United States Patent

[11] **3,577,650**

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[54] **PORTABLE AND COLLAPSIBLE CLOTHES DRIER RECEPTACLE**
4 Claims, 3 Drawing Figs.

[52] **U.S. Cl.** **34/151,** 34/233
[51] **Int. Cl.** **F26b 19/00**
[50] **Field of Search** 34/151, 163, 225, 233

[56] **References Cited**

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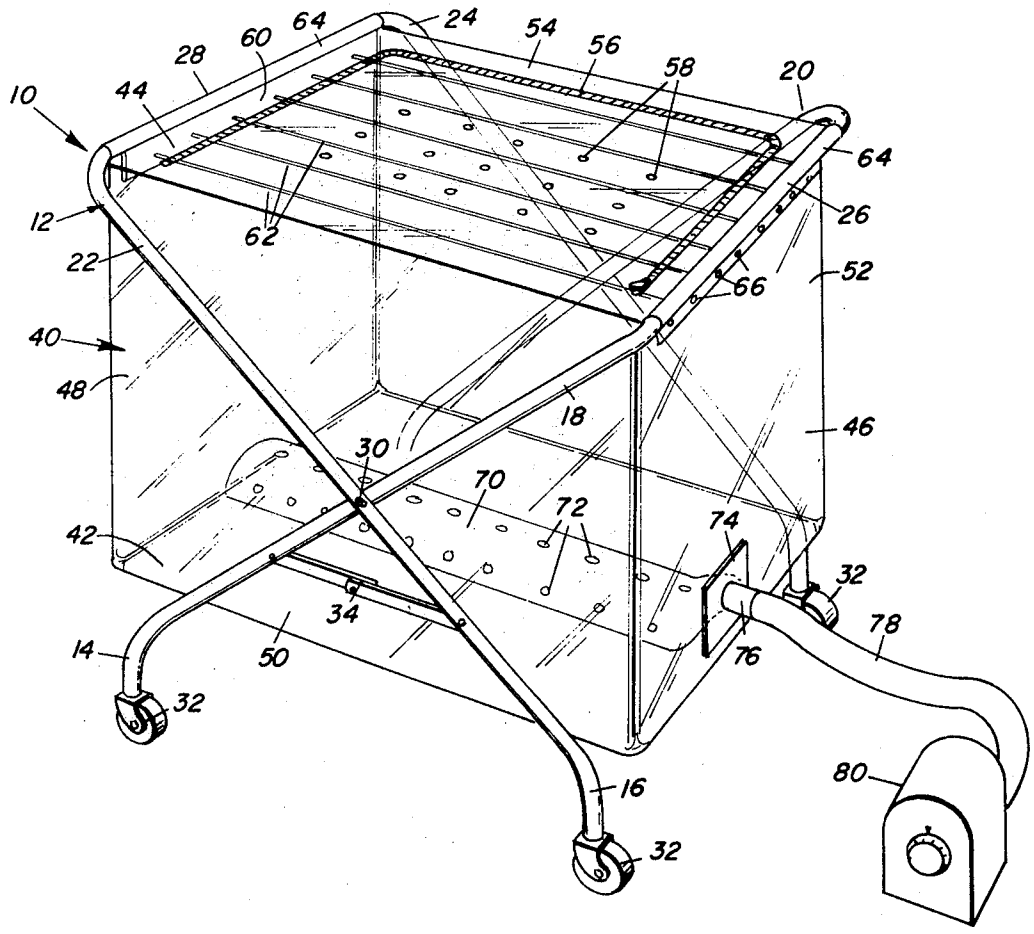
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ABSTRACT: A portable and collapsible clothes drier receptacle mounted on a foldable frame and adapted for attachment to a heater-blower unit.



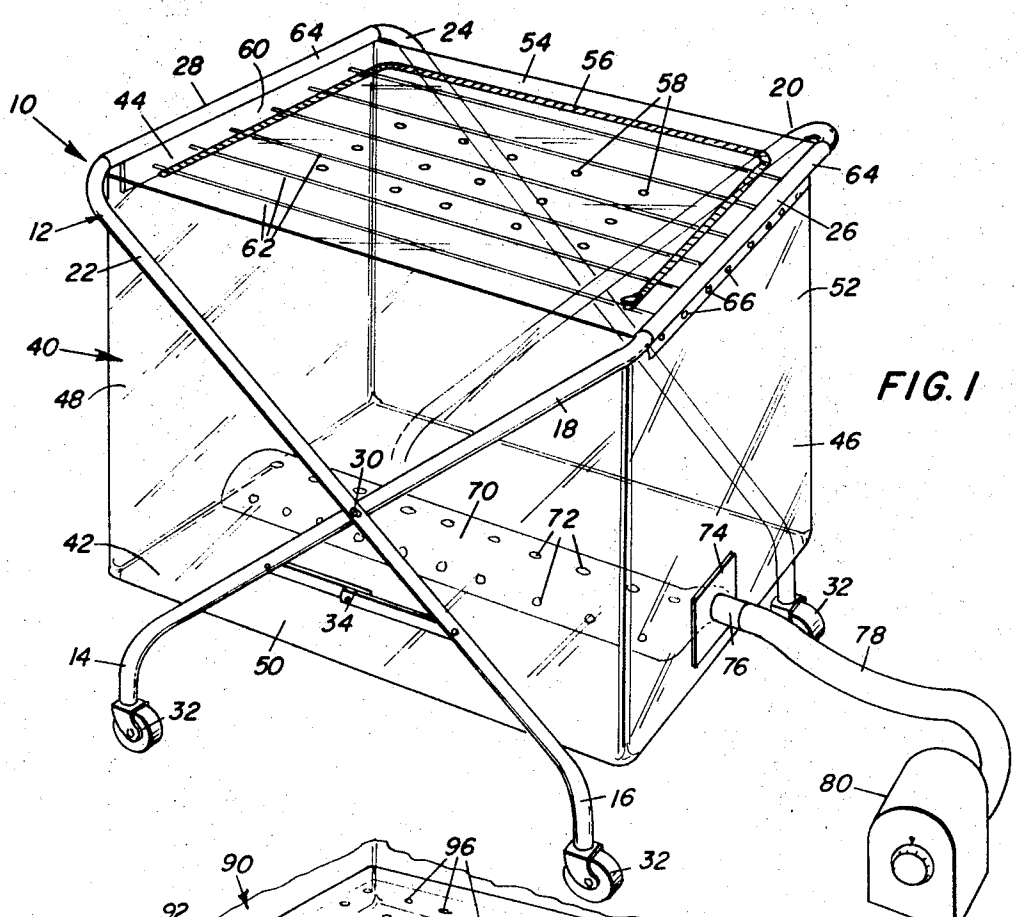


FIG. 1

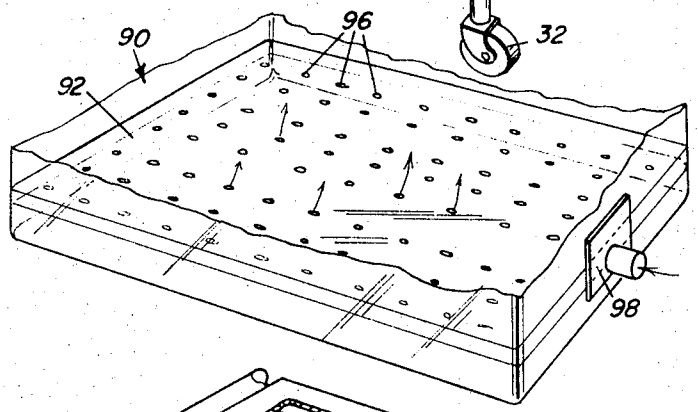


FIG. 2

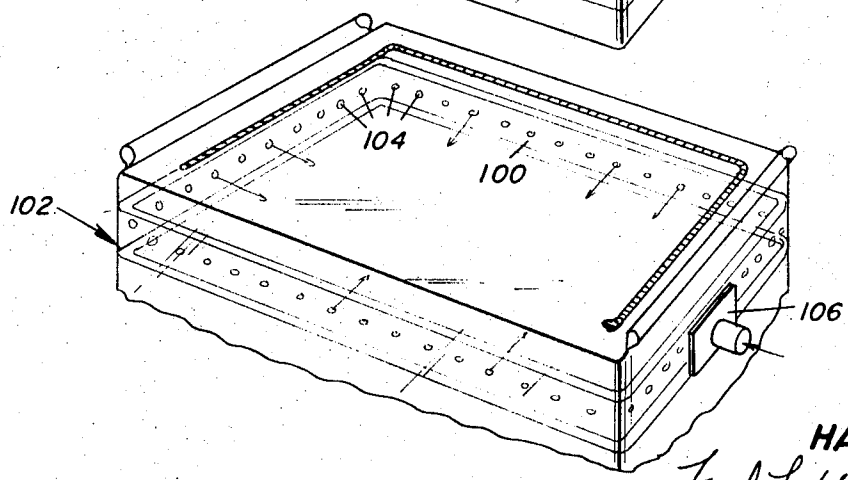


FIG. 3

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PORTABLE AND COLLAPSIBLE CLOTHES DRIER RECEPTACLE

BACKGROUND OF INVENTION

The advantages of having a small inexpensive drier receptacle assembly adapted to cooperate with the heater-blower unit of a conventional portable hair drier are immediately apparent. When traveling, the problem of clothes drying particularly in wet weather or on short stopovers is quite annoying. With this in mind, this drier receptacle assembly has been developed.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a drier receptacle assembly adapted to cooperate with the heater-blower unit of a conventional hair dryer.

It is another object of this invention to provide a drier receptacle assembly which is collapsible into a very small compact unit for easy portability.

It is yet another object of this invention to provide a drier receptacle assembly made of inexpensive yet sturdy materials to afford the desired results without undue cost.

It is a still further object of this invention to provide a portable and collapsible clothes drier receptacle assembly adapted to be operatively connected to a heater-blower unit, said drier receptacle assembly comprising a flexible rectangularly shaped closed receptacle having a top, bottom, end and sidewalls, an access flap portion formed in the receptacle top, means for fastening the free edges of the flap portion to said top, said receptacle being provided with a plurality of exhaust openings, reinforcing and supporting seams affixed to and transversely of the upper inner portion of each end wall, flexible lines connected to and extending between said reinforcing and supporting means, air distributing means positioned in the receptacle, air intake means connected to the air distributing means and extending through a portion of the receptacle to provide an outside connection to which a heater-blower unit may be attached to furnish hot dry air to the air distributing means and means for supporting the receptacle in erected operative position.

Other objects and advantages will become more apparent when considered in conjunction with the following detailed description and drawing, showing by way of example several embodiments of this invention.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view of the preferred embodiment of this invention in assembled position ready for use;

FIG. 2 is a partial view in perspective illustrating an alternative manifold arrangement, and

FIG. 3 is a partial view in perspective showing yet another alternative manifold arrangement.

As illustrated in FIG. 1 of the drawings, the portable drier unit **10** comprises a foldable frame assembly **12** including a pair of U-shaped supports **14** and **16**, said U-shaped supports having parallel legs **18** and **20** and **22** and **24** respectively. Parallel legs **18** and **20** are connected by a horizontal member **26** while legs **22** and **24** are bridged by horizontal member **28**. The U-shpaed supports **14** and **16** are crossed intermediate their leg lengths and pivotally connected at their point of intersection by means of pivot pin **30**. The free ends of the legs **18**, **20**, **22** and **24** mount swivel caster **32** to provide easy mobility of the unit. A folding locking bracket **34** is provided between legs **18** and **22** to maintain the frame assembly in erected position.

The folding frame assembly **12** supports a collapsible clothes drier receptacle **40** which is generally rectangular in shape having a bottom **42**, top **44**, end walls **46** and **48** and sidewalls **50** and **52**. Plastic material is quite advantageously used for the receptacle, particularly the types which are readily heat sealable. The top **44** is provided with a flap portion **54** whose three sides are secured to the top by means of a zipper **56**. The flap portion **54** is provided with a plurality of exhaust apertures **58** for the exiting of the moisture laden air from within the receptacle.

A reinforcing and support bar **60** is positioned within the receptacle **40** and secured to the upper inner face of each of the end walls **46** and **48**. These bars **60** act as the support for lines **62** which serve as clothes lines for the receptacle. Both upper transverse edges of the receptacle have a mounting flap **64** secured thereto. The free end of the flap **64** is passed over the respective horizontal members **26** and **28** of the U-shaped supports and secured to adjacent bar **60** by means of fasteners **66**.

The receptacle bottom **42** has a manifold **70** positioned on its inner face generally throughout the length of the bottom. This manifold **70** is semicircular in cross section and has a plurality of holes **72** through which hot air is introduced into the receptacle. The end of the manifold **70** contiguous to end wall **48** is closed while the other end is open and connected to intake plate **74** secured to end wall **46**. A nipple **76** extends from the plate **74** on the outside of the wall **46** and receives a flexible conduit **78** which in turn is connected to heater-blower unit **80**.

It is believed that the operation and use of the unit is reasonably apparent in view of the foregoing description. Even so, a brief description follows. With the portable drier unit **10** in erected position, as illustrated in FIG. **1**, the zipper **56** is operated to free flap portion **54** whereupon the items to be dried are hung on lines **62** provided for this purpose. After the receptacle is filled, the zipper is again pulled to close the top **44**. Next, the heater-blower unit **80** is started and hot dry air is forced through conduit **78** into manifold **70** and out through holes **72**. The moisture laden air is exhausted through apertures **58** in the flap portion **54**. As soon as the items within the receptacle are dry, they may be removed.

It is contemplated that the manifold **70** of FIG. **1** may be modified, and in this connection, attention is directed to FIG. **2** wherein the drier receptacle **90** is provided with a flexible manifoldlike cover **92** extending over the entire bottom of the receptacle in spaced relation thereto to provide a hot air chamber **94**. The cover **92** has a plurality of evenly spaced holes **96** over its entire surface for the discharge of hot dry air into the receptacle. The same type intake plate **98**, as in FIG. **1**, is used in this embodiment.

Yet another modification is shown in FIG. **3** wherein a different manifold arrangement is depicted. In this embodiment, the manifold comprises a flexible rectangularly shaped tube **100** secured around the upper inner portion of the drier receptacle **102**. The exposed inner face of the tubular manifold **100** has a plurality of hot air feed holes **104** for directing the hot dry air into the upper portion of the drier receptacle. The usual conduit plate **106** is provided to feed the hot air from the heater-blower unit to the manifold **100**. Obviously, the discharge openings in this embodiment would be located in the bottom of the drier receptacle.

In all of the constructions illustrated and described, use of a transparent heat sealable plastic for the drier receptacle is quite advantageous. The supporting frame assembly can be made of aluminum, stainless steel or even other materials depending mainly on cost factors. The heater-blower unit may be of the type usually associated with portable hair drier units although other types of heater-blower units could obviously be employed.

Many conventional additions could be made to the basic units as described above. For example, means can be provided to communicate with the entering hot air to introduce a scent into the drier receptacle. Further, an ultraviolet light could be positioned within the drier receptacle to deodorize and purify the air and items in the receptacle.

I claim:

1. A portable and collapsible clothes drier receptacle assembly adapted to be operatively connected to a heater-blower unit, said drier receptacle assembly comprising a flexible rectangularly shaped closed receptacle having a top, bottom, end and sidewalls, an access flap portion formed in the

receptacle top, means for fastening the free edges of the flap portion to said top, said receptacle being provided with a plurality of exhaust openings, a reinforcing bar affixed to and transversely of the upper inner portion of each end wall, flexible lines connected to and extending between said bars, a mounting flap connected to and extending upwardly from the transverse upper outer edge of each end wall, a pair of U-shaped supporting members having crossed legs pivotally secured to each other, the closed ends of said U-shaped supporting members being connected to the mounting flaps to freely support the clothes drier completely from the outside, air distributing means positioned in the receptacle, and air intake means connected to the air distributing means and extending through a portion of the receptacle to provide an outside connection to which a heater-blower unit may be attached to furnish hot dry air to the air distributing means.

2. The invention as described in claim 1 and wherein the air distributing means in the receptacle comprises a longitudinally extending manifold tube of flexible material secured to the

receptacle bottom, one end of the manifold tube is closed and the other end being connected to the air intake means, said manifold tube having a plurality of holes through which hot dry air is passed into the receptacle.

3. The invention as described in claim 1 and wherein the air distributing means in the receptacle comprises a flexible sheet extending completely over the bottom and in spaced relation thereto to form a manifold chamber, said manifold chamber being connected to the air intake means, the flexible sheet being provided with a plurality of holes for passing hot dry air into the receptacle.

4. The invention as described in claim 1 and wherein the air distributing means positioned in the receptacle comprises a tubular manifold extending around the inside of the receptacle, said manifold having a plurality of openings for directing the hot dry air into the receptacle, the tubular manifold being connected to the air intake means, and the exhaust openings in the receptacle being located remotely from the manifold.