Feb. 6, 1934. N. H. BUSCHMAN 1,946,386

DRIER

Filed June 10, 1930

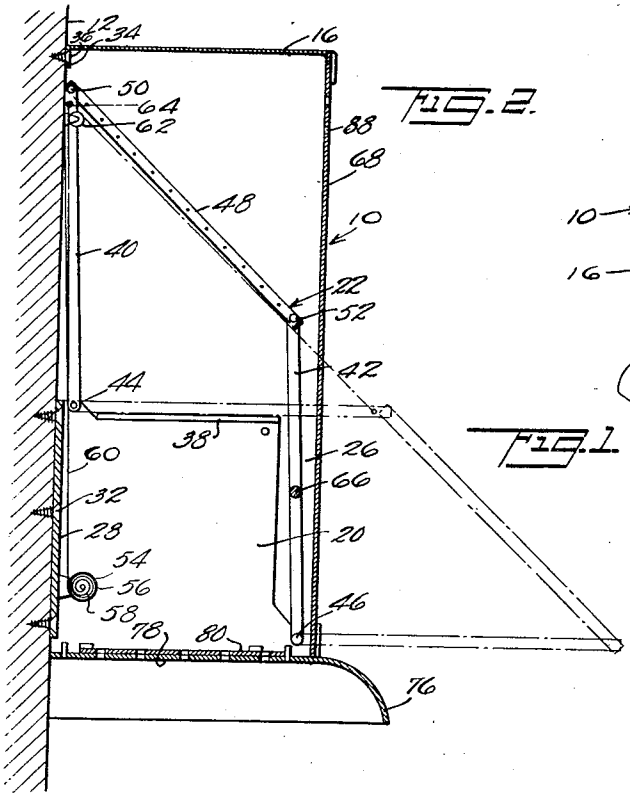


FIG. 2.

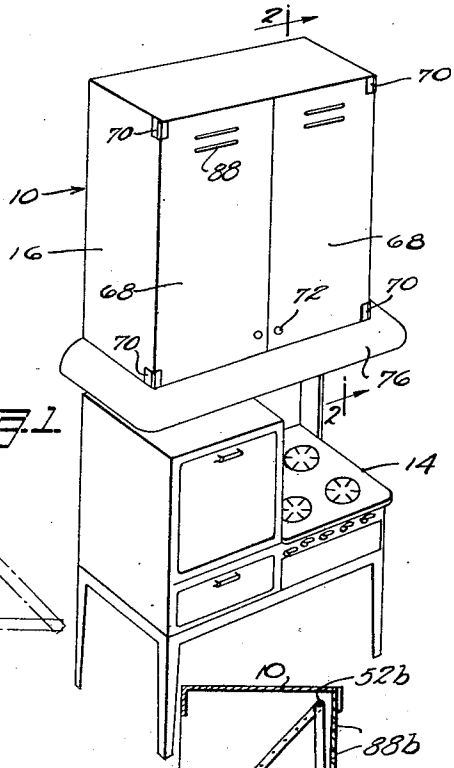


FIG. 1.

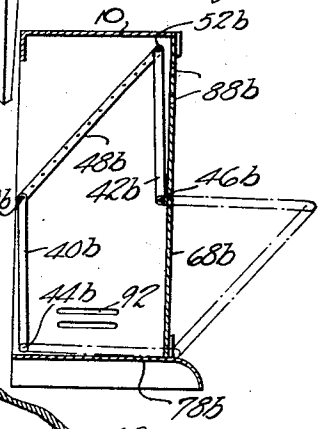


FIG. 5.

FIG. 3.

FIG. 4.

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DRIER

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12 Claims. (Cl. 312—113)

My invention relates to means for drying articles to be laundered, and the same has for its object to provide a simple, durable and sanitary apparatus which is adapted for use in homes, and particularly in homes such as apartments, where the space available is limited, and which may be readily and conveniently manipulated for receiving and removing the laundered articles into and from the same.

Another object of the invention is to provide apparatus of the character specified which is adapted to be disposed in an elevated position out of the way, such as in the kitchen preferably above the cooking range or other heating apparatus serving to supply the heat thereto for drying the articles.

Another object of the invention is to provide an apparatus of the character specified in which the article supporting rack thereof may be readily withdrawn from the elevated casing or enclosure therefor and brought into a position at a lower level convenient for placing the laundered articles thereon, and then as readily returned to position within said casing or enclosure.

Another object of the invention is to provide an apparatus of the character specified in which the weight of the rack, and any articles supported thereon, is sustained independently of the casing or enclosure therefor, whereby to relieve said casing from strain or stress and obviate the use of an unduly heavy, and therefore more expensive casing.

Another object of the invention is to provide an apparatus of the character specified in which the circulation of air through the casing may be controlled, particularly when the range is being used for frying food.

Another object of the invention is to provide an apparatus of the character specified in which the supporting rack thereof is retained in projected position and is spring urged to retracted position when released.

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

In the accompanying drawing:

Figure 1 is a perspective of one form of apparatus constructed in accordance with and embodying my said invention;

Fig. 2 is a sectional elevation thereof substantially on the line 2—2 of Fig. 1;

Fig. 3 is a perspective thereof with parts broken away and with the supporting rack in projected position; and

Fig. 4 is a sectional elevation showing a modification.

Fig. 5 is a sectional elevation showing another modification.

Referring to the drawing, the drying apparatus 10 is shown supported on the wall 12 in the normally unutilized space above a cooking range 14 where the apparatus is out of the way. The latter comprises a casing or enclosure 16 which is preferably, although not necessarily, open at the rear, as indicated at 18, to reduce the cost.

Relatively heavy or rigid angular plates or members 20 are provided as supports for the casing 16 and for the movable rack or article supporting means 22 and as brackets for securing the entire apparatus to the wall 12. The members 20 each comprise a forwardly extending portion 24 riveted or otherwise secured to the lower part of the lateral wall portion 26 of the casing 16, and an angular portion 28 extending transversely at the rear and provided with suitable holes 30 for receiving attaching screws or bolts 32 for securing the same to the wall 12. The upper portion of the casing 16 at the rear is formed with a depending flange 34 through which screws or other securing device 36 pass to provide auxiliary connection to the wall 12. The upper edges of the lateral portions 24 are provided with inwardly directed ledges or supporting stops 38.

The rack means 22 comprises at each side a pair of links 40 and 42 of substantially equal lengths, the link 40 being pivoted at one end to the upper portion of the plate 20 at the rear, as indicated at 44, and the link 42 being pivoted at one end to the lower portion of the plate 20 at the front, as indicated at 46.

The opposite ends of the several links 40 and 42 are pivotally connected to the rack frame 48 at the four corners thereof as indicated at 50 and 52. The frame 48 is thus positioned at an inclination to reduce the horizontal extension thereof both in the enclosed or retracted position thereof when the links 40 and 42 extend vertically and in the projected position thereof when the links are horizontal and engage the stops 38. In the former position, the links extend slightly rearwardly to position the center of gravity of the rack off center relative to the pivots so that the device is retained in the retracted position against the wall 12 by gravity, assisted, if so desired, by spring 54.

The rack means 22 is automatically urged towards and retained in enclosed position within the casing 16 by spring means 54 which preferably comprises a roller or rollers 56 having a coil spring therein tending to rotate the same in one direction. A cord 60 is wound at one end about the roller 56, passes over the pulley 62 and

is attached at its opposite end to the frame 48, at a point 64 at the rear. When the rack 48 is withdrawn from the casing by grasping the handle 66, the cord 60 is fed out and the rotation of the roller 56 tensions the spring 58. Upon release of the frame 48 the rotation of the roller under the influence of the spring 58 is reversed and the return of the parts to enclosed position is facilitated.

The casing 16 is provided with a pair of doors 68 pivoted at 70 and provided with knobs 72 at the lower portions thereof. When it is desired to project the rack, the doors 68 are swung open and the rack withdrawn. A door 68 is provided with a pin or detent 74 adapted to engage either link 42 to retain the rack means in projected and depressed position against the action of spring 58. The pin 74 may be readily disengaged by swinging the door outwardly a little.

The base of the cabinet 16 is formed as a downwardly directed hood 76 adapted to deflect the heated air from the range 14 through the perforated bottom 78 of the casing. A perforated plate 80 constituting a cut-off is slidably mounted upon the bottom 78 in suitable guides 82 for movement between the stops 84 and 86, the perforations in the plate 80 registering with the perforations in the bottom 78 in one position and being out of registering relation in the other position. The passage of air into the casing can therefor be shut off as desired, particularly when the air from the stove is contaminated with products from the cooking. The doors 68 are provided with suitable vents or openings 88 for the escape of air from the casing.

At Fig. 4 is illustrated a modified form of the invention in which the frame supporting links 40^a and 42^a at each side are pivoted at their lower ends at points in vertical alignment disposed at the rear of the casing 16, as indicated at 44^a and 46^a. The opposite ends of the links 40^a are pivoted, as indicated at 50^a, to the rear end of a rack frame 90 and the opposite ends of the corresponding links 42^a, as indicated at 52^a, are pivoted to an intermediate portion of the rack frame 90, the rack frame being disposed at an inclination both in retracted and projected position. The rack frame 90 is returned to and retained in enclosed position by the spring means 54^a, as shown, and when the frame is projected and lowered assumes the position shown in broken lines, Fig. 4.

At Fig. 5 is illustrated a further form of invention which can be located above the stove 14 and in which the rack frame 48^b received within the casing 10 is supported by the links 40^b and 42^b pivoted at the upper ends 50^b and 52^b to the frame 48^b and at the lower ends 44^b and 46^b to the casing or other part therein. In this form the pivots 44^b are at a lower level than the pivots 46^b so that the rack 48^b, when projected as shown in broken lines, will be positioned at an inclination the reverse of that shown at Fig. 2. With the rack in projected position to extend downwardly towards the casing, the placing of the laundry thereon is facilitated. In this form the bottom 78^b which supports the links 40^b in the projected position of the device is imperforate or closed and openings 92 are provided in the lower portions of the sides for insuring circulation of air therethrough and out through the openings 88^b in the doors 68^b. Undesirable vapors or substances arising from the stove are thus prevented from entering the casing 10. The construction otherwise, except that element 38 is omitted therefrom, may be the same as shown at Figs. 1 and 2.

In operation, when it is desired to use the apparatus the doors 68 or 68^b are opened and the rack means withdrawn and lowered and retained in lowered position by the stop 74 on the door. After the laundered articles are placed on the rack the latter is returned to enclosed position and the doors closed.

The heated air about the stove or range 14 circulates through the bottom 78 or openings 92 and out through the openings 88 or 88^b to thoroughly dry the articles; the extent of passage through the bottom 78 being controlled by the movable plate 80.

In my invention I utilize the usually unoccupied space above the ordinary range or heater which supplies the heat necessary for effecting the drying. The system of links by which the article supporting rack is carried directs the movement of the rack when pulled down into projected and lowered position from its elevated position, where it is conveniently located for placing and removing the articles, the rack being retained by the system of links at an inclination so as to reduce the depth of the casing necessary from front to rear.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

1. In apparatus of the character described, a casing, means supporting said casing and serving to attach said casing to the wall of a room, and a rack mounted within said casing and movably supported by said attaching means, whereby to relieve said casing from stress due to weight of said rack.

2. In apparatus of the character described, a casing for drying fabric or the like, a closure for said casing, and a rack movable into and from said casing, said closure and said rack including means for retaining said rack in projected position.

3. In apparatus of the character described, a casing for drying fabric or the like, a closure therefor, a rack movable into and from said casing, spring means for urging said rack into retracted position, and means on said closure for retaining the rack in projected position.

4. In apparatus of the character described, a drying casing, attaching members secured to said casing and serving to support the same from a wall, a rack, and means for supporting said rack on said members for movement into and from the casing.

5. In apparatus of the character described, a drying casing, means for supporting the same from a wall, a rack, links pivoted at the lower ends thereof to said supporting means at different elevations, and pivoted at the opposite ends thereof to said rack on transverse axes in spaced relation to each other, whereby to support the same for movement at an inclination.

6. In apparatus of the character described, a casing, reinforcing means attached to the inside of the casing at opposite sides and including provision for attaching the reinforcing means directly to a wall, a rack including side portions and transverse rods for supporting laundry, pairs of links pivoted at certain of the ends thereof to said reinforcing means within said casing at different elevations, and pivotally connected at the opposite ends thereof to said rack on transverse axes in spaced relation to each other, said linkage system serving to direct the movement of said rack into and from the casing and to a lower position in the pro-

jected position thereof while retaining the same at an inclination.

7. In apparatus of the character described, a casing, attaching members secured to said casing for supporting the same from a wall, stops formed on said attaching members, a rack, and links pivoted to said members and to said rack for allowing movement thereof to and from projected position, and arranged to engage said stops in the projected position of the rack.

8. An apparatus of the character described, a drying casing, a rack including a frame having cross rods for supporting laundry, forward and rear sets of links pivoted at the lower ends thereof to the inner side of said casing at the points removed from the lateral walls of said casing, and at the upper ends thereof to said rack, the lower ends of the rear set of links being pivoted at a lower level than the lower ends of the forward set of links, whereby to support the rack in projected position at an inclination extending downwardly toward the casing.

9. In apparatus of the character described, a casing, angular reinforcing members secured to the inner sides of the lateral walls of said casing and including rear portions for the direct attachment of the structure to a wall and forwardly extending side portions, links pivoted at the lower ends thereof to said side portions, and a laundry rack pivotally supported by the links at the opposite ends thereof.

10. In apparatus of the character described, a casing including a closure, a laundry rack, links pivoted to the interior of said casing and to said rack for supporting the rack for movement into and from said casing at an inclination, means for automatically retracting said rack, and means, including said closure, for retaining said rack in projected position.

11. In apparatus of the character described, a casing, a laundry rack, links pivoted within the casing at points out of engagement with the lateral walls thereof at different elevations and to said rack for movement of the rack into and from the casing at an inclination, stops for supporting said rack in projected position, means for automatically retracting said rack into the casing, and means for retaining said rack in projected position against said stops.

12. In apparatus of the character described, a casing, a closure therefor, means secured to said casing comprising front portions aligned with the side walls thereof, and angularly arranged portions at the rear of said first-named portions, adapted to be secured directly to a wall, front and rear sets of links pivoted at different elevations to said first-named means, a laundry rack pivotally supported by the opposite ends of said links for movement into and from the casing at an inclination, stops on said reinforcing means adapted to engage certain of said sets of links in the projected position of the rack, and means on said closure coacting with the remaining of said sets of links for retaining said rack in said projected position.

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