

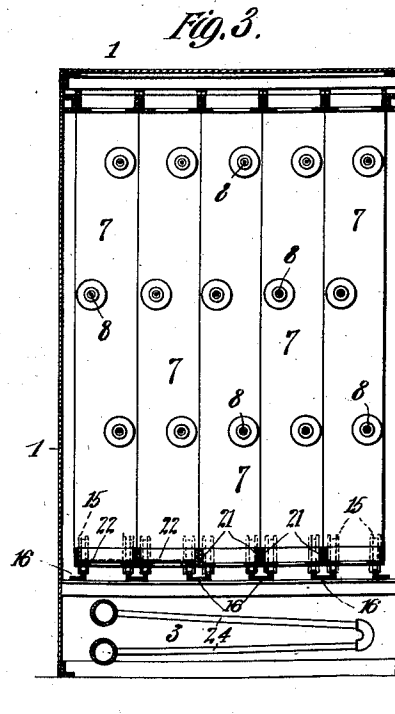
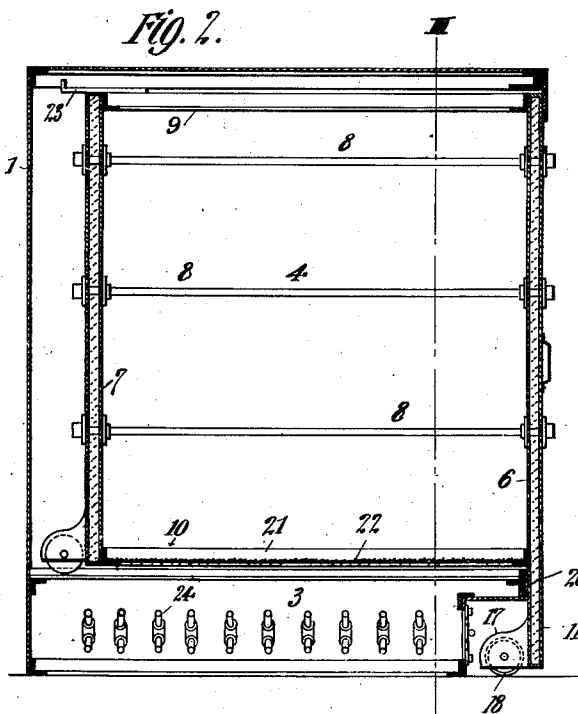
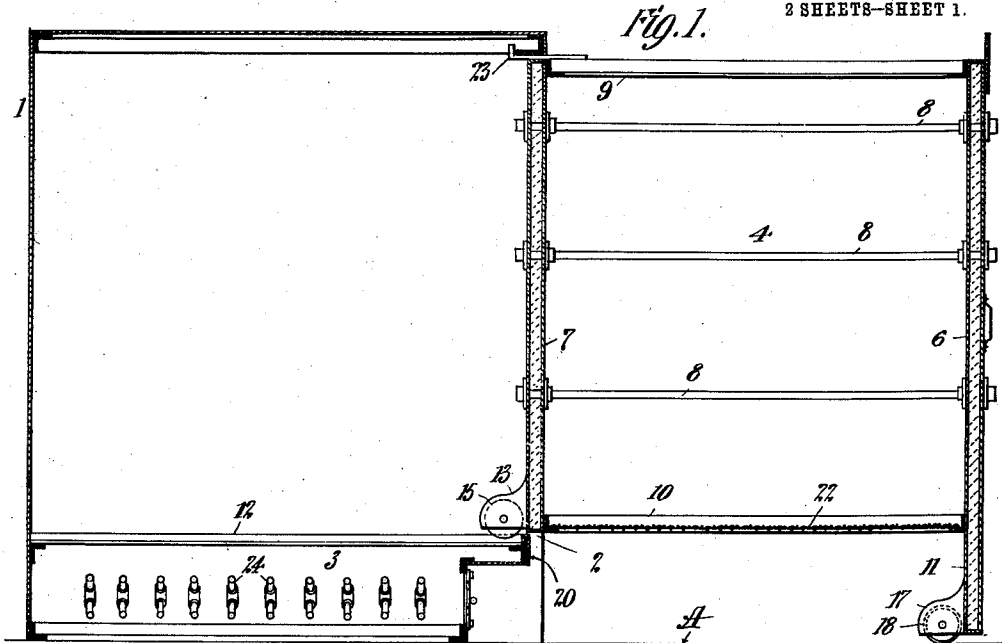
O. M. SHANNON.
DRIER CABINET.

APPLICATION FILED MAY 6, 1909.

Patented Dec. 5, 1911.

1,010,694.

2 SHEETS—SHEET 1.



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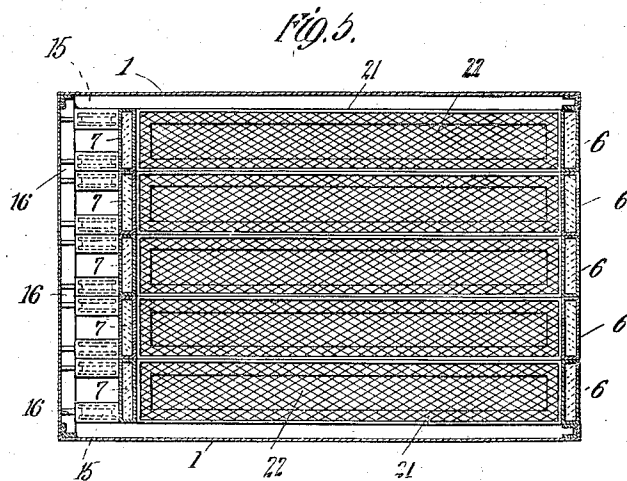
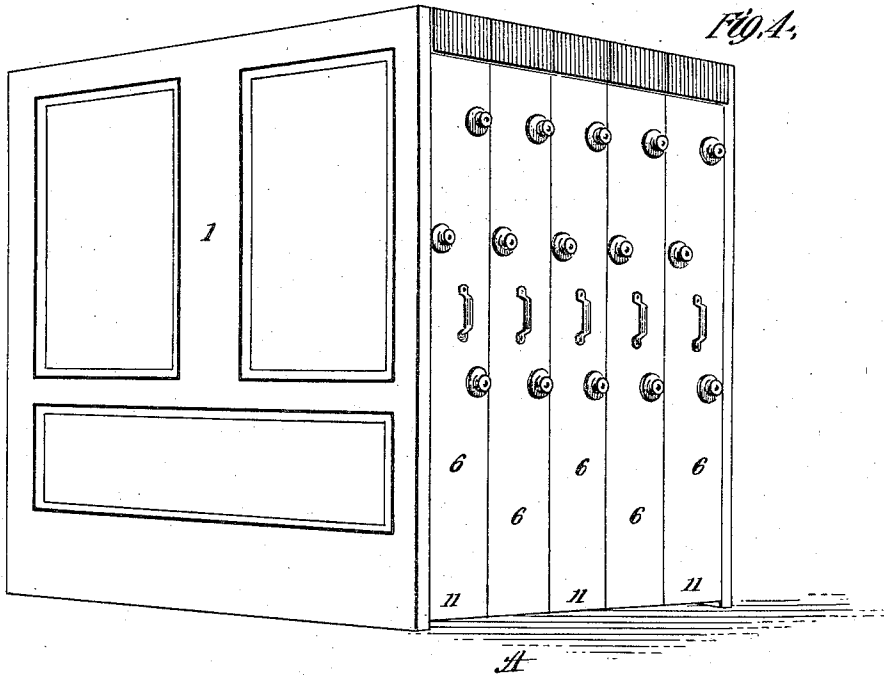
DRIER CABINET.

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2 SHEETS—SHEET 2.

1,010,694.



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UNITED STATES PATENT OFFICE.

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DRIER-CABINET.

1,010,694.

Specification of Letters Patent.

Patented Dec. 5, 1911.

Application filed May 6, 1909. Serial No. 494,259.

To all whom it may concern:

Be it known that I, OSCAR M. SHANNON, a citizen of the United States, residing at New Rochelle, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Drier-Cabinet, of which the following is a full, clear, and exact description.

This invention relates to laundry or clothes driers adapted for use in residences, apartment buildings, hotels, laundries, fire engine houses, hospitals, sanatoriums and similar institutions. Primarily their use is for drying washed linen, garments and clothing, but it will be evident that the present invention is not limited to use with driers, being adapted for use in filing cases or cabinets for architects' drawings, and other storage receptacles.

In a certain type of apparatus for the foregoing purposes, a plurality of rack frames have been guided or suspended to move into and out of a cabinet in vertical and parallel relation. A particular construction has made use of rack frames having horizontal rack bars which join vertical parallel uprights, the front uprights being adapted to register closely with one another in their side by side relation, so that the hot air may circulate around the rack bars, but without having an opportunity to escape from between the front uprights of the rack frames. The rack frames have been hung from overhanging tracks by means of grooved rollers, whereby each can be drawn out through such a range of movement as to expose the rack bars, at the same time causing the rear upright of the rack frame to approach and partially fill the space between the front uprights of adjacent frames, in this way preventing to some degree the undue escape of the heated air when such one of the rack frames was drawn out. It has been found in this prior construction, that the suspension method of supporting the rack frames is unsightly, is liable to collect dust which drops on the clean laundry, and is uncertain in its guiding action on the racks, so that the rear uprights cannot be made wide enough to fit or register closely together with the front uprights when drawn out. Moreover the foregoing arrangement prevents the rack frames from being drawn forward far enough for the rear upright to exactly register with the adjacent front uprights and

thus prevent escape of heat. And finally the heavy rack frames, rolling in and out on the overhanging trackways, cause undesirable noise and vibration, which is transmitted to the ceiling and thence through the entire building.

It is the object of the present invention to provide a construction having the general purposes which were first above set forth, and which overcomes these various objections and difficulties incident to the use of suspended rack frames.

With this object in view, my invention consists in the features of construction and combination as hereinafter set forth and claimed.

In the drawings: Figure 1 is a vertical sectional view of a drier cabinet embodying the principles of my invention, the drier or rack frames being drawn out; Fig. 2 is a vertical sectional view of the same with the drier or rack frames pushed fully in; Fig. 3 is a sectional view on the line III—III of Fig. 2; Fig. 4 is a perspective view of the complete drier cabinet, and Fig. 5 is a horizontal sectional view.

Referring to the drawings in which like parts are designated by the same reference sign, 1 designates a cabinet preferably formed of sheet metal, of sufficient height and width and depth to receive a series of rack frames or drier frames, as later described, and furnish a chamber or cavity therebeneath in which the heater is contained to originate the supply of hot air. The cabinet 1 is preferably constructed of sheet metal, with one side entirely open or cut-away above a certain plane 2. The space or chamber 3 below this plane is occupied by the heater, which may be of any suitable or approved construction.

4 denotes a rack or drier frame of which as many as desired may be provided, so as to substantially fill the entire cabinet when positioned vertically side by side therein. Each of these drier frames has a front vertical upright 6 and a rear vertical upright 7, both uprights having a width equal to the desired width of the rack frame and a thickness and construction sufficient to give them the requisite strength and rigidity. These uprights are securely joined together by the rack bars 8, and by horizontal frame bars 9 and 10, the latter being located at the top and bottom ends of the rear upright, and

extending forwardly therefrom to the front upright. The front upright is considerably longer than the rear upright, the extra length being extended downward below the lower horizontal frame bar 10 and forming a leg 11. In this way the complete rack frame has a rectangular outline with a front side or leg extended downward through a sufficient distance to about reach to the floor on which the cabinet rests. The rack bars 8, are of course, arranged parallel to and vertically over one another throughout the available space of the rectangular rack frame 4. The lower frame bar 10 extends in, or just above the plane 2 previously mentioned, and which confines the upper limit of the chamber 3 in which the heating appliance or apparatus is located. Disposed in this plane 2 or perhaps slightly below the same, are a plurality of horizontal track rails 12, extending parallel to one another, and to the direction of movement of the rack frames.

I have illustrated each rack frame provided with a casting 13 at the lower end of its rear upright 7 and on the rear face thereof, and this casting serves as a journal or bearing for two grooved rollers 15, which project slightly below the plane of the lower horizontal frame bar 10 and are located in close proximity to the two side edges thereof. With the foregoing arrangement two running rails are required for each rack frame, and I provide these by the use of channel bars 16 inverted so that their side edges or flanges form parallel running rails for the grooved rollers 15 of two adjacent track rails. The extreme outside or end track rails are simply formed of angle bars, which have a single flange forming the single track rails required at these locations. 17 designates another casting fixed to the lower end of each of the front uprights 6 and therefore closely adjacent to the floor A on which the cabinet rests. Each of these castings 17, has journals or bearing for a pair of rollers 18, which are provided with rubber tires. All of the foregoing rollers are preferably made with ball bearings, so as to secure anti-friction running qualities.

The various rack frames 4 as above described, are run into the cabinet with their grooved rollers on the channel and angle bars, and their front rubber tired rollers on the floor A. In this relation the horizontal frame bars 9 and 10 of the respective rack frames slide against one another, thereby guiding each rack frame in an exact rectilinear movement, strictly parallel to the planes or directions of movement of the remaining rack frames. Also in view of this guiding action of the horizontal frame bars, it is impossible for the rack frames to get out of adjustment or registry in such a manner that their front uprights and rear up-

rights interfere when they are drawn into and out of the cabinet. The latter are accordingly made closely fitting without looseness, and fit tightly together whenever they are adjacently disposed. When the rack frames 4 are pushed fully into the cabinet, the lower extensions of the front uprights are brought into abutting engagement with the front wall 20 of the cabinet at the lower portion where this wall or face has not been cut-away as above described. In this relation the main body of each rack frame is located within the cabinet and above the space or chamber 3 in which the heating apparatus is contained. Heat is therefore free to pass up around the rack bars where it dries the clothes, the escape of the heated air being prevented by the walls of the cabinet and by the front uprights, which fit so closely adjacent to one another that there is no appreciable space or crevice between the adjacent frames.

In order to permit the free passage of the heat from the space below into the body or main portion of the cabinet, I make the lower horizontal frame bars 10 of skeleton formation. A preferred construction is that illustrated in Fig. 5, in which angle bars 21 are welded or secured together to form a rectangle having the outline of the lower horizontal frame bars 10. This construction is particularly advantageous because it provides flat side faces on these frame bars which slide together and guide the rack frames 4, at the same time providing a recess or space in which a screen 22 may be dropped. This screen permits a free flow of heated air therethrough, and at the same time catches any clothes, linen or articles which happen to drop off the rack bars during the drying process. Furthermore the location of this screen is such as to prevent any loose hanging articles, such as a shirt sleeve for example, being caught on any projecting part or guide when the rack frames are drawn out in a manner which has been found objectionable in the prior suspended construction previously mentioned. When the rack frames are drawn out, the drying articles will be readily accessible, and furthermore will not have come in contact with any dust or dirt which may be present in the lower chamber 3 of the cabinet. The upper horizontal frame bar 9 may be made in a like manner if desired, or may be solid, the only essential requisite being the straight side edges or faces which slide against the corresponding faces of the adjacent rack frame for guiding purposes. The position of each rack frame when drawn out is fixed by a stop 23 on its upper frame bar 9 which abuts against the upper front wall of the cabinet. In this relation the rear upright 7 is in registry or alignment with the adjacent front uprights

of the other rack frames and fits closely so that no space is left for the escape of the heated air.

It will be observed that each rack frame 5 is supported wholly from below; all the frames are guided in perfectly parallel relation in their movement into and out of the cabinet by the engagement of the horizontal frame bars 9 and 10 at the top and bottom 10 which fit or slide closely together, but without appreciable friction, on account of the fact that the weight is entirely supported from below. With this construction the overhanging suspension which was found 15 objectionable for various reasons above enumerated, is entirely done away with, and in its place a support is provided which is not only free from all of the various objections mentioned, but has some special advantages 20 of its own besides. Among the latter may be mentioned the more certain and accurate guiding of the rack frames, and the catching of any linen or clothes which happen to drop from the rack bars.

Any sort of heater or heating medium 25 may be employed, for example, steam, hot water, gas, electricity, or flue gases led through suitable drums or coils of the chamber 3. In the drawings I have shown steam 30 or hot water pipes 24 which extend into the cabinet from an exterior stove or furnace. It is obvious that the source of heat may or may not be used, and that various changes in the relative dimensions of the 35 walls 6 and 7 may be made.

The embodiment of my invention illustrated in the accompanying drawings merely illustrates one application thereof; since the structure in addition to being used as a drying cabinet, is also admirably adapted for 40 use in filing architectural drawings, and the like.

What I claim, is:—

1. In a drier and storage cabinet of the 45 class described, a plurality of juxtaposed rack frames positioned for mutual lateral support and guidance, whereby one or more of said frames may be freely moved into and out of the casing in parallelism to the 50 remaining frame or frames, and rotatable means directed inwardly from the front wall of said frames for supporting said wall.

2. In a drier and storage cabinet of the class described, a plurality of juxtaposed 55 rack frames positioned for mutual lateral support and guidance, whereby one or more of said frames may be freely moved into and out of the casing in parallelism to the remaining frame or frames, and pivoted 60 floor engaging means directed inwardly from the front walls of said frames for supporting said walls directly from the floor on which the cabinet rests.

3. In a drier and storage cabinet of the 65 class described, a plurality of juxtaposed

rack frames positioned for mutual lateral support and guidance, whereby one or more of said frames may be freely moved into and out of the casing in parallelism to the remaining frame or frames, and rearwardly 70 directed rollers for supporting said frames wholly from below.

4. In a drying and storage cabinet of the class described, a plurality of rack frames, rollers for supporting the front sides of said 75 frames from the floor on which the cabinet rests, rollers for supporting the rear sides of said frames from below within the cabinet, and means forming part of each frame and acting on the adjacent frames for guiding 80 said frames in a movement parallel to one another into and out of the cabinet.

5. In a drying and storage cabinet of the class described, a plurality of rack frames, rollers for supporting the front sides of said 85 frames from the floor on which the cabinet rests, rollers for supporting the rear sides of the frames within the cabinet, and horizontal frame bars forming part of the rack frames and sliding against one another to 90 guide the rack frames in their movements into and out of the cabinet.

6. In a drier and storage cabinet of the class described, a plurality of movable rack frames each comprising front and rear up- 95 rights and top and bottom frame bars having a skeleton formation, a removable reticulated member carried by said bottom frame bars, and means for applying heat directly beneath said reticulated member. 100

7. In a drying and storage cabinet of the class described, a plurality of rack frames each having front and rear uprights and top and bottom horizontal frame bars, rollers for supporting said front uprights from 105 the floor on which the cabinet rests, and means within the cabinet for supporting said rear uprights, said horizontal frame bars sliding against one another to guide the frames in movements into and out of 110 the cabinet.

8. In a drying and storage cabinet of the class described, a plurality of rack frames each comprising front and rear vertical up- 115 rights and top and bottom horizontal frame bars, said bottom frame bars having a skeleton formation, and means for supporting the weight of said frames in their movement into and out of the cabinet, said frames 120 sliding against one another along said horizontal frame bars.

9. In a drying and storage cabinet of the class described, a plurality of rack frames each having front and rear uprights and top and bottom frame bars, the lower bar 125 being constructed of angle irons in a rectangular outline, a screen received between said angle irons, and means for supporting said rack frame in its movement into and 130 out of the cabinet.

10. In a drying and storage cabinet of the class described, a plurality of rack frames each having front and rear uprights and top and bottom frame bars, the lower
5 bar being constructed of angle irons in a rectangular outline, a screen received between said angle irons, and means for supporting said rack frame in its movement into and out of the cabinet, said frames

sliding against one another along their 10 horizontal frame bars.

It witness whereof, I subscribe my signature, in the presence of two witnesses.

OSCAR M. SHANNON.

Witnesses:

ALFRED WATERS PROCTOR,
WALDO M. CHAPIN.