

(No Model.)

4 Sheets—Sheet 1.

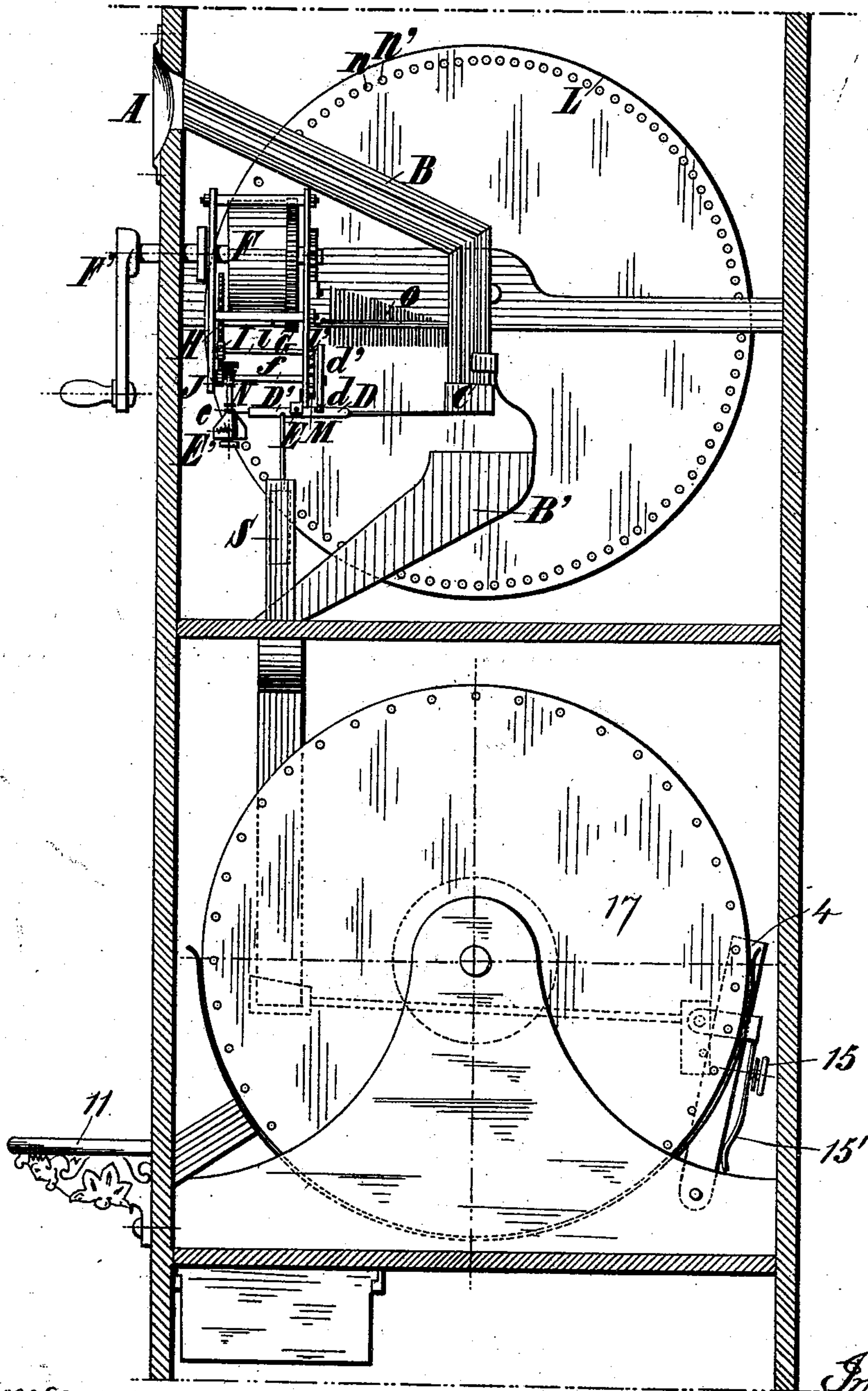
E. & C. STRANSKY.

COIN CONTROLLED APPARATUS FOR PLAYING TUNES, &c.

No. 507,046.

Patented Oct. 17, 1893.

FIG_1.



Witnesses:

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Per Lewis.

Inventors.

by
Edward Strausky
Charles Strausky
Moses Mauro,
their attorneys.

No Model.)

4 Sheets—Sheet 2.

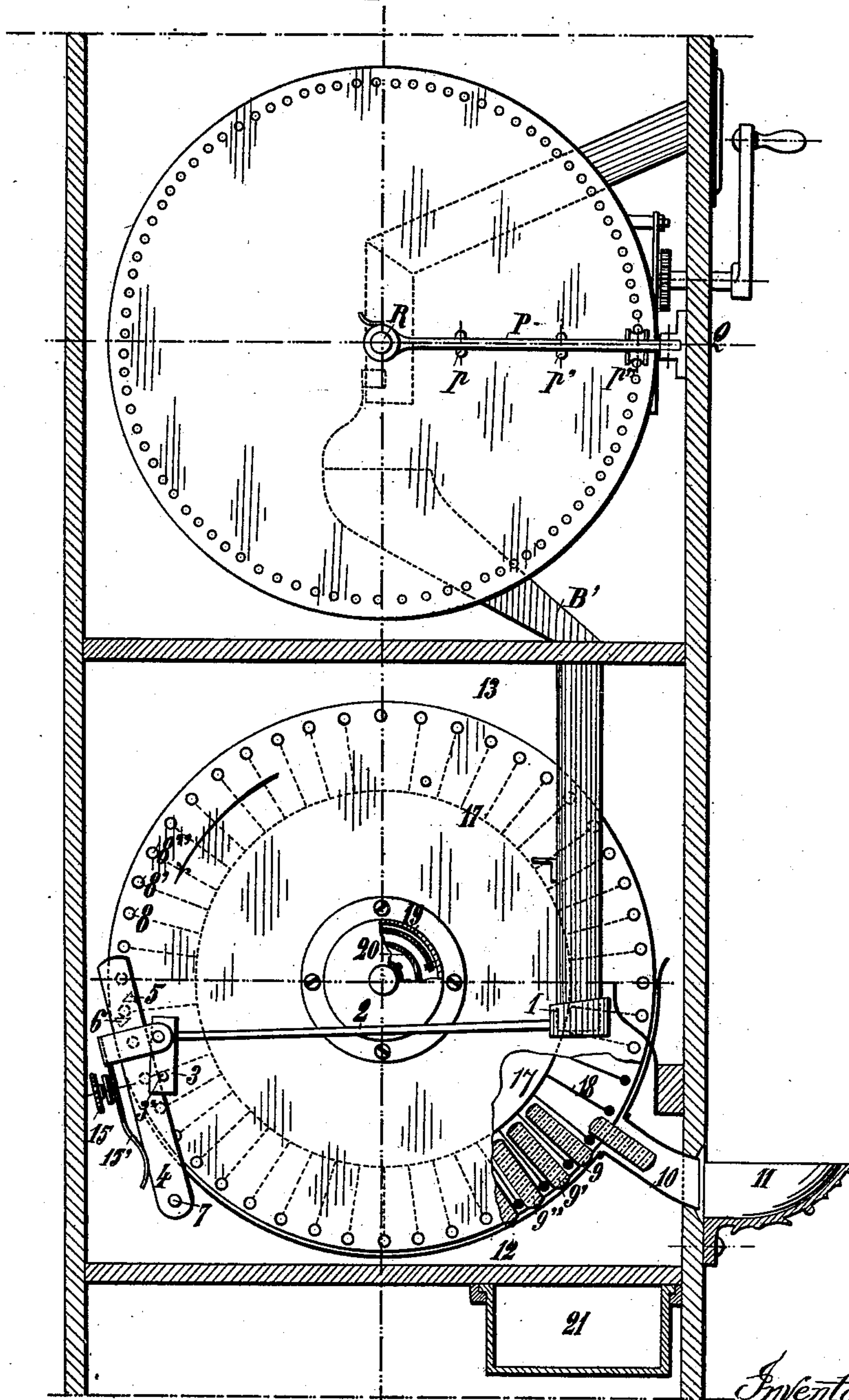
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FIG. 2



Witnesses:

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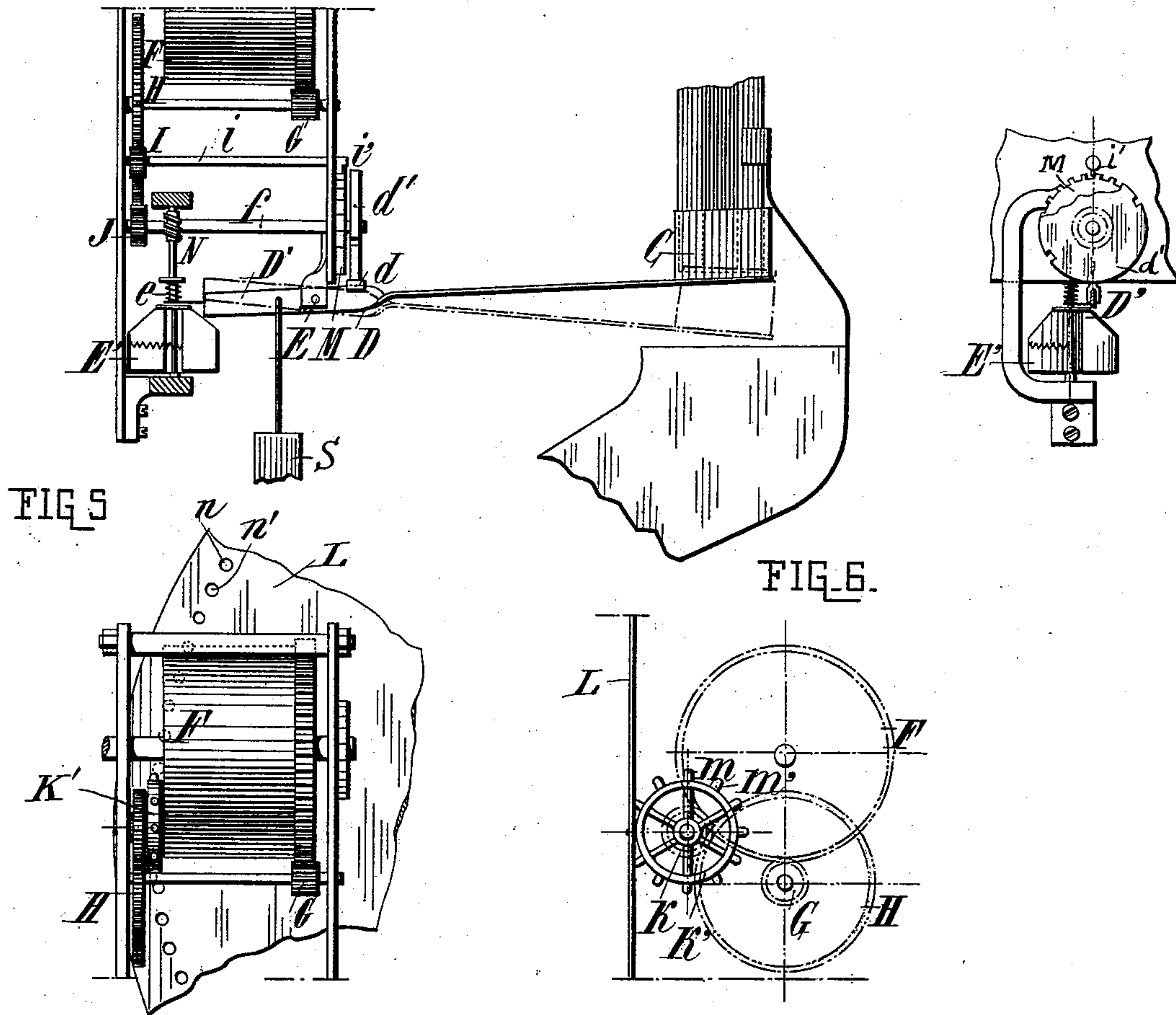
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FIG 3

FIG 4



Witnesses:
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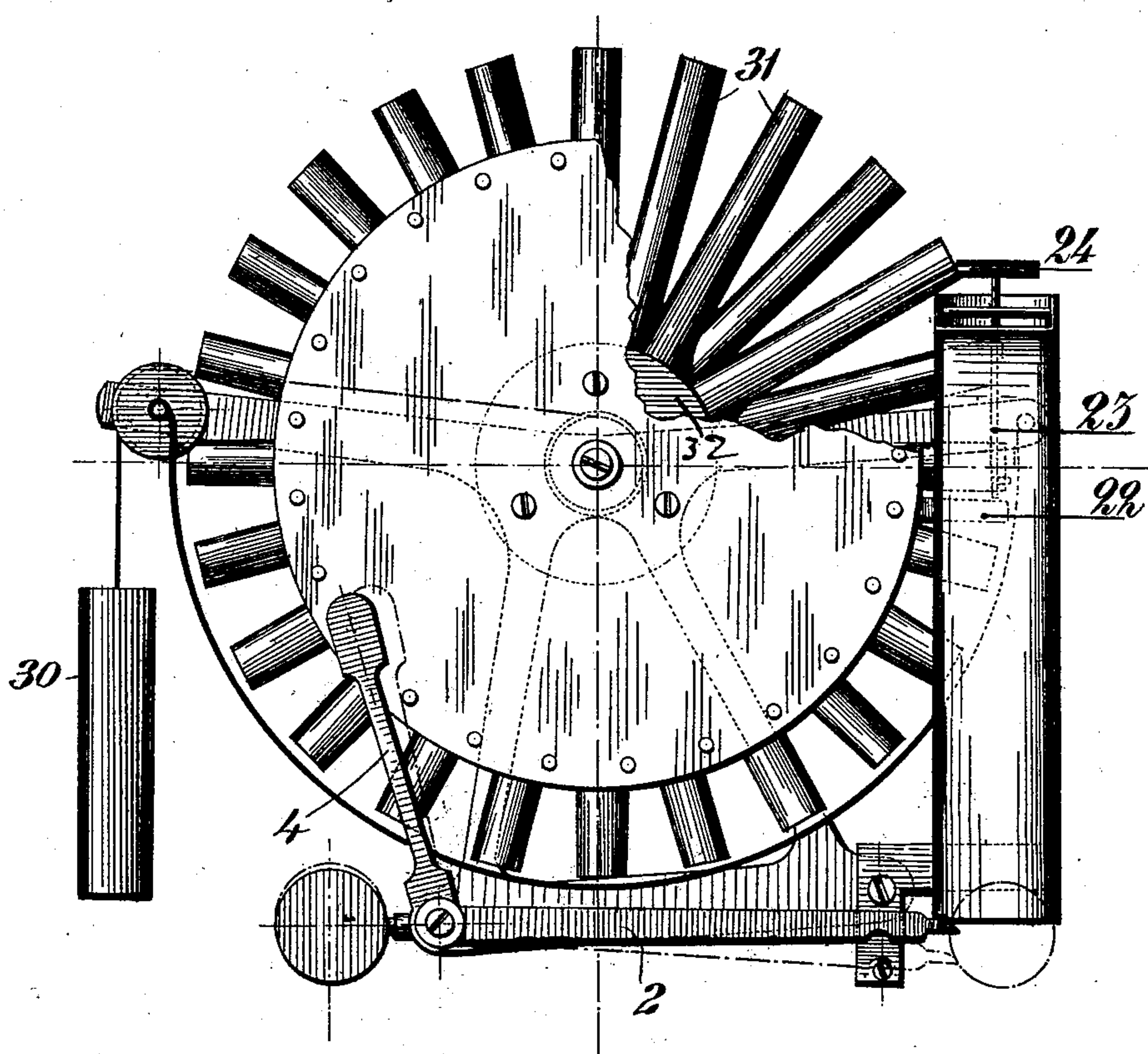
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(No Model.)

4 Sheets—Sheet 4.

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FIG. 7.



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UNITED STATES PATENT OFFICE.

EDOUARD STRANSKY AND CHARLES STRANSKY, OF PARIS, FRANCE.

COIN-CONTROLLED APPARATUS FOR PLAYING TUNES, &c.

SPECIFICATION forming part of Letters Patent No. 507,046, dated October 17, 1893.

Application filed November 28, 1892. Serial No. 453,442. (No model.) Patented in France September 10, 1892, No. 224,258; in Belgium September 22, 1892, No. 101,484; in England September 24, 1892, No. 17,113; and in Switzerland October 6, 1892, No. 6,284.

To all whom it may concern:

Be it known that we, EDOUARD STRANSKY and CHARLES STRANSKY, residents of Paris, in the Republic of France, have invented certain new and useful Improvements in Coin-Controlled Apparatus for Playing Tunes and Delivering Goods, which is fully set forth in the following specification, and for which Letters Patent have been received as follows:
10 in France, September 10, 1892, No. 224,258; in Switzerland, October 6, 1892, No. 6,284; in Belgium, September 22, 1892, No. 101,484, and in England, September 24, 1892, No. 17,113.

Our invention relates to apparatus for receiving coin and for delivering goods and playing tunes in exchange therefor.

With the improved apparatus the coin introduced into the slot slides along an inclined chute and drops into a pocket provided at the extremity of a lever which oscillates upon a fulcrum. The weight of the coin causes the lever to be lowered and the coin then leaves the pocket and falls into a second chute which conducts it to the distributing device. The action of the coin upon the aforesaid lever has for its object to disengage a clock work which operates the mechanism for playing a tune. When the lever is horizontal, that is to say when it is at rest, the short arm of said lever butts against the extremity of a spring and prevents the turning of vanes and the operation of the clockwork; moreover, in this horizontal position of the said lever, a cam or lug on said lever enters one of the notches formed upon a disk mounted upon an axis. Therefore, as soon as the lever oscillates under the action of a coin two movements are produced, that is to say, the aforesaid lug leaves the notch in the disk in which it was, and the short arm of the said lever abandons the extremity of the spring, and if the clockwork is wound up it will operate immediately. The axis above referred to turns at the same time as the mechanism in such a manner that when the coin has left the pocket to drop into the second chute, and when the lever rises again, the cam or lug, not encountering the notch in which it was originally, rubs upon the periphery of the disk and keeps the lever at a sufficient inclination for the arm of the lever not to act upon the spring. The

clockwork can therefore operate until the lug, rubbing upon the periphery of the disk, passes into a fresh notch. As soon as the lug is in the notch the said lever rises, its short arm is lowered, and coming in front of the spring stops the clockwork. We cause the extremity to act upon a spring and not upon the vanes directly, in order to obviate as much as possible the shocks which would be produced by the abrupt stoppage of the apparatus. The mechanism for playing tunes, which as hereinafter set forth is actuated by the clockwork, will therefore operate, at each introduction of the coin into the apparatus, so long as one of the notches formed in the disk does not come in front of the lug. The spring of the clock-work is inclosed in a drum and can be wound up by means of a crank which may be removed at will. As the drum turns under the action of the spring it turns a train of gears, transmitting motion to the music disk, to the escapement mechanism, and to the spindle carrying the vanes. The music-disk is furnished with projections arranged in such manner that, owing to the rotation of the disk, they will strike the teeth of a fixed comb producing a series of different notes. The projections on each disk are arranged so as to produce by their encounter with the teeth of the comb different tunes. This is in fact what happens in a certain number of musical boxes, such as those known by the name of "Polyphone" and "Symphonion." For changing the disk it is sufficient to turn a holding lever so as to put it perpendicular to the disk, when the latter can be withdrawn and replaced by another. A counterweight attached to the above-mentioned lever on the side opposite to the pocket relatively to the point of articulation, enables the apparatus to be regulated so that it will operate by the weight of any desired coin. As it leaves the pocket the coin falls into the second chute and thence it passes into another pocket which, oscillating under the action of the weight of the coin, operates the distributing or delivering device. This distributor or device for delivering the goods comprises two parallel disks connected by transverse partitions. The disk placed in front carries a

number of very short pins placed at equal distances from each other upon the same circumference. At the center of the two disks is a chamber in the interior of which we arrange a spring which tends to cause the distributor to turn. As the coin falls into the pocket it effects the oscillation of a lever and a pin secured to a bent part of the lever exerts a pressure upon a bar which can oscillate upon an axis. This bar has two lugs or stops one of which when the apparatus is at rest, prevents the distributor from turning—one of the pins bearing upon it. As above stated when the said lever oscillates under the action of the weight of a coin, the above mentioned bar pushed by the lever passes to the left as it oscillates upon the axis. In this movement one of the inclined lugs or stops abandons the pins of the distributor which it supported, and under the action of a spring the distributor turns until the pin abandoned by the inclined lug bears upon the other lug. The apparatus is so regulated that the contact between the pin and the second stop or lug takes place at the moment when the above mentioned bar is also at the extreme point of its movement to the left. By reason of the inclination given to the lever hereinbefore referred to, by the weight of the coin, the latter slides and drops into a drawer. The lever then rises and the bar which is no longer pressed by the pin returns to its normal position while the second inclined lug permits the escape of the pin which pressed upon it. The distributor turns under the action of the spring until the following pin bears upon the first or upper lug or stop. Accordingly, in the complete oscillation of the bar upon its axis, the distributor is displaced twice in the same direction, and the total of these two displacements is equal to the interval which separates two consecutive partitions of the distributor, so that an article contained in a chamber nearest to the chute leaves its place when the above mentioned lever has risen to its original position and falls into a cup from which it can be removed by hand. When the distributor is empty it is filled at the upper part by giving it a rotary motion in the opposite direction to that previously imparted to the same, so that all the chambers pass successively to the upper part. This rotary movement of the distributor in the opposite direction has moreover for its object to put a spring under tension, which spring expands when the distributor operates. A screw which acts upon a flat spring enables more or less pressure to be exerted upon the aforesaid bar so that the distributor may be caused to operate by the aid of different coins according to the countries where it is used.

It is evident that instead of having a central spring actuating the distributor I may use a counter weight. In like manner for less carefully constructed apparatus the said lever and bar may be firmly connected in-

stead of causing this bar to turn by acting upon a pin fixed upon the lever.

The arrangement of the partitions is optional, and the chambers of the distributor may be replaced by tubes mounted upon a sheath of wood.

When the distributor is empty a vane butts against a rod and compels a plate to close the orifice through which the coins are introduced.

If a coin is introduced in the apparatus before the clockwork disengaged by the preceding coin is stopped, the apparatus will distribute notwithstanding, for the coin dropping into the pocket does not act upon the mechanism for playing tunes, but arriving in the second pocket it acts upon the automatic distributor which delivers an article.

We may give any suitable exterior form to our improved apparatus, whether it is to be placed in a public thoroughfare, or whether it is designed to be put up at hotels, stations or the like. We may also arrange the apparatus so that it can be actuated by the aid of any coins, for the coin acts by its weight and it suffices to regulate the above mentioned counterweight and screw for enabling the two levers to be operated by means of any coin.

Having thus outlined in a general way the nature of the invention, we will now explain the same in detail, referring to the accompanying drawings, in which—

Figure 1, is a rear elevation of the apparatus, partly in section. Fig. 2 is a front elevation partly in section; Fig. 3 a front elevation on an enlarged scale, of the mechanism actuating the musical instrument. Fig. 4, is a side view of the same mechanism, and Fig. 5 a front view showing the mode of operation of the music-disk. Fig. 6 is a side view of the parts shown in Fig. 5, and Fig. 7, shows a distributor, based upon the same principle but of simpler construction.

The coin is introduced into a slot A. It slides along chute B, and falls in pocket C at the end of lever D, which oscillates on fulcrum E. The weight of the coin depresses the lever which discharges the coin from pocket C into the chute B', and the latter conducts it to the distributing apparatus, which will be described hereinafter. The action of the coin on lever D releases a clockwork mechanism, which actuates the musical instrument. When the lever is at rest the end D' bears against spring e (Fig. 3) and prevents the revolution of vanes E', and consequently holds the clock-work stationary. Moreover, in this horizontal position of the lever a lug d carried thereby, enters one of the notches of disk d' which is mounted on the spindle f. It will be seen that as soon as the lever tilts under the action of a coin, two movements will result: first, the lug d leaves the notch in disk d' and second the short arm D' of the lever releases the extremity of the spring e, and the clock-work will start. The spindle f revolves at the same time, so that

when the coin leaves pocket C and the lever rises, the lug *d* finding no notch, will rub against the edge of the disk, keeping the lever in an inclined position, so that the short arm D' is kept out of the path of spring *e*. The clock-work therefore continues to operate until the lug *d* encounters another notch on disk *d'*. When this occurs the short arm of the lever comes again into the path of spring *e* and arrests the clock-work. It is important that the end D' of the lever should act upon a spring, instead of upon the vanes, for the reason already explained.

The main-spring of the clock-work is inclosed in a barrel F, and may be wound by means of a crank F'. Barrel F actuates pinion G, and the train of gears H, I, J. Wheel H also actuates pinion K (Fig. 6) upon the axis of which is mounted the spoked-wheel K', which transmits movement to the music disk L. Pinion I is mounted on shaft *i*, on the end of which is a pallet *i'*, which regulates the speed by acting on the teeth of wheel M, in a manner well understood. Pinion J, (also revolved by wheel H) is mounted on shaft *f*, which actuates a worm N on the upright shaft carrying vanes E. Wheel K' has pins or spokes *m, m'*, placed at regular intervals, and which enter holes *n, n'* in music disk L. The latter is provided with small teeth in the usual way to engage the teeth of a comb O, and produce a series of different notes, and thereby play tunes, as common in music boxes. To change the disk it is only necessary to swing lever P around point Q, so as to bring it to a position perpendicular to the disk. Disk L can then be slipped off its shaft R and replaced by another. Lever P has friction roller *p, p', p''*, which bear against the face of the disk, to insure steadiness in rotation of the latter.

A counterweight S is attached to lever D to balance the weight of a coin, and supplies means for regulating the apparatus, so that it may be operated by any desired coin. In leaving pocket C the coin drops into the chute B' which conducts it to pocket 1, on lever 2, which is thereby tilted and operates the distributor. The latter is composed of two parallel disks 17 united by transverse radial partitions 18. The front disk, seen in Fig. 2 carries a series of small tenons 8, 8', 8'', disposed at equal distances apart. Between the two disks is a chamber 19, containing a volute spring 20, which has a tendency to turn the distributor in the direction of the arrow. When lever 2 tilts, the pin 3' on the short arm 3 thereof, acts on bar 4, which is pivoted at 7. This bar 4 carries two inclined stops or cams 5 and 6, one of which (6) when the apparatus is at rest holds the distributor stationary—by contact with one of the tenons 8, 8'. When bar 4 is moved to the left, it removes the inclined cam or stop 6 from the tenon 8, and the distributor is turned by spring 20 in the direction of the arrow until the next tenon encounters stop 5.

The apparatus is so proportioned that the contact between the tenon and the inclined stop 5 occurs when the bar 4 reaches the end of its motion to the left.

When lever 2 tilts under the weight of a coin the latter drops into a drawer or receptacle 21. Lever 2 then returns, and cam or stop 5 moves from the path of the tenon 8, and the distributor again moves a step until arrested by stop 6. Thus in the complete oscillation of the bar 4, the distributor moves twice in the same direction, the total motion being equal to the distance between two consecutive partitions 18, so that any article in chamber 9 nearest to chute 10 will be delivered into the cup 11.

When the distributor is empty, it may be filled at the upper portion 13, by turning it in the reverse direction, simultaneously winding up spring 20.

A regulating screw 15 acts upon a flat spring 15' and gives more or less pressure to bar 4, so that the distributor can be made to operate with coins of different weights.

Obviously, the spring 20 may be replaced by a counterweight 30, as shown in Fig. 7. Lever 2 and bar 4 may also be made in one piece as also shown in this figure. The arrangement of partitions is not an essential feature of the invention, and the chambers shown in Fig. 2, may be replaced by tubes 31, mounted on a wooden hub 32. When the distributor is empty the wing 22 encounters rod 23 and forces the plate 24 to close the orifice by which the coin is introduced.

If another coin be introduced into the apparatus before the clockwork is arrested, the apparatus will nevertheless distribute, because the coin falling in pocket C will not act on the musical device, but will, on arriving in pocket 1, act on the distributor, and cause an article to be delivered.

Other modifications may be made in details of construction and arrangement.

Having now fully described our invention, what we claim is—

The combination in an apparatus of the character described, of the musical device and its actuating clock-work mechanism, the coin-actuated controlling lever having one end normally in the path of vanes rotated by said clock-work, a spring interposed between said vanes and lever, a stop or lug, on said lever and a notched disk also rotated by said clock-work, permitting the return of the lever to its normal position in the path of said vanes after a predetermined interval, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

EDOUARD STRANSKY.
CHARLES STRANSKY.

Witnesses:

VICTOR M. BARTANCE,
JULES ROUSSET.