

Jan. 28, 1936.

J. E. BALES

2,028,891

MACHINE STAND AND CABINET

Filed April 12, 1934

3 Sheets-Sheet 1

FIG. 1.

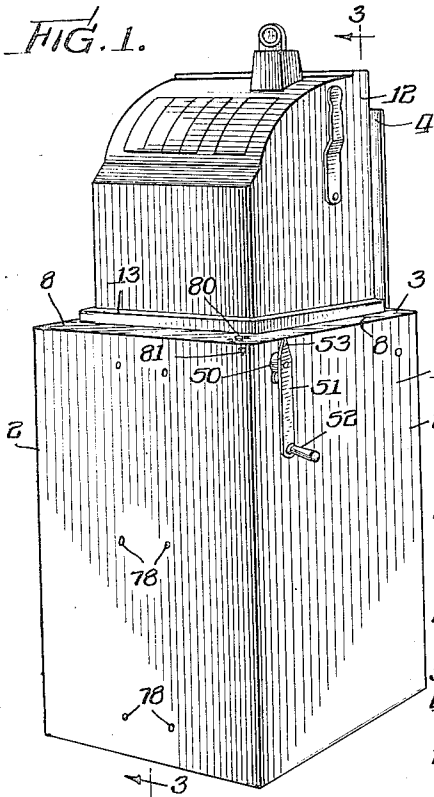


FIG. 2.

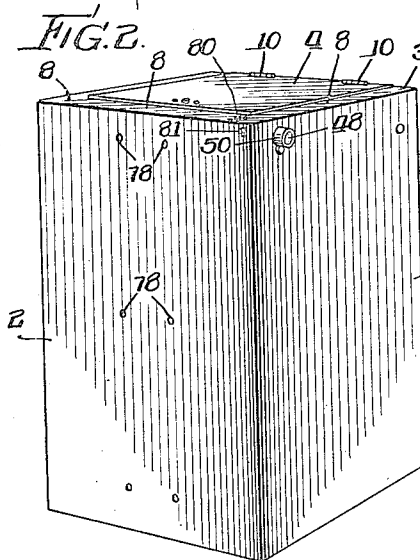


FIG. 4.

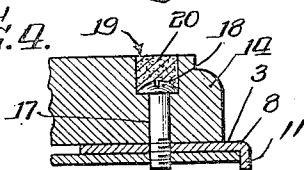
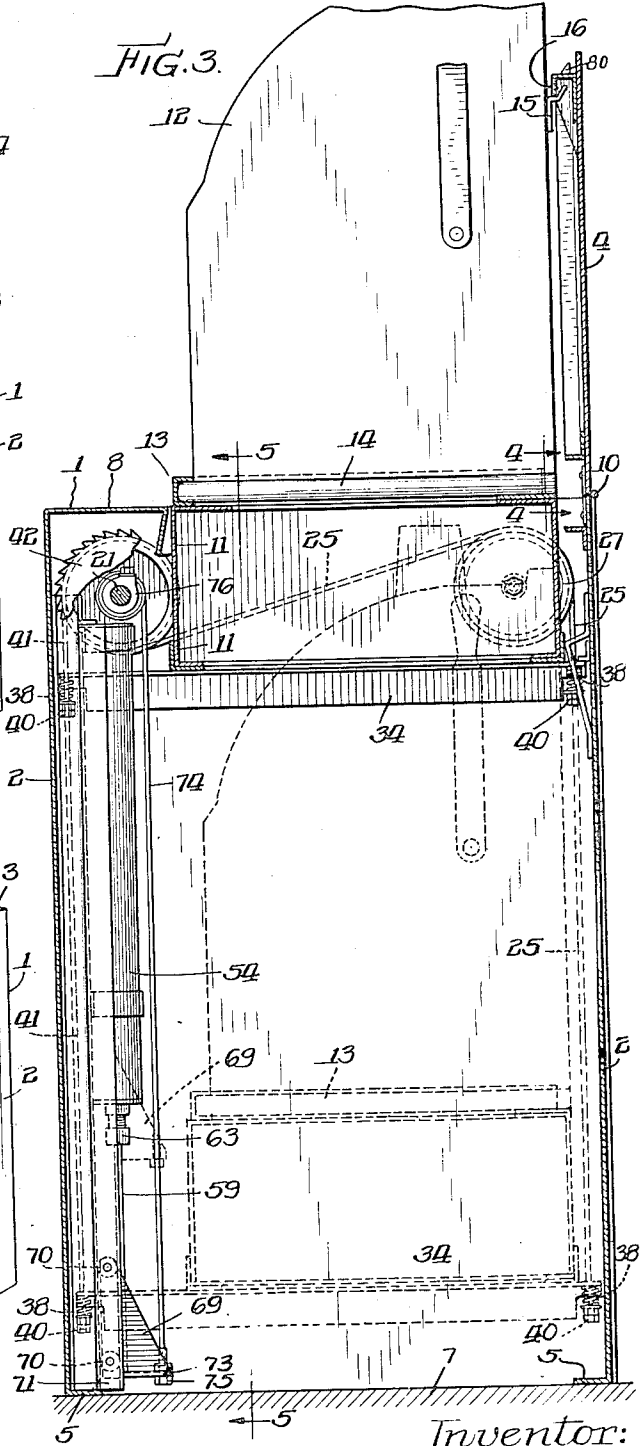


FIG. 3.



Inventor:
James E. Bales
By: Cox & Moore attys.

Jan. 28, 1936.

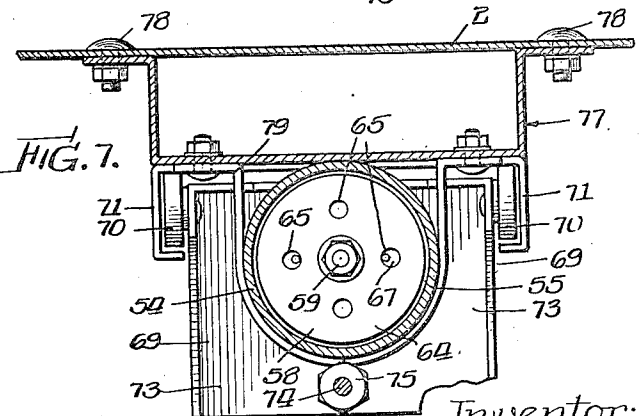
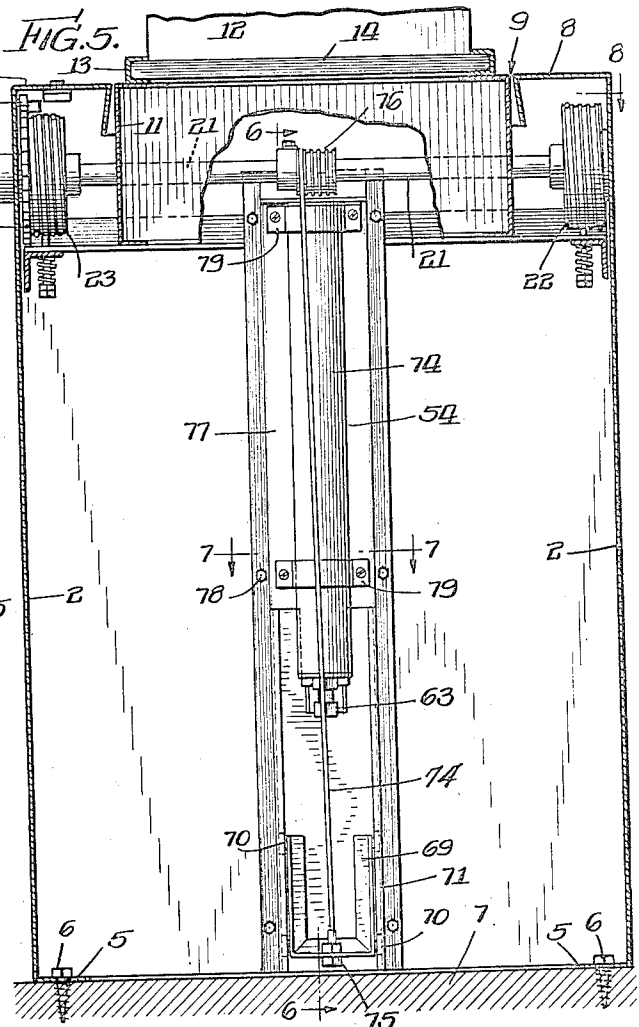
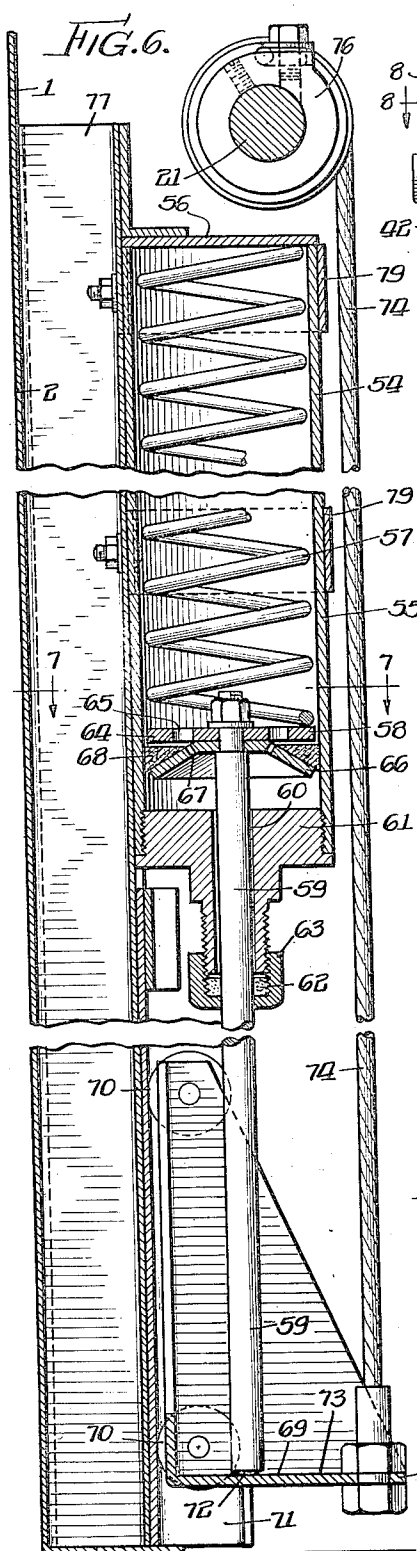
J. E. BALES

2,028,891

MACHINE STAND AND CABINET

Filed April 12, 1934

3 Sheets-Sheet 2



Inventor:
James E. Bales
By: Cox & Moore attys

Jan. 28, 1936.

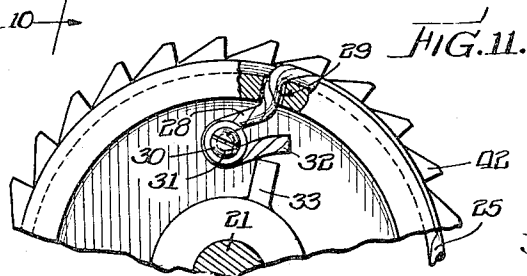
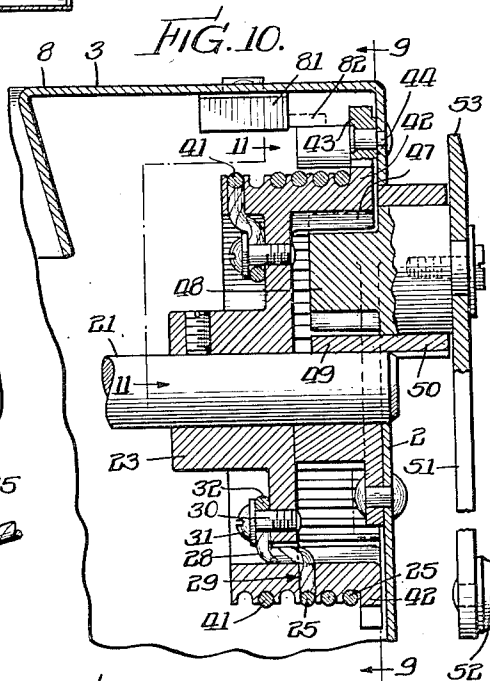
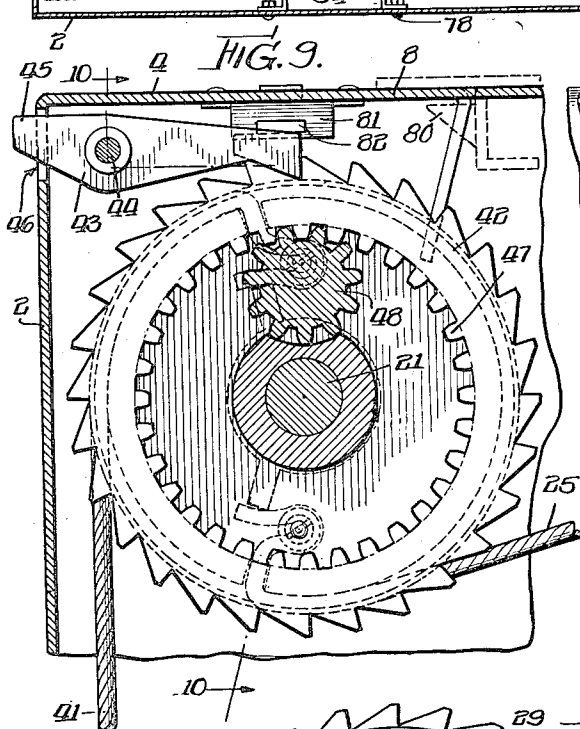
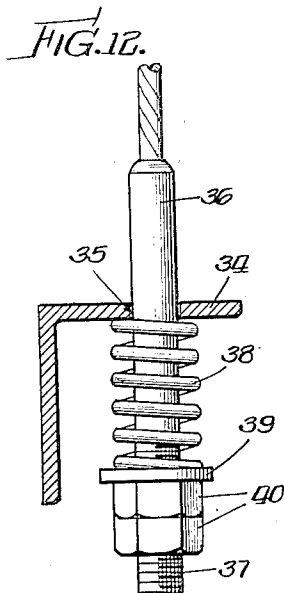
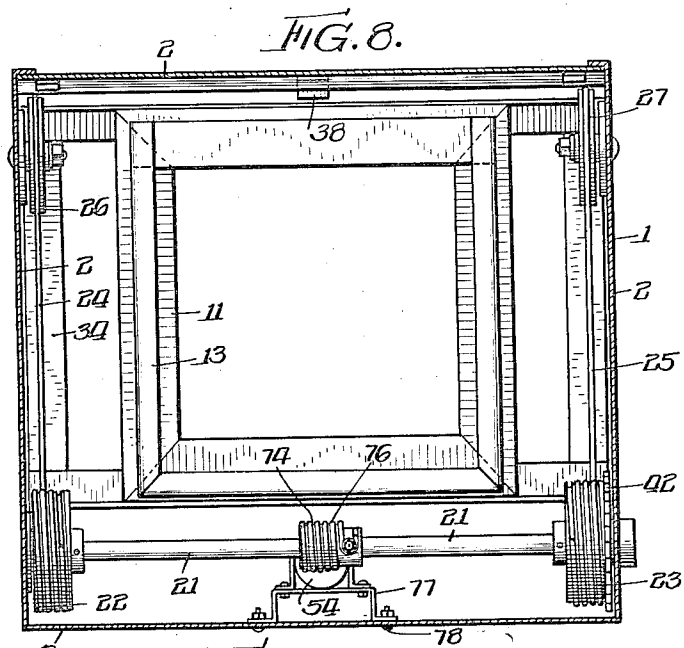
J. E. BALES

2,028,891

MACHINE STAND AND CABINET

Filed April 12, 1934

3 Sheets-Sheet 3



Inventor:
James E. Bales
By: Cox & Moore attys.

UNITED STATES PATENT OFFICE

2,028,891

MACHINE STAND AND CABINET

James E. Bales, Aurora, Ill., assignor to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois

Application April 12, 1934, Serial No. 720,187

11 Claims. (Cl. 109—1)

This invention relates to a machine stand, and particularly to a stand for slot machines, other machines, and/or display devices or other objects.

5 The primary object of the present invention is to provide a new and improved stand for machines, such as slot machines, which stand provides suitable means for mounting the machine and at the same time provides means manually operative for automatically and completely enclosing the machines when required whereby to prevent pilfering or unauthorized removal of the machine, such as a slot machine, whereby the machine is maintained in one position for operation and use when desirable and which provides a theft-resisting enclosure at times when the machine is not to be operated so as to prevent pilfering and unauthorized removal.

10 A still further object of the invention is to provide a base or support for a machine, such as a slot machine, to support the machine in a predetermined position, the support adapted to move by gravity upon the manipulation of control means at which time the support will move by gravity into a housing for the machine. There are means provided for raising the support by the operation of a crank.

15 Still another object of the invention is to provide a neat, compact, theft-resisting enclosure for a slot machine which enclosure is provided with means for supporting the machine in a predetermined operable position, the means being provided for raising and lowering the machine as desired and for completely locking the enclosure when the machine support and machine are housed in the enclosure.

Numerous other objects and advantages will be apparent throughout the progress of the following specification.

20 The accompanying drawings illustrate a selected embodiment of the invention and the views therein are as follows:

25 Fig. 1 is a detail perspective view of the improved closure and having a slot machine mounted thereon.

Fig. 2 is a similar view with the slot machine housed within the closure and the cover or lid locked in position.

30 Fig. 3 is a detail vertical sectional view on the line 3—3 of Fig. 1.

Fig. 4 is a detail sectional view on the line 4—4 of Fig. 3.

35 Fig. 5 is a detail vertical sectional view on the line 5—5 of Fig. 3.

Fig. 6 is a detail vertical sectional view on the line 6—6 of Fig. 5.

Fig. 7 is a detail transverse sectional view on the lines 7—7 of Figs. 5 and 6.

Fig. 8 is a detail plan section on the line 8—8 of Fig. 5.

Fig. 9 is a detail vertical sectional view on the line 9—9 of Fig. 10.

Fig. 10 is a detail vertical sectional view on the line 10—10 of Fig. 9.

Fig. 11 is a detail elevational view, partly in section, of the ratchet and gear showing the manner in which the cables are fastened thereto.

Fig. 12 is a detail elevational view showing the manner in which the free ends of the cables are attached to the machine supporting frame.

The device herein shown for the purpose of illustration comprises a cabinet 1 made up of four enclosing side walls 2 and a top 3 which includes a hinged cover or lid 4. The cabinet 1 has its side walls 2 made of sheet metal of suitable thickness. The lower free edges of the side walls are bent over to provide inwardly extending flanges 5. Fastening means 6 extend through the flanges 5, more clearly shown in Fig. 5, to fix the cabinet to a suitable base or floor 7.

The top 3 may be formed by bending inwardly the upper free edges of the side walls 2 to provide the surrounding surfaces 8. The surfaces 8 extend inwardly from the front and sides of the cabinet to the edge of the opening. The opening is closed by the lid 4 which is hinged at 10 to the rear side wall. A frame or platform 11, Figs. 3 and 5 adapted to support a machine 12, such as a slot machine, cash register or the like, is adapted to move vertically in the cabinet 1. The supporting frame 11 has a three-sided channel-shaped member 13 fixed thereon to slidably receive the base 14 of the machine 12, the base being slidably inserted in the member 13 from the rear side of the cabinet. The machine 12 is provided with a clip 15 on its rear side which is adapted to engage the flange 16 on the inner side of the lid at the free end thereof when the machine is raised as clearly shown in Fig. 3. Thus, when the machine is in its normal operating position outside of the cabinet, the machine will be supported on three sides by the member 13 and locked at its rear end by the engagement of the clip 15 with the flange 16. Clip 15 prevents the door being pulled away from the back of the slot machine when the latter is in an open, operating position. The base 14 of the machine may be fixed to the cabinet by fastening screws 55

17 having their heads 18 recessed in openings 19, Fig. 4. The openings above the heads 18 may be filled with suitable material 20 to prevent access from being had to the heads of the fastening members and therefore prevent unauthorized removal of the slot machine. As seen in Figure 3, the flange 16 is to the left of the pivot 10 when the cover 4 is in its fully opened position. The action of gravity upon the flange tends to move the cover counterclockwise to closed position. Accordingly, as the machine 12 descends, the cover follows bearing thereagainst, and the cover is automatically moved to closed position by gravity as the machine moves into the cabinet. The means for operating the platform 11 to bring the machine 12 into and out of the cabinet 1 comprises a transverse shaft 21 arranged inside of the cabinet near the front thereof and under the front edge 8. The shaft 21 is rotatably mounted in suitable bearings fixed to the side walls of the cabinet. Cable winding drums 22 and 23 are fastened to opposite ends of the shaft 21 as clearly shown in Fig. 8. Cables 24 and 25 have their ends fastened to the drums 22 and 23 respectively and pass over idler pulleys 26 and 27 respectively. The ends of the cables 24 and 25 are fastened to their respective drums by having their ends 28, Fig. 11, extending through an opening 29 in the drums and passing about pins 30 fastened to a face of each drum. These ends pass about the pin 30 as clearly shown in Fig. 11 and are held in locked position by a fastening member 31. The extreme end 32 of each cable is held in a predetermined position by a lug 33 formed on each drum, Fig. 11. The cables 24 and 25 are adapted to be wound and unwound on the drums 22 and 23 and are received in proper guiding grooves formed in the drums. The cables extend from the underside of the drums 22 and 23 and pass over the uppersides of their respective idler pulleys 26 and 27. The free ends of the cables 24 and 25 pass through the platform carrier 34, the carrier 34 comprising a frame made of connected angles. Each of the cables has its end passing through an opening 35 in the carrier 34, the same being fixed to a rod 36 which is screw threaded as indicated at 37, Fig. 12. A spring 38 is interposed between the bottom of the carrier 34 and a washer 39 which is mounted against the fastening nuts 40. The cables 24 and 25 operatively connect the rear side of the carrier 34 to the winding drums 22 and 23. The front side of the carrier 34 is connected to the drums 22 and 23 by two cables 41 fastened to the respective drums 22 and 23. The cables 41 pass about the upper side of their respective drums and have their free ends passing through the carrier 34 and connected thereto by the nuts 40 and the resilient interposed springs 38. The other ends of the cables are fastened to the drums in the same manner in which the cables 24 and 25 are fastened and as clearly shown in Fig. 11. The drum 23 has fixed thereto a ratchet 42, Figs. 9 and 10, which, cooperates with a pawl 43, Fig. 9, pivoted at 44 to the inside of the cabinet. The tail-piece 45 of the pawl 43, Fig. 9, passes through an opening 46 in one of the side walls 2 of the cabinet. The pawl 43 cooperating with the ratchet 42 keeps the shaft from rotating and maintains the carrier and its supporting platform in a predetermined position. The ratchet is free to slide over the ratchet tooth when the cables are wound on the drums to raise the platform. This ratchet pawl prevents the carrier and its cooperating platform from lowering except when

the pawl is out of engagement with the teeth. The ratchet 42 also comprises an internal ring gear 47 which meshes with an operating pinion 48, Figs. 9 and 10. The pinion 48 is revolubly mounted in a suitable bearing 49 fastened to the cabinet and having a part 50 thereof extending outwardly of the casing. An operating crank 51 having a handle 52 is adapted to operate the pinion 48. The crank 51, the handle 52 and the pinion 48, are preferably made as a single unit. The pinion part of this single unit is inserted into the bearing 49 whenever it is desired to raise the platform. When the pinion 48 is inserted into the bearing 49 and rotated by the handle 51, the shaft 21 will rotate and wind the two cables 41 and the cables 24 and 25 on the drums 22 and 23. As the cables are being wound, the carrier 34 and platform 11 will be raised. When it is desired to lower the platform 11 and its cooperating carrier 34, the pawl 43 is released from the ratchet 42. The pawl 43 can be conveniently released from the ratchet 42 by using the crank 51. For this latter purpose the crank 51 is provided with an operating end 53. The end 53 may be inserted in the part of the opening 46 above the upper edge of the tail-piece 45, Fig. 9, and a leverage applied on the tail-piece. Obviously the tail-piece 45 may be released by pressing down thereon by manual movement.

To prevent the carrier and platform with the machine 12 mounted thereon from dropping and falling when the pawl 43 is released from the ratchet 42, means are provided to retard the downward movement of the carrier 34 to allow the carrier and its cooperating platform to descend without shock or jar. Means for preventing the quick dropping of the carrier and for permitting retarded and cushioned movement of the carrier in its downward movement comprises a dash pot 54 mounted inside of the cabinet as shown in Figs. 5, 6 and 7, the construction of the dash pot being more clearly shown in Fig. 6. The dash pot 54 comprises a cylinder 55 having a closed upper end 56. The cylinder 55 contains a fluid, such as oil, and a spring 57 is arranged inside of the cylinder and engages the piston 58 which has slidable movement in the cylinder. A rod 59 is fastened to the piston and passes through an opening 60 formed in the closing plug 61, Fig. 6. Suitable packing 62 and packing nuts 63 are provided for forming a tight seal about the rod 59 to prevent the fluid in the cylinder 55 from escaping. The piston 58 comprises a circular member 64 having openings 65 therein and a lower member 66 having openings 67. Suitable packing 68 is provided between the members 64 and 66 as clearly shown in Fig. 6. During raising or lowering of the piston 58 in the cylinder 55 it is necessary for the fluid in the cylinder to pass through the openings 65 and 67. Therefore the rod 59 is only free to move a speed equal to the displacement of the fluid in the cylinder from one side of the piston to the other side of the piston. A carriage 69 having wheels 70 slidable in a vertical guideway 71 supports the bottom of the rod 59 as indicated at 72 and limits the speed of descent of the machine in the cabinet. The carriage 69 is provided with an extension 73 to which there is fastened a cable 74 as indicated at 75, Fig. 6. The other end of the cable is fastened to a drum 76 which is fixed to the shaft 21. The drum 76 is smaller than the drums 22 and 23 because it is not necessary that the carriage 69 travel the same distance as the carrier 34. The cable 74 winds in a direction opposite to the cable

49 so that when the cables 40 wind on their respective drums, the cable 74 will unwind on its drum 76. Therefore, when the shaft 21 is rotated to wind the cables 40, 24 and 25 to raise the platform 11 to the position shown in full lines in Fig. 3, the carriage 69 will be lowered to the position shown in full lines in Fig. 3. When the ratchet pawl 43 is released from the ratchet wheel 42, the cables which support the carrier 34 will unwind, but the cable 74 will wind on its drum 76. Inasmuch as the ledge 73 is in engagement with the lower end of the rod 59, the carrier 34 and its cooperating platform 11 and the machine 12 cannot descend rapidly because the carriage 69 is operating against the rod 59 and the rod 59 cannot move rapidly on account of the restricted orifices 85 and 87. The descent of the machine therefore is restricted by the displacement of the fluid in the cylinder 55 passing from one side of the piston to the other. As the machine descends, the piston ascends and the speed of the shaft 21 will be limited and restricted and synchronized with the movement of the piston 53. Therefore the machine cannot descend at a rate faster than the ascension of the piston.

The dash pot and its cooperating guideway is fixed to a supporting bracket 77 fastened to the front side 2 of the cabinet by the fastening members 78. Straps 79, Fig. 7, support the dash pot 54 in position on the face of the bracket.

Locking means 89, preferably of the spring lock type, Fig. 1, is provided for automatically locking the lid or cover 2 in closed position. Optional locking means 81, Figs. 9 and 10, comprising a draw bolt 82, may be provided to prevent some one from tampering with the pawl 83. When the draw bolt 82 is in position to extend over the top of the pawl 43, the pawl cannot be lifted out of engagement with the ratchet wheel 42.

Operation

The machine 12 is securely fastened to the platform 11 due to the engagement of the machine with the members 13 and the fastening members 17. The machine is positioned from the rear side of the cabinet, being slid into the guides 13. The pawl is then released and the machine descends to the bottom of the cabinet as shown in dotted lines in Fig. 5, the descent of the machine being checked by the dash pot 54. The lid or cover 4 then closes and the lock 30 operates. The machine is therefore totally enclosed within the cabinet and is protected against pilfering and unauthorized operation. The cabinet cannot be moved because it is fixed to a suitable supporting base, such as a floor. When it is desired to raise the machine out of the cabinet, the single unit comprising the crank 51 and its related pinion 48 is rotated, it being understood, of course, that the cabinet door is first unlocked. As the crank 51 is rotated, the shaft 21 will rotate and cause the carrier 34 to rise carrying the machine with it and causing the carriage 69 to lower. The piston will then be lowered by the action of the spring 57. The upper edge of the machine will engage the underside of the lid 4 and cause the lid to swing open as the machine rises. At the end of the upward travel, there being suitable limit stops, the clip 15 on the machine will engage the flange 15 on the lid and the machine will be in its normal operative position as shown in Figs. 1 and 3. The handle is then removed. The machine therefore will remain in the position shown in Fig. 1 until it is desired to again lower the machine into the cas-

ing by manual operation of the release or control 45. During rotation of the shaft 21 to raise the machine, the cable 74 will unwind from the drum 76. Therefore the carriage 69 will be at the bottom of its travel as shown in full lines in Fig. 3. The end of the rod will remain against the ledge 73, being pushed there by the spring 57. When the machine is to be again lowered and locked inside of the cabinet, the pawl is released from the ratchet in the manner previously described at which time the weight of the machine on the supporting carrier 34 will cause the machine to descend by gravity, the speed of the descent being governed by the dash pot 54. The lid 4 automatically descends by gravity to closed, locked position, the crank 51 having been previously removed. The machine will then be completely enclosed to protect against pilfering or unauthorized removal thereof from its totally enclosed cabinet.

The invention provides simple and relatively inexpensive means for totally enclosing a slot machine to prevent pilfering and unauthorized removal thereof at such times when the machine is not to be operated. The device is relatively economical to manufacture, is strong and durable in construction and is positive and efficient in operation.

Changes may be made in the form, construction, and arrangement of the parts without departing from the spirit of the invention or sacrificing any of its advantages, and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

The invention is hereby claimed as follows:

1. A stand for machines such as slot machines and the like comprising a cabinet, a support for the machine arranged inside of the cabinet, a frame on the support slidably receiving the machine, a door for the cabinet, and means on the door and machine and interlocking with each other.

2. A stand for machines such as slot machines and the like comprising a cabinet, a support for the machine arranged inside of the cabinet, a frame on the support slidably receiving the machine, a door for the cabinet, means on the door and machine and interlocking with each other, and means for moving the support vertically, said next to last named means interlocking and disengaging upon rising or lowering movement of the machine.

3. The combination with a machine having an operating member, a housing therefor, means for supporting the machine in operative position outside of said housing, manually operable control means, and mechanism operated by said control means for causing said machine to move into tamper-resisting position within said housing, and means for locking said machine in such position comprising a door member which follows the movement of the machine and a lock therefor.

4. The combination with a machine, an enclosing cabinet having an opening, means for supporting the machine through said opening in operative position outside said cabinet, manually operable means, mechanism operable upon actuation of said manually operable means for effecting movement of said machine to a housed position within said cabinet, a door for said cabinet opening, locking means for said door when closed, said door being urged into engagement with the machine for movement therewith to closed position as said machine moves into said housing.

5. The combination with a machine having an operating member, a housing adapted to enclose said machine, said housing having a closure, means for projecting the machine from an enclosed position within said housing to a supported position outside said housing to permit the operation of the member of said machine, and manually operated means causing the movement of said machine to a position within said housing and the closing of said closure, and latch-controlled means for locking said machine in such position to protect against access thereto, said locking means being rendered operative immediately upon the arrival of the machine within the housing.

6. The combination with a cabinet having an opening, a door adapted to close said opening, a machine support mounted within said cabinet, a machine mounted on said support, means housed within said cabinet, including a detachable member projecting through the wall of said cabinet and operable from outside of said cabinet for projecting said machine through said opening into an operative position outside of said cabinet, said door being arranged with respect to said machine whereby upon projection of said machine through said opening, said door is opened, means including a manually operable member projecting through the wall of said cabinet and operable from outside of said cabinet for causing the movement of said machine into said cabinet, and the closing of said door, and lock controlled latching means for said door.

7. In combination with a cabinet having an opening at its top, a machine support within said cabinet, a machine mounted on said support, means housed within said cabinet and including a detachable member operative from the outside of said cabinet for raising said support and said machine through said opening to an operative position outside of said cabinet, a top hinged to said cabinet and adapted to be contacted by the machine to be raised to open position by the raising of said machine, and means for causing the gravity-operated descent of said machine into said cabinet and the closing of said top, said means being housed within the cabinet and including a portion operable from the outside of said cabinet by manual actuation, and means for locking the top when closed.

8. The combination with a cabinet, means for

firmly supporting an object in display position outside of said cabinet, means including a manually operable release member passing through the wall of said cabinet and operable from the exterior thereof for causing the relative quick movement of said supporting means into such a position within said cabinet as to render the object thereon inaccessible, means for again projecting said object to its display position outside of said cabinet, said means being housed within said cabinet and including an operating member operable from outside of said cabinet, and means for rendering said release member inoperative.

9. The combination with a totally enclosed cabinet having an opening in one enclosing wall thereof, and a door hingedly connected to said cabinet, said door being normally urged toward closing position, the combination with a machine adapted to be totally enclosed within the cabinet, and means for moving the machine into and out of said opening, said machine being adapted to contact said door whereby simultaneously to close and open said door upon movement of the machine into and out of the cabinet.

10. In a device of the class described, a cabinet having an opening therein, a door for closing said opening, latching means for latching said door in closed position, a support mounted for movement within said cabinet, an object mounted on said support, means for moving said support to move the object from a position within the cabinet to a position wherein the object extends outside of the cabinet through said opening, said door member being movable with the object to closed position simultaneously as the object reaches a position within the cabinet.

11. In a device of the class described, a cabinet having an opening therein, a door for closing said opening, a support mounted for movement within said cabinet, an object mounted on said support, means for moving said support to move the object from a position within the cabinet to a position wherein the object extends outside of the cabinet through said opening, and interengageable means upon the object and said door adapted to be engaged as the object reaches its exposed position whereby the object retains the door in position and the door retains the object in position upon its support.

JAMES E. BALES.