

Sept. 23, 1952

M. F. HUEBSCH

2,611,192

LINT REMOVER FOR DRIERS

Filed Nov. 21, 1949

3 Sheets-Sheet 1

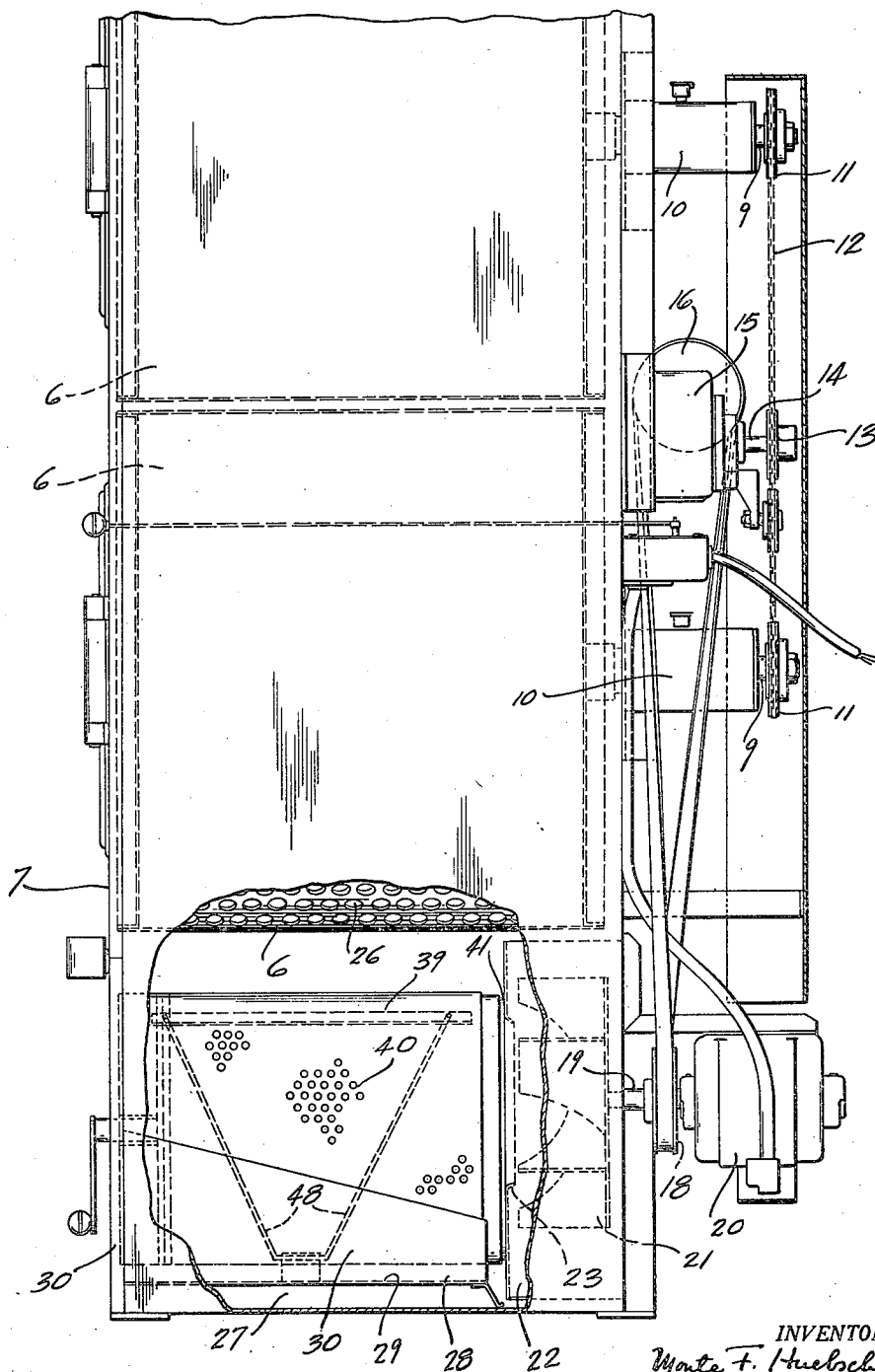


Fig. 1

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3 Sheets-Sheet 2

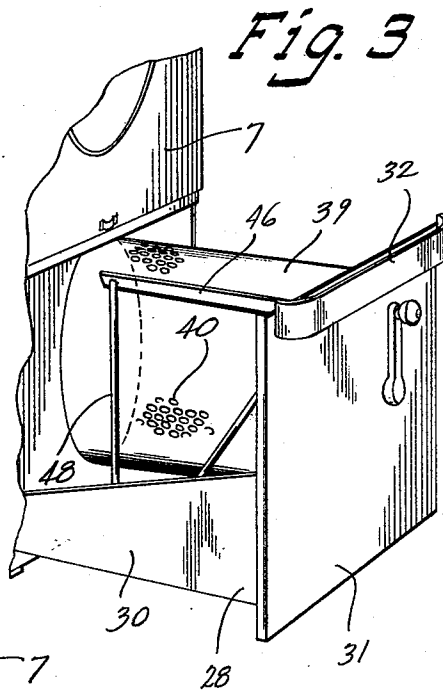
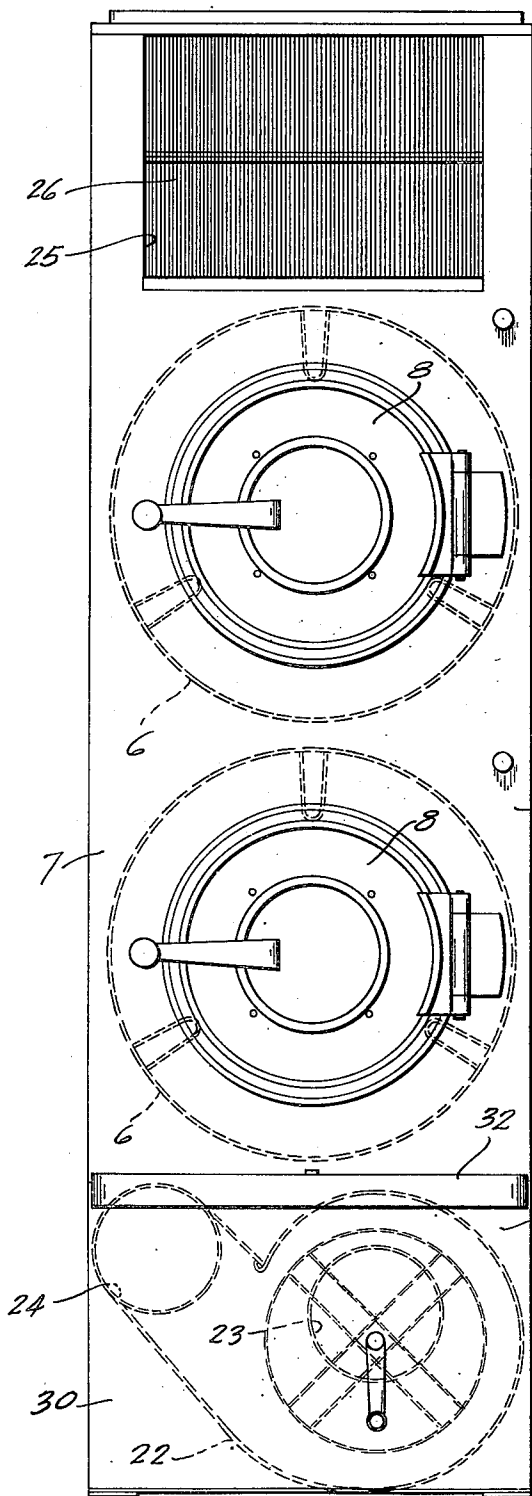


Fig. 2

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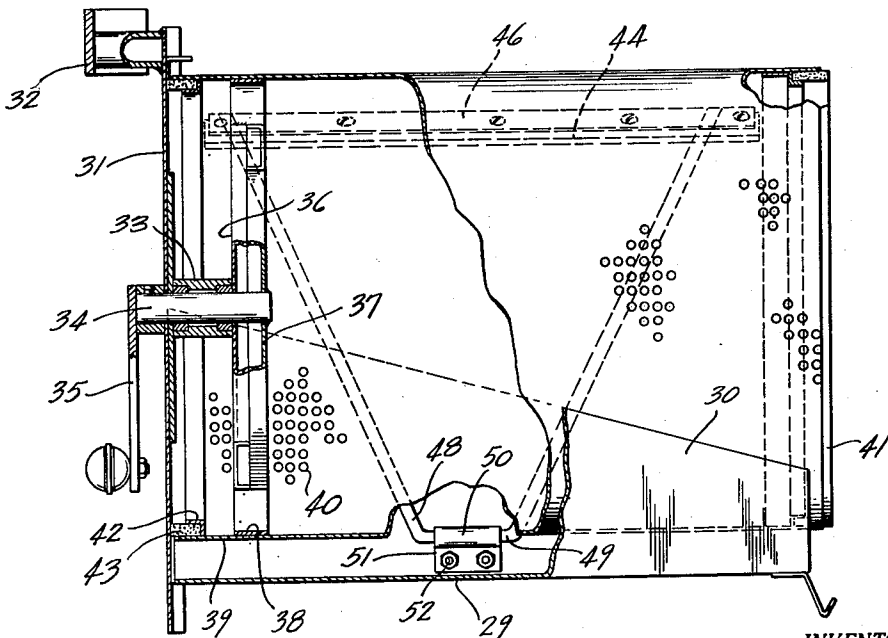
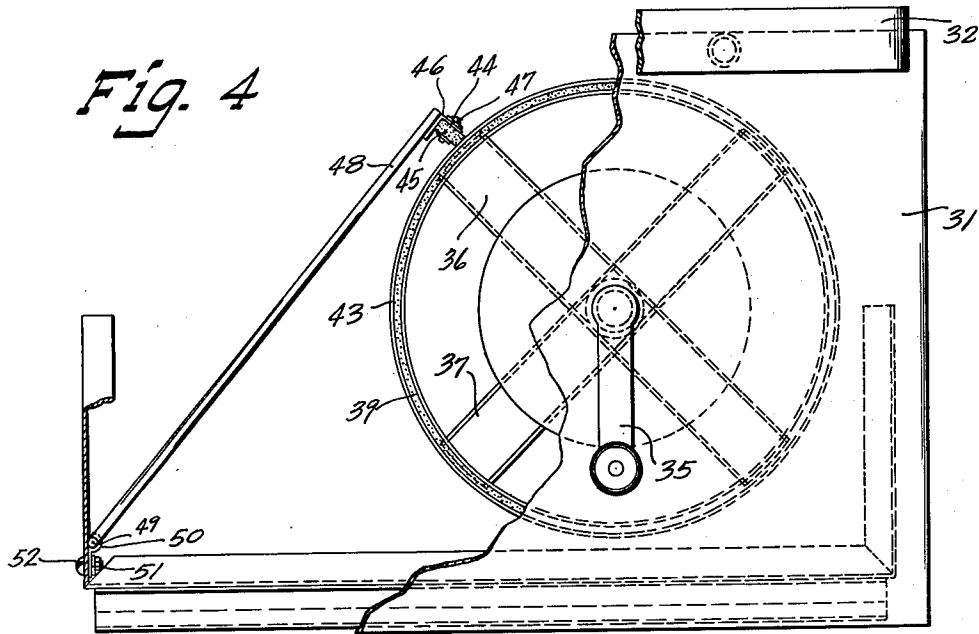
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3 Sheets-Sheet 3



*Fig. 5*

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# UNITED STATES PATENT OFFICE

2,611,192

## LINT REMOVER FOR DRIERS

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Application November 21, 1949, Serial No. 128,593

3 Claims. (Cl. 34—82)

1

The invention relates to driers and more particularly to laundry or clothes driers of the rotating tumbler type.

The main object of the invention is to provide a lint trap located in the air circulating system of the drier and preferably adjacent the circulating fan for collecting lint from which the collected lint may be readily removed.

A further object of the invention is to provide a lint trap comprising a perforated cylinder mounted on a sliding drawer and movable on the closing of the drawer into operative engagement with the inlet of an exhaust fan housing, the cylinder also being mounted to be revolved against a scraper which rides against it so as to remove lint therefrom and deposit it in the bottom portion of said drawer.

The invention further consists in the several features hereinafter described and more particularly defined by claims at the conclusion hereof.

In the drawings:

Fig. 1 is a side elevation view of a drier embodying the invention, parts being broken away and parts being shown in section;

Fig. 2 is a front elevation view of the drier;

Fig. 3 is a perspective view of the lint trap embodying the invention;

Fig. 4 is a detailed front end elevation view of the lint trap, parts being broken away and parts being shown in section;

Fig. 5 is a side elevation view of the lint trap, parts being broken away and parts being shown in section.

While the lint trap hereafter described may be used in the circulatory system of any suitable drier for laundry, garments, and textile materials, I have shown it associated with a drier of the rotating tumbler type which may have one or more drying tumblers, that shown being a drying apparatus of the type shown in my prior U. S. Letters Patent No. 2,351,429, dated June 13, 1944.

Referring to Figs. 1 and 2, the drier includes a pair of tumblers 6, mounted one above the other, in a housing 7 provided with hinged doors 8 providing access to each tumbler. As in said patent, each tumbler 6 is supported at one end by a shaft 9 mounted in a bearing 10. The shafts 9 carry sprockets 11 over which runs a chain 12 which engages a drive sprocket 13 mounted on the output shaft 14 of a speed reducer 15 whose input shaft carries a pulley 16 connected by a belt 17 with a pulley 18 on the drive shaft 19 of an electric motor 20.

The motor shaft 19 extends into the casing

2

at its lower end and carries an exhaust fan 21 mounted in a fan housing 22 having an inlet 23 and an outlet 24.

The upper end of the housing 7 has an air inlet opening 25 in which a suitable air heater 11 usually formed by steam heated coils is mounted.

The air drawn through the heater 11 by the action of the fan 21 is heated and passes down through the housing and out the outlet 24. During its passage through said housing it passes through apertures 26 in the tumblers 6 and comes in contact with the laundry, garments, or other textiles and removes the moisture therefrom. Since the laundry or clothes in the drums are tumbled about as the tumblers revolve, there is always a certain amount of lint given off from this drying material, and the present invention is directed to trapping this lint before the air carrying it is expelled from the housing and expeditiously handling this collected lint after it is trapped.

A space 27 is provided at the lower end of the housing in front of the exhaust fan housing 22 in which a drawer 28 is slidably mounted, said drawer having a bottom 29, sides 30, and a front panel 31 provided with a handle 32, see Figs. 1, 3 to 5.

The front panel 31 carries a bearing 33 in which a drum supporting shaft 34 is rotatably mounted, said shaft extending exteriorly of the panel and carrying a hand crank 35. The inner end of the shaft 34 has a spider 36 having arms 37 connected to a ring 38 carrying a metal cylinder 39 provided with perforations 40. The front end of the cylinder carries a sealing ring 41 of felt or other suitable material that is adapted to abut the front end of the fan housing 22 when the parts are in operative position whereby the cylinder forms a continuation of the inlet duct to the fan housing 22, the cylinder diameter being larger than the opening 23. The back end of the cylinder 39 has an angled annular flange 42 cooperating with the cylinder to form an annular pocket in which one end of a sealing ring 43 of felt or other suitable material is mounted. The ring 43 is adapted to abut the inner side of the front panel 31 of the drawer. Thus, all air drawn through the housing 7 has to go through the apertured cylinder 39 before going through the fan housing and being exhausted to atmosphere, and any lint entrained in this air will lodge on the outer surface of the cylinder 39 about its apertures. Periodically the lint that may collect on the cylinder 39 is brushed or scraped off when said cylinder is revolved by the

3

hand crank 35 by a scraper which comprises a scraper element 44 of felt or other suitable material clamped between a flat plate 45 and an angled metal strip 45 by screws 47, said strip being secured to the upper ends of the legs of a supporting rod 48 which has a transverse central portion 49 pivotally mounted in a hinge mounting formed by the panel 31 and the curved end 50 of a hinge member 51 secured to the front panel by screw bolts 52. The lint scraped from the cylinder 39 by the scraper above described when the cylinder revolves is free to fall to the bottom of the drawer where it may be readily removed when the drawer is withdrawn from the housing 7.

I 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 claims.

What I claim as my invention is:

1. In a drier of the type described, the combination of a movable drawer mounted in the housing of the drier, a perforated lint collecting cylinder mounted for rotation in said drawer and through which drying air must pass in the closed position of said drawer, means for rotating said cylinder, scraper means bearing on the periphery of said cylinder for removing the collected lint from said cylinder, when the same is revolved, for deposit on the bottom of said drawer, and means for mounting said scraper means in operative relation with said cylinder.

2. In a drier of the type described, the combination of a movable drawer movably mounted in the housing of the drier, a perforated lint collecting cylinder mounted in said drawer and

4

having a revoluble supporting shaft mounted in the front side of said drawer and provided with an exteriorly disposed actuator, said cylinder in the closed position of the drawer forming part of the air circulatory system of the drier, and a pivoted scraper member mounted in said drawer and engageable with said cylinder for removing lint therefrom as said cylinder is rotated.

3. In a drier of the tumbler type having a main housing and a fan housing, the combination of a drawer movably mounted in said main housing adjacent one end of said fan housing, a perforated lint collecting cylinder mounted in said drawer which in the closed position of said drawer forms the inlet to said fan housing, sealing means at the ends of said cylinder respectively engaging said fan housing and the front of the drawer, and means for removing lint collected on the cylinder from said cylinder.

MONTE F. HUEBSCH.

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