

March 26, 1929.

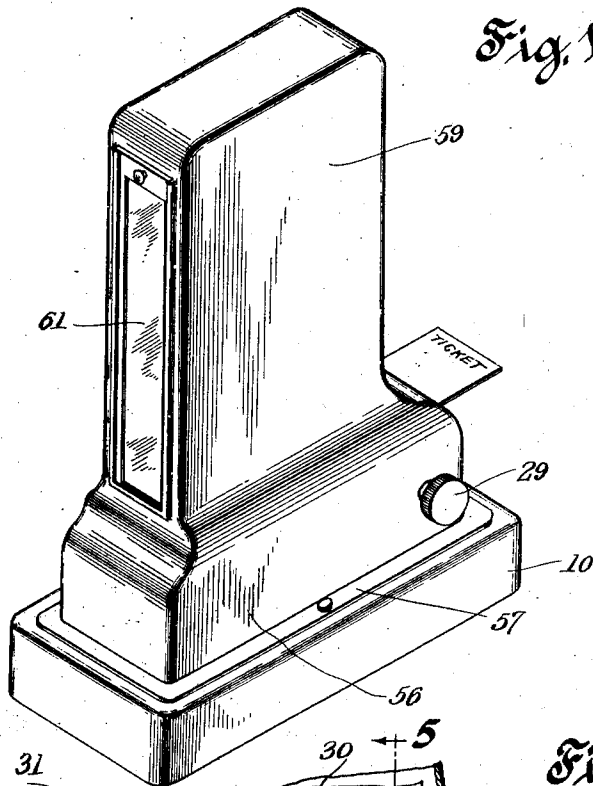
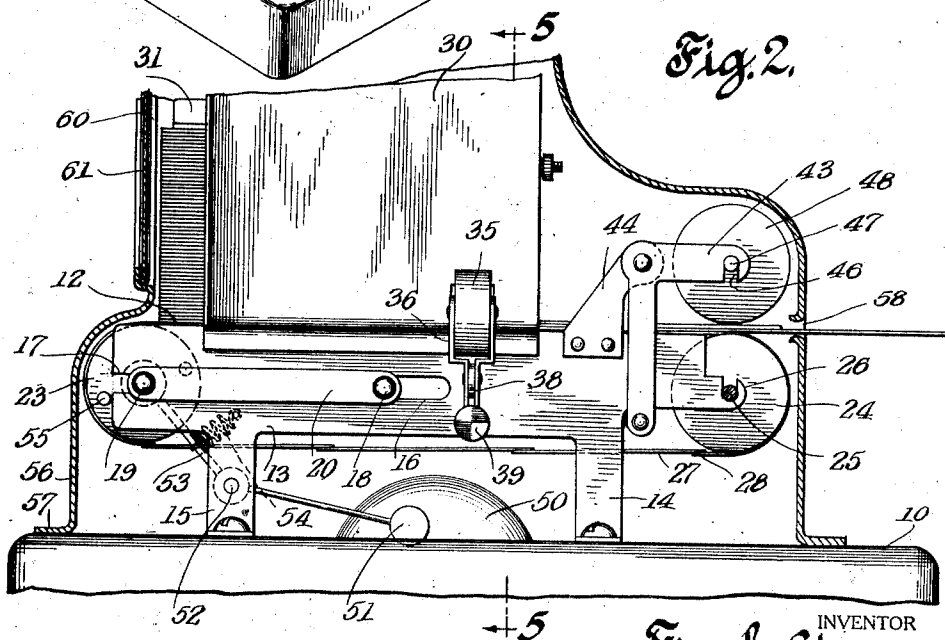
F. SIMONE

1,707,144

TICKET DISPENSING MACHINE

Filed May 17, 1923

2 Sheets-Sheet 1



INVENTOR
Frank Simone
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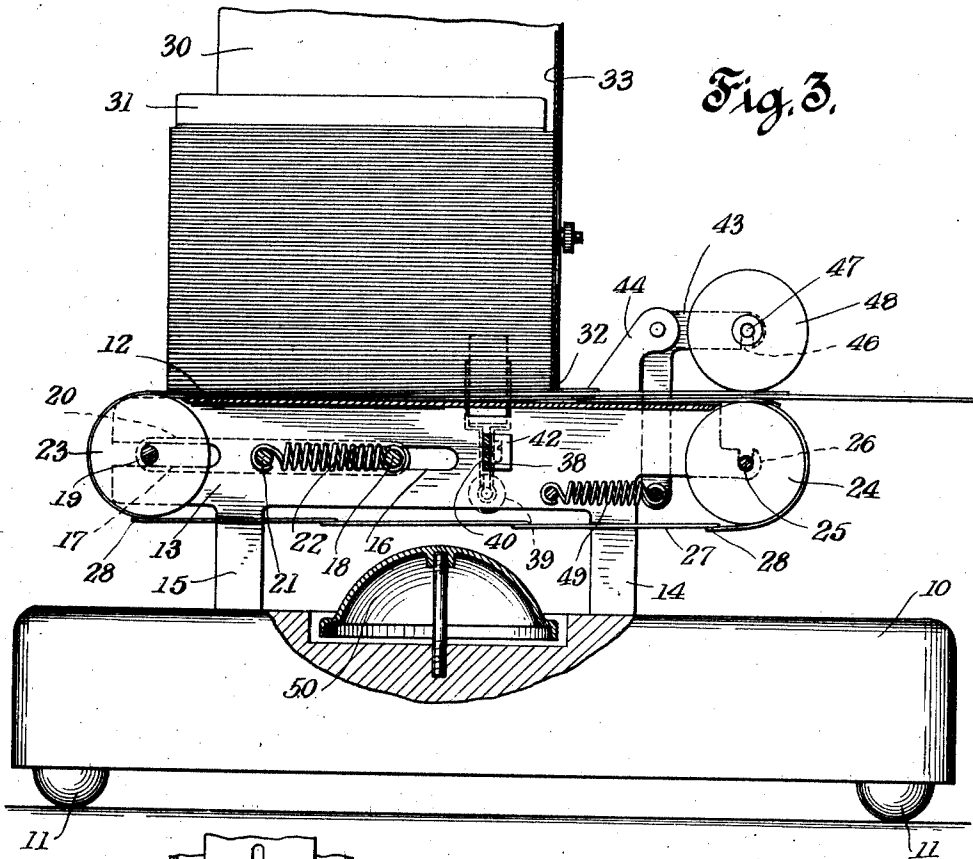
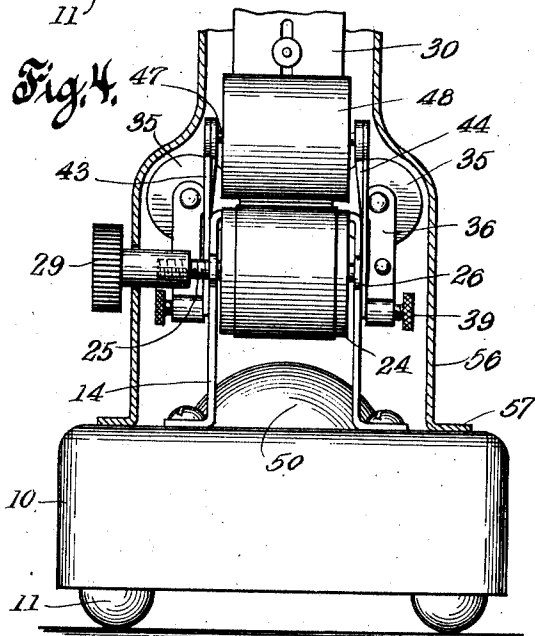
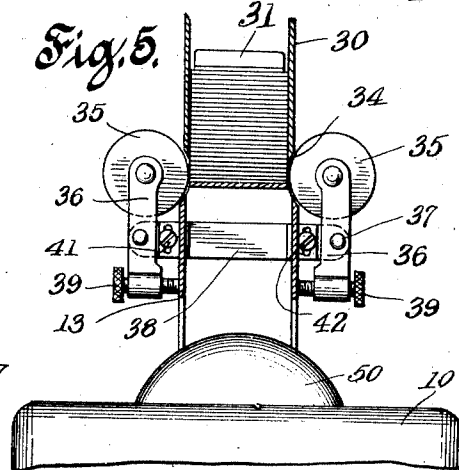
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TICKET DISPENSING MACHINE

Filed May 17, 1923

2 Sheets-Sheet 2



INVENTOR
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UNITED STATES PATENT OFFICE.

FRANK SIMONE, OF NEW YORK, N. Y.

TICKET-DISPENSING MACHINE.

Application filed May 17, 1923. Serial No. 639,494.

This invention relates to ticket dispensing machines and has as one of its objects to provide an apparatus capable of delivering a single ticket from the bottom of a stack or pile in an unfailing, positive manner, the end of the ticket being presented so as to be conveniently grasped to complete its extraction.

Another purpose is to produce a ticket dispensing mechanism of extreme simplicity, composed of few parts completely encased and protected from injury, and which is neat and attractive in appearance.

A further aim is in the provision of means for adjusting the tension on the tickets, providing for variations in their width and thickness, and also for audibly announcing the removal of each ticket.

These and other like aims and objects are accomplished by the novel construction, combination and arrangement of parts hereafter described and shown in the accompanying drawings, forming part of this disclosure, and in which:—

Figure 1 is a perspective view of an embodiment of the invention.

Figure 2 is an enlarged fragmentary side view, the casing and protruding parts being shown in section.

Figure 3 is a partial central longitudinal sectional view of the same.

Figure 4 is a front elevational view of the apparatus, with the casing removed.

Figure 5 is a transverse sectional view taken in a plane represented by the line 5—5 of Fig. 2.

Unlike most mechanisms for performing similar purposes, this apparatus is small, compact and wholly devoid of power actuated means, motors, shears and other appurtenances, expensive, intricate and readily liable to failure, beside taking up much valuable space.

The present invention includes a relatively heavy, oblong rectangular base 10 provided with rubber feet 11 adapted to rest upon the surface of any convenient support.

A frame, comprised of a sheet metal plate, is formed to present a level platform 12 having downturned integral sides 13 arranged in parallel and provided with pairs of supports 14 and 15, respectively near the front and rear, these supports being turned outwardly at their extremities and secured to the base 10.

Midway in the length of the sides 13 and

also in their rear portions, are elongated horizontal slots 16 and 17 the latter extending through the ends and passing freely through the slots 16 is a transverse rod 18, the extending ends being rigidly fixed in the ends of a pair of horizontal bars 20 slidable adjacent the sides 13, these bars having between them, at their rear ends, a spindle 19 slidable in the slots 17.

A pin 21, fixed to extend between the side plates 13, parallel and between the slots, has secured to it one end of a tension spring 22, the other end of the spring engaging the rod 18 in such manner that the bars are normally drawn toward the rear.

Mounted on the spindle 19 is a friction wheel or roll 23 and a similar wheel 24 is mounted in a like manner on a spindle 25 removably engaged in bracket 26 at the extreme forward ends of the sides 13.

Trained over the wheels 23 and 24 is an endless conveyor belt 27 having at regular spaced intervals, raised, outstanding transverse ledges 28, the inner side of this belt moving lengthwise over the surface of the platform 12 and in close proximity to it.

Due to the pull of the spring 22 the belt 27 will be maintained uniformly taut and under an even tension, irrespective of conditions which may tend to change the length of the belt.

The spindle 25 extends outward beyond the frame and is provided with a knurled knob 29 by which rotary motion may be given the wheels and cause movement of the conveyor belt during the initial operation of the device, this knob being so arranged as to turn the spindle in a forward direction only.

Secured to the upper portion of the sides 13 is a container 30 the same having its side walls spaced to receive a stack of the tickets, entered through the open back so that their forward ends are against the front wall of the container, a weight 31 being used to assure a gravity feed downward upon the surface of the belt as supported by the platform.

The front wall of the container is formed with a transverse opening 32, the operative height of which is controlled by an adjustable shutter plate 33 held in positive adjustment by a stud fixed in the plate to pass through a slot in the front of the casing by a thumb nut, in conformity with the thickness of the tickets to be dispensed.

In order to further retard and prevent more than one ticket from being issued at each operation, openings 34 are formed in the side walls of the container near the front, the platform and its side walls being recessed in register with them, these openings permitting the entrance of relatively soft friction rolls 35 supported in forked brackets 36.

These brackets are pivotally mounted on pins 37 carried at the ends of a bar 38 and are provided at their opposite lower ends with adjusting screws 39, the points of which impinge on the frame sides 13 below the slot 40 through which the bar 38 passes, said bar being adjustably mounted, as at 41, on brackets 42 secured to the sides 13.

From the foregoing it will be seen that the pressure rolls 35 may be adjustably raised or lowered with reference to the platform 12 and exert frictional pressure on the opposite edges of the tickets, this pressure being controlled by the screws 39, as best seen in Fig. 5.

A pair of bell-crank levers 43 are pivoted on pins fixed in brackets 44 secured to the sides 13 their upper horizontal elements extending forward and are provided with recesses 46 to receive a spindle 47 on which is mounted a wheel 48, the same being a duplicate of the wheel 24 positioned directly below.

Due to the mounting of the wheel 48 it is held normally in contact with the mating wheel by means of tension springs 49 engaging the lower elements of the bell-crank levers 43 below their pivot pins, these springs being attached at their opposite ends to the sides 13 as shown in Fig. 3.

Fixed on the base 10, below the platform 12, is a bell 50 having a hammer 51, the same being pivoted at 52 to the rear legs and having an arm extension 53 drawn upwardly by a spring 54, this extension being so disposed as to be struck by pins 55 fixed in the side of the wheel 23.

Disposed over all the foregoing mechanism is a casing, the lower expanded portion 56 of which is provided with a circumambient flange 57 resting on the base 10 to which it is secured.

The spindle 25 extends so that the knob 29 may be engaged with it for turning the wheels in a forward direction only.

A slot 58 is formed through the front of the casing in register with the surface of the platform 12 and in the plane of peripheral contact of the wheels 24 and 48, the edges of the slot being inturned and smoothly finished to permit a ticket to readily pass through.

The upper portion 59 of the casing is reduced in cross section to loosely engage over the container 30, completely enclosing the same and is provided with an opening 60

in its rear wall through which tickets may be supplied to the container, this opening having a cover 61, such as a swinging door or sliding plate as shown.

In operation, the receiver 30 having been supplied with a quantity of tickets uniform in dimensions, the shutter 33 will be adjusted to permit the proper discharge of the single tickets. Upon turning the knob 29, if it be the first ticket to be discharged, the wheel 24 will be rotated, conveying motion to the belt 27 which runs over the idle wheel 23, being thereby stressed, and also over the platform 12, the upper run of the belt moving towards the front.

One of the ledges 28, carried by the belt, engages the lowermost ticket, held flat upon it by the stack and weight 31, and also held tensionally between the rolls 35, this tension restraining the next upper adjacent tickets from movement, in addition to the shutter 33.

As the ticket is pushed outwardly it is caught between the friction wheels 24 and 48, held in normal contact by the springs 49, until it is extended through the delivery slot 58 where it is grasped by the fingers of an operator and fully withdrawn.

As less than half the length of the ticket has been extended past the wheels 24 and 48, the act of pulling the ticket fully free causes the wheels to further rotate and present the end of the next ticket for a subsequent operation.

The distance between adjacent ledges on the belt is equivalent to half the length of a ticket and as the belt is moved at each operation the full length of a ticket it will be apparent that as one ticket is discharged another will be in position to take its place, there being normally two tickets between the wheels 24 and 48 and a third ticket, emerging from below the shutter plate 33.

It will also be understood that the bell will be struck at least once at the discharge of each ticket, thereby calling attention to the use of the machine.

Although I have described my improvements with considerable detail and with respect to certain particular forms of my invention, I do not desire to be limited to such details since many changes and modifications may well be made without departing from the spirit and scope of my invention in its broadest aspect.

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

1. A dispensing machine for stacked tickets comprising a ticket container, a conveyor belt movable below the container, said belt being composed of a series of flexible plates overlapping at their advancing ends and presenting abutments for engaging the lowermost ticket in the stack, and means di-

rectly operated by the withdrawal of one ticket for advancing said belt to project another ticket into dispensing position.

2. A dispensing machine for stacked tickets comprising an endless belt movable below the ticket stack, said belt engageable with the lowermost ticket, adjustable means impinging on the lateral edges of the tickets at their front ends for frictionally retarding the tickets, and means for advancing said belt a definite distance by the removal of successive tickets engaged therewith.

3. A dispensing machine for stacked tickets comprising a frame, friction rolls revoluble at the ends thereof, an endless belt trained over said rolls, the ticket resting on said belt, raised transverse abutments at spaced intervals on said belt for engaging the lowermost ticket in the stack, friction rolls disposed on opposite sides of the tickets resting on said belt, means for adjusting the pressure of said rolls, and manual means for actuating said belt to cause delivery of successive tickets.

4. A dispensing machine for stacked tickets comprising a frame, friction rolls revoluble at the ends thereof, an endless belt trained over said rolls on which the tickets rest, means on said belt for engaging the bottom ticket in the stack, friction rolls disposed on opposite sides of the tickets adjacent said belt, means for adjusting the pressure of said rolls, means for adjusting the

plane of said rolls relative to the plane of the belt, and means for actuating said belt to cause delivery of successive tickets.

5. A dispensing machine for stacked tickets comprising a frame, a friction drive roll at one end, an idle roll at the other, an endless belt trained over said rolls on which the tickets rest, means for manually rotating said drive roll in one direction whereby said belt is moved to advance a ticket from the stack, an elastic roll spring pressed directly upon said friction drive roll to exert tension on tickets extended therebetween, the withdrawal of the ticket causing advancement of said belt, a lever on each side of said frame, friction rolls carried at one end of said levers to impinge on the edges of the lowermost tickets, the last named rolls being rotatable on horizontal axes, and means at the other ends of said levers to press the rolls adjustably into operative engagement with the tickets to retard delivery thereof.

6. A dispensing machine for stacked tickets comprising a belt movable below the ticket stack, means on the belt for engaging the lowermost ticket, means impinging on the edges of the tickets for retarding the tickets, and means for advancing the belt by the removal of successive tickets.

In testimony whereof I have signed my name to this application.

FRANK SIMONE.