(No Model.) 3 Sheets—Sheet 1.

H. T. EMEIS.

COIN CONTROLLED MACHINE.

No. 597,965. Patented Jan. 25, 1898.

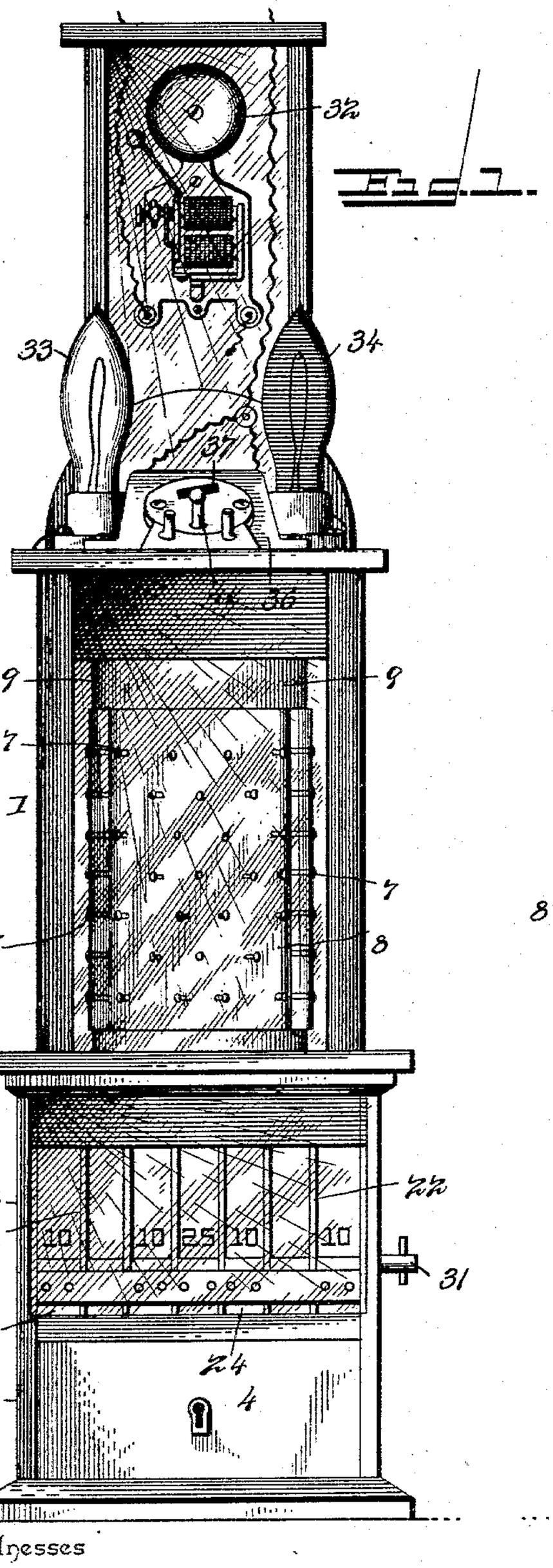

Fig. 1.

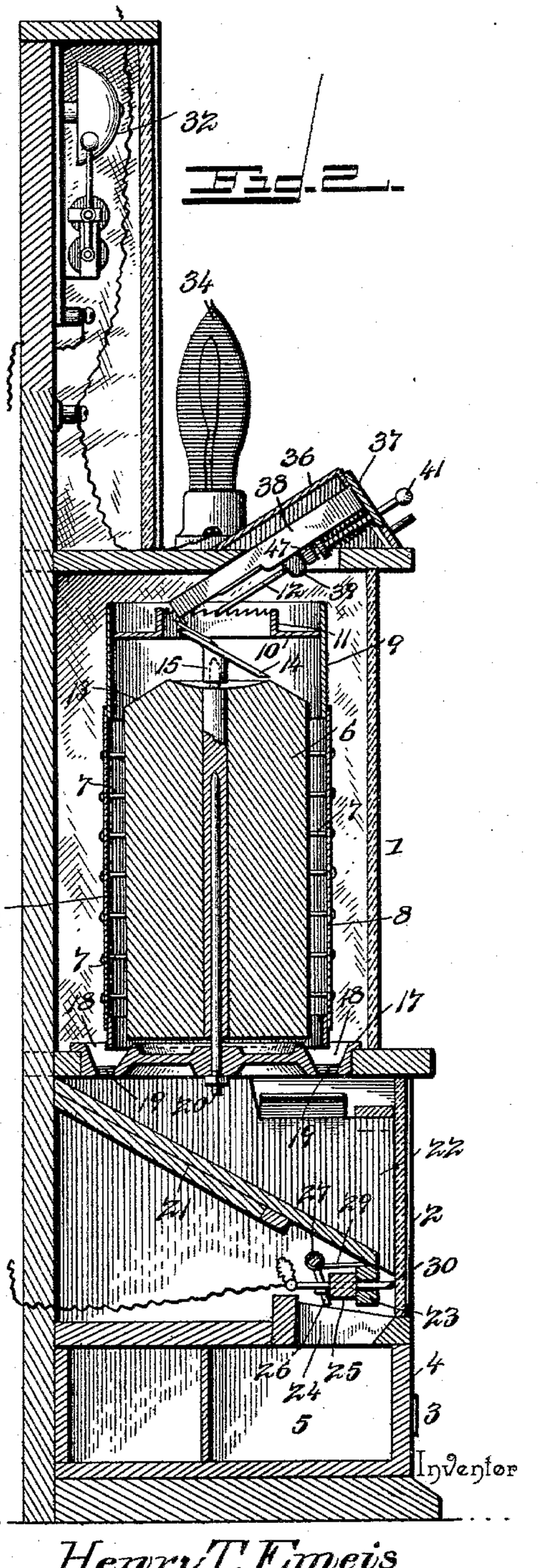

Fig. 2.

Inventor

Witnesses
E. K. Stewart.
V. B. Hillyard.

Henry T. Emeis
By Wm. S. & A. Attorneys,
C. A. Snow & Co.

(No Model.) 3 Sheets—Sheet 2.

H. T. EMEIS.

COIN CONTROLLED MACHINE.

No. 597,965. Patented Jan. 25, 1898.

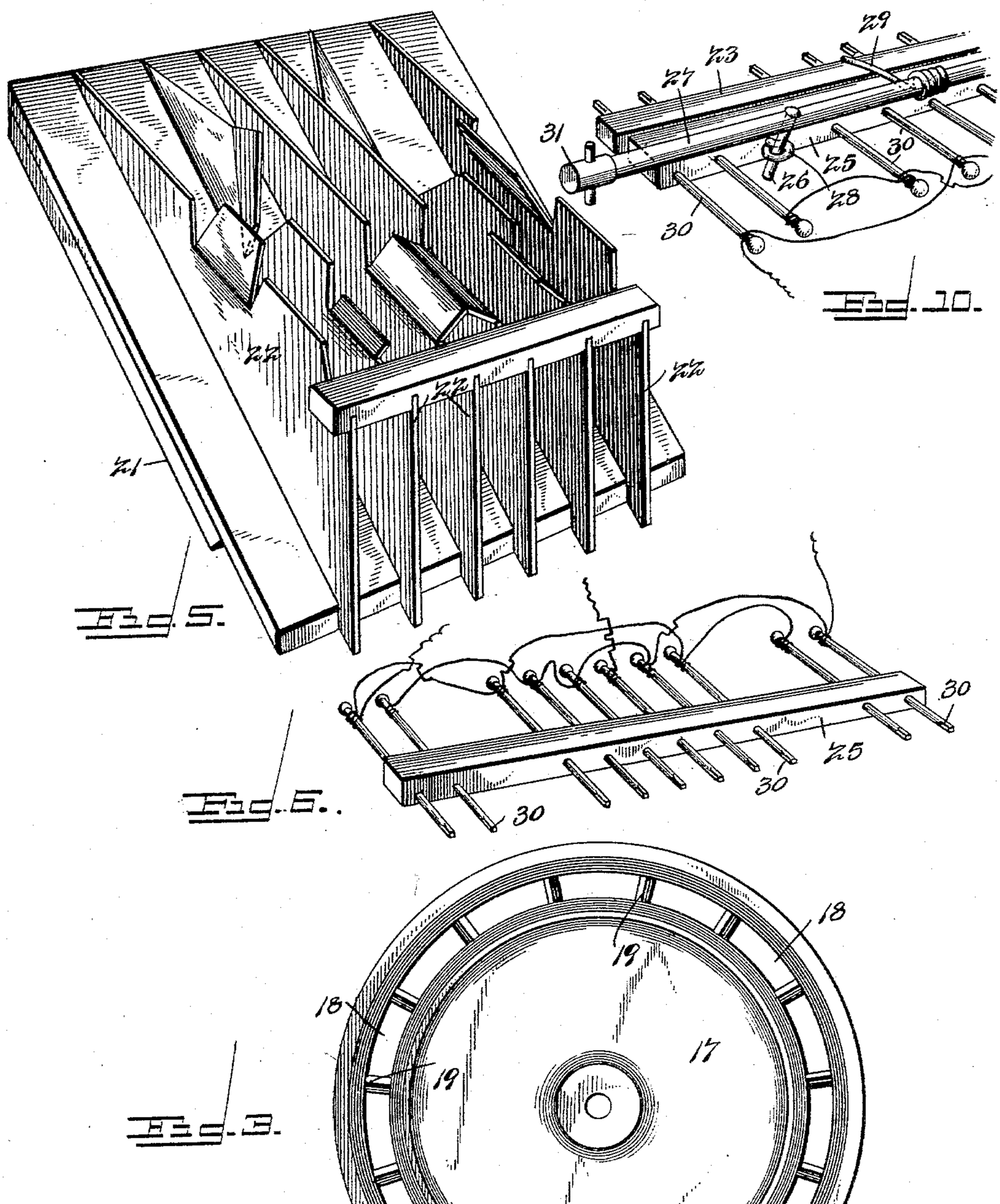

Fig. 10.

Fig. 5.

Fig. 6.

Fig. 8.

Witnesses
E. F. Stewart.
U. B. Hillyard.

Inventor
By his Attorneys,
Henry T. Emeis
Church & Co.

(No Model.) 3 Sheets—Sheet 3.

H. T. EMEIS.

COIN CONTROLLED MACHINE.

No. 597,965. Patented Jan. 25, 1898.

Fig. 5.

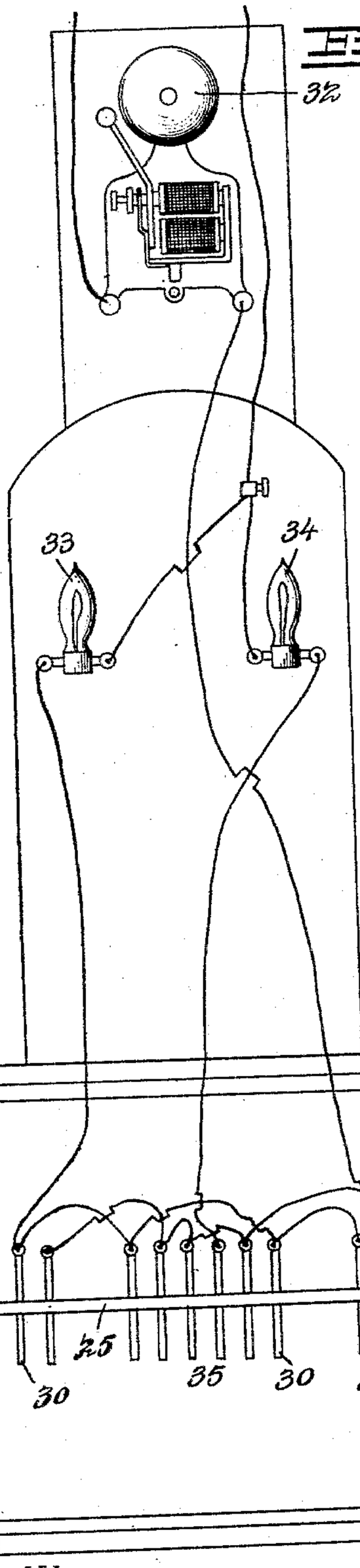

Fig. 8.

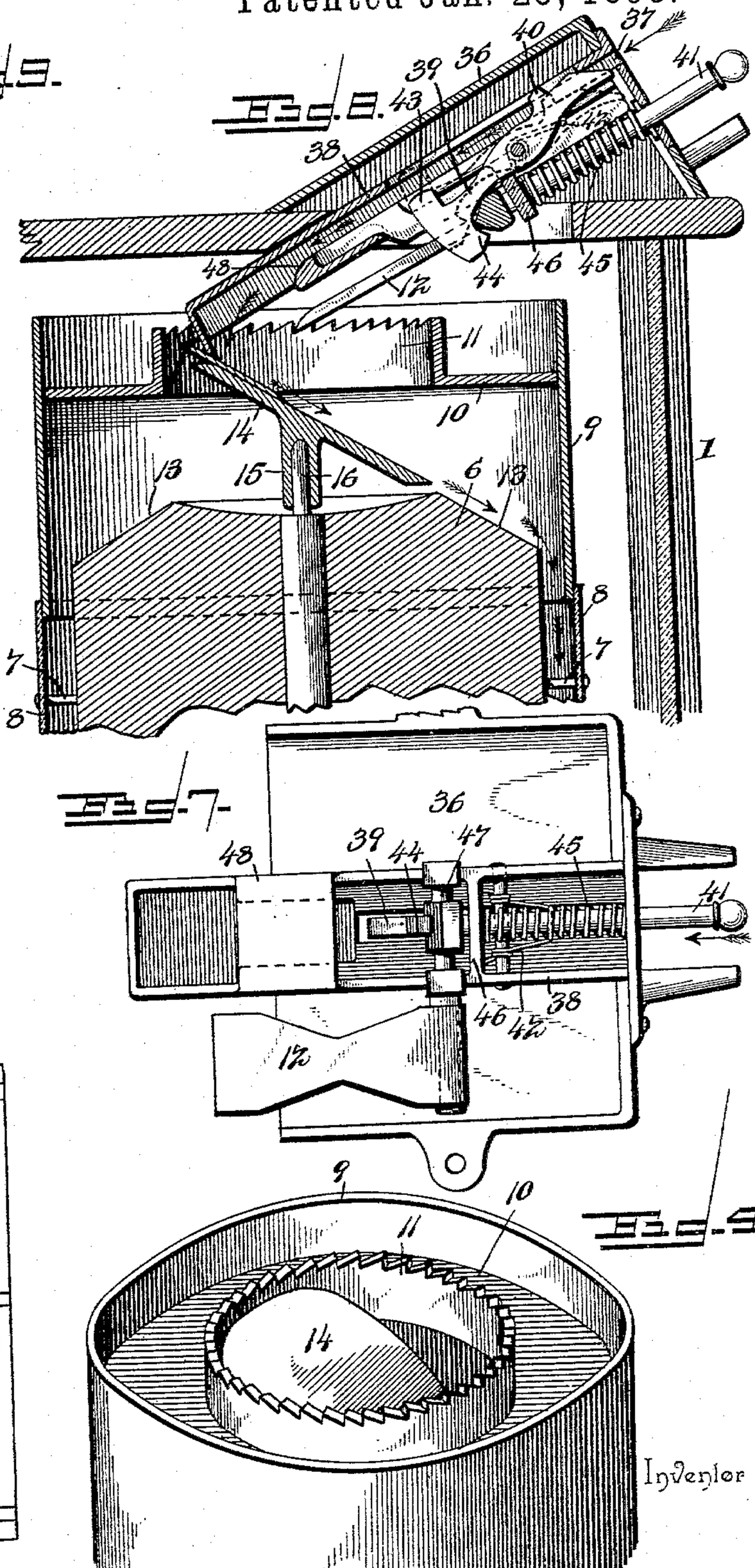

Fig. 7.

Fig. 4.

Witnesses
E. L. Stewart.
V. B. Hillyard.

Inventor
By his Attorneys,
Henry T. Emeis
Cachow & Co.

UNITED STATES PATENT OFFICE.

HENRY T. EMEIS, OF SALT LAKE CITY, UTAH.

COIN-CONTROLLED MACHINE.

SPECIFICATION forming part of Letters Patent No. 597,965, dated January 25, 1898.

Application filed September 9, 1897. Serial No. 651,109. (No model.)

To all whom it may concern:

Be it known that I, HENRY T. EMEIS, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented a new and useful Coin-Controlled or Slot Machine, of which the following is a specification.

This invention provides a machine for advertising and trade purposes and which affords amusement and a degree of excitement for persons taking an interest therein, and is of the type operated by means of a coin introduced into a chute and which in its passage to the coin-receptacle closes an electric circuit, whereby an electric lamp is lighted and a bell sounded, both serving to intensify the interest and materially add to the amusement afforded. Intermediate of the coin-receptacle and coin-chute is located a cylinder studded with pins, which deflect the coin from a straight course, whereby it is practically impossible for the depositor to control the direction of the coin and cause it to enter any particular compartment of the receptacle, whereby a degree of uncertainty is involved as to the final location of the coin with respect to the compartments of the coin-receptacle. Between the cylinder and the coin-receptacle is arranged an annulus having a series of openings formed in a circle and a series of inclined raceways, through any one of which the coin travels to its final destination, some of the raceways having obstructing-points provided in pairs, forming electrical terminals which are spanned and electrically connected by the coin, thereby completing an electric circuit, whereby the bell is sounded and a lamp lighted.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a front view of a machine constructed in accordance with this invention and embodying the essential principles thereof. Fig. 2 is a vertical transverse section thereof. Fig. 3 is a top plan view of the base upon which the cylinder is mounted and which has a circular series of openings. Fig. 4 is a detail view of the upper portion of the cylinder, showing the coin-deflector revolubly mounted thereon. Fig. 5 is a detail view of the base provided with a series of inclined raceways. Fig. 6 is a detail view in perspective of the series of points forming the electric terminals which normally obstruct the raceways. Fig. 7 is a view of the coin-chute and the mechanism connected therewith as seen from the inner side. Fig. 8 is a longitudinal section thereof, the dotted lines showing the position of the detent when the plunger for actuating the cylinder is released. Fig. 9 is a diagrammatical view showing the direction of circuits. Fig. 10 is a detail view in perspective of the circuit-closing devices and the means for withdrawing the contact-points out of the path of the coin.

Corresponding and like parts are referred to in the following description and indicated in the several views of the accompanying drawings by the same reference-characters.

The operating parts of the machine are inclosed in a suitable cabinet comprising an upper compartment 1, an intermediate compartment 2, and a lower compartment 3, the latter containing a drawer 4 to receive the coins deposited in the machine and subdivided into a series of pockets or receptacles 5. This drawer is locked, and access can be had thereto only by duly authorized persons provided with a suitable key. The upper compartment 1 has a glass front and sides and contains a cylinder 6, mounted so as to rotate about a vertical axis and studded with pins 7, set staggering, whereby a coin in its passage from the upper to the lower end of the cylinder is diverted from a straight line. The cylinder may be hollow or solid and constructed of any suitable material and is surrounded by a jacket 8, of transparent substance, such as gelatin, celluloid, or any substance which will permit the observation of the coin in its descent through the space formed between the cylinder and jacket.

The outer ends of the pins 7 pass through the jacket and serve to retain the latter in place and maintain the predetermined distance between the cylinder and jacket, which distance is sufficient to admit of the free passage of a coin of denominate value without binding. A broad metal band 9 is secured to the upper portion of the jacket 8 and projects above the cylinder 6 and supports an annulus 10, having a vertical rim 11 at its inner edge, said rim being toothed to coöperate with a dog 12, whereby the cylinder is given an initial impetus to rotate it after a coin has been deposited in the coin-chute. The upper portion of the cylinder is beveled, as indicated at 13, to direct the coins into the space formed between the cylinder and its jacket, and a deflector 14 is rotatably mounted upon the upper end of the cylinder to direct the coins to the beveled edge portion thereof, and this deflector consists of a plate normally inclining from the perpendicular and having a socket 15, which is mounted upon a pointed journal 16, extending from the upper end of the cylinder, and the upper portion of the deflector extends into the space inclosed by the vertical rim 11, whereby a coin dropping from the coin-chute will be received upon the deflector and directed by it to the annular space formed between the cylinder and jacket.

A base 17, formed with or applied to the horizontal partition separating the upper and intermediate compartments, is formed with an annular channel or groove 18, whose opposing side walls flare upwardly and which corresponds with the annular space surrounding the cylinder, so as to receive the coins dropping therefrom, and this annular space or channel 18 is subdivided by cross-bars 19, knife-edged at their upper sides to prevent the lodging thereon of a coin, whereby the latter is given proper direction into one of a series of raceways located in the lower compartment. The cross-bars 19 provide, in effect, a series of openings whose walls flare upwardly to receive the coins and guide them on their way to the coin-receptacle. A journal 20 rises vertically from the base 17 and is pointed at its extremity and receives the cylinder 6, which is mounted thereon.

The intermediate compartment 2 contains the raceways and the circuit-closing devices whereby the bell is sounded and the lamp lighted. An inclined diaphragm 21 is formed on its upper side with a series of parallel grooves, in which are fitted the lower ends of vertical partitions 22, of sheet metal or other suitable material, and which form the side walls of the raceways. The upper portions of the vertical partitions are slitted, and parts are deflected to one or the other side, as required, whereby the coins have a tendency to pass through some of the raceways more frequently than through others, whereby the interest is augmented, especially when the raceways are differently designated, according to the purpose or object for which the machine is designed. For trade purposes a rebate-check having a corresponding value to the coin deposited is issued to the person depositing a coin, and by attaching different values to the various raceways and issuing checks of proportionate value redeemable in merchandise it will be readily seen that the machine as an advertising medium is beneficial both to the merchant and customer. The front ends of the partitions 22 touch the front wall of the compartment 2, whereas the front edge of the diaphragm 21 terminates a short distance from the said wall, whereby the coins may pass readily from the raceways into the space formed between a cross-bar 23 and the front wall or glass panel of the intermediate compartment. A series of plates 24 aline vertically with the partitions 22 and the vertical walls of the pockets or coin-receptacles 5 and are interposed between the cross-bar 23 and the drawer 4 and extend across the space formed between the part 23 and the opposing wall. A movable bar 25 is located in the rear of the cross-bar 23 and is held against the latter by arms 26, projecting from a rock-shaft 27, engaging therewith and operating loosely through staples or keepers 28, applied thereto. A spring 29 is mounted upon the rock-shaft and has one end secured thereto and its opposite end resting upon the cross-bar 23 and serves to hold the bar 25 against the bar 23. A series of points 30 are provided in pairs and secured to the movable bar 25, and operate through openings formed in the bar 23, and normally project across the space between the bar 23 and the front wall of the compartment 2, so as to interrupt the coin in its passage, whereby a circuit is closed and an audible signal sounded and a visual signal brought under observation. The manner of connecting the points or electric terminals 30 is illustrated in the diagrammatical view and will be referred to more fully hereinafter in connection with the audible and visual signals. The rock-shaft is extended at one end and provided with a handle 31, whereby the electric terminals or points 30 may be withdrawn to interrupt a closed circuit and permit the coin to drop into the proper pocket or receptacle. Some of the raceways are not provided with circuit-closing devices. Hence the coin is not interrupted in its passage from the coin-chute to the receptacle.

The audible signal consists of an electric bell 32, of ordinary construction, secured to the back of the cabinet above the upper compartment, or it may be located at any convenient point, and is in circuit with any of the pairs of electric terminals or points 30. The visual signal consists of incandescent lamps 33 and 34, of different color and in different circuits, whereby upon closing one set of circuits one lamp is lighted and upon closing another circuit the other lamp is lighted. The lamp 34 is in the same circuit with the middle circuit-closer 35, and the lamp 33 is

in circuit with the remaining circuit-closers, as clearly illustrated in the diagrammatical view.

The machine may be operated by battery or interposed in an electric circuit of a dynamo or other current-generator, the several circuits being open and any one adapted to be closed by a coin spanning the space formed between any pair of the electric points or terminals 30 and electrically connecting them, as will be readily understood. The manner of wiring and connecting the parts is clearly illustrated in the diagrammatical view, which shows a point or terminal 30 of each of the circuit-closers in electrical connection and on different lines, whereby upon bridging any pair of points or terminals 30 a circuit will be completed and the signals brought into operation.

The lamps may be conveniently located, but are preferably placed upon the upper portion of the cabinet, below the bell, where they show to advantage and add to the appearance of the machine.

The coin-chute and coin-operated mechanism are protected and attached to a housing 36, which is secured to the upper portion of the cabinet, the front portion of the housing having a plate secured thereto, in which is formed the coin-receiving slot 37 and to which is attached the coin-chute 38, the latter inclining inwardly and downwardly and terminating within the space circumscribed by the vertical rim 11, so as to deposit the coin upon the deflector 14. A dog 39 is fulcrumed intermediate of its ends to the sides of the coin-chute, and its front end is beveled and normally projects across the receiving portion of the coin-chute, so as to be depressed upon introducing a coin therein. The rear portion of the beveled end is notched, forming a projection 40, which limits the inward movement of the coin until the push-bar 41 is pressed inward to withdraw the projection 40 from the path of the coin and at the same time actuate the cylinder, whereby the latter is set in motion. A spring 42, mounted upon the same pin with the dog 39, holds the latter in a normal position and returns it to its original position after being actuated upon moving the push-bar inward. The inner or rear end of the dog has an extension 43, which is projected across the coin-chute to interrupt the flight of the coin when released from the projection 40, and a pendent hook 44, which normally engages with the inner end of the push-bar 41, so as to prevent the latter from being moved inward except upon the introduction of a coin into the coin-slot, whereby the dog 39 is moved so as to withdraw the pendent hood 44 from engagement with the push-bar, thereby admitting of the latter moving inward upon the application of pressure to its outer end. The push-bar 41 projects through the plate applied to the front end of the housing 36 and terminates in a knob to be engaged by the hand when it is desired to press the part 41 inward to effect a release of the coin from the projection 40 and start the cylinder to rotate. A spring 45 is mounted upon the push-bar 41 and confined between the pin passing transversely therethrough and a web 46, connecting the side pieces of the coin-chute, and serves to hold the push-bar normally projected. A cross-bar 47 is applied to the inner end of the push-bar and has its ends enlarged to bear against the lower edges of the coin-chute sides, whereby the push-bar is prevented from turning when moved inward. The dog 12 is loosely mounted upon an end portion of the cross-bar 47 and is located wholly to one side of the coin-chute. The lower side of the coin-chute is open and a plate 48 is located near the rear end to assist in properly directing the coin to the rear end of the coin-chute, whence it drops onto the deflector 14.

Upon introducing a coin of proper denominate value into the slot 37 the front portion of the dog 39 is depressed a sufficient distance to withdraw the pendent hook 44 from the path of the cross-bar 47, whereby the latter is free to be moved inward. The coin engaging with the projection 40 is limited in its inward movement, and upon moving the push-bar 41 inward the cross-bar 47 engages with the beveled end of the pendent hook 44 and moves the inner end of the dog 39 upward, thereby withdrawing the projection 40 from the path of the coin, which latter descends until stopped by the vertical extension 43, and upon releasing the push-bar it is moved forward by its spring 45, thereby permitting the spring 42 to return the dog 39 to a normal position, whereby the coin is again liberated and permitted to continue its travel and drops from the coin-chute onto the deflector 14, which directs it into the space formed between the cylinder and its inclosing jacket 8, and in its passage through this space the coin is diverted from a straight course and the cylinder rotating it finally drops into the annular channel or groove 18 and passes into one of the raceways, thence into one of the pockets or receptacles, or is received upon a circuit-closer, in which instance the bell is sounded and one or the other of the lamps lighted by reason of the circuit being established. Upon operating the rock-shaft 27 the circuit-closer is withdrawn from the path of the coin, which drops into the proper pocket or receptacle and, the circuit previously established being interrupted, the bell is hushed and the lamp extinguished, thereby restoring the machine to a normal condition, when the operation just described is repeated by the introduction of another coin into the slot 37 and operating the push-bar.

Having thus described the invention, what is claimed as new is—

1. In a machine of the character described, the combination of a series of raceways, a coin-chute, means intermediate of the coin-chute

and the raceways for diverting the coin from a straight course and directing it into any one of the raceways, and electric circuit-closing devices for interrupting the coin in its passage and brought into operation for closing a circuit, whereby an electric appliance located in the circuit is operated, substantially as and for the purpose set forth.

2. In a machine of the character set forth, the combination of a series of raceways, a coin-chute, means intermediate of the coin-chute and raceways for diverting the coin from a straight passage and directing it into any one of the raceways, circuit-closing devices for interrupting the coin in its passage and actuated thereby for closing a circuit, and means for withdrawing the circuit-closers out of the path of the coin, whereby the latter is liberated and the circuit previously closed interrupted, substantially as set forth.

3. In a machine of the character aforesaid, the combination of means for diverting a coin from a straight line, pairs of electric points or terminals normally projecting across the path of the coin to interrupt it in its passage and be bridged thereby so as to complete the circuit of which they form the terminals, whereby an electric appliance is brought into operation, and means for withdrawing the said electric points from the path of the coin, whereby the latter is liberated and the circuit interrupted, substantially as set forth.

4. In a machine for the purposes set forth, the combination of means for diverting a coin from a straight passage, a cross-piece forming a wall of a passage through which the coin passes, a bar, a series of points connected with the said bar and normally projecting beyond the cross-piece to interrupt the coin in its passage, whereby a circuit is closed, and means for moving the bar for withdrawing the said points from the path of the coin, whereby the latter is liberated, substantially as and for the purpose set forth.

5. In a machine of the character set forth, the combination of means for diverting a coin from a straight line, a cross-piece forming a wall of a passage through which the coin passes, a movable bar, a series of points provided in pairs and constituting electric terminals and attached to the said movable bar, a rock-shaft, and a spring for holding the rock-shaft and movable bar in a normal position, whereby the said points are held projected across the coin-passage, substantially as set forth.

6. In a machine of the character described, the combination of means for diverting a coin from a direct line, a series of circuit-closers normally projecting across a space through which the coin passes so as to interrupt the latter, and in turn be operated thereby, a bell in circuit with the series of circuit-closers so as to be sounded upon the completing of any one of the circuits, and lamps in different circuits, whereby upon establishing one circuit one of the lamps is lighted and upon closing another circuit the other lamp is brought into operation, substantially as set forth for the purpose described.

7. In a machine of the character set forth, the combination of a revolving cylinder studded with pins for diverting a coin from a straight passage, an inclined diaphragm, and a series of partitions applied to the diaphragm and forming a number of raceways, substantially as and for the purpose set forth.

8. In a coin-operated machine, the combination of means for diverting the coin from a straight line, an inclined diaphragm, and a series of vertical partitions applied to the diaphragm, forming a number of raceways, the partitions having their upper portions deflected, substantially in the manner set forth for the purpose specified.

9. In a coin-operated machine, the combination of a series of raceways, and a revolving cylinder studded with pins for diverting the coin from a straight line and delivering it to any one of the series of raceways, substantially as set forth.

10. In a coin-operated machine, the combination of a series of raceways, a revolving cylinder studded with pins, and an enveloping-jacket for the cylinder, substantially as set forth.

11. In a coin-operated machine, the combination of a series of raceways, a cylinder, a jacket enveloping the cylinder and forming therewith a space for the passage of a coin, and pins passing through the jacket into the cylinder for properly positioning and holding the jacket in place, and serving to divert the coin from a straight passage, substantially as set forth.

12. In combination, a cylinder having an inclosed surrounding space, a vertical rim having connection with the cylinder, an inclined deflector rotatably mounted with respect to the cylinder and having its upper portion extending into the space circumscribed by the aforesaid vertical rim, and a coin-chute disposed to deliver the coin upon the said deflector, substantially as set forth for the purpose described.

13. In combination, a cylinder having an inclosed surrounding space, an inclined deflector rotatably mounted with respect to the cylinder to direct a coin into the space surrounding the cylinder, and a coin-chute disposed to deliver a coin upon the deflector, substantially as and for the purpose set forth.

14. In combination, a cylinder having its upper portion beveled, a jacket surrounding the cylinder and connected therewith, a vertical rim supported by the jacket, and an inclined deflector rotatably mounted upon the cylinder and having its upper portion extending into the space circumscribed by the vertical rim, substantially as and for the purpose set forth.

15. In combination, a series of raceways, a base located above the raceways and having an annular channel or groove subdivided by

cross-bars, and a cylinder rotatably mounted upon the base and adapted to divert a coin from a straight line and into the annular channel, substantially as and for the purpose set forth.

16. In combination, a series of raceways, a base located over the raceways and having an annular channel or groove whose walls flare upwardly and which is subdivided by cross-bars knife-edged on their top side, and a cylinder rotatably mounted upon the base, studded with pins, and having a surrounding jacket, substantially as and for the purpose set forth.

17. In a coin-operated machine, the combination of a coin-chute, a dog having a beveled portion normally projecting across the coin-chute and having an extension at its inner end to be projected across the coin-chute upon introducing a coin therein, and a push-bar normally locked by the dog and released when placing a coin into the chute, and which when moved inward frees the coin, substantially as and for the purpose set forth.

18. In a coin-operated machine, the combination of a coin-chute, a dog having a portion normally extending across the coin-chute, and having a projection a short distance from its front end to limit the inward movement of the coin, and having an extension at its inner end to be projected across the coin-chute upon placing a coin therein, and a push-bar normally locked by the dog and released upon inserting a coin into the coin-chute, and which when moved inward releases the coin from the projection of the dog, substantially in the manner set forth.

19. In a coin-operated machine, the combination of a revolving cylinder for delivering a coin to one of a series of raceways, a push-bar, a dog operated by the push-bar for giving an initial impetus to the cylinder, and a second dog for normally locking the push-bar and adapted to be released therefrom upon introducing a coin into the coin-chute, substantially as set forth.

20. In a coin-operated machine, the combination of a revolving cylinder, a coin-chute, a dog having a portion normally projecting across the coin-chute and having an extension to be projected across the coin-chute upon introducing a coin therein, a push-bar normally locked by the aforesaid dog and released upon inserting a coin into the coin-chute, and a second dog having connection with the push-bar and adapted to actuate the cylinder upon moving the push-bar inward, the parts being disposed whereby the cylinder is set in motion prior to the delivery of the coin thereto, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

HENRY T. EMEIS.

Witnesses:
C. M. THOMPSON,
W. D. BROWN.