

Sept. 18, 1951

E. E. BUMPUS

2,568,183

MACHINE FOR REMOVING PAINT

Filed July 21, 1947

2 Sheets-Sheet 1

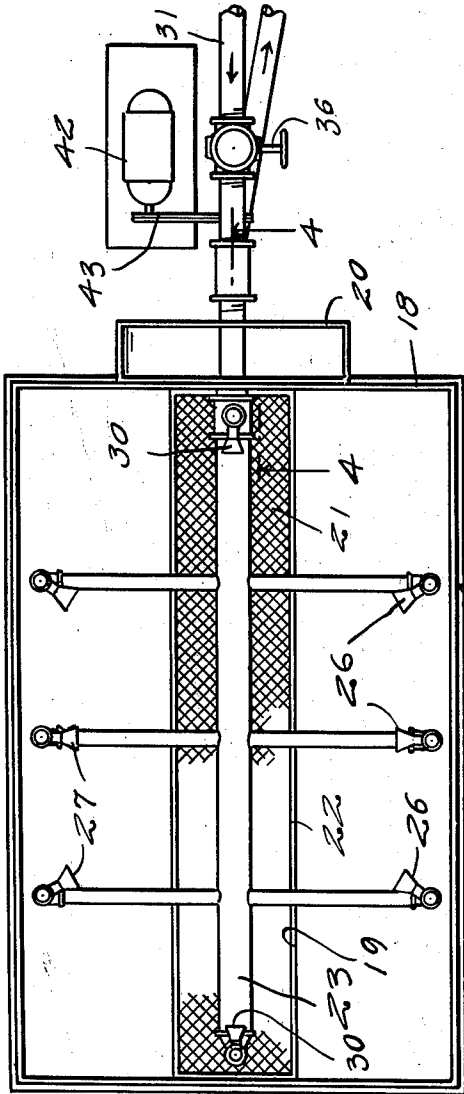


FIG. 2-

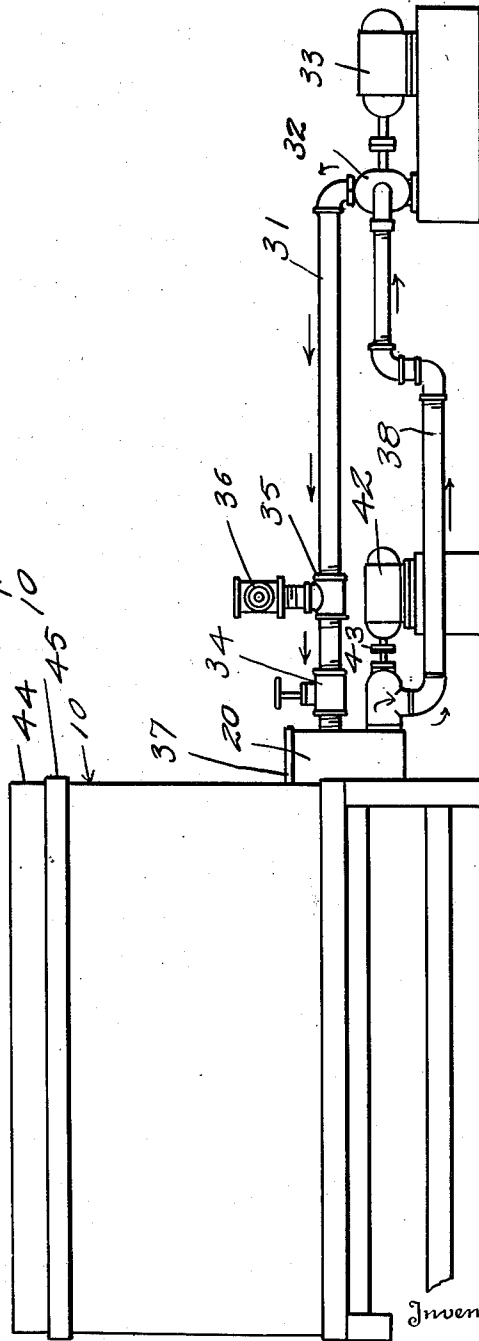


FIG. 1-

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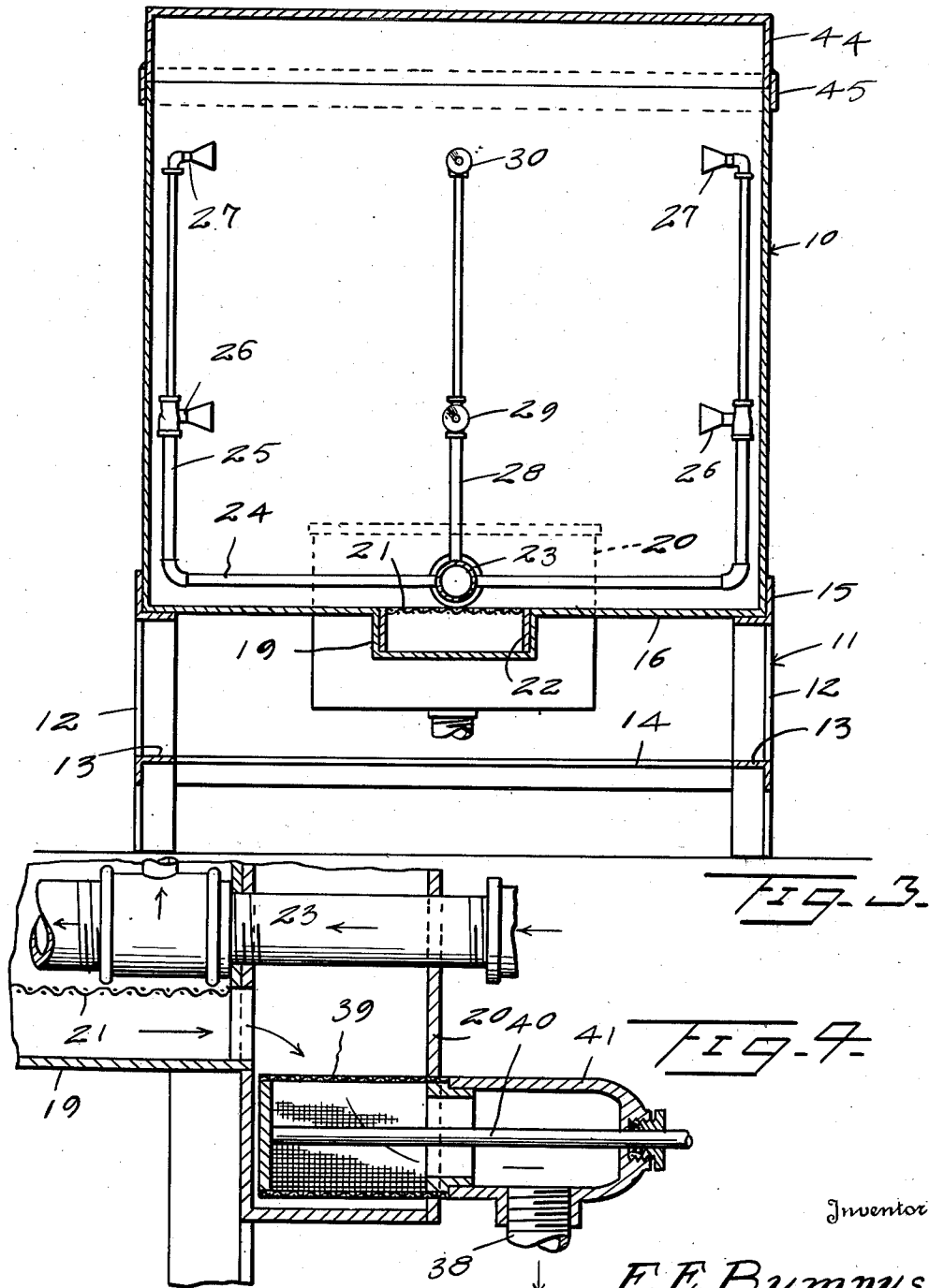
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UNITED STATES PATENT OFFICE

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MACHINE FOR REMOVING PAINT

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1 Claim. (Cl. 134—111)

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This invention relates to an improved paint removing apparatus.

An object of this invention is to provide an improved apparatus for removing paint from articles, the apparatus including a housing having spray nozzles therein for spraying the liquid onto the article, and the nozzles being connected to the pressure side of a pump which is connected at the suction side thereof to a collecting trough in the housing so that a small quantity of the liquid may be used and re-circulated.

Another object of this invention is to provide in a device of this kind an improved rotary or centrifugal filter disposed in the sump so that the heavy or solid particles will be retained in the sump, and the filter screen will not become clogged.

A further object of this invention is to provide a device of this kind which is simple in construction and can be used for articles of various sizes and shapes.

A further object of this invention is to provide an improved method of removing paint which includes subjecting the article to a spray or mist of a paint removing characteristic in a closed chamber for a period of time sufficient to dissolve the paint.

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 claim.

In the drawings,

Figure 1 is a detail side elevation, partly broken away, of a paint removing device constructed according to an embodiment of this invention,

Figure 2 is a fragmentary plan view of the device with the top cover removed,

Figure 3 is a transverse section taken vertically through the device; and

Figure 4 is a fragmentary sectional view taken on the line 4—4 of Figure 2.

Referring to the drawings, the numeral 10 designates generally a housing which is mounted on a supporting frame 11. The frame 11 includes upright legs 12 connected together adjacent the lower ends thereof by longitudinal connecting bars 13 of angle-shape and the end legs are connected together by end angle bars 14.

The frame also includes a pair of longitudinal or side angle bars 15 providing the support for the housing 10. The housing 10 is formed of a bottom wall 16, side walls 17, and end walls 18. The bottom wall 16 has secured thereto a longitudinal extending trough 19 which communi-

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cates at one end thereof with a sump 20. A screen 21 is disposed across the upper end of the trough 19, being secured to a screen frame 22. The housing 10 has extending lengthwise thereof a manifold pipe 23 which extends over the top of the screen 21. The pipe or manifold 23 has secured thereto a plurality of laterally extending branches 24 with which upwardly extending nozzle pipes 25 are connected.

Each nozzle pipe 25 has secured thereto a lower nozzle 26 and an upper nozzle 27. The manifold or pipe 23 also has secured thereto upright end nozzle pipes 28 having a lower nozzle 29 and an upper nozzle 30 secured thereto. The manifold pipe 23 extends outwardly through one end of the housing 10 and in the present instance extends through the sump 20 and is connected to a pipe 31 which is connected to the outlet side of a pump 32 operated by a motor 33. The pipe 31 has interposed therein a valve 34 and a T 35 is also interposed in the pipe 31 between the valve 34 and the pump 32.

A discharge valve 36 is connected to the T 35 so that when it is desired to remove the cleaning fluid from the system, valve 34 may be closed and valve 36 opened and the cleaning fluid then discharged into a receptacle or the like. The sump 20 is provided with a removable cover 37 and a suction pipe 38 connected at one end to the suction side of the pump 32 is connected to the lower portion of the sump 20.

In order to provide for filtering the fluid which is removed from the sump 20, I have provided a cylindrical filtering screen 39 which is secured to a shaft 40. The shaft 40 extends through a housing 41 which is fixed to the pipe 38 and the shaft 40 is operated by means of a motor 42 connected to the shaft 40 through an endless belt 43.

In the use and operation of this device, the article from which the paint is to be removed is placed in the housing 10 between the side nozzles 26 and 27 and the end nozzles 29 and 30. These nozzles may be directed on different angles, as shown in Figure 2, so that substantially the entire surface of the article will be contacted by the spray. A cover 44 is mounted on the upper end of the housing 10, being formed with a flange 45 telescoping over the upper end of the housing 10.

Motor 33 is then operated to operate pump 32, and motor 42 is also operated. The fluid which flows from the article within the housing 10 will drain into the trough 19 and will flow into the sump 20. The fluid in the sump 20 will be drawn into the suction side of the pump 32

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by the pipe 38 and will then return to the housing 10 through the pipe 31. As the fluid passes through the sump 20 into the pipe 38, this fluid will pass through the rotary filter 39. The filter 39 being of cylindrical configuration will provide for centrifugally removing the solid particles from the screen so that this filter will not become clogged by such solid particles.

It will be understood that this device will operate for a sufficient length of time to dissolve the paint, varnish or other finish on the article and that the fluid used will be any suitable paint or varnishing removing fluid.

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 claim.

What I claim is:

Paint removing apparatus comprising a rectangular housing, an elongated longitudinally extending drainage trough carried by said housing, a sump at one end of said housing communicating with one end of said trough, a longitudinally extending manifold within said housing, pairs of opposed lateral spaced apart branches connected to said manifold and extending along a portion of the length thereof, upstanding nozzle pipes carried by each of said branches and the oppo-

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site ends of said manifold, vertically spaced apart nozzles carried by said nozzle pipes and directed inwardly for spraying liquid onto an article within said housing, a pressure pipe connected to one end of said manifold, a suction pipe connected to said sump, a circulating pump connected between said pressure and suction pipes and rotatable, a cylindrical filter screen in said sump and confronting the opening of said suction pipe into said sump for filtering the liquid entering said suction pipe.

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