

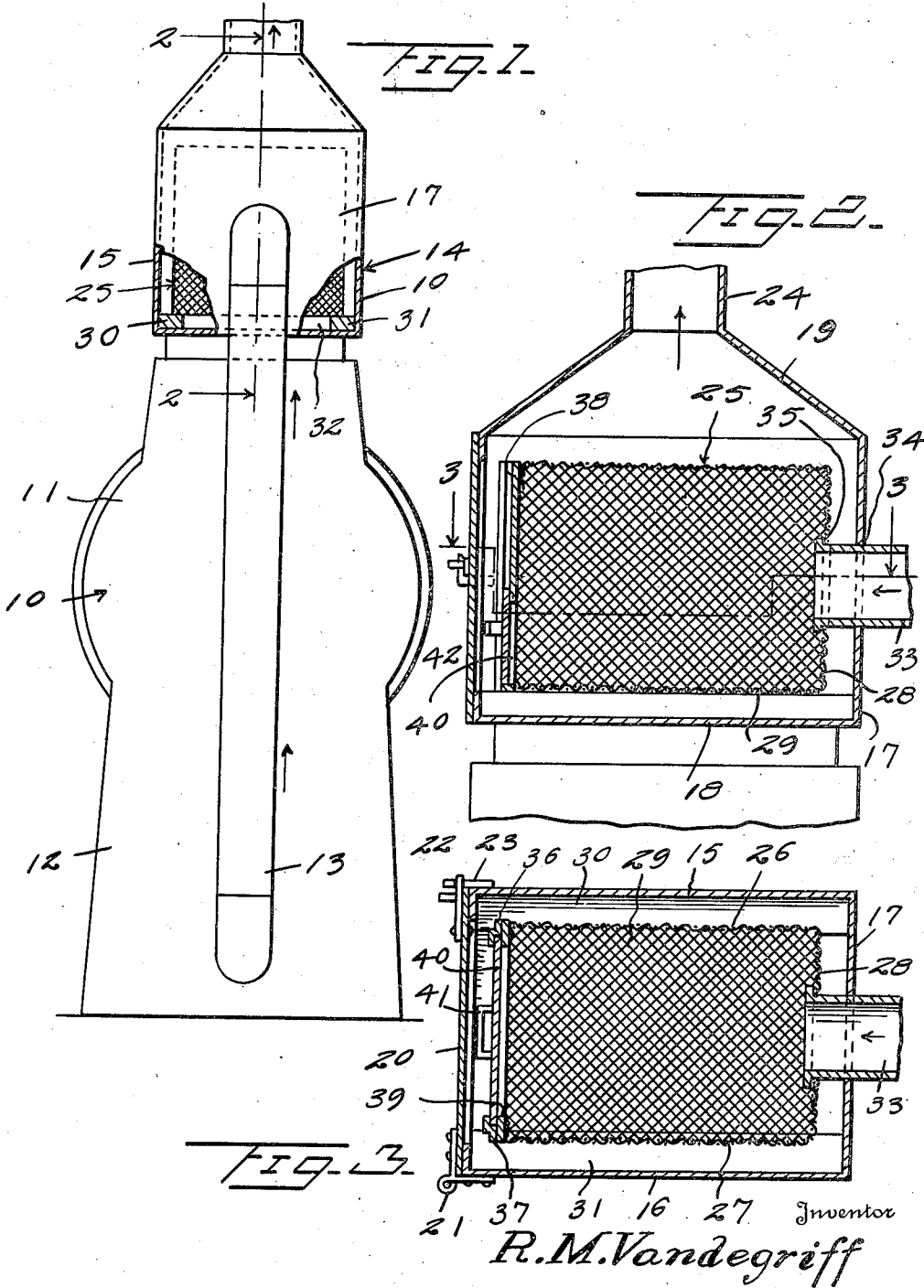
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LINT TRAP

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LINT TRAP

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1 Claim. (Cl. 183—36)

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This invention relates to lint traps.

In the deodorizing or drying of garments, the garments are placed into a tumbling machine and subjected to a suction of air for removing the vapors and volatile cleaning fluids. During the tumbling or agitation of the garments a considerable amount of lint is separated from the garments, and this lint creates a dangerous fire hazard as it is discharged into a stack. It is, therefore, an object of this invention to provide a lint collector or trap which is interposed in the draft of discharged or exhausted air and which will trap the free lint so that it cannot be discharged into the atmosphere.

Another object of this invention is to provide a trap which is constructed in the form of a perforate container and is adapted to be connected to the exhaust side of the suction fan, so that substantially all of the lint will be separated from the air.

To the above objects and others which may hereinafter appear, the invention consists of the novel combination, construction and arrangement of parts as will be more specifically referred to and illustrated in the accompanying drawing, wherein is shown an embodiment of the invention, but it is to be understood that changes, modifications and variations may be resorted to which fall within the scope of the invention as claimed.

In the drawing:

Figure 1 is a detail rear elevation partly broken away and in section of a drying or deodorizing machine having combined therewith a lint trap or collector constructed according to an embodiment of this invention,

Figure 2 is a fragmentary sectional view taken on the line 2—2 of Figure 1, and

Figure 3 is a sectional view taken on the line 3—3 of Figure 2.

Referring to the drawing, the numeral 10 designates generally a conventional drying or deodorizing machine which includes a tumbler (not shown) mounted in the tumbler chamber 11 and includes a suction fan (not shown) mounted in the hollow base 12. The pressure side of the suction fan which is adapted to draw out of the garments odor or to draw air there-through for drying moistened garments, has connected thereto an exhaust pipe 13 which extends vertically at the rear end of the machine and in machines at present in use, the exhaust pipe 13 is connected to a stack or other means for discharging the exhausted air into the atmosphere.

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The tumbler chamber 11 has mounted thereon a housing, generally designated as 14. The housing 14 includes opposite side walls 15 and 16, a rear end wall 17, a bottom wall 18 and an upwardly tapered top 19. A door or closure 20 which forms the front wall of the housing 14, is hingedly connected as at 21 to the side wall 16 and is provided with a pivoted latch 22 engageable with a keeper 23 which is carried by the side wall 15. The closure 20 provides a means whereby entrance may be gained to the interior of the collector housing 14 for purposes of cleaning this housing and also the lint trap, to be hereinafter described, which is mounted within the collector housing. The tapered top 19 has connected thereto an upwardly extending pipe 24 which may be extended for the desired distance from the machine for exhausting the air passing through the pipe 13.

In order to provide a means whereby the lint which is picked up by the suction of the fan in the fan chamber 12 may be collected and/or separated from the air, I have provided a lint trap or collector 25. The trap or collector 25 includes perforate opposite side walls 26 and 27, a perforate rear end wall 28 and a perforate bottom wall 29. The bottom wall 18 of the housing 14 has mounted on the inner side thereof a pair of elongated strips 30 and 31 which provide a space 32 therebetween in order that air may freely pass through the bottom wall 29. The upper end of the exhaust pipe 13 has connected thereto a horizontal extension 33 which is extended through an opening 34 formed in the end wall 17 of the housing 14. The pipe extension 33 is extended through an opening 35 formed in the end wall 28 of the trap or collector 25 in order that the incoming air, which is laden with lint, will be discharged into the interior of the perforate housing or trap 25. The trap 25 is formed with a closed forward end and this forward end includes confronting vertically disposed guide members 36 and 37. An upper plate 38 is interposed between the forward end of the housing 25 and the guide members 36 and 37 and is formed at its lower end with a pair of narrow extensions 39 which cooperate with the guide members 36 in forming guides for a vertically slidable closure plate 40. The closure plate 40, which is provided with a looped handle 41, is adapted when in closed position to overlap the lower portion of the plate 38, as shown in Figure 2, and is adapted to be vertically raised to expose an opening 42 below the plate 38 so that

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the collected lint can be removed from the trap or collector 25 at selected periods.

In the use and operation of this device the drying or deodorizing machine 10 is operated in the usual manner with the pipe 13 connected to the exhaust or pressure side of the fan which is mounted in the base 12. The air withdrawn from the tumbling chamber 11 will be laden with lint and this lint will be suspended with and carried by the air passing through the exhaust pipe 13. The suspended lint will then be discharged into the interior of the perforate trap 25 and this trap will thereupon trap the lint and permit the air to exhaust through the perforations thereof. The trap 25 may have the perforate walls thereof made of woven wire or other suitable perforate material. After the machine 10 has been in operation for a period of time, the collected lint may be removed from the trap 25 by opening the outer closure 20 and raising the sliding closure 40.

This trap will provide an efficient means for entrapping the suspended lint so as to thereby remove a dangerous fire hazard which is caused by the suspension of the inflammable lint in the air, particularly where the air has also combined therewith inflammable vapors which are used in the dry cleaning process.

What I claim is:

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In a device as described, a lint and detergent conveying vertically disposed conduit, a chamber to which the lower end of the conduit is secured as a source of forcing a draft of air through said conduit, a chute surmounting said chamber consisting of a lower case and an upper convergent spout having a discharge pipe continuing the conduit line to the atmosphere, a pair of oppositely arranged elongated strips secured marginally in the bottom of said case, a reticulated closed body resting upon said strips marginally so as to have its bottom spaced above the bottom of the case, and being spaced with its opposing ends from opposite walls of the case and arranged to present its reticulated top opposite to said spout, means giving access to the interior of the reticulated body, means opening said case to give access to said means, and a right angular inner open terminal upon said conduit projecting supportedly into said case and into an adjacent part of the reticulated body to center the latter upon said strips and relatively to the walls of the case, whereby lint conveyed from said conduit into the case by means of said right angular open terminal is trapped in said body, while under influence of the forced draft of air in said conduit, the detergent is blasted out of the spout through said discharge pipe.

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