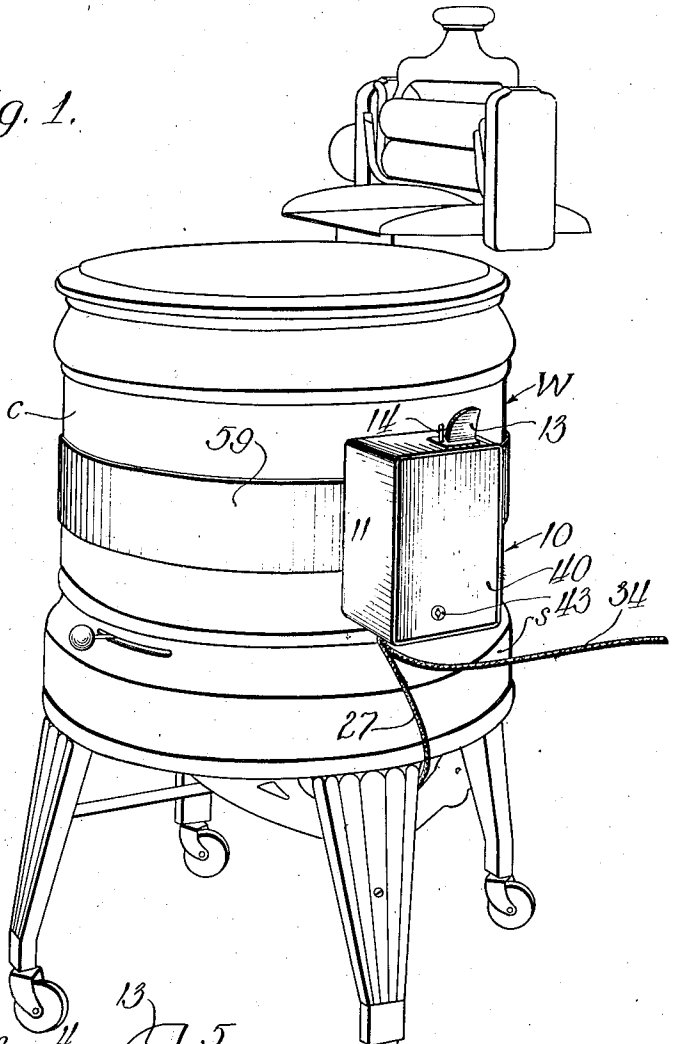
March 5, 1940. A. H. WOODWARD 2,192,392

METER AND MOUNTING THEREFOR

Filed March 14, 1938 2 Sheets-Sheet 1

Fig. 1.



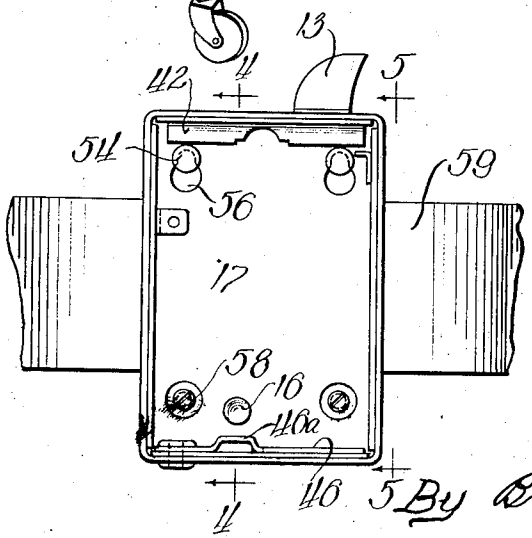


Fig. 2.

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Fig. 3.

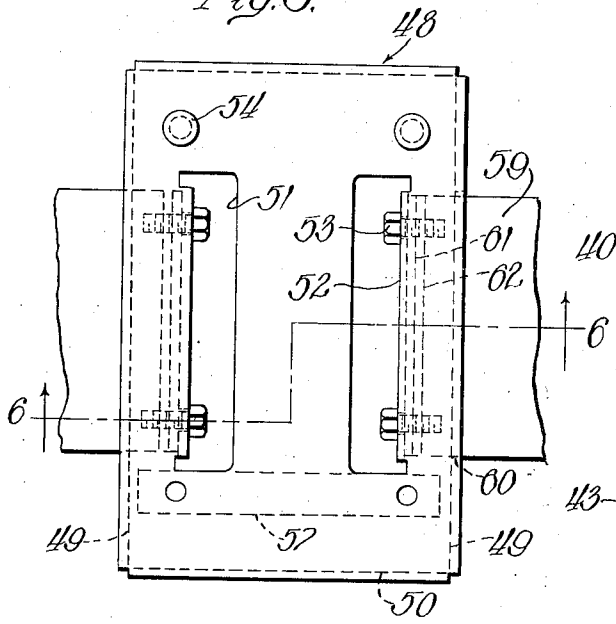


Fig. 4.

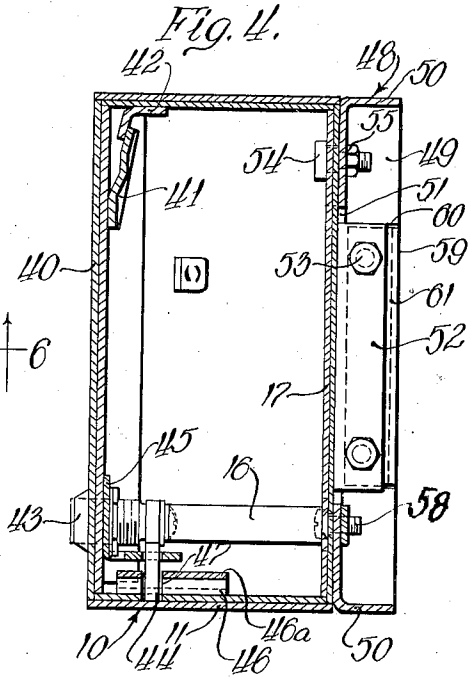


Fig. 5.

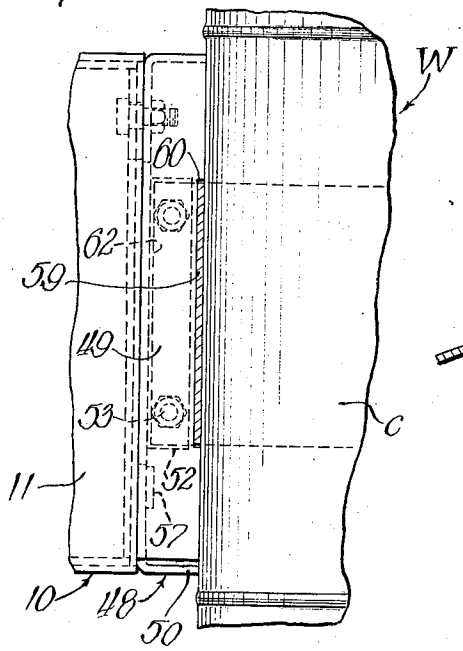
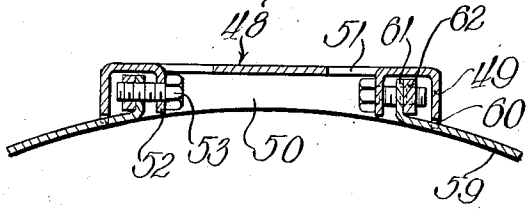


Fig. 6.



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UNITED STATES PATENT OFFICE

2,192,392

METER AND MOUNTING THEREFOR

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Application March 14, 1938, Serial No. 195,678

2 Claims. (Cl. 248—231)

This invention relates to the use of coin controlled meters with laundry apparatus and analogous mechanisms, and has to do with means for mounting the meter.

It is known to provide coin controlled meters which control the circuit of an electric motor for driving a washing machine or other mechanism, the meter serving to cause opening of the circuit of the motor at the expiration of the time period paid for by the insertion of a coin of a predetermined value. There is an increasing demand for coin controlled meters associated in this manner with laundry equipment and analogous mechanisms. Preferably, though not necessarily, the meter should be mounted upon the controlled apparatus, and, under present practice, considerable difficulty is frequently encountered in thus mounting the meter.

My invention is directed primarily to the provision of relatively simple and inexpensive means whereby the meter may be mounted with expedition and facility in an appropriate location with respect to the controlled apparatus. More specifically, my invention is directed to means for mounting the meter directly upon the controlled apparatus without necessity of in any way defacing or marring the latter. It is also an object to provide mounting means in association with the meter, the meter serving to shield the mounting means in such manner as to prevent unauthorized access thereto, thereby preventing unauthorized removal of the meter, while also serving to shield the coin meter itself, the switch controlled by this meter, and the coin receptacle which receives the coins inserted into the meter. Further objects and advantages will appear from the detailed description.

In the drawings:

Figure 1 is an isometric elevational view of a washing machine of known type, showing a coin controlled meter mounted thereon in accordance with my invention;

Figure 2 is a front view of the meter casing and associated parts of the mounting means, the door of the casing being removed and the meter mechanism being also removed from the casing for clearness of illustration, the mounting band being shown fragmentarily;

Figure 3 is a front view, on an enlarged scale, of the mounting plate and the means for securing this plate to the ends of the band and contracting the latter, the end portions of the mounting band being shown;

Figure 4 is a sectional view taken substantially on line 4—4 of Figure 2, on an enlarged scale, with the meter mechanism and the coin receptacle removed from the meter casing and the door of the latter locked in closed position;

Figure 5 is a view taken substantially on line 5—5 of Figure 2, on an enlarged scale, the major portion of the meter being broken away and the tub of the washing machine being shown fragmentarily; and

Figure 6 is a sectional view taken substantially on line 6—6 of Figure 3.

In Figure 1 I have shown the meter and mounting means of my invention as applied to a washing machine W of known construction, by way of example, it being understood that the mounting means and the meter associated therewith may be applied to other apparatuses, the operation of which it is desired to control by the meter. The washing machine W is of known construction, may be of any suitable type, comprises a substantially cylindrical tub or casing *c*, and is driven by an electric motor concealed by a skirt portion *s* extending downward from the casing *c*.

The circuit of the electric motor is controlled by a switch, which is controlled by a coin controlled meter indicated in its entirety by the reference number 10. This meter comprises a steel casing 11 which is cubiform and preferably of double-walled construction, as shown in Figure 4. Meter mechanism, of suitable type, is appropriately mounted within the upper portion of casing 11 and is adapted for reception of coins of appropriate denominations inserted through a hood 13 secured upon the top wall of casing 11. A plunger 14 is slidably mounted through the top wall of the meter casing and is depressed after insertion of a coin, thereby closing the switch controlled by the meter mechanism, if such switch is open, and conditioning the circuit of the electric motor for operation of the latter. The inserted coins are delivered from the coin mechanism into a coin receptacle (not shown), which may be in the form of a sheet metal box open at its top, supported upon the lower wall of the casing 11 and free therefrom for ready removal. Conveniently, a stud 16 projects from back wall 17 of casing 11 toward the front of the casing, this stud cooperating with a wall of casing 11, for confining the coin receptacle against lateral displacement.

Coin controlled meter mechanisms of the general type referred to, in conjunction with a control switch, are known, and the meter mechanism need not be illustrated nor described in detail. Conveniently, this mechanism may be similar to that disclosed in my copending application for

timing mechanism, Serial No. 11,529, filed March 18, 1935, now Patent No. 2,147,941, dated February 21, 1939.

The front of meter casing 11 is closed by a door 40, also preferably of double-walled construction, which fits snugly within the casing. Securing members, one of which is shown at 41 in Figure 4, are welded or otherwise suitably secured to the inner face of door 40, and, in the operative position of the door, engage in back of the forward flange of an angle strip 42 welded or otherwise suitably secured to the top wall of casing 11. Door 40 is provided, adjacent the lower end thereof, with a cylinder lock 43 of known type, this lock being provided with a locking bolt or tongue 44 operable through a slot in the lower flange of an angle strip 45, welded or otherwise suitably secured to the inner face of the door. A keeper 46, conveniently in the form of an appropriately shaped strip of steel, is welded to the inner face of the bottom wall of casing 11, and is provided with an upwardly offset element 46a slotted at 47 for reception of bolt 44. When door 40 is locked within casing 11, the meter mechanism and the control switch and the coin receptacle, disposed within the casing, are effectively shielded thereby, and unauthorized access to any of such parts or mechanism is prevented.

For convenience in mounting the meter 10 on an appropriate support, I provide a rectangular mounting plate 48 provided, at its sides and its ends, with rearwardly projecting integral flanges 49 and 50, respectively. Plate 48 is further provided, adjacent each side thereof, with a slot 51 extending lengthwise of the plate, these slots permitting the contiguous portions of the plate to be bent rearwardly, providing flanges 52 spaced inward from and disposed substantially parallel to the side flanges 49. Plate 48 is thus provided, at the central portion of its length, with portions of channel cross section which effectively reenforce and stiffen the plate. Flanges 52 are provided with suitably disposed openings for reception of securing members, conveniently in the form of headed screws 53, by means of which the plate 48 may be secured to elements of a support or mounting member, with the flanges 49 and 50 seating against the support so that the plate 48 forms therewith an enclosure within which the screws 53 are housed in such manner as to be accessible through slots 51 only.

Two shouldered screws 54, provided at their forward ends with enlarged cylindrical heads, are secured through plate 48 above slots 51, by means of nuts 55, and project from the front face of the plate. These screws provide, in effect, headed pins suitable for engagement through keyhole slots 56 extending through back wall 17 of casing 11 adjacent the top thereof, slots 56 converging upward with their reduced portions toward the top of the casing. By inserting the screws or pins 54 through slots 56, at the larger portion of the latter, and then moving the casing 11 downward relative to plate 48, the upper portion of the casing may be readily secured to the mounting plate.

A steel strip 57 is welded to the back of plate 48 at the lower ends of slots 51 and parallel with the lower end flange 50. This strip and the plate 48 are suitably bored and tapped for reception of securing screws 58, which pass through openings in back wall 17 of casing 11 and screw into the plate and the strip. It will be noted from Figure 2 that the screws 58 are readily accessible from the front of casing 11, when door 40 is removed. By removing the screws 58 the meter may be detached from the mounting plate with expedition and facility, and it may also be replaced upon the mounting plate, without any necessity of disturbing the meter mechanism. Since the portions of the screws 58 which project rearward beyond plate 48 are housed within this plate, as are the nuts 55 and the corresponding portions of the screws 54, and the heads of screws 58 are disposed within casing 11, the meter casing cooperates with the mounting plate in such manner as to prevent unauthorized access to the parts enclosed within the casing while also preventing access to the means for mounting the meter upon plate 48 or the means for securing the mounting plate upon the support. The meter thus is effective for preventing closing of the motor control switch without insertion into the meter of a coin or coins of proper denomination and in proper number, while also preventing unauthorized removal of the coin receptacle or unauthorized removal of either the meter or the supporting plate from the associated support.

In Figure 1 the tub or casing c of the washing machine W provides the support for the mounting plate and the associated meter 10, the meter in this case being thus mounted upon the controlled apparatus. In order that the meter may be mounted upon the casing or support c, I provide a steel mounting band 59 of appropriate length to extend about the casing c, with the end portions of band 59 extending through appropriately disposed notches 60 provided in the rearward edges of side flanges 49 of plate 48. Preferably, the rearward edges of the end flanges 50 of plate 48 conform in curvature to the curvature of casing c, as shown in Figure 6, flanges 49 and 50 thus seating against the outer face of support c with which the mounting plate 48 provides an enclosure. The end portions of the band 59 are bent outward to provide terminal elements 61 disposed between and substantially parallel with flanges 49 and 52 of mounting plate 48. Preferably, a relatively thick steel reenforcing strip 62 is welded to the outer face of terminal element 61. The latter and this strip 62 are suitably bored and threaded for reception of the screws 53. The heads of these screws seat against the inner faces of flanges 52, as shown in Figure 6, these flanges and these screws providing means for contracting band 59 tightly about the tub or casing c of the washing machine, while also securing the mounting plate 48 to band 59. This provides means whereby the meter may be mounted upon the tub or casing of the washing machine with expedition and facility, while avoiding all necessity for in any way changing or marring the tub or casing of the machine. Since the end portions of band 59 and the associated securing and adjusting means are enclosed within the plate 48, and are inaccessible except through the slots 51, and the meter casing 11 completely closes these slots, the meter and the mounting plate cooperate effectively to prevent unauthorized access to the mounting and securing means, in the manner previously described. While I have illustrated my invention, by way of example, as applied to a washing machine, it is equally applicable to other apparatuses, the operation of which is to be controlled by a coin controlled meter. Conveniently, the meter may be mounted upon the controlled apparatus, the band 59 being appropriately formed

to that end. In the broader aspects of my invention, however, the meter may be mounted upon any suitably located support, by means of the mounting plate 48 and associated means for securing such plate to the support in such manner that the securing means is housed within and shielded against unauthorized access, by the mounting plate and the meter casing, in the manner previously described.

I claim:

1. In mounting means, a substantially rectangular mounting plate having rearwardly projecting side and end flanges, said plate also having two rearwardly projecting flanges spaced inward from and substantially parallel with said side flanges, a mounting band having its end portions disposed beneath said plate with the terminal elements of said end portions disposed between and substantially parallel with said inner and side flanges, and securing means cooperating with said inner flanges and terminal elements for contracting said band and securing said plate thereto.

2. In mounting means, a substantially rectangular mounting plate having rearwardly projecting side and end flanges, said plate being provided adjacent its sides with lengthwise slots and rearwardly projecting flanges spaced inward from and substantially parallel with said side flanges, a mounting band having its end portions disposed beneath said plate with the terminal elements of said end portions disposed between and substantially parallel with said inner and side flanges, and securing means cooperating with said inner flanges and terminal elements for contracting said band and securing said plate thereto, said securing means being accessible through said slots.

ARTHUR H. WOODWARD.