

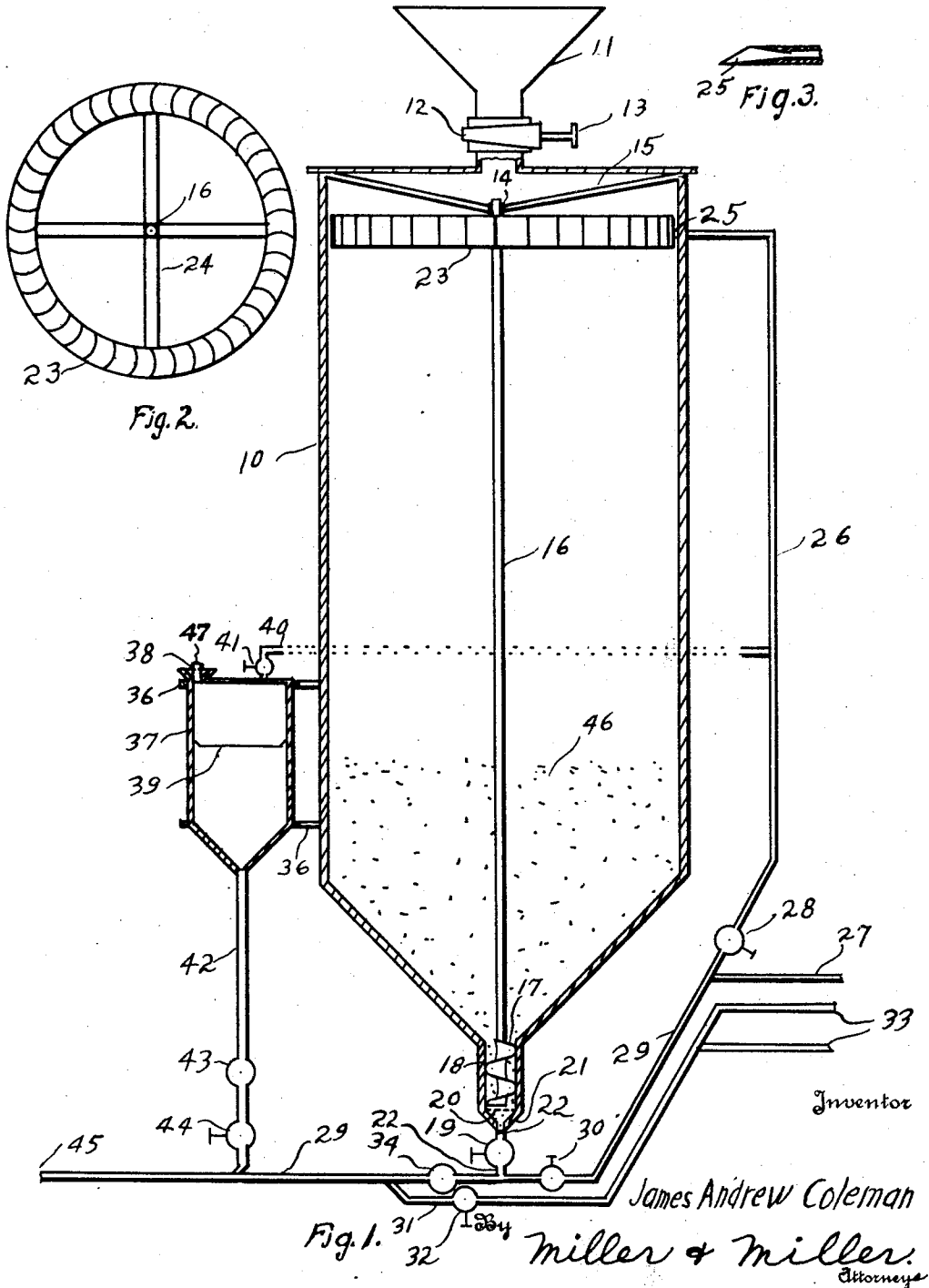
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VEHICLE WASHING APPARATUS

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VEHICLE WASHING APPARATUS

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This invention relates to improvements in washing apparatus and particularly washing apparatus used in cleaning vehicles, buildings, finely painted surfaces, and so forth, and has for an object to provide a means of injecting pulverized wood or sawdust into the spray of cleansing mixture used.

A further object of this invention is to provide an improved cleansing material for vehicles, buildings, and so forth which shall contain therein pulverized wood or sawdust so that the improved cleansing material will easily remove oil, grease and so forth without injury to the paint or finish of the object.

Still another object of this invention is to provide an apparatus for feeding the pulverized wood or sawdust into the high pressure stream of cleaning material and further to provide an apparatus capable of using the same pulverized wood or sawdust over and over again.

Yet another object of this invention is to provide an apparatus that will feed the pulverized wood or sawdust into the cleansing stream in finely comminuted particles so that there is no danger of clogging the hose line.

With the foregoing and other objects in view, as will hereinafter become apparent, this invention comprises the combinations, constructions and arrangements of parts hereinafter set forth and disclosed and illustrated on the accompanying drawing and within the scope of what is hereinafter claimed. In the drawing,

Figure 1 is a vertical view of this improved mixing apparatus, the mixing chamber being in section to disclose the working parts.

Figure 2 is a top plan view of the turbine or air operative wheel for operating the feeding spiral, and

Figure 3 is a cross section of the nozzle for directing an air stream against the air wheel of Figure 2.

There is shown at 10 a container for holding sawdust or pulverized wood. On the top of the container 10 there is a funnel 11 having a gate valve 12 operated by a handle 13 for feeding sawdust or pulverized wood into the container. Supported in a bearing 14 on a bracket 15 is a shaft 16 extending down-

wardly centrally of the container 10 and ending in or affixed to a spiral 17. This spiral 17 operates in a reduced neck 18 of container 10 wherein it fits snugly. When the shaft 16 is rotated, the spiral 17 will forcibly feed the pulverized wood or sawdust 46 contained in the container through a grinding disc 20 and thus through the outlet 21 of the pipe 22. To operate the shaft 16 and the spiral 17 a turbine or air wheel 23 is affixed thereto by means of spokes 24. A nozzle 25 serves to drive a stream of compressed air from the air pipe 26 which is connected to a pipe 27 leading from an air compressing tank. In order to shut off and control the air pressure through the nozzle 25 a manually operable globe or valve 28 is interposed in pipe 26. The pipe 29 also connected to pipe 27 has a globe or control valve 30 affixed therein and receives therein pipe 22 so that the pulverized wood or sawdust forced out of the container by spiral 17 is fed into the air stream coming through pipe 29. Leading to pipe 29 is a water pipe 31 having a control valve 32 therein and leading into the water pipe 31 are hot and cold water pipes 33. To prevent any possibility of the pressure in the water pipe being greater than that in the air pipe, and thus forcing the material in the wrong direction, a check valve of conventional construction may be provided at 34 in pipe 29.

Attached to the container 10 by means of brackets 36 is a liquid soap container 37 having a feeding funnel 38 whereby the liquid soap 39 may be poured therein, the funnel 38 being thereafter closed by an appropriate plug 47 or other suitable means. An air pipe 40 is tapped into air pipe 26 and leads into the container 37 through a control valve 41. Container 37 discharges through pipe 42 and through check valve 43 and control valve 44 into pipe 29, and pipe 29 leads at 45 to a washing nozzle (not shown) for washing vehicles, buildings and so forth.

In operation, the container 10 will receive a quantity of pulverized wood or sawdust through its funnel 11. If desired a supply of powdered soap may likewise be placed therein at the same time. When valve 28 is opened, air pressure through nozzle 25

will rotate turbine 23 and thus turn shaft 16 in its bearing 14. This will rotate spiral 17 thus forcibly feeding the pulverized wood or sawdust through outlet 18 against and
 5 through the grinding disc 20 thus guarantying that no large clogs or lumps will be fed into the air pipe 29, it being obvious that the control valve 19 will be appropriately opened to permit the sawdust to pass through at 21.
 10 As will be apparent, the feeding action of spiral 17 is very similar to that in a conventional meat chopper, that is, it will receive the sawdust falling therein from the container 10 and forcibly grind it between the
 15 insides of the neck 18 and against and through the grinding disc 20 and outlet 21 into pipe 22. Obviously, the air pressure built up inside the container 10 after the turbine wheels operate will also tend to force
 20 the wood therethrough and prevent air pressure from the pipe 29 operating reversely through pipe 22. In the same manner, air pressure through pipe 40 will force liquid soap 39, if such be used, in addition to or
 25 instead of powdered soap which may be mixed with sawdust 46 through pipe 42 and pass valves 33 and 34 into pipe 29. Thus, the cleansing material passing through the pipe at 45 will obviously comprise a mixture
 30 of finely divided sawdust or pulverized wood, air pressure from pipe 27, liquid soap from pipe 22, hot and cold water from water pipe 31. Due to the presence of the pulverized wood or sawdust this cleanser will readily remove dirt or grease without effecting the
 35 usual fine finish found on vehicles nowadays. As will be further apparent, the pulverized wood or sawdust may be collected and used over and over again, for the use of the
 40 spiral 17 and grinding disc 20 guarantees that the material will be again finely divided when fed into pipe 29.

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

- 45 1. In a vehicle washing apparatus, a chamber, means whereby pulverized wood, sawdust or the like may be fed into said chamber, the bottom of said chamber converging into an exit port within said chamber grinding
 50 means in said exit port of said chamber, an air pressure conduit, an air turbine within said chamber for operating said grinding means, a by-conduit leading air pressure from said air pressure conduit to operate said turbine, said grinding means serving to force
 55 said pulverized wood or sawdust out of said chamber into said air pressure conduit, the air pressure from said by-conduit also serving to assist in forcing said pulverized wood
 60 from said chamber into said conduit, and means leading water into said air pressure conduit. 125
2. In a vehicle washing apparatus, a chamber, means whereby pulverized wood, sawdust
 65 or the like may be fed into said chamber, 130

the bottom of said chamber converging into an exit port within said chamber grinding means in said exit port of said chamber, an air pressure conduit, an air turbine within said chamber for operating said grinding
 70 means, a by-conduit leading air pressure from said air pressure conduit to operate said turbine, said grinding means serving to force said pulverized wood or sawdust out of said chamber into said air pressure conduit, the
 75 air pressure from said by-conduit also serving to assist in forcing said pulverized wood from said chamber into said conduit, means leading water into said air pressure conduit, another chamber adapted to contain liquid
 80 soap or the like, another by-conduit from said air pressure line, and controllable means for leading liquid soap from said other chamber into said air pressure conduit.

3. In a vehicle washing apparatus, a chamber for pulverized wood or the like, another
 85 chamber for liquid soap or the like, an air pressure conduit, valve controlled by-conduits leading from said air conduit into each of said chambers, means for feeding pulverized wood or the like into said first mentioned
 90 chamber, said last mentioned means having means for preventing the escape of air pressure from said chamber, means in said first mentioned chamber for grinding said pulverized wood and forcing it into said air
 95 pressure conduit, said means being operated by air from the by-conduit leading to said first-mentioned chamber, means for leading water into said air pressure conduit, means
 100 for leading liquid soap from said other chamber into said air pressure conduit, said other by-conduit serving to supply air pressure to said liquid soap chamber to assist in forcing
 105 soap into the air pressure conduit.

In testimony whereof I affix my signature.
 JAMES ANDREW COLEMAN.