May 19, 1953 M. E. ADAMS 2,639,148

TICKET DISPENSING APPARATUS

Filed May 1, 1948 2 Sheets-Sheet 1

FIG. 1

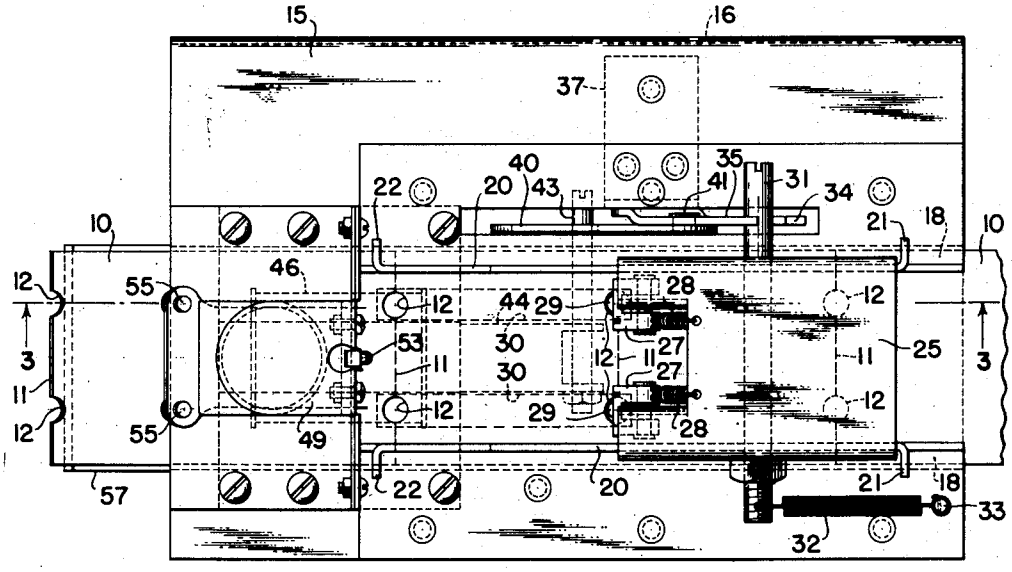
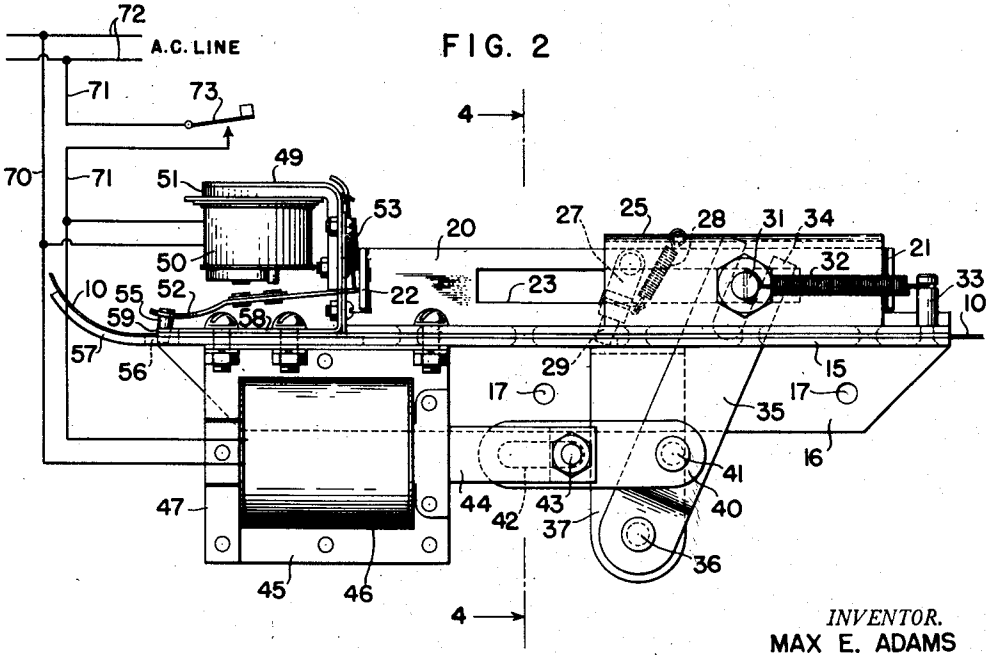


FIG. 2



INVENTOR.
MAX E. ADAMS

BY

ATTORNEY.

May 19, 1953 M. E. ADAMS 2,639,148

TICKET DISPENSING APPARATUS

Filed May 1, 1948 2 Sheets-Sheet 2

FIG. 3

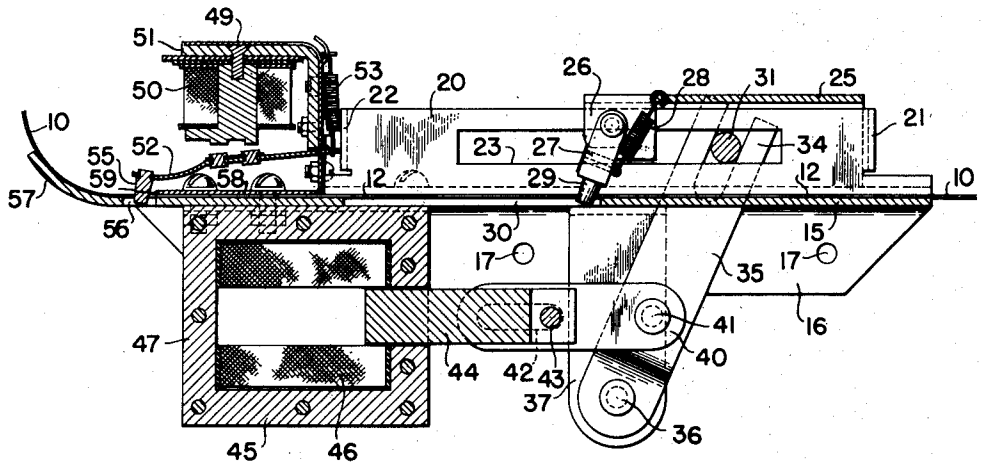


FIG. 4

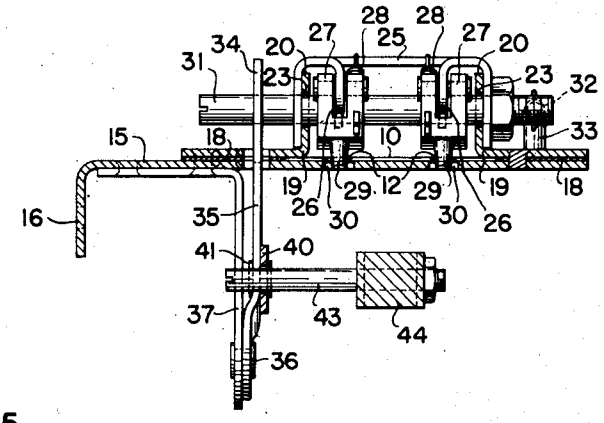
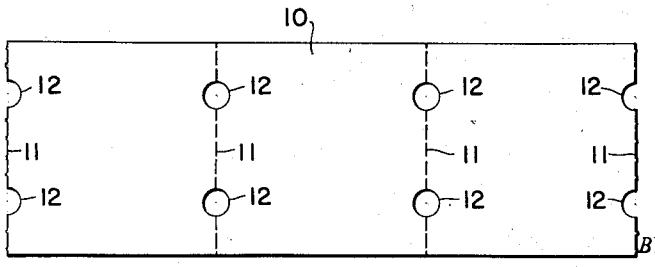


FIG. 5



INVENTOR.
MAX E. ADAMS
BY Z. T. Wolcensmith 2d
ATTORNEY.

Patented May 19, 1953

2,639,148

UNITED STATES PATENT OFFICE

2,639,148

TICKET DISPENSING APPARATUS

Max E. Adams, Wilkes-Barre, Pa.; Francis Adamski Adams, administratrix of said Max E. Adams, deceased

Application May 1, 1948, Serial No. 24,502

3 Claims. (Cl. 271—2.5)

1

This invention relates to ticket dispensing apparatus.

It is the principal object of the present invention to provide ticket dispensing apparatus which is positive in its action and in which unauthorized extraction of tickets is prevented.

It is a further object of the present invention to provide ticket dispensing apparatus having improved mechanism for effecting a positive delivery of a ticket.

It is a further object of the present invention to provide ticket dispensing apparatus having improved provisions for preventing the unauthorized extraction of tickets.

It is a further object of the present invention to provide improved ticket dispensing apparatus which is capable of operation from any predetermined location, near or remote.

It is a further object of the present invention to provide ticket dispensing apparatus which may be installed in game and amusement apparatus now in use for distributing tickets indicating the successful accomplishment of a particular play or of a winning play.

Other objects and advantageous features of the invention will be apparent from the specification and claims.

The nature and characteristic features of the invention will be more readily understood from the following description, taken in connection with the accompanying drawings forming part hereof, in which:

Figure 1 is a top plan view of a ticket dispensing apparatus in accordance with the present invention;

Fig. 2 is a side elevational view of the apparatus shown in Fig. 1;

Fig. 3 is a transverse vertical sectional view taken approximately on the line 3—3 of Fig. 1;

Fig. 4 is a vertical sectional view taken approximately on the line 4—4 of Fig. 2; and

Fig. 5 is a plan view of a strip from which the tickets are taken.

Like numerals refer to like parts throughout the several views.

It should, of course, be understood that the description and drawings herein are illustrative merely, and that various modifications and changes may be made in the structure disclosed without departing from the spirit of the invention.

The apparatus of the present invention is particularly adapted for dispensing tickets or coupons from a continuous strip. As shown more particularly in Fig. 5, by way of illustration, the strip

2

10 from which the tickets are taken is initially continuous and, at predetermined spaced intervals therealong and providing the ends of the respective tickets, has weakened or perforated lines 11 transversely disposed and openings 12 in the lines 11, transversely spaced for effecting the advancing of the strip, as hereinafter explained. The ticket strip 10 may be stored in any desired manner, such for example as in a coil (not shown), or in other preferred arrangement. The ticket strip 10 may, of course, be of different width if desired.

Referring now more particularly to the drawings of the device, a base plate 15 is provided, which may have along one edge thereof, a flange 16 with openings 17 for mounting the dispenser at the desired location. The base plate 15 is provided, on the upper face thereof, with longitudinally extending spaced strips 18 facing walls of which provide guides for the side edges of the ticket strip 10.

The strips 18 have mounted thereon longitudinally extending rails 19 which extend inwardly and, with the upper face of the base plate 15 and the inner walls of the strips 18, provide a channel for the ticket strip 10.

Each of the rails 19 is provided with a vertical or upstanding flange 20, the ends 21 and 22 of which are transversely disposed to provide stops. Each of the flanges 20, intermediate the ends 21 and 22, has a longitudinally extending slot 23 therein. The flanges 20, between the stops 21 and 22, provide a track for horizontal movement of a carriage 25 of inverted U or channel shape.

At the front end of the carriage 25 downwardly extending legs 26 are provided on each of which a pawl 27 is mounted. Each of the pawls 27 is adapted to be stopped at a rearward position by engagement with a portion of the leg 26 and each is preferably resiliently urged to its rearward position by a tension spring 28. The pawls 27 each has a lower terminal end portion 29 which extends downwardly for longitudinal movement in a slot 30 in the base plate 15. A transverse rod 31 is provided, mounted on the carriage 25, at one end of the rod 31, a tension spring 32 is secured, the other end of the spring 32 being secured to a post 33 fixedly mounted on the base plate 15. The other end of the rod 31 is adapted for engagement by the bifurcated end 34 of an actuating lever 35. The lever 35 is pivotally mounted by a pivot pin 36 on a downwardly extending bracket 37 carried by the base plate 15.

An actuating link 40 is provided, pivotally connected to the lever 35 by a pivot pin 41 and has

an elongated slot 42 at the forward end thereof for engagement by an actuating pin 43 carried by an armature 44 of a solenoid 45. The winding 46 of the solenoid 45 is carried by a frame 47 secured to the under side of the base plate 15. At the front end of the base plate 15 and on the upper face thereof, a bracket 49 is provided on which the winding 50 of another solenoid 51 is mounted. The solenoid 51 has an armature 52, pivotally mounted with respect to the solenoid bracket 49, a tension spring 53 being provided for normally moving the armature 52 away from the winding 50.

At the outer end of the armature 52 a pair of locking pins 55 are provided which are adapted to extend downwardly through openings 56 in the base plate 15, when the armature 52 is in its lowermost position and which, upon energization of the winding 50, are adapted to be retracted for permitting the advance of the ticket strip 10 and the delivery of a ticket.

At the front end of the base plate 15 a forwardly disposed upwardly curved extension 57 is provided for guiding the forward end of the ticket strip 10 upon its advance. The bracket 49 has a forwardly extending portion 58 with a front edge 59 which serves for aiding in the manual severing of a ticket from the ticket strip 10 at the line 11 presented at that edge.

The electric circuit for effecting actuation of the ticket dispensing apparatus is illustrated in Fig. 2 and includes conductors 70 and 71 connected to a suitable source 72 of electrical energy such, for example, as the power leads of a 110 volt 60 cycle alternating current source. The conductor 70 extends to one of the terminals of the winding 50 of the solenoid 49 and to one of the terminals of the winding 46 of the solenoid 45. The conductor 71 has a switch 73 in series therein, and extends to the other terminal of the winding 50 of the solenoid 51, and to the other terminal of the winding 46 of the solenoid 45.

The switch 73 may be of any desired type, such as a conventional push button, or may be a switch actuated by contact by a projectile propelled or delivered thereagainst in any desired manner.

The mode of operation will now be pointed out.

With the conductors 70 and 71 connected to the source 72, the circuit for the solenoids 45 and 51 is normally in open condition and remains in such condition until the switch 73 is closed. When the circuit is in open condition, the solenoid 51 is deenergized and the armature 52 is held in its lowermost position by the spring 53 and with the locking fingers 55 extending downwardly in engagement in the openings 12 at the front end of the ticket strip 10 from which a ticket is to be dispensed. The solenoid 45 is also in deenergized condition and the carriage 25 is in its rearward position at the stops 21 and with the terminal ends 29 of the pawls 27 in engagement in openings 12 in the ticket strip 10 and extend into the slots 30.

Upon the closing of the switch 73 the circuit is completed therethrough to the winding of the solenoid 45 and to the winding of the solenoid 51. The energization of the winding 50 of the solenoid 51 causes the armature 52 to be moved, against the force exerted by the spring 53, to a position to withdraw upwardly the locking fingers 55 thereby to permit the advance of the ticket strip 10. At the same time the energization of the winding 46 of the solenoid 45 causes the armature 44 to move forwardly and advance the actuating pin 43 in the slot 42. The lost motion connection provided by the pin 43 and slot 42 permits of initial movement of the armature 44 during the interval required for the retraction of the locking fingers 55.

While the locking pins 55 are being retracted, further movement of the armature 44 is effective through the actuating link 40 and the actuating lever 35 for advancing the carriage 25 and the pawls 27 carried thereby, which pawls 27, by their forward movement, advance the strip of tickets 10 through the length of one ticket. The action of releasing and advancing the ticket strip 10 is, of course, very rapid.

Upon the release of the switch 73 the circuit is returned to its deenergized condition and the windings 50 and 46 of the solenoids 51 and 45 are again deenergized. Upon deenergization of the windings 50 and 46, the spring 32 effects a retracting of the carriage 25, the pawls 27 swinging against the tension of the springs 28 to a position to slide over the top face of the ticket strip 10 until they again enter the next openings 12 provided thereon. The ticket dispensing apparatus is then in condition for dispensing an additional ticket upon actuation of the switch 73.

It will be noted that the ticket strip is normally retained in locked condition to prevent unauthorized withdrawal of a ticket and that no ticket is available until, upon actuation of the switch 73 to closed position, the ticket strip is released and advanced the length of a single ticket, whereupon it is again locked and held until the switch 73 is again moved to closed position. The ticket advanced for withdrawal may then be readily severed along the line 11. The bracket portion 58 aids in maintaining the remainder of the ticket strip 10 in position so that the forwardly projecting ticket may be manually severed by tearing along the line 11, the front edge 59 facilitating the tearing.

The structure employed for this purpose is simple and rugged and free from likelihood of failure or operating difficulties in use.

I claim:

1. In ticket dispensing apparatus for tickets in a strip having equally spaced perforations, a base plate, guide members carried by said base plate for guiding the ticket strip, a carriage reciprocable on said base plate, resilient means for urging said carriage in one direction, a member carried by said carriage for driving engagement with a perforation in said ticket strip for advancing the same upon forward movement of the carriage and movable out of driving engagement upon return movement of said carriage, a locking lever having a pin engageable with the perforations in said ticket strip for preventing the advance thereof, a first solenoid for retracting said locking lever, a second solenoid for moving said carriage in the other direction, means including a switch for simultaneously energizing both of said solenoids, and means providing a lost motion connection between said second solenoid and said carriage whereby upon operating said switch means said first solenoid is energized to retract said lever prior to the time said second solenoid functions to move said carriage in the other direction.

2. Apparatus as defined in claim 1 wherein said member carried by said carriage includes a pawl having a terminal end portion for engagement in a strip perforation and resiliently urged downwardly on said strip.

3. Apparatus as defined in claim 1 wherein the armature of said first solenoid is normally biased to urge said locking lever downwardly in a perforation on said strip and the armature of said second solenoid reciprocates in a slot of an actuating link pivotally connected to the actuating lever for moving said carriage.

MAX E. ADAMS.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,124,577	Allen	Jan. 12, 1915
1,400,742	Grumstrup	Dec. 20, 1921
1,407,699	Marian	Feb. 28, 1922
2,250,530	Hafecost	July 29, 1941
2,263,721	De Lorme	Nov. 25, 1941
2,278,196	Fluharty	Mar. 31, 1942