

Sept. 29, 1953

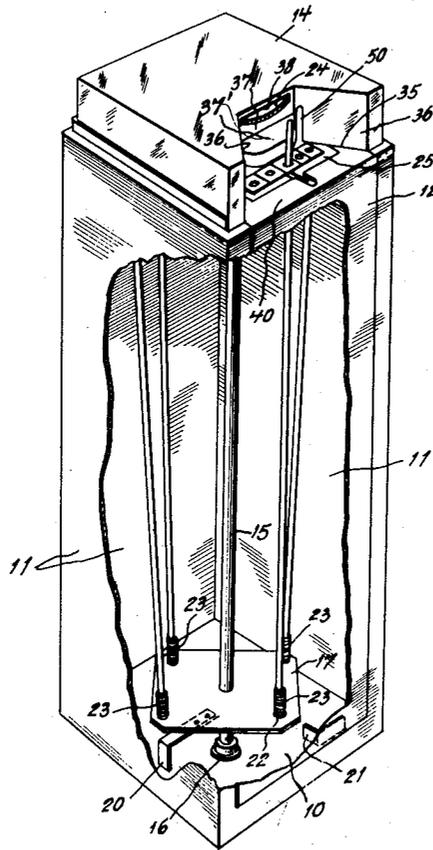
R. I. N. WEINGART
TICKET STACKING MACHINE

2,653,759

Filed April 12, 1950

3 Sheets-Sheet 1

Fig. 1



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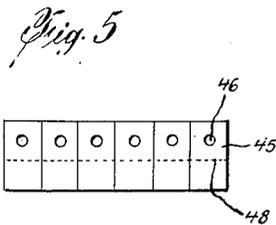
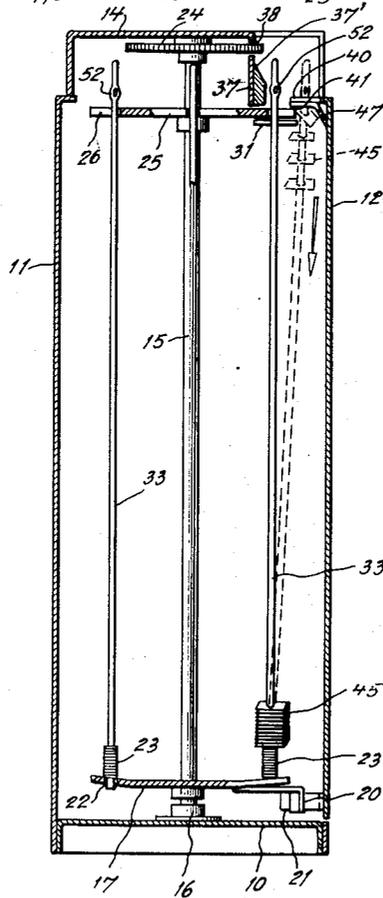
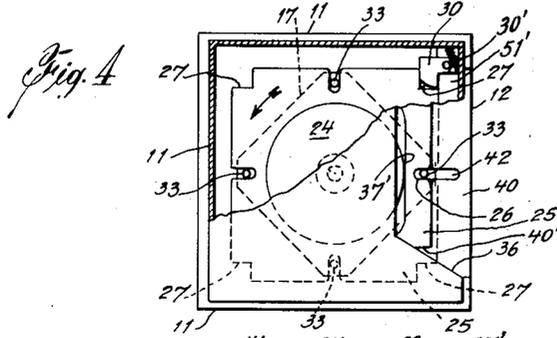
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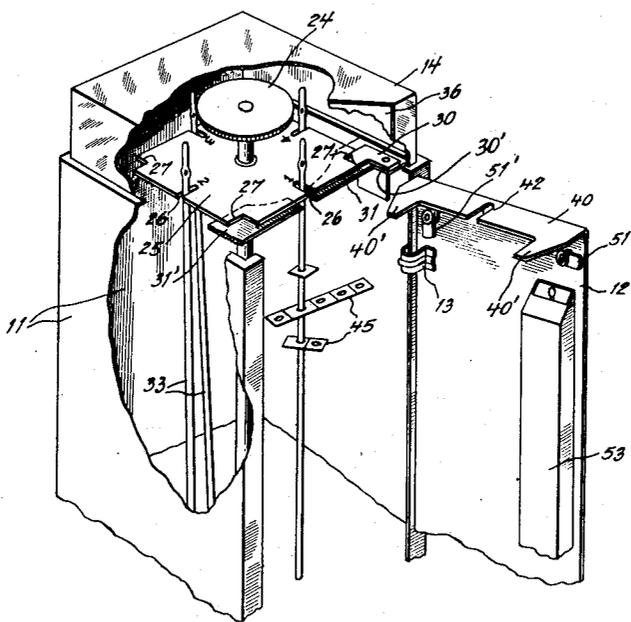
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3 Sheets-Sheet 3

Fig. 2



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UNITED STATES PATENT OFFICE

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TICKET STACKING MACHINE

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Application April 12, 1950, Serial No. 155,483

2 Claims. (Cl. 232-7)

1

This invention relates generally to ticket stacking machines and in particular to a machine incorporating new and useful improvements which will prevent the removal of ticket stubs placed therein by unauthorized persons.

Ticket stacking machines have been designed primarily for theater use wherein patrons purchasing tickets from a cashier, usually located at the entrance thereto, present the said tickets to a ticket collector for admittance therein. The ticket collector is normally located apart and away from said cashier. The said ticket collector upon receiving a ticket from a patron, tears the ticket in half, returning one half to the patron and depositing the remaining half in the ticket stacking machine. The tickets utilized therewith are pre-perforated with apertures centrally positioned in each half thereof. A rod is provided which extends through the stacking machine and upon which the retained half is positioned and allowed to slide down into a suitable storage receptacle. To prevent fraudulent practices such as reselling of surrendered tickets, the retained half is stacked in sequence in the said ticket stacking machine. It is a normal assumption that each patron upon the purchase of a ticket will proceed directly to the ticket collector, therefore the pre-numbered tickets will be stacked in a substantially consecutive order. Any subsequent auditing of the stacked tickets which discloses undue variation in the order or sequence of stacking will immediately call attention to the possibility of fraud.

Conventionally, patrons do not request the return of half of the ticket when the said ticket is surrendered, therefore the ticket-taker may refrain from performing the required mutilation and subsequently return the ticket to the cashier for resale. Especially when several tickets are surrendered simultaneously, one or more may be retained without detection. Obviously, the serial number of the resold ticket, when subsequently deposited in the stacking machine, will not conform to the numerical order of adjacent stacked tickets.

To circumvent the protection heretofore offered by said stacking machines, the dishonest ticket-taker will, prior to the auditing thereof, unscrupulously remove the stacked tickets through the depositing slot, rearrange the order and restack, to avoid detection.

Therefore, the instant invention has for an important object thereof, the provision of means which prevent the removal of stacked tickets by unauthorized persons.

2

Another object provides for a novel ticket to be used in conjunction with said stacking machine.

A further object provides for means whereby a string of tickets may be stacked by the positioning of a single ticket on the stacking rod.

A still further object provides for an improved ticket-stacking mechanism.

Other ancillary objects will be apparent from the following detailed description when read in the light of the drawings in which Fig. 1 is a perspective view of a stacking machine embodying the principles of the invention with the outer casing broken away to illustrate the stacking mechanism.

Fig. 2 is a perspective view of the machine illustrating part of the stacking mechanism.

Fig. 3 is a sectioned side elevational view of the stacking machine.

Fig. 4 is a plan view thereof broken away to illustrate the spindle latching mechanism.

Fig. 5 is a plan view of plural tickets illustrating the aperture therein and the score lines thereon.

Referring to Figs. 1 and 2, the stacking machine illustrated therein is arranged to be mounted within a casing or housing including a base 10, side walls 11, a side wall or door 12 pivotal on hinges 13 and an upper wall or cover 14.

Centrally positioned within the housing is a vertical shaft 15 which is journaled in a suitable bushing 16 secured to the base wall 10. A substantially square plate 17 is secured to the shaft 15 and is rotatable therewith, the dimensions of the plate being relatively less than those of the base 10. Secured to the plate 17 is a bracket 20 having a downwardly extending arm thereon. The plate 17 rotatable through 360° is stopped from further rotation by means of a fixed blocking member 21 secured to the door 12 and having a laterally extending arm thereon which lies in the circular path of bracket 20.

Formed in the plate 17 are plural apertures 22 which are individually disposed in each of the corners thereof. Adapted to be secured in the apertures 22 are the lowermost ends of coil springs 23, the purpose of which will be hereinafter apparent.

Secured to the upper terminal of the shaft 15 is a knurled knob 24 which is utilized to impart rotation to the said shaft. Adjacent the knob 24 is a substantially square plate 25 also secured to the shaft 15 and rotatable therewith. Recessed in each side of plate 25 are slots 26 and in each corner of the said plate detents 27

3

are provided. Cooperable with detents 27 is a spring loaded pawl 30 which is pivotally secured to a supporting bracket 31 fast on a side wall 11. The pawl 30 is spring urged into engagement with a detent 27 and permits rotation of the shaft 15 in one direction while locking the plate 25 against rotation in the other direction. As shown in Fig. 2, plate 25 may be rotated counter-clockwise with the pawl 30 being displaced against the tension of a spring, not shown. Secured to the opposite side wall 11 is a second bracket 31' with the space between the inner end thereof and the end of bracket 31 being analogous to the width of a slot 26.

Arranged to be disposed between the plates 25 and 17 are plural spindles 33, the lower ends of which are secured within the upwardly extending coil springs 23, Fig. 3. The portions of plate 17 supporting the springs 23 are bent upwardly so that in the normal position, the latter are biased inwardly toward the center shaft 15. The biasing action thereof urges the spindles 33 therein into intimate engagement with the inner terminals of the slots 26 of the plate 25.

Formed in the cover 14, Figs. 1, 2, 3 and 4, is a recess 35 defined by the inwardly leading side walls 36 and a rear wall 37, the latter being provided with a transverse aperture 38 through which a portion of the knob 24 extends. The base wall of the recess 35 consists of an exposed portion of plate 25 and a flange 40 inwardly extending and formed on the door 12. The flange 40, with the door 12 in closed position, is arranged to overlie the edge of plate 25 with the space therebetween forming a throat 41. A slot 42, recessed in the inner edge of the flange 40, aligns with the related aforementioned slot 26 to permit the passage of a related spindle 33 therein.

Adapted to be positioned on the exposed portion of the spindle 33, are tickets 45, Fig. 5, which have preperforated therein apertures 46, the diameters of which are relatively larger than the diameter of the spindle 33. Therefore, the placement of a ticket 45 on the spindle is readily accomplished. The impaled ticket then falls by gravity into contact with the exposed portion of plate 25 and is positioned parallel to the edge of plate 25 by means of the guide member 37' which is secured to the wall 37. The guide member 37' is partially inclined to initially position the said ticket while the lower portion thereof is vertical and parallel to the spindle 33 for guiding the ticket or strip of tickets into a parallel relationship with the throat 41. It will be noted that the length of the exposed portion of plate 25 is sufficient to accommodate a strip of several tickets. The impaled tickets 45 now lie on the same plane as that of the throat 41, therefore the outwardly manual displacement of the spindle 33 carries the said tickets through the throat 41 to a position under the flange 40 wherein they are engaged by a stripper baffle 47 which may be resiliently secured to the flange 40. Obviously, when a strip of tickets have been positioned on the spindle 33 utilizing the aperture in a ticket other than the central ticket of the strip, that particular ticket will move forwardly through the throat 41 prior to the remainder thereof, thus disturbing the parallel relationship. However, the impaled ticket upon striking the stripper baffle 47 will effect realignment of the trailing tickets thereby positioning all of the tickets in the strip under the flange

4

40 and clear of the plate 25. The tickets 45 will normally slide downwardly by gravity. However, the stripper 47 further insures the free-falling thereof, Fig. 3. Subsequent release of the manual pressure on the spindle 33, repositions the impaled tickets under the plate 25. The novel tickets utilized herein, Fig. 5, are issued in strip form with the issuing machine, not shown, severing the desired number of tickets from a roll. The tickets 45 in addition to the aperture, have therein transverse score lines 48 which facilitate the tearing thereof.

When the first spindle 33 is filled, that is, the maximum number of tickets have been impaled thereon, the knob 24 may be rotated counter-clockwise and a fresh spindle 33 presented for use. Provided in the side walls 36 of recess 35 in the cover 14, are vertical slots 50, Fig. 1, which permit the passage therethrough of the exposed portions of the spindles 33. It will be noted that the brackets 31 and 31' guard against possible "ticket fishing" through the detents 27 where the plate 25 has been partially rotated. The brackets 31, 31' are positioned under the arc of travel of the detents 27 thereby preventing the insertion of a wire or fish hook therethrough to fraudulently remove the stacked tickets. With the plate 25 in normal position, Figs. 2 and 4, the inwardly extending portions 40' of the flange 40 effectively cover the related detents 27.

Upon reaching the fourth spindle 33 and the filling thereof, the machine must be emptied and reset. As shown in Fig. 2, the door 12 is provided with a suitable lock 51, the opening of which permits access to be had to the stacked tickets. Each of the spindles 33 has formed in the exposed portion thereof an aperture 52 through which a string or wire, not shown, may pass and the impaled tickets removed thereon, thus preserving the stacking sequence. The pawl 30 may be manually displaced and the shaft 15 rotated clockwise, removing the stacked tickets, until the first spindle 33 is positioned once again for the receiving of fresh tickets thereon.

The key lock 51', Fig. 2, operable independently of the lock 51, has a pivotal finger thereon which is employed to lock the pawl 30 against displacement thereby preventing the rotation of shaft 15, as would be desired during the period of time that the stacking machine is not in use. The lock 51' is positioned adjacent to and above the said pawl, and the finger thereon, when in downwardly extending position, abuts against the portion 30' of pawl 30 preventing the rotation thereof. A 90° rotation of the lock 51' finger displaces said finger free of the pawl thus permitting normal operation thereof.

It is readily observed that once the tickets have been stacked on the spindles, they cannot be removed except by opening the door 12, and cannot be removed by unauthorized personnel.

While one form or embodiment of the invention has been shown and described herein for illustrative purposes, and the construction and arrangement incidental to a specific application thereof have been disclosed and discussed in detail, it is to be understood that the invention is not limited to the mere details or relative arrangement of parts, nor to its specific embodiment shown herein, but that extensive deviations from the illustrated form or embodiment of the invention may be made without departing from the principles thereof.

What I claim is:

1. In a machine of the character described in-

5

cluding a housing having fixed side walls, a base, a cover and a door, a vertical shaft journaled therein, a knob thereon, a base plate secured to said shaft and rotatable therewith, an upper plate secured to said shaft and rotatable therewith, a plurality of spindles arranged to be supported on said base plate, said upper plate having narrow, inwardly extending slots arranged to receive said spindles therein; biased resilient means on said base plate for securing said spindles thereon; a downwardly extending recess formed in said cover including fixed side walls and a rear wall, the base wall thereof formed by a portion of said upper plate and a rearwardly extending flange adjacent the upper end of the door, said flange being disposed in spaced relation thereto to form a throat therebetween, said flange having a slot therein alignable with said upper plate slot, an exposed portion of one of said spindles providing gripping means for the manual displacement thereof in the combined slots to move tickets impaled thereon through said throat, and ticket stripping means to urge said tickets downwardly on the unexposed portion of said spindle.

2. In a ticket stacking machine of the character described, an enclosed housing having a ro-

6

tatable spindle assembly therein, a plurality of ticket spindles thereon, means whereby a portion of each spindle may extend through said housing, said exposed spindle portion arranged to receive tickets thereon which are pre-perforated with an aperture therein having a greater diameter than the spindles, means for permitting the entry of said tickets into said housing, the latter means comprising a narrow throat formed by a plate on the spindle assembly and an overlapping flange disposed in spaced relation thereto on the front wall of the housing, guide means for positioning said tickets parallel to said throat prior to the entry therein, ticket stripping means for positioning said tickets parallel to said throat after the passage therethrough, and said tickets inaccessible for removal except by the displacement of said flange.

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