Dec. 11, 1956 G. K. GAUFF 2,773,314

GARMENT DRYERS

Filed May 5, 1955 2 Sheets-Sheet 1

Fig. 1.

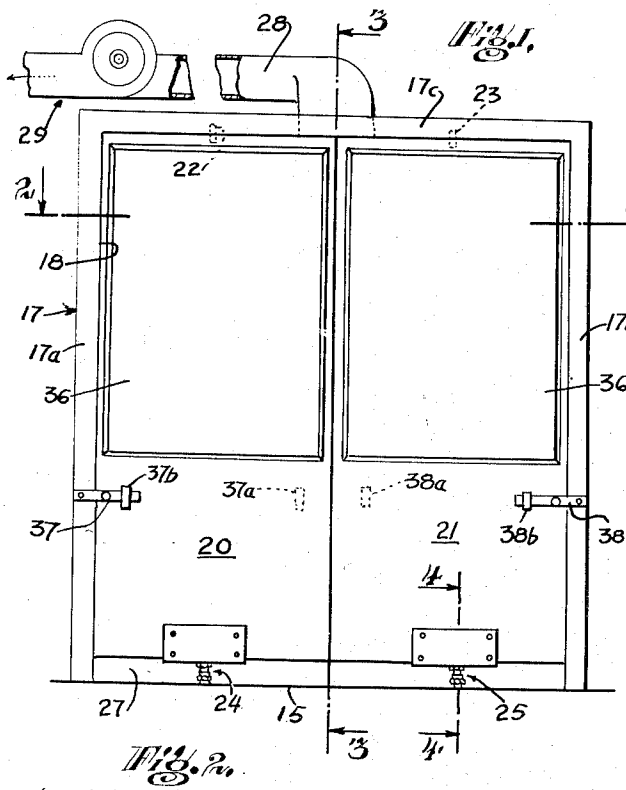


Fig. 3.

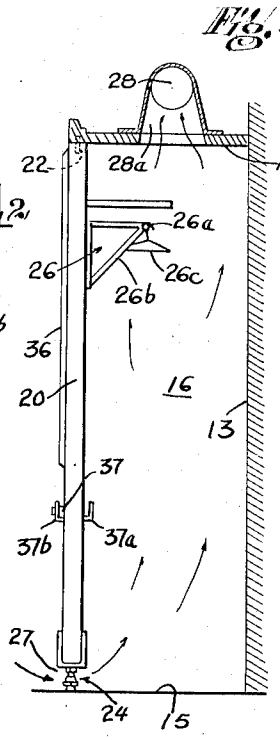


Fig. 2.

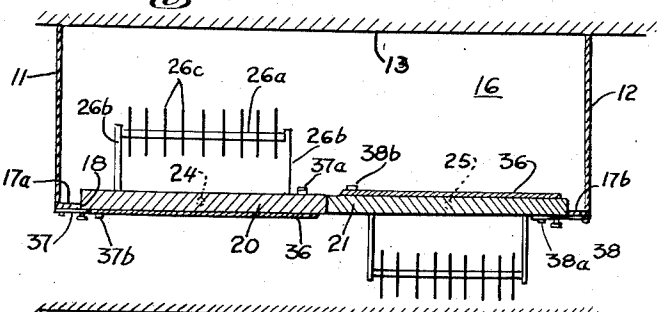


Fig. 4.

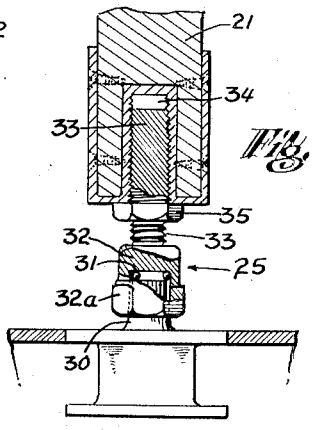
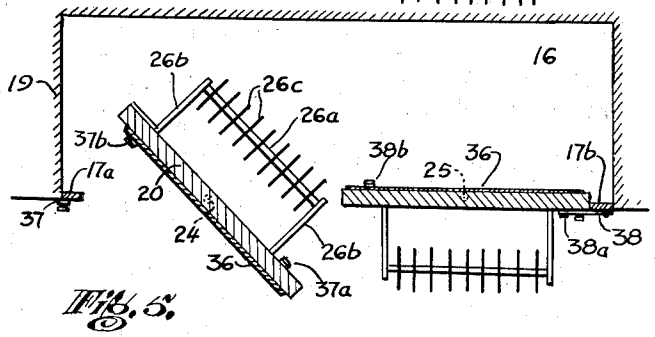


Fig. 5.



INVENTOR
George K. Gauff
BY
Kenyon & Kenyon
ATTORNEYS

Dec. 11, 1956 G. K. GAUFF 2,773,314

GARMENT DRYERS

Filed May 5, 1955 2 Sheets-Sheet 2

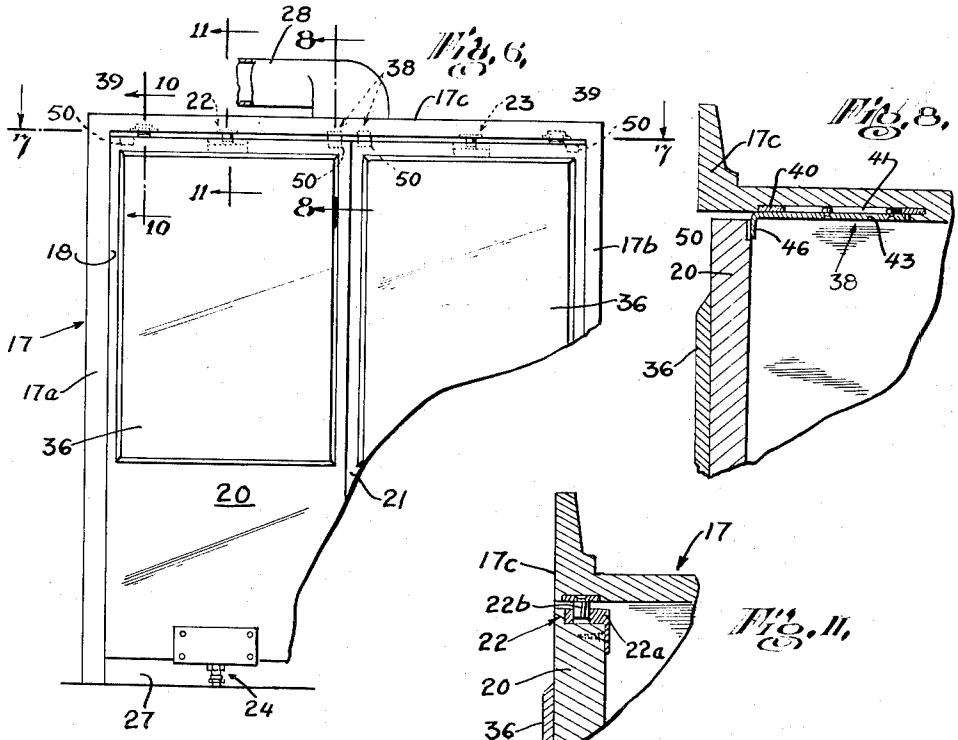


Fig. 6.

Fig. 8.

Fig. 11.

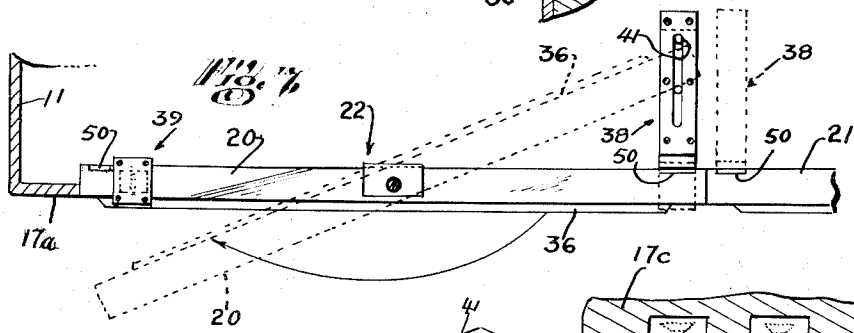


Fig. 7.

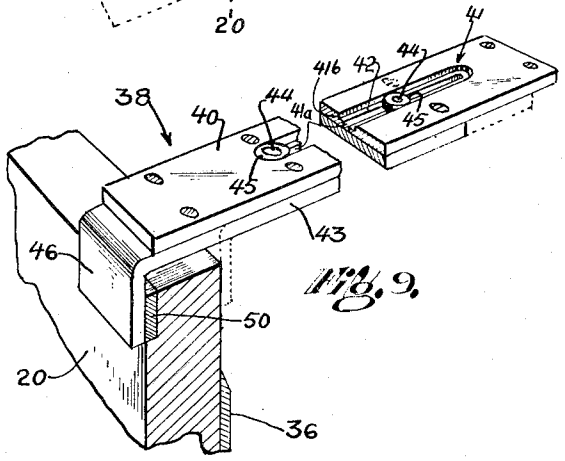


Fig. 9.

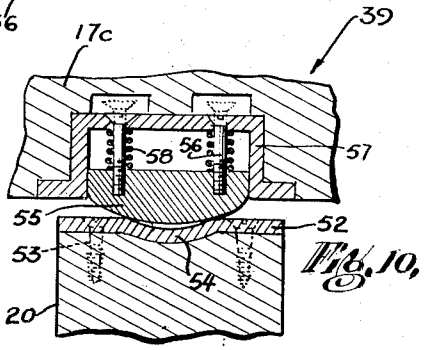


Fig. 10.

INVENTOR
George K. Gauff
BY
Kenyon & Kenyon
ATTORNEYS

United States Patent Office 2,773,314 Patented Dec. 11, 1956

2,773,314

GARMENT DRYERS

George K. Gauff, Great Neck, N. Y., assignor to New York Silicate Book Slate Co., Inc., New York, N. Y., a corporation of New York

Application May 5, 1955, Serial No. 506,281

9 Claims. (Cl. 34—91)

This invention relates generally to garment dryers, and more specifically to combination cloakrooms and garment dryers for use in schoolrooms, meeting halls, and the like. This application is a continuation-in-part of my co-pending application Serial No. 329,790, filed January 6, 1953, now forfeited.

The conventional cloakroom used in schools consists of an entirely closed room where children's garments are kept while classes are being conducted. Inasmuch as this cloakroom serves a single purpose, insufficient space and arrangement is normally allotted to it. This is true even in the most modern of schools, where it is desirable to have the maximum of light and chalkboard surfaces, neither of these normally permitting utilization of wall areas for cloakrooms.

In these conventional cloakrooms, garments of many students, wet from rain or damp from perspiration, are normally hung closely together for the entire school day. During this period, the clothing cannot dry out, and the odors of dampness and perspiration multiply and often permeate dry clothing hung with the wet. Upon removal, the garments, still wet and odoriferous, must be again worn by the students, thus subjecting them to the possibilities of catching cold.

An object of this invention is to provide means for adequately drying and ventilating garments in a schoolroom without detracting from light, air or wall surface and without annoyance to persons using the schoolroom.

Another object of this invention is to provide a garment dryer to which there is ready and convenient access for the insertion and removal of garments.

A further object of the invention is to provide a garment-drying unit which may be easily and inexpensively installed in existing constructions.

Another object is to provide garment-drying units which may be installed in sufficient numbers in a room to maintain proper drying capacity without diminishing the usable wall surfaces of the room.

Other objects and features of the invention will become apparent from the following specification and drawings.

In this specification and drawings examples of structures embodying this invention are described and shown, but it is to be understood that the invention may take other forms and structures within the scope of the subjoined claims.

In the drawings,

Fig. 1 is a front elevation of the garment dryer;

Fig. 2 is a horizontal section on the line 2—2 of Fig. 1;

Fig. 3 is a vertical section on the line 3—3 of Fig. 1;

Fig. 4 is a detail of the lower bearing part in vertical section;

Fig. 5 is a plan view of the garment dryer placed in an alcove of a wall;

Fig. 6 is a partial front elevation of the garment dryer with some modified structural features;

Fig. 7 is a fragmentary horizontal section on the line 7—7 of Fig. 6;

Fig. 8 is a fragmentary vertical section on the line 8—8 of Fig. 6;

Fig. 9 is a fragmentary perspective view of a structural detail used in Fig. 6;

Fig. 10 is a fragmentary vertical section on the line 10—10 of Fig. 6; and

Fig. 11 is a fragmentary vertical section on the line 11—11 of Fig. 6.

Referring to the drawings, and first specifically to Figs. 1, 2 and 3 thereof, the form of garment dryer there disclosed consists of vertical side panels **11** and **12**, a vertical rear wall **13**, an upper horizontal ceiling or cover **14** and a floor **15** which may be the floor of the schoolroom. A frame **17** having vertical portions **17***a* and **17***b* and horizontal portion **17***c* is secured to side panels **11** and **12** and the cover **14** respectively to form with floor **15** a rectangular frontal opening **18**.

The wall **19** of a room may form either the vertical rear wall **13** or the vertical side walls **11** and **12** of the structure, or all of these as shown in Fig. 5 where the structure is set into an alcove in wall **19**, and said wall forms the side panels and the rear wall of the structure.

Panels **20** and **21** are pivotally mounted in rectangular frontal opening **18** by upper pivots **22** and **23** and lower pivots **24** and **25** for rotation of at least 180° about their central vertical axes. Panels **20** and **21** are normally positioned in the plane of frame **17** to close opening **18**, and when panels **20** and **21** are in said plane, the adjoining lateral margins of the panels are in close relation with each other, and their extreme lateral margins are in close relation with the lateral edges of vertical portions **17***a* and **17***b* of frame **17**. Inasmuch as it is intended that there be a minimum of leakage of air through the space between said panels **20** and **21**, and between said panels and frame **17**, it is desirable that these elements be as close together as possible, while still permitting panels **20** and **21** to be rotated. This relationship will depend upon the particular construction of panels **20** and **21** and of frame **17**, and in some cases it may be possible to limit the space to 1/16 of an inch, whereas with other constructions, the space may be larger. The construction should be such that the close relationship does not exceed 1/8 of an inch inasmuch as a greater opening would create excessive bleeding of air into enclosure **16**. This relationship should be maintained when one of the panels is rotated 180°, as shown in Fig. 2.

It is desirable that the garments be positioned inside of enclosure **16** in such a manner that there may be adequate contact of drying air with garments. One means for doing this is by a bar **26***a* mounted by bracket **26***b* secured to one side of said panels. Ordinary clothes hangers **26***c* may be hung from bar **26***a*, and said bar is positioned a sufficient distance from said panel and from the rear vertical element of said enclosure to permit the desired contact of air with the garments suspended therefrom. It is obviously necessary that bar **26***a* and bracket **26***b* be so constructed that neither they nor any garment hanging thereon will extend beyond the arc of rotation of panels **20** and **21** to impede rotation thereof.

The lower marginal edge of panels **20** and **21** may be spaced from the lower horizontal element **15** sufficiently to provide an inlet or intake air opening **27** preferably below the level of garments hanging on rack **26**. An outlet or air duct **28**, having its orifice **28***a* positioned in enclosure **16** above garment hanging means **26**, is located preferably in the cover **14** of the enclosure. A power driven exhaust fan **29** is mounted on exhaust duct **28** to pull air from enclosure **16** and to expel it into the outside atmosphere. Where there are facilities available in a

building for removing air from the building, duct 28 may be vented directly thereinto.

Operation of fan 29 thus causes air to enter the enclosure below the level of the garments, to rise among them, and to leave the enclosure through duct 28 by which it passes to the atmosphere. Reliance may in many instances be made upon convection circulation of air through the chamber 16, the air entering via inlet or air opening 27 and leaving via outlet or duct 28. In such event, no fan is needed.

Panels 20 and 21, as already described, are pivotally mounted on their central vertical axes by upper pivots 22 and 23 and lower pivots 24 and 25, which are so constructed and arranged that the panels 20 and 21 may be axially raised and lowered, in order that the upper margins of said panels may be kept in close relation with the horizontal portion 17c of frame 17 to minimize leakages of air into enclosure 16.

One way in which panels 20 and 21 may be axially raised and lowered is by the coaction of upper and lower pivots 22 and 24 and upper and lower pivots 23 and 25. Lower pivots 24 and 25 (Fig. 4) each consist of a hub or spindle 30 securely attached to floor 15, a ball bearing 31 resting on spindle 30, and a step bearing 32 adapted to rotate on and about spindle 30. A threaded shank 33 is secured by one end to step bearing 32. Bore 34 is provided in the lower edge of the panel and is adapted to threadably receive the shank 33. A lock nut 35 rotatably engages shank 33 between step bearing 32 and the lower edge of the panel. For example, in Fig. 4 shank 33 has been threaded into bore 34 and nut 35 has been rotated to its upper extremity on shank 33. In order to raise the panel, nut 35 is rotated downwardly, and bearing 32 is rotated in a direction to withdraw shank 33 from bore 34 until the panel is in the desired position. Rotation of bearing 32 may be facilitated by nut portion 32a formed thereon. Nut 35 is then again rotated to its upper extremity on shank 33, locking shank 33 in position in bore 34. The panel is then free to rotate about its axis, the weight of the panel being borne by the ball bearing 31 upon which bearing 32 rotates.

Upper pivots 22 and 23 should permit slidable axial and rotational movement of the panels. One well known way in which this may be accomplished is by a bearing 22a (Fig. 11) centrally mounted by the upper edge of the panel, and a pivot pin 22b mounted by frame 17 and journalled in the pivot bearing. The panel may then be freely rotated, and it will have free axial movement as it is raised or lowered by adjustment of step bearing 32.

Inasmuch as this invention is primarily directed at use in schoolrooms, meeting halls and the like, chalkboard surfaces 36 may be secured to the other side of panels 20 and 21. A chalk tray or the like may also be provided as desired. In addition, the other sides of panels 20 and 21 may be utilized for other artistic or functional purposes, such as bulletin boards, or they may be so finished as to provide a continuous wall surface when exposed.

It is necessary that means be provided for securing or locking panels 20 and 21 in position in the plane of frame 17. One means for doing this is shown in Figs. 1, 2, 3 and 5 of the drawings, and comprises drop bars 37 and 38 pivotally connected to the vertical portions 17a of frame 17, and swinging catches 37a and 37b and 38a and 38b mounted by panels 20 and 21 to secure drop bars 37 and 38. In Fig. 1, catch 37a will secure drop bar 37 when one side of panel 20 is exposed, and catch 37b will secure drop bar 37 when the other side of said panel is exposed. It is obvious that other means than those shown may be used for securing panels 20 and 21 in position in frame 17.

For example, an alternative securing means or arrangement is shown in Figs. 8–10, inc. The elements 37, 37a, 37b and 38, 38a and 38b are eliminated. These elements are replaced by overhead stop means 38 and check means 39 now to be described.

The stop means 38, as seen in Fig. 9, includes a first plate member 40 provided with a longitudinally extending slot 41. The slot 41 has a lower portion 41a and a wider upper portion 41b thereby defining a peripheral shoulder 42 lying in slot 41 between the upper and lower surfaces of the plate member 40. A second plate member 43 is supported slidably on one face of the first plate member 40 through the agency of a pair of spaced apart pins 44 which extend from plate 43 into the slot 41. Washers 45 are mounted on the pins 44 above the peripheral shoulder 42 and are secured on the pins as by riveting over their ends. The fit between the washers 45 and the shoulder 42 is sufficient to permit free longitudinal sliding movement of the plate member 43 relative to the plate member 40 without undue looseness to the limits permitted by the abutment of the respective washers 45 with the opposite ends of said slot 41. The plate member 43 has a stop flange 46 bent at right angles to its main body.

One of said stop means 38 is provided for each of the panels 20 and 21. As seen in Fig. 6, these means 38 are supported from the upper frame part 17c adjacent the two inner side edges of the respective panels 20 and 21. Each means 38 is secured to the upper frame part 17c by having its upper plate member 40 secured as by screws in a recess provided in the lower face of frame part 17c so that the slot 41 of each plate member 40 is perpendicular to the plane of frame 17. The position of the plate members 40 is fixed so that the limiting forward and rearward positions of the flanges 46 of their slidably carried members 43 lie in positions to function as exact limit stops for each of the panels 20 and 21 in either of their two 180° positions of swing. For example, as seen in Fig. 9, one face of panel 20 engages the inner face of flange 46. With such engagement the panel 20 lies in the plane of the frame 17. It cannot be rotated clockwise because the flange 46 is at its extreme forward limiting position as permitted by the slot 41. The panel 20 can, however, be rotated counterclockwise through 180°. Just before completion of the latter rotation another part of said face of panel 20 strikes the front face of the flange 46. In consequence, the latter and slide member 43 are free to slide inwardly to the extreme inward limiting position permitted by slot 41. When this position is achieved the panel 20 again lies in the plane of the frame 17 but its face having a chalkboard surface 36 is disposed outwardly as seen in Fig. 8. To restore the panel 20 to its first position it must be rotated 180° in opposite direction. The flange 46 on slide member 43 which is slidable to either of two limiting positions in the manner described thus serves as an aligning stop for the panel 20. Similar disposition of the stop means 38 for the panel 21 performs similar functions for it. Metallic bumper or strike plates 50 are mounted to the faces of the panels 20 and 21 in those areas that would normally engage the flanges 46 so as to reduce wear on the panel surfaces. For example a pair of bumpers or strike plates 50 are secured or mounted on the inner face of panels 20 and 21 at spaced apart points on each panel adjacent its top edge and at opposite symmetrical locations relative to the respective axes of rotation of the panels on their pivots 22 and 23.

In order to check the panels 20 and 21 in either of their two 180° rotated positions, the check means 39 are provided. Each such means includes a strike plate 52. Two such strike plates are secured to the upper edge of each panel 20 and 21 as by screws 53. Each strike plate 52 has a curved cavity or recess 54.

A curved engaging member 55 is supported by slidable pins 56 mounted in a socket 57. The member 55 is biased toward an outward position from the socket 57 by springs 58. Each socket 57 is fixedly mounted from a recess in the frame part 17c and is so disposed that its engaging member 55 is engageable in the recess

54 of a strike plate 52 and when so engaged serves to hold or check panel in a checked or semi-locked position. Two strike plates 52 are provided on the upper edge of each panel, being symmetrically disposed on opposite sides of the pivots 22 or 23. One engaging or check member 55 and associated parts is provided for each panel 20 or 21 and as shown in Fig. 6 these members are carried by the upper frame part 17*c* in proximity, respectively, to the vertical frame parts 17*a* and 17*b*.

The cooperation of the stop means 38 and the check means 39 of the alternative securing means as herein decribed thus provides for automatic stopping and checking of the two panels 20 and 21 in the plane of the frame 17 in either of their two 180° positions of rotation.

Structures embodying this invention have been shown in the drawings and herein described but it must be understood that the invention may take other forms and other structures equivalent to what is described above. It is intended that the scope of this invention be limited neither by the above description nor by the drawings, but only by the appended claims.

What is claimed is:

1. A garment dryer for use in schoolrooms and the like comprising an enclosure having a rectangular frontal opening whose lower edge is substantially at floor level, a panel normally positioned in the plane of said opening with its upper and at least one lateral margin in close relation with the upper and at least one lateral edge of the opening, said panel being pivoted at top and bottom so that it is adapted to rotate about its central vertical axis through at least 180° and, after having been rotated so that its own faces are reversed, to resume a position in which its upper and at least one lateral margin are in close relation with the upper and at least one lateral edge of the opening, securing means to hold the panel in each of said positions, a garment rack secured to one face of said panel, an opening for passage of air into said enclosure, at least one of the marginal edges of said opening being defined by said panel and the opening being positioned below the level of the garment rack for entry of air into the enclosure beneath the same, an air duct for removing air from the enclosure, said duct having its intake orifice positioned within the enclosure and at a level above the level of said garment rack, and means for propelling air in said duct in a direction away from said enclosure.

2. A garment dryer as described in claim 1 wherein a chalkboard is secured to the face of the panel opposite to that on which the garment rack is secured.

3. A garment dryer as described in claim 1 wherein a plurality of panels are mounted in the plane of the opening and the pivots thereof are so arranged that, when all of the panels are in the plane of the opening, their adjoining lateral margins are in close relation with each other and the extreme lateral margins of the first and last panels are in close relation with the lateral edges of the opening.

4. A garment dryer as described in claim 1 wherein the means for propelling air is a power-driven exhaust fan.

5. A garment dryer for use in schoolrooms and the like comprising an enclosure having a rectangular frontal opening whose lower edge is substantially at floor level, a panel normally positioned in the plane of said opening with its upper and at least one lateral margin in close relation with the upper and at least one lateral edge of the opening, said panel being pivoted at top and bottom so that it is adapted to rotate about its central vertical axis through at least 180° and, after having been rotated so that its own faces are reversed, to resume a position in which its upper and at least one lateral margin are in close relation with the upper and at least one lateral edge of the opening, securing means to hold the panel

in each of said positions, a garment rack secured to one face of said panel, an opening for passage of air into said enclosure, at least one of the marginal edges of said opening being defined by said panel and the opening being positioned below the level of the garment rack for entry of air into the enclosure beneath the same, an air duct for removing air from the enclosure, said duct having its intake orifice positioned within the enclosure and at a level above the level of said garment rack, and said securing means including slidable stop means movable into either of two limiting positions and engageable with said panel for stopping it precisely in each of said positions, and also including check means for maintaining the stopped panel in each of said positions.

6. A garment dryer for use in schoolrooms and the like comprising an enclosure having a rectangular frontal opening whose lower edge is substantially at floor level, a panel normally positioned in the plane of said opening with its upper and at least one lateral margin in close relation with the upper and at least one lateral edge of the opening, said panel being pivoted at top and bottom so that it is adapted to rotate about its central vertical axis through at least 180° and, after having been rotated so that its own faces are reversed, to resume a position in which its upper and at least one lateral margin are in close relation with the upper and at least one lateral edge of the opening, securing means to hold the panel in each of said positions, a garment rack secured to one face of said panel, an opening for passage of air into said enclosure, at least one of the marginal edges of said opening being defined by said panel and the opening being positioned below the level of the garment rack for entry of air into the enclosure beneath the same, an air outlet for removing air from the enclosure, said outlet being positioned within the enclosure at a level above the level of said garment rack and said securing means including a slidable stop member secured to said frame and movable to either of two stop positions and bumper members secured to said panel at spaced apart points on one face thereof at opposite locations relative to said axis so that abutment of one of said bumper members with said slidable stop member in the first of its two stop positions will align the panel in the first of its positions and so that abutment of the other of said bumper members with said slidable stop member in the second of its two stop positions will align the panel in the second of its two positions.

7. The garment dryer as described in claim 6 wherein said securing means also includes check means for maintaining the panel in either of its said two positions.

8. A garment dryer for use in schoolrooms and the like comprising an enclosure having a rectangular frontal opening whose lower edge is substantially at floor level, a panel normally positioned in the plane of said opening with its upper and at least one lateral margin in close relation with the upper and at least one lateral edge of the opening, said panel being pivoted at top and bottom so that it is adapted to rotate about its central vertical axis through at least 180° and, after having been rotated so that its own faces are reversed, to resume a position in which its upper and at least one lateral margin are in close relation with the upper and at least one lateral edge of the opening, securing means to hold the panel in each of said positions, a garment rack secured to one face of said panel, an opening for passage of air into said enclosure, at least one of the marginal edges of said opening being defined by said panel and the opening being positioned below the level of the garment rack for entry of air into the enclosure beneath the same, an air outlet for removing air from the enclosure, said outlet being positioned within the enclosure at a level above the level of said garment rack and said securing means including a spring biased engaging member secured to said frame and a pair of strike plates each having a cavity for re-

ceiving said engaging member secured at symmetrically disposed spaced apart points of said panel and at opposite locations relative to said axis so that engagement of said engaging member in the cavity of one of said strike plates will check the panel in the first of its positions and so that engagement of said engaging member in the cavity of the second of said strike plates will check the panel in the second of its two positions.

9. The garment dryer as described in claim 8 wherein said securing means also includes slidable stop means mov-

able to either of two locations and engageable in either thereof with said panel for stopping it precisely in either of its said two positions.

References Cited in the file of this patent

UNITED STATES PATENTS

649,135	Millett	May 8, 1900
747,787	Smith	Dec. 22, 1903
1,085,153	Moyer	Jan. 27, 1914