July 8, 1958 T. H. HARRISON 2,842,465

METHOD FOR CLEANING TIRES

Filed Dec. 6, 1955

Fig. 1.

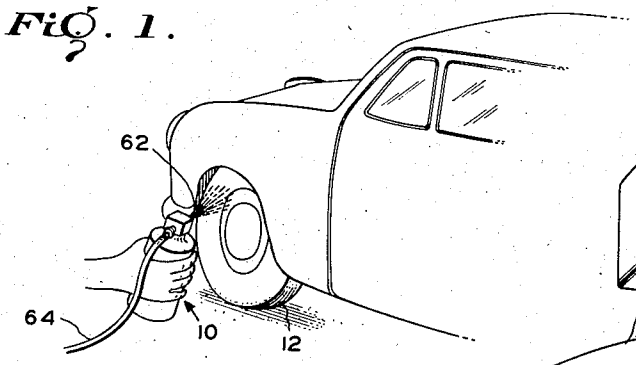



Fig. 2.

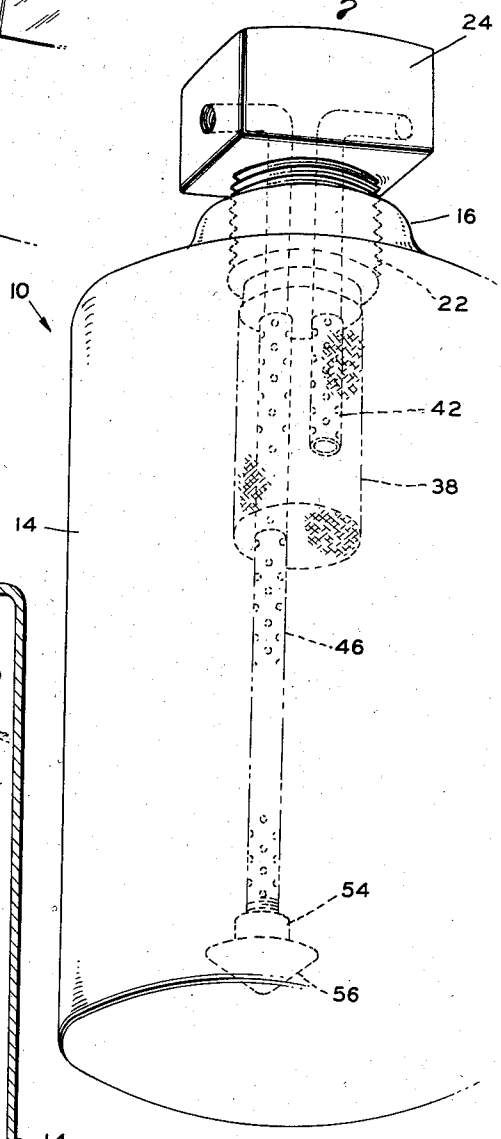
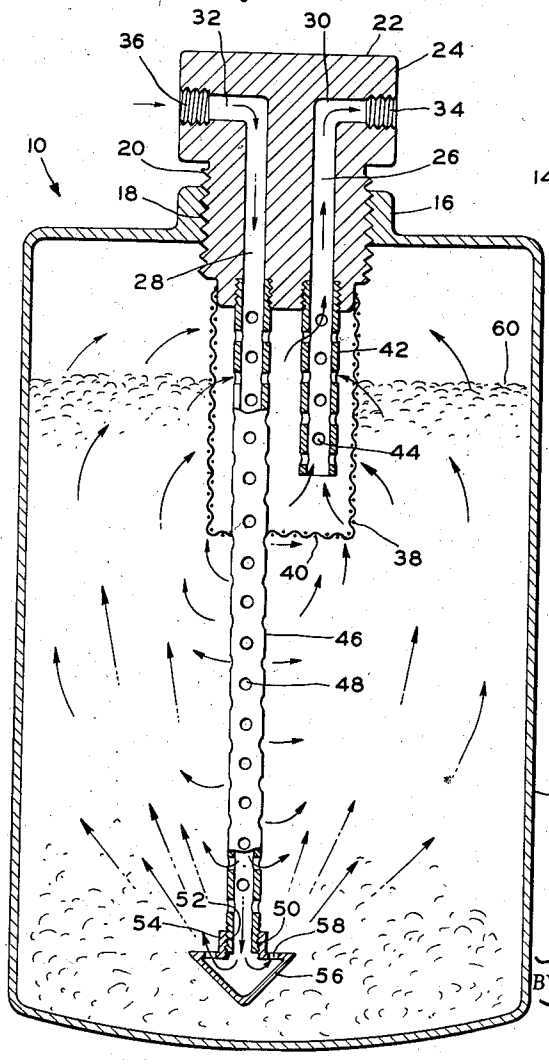



Fig. 3.




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# METHOD FOR CLEANING TIRES

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1 Claim. (Cl. 134—7)

This invention relates to a method for cleaning automobile tires and the like; and it particularly relates to the cleaning of tires having white side-walls, although it is also effective for black side-wall tires.

The cleaning of tires, and particularly white side-wall tires, is generally a tedious and difficult task because of the thick encrustations of road mud, dust, grit and grime, and because of the damages caused by curb scrapings and the like. Because of this, many persons prefer to have their cars washed professionally; but even then, the charges for washing cars having white side-wall tires is usually greater than otherwise because of the same difficulties.

It is one object of the present invention to provide a method for cleaning tires, and particularly, white side-wall tires, which is easy and inexpensive.

Another object of the present invention is to provide a method for cleaning tires which is highly effective in the results obtained.

Other objects of the present invention are to provide an improved method, of the character described, that are easily and economically practiced and which are highly efficient in operation.

With the above and related objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing in which:

Fig. 1 is a view of a device embodying the present invention, shown in operation.

Fig. 2 is a perspective view of the device.

Fig. 3 is a view, partly in section and partly in elevation, of the device.

Referring now in greater detail to the drawing, wherein similar reference characters refer to similar parts, there is shown a cleaning device, generally indicated at **10**; this device being manually held near the side-wall of a tire **12** and the spray applied therefrom onto the side-wall.

The device, itself, comprises a container **14** having a neck **16**. The neck **16** is internally threaded, as at **18**, and is adapted to threadedly engage with the external threads **20** on a plug **22**.

The plug **22** is provided with a rectangular, nut portion **24** which may be knurled as shown. It is also provided with a pair of longitudinal, laterally-spaced passages **26** and **28**. Each of these passages is provided with a lateral portion, as at **30** and **32**; these lateral passages extending, in opposite directions, to the outer periphery of the nut portion **24**. At their outer ends, these lateral passages are respectively provided with internally threaded outlet and inlet openings, as at **34** and **36**.

The plug **22** is insertable into the neck **16** by threading it in, and depending from the bottom end of the plug, within the container when the plug is in place, is a cylindrical screen housing **38** having a screened bottom closure **40**.

Also depending from the plug **22**, in line with passage



**26**, is a tube **42** having perforations **44** throughout its length. This tube **42** is entirely positioned within the screen housing **38** and terminates just short of the screen bottom **40**.

Another tube **46** depends from the plug **22**, and this tube is in line with passage **28**. The tube **46** is also perforated throughout its length, as at **48**, and extends through the bottom of the screen housing to a position just slightly spaced from the bottom of the container. At its lower end, this tube **46** is externally threaded at **50** and is engaged with the internal threads **52** of a sleeve **54**. The sleeve **54** is integral with the top wall of a generally V-shaped closure member **56**. Perforations **58** are provided in the top wall of this closure member.

In operation, the plug **22** and its depending parts are removed from the container and through the open neck is inserted a crystalline mass **60**. This crystalline mass consists of a mixture of bicarbonate of soda, potassium hydroxide and blueing.

The plug and its depending parts are then re-inserted in the container and a nozzle, shown at **62** in Fig. 1, is coupled to the outlet opening **34**. A hose **64**, leading from a source of compressed air, is then coupled into the threaded inlet opening **36**, at which point the device is ready for use.

In use, the nozzle **62** is applied adjacent the tire side-wall and the compressed air is permitted to flow into the device. Appropriate valve mechanism, not shown, is preferably used to control the supply of compressed air. It should here be noted that although compressed air is illustrated as being used, it is possible to merely use atmospheric air. The atmospheric air, when it flows into the container and through the crystalline mass, will vaporize some of the crystals, or at least partially vaporize some crystals, that is, break up some of the crystals into a mist or vapor, and this vapor will be entrained with the air. The vapor-air mixture provides an increased pressure within the container and this causes the mixture to be expelled through the nozzle. The compressed air is preferably used because it provides a greater degree of vaporization of the crystals and because it increases the pressure of the air-vapor mixture.

The actual flow of the air is as follows: As the air enters inlet **36**, it flows down through tube **46**. As it flows through the tube **46**, it passes through the perforations **48** as well as through the perforations **58** in member **56**. It then passes through the crystalline mass **60** where it acts to cause vaporization. The vapors or mists are entrained in the upflowing air stream and the mixture passes through the screen housing into the perforated tube **42**. Meanwhile, the housing **38** prevents the solid crystals themselves from passing into the tube.

The air-vapor mixture then passes through passage **26** and through the portion **30**, to the outlet **34**, from whence it is expelled in the form of a spray through the nozzle **62**. This spray has a very effective detergent effect. After being sprayed, the tires are washed down with water to complete the cleaning action.

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

A method of cleaning tire side-walls which comprises passing a stream of compressed air through a readily vaporizable crystalline detergent mass to vaporize at lease a portion thereof, the vapors being entrained in the air stream, and ejecting the compressed air stream and its entrained vapors against the tire, followed by

rinsing the treated tire, said detergent mass consisting of bicarbonate of soda, potassium hydroxide, and blueing.

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