

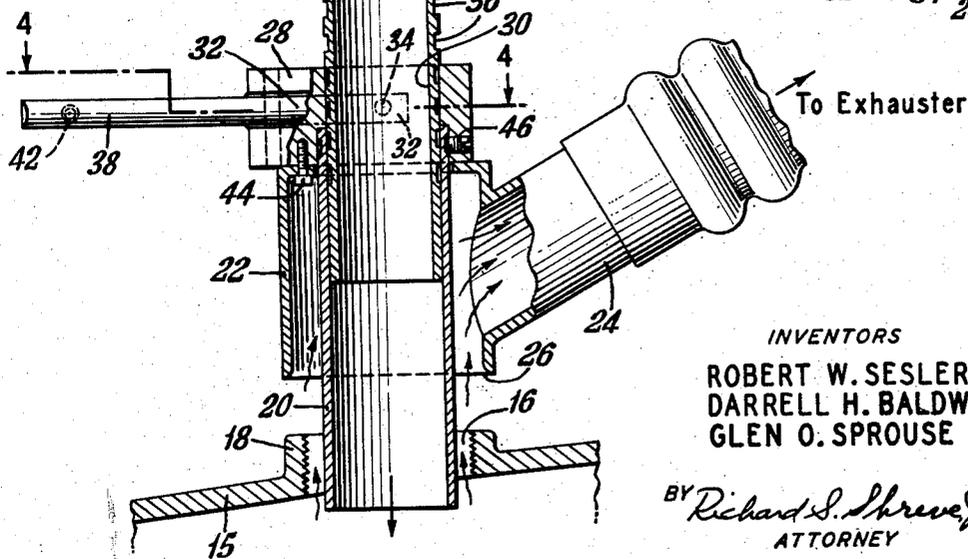
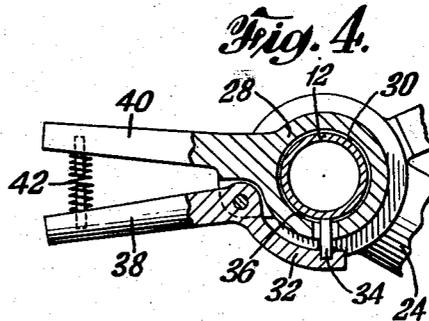
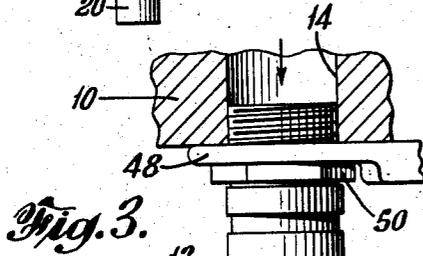
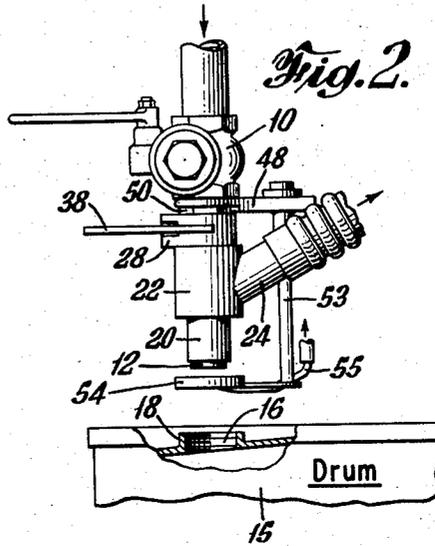
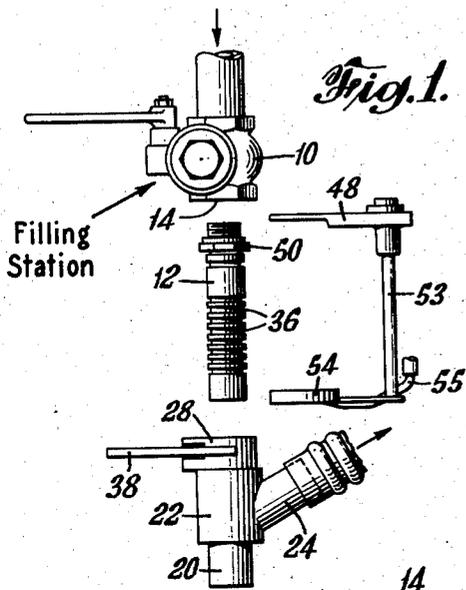
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R. W. SESLER ET AL  
CONTAINER FILLER

2,874,733

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2 Sheets-Sheet 1



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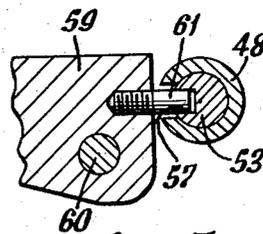
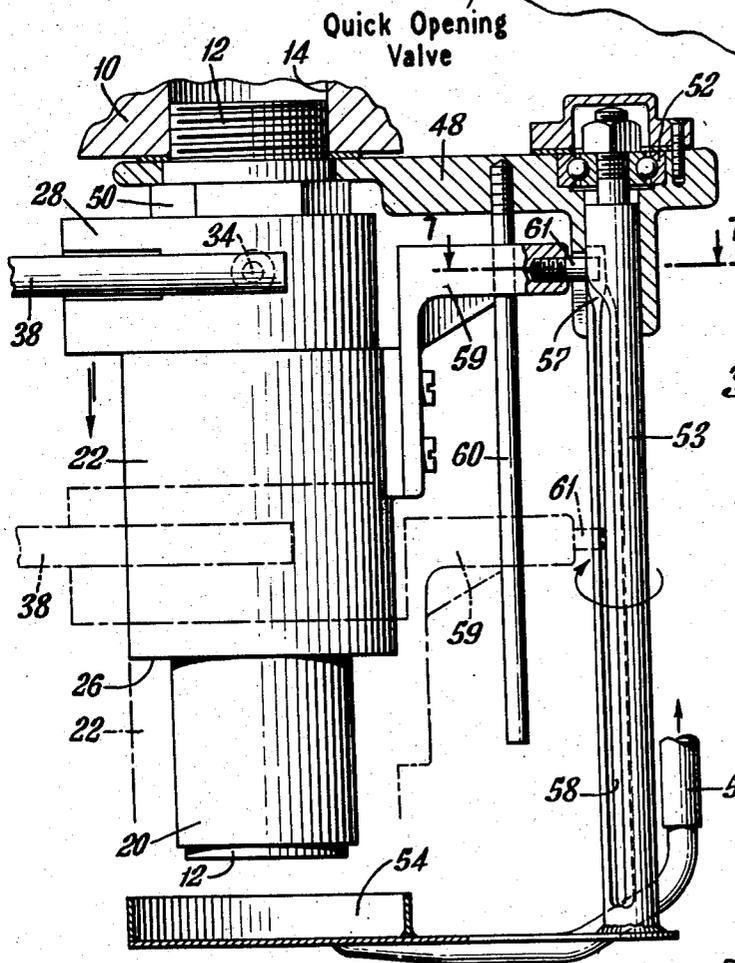
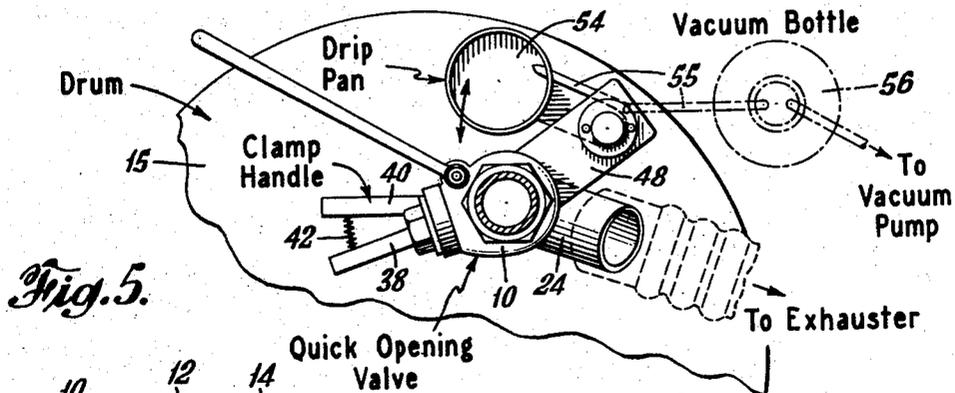
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2,874,733

## CONTAINER FILLER

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4 Claims. (Cl. 141—87)

This invention relates to container fillers, and more particularly to devices of this character for filling containers with fluids having volatile constituents tending to liberate fumes during the filling operation.

Filling stations are frequently provided with feed spouts for supplying different fluids for selectively filling containers according to the product desired. When the fluids contain volatile constituents, an exhaust nozzle has been provided, to be manipulated separately from the filling device, to carry away the liberated fumes. This operation was awkward and cumbersome, and too hazardous to allow filling of irritants to be filled in confined areas.

It is therefore the main object of the present invention to provide a container filler with an exhaust hood manipulable with the filling device, and which is convenient and effective in operation. Another object is to provide a drip pan to catch material which would otherwise drip onto the container or the fill scale.

According to the present invention the container filler comprises a sleeve adapted to slidably receive a feed spout and to enter the container inlet, and a hood surrounding said sleeve and having an exhaust outlet and terminating in a rim forming an exhaust inlet, said sleeve and hood being secured together to slide as a unit with respect to said feed spout to extend said sleeve into the inside of said inlet and the rim of said hood into position surrounding the outside of said inlet. Preferably the container has an upstanding reinforcing boss, and the exhaust hood rim extends down over the container inlet boss. The feed spout preferably has a drip pan mounted thereon to swing under said sleeve, and means are provided actuated by sliding said sleeve to swing the drip pan away from said sleeve.

### In the drawings

Fig. 1 is an exploded view of a filling station provided with the container filler device according to the preferred embodiment of the present invention;

Fig. 2 is a view of the same parts in assembled position in relation to a container to be filled;

Fig. 3 is a detailed vertical cross section through the device shown in Figs. 1 and 2;

Fig. 4 is a horizontal section taken along the line 4—4 of Fig. 3;

Fig. 5 is a plan of the parts shown in Fig. 2;

Fig. 6 is an enlarged section showing the drip pan; and

Fig. 7 is a section along line 7—7 of Fig. 6.

As shown in the drawing, the filling station comprises a cut off valve 10 at the terminal of a supply line, and is generally in fixed position. A feed spout 12 is screwed into a socket 14 in the filling station valve 10. The container 15 to be filled is shown as a drum having an inlet 16, which in the form shown is provided with an upstanding reinforcing boss 18.

The container filler for introducing the inlet 16 into the speed spout 12 comprises a sleeve 20 adapted to slidably receive the feed spout 12 when slid up over the same, and to enter the inlet 16 when slid down thereon. The filler

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also comprises a hood 22 surrounding the sleeve 20 and having an exhaust outlet 24 connected to an exhaust system. The hood terminates in a rim 26.

The sleeve 20 and hood 22 are secured together to slide as a unit with respect to the feed spout 12 to extend the sleeve 20 into the inside of the inlet 16 and the rim 26 into position surrounding the inlet 16.

The container filler also preferably comprises a clamp 28 having a throat 30 aligned with the sleeve 20 for clamping the sleeve 20 and hood 22 onto the feed spout 12. The clamp 28 also has a jaw 32 pivoted thereon and preferably provided with a pin 34 adapted to enter one of the grooves 36 in the feed spout 12. The throat 30 and jaw 32 have handles 38 and 40 respectively, urged apart by a spring 42 for the clamping action. In the form shown, the hood 22 is secured to the clamp 28 by one or more screws 44, and the clamp 28 is secured to the sleeve 20 by one or more screws 46. The container filler is also preferably provided with a drip pan to catch material which would otherwise fall onto the container or fill scale platform. A core support 48 has a ring portion which fits over the upper end of the feed spout or core 12 above a nut 50 which clamps the core support against the filling station valve 10. The core support 48 extends laterally to receive a bearing 52 for a shaft 53, the lower end of which is rigidly secured to a drip pan 54, from which a drain tube 55 leads in a vacuum bottle 56.

The shaft 53 is provided with a cam groove having a spiral top portion 57 and a longer vertical portion 58. A guide bracket 59 is secured to the hood 22 and slidably receives a guide rod 60 depending vertically from the core support 48. The guide bracket 59 also has a laterally extending pin 61 which rides in cam groove 57—58.

In operation, the ring of the core support 48 is fitted over the feed spout 12, which is screwed into the socket 14 of the valve 10, and the core support is locked in position by the nut 50. The clamp handles 38 and 40 are grasped and the sleeve 20 slid up along the feed spout 12. The guide bracket 59 slides along the guide rod 60, and the pin 61 slides along the straight vertical cam groove 58. When the spiral groove 57 is reached, it cams the drip pan 54 into position under the sleeve 20. The clamp handles 38 and 40 are released, and the pin 34 enters one of the top grooves 36 in the feed spout 12.

After a container has been positioned under the filling station, the clamp is released and the handles 38 and 40 serve to slide the sleeve 20 down along the feed spout 12. During the initial part of this movement, the pin 61 engages the spiral cam 57 which swings the drip pan 54 to one side to the position shown in Fig. 5. Continued movement brings the pin 61 down along the vertical groove 58 which holds the drip pan in that position.

As the sleeve 20 descends, the hood 22 goes along with it to surround the inlet 16. Preferably the hood rim 26 extends down over the boss 18, but is spaced from the container a quarter to a half inch at all times during the filling operation to control displaced vapors and cross drafts.

### We claim:

1. A container filler for introducing a feed spout into a container inlet and exhausting fumes liberated during the filling operation, comprising a sleeve adapted to slidably receive said feed spout and to loosely enter the container inlet with a clearance therebetween, and a hood surrounding said sleeve and having an exhaust outlet and terminating in a rim forming an exhaust inlet, said sleeve and hood being secured together at the top with a clear annular space therebetween below the top to slide as a unit with respect to said feed spout to extend said sleeve into the inside of said container inlet and the rim of said hood into position surrounding the outside of

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said container inlet, with said container inlet entering said clear annular space, and with said annular space aligned with said clearance between said sleeve and container inlet to receive fumes therefrom.

2. A container filler for introducing a feed spout into a container inlet and exhausting fumes liberated during the filling operation, comprising a sleeve adapted to slidably receive said feed spout and to enter the container inlet, a clamp having a throat aligned with said sleeve, and a hood surrounding said sleeve and having an exhaust outlet; said sleeve, clamp, and hood being secured together to slide as a unit with respect to said feed spout when said clamp is released, to extend said sleeve into said container inlet and said hood to surround said container inlet.

3. A container filler for introducing a feed spout into a container inlet, comprising a sleeve adapted to slidably receive said feed spout and to enter the container inlet, a drip pan mounted to swing under said sleeve, a hood surrounding said sleeve secured thereto and slidable therewith and having an exhaust outlet and terminating in a rim forming an exhaust inlet, and means actuated by sliding said hood for swinging said drip pan away from said sleeves.

4. A container filler for introducing a feed spout into

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a container inlet, comprising a sleeve adapted to slidably receive said feed spout and to enter the container inlet, a support adapted to be secured to said feed spout, a vertical shaft journaled in said support at one side of said sleeve, a drip pan mounted on the bottom of said shaft to swing horizontally under said sleeve, a hood surrounding and secured to said sleeve slidable therewith having an exhaust outlet and terminating in a rim forming an exhaust inlet, and cooperating means on said hood and shaft actuated by sliding said sleeve for swinging said drip pan about the axis of said shaft and away from said sleeve.

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