

[54] COIN BOX ADAPTER FOR A COIN
CONTROLLED APPARATUS

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312/204, 291, 292; 194/1 A, 1 B, 1 F

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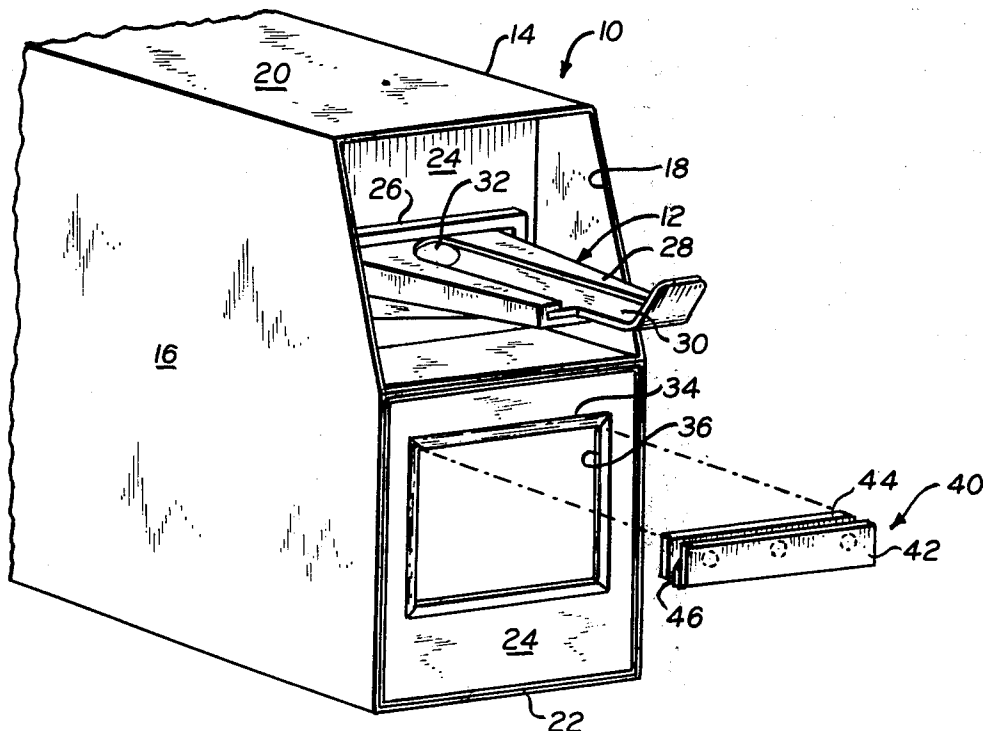
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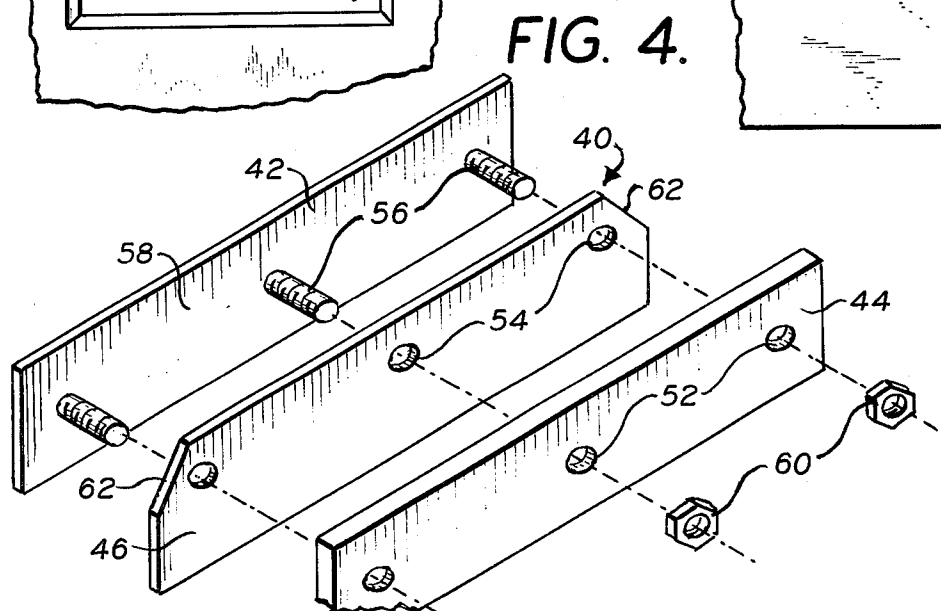
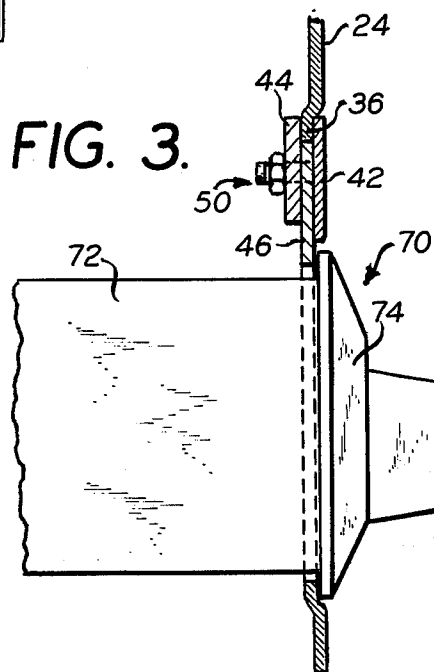
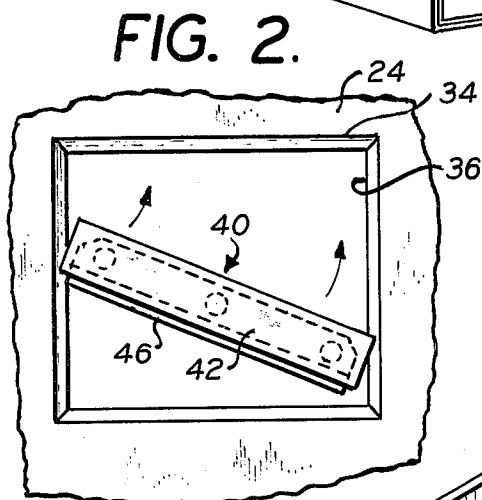
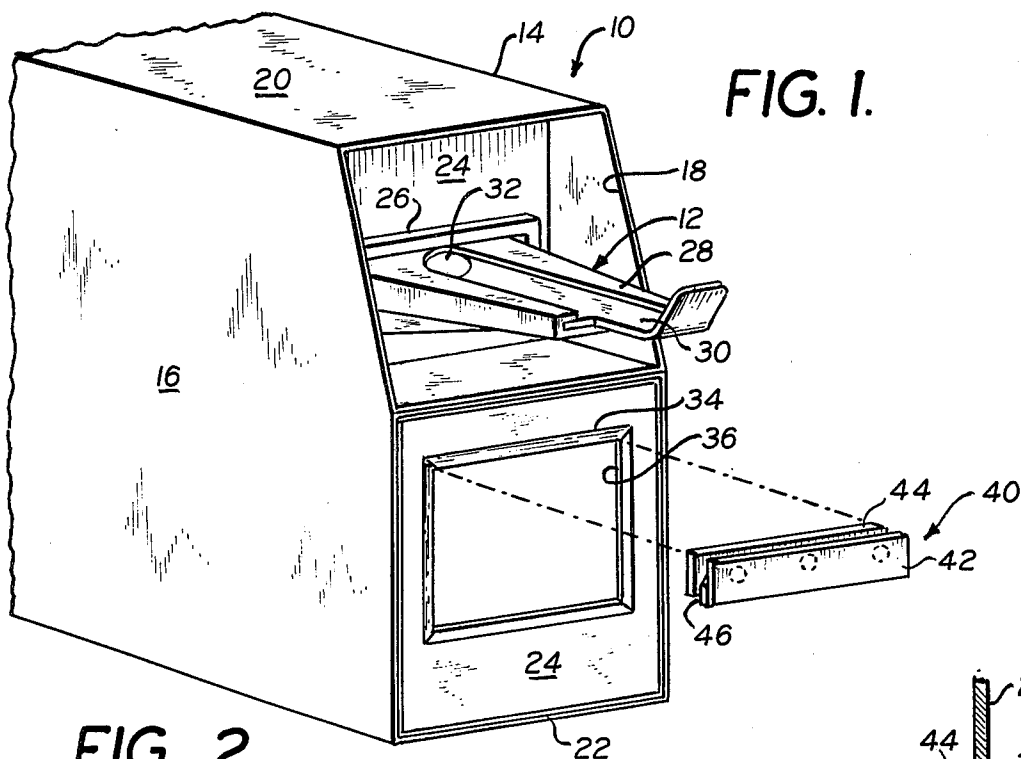
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[57] ABSTRACT

An adapter for a coin operated apparatus of the type having a housing and an opening in a wall of the housing for receiving a first sized coin box therein. The adapter is mounted to the housing and reduces the size of the wall opening to accept a second sized coin box of smaller size than the first sized coin box.

7 Claims, 4 Drawing Figures





COIN BOX ADAPTER FOR A COIN CONTROLLED APPARATUS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates generally to a coin box adapter for a coin operated apparatus and, more particularly, to an adapter mounted on the housing of said apparatus to reduce the size of a wall opening of said housing to receive a coin box of reduced size.

2. Description of the Prior Art

Coin controlled or operated units are usually installed on commercial appliances; such as, clothes washers, dryers, vending machines and the like. The coin control is enclosed within a housing mounted on the appliance or machine, and the housing is usually provided with a locked coin drawer assembly which is intended to prevent unauthorized access to a coin receptacle or box removably supported within the housing. The coin controlled or operated apparatus comprises a guide track mounted on the housing, and a coin slide reciprocally supported in the guide track for projected and retracted movement. The coin slide has a coin receiving portion whereby insertion of a proper coin therein permits projected movement of the inner end of the coin slide to its operate position within the housing to start the apparatus. In this regard, the inner end of the coin slide includes an actuator adapted to engage with a starting mechanism of the apparatus upon projected movement of the coin slide to its operate position.

The coin drawer assembly is generally mounted on a front wall of the housing and includes a coin receptacle or box received in an opening in the front wall and removably supported within the housing. The coin box is disposed below the coin slide to receive and retain the coins passing therethrough. The coin drawer assembly further includes a faceplate in which there is mounted a tumbler-type lock by which the coin drawer assembly is latched or locked to the front wall of the housing. An example of one such coin drawer assembly is noted in U.S. Pat. No. 3,334,501 owned by the common assignee herein.

It will be appreciated that the opening in the front wall of the housing is of predetermined dimensions for receiving a selected coin box therein. In other words, the dimensions of the wall opening and the corresponding dimensions of the faceplate of the coin drawer assembly are preselected to permit only a coin box of particular size to be received within the wall opening of the housing. Thus, in those instances where the operator of such coin operated machines desires to replace the coin drawer assembly with another such assembly having a coin box of different size than the first sized coin box, it is necessary to either purchase an entirely new housing or return the original housing to the supplier for retooling or machine work to obtain a housing having a front wall opening which accommodates the dimensions of the replacement coin drawer assembly.

The need to replace the coin drawer assembly may result from the simultaneous replacement of the coin slide assembly to accommodate coins of different denomination. In this regard, the size or dimensions of the coin box are a function, among other things, of the particular coin slide mechanism associated therewith. Accordingly, it may be necessary to replace the coin box

when a replacement is made in the coin slide mechanisms of a particular coin operated apparatus.

Accordingly, an object of the present invention is to provide an adapter for a coin operated apparatus having an opening in a wall of the housing for receiving a first sized coin box therein; said adapter being mounted on the housing to reduce the size of the wall opening to accept a second sized coin box of smaller size than the first sized coin box.

Another object, feature and advantage of the present invention is to provide an adapter for a coin operated apparatus which is relatively simple in construction and easy to mount on the housing of the apparatus.

SUMMARY OF THE INVENTION

The adapter of the present invention is disposed for use in combination with a coin operated apparatus of the type having a housing and an opening in a wall of the housing for removably receiving a first sized coin box therein. The adapter is formed having a front plate, a rear plate and an intermediate plate between the front and rear plates. The dimensions of the respective plates are such that the front plate and rear plate each have a corresponding edge extending beyond the corresponding edge of the intermediate plate to define a groove therebetween adapted to receive a portion of the wall adjacent to an edge of the opening.

The rear plate and intermediate plate are each formed having a plurality of through-openings which are located such that each one of the openings in the rear plate is aligned with a separate one of the openings in the intermediate plate. The adapter is further formed having a plurality of screws extending from the rear surface of the front plate. The arrangement is such that each one of the screws projects through a separate pair of the aligned openings in the intermediate plate and rear plate and is provided with a fastening nut threaded on the end of the screw.

The cooperation of the screws passing through the aligned openings and receiving a fastening nut thereon define clamping means for clamping the front and rear plates together to mount the adapter to the wall portion of the housing. In the mounted position of the adapter, the front and rear plates extend into the wall opening to reduce the size of said opening to thereby accept a second sized coin box of smaller size than the first sized coin box.

Additional features and advantages of the present invention will become more apparent from a consideration of the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the adapter of the present invention spaced from the housing of a coin operated apparatus;

FIG. 2 is a front elevational view, with parts broken away, of the adapter in position to be mounted on the front wall of the housing;

FIG. 3 is a side elevational view, partly in section and with parts broken away, of the adapter mounted on the front wall of the housing to reduce the size of the opening in said wall to receive a coin box of reduced size; and

FIG. 4 is an exploded perspective view of the adapter illustrating the components thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings, numeral 10 represents an apparatus illustrating a coin slide assembly 12 mounted on a housing 14 which is adapted to be installed on a commercial appliance; such as, a clothes washer, dryer, vending machine or the like (not shown). Housing 14 includes opposed side walls 16, 18, opposed top and bottom walls 20, 22 and a front wall 24 therebetween. It is understood that housing 14 also includes a back wall (not shown) which is omitted from the drawing for purpose of convenience.

The upper surface portion of front wall 24 is recessed and formed having an opening 26 which serves to support and mount assembly 12 to the housing. In this regard, assembly 12 includes a guide track 28 which is mounted to the front wall 24 of housing 14 in conventional manner. Guide track 28 reciprocally supports a coin slide 30 for projected and retracted movement thereof. Coin slide 30 includes a coin receiving portion 32 for conventionally transmitting a coin to a coin drawer assembly (not shown) having a coin receptacle or box positioned within the housing. The operation is such that the presence of a coin in coin receiving portion 32 permits projected movement of the inner end of coin slide 30 to its operate position within the housing to start the apparatus in conventional manner. Upon projected movement of coin slide 30, the coin is discharged through an opening in the undersurface of guide track 28 and is directed by a funnel member (not shown) to the coin receptacle or box located therebelow.

The lower surface portion of front wall 24 is also formed having an opening 34 which serves to support and mount the coin drawer assembly to the housing. In this regard, the coin drawer assembly normally includes a faceplate formed integral with the coin box, or permanently connected thereto, and in which plate there is mounted a tumbler-type lock by which the assembly is latched or locked to the front wall 24 of housing 14. The faceplate may thus be considered the front wall of the coin box and is formed having dimensions greater than the corresponding dimensions of the opening 34 in front wall 24. The portion of the wall adjacent the edges of opening 34 are recessed, as represented by numeral 36 in FIG. 3, which normally provides a stop for the front wall of the coin box to limit the extent to which the coin box is received within opening 34.

The dimensions of wall opening 34 and the corresponding dimensions of the faceplate or front wall of the coin box are preselected to permit only coin drawer assemblies of a particular size to be received within the wall opening of housing 14. Thus, for any given application of use, the manufacturer will provide a coin drawer assembly of suitable size compatible with the front wall opening 34 of housing 14 and the coin slide assembly 12 associated with the apparatus. In mounting the assembly to the housing, the sized coin box is received in front wall opening 34 and positioned with its faceplate in abutting relation to the recessed wall portion 36 adjacent the edges of said opening. The arrangement is such that the sized coin box is removably supported and positioned within housing 14 to receive coins that are discharged from coin slide assembly 12.

Referring to FIG. 4, there is illustrated an adapter, represented generally by numeral 40, for decreasing

the size of front wall opening 34 to accept a second sized coin box of smaller size than the first mentioned sized coin box. Adapter 40 comprises a front plate 42, a rear plate 44 and an intermediate plate 46 positioned between the front and rear plates. Each of said plates 42, 44, 46 is formed of hardened metal or other suitable material and is generally rectangular in shape to accommodate the substantially rectangular shape of wall opening 34. Clamping means, represented generally by numeral 50, are provided for clamping the plates together to mount adapter 40 to the front wall 24 of housing 14 in the manner hereinafter described.

Clamping means 50 comprises a plurality of first through-openings 52 in rear plate 44 and a plurality of second through-openings 54 in intermediate plate 46. The positions of said openings are such that each one of the openings 52 is aligned with a separate one of the openings 54 when the plates are in their clamping relation. The clamping means further comprises a plurality of screws 56 extending from the rear surface 58 of front plate 42, and a plurality of fastening nuts 60 associated with said screws. The arrangement is such that each one of the screws 56 is located to project through a separate pair of the aligned openings 52, 54 in the rear and intermediate plates, whereupon one of the fastening nuts 60 is threaded on the end of each separate one of said screws.

In mounting adapter 40 to front wall 24 of housing 14, attention is directed to FIGS. 2 and 3 of the drawings. The locations of through-openings 54 of plate 46 relative to through-openings 52 of plate 44 and screws 56 are such that the top edges of the front and rear plates 42, 44 extend beyond the corresponding top edge of intermediate plate 46 to define a groove therebetween adapted to receive the recessed front wall portion 36 adjacent the top edge of front wall opening 34. Furthermore, the thickness of intermediate plate 46 is no greater than the thickness of the recessed front wall portion 36 which is received between said plates.

The top corners of intermediate plate 46 are beveled, as represented by numeral 62, to facilitate mounting of adapter 40 to the housing. In this regard, the length of intermediate plate 46 is less than the corresponding lengths of front and rear plates 42, 44 to define a groove therebetween along each end adapted to receive portions of front wall 24 adjacent the end edges of front wall opening 34. The dimensions are such that the lengths of front and rear plates 42, 44 are greater than the corresponding dimension of front wall opening 34, whereas the length of intermediate plate 46 is substantially coextensive with said corresponding front wall opening dimension.

Thus, referring to FIG. 2, adapter 40 is initially positioned as indicated with portions of the opposed end edges of the front wall opening 34 received within the associated end grooves of the adapter whereupon the adapter is then rotated or pivoted in the direction of the arrows to a horizontal position. Adapter 40 is then slid upwardly until the top recessed front wall portion 36 is received within the top groove of the adapter. Fastening nuts 60 are then tightened to securely mount the adapter in position as noted in FIG. 3.

The mounting arrangement is such that the plates 42, 44, 46 extend into front wall opening 34 to reduce the size of said opening to accept a second sized coin box of smaller size than the first mentioned sized coin box. Referring again to FIG. 3, coin drawer assembly 70 rep-

resents the smaller sized coin box 72 and its associated faceplate or front wall 74. Since intermediate plate 46 serves as an extension of recessed front wall portion 36, it will be appreciated that the construction of adapter 40 provides for the bottom edge of said intermediate plate to project downwardly into front wall opening 34 a greater distance than the front and rear plates 42, 44 to define a stop for front wall 74 of coin box 72.

There is thus provided a novel adapter by which the operator of a coin operated apparatus can readily replace a first sized coin box with a second sized coin box of smaller size than the first sized coin box without the need of acquiring a new housing or retooling the original housing for said apparatus. The adapter consists of relatively few component parts and is easily mounted on the front wall of the housing.

While a preferred embodiment of the invention has been shown and described in detail, it will be readily understood and appreciated that numerous omissions, changes and additions may be made without departing from the spirit and scope of the present invention.

We claim:

1. In combination with a coin operated apparatus having a housing, an opening in a wall of the housing for removably receiving a first sized coin box therein, and said coin box supported within the housing for receiving coins deposited in the apparatus; wherein the improvement comprises:
 - a. an adapter for decreasing the size of the wall opening to accept a second sized coin box of smaller size than the first sized coin box;
 - b. said adapter comprising a first plate, a second plate and an intermediate plate between said first and second plates;
 - c. said first and second plates having an edge extending beyond the corresponding edge of the intermediate plate to define a groove therebetween adapted to receive a portion of the wall adjacent an edge of the opening; and
 - d. means for clamping the first and second plates together to mount the adapter to the wall portion of

the housing;

- e. said first and second plates extending into the wall opening to reduce the size of said opening.

2. The improvement as recited in claim 1, wherein said intermediate plate projects into the wall opening a greater distance than the first and second plates to provide a stop for the front wall of a coin box received through said opening.

3. The improvement as recited in claim 1, wherein said clamping means comprises a plurality of first through-openings in one of the first and second plates and a plurality of second through-openings in the intermediate plate; each one of said first openings being aligned with a separate one of said second openings; a plurality of screws extending from the other one of the first and second plates; each one of said screws projecting through a separate pair of the aligned openings, and a plurality of fastening nuts; each of said nuts threaded on the end of a separate one of said screws.

4. The improvement as recited in claim 3, wherein said first plate is a front plate and said second plate is a rear plate; said first plurality of through-openings being formed in the rear plate; and said plurality of screws extending from the rear surface of the front plate through the aligned openings in the intermediate and rear plates.

5. The improvement as recited in claim 1, wherein the thickness of the intermediate plate is no greater than the thickness of the portion of the wall received between the first and second plates.

6. The improvement as recited in claim 1, wherein one dimension of the first and second plates is greater than the corresponding dimension of the opening in the wall of the housing; and the corresponding dimension of the intermediate plate is substantially coextensive with said corresponding opening dimension.

7. The improvement as recited in claim 6, wherein at least one corner of the intermediate plate adjacent said wall portion is beveled.

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