Oct. 28, 1924. 1,513,593

J. JUDELSON

DRIER

Filed April 4, 1921 3 Sheets-Sheet 1

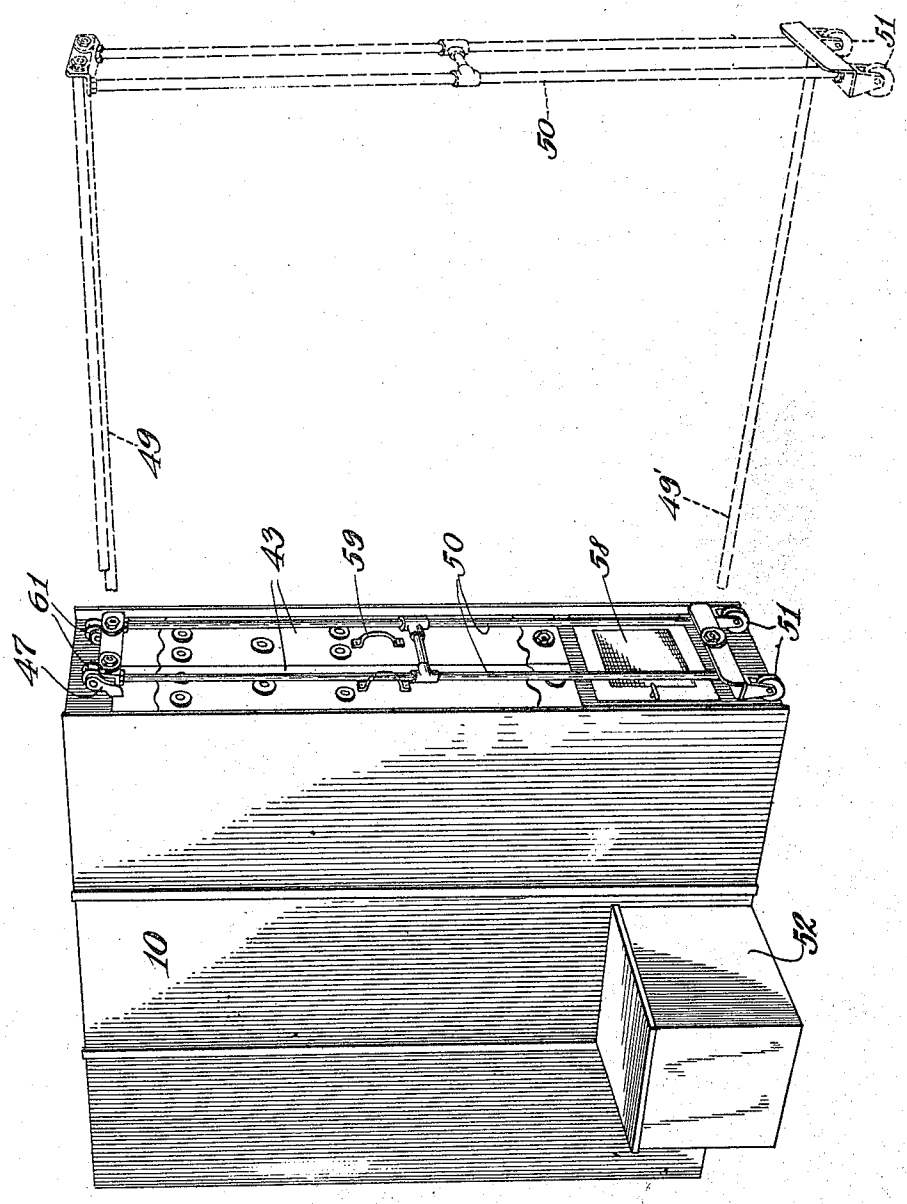


Fig. 1.

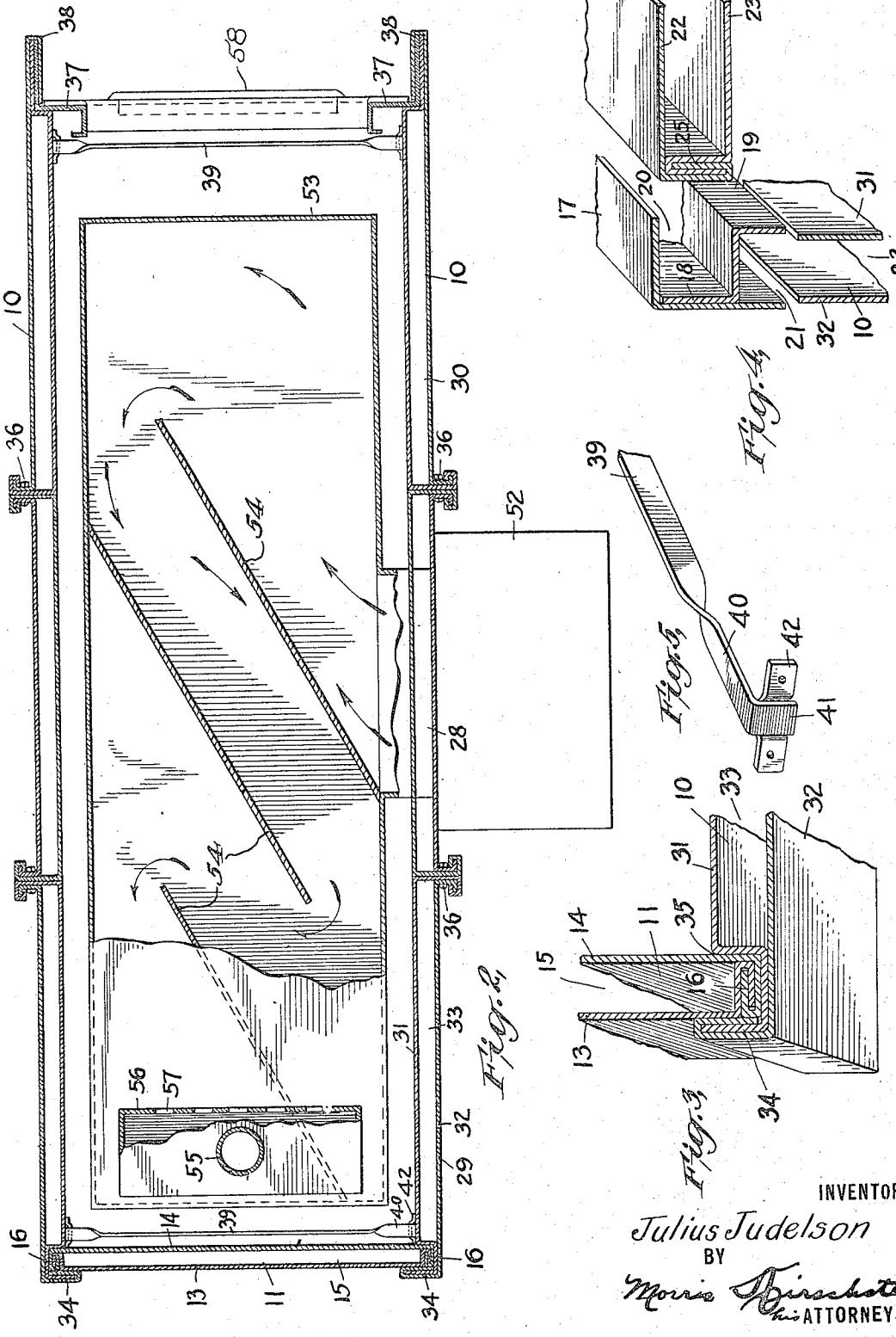
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DRIER

Filed April 4, 1921 3 Sheets-Sheet 2



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DRIER

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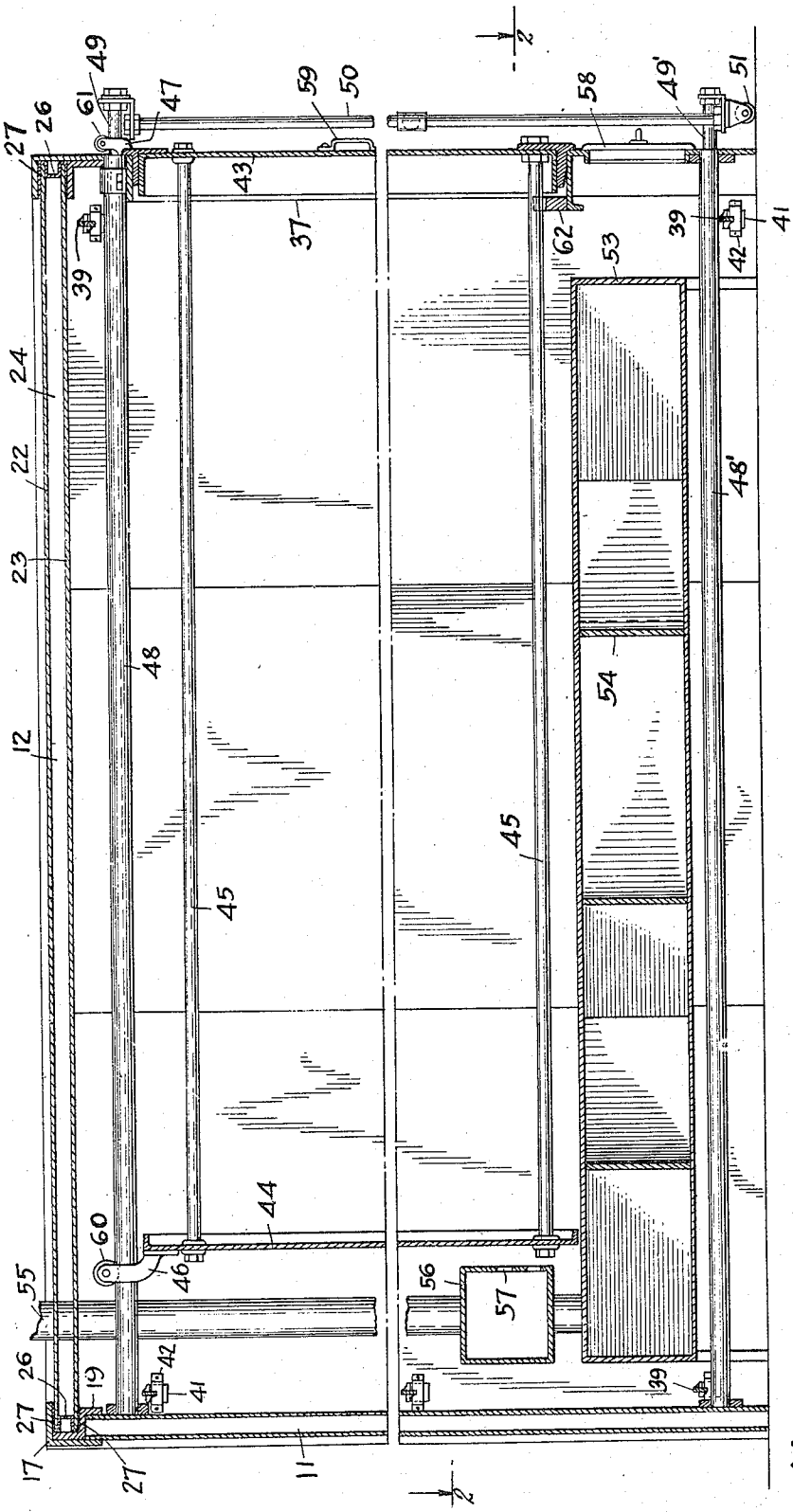


Fig. 6.

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UNITED STATES PATENT OFFICE.

JULIUS JUDELSON, OF NEW YORK, N. Y.

DRIER.

Application filed April 4, 1921. Serial No. 458,314.

To all whom it may concern:

Be it known that JULIUS JUDELSON, a citizen of the United States, and resident of the city of New York, in the county of Bronx and State of New York, has invented certain new and useful Improvements in Driers, of which the following is a specification.

This invention relates to driers. One of the objects thereof is to provide in a drier, a drying cabinet or chamber formed from a number of unit sections easily disassembled for shipping and capable of being quickly and accurately put together by unskilled labor.

Another object of this invention is the provision of a strong, efficient, drying cabinet made of sheet material, and the provision of separable walls and top members having strong tightly sealed joints therebetween.

A still further object of this invention is the provision in a drier of means for carrying a drying rack, which means may be telescoped out of the way during the drying operation, and which may readily be pulled out into position for suitably supporting the rack in the loading and unloading position thereof.

Other objects of this invention will be in part obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the construction hereinafter described and of which the scope of invention will be indicated in the following claims.

In the accompanying drawings in which is shown one of various possible illustrative embodiments of this invention.

Fig. 1 is a perspective view of the drying cabinet with the means for carrying the drying rack pulled out, shown in dotted lines;

Fig. 2 is a partial top plan view and horizontal section of the drier on line 2—2 of Fig. 6 with the rack and the means for supporting the same removed;

Fig. 3 is an enlarged perspective sectional view of the joint between the rear and the side walls;

Fig. 4 is a similar view of part of the upper corner edges of the drier cabinet, the various parts forming the joint between the walls and the top being separated for clearness;

Fig. 5 is a perspective view of the means for holding the walls in place; and

Fig. 6 is a partial front view and vertical section of a drier embodying this invention showing the drying rack and the frame guide therefor in the closed or operative position, part of the central portion between the top and bottom being removed.

In the illustrated embodiment of my invention, I provide a drying cabinet in which the side walls 10, the rear walls 11 and the top 12 are each made preferably of sheet material so arranged as to provide suitable air spaces in said walls. The arrangement of the sheets being somewhat different in each of said members 10, 11 and 12, the description of one only will be taken up at a time. The rear wall 11 is made preferably of two independent sheets 13 and 14 (see Fig. 2) having the air space 15 between them and joined at the side edges thereof to form a substantially rectangular prism which may be left open at the bottom for the sake of economy, and which may be closed at the top by the means shown in Fig. 4 as will be more fully described hereinafter. The type of joint used in securing the edges of the sheets 13 and 14 together is clearly shown in Figs. 2 and 3 at 16 and may be described as an interlocking U joint.

For closing the top of the rear wall 11, and of the side walls 10, (Fig. 4) an outer angle 17 is suitably fastened to the outer face of one of the flanges 18 of the Z bar 19 so as to form a recess 20 between the horizontal faces of the angle 17 and the Z bar 19 into which recess the top 12 may be inserted. A like recess 2 is also formed between the vertical faces of the angle 17 and Z bar 19 into which recess the upper ends of the rear wall 11 and of the side walls 10 may be inserted.

The top 12 comprises the sheets 22 and 23 arranged with the space 24 between them. The side edges of said sheets are joined to-

gether by an interlocking U-joint as 25 similar to the joint 16, while the end edges are joined by means of a double S-shaped member 26 (Fig. 6) which serves to properly space the sheets 22, 23 and which is lapped over the edges of said sheets by means of a suitable joint 27.

The sides 10 may be of various lengths, one intermediate section 28, and end sections 29 and 30 being illustrated (Fig. 2) though it is obvious that the cabinet may be made of any desired greater length merely by lengthening the top, the trolley guides and the other members disposed lengthwise of the cabinet. The rear end section 29 comprises the sheets 31 and 32 arranged with the air space 33 between them. For joining the said sheets together at their rear upright edges, the inner sheet 31 has a U-shaped bend therein to provide a groove 35 into which the bent edges 16 of the rear wall may be fitted, while the other sheet 32 is folded over said bend as at 34. A similar joint is made at the inner edges of each of the end sections 29 and 30 of the side 10, and at both of the upright edges of the intermediate sections 28, whereby two thicknesses of material are provided at the edge of each section through which suitable bolts such as 36 may be passed for firmly securing said sections together. The front end section 30 is constructed somewhat similarly to the section 29, the difference consisting in the fact that the Z-bar 37 which forms the door stop of the cabinet is held to the front of said section 30 by the flap 38 which is folded over a flange of said Z-bar and serves to hold the sheets comprising said section and said Z-bar together.

For holding the sides 10 together, and for maintaining the rear wall 11 in the grooves 35, suitable means such as straps 39 are provided. The main portions of said straps are arranged with the wide face thereof preferably vertical, while the ends 40 are twisted at right angles so that the wide faces thereof become horizontal, each of said portions 40 terminating in a downwardly extending hook 41. On the inner faces of the side walls are attached the strap catches 42 suitably bent to receive the hooks 41 of said straps 39.

A rack member comprising the door 43, the end 44, and the cross bars 45 suitably connecting said door and said end is suspended by the trolleys 46 and 47 from the trolley guides 48 and 49. The guide 49 is adapted to slidably enter the guide 48 and carries the frame 50 which is connected to a bar 49′ and which is provided with suitable floor castors 51 at the lower end thereof.

Said bar 49′ is arranged to slide in the hollow guide 48′ which is suitably supported longitudinally of the cabinet whereby the frame 50 and the guides 49 and 49′ connected thereto, may be moved longitudinally relatively to and independently of said rack and said cabinet.

For supplying heat to the cabinet, a suitable heater 52 may be arranged outside of said cabinet, the heated air being conducted through a suitable chamber 53 and against suitable baffle plates 54 before escaping through the vent pipe 55.

For exhausting much of the moist air from the inside of the cabinet during the drying operation, a suitable box 56 having openings 57 on one side thereof is interposed between two sections of said vent pipe 55. A hinged door 58 may be provided in the front of the cabinet for allowing access to the portion of the cabinet where is located the heating chamber 53.

The operation of my device is as follows: The frame 50 is first pulled out from the inside of the cabinet, the rods 49 and 49′ being withdrawn from the rods 48 and 48′ respectively, the castors 51 rolling along the floor, while said frame is being moved. The rack may now be readily withdrawn from the cabinet by pulling on the handle 59 whereby the trolley wheels 60 and 61 roll on the guides 48, 49 respectively until the end 44 is stopped by means of a suitable stop member 62 and the opening in the front end of the cabinet is sealed by said end 44. After the rack has been loaded with material to be dried, both said rack and the frame carrying it may be pushed back with the cabinet out of the way, the drying operation beginning as soon as the heating apparatus is turned on. Heated air will then circulate in the heating chamber 53 as indicated by the arrows in Fig. 2 thus heating the air in the drier proper by conduction and convection. The moisture laden air is extracted through the vent 55.

It is obvious that the side walls may be made of any desired length by merely adding the proper number of intermediate sections 28, while the lengths of the other parts are made to conform to the length of said walls. It will also be understood that any number of racks trolleys and frames may be placed side by side in the same cabinet within the limits of the widths thereof so that different steps in the loading, drying and unloading operations may proceed simultaneously.

It will thus be seen that there is provided apparatus in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to

be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:—

1. In a drying cabinet, a rear wall, sectional side walls, a top, said rear and side walls and top each comprising two sheets arranged with an air space between them, joints connecting said sheets in such manner as to provide grooves in said side walls for the reception of said rear wall, and means at the upper corner edges of said cabinet having grooves for the reception of said top and for connecting said top to said walls.

2. In a drying cabinet, sheet metal side walls, a rear wall and a top each having air spaces therein, and grooved joints in connection with said side walls, and at the tops of all of said walls whereby said top and walls may be fitted together.

3. In a drying cabinet, a substantially rectangular wall member comprising a pair of spaced sheets having an air space therebetween, and interlocking substantially U-shaped vertically disposed edge seams connecting said sheets and forming the edge surfaces of said prismatic wall member.

4. In a drying cabinet, a side wall comprising a rear end section, a front end section, and intermediate sections, each of said sections comprising a pair of spaced sheets, joints at the ends of said sheets formed by bringing each of a pair of said sheets into contact with each other, and interlocking the ends thereof.

5. In a drying cabinet, a top comprising a pair of spaced sheets, interlocking substantially U-shaped edge seams connecting said sheets and forming the edge surfaces thereof, and a distance piece inserted between the ends of and bent over the edges of the outside surfaces of said sheets.

6. In a drying cabinet, side walls, a rear wall, a top and means for connecting said walls and said top comprising an outer angle and a Z-bar having one flange secured to the inside of the downwardly extending leg of said angle whereby a pair of grooves is provided, one of which is adapted to receive said top and the other of which is adapted to receive said walls.

7. In a drying cabinet, a rear wall having an air space therein, side walls having air spaces therein and grooves at the rear ends thereof into which said rear wall is adapted to be fitted, and means for tying said walls together comprising a strap having downwardly bent terminal hooks and hook catches secured to said side walls adapted to receive said hooks.

8. In a drying cabinet, a rear wall comprising a pair of spaced sheets having an air space therebetween, and interlocking edge seams connecting said sheets and forming the edge surfaces of said wall, side walls each comprising a rear end section, a front end section and intermediate sections, each of said sections comprising a pair of spaced sheets, joints at the ends of said sheets interlocking said sheets together at the ends thereof, means for fastening said sections together, and a top comprising a pair of spaced sheets, interlocking edge seams connecting said sheets at the sides thereof, and a distance piece inserted between the ends of and bent over the edges of the outside surfaces of said sheets at the ends thereof.

9. In a drying cabinet, a rear wall comprising a pair of spaced sheets having an air space therebetween, and interlocking edge seams connecting said sheets and forming the edge surfaces of said wall, side walls each comprising a rear end section, a front end section and intermediate sections, each of said sections comprising a pair of spaced sheets, joints at the ends of said sheets interlocking said sheets together at the ends thereof, means for fastening said sections together, and a top comprising a pair of spaced sheets, interlocking edge seams connecting said sheets at the sides thereof, and a distance piece inserted between the ends of and bent over the edges of the outside surfaces of said sheets at the ends thereof, and means for connecting said walls and said top comprising an outer angle and a Z-bar having one flange secured to the inside of the downwardly extending leg of said angle whereby a pair of grooves is provided, one of which is adapted to receive said top and the other of which is adapted to receive said walls.

10. In a drying cabinet, a rear wall comprising a pair of spaced sheets having an air space therebetween, and interlocking edge seams connecting said sheets and forming the edge surfaces of said wall, side walls each comprising a rear end section, a front end section and intermediate sections, each of said sections comprising a pair of spaced sheets, joints at the ends of said sheets interlocking said sheets together at the ends thereof, means for fastening said sections together, and a top comprising a pair of spaced sheets, interlocking edge seams connecting said sheets at the sides thereof, and a distance piece inserted between the ends of and bent over the edges of the outside surfaces of said sheets at the ends thereof, and means for tying said walls together comprising a strap having downwardly bent terminal hooks, and hook catches adapted to receive said hooks secured to said side walls.

11. In a drying cabinet, a rear wall comprising a pair of spaced sheets having an air space therebetween, and interlocking edge seams connecting said sheets and forming the edge surfaces of said wall, side walls each comprising a rear end section, a front

end section and intermediate sections, each of said sections comprising a pair of spaced sheets, joints at the ends of said sheets interlocking said sheets together at the ends thereof, means for fastening said sections together, and a top comprising a pair of spaced sheets, interlocking edge seams connecting said sheets at the sides thereof, and a distance piece inserted between the ends of and bent over the edges of the outside surfaces of said sheets at the ends thereof, and means for tying said walls together.

Signed at the city of New York, in the county of New York and State of New York, this first day of April, 1921.

JULIUS JUDELSON.