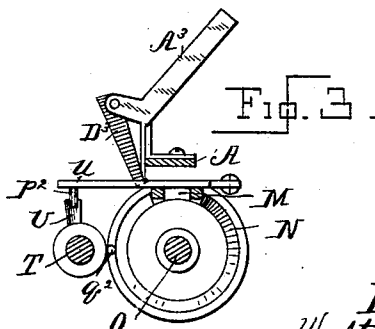
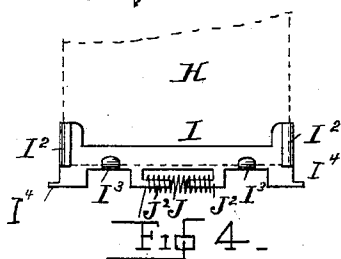
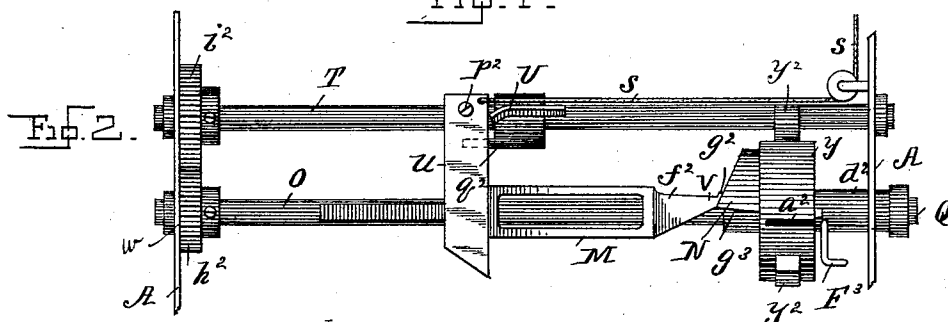
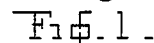


2 Sheets—Sheet 1.

No. 489,262.

Patented Jan. 3, 1893.



Witnesses  
W. A. Courtland.  
John Kilham.

Inventors  
Walter H. Pitt  
and  
Gustav Littenbaum  
by J. F. Bourne  
their attorney



# UNITED STATES PATENT OFFICE.

WALTER H. PITT AND GUSTAV SITTMANN, OF BROOKLYN, NEW YORK.

## CARD-EXHIBITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 489,262, dated January 3, 1893.

Application filed December 30, 1891. Serial No. 416,522. (No model.)

*To all whom it may concern:*

Be it known that we, WALTER H. PITT and GUSTAV SITTMANN, residents of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Card-Exhibiting Machines, of which the following is a specification.

Our invention relates to that class of machines wherein several cards for display are carried on drums that are turned to cause different cards to be presented to view.

The object of our invention is to so simplify the mechanism of this class of machines as to render them less liable to get out of order, and make them more perfect in their action, than the machines heretofore made.

Another object is to improve the coin slot arrangement so as to prevent foreign substances from passing into the coin locking device.

The invention consists in the novel details of improvement and the combination of parts that will be more fully hereinafter set forth and then pointed out in the claims.

Reference is to be had to the accompanying drawings forming part hereof, wherein,

Figure 1, is a longitudinal section of our improved machine, part of the cards being removed for the sake of clearness; Fig. 2, is a plan view of the coin-operated shafts and their connected parts; Fig. 3, is a cross section of the latter looking from the left in Fig. 2; Fig. 4, is a detail view of the card holding clamp and its spring; Fig. 5 is a vertical cross section of the machine, looking from the right in Fig. 1; Fig. 6, is a partly broken side view of the coin operating shafts and connected parts looking from the right in Fig. 5; Fig. 7, is a partly broken side view of the card carrying drums, showing the means for rotating them with their shaft; Fig. 8, is a longitudinal section showing the means for intermittently turning the drum shaft; Fig. 9, is a detail cross section through said shaft showing the ratchet mechanism for turning it; and Fig. 10, is a detail sectional view of the two shafts that the coin locks together in order to operate the machine.

The mechanism of our machine is preferably supported by a frame A, of suitable construction, that is contained within an outer casing B, having a glass a, through

which the cards can be seen. In the upper part of the frame A is journaled a shaft D, upon which are mounted card drums E. The drums E are loose on the shaft D so that the latter can turn independently, and said drums are longitudinally movable on said shaft so as to disengage them from the means that turns them with the shaft. To cause the shaft D, to turn the drums E, each drum is provided on one end with a series of teeth b, that are adapted to be engaged by a pin or the like d, on a collar or the like e fast on the shaft D, there being one pin d and collar e for each drum E, and set of teeth b. Between each collar e and the next drum E is interposed a spring f, (see Fig. 7) that is coiled on the shaft D, and thereby holds the teeth b in engagement with the pin d. The teeth b and pin d further act to prevent the drum E from turning backward.

To prevent any drum E, (or as many as desired) from being turned at any time by the shaft D, it is moved along the shaft D, to disengage its teeth b from its pin d, and for this purpose rods F, (one for each drum) are journaled in suitable bearings in the frame A, which rods each have a finger g, at one end to bear against the end of the drum E, to slide it along the shaft D, as the rod F is turned on its longitudinal axis. The fingers g, are normally out of contact with the drums E, to allow them free rotary motion. Each rod F is provided with a crank arm h, (see Fig. 1) at one part and an extension F<sup>2</sup>, that passes through a slot i (see Fig. 5) in the casing B, the extension F<sup>2</sup> being preferably provided with a knob j, as shown. By the foregoing means as the knob j, is depressed the rod F will be rocked to press the finger g against the drum E, to disengage the latter from the shaft D, to prevent the latter from turning it. To prevent the drums E, from turning spontaneously when in the last mentioned position, the edge of the drum E is roughened or serrated as at l, (Fig. 5) so that the fingers g will firmly grip the drum.

As each extension F<sup>2</sup> of the rod F is pressed down to turn the rod F, it is to be held down until a new coin has been inserted to permit it to be released, and for this purpose, each extension F<sup>2</sup>, carries a sliding collar m, pressed outward by a spring n as shown. The exten-

sions  $F^2$ , normally lie in slots  $o$  on the under side of a cross bar  $G$ , that is pivotally connected by arms  $G^2$ , with the frame  $A$ , see Fig. 5. The collars  $m$  normally lie in front of the bar  $G$ , but when the extensions  $F^2$ , are pressed down out of the slots  $o$  to slide the drums  $E$ , the collars  $m$  immediately spring under the bar  $G$ , to prevent the extensions from rising, and they remain in this position until the bar  $G$ , is moved back, as will be hereinafter shown.

The cards  $H$ , are to be pivotally carried by the drums  $E$ , and for this purpose we prefer to use the clamp  $I$ . This clamp is made, with its pivots, in one piece of sheet metal, having ears  $I^2$  folded over on the ends to grasp the sides of the cards  $H$ , and ears folded over on the lower side to grasp the ends of the cards, (see Fig. 4.)

$I^4$ , are projections or pivots on the sides of the clamp  $I$  that are adapted to enter apertures on the rims  $p$ , of the drums  $E$ , whereby the clamps  $I$ , will be pivoted on the drums. To insert the pivots  $I^4$  in the apertures in the rims  $p$ , the clamp  $I$  is first bent or curved to shorten its length, the pivots  $I^4$  are brought opposite the apertures in the rims  $p$ , and when the clamp is released it will straighten out thereby carrying the pivots  $I^4$  into said apertures.

$J$ , is a spring carried by the clamp  $I$ , and adapted to cause the cards  $H$ , to stand substantially vertically above the drums  $E$  as in Fig. 5, and rest against a cross rod  $H^2$ , see Fig. 5.

The clamp  $I$  on its lower side carries two inwardly projecting fingers  $J^2$ , having a space between them as in Fig. 4, which fingers support the spring  $J$  as shown. To place the spring  $J$  upon the fingers  $J^2$ , one end of the former is first slipped along one finger  $J^2$ , it is then compressed on said finger until the other end passes into the aperture between the fingers  $J^2$  when it is permitted to extend and thus pass over the other finger  $J^2$ , in position indicated in Fig. 4. By this means the spring  $J$  is readily adjustable and it will not become detached from the clamp.

To turn the shaft  $D$  intermittently so as to rotate any or all of the drums  $E$ , we secure to said shaft a ratchet wheel  $p$ , that is adapted to be engaged by a spring actuated pawl  $q$  carried by a sleeve  $r$ , loose on the shaft  $D$ . Upon the sleeve  $r$ , is wound a cord or the like  $s$ , that connects at one end with a spring  $t$ , attached to the frame  $A$ , and at its other end with an arm  $u$ , carried by a sliding bar  $M$ , the latter being suitably guided in suitable bearings on the frame  $A$ . The forward end  $v$ , of the bar  $M$  engages a cam  $N$ , that is secured to one end of a shaft  $O$ , journaled in suitable bearings on the frame  $A$ , such as one end  $w$  being journaled in the side of said frame (Figs. 1 and 2) the other part of said shaft near the cam  $N$ , being supported in a hanger or bearing  $x$ , (see Fig. 6.) The cam  $N$ , is preferably on one side of a ring-like

disk  $P$ , that is secured to the shaft  $O$ , and has an overhanging ring-like ledge  $y$ , (see Fig. 10.) This latter part  $y$ , has a slot  $a^2$ , that extends to its outer edge (Fig. 2) in which a coin  $b^2$  (Fig. 5) is adapted to pass to permit the machine to be operated. This slot is so arranged that at a certain time the arm  $M$ , will move forward and push the coin out of the slot  $a^2$ . A band  $y^2$ , extends around the lower part of the ring  $y$  to prevent the coin from falling out as the parts rotate.

$Q$ , is another shaft placed in line with the shaft  $O$ , and suitably journaled in a bearing or bushing  $d^2$  carried by the frame  $A$ . The shaft  $Q$ , extends through the casing  $B$ , and on its outer end has a crank or handle  $R$ , by which to turn the shaft. On the inner end of the shaft  $Q$ , is a disk  $S$ , that passes within the ring  $y$ , (see Figs. 6 and 10) said disk being preferably in the shape of a snail-like cam having a projecting part  $e^2$ , that is adapted to press against the coin  $b^2$  when inserted and thereby to turn the disk  $P$ , cam  $N$ , and shaft  $O$ , but the disk  $S$ , is free to turn when no coin is present. From the foregoing it will be seen that the shaft  $Q$ , being independent of the shaft  $O$ , is free to turn at all times, but the shaft  $O$ , can only turn when a coin  $b^2$  is passed into the slot  $a^2$  to be engaged by the projection  $e^2$  on the disk  $S$ .

In its normal position the bar  $M$ , extends forward through an opening 2, in the disk  $P$  and under the ring  $y$  (see dotted lines Figs. 6 and 10), said bar having a depression  $f^2$ , on one side forming a toe  $g^2$ , see Fig. 2. This toe  $g^2$ , is adapted to push the coin  $b^2$  from the slot  $a^2$ , and the depression  $f^2$ , then comes to one side of the slot  $a^2$ , beneath it, so that a coin can pass down and rest on the disk  $S$ . As the ring  $y$  is cut away at 3, (see Figs. 5 and 10) to permit the bar  $M$  to slide under the ring  $y$ , a pin or projection 4, is placed in the disk  $P$  (see Fig. 5) to prevent the coin  $b^2$  from slipping back under the ring.

It is intended that the first revolution of the shafts  $Q$  and  $O$ , shall turn the shaft  $D$ , to assort the cards on the drums  $E$ , and at the next turn of said shafts, all or any of the drums  $E$  can turn according as the rods  $F$  have been turned, and to permit this double turning of said shafts for one coin, the shaft  $O$  is geared to another shaft  $T$ , suitably journaled in the frame  $A$ . The shaft  $O$  carries a gear wheel  $h^2$ , that meshes with a similar wheel  $i^2$  on the shaft  $T$ , the latter wheel being, say, twice the size and having twice the teeth of the forward wheel, so that the shaft shall make two turns to one turn of shaft  $T$ . On the shaft  $T$ , is a cam  $U$ , that is adapted to be engaged by a projection  $p^2$  on the arm  $u$ , so that as the latter is drawn forward by the spring  $t$ , the projection  $p^2$  will encounter the cam  $U$ , and thus act to turn shaft  $T$  and thereby the shaft  $O$ , thus carrying the slot  $a^2$ , and coin  $b^2$  forward a slight distance so that the toe  $g^2$  on bar  $M$  will not encounter the coin, but on the next revolution of the shafts

Q, O, the cam U, will not encounter the projection  $p^2$ , and thus the bar M will be free when it advances to push the coin  $b^2$  out of its slot. The shaft T also carries a projection  $q^2$ , that is adapted to encounter and raise an arm  $r^2$  that is carried by the bar G, so as to swing the latter outwardly to release the collars  $n$  and rods F, to permit them to return to their normal positions, the positions of these parts being such that when the shaft O is first turned the projection  $q^2$ , will actuate the bar G, before the shaft D has turned. A spring  $s^2$ , connected to the bar G and to the frame A, holds the bar G in its normal position.

Although we may use any suitable coin chute we have provided the following which we find very useful.  $A^3$ , is a tube or channel that opens at its upper end at the outer side of the casing B, and then preferably slants inward and is suitably supported by the frame A, the chute or channel  $A^3$  leading to the slot  $a^2$  in the ring  $y$ , (see Fig. 5.) The under side of this channel  $A^3$ , is preferably partly cut away as at  $B^3$ , to allow foreign and spurious substances to fall through (see Fig. 1.) The back part of the chute or channel  $A^3$ , preferably where it turns, as shown, is partly open to permit foreign substances that may pass down the channel  $A^3$  to slide through the back of the chute, but being so arranged that a proper coin will pass from the channel  $A^3$  to the slot  $a^2$ . One side of the coin chute is movable laterally or outwardly, and for this purpose the side  $D^3$ , is pivotally carried, its lower end coming just above the slot  $a^2$  in the ring  $y$ . A spring  $E^3$  (Fig. 1) suitably arranged, holds the side  $D^3$  in its normal position over the slot  $a^2$ . The shaft Q carries an arm  $F^3$ , that is adapted, when said shaft turns, to rock the side  $D^3$  of the coin chute (see Fig. 5) on its pivot, so as to cause any spurious matter that may have collected in it, to drop out. Also to cause any excess of coins that may have been inserted to fall away, as only one coin can enter the slot  $a^2$ . The latter slot being very narrow, and at the extremity of the coin channel, or chute, makes it very difficult for anything but the proper coin to reach the coin-operating parts.

To hold the handle R in its proper normal position, we provide a rod  $R^2$ , that is carried by the case B, and is pressed outwardly by a spring  $R^3$ , so that to turn the handle R and shaft Q the rod  $R^2$  is first pressed in to give the handle free rotary motion.

Our improvements operate as follows: When in their normal positions the parts assume the relations shown in Figs. 1, 5 and 6. When a coin is inserted in the chute  $A^3$ , it enters the slot  $a^2$  in ring  $y$ . The shaft Q now being turned presses the projection  $e^2$ , against the coin whereby connection is made between the disk S and ring  $y$ , to cause the shaft Q to turn the shaft O. As the shaft O and cam N now turn, the latter, acting on bar or rod M, moves it backward, thereby drawing on cord

$s$ , turning back the ratchet  $q$ , and distending spring  $t$ , at the same time causing projection  $q^2$  to lift arm  $r^2$ , to push back the bar G to release the rods F and thus free the drums E from the fingers  $g$ , so that the drums are free to turn. As the shaft O, has about made a single revolution the toe  $g^2$  of bar or rod M will slip off the edge  $g^3$  of cam N, the cam U at this time having come into position to be engaged by projection  $p^2$ . As the bar M is now free to slide the spring  $t$ , draws it forward, whereby the projection  $p^2$  and cam U, will cause the gears  $h^2, i^2$ , to turn the shaft O slightly and advance the coin  $b^2$  out of line of the toe  $g^2$ , while at the same time the action of the spring  $t$  will turn the sleeve  $r$  forward thereby carrying forward the shaft D and thus turning the drums E. If it is desired to retain any drum in the new position its corresponding knob  $j$ , is pressed down to cause the rod F to turn and thus, by its finger  $g$ , to disconnect the drum from its clutch as before explained. The shafts Q, O, are again turned, whereupon when the toe  $g^2$  slips off of the edge  $g^3$  of cam A the bar M will advance under the influence of the spring  $t$  to expel the coin from the slot  $a^2$ , while the shaft D will be again turned to present new cards to view.

Having now described our invention, what we claim is:

1. The combination of the shaft D a cam and a sliding bar M actuated thereby, and connections between said bar and said shaft for turning it intermittently with the card drum loose thereon and having longitudinal motion thereon, a clutch for turning the drum with the shaft, and means for sliding the drum on the shaft to disconnect the clutch, substantially as described.

2. The combination of the shaft D, card drums loose thereon, and clutches for turning the latter by the former, card drums having teeth or serrations  $l$ , with rotating shafts F, having fingers  $g$  to engage the teeth or serrations  $l$  and to push the drums along the shaft, and with cranks or knobs on said rods for turning them, substantially as described.

3. The combination of the shaft D card drums loose thereon but rotatable therewith, rotary rods F, for sliding said drums on said shaft, means on said rods for turning them, spring pressed collars carried by said rods, and with the bar G, for holding said rods F, and means for moving said bar to release the rods F, substantially as described.

4. The combination of the shaft D, card drums E thereon, rods F, having cranks  $h$ ,  $F^2$ , collars  $m$  pivoted rod G, to hold and release the rods F, arm  $r^2$ , projection  $q^2$ , and a coin controlled shaft for actuating the projection  $q^2$ , substantially as described.

5. The combination of the shaft O, cam N thereon, sliding rod M, actuated by said cam, spring  $t$ , cord or belt  $s$ , shaft D, drums E thereon and a sleeve and connections for turning the shaft by the action of the spring  $t$  and cord  $s$ , substantially as described.

6. The combination of the shaft O, cam N, ring  $y$  having slot  $a^2$  independent shaft Q having projection  $e^2$ , sliding bar M, shaft D, drums E thereon, and connections between  
5 said shaft and said bar M for turning the former by the latter, substantially as described.

7. The combination of the shaft O, carrying ring  $y$ , having slot  $a^2$ , with the independent shaft Q, having projection  $e^2$ , whereby  
10 the former will be turned by the latter when a coin is inserted, and with card exhibiting drums, a shaft carrying them, and connections between said shaft and the shaft O, for  
15 turning the former by the latter, substantially as described.

8. The combination of the shaft O, cam N thereon, ring  $y$  having slot  $a^2$ , sliding bar M, having toe  $g^2$ , and depression  $f^2$ , projection  
20  $p^2$  carried by bar M, shaft T geared to the shaft O, and cam U on the shaft T to engage the projection  $p^2$ , and with card exhibiting drums, a shaft carrying them, and connections between the shaft and bar M, for turning the  
25 former by the latter, substantially as described.

9. The combination of the shaft O, cam N, ring  $y$ , having slot  $a^2$ , shaft Q, having projection  $e^2$ , sliding bar M, projection  $p^2$  carried  
30 thereby, shaft T, cam U thereon, and gears  $h^2 i^2$ , and with card exhibiting drums, a shaft carrying them, and connections between the shaft and bar M, for turning the former by the latter, substantially as described.

10. The combination of the shaft O, cam N, 35 sliding rod M projection  $p^2$ , shaft T geared to the shaft O, cam U, shaft D, card drums E thereon and intermediate connections between the shaft D and bar M, whereby the shaft D can be given two independent turns  
40 for one coin, substantially as described.

11. The combination of the chute or channel  $A^3$ , having one side or portion independently movable, a shaft and a projection thereon for actuating said pivoted portion of the  
45 chute, substantially as described.

12. The combination of chute or channel  $A^3$ , having one side or portion independently movable, with a spring to hold the portion  $D^3$ , in position, a shaft and a projection thereon  
50 to actuate the portion  $D^3$ , substantially as described.

13. The combination of the chute  $A^3$ , having one side or portion  $D^3$  pivoted, the lower part of the chute and the pivoted portion extending at an angle to the upper part of the  
55  $A^3$ , the part  $D^3$  having an opening at its back in line with the upper part of  $A^3$  and with a shaft and a projection thereon to actuate the part  $D^3$ , substantially as described. 60

Signed at New York, in the county of New York and State of New York, this 28th day of December, A. D. 1891.

WALTER H. PITT.  
GUSTAV SITTMANN.

Witnesses:

C. L. WALKER,  
I. S. HARWOOD.