Aug. 25, 1931. E. J. BRANDT 1,820,343

CHANGE MAKING MACHINE

Filed Jan. 16, 1926 3 Sheets-Sheet 1

Fig. 1.

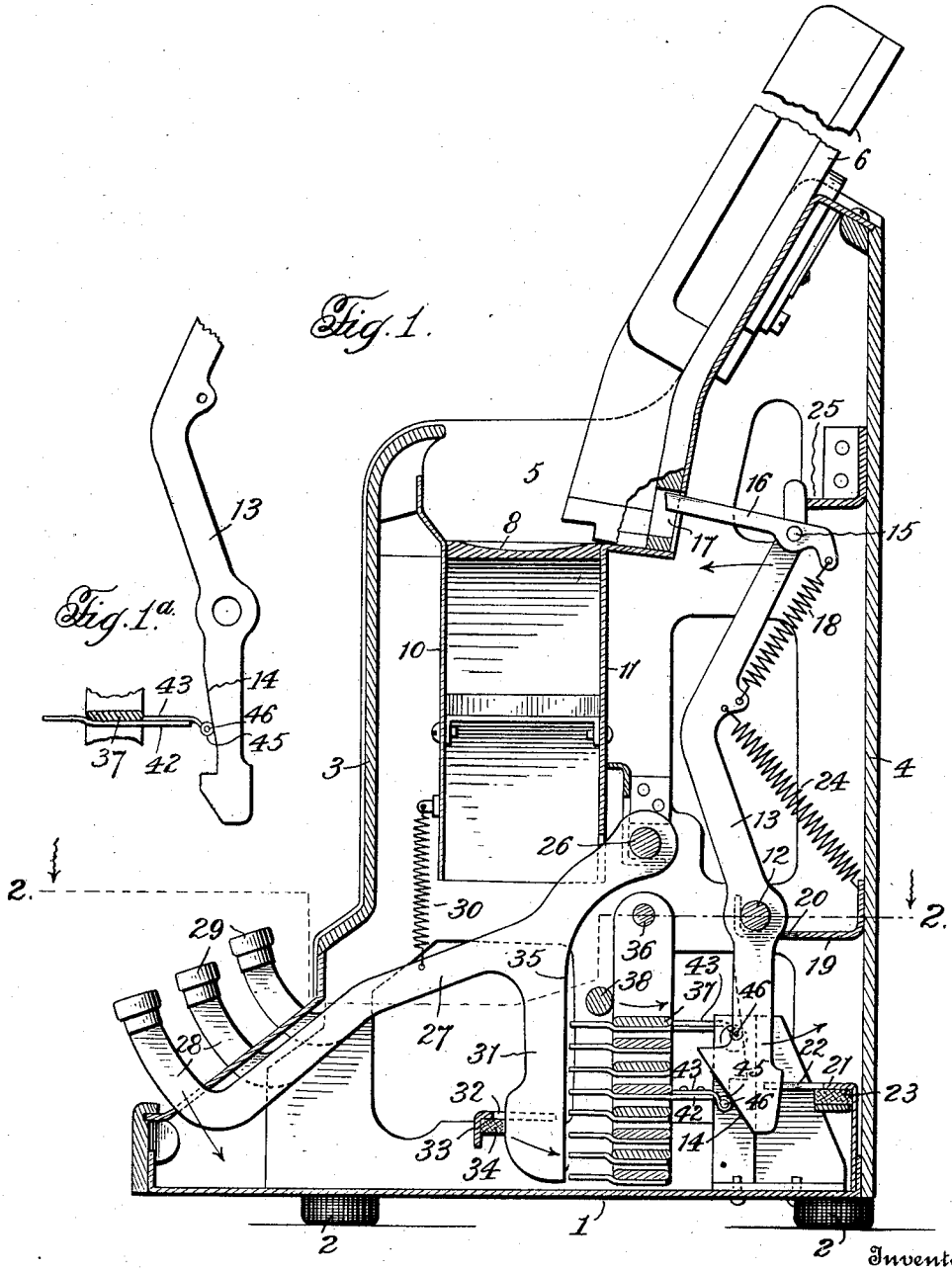


Fig. 1a.

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Filed Jan. 16, 1926 3 Sheets-Sheet 2

Fig. 2.

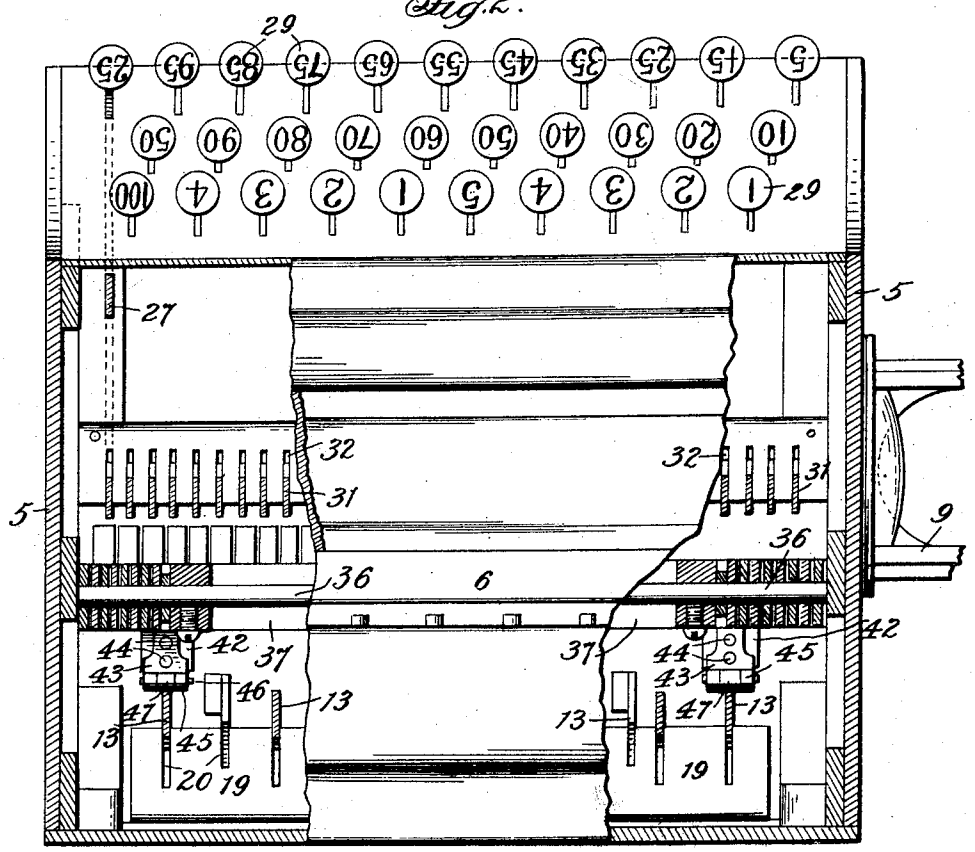


Fig. 5.

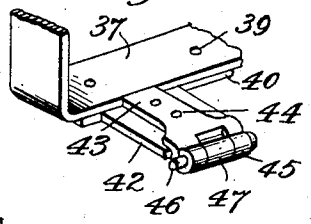
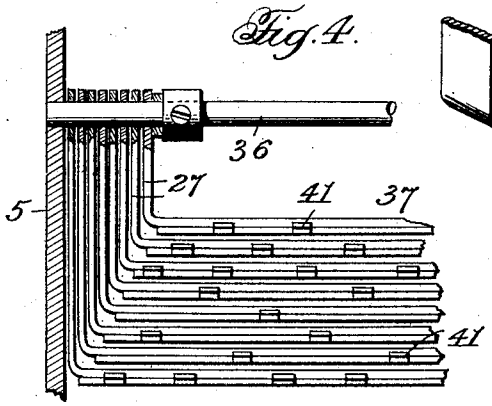


Fig. 4.



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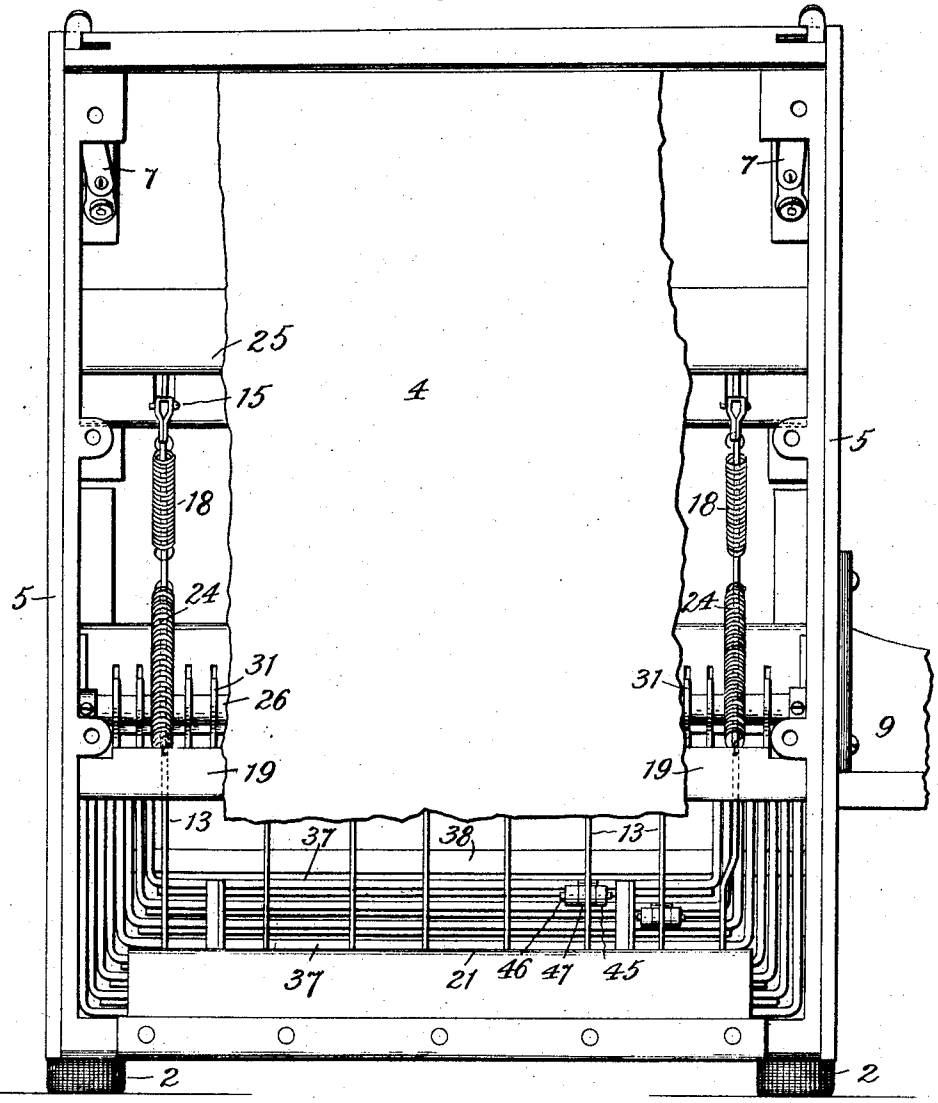
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CHANGE MAKING MACHINE

Filed Jan. 16, 1926 3 Sheets-Sheet 3

Fig. 3.



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UNITED STATES PATENT OFFICE

EDWARD J. BRANDT, OF WATERTOWN, WISCONSIN, ASSIGNOR TO BRANDT AUTOMATIC CASHIER COMPANY, OF WATERTOWN, WISCONSIN, A CORPORATION OF WISCONSIN

CHANGE MAKING MACHINE

Application filed January 16, 1926. Serial No. 81,853.

My invention relates to new and useful improvements in money handling machines and more particularly to a money changing machine of the well-known "Brandt" type, the principal object of the present invention residing in the construction of a machine which is relatively small and compact, simple in operation, and which may be manufactured and sold at a relatively low price.

Another object of the invention resides in the provision of a machine of the character described in which a plurality of swinging frames are interposed between the coin ejecting levers and the keys which are depressed when it is desired to eject the coins, from the coin receptacle, the swinging frames being provided with projections adapted to be engaged by the keys and projections adapted to engage the coin ejecting levers, the frames being suspended from a suitable supporting member so that they will normally hang vertically with the key engaged projections and the coin ejecting lever engaging projections extending in a horizontal plane.

A further object of the invention consists in forming the operating keys with a projection, normally extending in a vertical plane, provided with a straight edge adapted to engage the projections carried by the swinging frames, said straight edge allowing the projection to engage the desired number of frame projections, vertically spaced, to eject the desired combination of coins from the coin receptacle.

With the above and other objects in view, which will appear as the description proceeds, my invention consists in the novel details of construction, and arrangement of parts, described in the following specification and illustrated in the accompanying drawings, and while I have illustrated and described the preferred embodiments of the invention, as they now appear to me, it will be understood that such changes may be made as will fall within the scope of the appended claims.

In the drawings:—

Fig. 1 is a transverse vertical section through the machine with parts shown in side elevation.

Fig. 1*a* is a detail of the ejecting lever operated by the uppermost of the swinging frames.

Fig. 2 is a horizontal section on the line 2—2 of Fig. 1 looking in the direction of the arrows.

Fig. 3 is a rear view with a portion of the rear plate broken away.

Fig. 4 is a fragmental front view of the swinging frames and their support with parts shown in vertical section; and

Fig. 5 is a fragmental perspective showing a detail of a portion of one of the swinging frames.

In the drawings 1 indicates the bottom of the machine which is supported by the feet 2, preferably of rubber, so as not to mar the object upon which the machine is set, 3 and 4 represent respectively the front and rear plates of the machine, and 5 indicates the end plates. Supported upon the top of the machine is a coin receptacle 6 having the desired number of coin compartments for holding coins of different denominations, said receptacle being connected to the machine in any desirable manner but preferably by means of the pivoted catches 7 which engage a portion of the receptacle, said catches being shown more particularly in Figs. 1 and 3 of the drawings. As the receptacle and manner of connecting the same in position form no part of the present invention it is thought that a further detail description thereof is not necessary at the present time. The coins which are ejected from the receptacle are discharged into the inclined chute 8 from which they are delivered through an opening in the side of the machine into a cup or receptacle shown generally at 9 more particularly in Fig. 2 of the drawings. The chute 8 is supported between the plates 10 and 11 which extend longitudinally of the machine as shown more particularly in Fig. 1 of the drawings.

Pivotally supported upon a rod 12, which extends longitudinally of the machine between the end plates, are the coin ejecting levers 13 there being one lever for each of the compartments of the coin receptacle. The lower ends of the levers are formed with

the beveled edge 14, for a purpose to be later described, and pivotally connected adjacent the top of the levers, as shown at 15, are the fingers 16, the forward ends of the fingers extending through the opening 17 in the back of the coin receptacle, as more particularly shown in Fig. 1, to engage and eject the coins in the well known manner of the "Brandt" machines. A coiled spring 18 is connected to each of the levers 13 and the finger 16 carried thereby for normally holding the forward end of the finger in raised position in contact with the upper end of the opening 17 through which it extends. Secured to the rear plate 4, and extending inwardly, is a guide plate 19 having a plurality of slots 20 formed in its forward edge through which the levers 13 will extend and supported by the bottom 1 is a guide member 21 having a plurality of slots 22 in which the lower ends of the levers operate. Secured to the under surface of the guide member 21 is a buffer strip 23 against which the edges of the levers will contact, said strip being of any desirable resilient material. A coiled spring 24 is connected to each of the levers 13 and to the guide plate 19 so as to normally hold the upper end of the levers in their rearwardmost positions and in contact with the abutment plate 25.

Pivotally supported on the horizontal rod 26 are the key levers 27 having their forward end portions 28 extending through the front plate of the machine and provided with the finger engaging buttons 29. The key levers 27 are held in raised position by means of the coiled springs 30. Each of the levers 27 is provided with the downwardly extending projection 31 which operates in a slot 32 formed in the guide plate 33, a buffer strip 34 of suitable material engaging the forward edges of the projections for limiting the movement thereof and preventing noise in operation. The rear edge of each of the projections 31 is straight as shown at 35 for a purpose which will be later described.

Supported by the horizontal rod 36, for swinging movement, are the frames 37, the number of the frames used in the machine corresponding to the number of coin ejecting levers 13. The frames 37 will normally hang vertically as is quite clearly shown in the drawings, and the forward swinging movement thereof is limited by the horizontally extending rod 38 which will engage the edges of the vertically extending portions or arms of the frames. Detachably connected to the horizontal portion of each of the frames 37, by means of the screws 39 or other suitable fastenings, is a plate 40. Formed on the forward edge of each of the plates are the projections 41 which are adapted to be engaged by the straight edges 35 of the projections 31 of the key levers 27. On each of the plates any desired number of projections might be formed to be engaged by the projections of the various keys but I wish to lay particular emphasis on the fact that each of the projections on any plate will represent the particular denomination of coin which is to be ejected by the swinging of the particular frame to which the plate is connected. At the same time it will be understood that the projection of a particular key may engage the number of plate projections desired so as to eject the desired combination of coins from the coin receptacle. Formed on the rear edge of each of the plates 40 is a projection 42 to which a plate 43 is secured by the rivet 44 or other suitable fasteners, the rearward end of the plate 44 being forked as shown at 45. Supported in the forked end 45 on a pin or rod 46, is a roller 47. The projections 42 and the rollers 47 carried thereby align with the various coin ejecting levers 13 with the rollers 47 in contact with the inclined edges 14 thereof as more particularly illustrated in Figs. 1 and 2 of the drawings. It will be understood that there is but a single projection 42 and roller 47 carried by each of the frames and the roller of each frame will engage the particular coin ejecting lever adapted to be operated by the swinging of that particular frame.

From the above it is thought that the detailed construction of the present machine will be clearly understood. When it is desired to make change the operator engages the desired finger button 29 on the desired key lever 27 and by depressing the lever will be swung upon its supporting rod 26. The straight edge 35 of the projection 31 will engage those projections 41, on the swinging frames 37, in alignment therewith and the swinging frames will be moved rearwardly and the rollers 47 engaging the inclined edges 14 of the coin ejecting levers 13 in alignment therewith will swing the levers on their supporting rod 12 and carry the coin ejecting fingers 16 forwardly to eject the coins from the coin receptacle and discharge them down the chute 8. The rollers 47 engaging the beveled edges 14 of the coin ejecting levers 13 reduces friction to a minimum, and by having the straight edge 35 of the projections 31 of the key levers the projections on the swinging frames are properly engaged to swing the frames rearwardly. In Fig. 1*a* of the drawings I have illustrated in detail the ejecting lever which will be operated by the uppermost swinging frame. It will be appreciated that the roller 47 carried by the uppermost frame will be in a horizontal line slightly above the lowermost end of the lever and for this reason the bevel 14 of this particular lever is positioned slightly above the enlarged end. The enlarged ends of the other levers may be beveled to different heights to properly align with the rollers of the swinging frames. The plates 40 being

detachably connected to the frames 37 are interchangeable from one frame to another or new plates may be attached to secure different combinations of projections adapted to be engaged by the projections of the key levers so that different combinations of coins may be ejected from the coin receptacle. By arranging the swinging frames to hang vertically I am enabled to provide a compact machine and after the frames have been swung by the key levers they will automatically return to their original vertical position.

Having fully described my invention what I claim as new and desire to secure by Letters Patent is:

1. A change making machine comprising a coin receptacle, pivotally mounted key levers, a vertically extending projection formed on each of the key levers, coin ejecting levers mounted for swinging movement, each of said coin ejecting levers having inclined surface frames mounted for swinging movement, horizontally extending projections carried by the frames and adapted to be engaged by the vertically extending projections formed on the key levers, and a roller carried by each frame and adapted to be engaged with the inclined surface of a coin ejecting lever.

2. A change making machine comprising a coin receptacle, key levers each having a depending vertically extending portion, coin ejecting levers each having a depending vertically extending portion, swinging frames positioned between the depending vertically extending portions of the key levers and the coin ejecting levers and normally held in vertical position by gravity, and a horizontally extending member carried by each of the frames, portions of said horizontally extending members adapted to be engaged by the depending vertically extending portions of the key levers and other portions thereof being adapted for engagement with the depending vertically extending portions of the coin ejecting levers.

3. A change making machine comprising a coin receptacle, key levers each having a depending vertically extending portion, coin ejecting levers each having a depending vertically extending portion, a horizontally extending rod, vertically extending frames carried by and depending from the rod for swinging movement and positioned between the depending vertically extending portions of the key levers and the coin ejecting levers, and a horizontally extending member carried by each of the frames, portions of said horizontally extending members adapted to be engaged by the depending vertically extending portions of the key levers and other portions thereof being adapted for engagement with the depending vertically extending portions of the coin ejecting levers.

4. A change making machine comprising a coin receptacle, key levers each having a depending vertically extending portion, coin ejecting levers each having a depending vertically extending portion, substantially U-shaped frames positioned between the depending vertically extending portions of the key levers and the coin ejecting levers, and a plate secured to the horizontal portion of each of the U-shaped frames and extending transversely thereof with a projecting portion adapted to be engaged by the depending portion of a key lever and a projecting portion adapted to engage the depending portion of a coin ejecting lever.

In testimony whereof I hereunto affix my signature.

EDWARD J. BRANDT.