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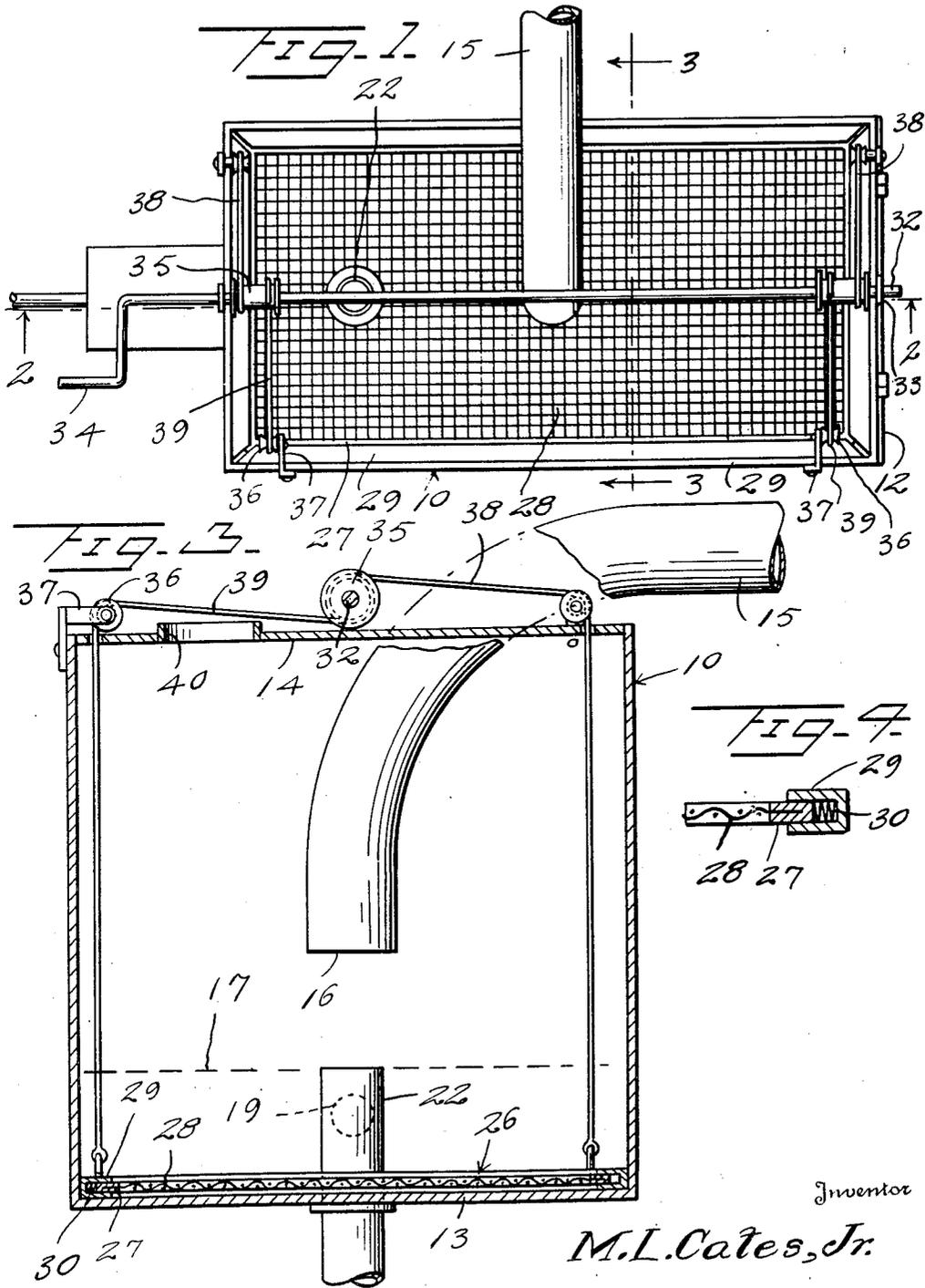
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LINT TRAP

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2 Sheets-Sheet 1



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LINT TRAP

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3 Claims. (Cl. 261-119)

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This invention relates to an improved lint trap for dry cleaning or like systems.

An object of this invention is to provide an improved lint trap which is so constructed and arranged that the accumulated lint can be easily and quickly removed from the trap.

Another object of this invention is to provide a lint trap formed of a housing having water or other liquid therein with a screen adapted to normally rest on the bottom of the housing. The screen has connected thereto an elevating means so that the screen can be periodically raised above the liquid level, carrying therewith the accumulated lint. After the liquid has drained from the lint the latter may be removed from the screen through a side door in the housing.

A further object of this invention is to provide an improved lint trap which will eliminate fire hazards, and will also speed up the time required for cleaning the trap.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a detail top plan of a lint trap constructed according to an embodiment of this invention with the top wall thereof removed,

Figure 2 is a sectional view taken on the line 2-2 of Figure 1,

Figure 3 is a sectional view taken on the line 3-3 of Figure 1,

Figure 4 is a fragmentary sectional view of the screen used with this device; and

Figure 5 is a fragmentary side elevation of a modified form of screen elevator used with this device.

Referring to the drawings, the numeral 10 designates generally a housing which is formed of opposite side walls 11, opposite end walls 12, a bottom wall 13 and a top wall 14. The housing herein disclosed is rectangular in plan and is adapted to be connected to a lint delivery pipe 15.

The pipe 15 extends through the top wall 14, being bent on an arc, as shown in Figure 3, and terminates as at 16 at a point substantially above the bottom wall 13 and above the level 17 of water which is adapted to be contained within the lower portion of the housing 10.

A water reservoir or chamber 18 is disposed at one end of the housing 10, extending from the bottom thereof and the adjacent end wall 12 of the housing is formed with an opening 19 so that water from the reservoir 18 will flow into the lower portion of the housing 10.

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A float valve 20 is disposed in the reservoir 18, being connected to a water supply pipe 21 so that the water level 17 will be maintained at a predetermined height. An overflow pipe 22 is extended through the bottom wall 13 and terminates at a point coplanar with the water level 17.

A closure 23 is hingedly carried as at 24 by the opposite end wall 12, normally closing an opening 25 through which the screen to be hereinafter described may be withdrawn. The housing 10 has mounted in the lower portion thereof and resting on the bottom wall 13 a screen structure generally designated as 26. The screen structure 26 includes a screen frame 27 having a wire mesh 28 fixed therein and the screen frame 27 is mounted in a channel-shaped frame 29 which may have either one end or side thereof removable for disposing the screen frame 27 therein or removing same from the supporting channel frame.

A plurality of springs 30 are mounted within the supporting frame 29 and hold the screen frame 27 centrally therein. The screen 28 is formed with an opening 31 so that this screen may engage over the overflow pipe 22. The screen and supporting frame 29 are adapted to be elevated to a point above the water level 17 in order to remove the lint which may be floating on top of the water or may be submerged within the water by elevating means which comprises a rotary shaft 32 mounted in bearings 33 carried by the upper edges of the end walls 12. A crank 34 is fixed to the shaft 32 at one end thereof and a pair of winding drums 35 are also fixed to the shaft 32.

A plurality of idler pulleys 36 are rotatably carried by bracket members 37 fixed to the housing 10 adjacent each side thereof and cables 38 and 39 are wound on each drum 35, the cable 38 being wound reversely from the cable 39 so that the screen structure will be raised in a horizontal plane when the shaft 32 is rotated to wind the cables on the drums 35.

The top wall 14 is formed with an outlet nipple 40 so that the air discharged into the housing 10 from the pipe 15 may be exhausted therefrom. A conveyor pipe may be engaged with the nipple 40 so as to convey the air from the housing 10 to a remote point.

Referring now to Figure 5, there is disclosed a modified form of elevating means which includes a hydraulic cylinder 41 connected with a pressure line 42. A plunger rod 43 extends from the lower end of the cylinder 41 and is connected to the screen structure 26 at each corner thereof for elevating the screen structure to a point above the water level, or for lowering the screen struc-

ture into the bottom of the housing. It will be understood that with the exception of the flexible elevating means shown in Figures 1 to 3 inclusive the trap structure shown in these figures will be used with the structure shown in Figure 5.

In the use and operation of this device, the pipe 15 is connected to the pressure or outlet side of a suction fan which withdraws lint from a room or other enclosure. The lint carrying air is discharged in a downward direction against the water in the housing 10 and upon striking the water the lint will be retained within the housing 10. When a predetermined quantity of lint has been accumulated in the housing 10, the screen structure 26 may be elevated above the water level 17 to a point substantially flush with the bottom of the closure 23.

If desired, a lose mesh fabric may be laid over the screen 28 so that in cleaning the screen structure it will only be necessary to either roll up or pull out the fabric and insert a new fabric.

With a trap as hereinbefore described, it will be possible to clean the trap in a very short period of time and renew the trap for immediate use. Where the device is used on substantially a twenty-four hour basis embodying several shifts of workmen, the device may be cleaned between one or more shifts.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim all variations falling within the purview of the appended claims.

What I claim is:

1. A lint trap comprising a housing, inlet means discharging water into said housing, means for maintaining a predetermined water level in said housing, a lint carrying duct extending through the top wall of said housing and terminating at a point above the water level, a frame disposed loosely in said housing and normally submerged below the water level, a screen removably carried by said frame, an opening extending across one end wall of said housing above the water level, a closure for said opening, and means operable from the outside of said housing and adapted to raise said frame above the water level for

registration with said opening whereby said screen may be removed through said opening.

2. A lint trap comprising a housing, water inlet means connected to said housing, means for maintaining a predetermined water level in said housing, a lint carrying duct terminating in said housing above the water level, a frame disposed loosely in said housing and normally submerged below the water level, a screen removably carried by said frame, an opening extending across one end wall of said housing above the water level, a closure for said opening, and means operable from outside of said housing and adapted to raise said frame into registry with said opening whereby said screen may be removed through said opening.

3. A lint trap comprising a rectangular housing, water inlet means connected to said housing, means for maintaining a predetermined water level in said housing, a lint carrying duct terminating in said housing above the water level, a frame disposed loosely in said housing and normally submerged below the water level, said frame including a pair of side members and an end member at one end thereof, a screen slidably carried by said side members and removable from said frame at the other end thereof, an opening extending across the end wall of said housing adjacent to said other end of said frame and above the water level, a closure for said opening, and means connected to said frame adapted to raise said frame into registry with said opening whereby said screen may be removed through said opening.

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