Jan. 5, 1960 F. G. KONSTANDT 2,919,497

CLOTHES DRIER

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FIG. 1

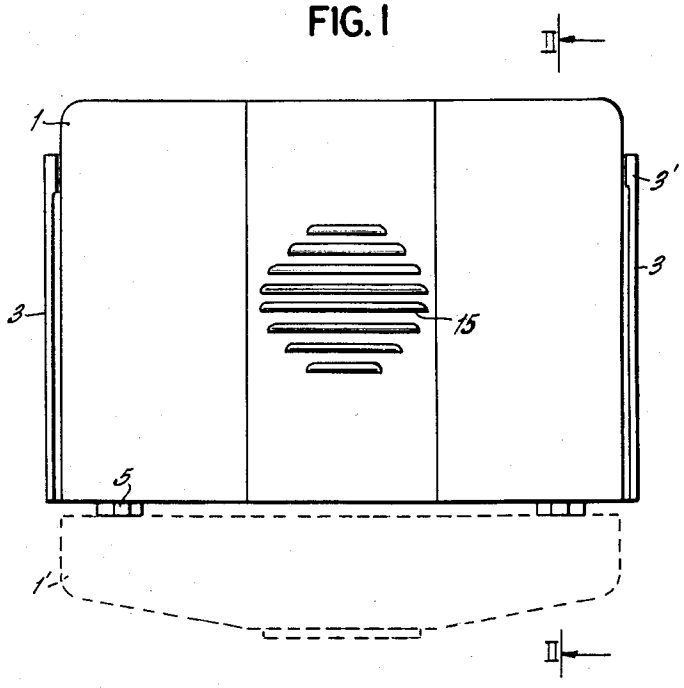


FIG. 2

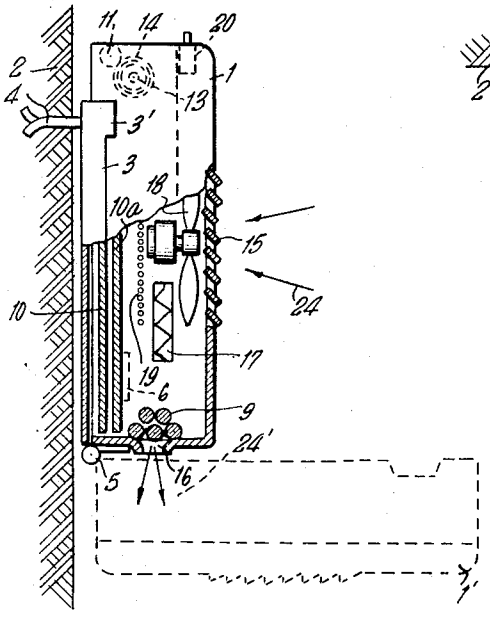
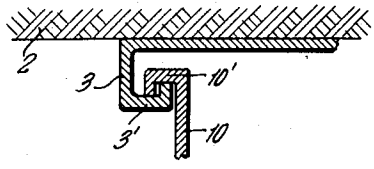


FIG. 5



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FIG. 4

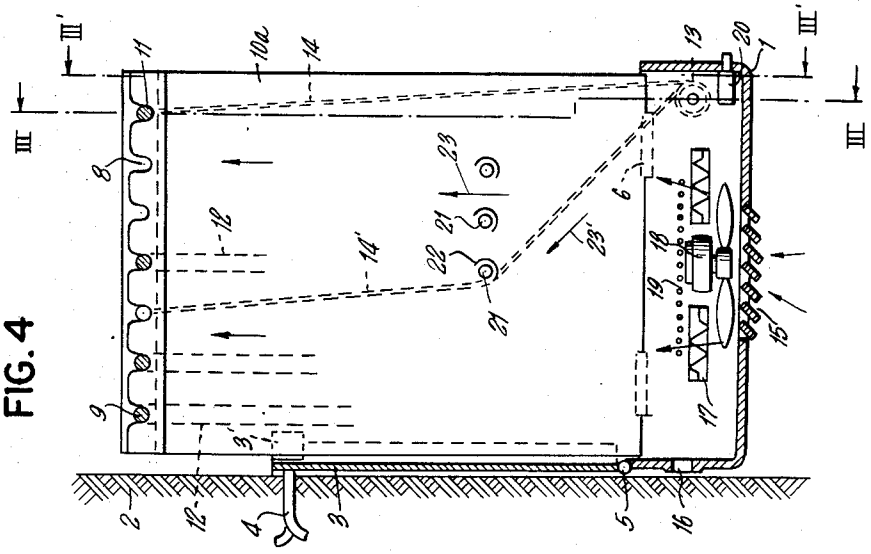
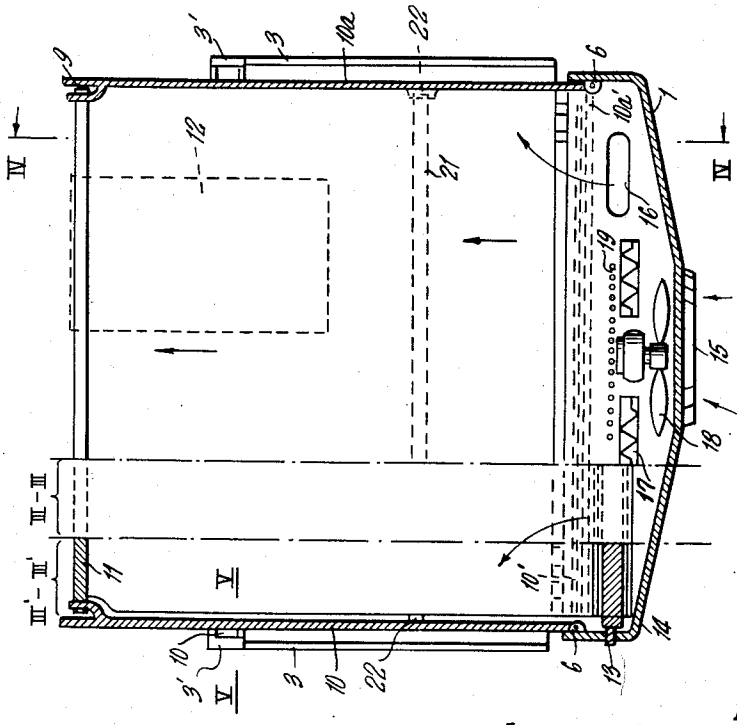


FIG. 3



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CLOTHES DRIER

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5 Claims. (Cl. 34—151)

Driers for laundry, attached to a wall, parts or the whole of which can be folded up against said wall, when the drier is not in use, are already known. Some of the known types of driers have an electric heating element placed in the upper portion and are provided with means for blowing or forcing the air downwards over the heating element and through the laundry to be dried.

The object of the present invention is a drier that is fixed to a wall and which can be folded against it when not in use and where an electric heating element and a fan are situated below and the heated air passes upwards through the laundry to be dried. A further characteristic of the present invention is a device that enables full use to be made of the heated air when the drier is only partially filled with laundry.

Other objects will be apparent from the description and appended claims.

The drier of the present invention consists of a preferably square tray or pan, horizontally positioned when in use, having suitable air holes in its base plate for letting the air enter and at the same time of sufficient depth to hold the electric or other heating elements, the two side walls of the drier, the rods for supporting the laundry to be dried and the front closure curtain. It is characterized furthermore that the said side walls of the drier can be elevated from their position of rest to a vertical working position and are longitudinally attachable along the wall to which the drier is fixed.

The front opening of the drier is closed by means of a curtain, which may be of cloth, plastic or rubber. This curtain is rolled around a rod with a spring inside of it, very similar to spring-slide window curtains or shades. The rod with the curtain is fixed in the lower front part of the tray or pan in such manner that it can be drawn upwards. The end of the curtain can be raised upwards so as to form a sort of drying chamber and can be fixed in this position in a relatively air-tight manner.

Furthermore, an electric fan is provided in the bottom of the tray or pan for drawing fresh air over an electric heating element upwards through the laundry to be dried.

The invention will be more completely understood from the following detailed description which is given in conjunction with the accompanying drawing, in which:

Fig. 1 is a front elevation of the drier, pressed against the wall, with the working position shown in broken lines;

Fig. 2 is a side elevation thereof, with a part broken away substantially on the line II—II of Fig. 1;

Fig. 3 is a front view of the drier with parts broken away in different depths, substantially on the lines III—III and III'—III' of Fig. 4, the drier being in working position;

Fig. 4 is a side sectional elevation thereof, substantially on the line IV—IV of Fig. 3;

Fig. 5 is a fragmentary sectional view taken on line V—V of Fig. 3.

Referring now to the drawing, which illustrates the preferred embodiment of my invention, the numeral **1** designates a tray or pan, constructed in such manner as to contain all the parts of the drier. This tray or pan **1** is attached to a brick wall **2**, as shown in Fig. 2. The most useful height at which the tray or pan **1** may be fixed, has been found to be about 4 feet above the floor level. The broken lines in Fig. 1 and Fig. 2 show the pan **1'** in working condition and the unbroken lines show same when folded up against the brick wall **2**, at rest.

The hinged bearings **6** support the lateral sides of the tray, **10** and **10*a***, respectively. These lateral sides **10** and **10*a*** are fastened to the back wall of the drier **3**, when in a vertical position, by means of fasteners. This is shown more clearly in Fig. 5, where the side wall (**10** and **10'**) is hooked into the protuding part **3'** of the back wall **3** of the drier. The lateral sides of the drier **10**, **10*a*** are provided with a plurality of U shaped slots **8** at their upper edges, and which slots **8** form the support or bearing for the rods **9** upon which rods the laundry is hung to be dried.

After the laundry has been hung on the rod for drying, the curtain **14**, fixed in the lower front part of the tray, is raised with its free end and fastened at the point marked with **11**. For the better raising and lowering of the curtain, the rod on which it is rolled, is equipped with a spring inside of it, similar to those used for window shades. Thus, when the curtain is pulled up and fastened at **11**, the tray is enclosed from all sides.

Figs. 3 and 4 also show the tray or pan **1** containing an electric heater **17**, above which a wire protecting screen **19** is provided, as well as the openings **15** for the fresh air to enter and which is heated and then rises vertically through the laundry to be dried **12**.

According to the present invention, the rod **11**, to which the front curtain **14** is attached, can be supported in the first pair of U shaped slots **8**, but when the drier is not completely filled with laundry, the curtain rod **11** can also be supported in the U shaped slots nearest to the laundry as shown in **14'** (Fig. 4), thereby reducing the sectional area of the outlet of heated air, thus allowing the complete heated air to pass the laundry. On both lateral side walls of the drier **10**, **10*a*** are projecting parts or hooks **22** for pressing the curtains **14'** into the position as shown in Fig. 4, by means of a rod **21**, thus directing the heated air closer towards the laundry which is to be dried. The direction of the stream of heated air in both cases is indicated by arrows **23**, **23'** (Fig. 4). Numeral **20** in Figs. 2 and 4 represents a push button to connect the electric current, either for the fan alone, or for both the fan and the heating element together.

Fig. 2 shows also the different parts of the drier packed into the tray or pan **1**, the hinged side wall bearings **6**, the heating element **17** with its fan **18** and the lateral sides **10**, **10*a***, folded into said pan **1**. The rods **9** and the protecting screen **19** are also shown. There is also room in the tray for the front curtain **14** with its supporting rod **13** (curtain attached to the latter).

The hinges **5**, upon which the pan **1** swings, may be provided with springs, as used on oven doors, whereby the pan **1** is pressed towards its position of rest (Fig. 2), vertically against the back wall of the drier **3**, fixed with hooks **4** to the brick wall of the room **2**. The lateral sides **10**, **10*a*** can be fixed in their working position against the back wall **3** of the drier, as shown in Fig. 5.

When the drier is not used for drying laundry (that is, when folded back), the fan **18** with the heating element **17** can be used for heating the room. In such case,

the air enters in the direction 24 through the openings 15 of the drier (Fig. 2), passes the heating element 17 and leaves through the holes 16 in the direction 24'. In working position (when drying laundry), these holes 16 are closed by the wall 2 (Fig. 4).

In another embodiment of the same drier, the back wall 3 is not fixed to the wall 2 by means of hooks, but is provided with a plurality of openings or holes, preferably placed near its edges. Through these holes fine, needle-like nails are driven into the wall 2. The number and the spacing of these nails secures the back wall 3 of the drier to the wall. The said openings can be bored at a slant through the back wall 3 and the device is then fixed in a manner similar to the process of nailing pictures to the wall.

A further improvement consists in making the hinges 5, upon which the tray or pan 1 swings, easily disengageable. Thus the back wall 3 can be fixed to the wall 2 without being burdened during this operation by the remaining items. After fixing the back wall 3 by means of the said needle-like nails the pan 1 is hinged onto it and the device functions in the manner described at the beginning.

Having now particularly described and ascertained the nature of my invention and in what manner the same is to be performed, I declare that what I claim is:

1. A collapsible drier for clothes, laundry or the like adapted to be fixed to a supporting wall or other supporting structure, comprising a substantially rectangular pan or tray; hinges connecting the rear rim of said pan to said wall permitting said pan to be swung upward from a horizontal position against the wall; two vertical side walls hinged in spaced relation to the wall above said pan to be swung outwardly from a mutually overlapping position parallel to the wall into positions vertical to the wall; said pan in horizontal position and said side walls in outswung position enclosing a drying compartment; a curtain rod rotatably mounted in said pan close to its frontal wall; a curtain rolled upon said curtain rod and adapted to be drawn upward to close the frontal opening

of the drying compartment between said side walls when the same are in outswung position; means holding the free end of the curtain when drawn upward in an adjustable distance from the wall; an air vent in the bottom of said pan; and an electric heater and a fan above said air vent within said pan to draw air into and through the drying compartment.

2. A collapsible drier according to claim 1 comprising at least one second air vent in the back wall of the pan; said second air vent being covered by the supporting wall when the pan is in horizontal position, and being exposed when the pan is in upswung position to permit air heated by said heater and driven by said fan to flow from inside the pan into the surrounding space.

3. A collapsible drier according to claim 1 comprising a plurality of indentations in the upper edge of each swingable side wall, each pair of said indentations adapted to receive and to hold supporting rods for articles to be dried.

4. A collapsible drier according to claim 1 comprising a plurality of spaced indentations in the upper edge of each swingable side wall, and a second curtain rod attached to the free end of the curtain, the ends of said second curtain rod adapted to rest in any one pair of said indentations.

5. A collapsible drier according to claim 1 comprising at least one adjusting rod extending between the side walls when the same are in outswung position; and a plurality of spaced supports for the ends of said rod arranged in the middle portion of each side wall to hold said rod against the updrawn curtain in variable distances from the supporting wall.

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