

July 28, 1936.

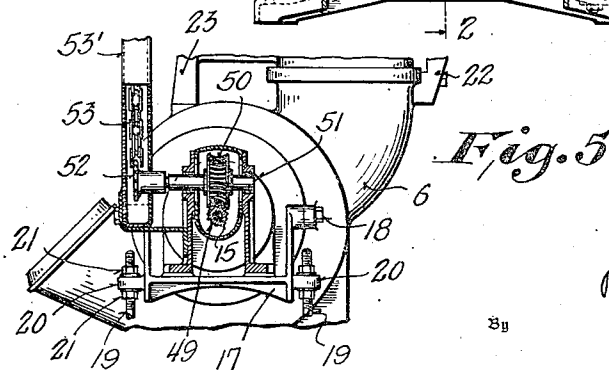
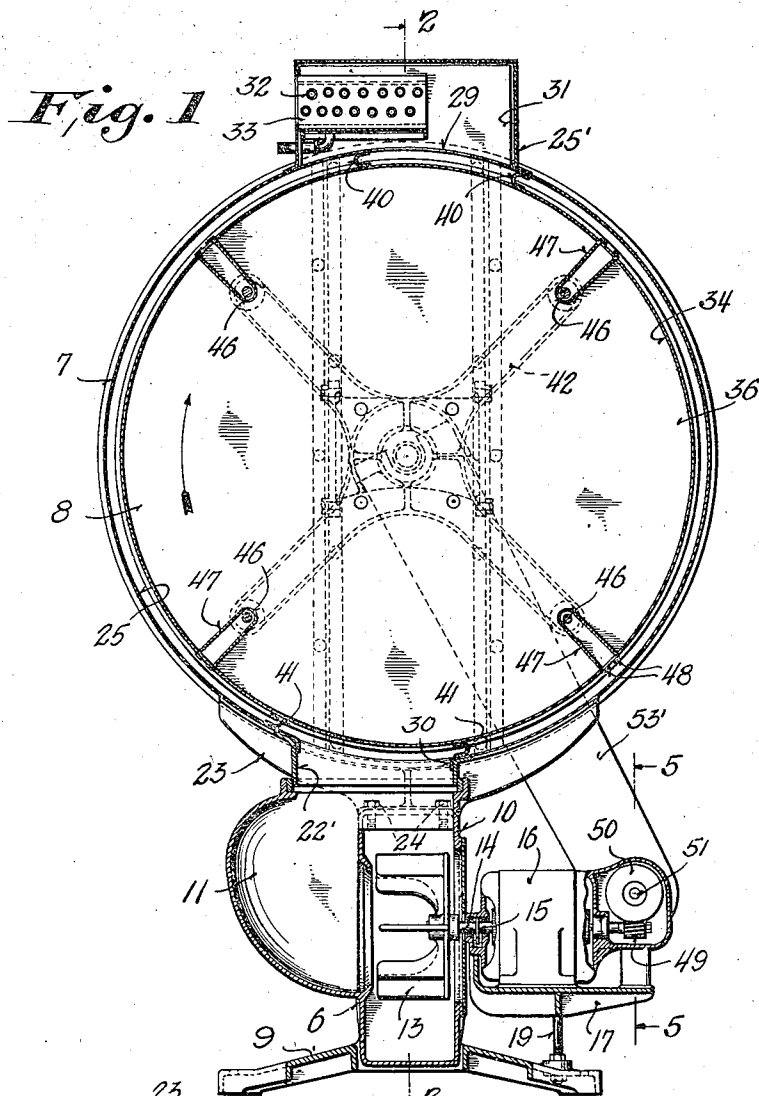
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2,048,743

CLOTHES DRYING APPARATUS

Filed April 10, 1933.

3 Sheets-Sheet 1



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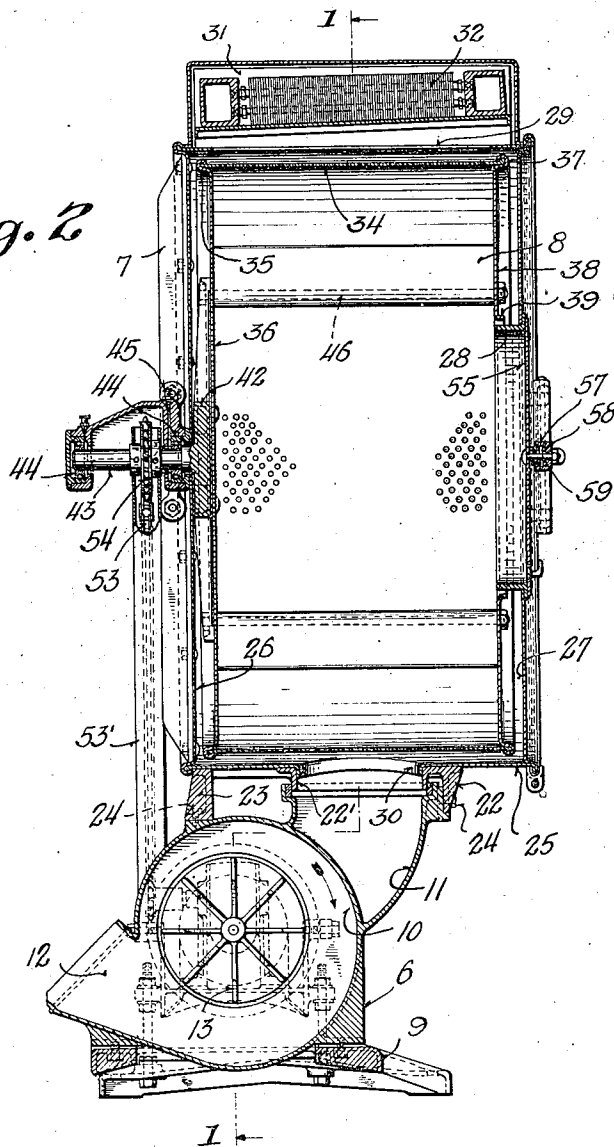
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Fig. 2



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Fig. 3

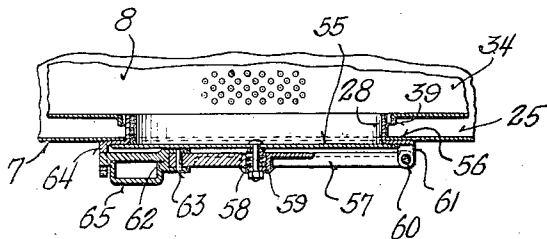
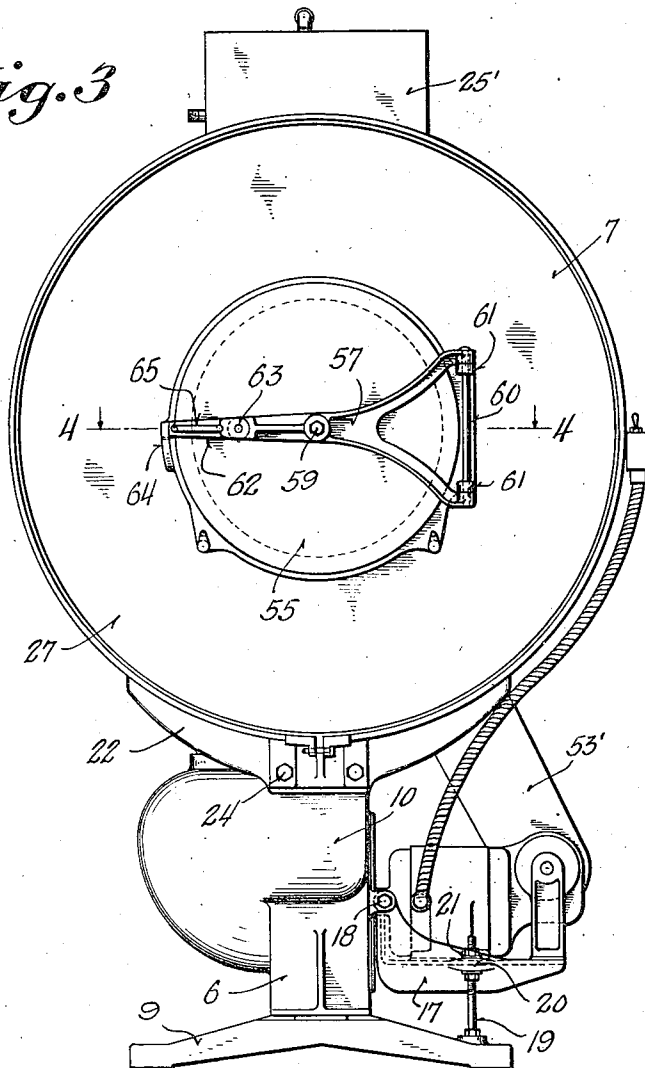


Fig. 4

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UNITED STATES PATENT OFFICE

2,048,743

CLOTHES DRYING APPARATUS

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Application April 10, 1933, Serial No. 665,280

1 Claim. (Cl. 34—5)

The invention relates to clothes drying apparatus.

The general object of the invention is to provide a clothes drying machine of simple and compact construction and whose first cost is not high so that the cost of several of these machines compares favorably with that of the large multi-pocket machines used by laundries and a more flexible equipment is obtained as well as a saving in operating cost over the usual large laundry drying equipment.

A further object of the invention is to provide a clothes drying apparatus in which the clothes are tumbled about in a revolving drum while subjected to drying currents of hot air, the air being introduced into the drum through the aid of a fan whose casing forms the supporting pedestal for the drum and its casing.

The invention further consists in the several features hereinafter set forth and more particularly defined by the claim at the conclusion hereof.

In the drawings: Fig. 1 is a vertical sectional view taken on the broken line 1—1 of Fig. 2;

Fig. 2 is a vertical sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a front end elevation view;

Fig. 4 is a detail sectional view taken on the line 4—4 of Fig. 3;

Fig. 5 is a detail sectional view taken on the line 5—5 of Fig. 1.

Referring to the drawings, the numeral 6 designates generally the pedestal, 7 the drum casing and 8 the drum.

The pedestal 6 includes a foot portion 9 and a fan housing 10 which includes the inlet conduit 11 and the outlet 12, a fan or impeller 13 being mounted to rotate in said housing and having its shaft 14 forming an extension of or secured to the armature shaft 15 of an electric motor 16 mounted on a stand 17 which is pivotally mounted at one end 18 upon the pedestal 6 and is secured in position by spaced studs 19, each of said studs having threaded engagement with the foot portion 9 and extending through an ear 20 on said stand to which it is secured by nuts 21. The fan housing 10 has the drum casing supporting frame members 22 and 23 connected thereto by the bolts 24, the member 22 also forming a pipe coupling portion 22' cooperating with the upper end of the conduit 11 to connect said conduit with the interior of the drum casing 7.

The drum casing 7 includes the shell 25, the rear wall 26 and the front wall 27, these parts

being formed of sheet metal suitably joined together. The front wall 27 is of annular form and includes the inwardly extending ring member 28. The shell 25 has an air inlet opening 29 formed in its upper portion and an outlet 30 in its lower portion aligned with the coupling portion 22'. A compartment 31 is formed above the opening 29 and has its side walls secured to the shell 25 and has a heating unit 32 mounted therein adjacent the inlet 33 to said compartment.

The drum 8 includes a shell 34 whose rear edge is interlocked with the beaded edge 35 of the back end or wall 36 and whose front edge is interlocked with the beaded edge 37 of the annular front end or wall 38, which has an outwardly extending annular lip 39 at its opening with which the ring member 28 overlaps quite closely so as to prevent clothes getting caught between the drum and its casing. The shell 34 of the drum is perforated and spaced a short distance from the enclosing casing and to prevent free passage of the flowing air to this whole space, flexible sealing flaps 40 are secured to the casing adjacent the opening 29 and similar flaps 41 secured to said casing adjacent the outlet 30 so that the heated air is drawn into the drum at the top and removed by the suction fan 13 from the lower portion of the drum.

A spider 42 is secured to the wall 36 of the drum, as by riveting, and has a shaft portion 43 extending from its center and journaled in ball bearing journals 44 mounted in a frame member 45 secured to the rear wall 26 of the drum casing 7.

The drum 8 is reinforced by the transversely extending radially disposed bolts 46 connected at one of their ends with the ends of the arms of the spider 42 and at their other ends with the wall 38 and these bolts also form supports for the inner edges of lifting ribs 47 mounted within the drum. Each of the lifting ribs 47 is formed of a piece of sheet metal which is medially bent so as to fit around a bolt 46 and its outer edges are provided with tongues 48 adapted to project through openings in the drum and be bent back against the sides of said openings, each rib projecting radially inwardly into the drum.

The motor shaft 15 drives, through the worm 49 and worm wheel 50, a shaft 51 which carries a sprocket 52 connected by chain 53 with a sprocket 54 on the shaft 43 whereby the drum 8 is driven by the motor at a reduced speed. The fact that the stand 17 may swing about its pivot 18 permits of a certain limited adjustment thereof so that slack in the chain 53 may be taken up.

The drum is loaded and unloaded through the opening, provided by the ring member 28, which, when the drum is operating, is closed by the door 55 in the form of a flat circular disk engageable 5 with the outer flange 56 of said ring member 28 and yieldingly connected to a supporting hinge member 57 by a spring 58 and bolt 59. The hinge member 57 is pivotally mounted on a hinge pin 60 carried in the spaced arms of a hinge bracket 10 61 formed integral with or secured to the member 28.

For locking the door in closed position, a latch member 62 pivotally connected by a pin 63 with the outer end of the hinge member 57 co- 15 operates with the usual notched keeper 64, said latch provided with a handle portion 65 for both swinging said latch and moving said door.

With the above construction as the drum is revolved, the clothes are tumbled about therein 20 and are subjected to the current of heated air passing through the drum as it turns.

The clothes are put in and taken out of the same opening and no braking or other special operations employed on larger equipment is required. 25 The operator may readily determine the condi-

tion of the clothes in a moment by simply opening the door and feeling of them. For large laundries, a number of these units may be used in place of the single large and costly multi-pocket machines and provide a more flexible equipment 5 and thus effect savings in operating costs.

We desire it to be understood that this invention is not to be limited to any particular form or arrangement of parts except in so far as such limitations are included in the claim. 10

What we claim as our invention is:

In a device of the character described, the combination of a casing, a perforated drying drum 15 mounted to revolve in said casing and having radially disposed lifting ribs and an opening centrally disposed in one end and having an outwardly extending flange, said casing having an opening alined with said opening in said drum and having an inwardly extending flange projecting into said outwardly extending flange, a closure 20 for the opening of said casing, means for circulating drying air currents through said drum, and means for rotating said drum.

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