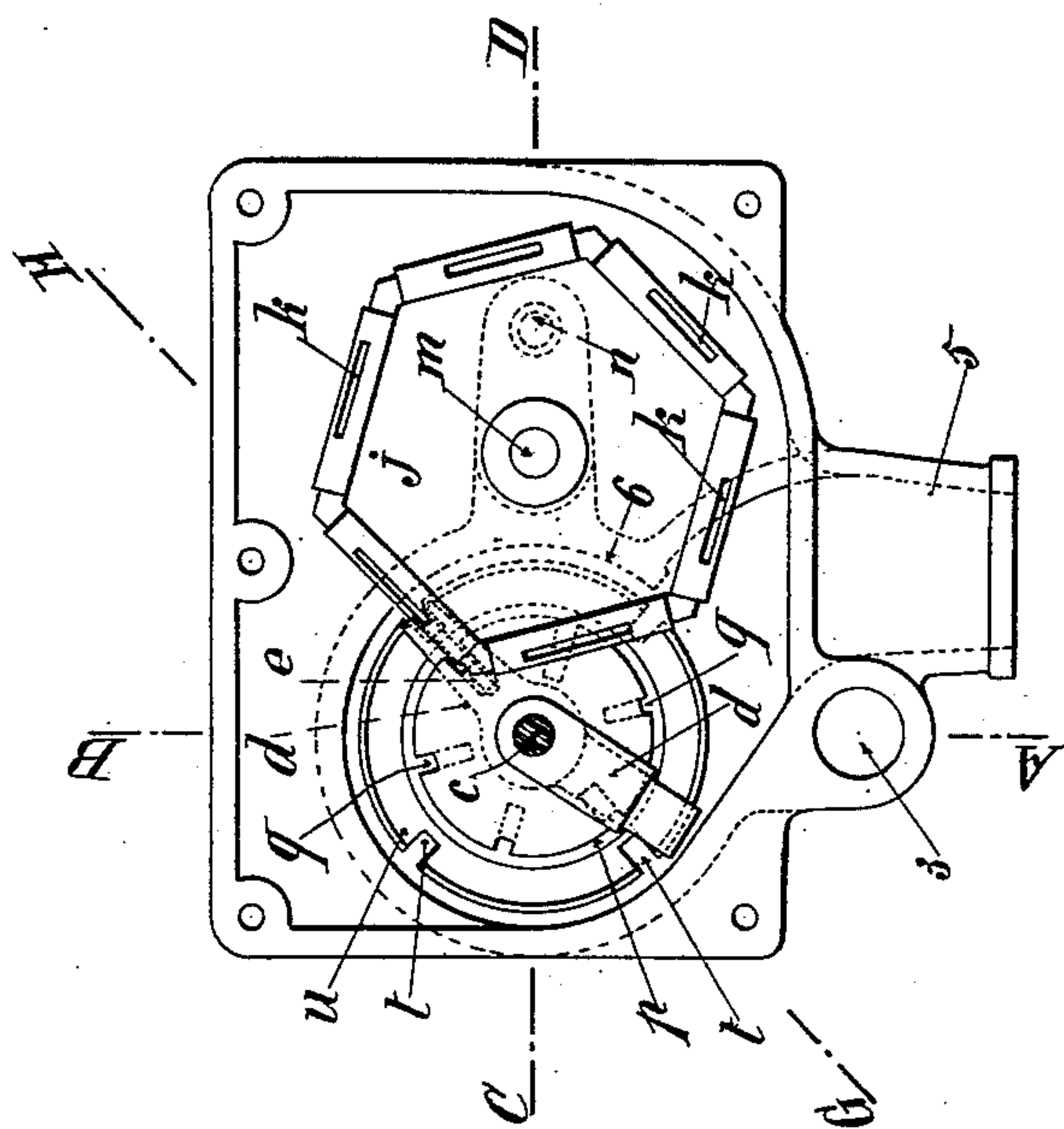


FIG- 2 -



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FIG-6-

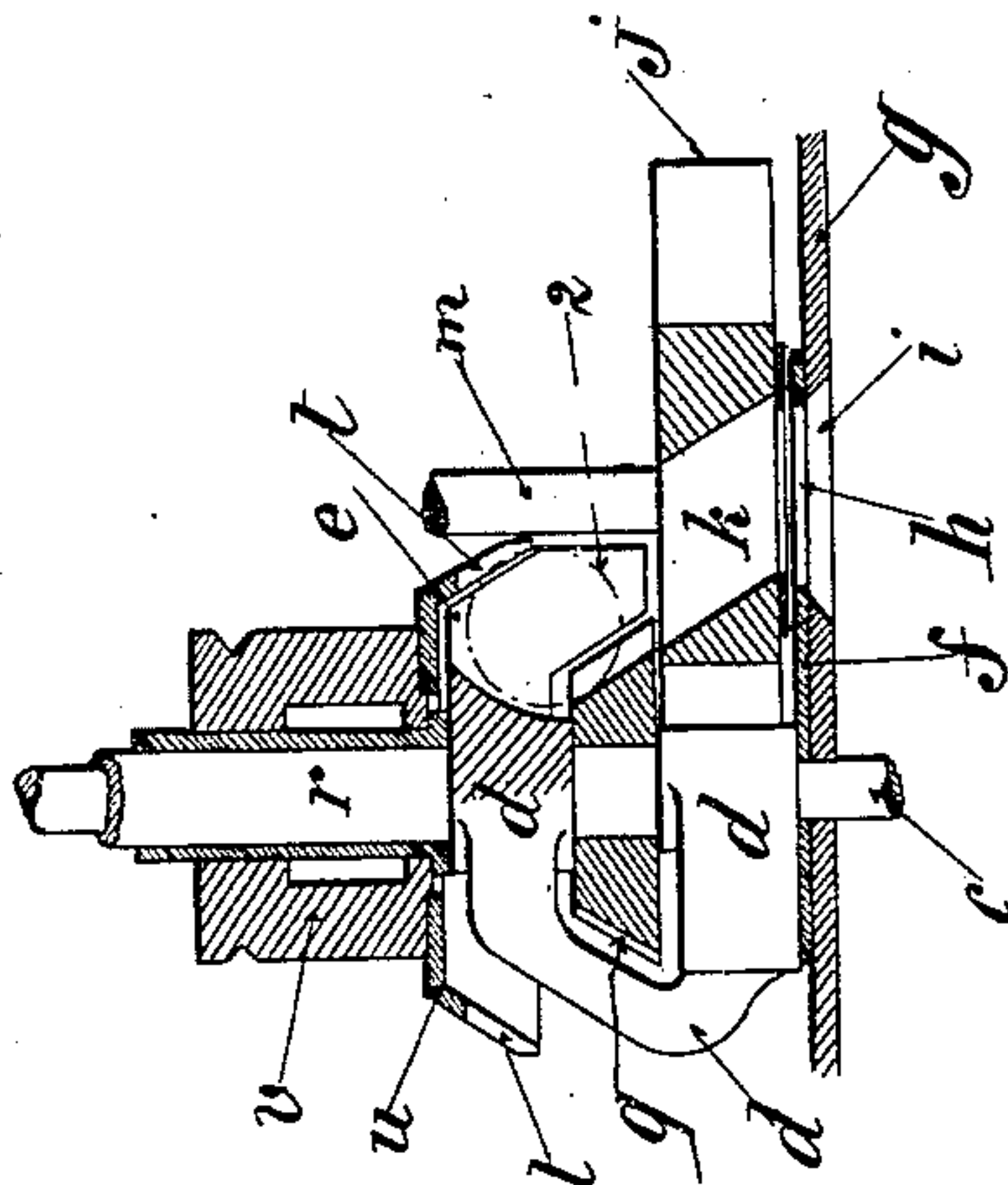
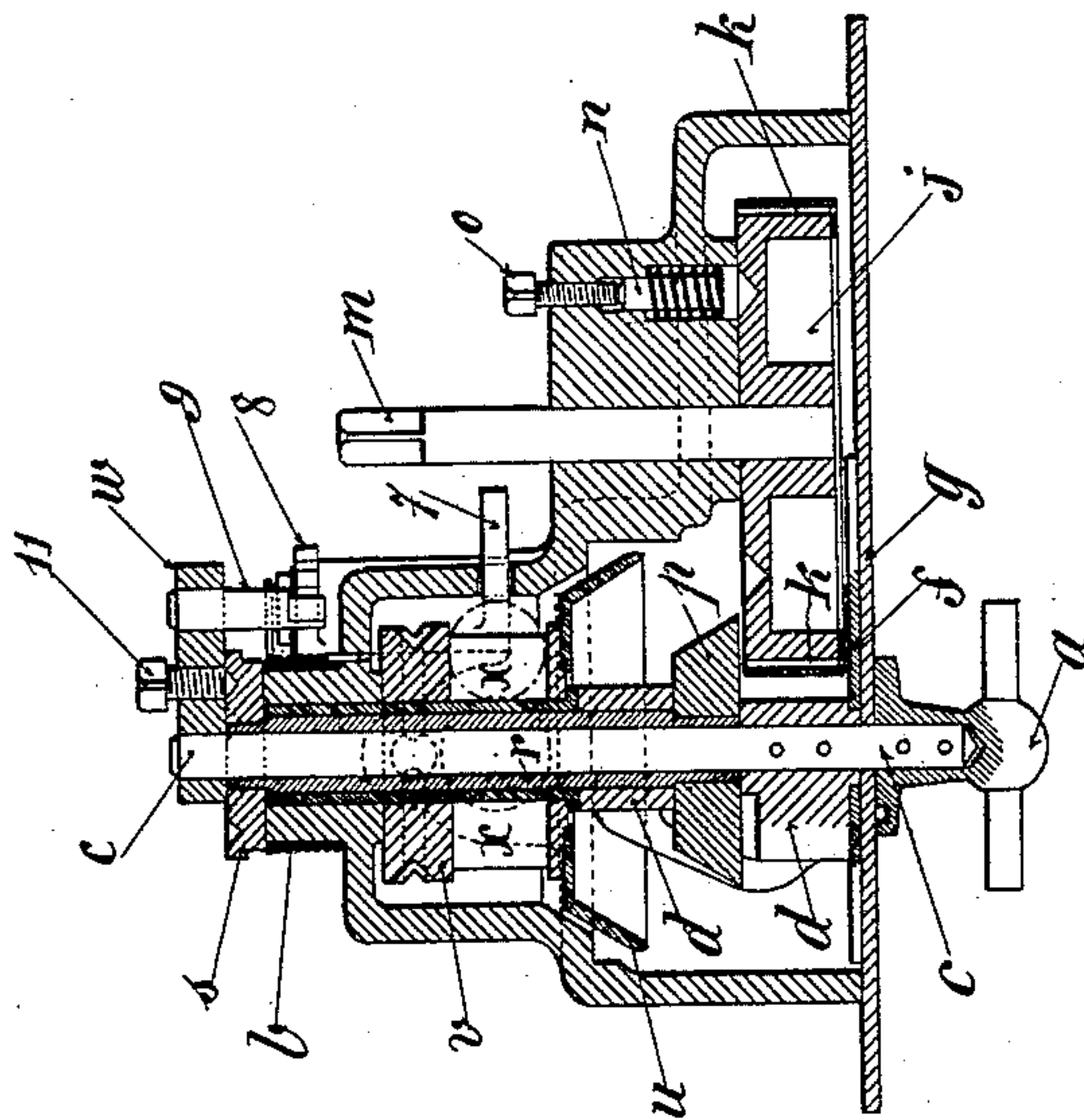


FIG-4-



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UNITED STATES PATENT OFFICE.

CHARLES DUHAMEL, OF PARIS, FRANCE.

COUNTER-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 677,189, dated June 25, 1901.

Application filed November 24, 1900. Serial No. 37,634. (No model.)

To all whom it may concern:

Be it known that I, CHARLES DUHAMEL, journalist, a citizen of the Republic of France, residing at 11 Rue Le Peletier, Paris, in the Republic of France, have invented certain new and useful Improvements in Counter-Controlled Vending-Machines, of which the following is a specification.

My invention relates to vending or delivering machines in which the discharge of an article is controlled by the insertion of a coin, metal disk, or the like, designated hereinafter by the generic term of "counter." The articles to be delivered are preferably of a uniform shape, such as balls, and these balls may be formed of the goods themselves—as, for instance, in the case of soap or candies, (sweetmeats)—or the balls may be hollow, forming boxes which contain the commodities sold, or the balls may bear suitable inscriptions entitling the purchaser to exchange them for certain goods, so that the balls in this case are the equivalent of checks such as are used by druggists in selling soda-water and for analogous uses.

To prevent defrauding—that is to say, the use of worthless metal disks in place of the counters supplied to the public for operating the apparatus and which represent a certain value or, in other words, have been sold for that purpose—the following arrangements have been made:

First. The counters must be inserted through a slit of a given length, so that only those of a corresponding or smaller diameter will pass through the same. The counters of smaller diameter have no action on the "distributor," properly so called, and simply pass through the apparatus without producing any effect.

Second. The type of counter which will serve to operate the apparatus will not always be the same, several different sizes of counters having been adopted and the apparatus having been so arranged as to allow of changing it readily from one type of counter to another.

By the frequent and unexpected change in the type of counters to be used the fraudulent use of any sort of improper metal disks may be prevented.

In the accompanying drawings, Figure 1 is

an outer elevation of the apparatus. Fig. 2 is an elevation, the front side of the casing being removed. Fig. 3 is a vertical section on the line A B of Fig. 2. Fig. 4 is a horizontal section on the line C D of Fig. 2. Fig. 5 is a vertical section on the line E F of Fig. 3. Fig. 6 is a diagonal section on the line G H of Fig. 2.

In Figs. 1, 3, and 4 is shown an operating-handle *a*, to which a quarter of a turn can be given, the said handle being brought back to its place by a spring *b*. It is fixedly attached to a spindle *c*, on which is also fixed a curved lever *d*, (see Figs. 3 and 6,) provided with a slit *e*. On the said lever *d* is fixed a plate *f*, located immediately behind the front side *g* of the casing and forming a movable screen. In the said plate is made an opening *h*, which when the handle *a* is in its position of rest comes opposite to or coincident with another opening *i*, made in the said front side *g*. Between the slitted part of the lever *d* and the screen *f* is located a polygonal disk or counter-gage *j*, having in each of its six faces an inclined mortise or slot *k*, the width of which is made to exactly correspond to one of the types of counters 2. As the said disk is fixedly attached to a spindle *m*, projecting outside the casing at the rear thereof, it can be turned to bring any one of the mortises *k* opposite the slit *i*. It can be fixed in a determined position by means of a spring-pin *n* and then locked by a screw *o*. On the disk six recesses are made to house the conical end of the pin *n*, so that the disk can be readily brought exactly into the required position. In each position of the same a slit *e* is located exactly opposite the mortise *k*. The counter 2 inserted falls by gravitation into the slit *e*, its edge pressing against the bottom of the said slit and against a cone *p*, provided with six grooves *q* of different depths. The cone *p* is fixed on a tube *r*, projecting outside the casing at the rear thereof and carrying a small plate *s*. This plate can occupy different positions on the spindle *c* of the operating-lever, according to the type of counter chosen. It is fixed on the said spindle by the pointed screw 11 of a lever *w*, fixedly attached to the spindle *c*. The counter, inserted as hereinbefore described, takes into a slit *t* in a conical piece

u , concentric to the spindle c . The said piece u is fixed to a barrel v , provided with recesses x , and serves to carry the same around through the medium of the counter. If the latter is too small, it does not carry the disk j around and the lever d turns by itself. At the end of its course the counter falls down without having produced any effect. The recess located at the upper part of the barrel v is placed below a hole y in the casing, into which opens a tube z , containing the articles, such as balls 1, to be distributed, so that the latter move down by gravitation into the said recess. The exact position of the barrel v is assured by means of a finger 12, pushed by a spring into the notches formed in the periphery of the barrel.

By turning the barrel v a quarter of a revolution the ball which was at the top comes on a level with the axis and that which was on a level with the axis presents itself at the mouth of a conduit 3, which guides it down into a basket 4, where it can be taken by the person. After the quarter-turn the counter falls of itself into a pipe 5, on which may be arranged a sealed bag to receive the counters. The counter is guided to the upper end of the pipe or chute 5 by a circular part 16. The handle is then allowed to return of itself to its initial position. As soon as the said handle has made the least movement from its initial position the mortise h disappears behind the front side g of the casing and a full part comes behind the slit i . If, therefore, the handle a does not come back to its place on account of its having been prevented from doing so by some one or its being out of order for any reason whatever, no counter can be inserted in the apparatus. This avoids the insertion of a counter in the casing to occupy some other position than that of the starting-point, which would lead to the useless loss of a good counter.

To prevent the insertion of counters when there are no balls in the barrel, the following device may be used: A lever 7, fixedly attached to the axis or spindle of a pawl 8, penetrates into the interior of the casing in front of the barrel and is adapted to take into that recess x which momentarily is located on a level with the axis of the barrel. The pawl 8 is adapted to engage a finger 9, carried by the arm or lever w , which, as before stated, is secured rigidly to the spindle c . As long as there is a ball in the chamber or recess x the arm or lever 7 remains in the outer position (shown in Fig. 4) and the pawl 8 is clear of the finger 9, so that the spindle can be rotated freely. When, however, the said recess x is empty, the lever 7, being spring-pressed, Fig. 5, will be projected into said recess, bringing the pawl 8 into the path of the finger 9, so the spindle becomes blocked and cannot return to its initial position, the slit i remains covered, and no further counter can be inserted. It then requires the intervention of an attendant to move the lever

7 out of the recess after having previously filled the tube-reservoir z . When the reservoir z has again been filled and the barrel v is turned forward, a ball pushes the lever 7 out and the finger 9 becomes free, so that the lever w can move back and the handle a also.

When it is desired to so change the apparatus that a different kind of counter will be required to operate it, (so as to render fraud more difficult,) an attendant will turn the spindle m to bring a different slot k into registry with the slit i and will also turn the disk s to bring the corresponding groove q into registry with the said slot k .

I claim—

1. An automatic distributor of balls, comprising a chambered distributor-barrel loosely mounted on a horizontal shaft, a handle and a slitted lever connected with the said shaft, a slitted disk connected with the barrel, a cone having grooves of different depths mounted on the said shaft and capable of being made to coöperate with the same in different positions by means of a plate fixed on a tubular extension of the said cone, of a lever fixed on the said shaft, and of a screw carried by the said lever and engaging in holes in the said plate, a disk having several openings, and movable behind a casing provided with a slit, said disk being capable of being turned or revolved to various positions, a device for locking the said disk, a tube or reservoir of balls the outlet of which is above the barrel, and an outlet-conduit for the balls the inlet of which is located below the said barrel.

2. A vending or distributing machine, comprising a chambered distributor mounted to turn, means for conveying articles to and from the distributor, and counter-controlled mechanism for turning the distributor, said mechanism comprising a rotary counter-support having a longitudinal or axial groove in its periphery to seat a counter, a counter-chute leading to said support, an operating-piece held to turn with the distributor and provided with a longitudinal or axial groove into which is adapted to project the counter carried on said support, and means for allowing the counter to escape after the operation of the distributor.

3. A vending or distributing machine, comprising a chambered distributor mounted to turn, means for conveying articles to and from the distributor, and counter-controlled mechanism for turning the distributor, said mechanism comprising a rotary counter-support, a chute for the insertion of counters, a normally stationary counter-gage interposed between said chute and the counter-support, said gage being provided with a plurality of counter-passages of different dimensions, and being adjustable to bring any one of said passages into registry with the chute, an operating-piece held to turn with the distributor and adapted to be engaged and carried along by the counter projecting from said support, and means for allowing the counter

to escape after the operation of the distributor.

4. A vending or distributing machine, comprising a chambered distributor mounted to turn, means for conveying articles to and from the distributor, and counter-controlled mechanism for turning the distributor, said mechanism comprising a rotary counter-support having in its periphery a series of grooves of different depths, an operating-handle normally held to turn with said support, but capable of turning relatively thereto for adjustment, a chute for the insertion of counters, a normally stationary counter-gage interposed between said chute and the counter-support, said gage being provided with a plurality of counter-passages of different dimensions, and being adjustable to bring any one of said passages into registry with the chute, an operating-piece held to turn with the distributor and having a series of grooves into which is adapted to project the counter carried on said support, and means for allowing the counter to escape after the operation of the distributor.

5. A vending or distributing machine, comprising a chambered distributor mounted to turn, means for conveying articles to and

from the distributor, and counter-controlled mechanism for turning the distributor, said mechanism being provided with a projection or finger, a spring-pressed pawl arranged to extend into the path of said finger, a lever held to move with said pawl and arranged to engage an article within the chambered distributor, to keep the pawl in an inactive position as long as the distributor is supplied with articles, and means for allowing the counter to escape after the operation of the distributor.

6. In a counter-operated mechanism, a chute for the insertion of counters, a normally stationary counter-gage having a plurality of counter-passages of different dimensions, said gage being adjustable to bring any one of said passages into registry with the counter-chute, and mechanism controlled by the insertion of the counter.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

CHARLES DUHAMEL.

Witnesses:

JEAN BARDET,

EUGÈNE WATTIER.