Oct. 12, 1971 B. L. BRUCKEN 3,611,756

ARRANGEMENT FOR ATTACHING A CLOTHES DRYER TO THE TOP OF A CLOTHES WASHER

Filed July 8, 1970 2 Sheets-Sheet 1

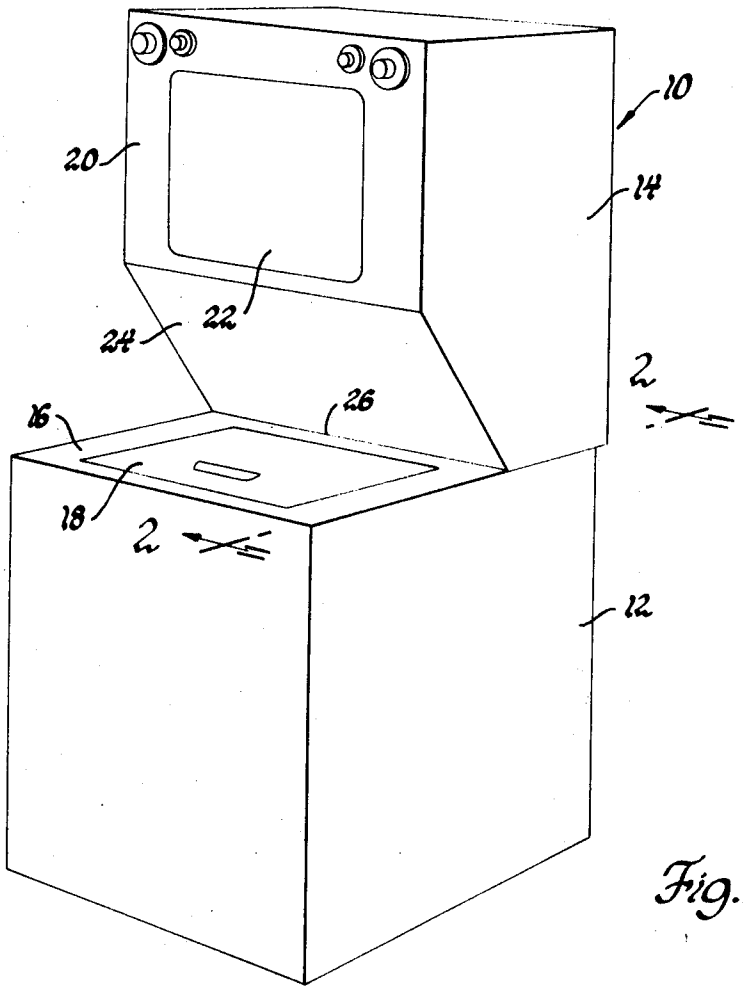


Fig. 1

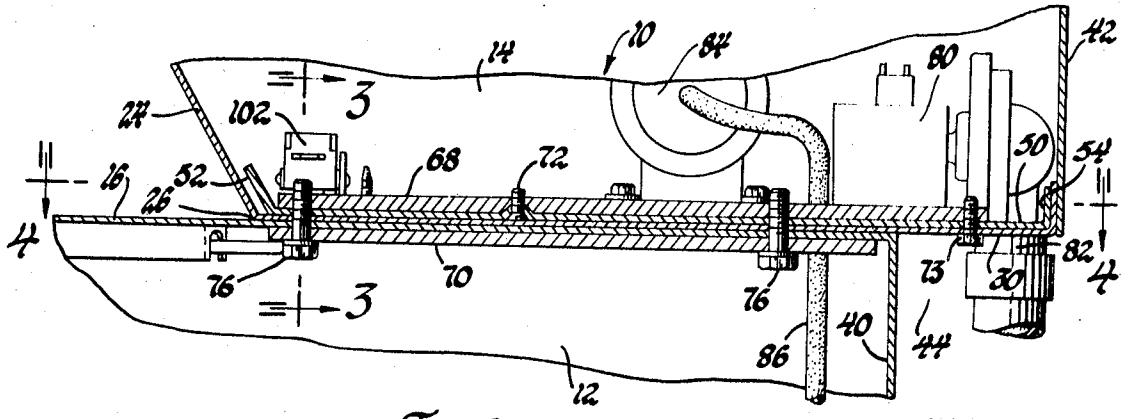


Fig. 2

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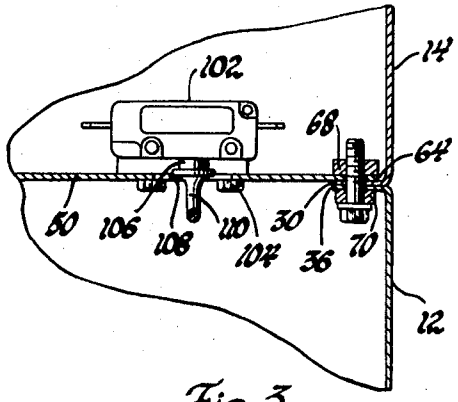


Fig.3

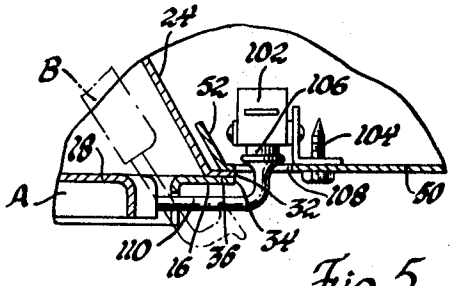


Fig.5

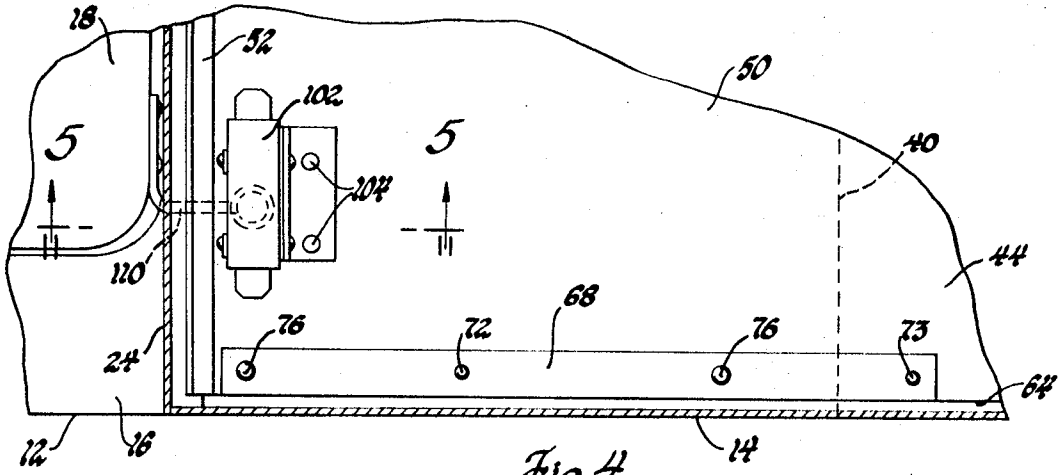


Fig.4

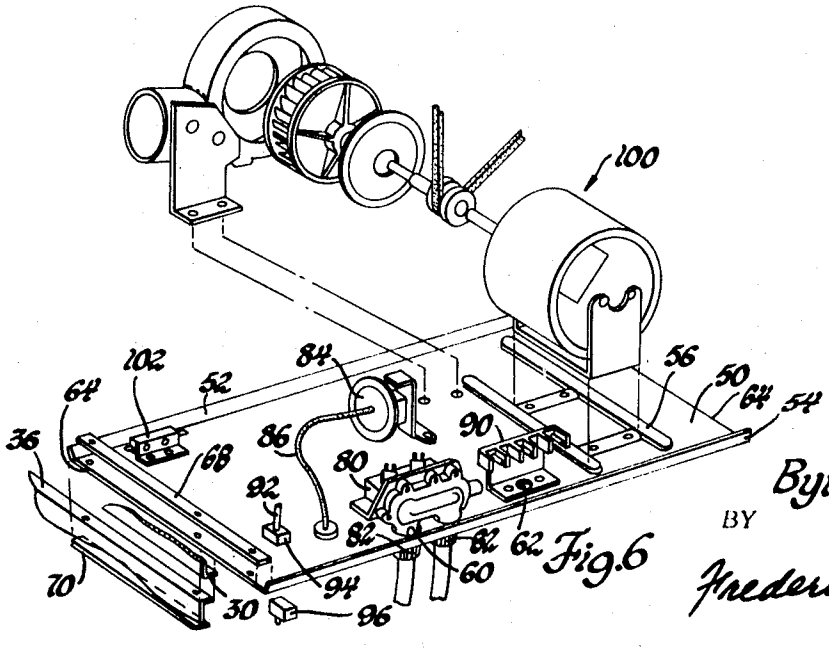


Fig.6

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ARRANGEMENT FOR ATTACHING A CLOTHES DRYER TO THE TOP OF A CLOTHES WASHER

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U.S. Cl. 68—3 R 5 Claims

ABSTRACT OF THE DISCLOSURE

A vertically stacked combination clothes washer and clothes dryer wherein the top of the washer cabinet has a top opening in juxtaposition with a bottom opening on the dryer cabinet. A control support panel provides a partition between the cabinets of the washer and dryer closing the openings, rigidifying the cabinets and providing a mounting panel for components associated with the washer and the dryer. The dryer cabinet overhangs the rear of the washer cabinet to provide a protected utility connection area. A pair of heavy plates sandwich juxtaposed flanges on the washer and dryer cabinets to provide a solid connection of the clothes dryer to the clothes washer

This invention relates to a domestic appliance and, more particularly, to a combination clothes washer and clothes dryer which are in stacked-on relationship to one another. The clothes dryer rests directly on the top of the clothes washer to the rear portion of the top wall thereof thereby to provide an access opening to the clothes washer in front of a slanted panel of the clothes dryer.

Clothes dryers have been placed in stacked-on relationship in the prior art. However, the prior art provided columns for supporting the clothes dryer a spaced distance above the clothes washer and by such an arrangement produced a combination appliance which was too tall to be of practical value in a domestic residence. Accordingly, this invention is directed to a mounting arrangement for a combination washer and dryer wherein the clothes dryer rests directly on the top of the clothes washer.

It is an object of this invention to provide a laminar mounting arrangement for directly mounting a clothes dryer to the top wall of a clothes washer.

Another object of this invention is the provision of a clothes dryer cabinet having a bottom opening mounted to a clothes washer having a top opening substantially coextensive with the bottom opening in the clothes dryer and including a control support panel closing the openings of both the dryer and washer and providing thereby a partition for mounting auxiliary components associated with both the clothes dryer and the clothes washer.

A more particular object of this invention is the provision of juxtaposed appliance cabinets forming a combination washer-dryer wherein the cabinets have juxtaposed flanges and a pair of heavy plates sandwiching the juxtaposed flanges of the cabinets and fastened together to form a solid connection of the appliance cabinets.

A still further object of this invention is the provision of stacked-on appliance cabinets comprising a combination washer-dryer joined by a common partition wherein the dryer cabinet is offset to the rear of the washer cabinet to form a protected utility service connection area immediately below a portion of said partition.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings wherein a preferred embodiment of the present invention is clearly shown.

In the drawings:

FIG. 1 is a perspective view of a combination washer-dryer with a clothes dryer stacked directly on top of the clothes washer;

FIG. 2 is a fragmentary sectional view taken along line 2—2 in FIG. 1 to show one side of the laminar mounting arrangement of this invention;

FIG. 3 is a sectional view taken along line 3—3 in FIG. 2 to show an access door safety switch mounting arrangement from the front thereof;

FIG 4 is a section taken along line 4—4 in FIG. 2 showing the access door safety switch from the top thereof;

FIG. 5 is a fragmentary sectional view taken along line 5—5 in FIG. 4 showing the access door safety switch from the side thereof with the door open position being shown in phantom line; and

FIG. 6 is a fragmentary exploded perspective view illustrating the support panel arrangement for supporting the appliance controls and for joining the washer and dryer cabinets.

In accordance with this invention and with reference to FIG. 1, a combination washer-dryer **10** is illustrated. The appliance includes a sheet metal washer cabinet **12** forming a top loading clothes washer and a sheet metal dryer cabinet **14** forming a front loading clothes dryer mounted directly on the top of the washer cabinet to the rear of a top wall portion **16** thereof which includes an access door **18**. The front of the dryer cabinet **14** includes a vertical wall **20** having an access door **22** and a sloped front wall portion **24** forming a jointure **26** with the top wall portion of the washer cabinet immediately to the rear of the washer access door **18**.

With reference to FIGS. 1, 3 and 5, the clothes dryer cabinet **14** is comprised of .035 inch sheet metal having at each side along the bottom thereof a horizontal turned-in flange **30** forming with said front panel **24** bottom opening **32**. The clothes washer cabinet **12** is comprised of .035 inch sheet metal having at each side along the top thereof a turned-in flange **36** which forms a top opening **34** with the top wall **16** of the washer cabinet. The dryer cabinet flange **30** is supported on the washer cabinet flange **36**.

One of the features in this combination laundry appliance is a provision in the stack-on mounting arrangement of this invention of a protected utility connection area at the rear thereof. The dryer cabinet **14** overhangs the washer cabinet **12** by approximately two inches. This places the bottom opening **32** of the dryer cabinet between a back wall **40** of the washer cabinet and a removable rear panel **42** on the dryer cabinet. The protected area **44** thus formed extends across the back of the combination appliance and may be used to bring water and power to the combination appliance up through the bottom opening **32** of the dryer cabinet which overhangs the protected area **44**.

A control support panel **50** forms a common partition between the washer and dryer cabinets and supports the controls therefor. Galvanized steel .0516 inch thick is used to form the support panel which is otherwise rigidified by stiffening means, such as side-to-side flanges **52** and **54**, .62 inch in length and front-to-back embossments **56** having a 26 inch depth.

The control support panel **50** is coextensive with the bottom opening **32** of the dryer cabinet. It also covers the top opening **34** of the washer cabinet and overhangs the protected area **44** where it includes openings **60** for the hot and cold water lines and an opening **62** for the power supply.

Each side **64** of the support panel overlies the respective pair of cabinet flanges **30**, **36** to form a three-layer laminate of sheet metal. The laminate is sandwiched between

a pair of mounting plates **68**, **70**, each being 3/16 inch thick. The top plate **68** is first fastened to the support panel **50** by a countersunk screw **72**. Then this subassembly **50**, **68** is fastened by screw **73** to the side flange **30** of the dryer cabinet. Lastly, the bottom plate **70** is joined to the top plate **68** through holes in the three-layer laminate by means of bolts **76**. When bolts **76** are tightened the dryer cabinet **14** is locked solidly to the washer cabinet **12** with the support panel **50** rigidifying the stacked-together cabinets at the plane of their jointure.

The support panel **50** is also the support for controls serving both the washer and dryer. For instance, a water valve **80** is secured to the panel with its hot and cold water legs **82** extending through openings **60** leading to the protected area **44**. A pressure switch **84** is carried on the panel and includes a pressure conduit **86** extending through the panel to the washer where it measures water level. An electrical terminal block **90** is carried on the panel over the opening **62** therein. Power connections are made at this point for both the washer and dryer. For instance, a wiring harness **92** is connected to the power supply at the terminal block **90**. The harness includes one-half **94** of a male-female connector which snaps into an opening in the panel **50**. The other half **96** of the connector can join the half **94** after the clothes washer mechanism is installed in the washer cabinet **12**. In addition, the support panel **50** carries the motor-blower assembly **100** for the clothes dryer.

Another feature of this mounting arrangement is the connection between the access door **18** and a door safety switch **102**. The switch **102** is mounted on the panel **50** by screws **104** in a manner which locates a switch actuator **106** over a hole **108** in the panel **50**. The access door **18** has solidly connected thereto a bent-up rod forming a switch actuating arm or bridge **110** between the door and the switch. The door **18** is hinged in a manner to facilitate pivoting (FIG. 5) between a closed position A in the plane of the top wall of the washer cabinet and an open position B generally in the plane of the front panel **24** of the dryer cabinet. As the door pivots between positions the arm **110** moves the actuator **106** to operate the door safety switch **102** to immobilize the clothes washer mechanism when the access door is open.

It should now be seen that an improved mounting arrangement has been provided wherein a common separate partition between stacked-on laundry cabinets serves not only as a means to preassemble the electrical components of the washer and dryer but also as a rigidifying member in a sandwiched connection of the cabinets.

What is claimed is:

1. A mounting arrangement for a stack-on laundry appliance comprising a sheet metal washer cabinet having a top wall including an access door portion at the front thereof and a horizontal washer cabinet flange at the rear thereof defining with said access door portion a top opening, a sheet metal dryer cabinet having a front panel to the rear of said access door portion and forming a jointure therewith, a back panel spaced from the rear of said washer cabinet to form with the rear of said washer cabinet a protected utility connection area and a horizontal dryer cabinet flange overlying said washer cabinet flange and defining with said front and back panels a bottom opening coextensive with said top opening and extending over said protected utility connection area, a control support panel separate from said cabinets for supporting washer and dryer control means, said support panel closing the top opening of said washer cabinet and the bottom opening of said dryer cabinet and having a side edge overlying the cabinet flanges of said washer and dryer to form a laminate of sheet metal, a pair of mounting plates

sandwiching said laminate and locked together to form a solid connection between said support panel, said dryer cabinet and said washer cabinet, and washer and dryer control means carried by said support panel for controlling said washer and dryer, said control means including means extending through said support panel for connection with a utility supply in said protected utility connection area.

2. The mounting arrangement of claim **1**, including an access door in said access door portion, said access door pivoting between a closed position coplanar with the top wall of said washer and an open position substantially coplanar with the front panel of said dryer and wherein said control means includes a door switch adjacent said front panel having an actuator actuatable through said control support panel, said access door having a switch actuating arm fastened thereto and extending rearwardly generally in the plane of said door to a position adjacent the top opening of said washer cabinet and the actuator of said door switch whereby to actuate said door switch when said access door pivots between said open and closed positions.

3. The mounting arrangement of claim **1**, wherein said means extending through said support panel is a water valve adapted for connection with hot and cold water hoses in said protected utility connection area.

4. The mounting arrangement of claim **1**, wherein said means extending through said support panel is an electrical terminal block means, said terminal block means including one-half of a terminal connector on one side of said support panel adapted for connection with the other half of said terminal connector on the other side of said support panel.

5. A mounting arrangement for a stack-on laundry appliance comprising a sheet metal washer cabinet having a top wall including an access door at the front thereof and a top opening at the rear thereof defined at one side by a horizontal washer cabinet flange, a sheet metal dryer cabinet wall mounted directly on said top, said dryer cabinet having a front panel to the rear of said access door forming a jointure with said top wall and having a horizontal dryer cabinet flange overlying said washer cabinet flange and defining with said front panel a bottom opening, a support panel in a horizontal plane closing the top opening of said washer cabinet and the bottom opening of said dryer cabinet and having a side edge overlying the flanges of said washer and dryer cabinets to form a laminate of sheet metal, said support panel including means for stiffening thereof in the horizontal plane, a pair of mounting plates each substantially 3/16 inch thick and substantially as wide as said laminate sandwiching said laminate, said plates being locked together by fastening means to form a solid connection of said dryer cabinet and said washer cabinet to said stiffened support panel, and control means carried by said support panel for controlling said laundry appliance.

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