No. 741,862. PATENTED OCT. 20, 1903.

T. F. WHITE.

OIL DISTRIBUTING APPARATUS.

APPLICATION FILED MAY 10, 1902.

NO MODEL.

Fig. 2.

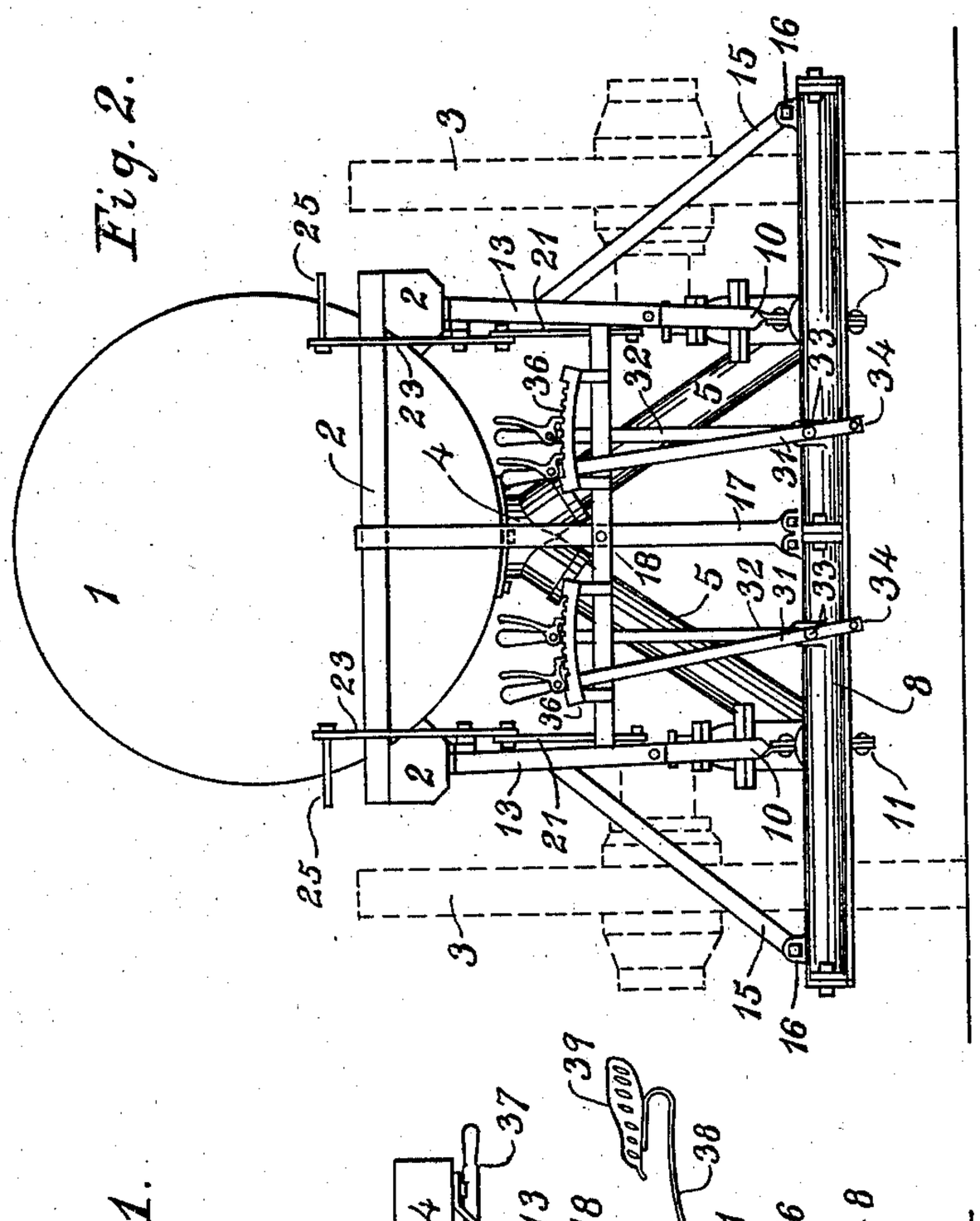


Fig. 1.

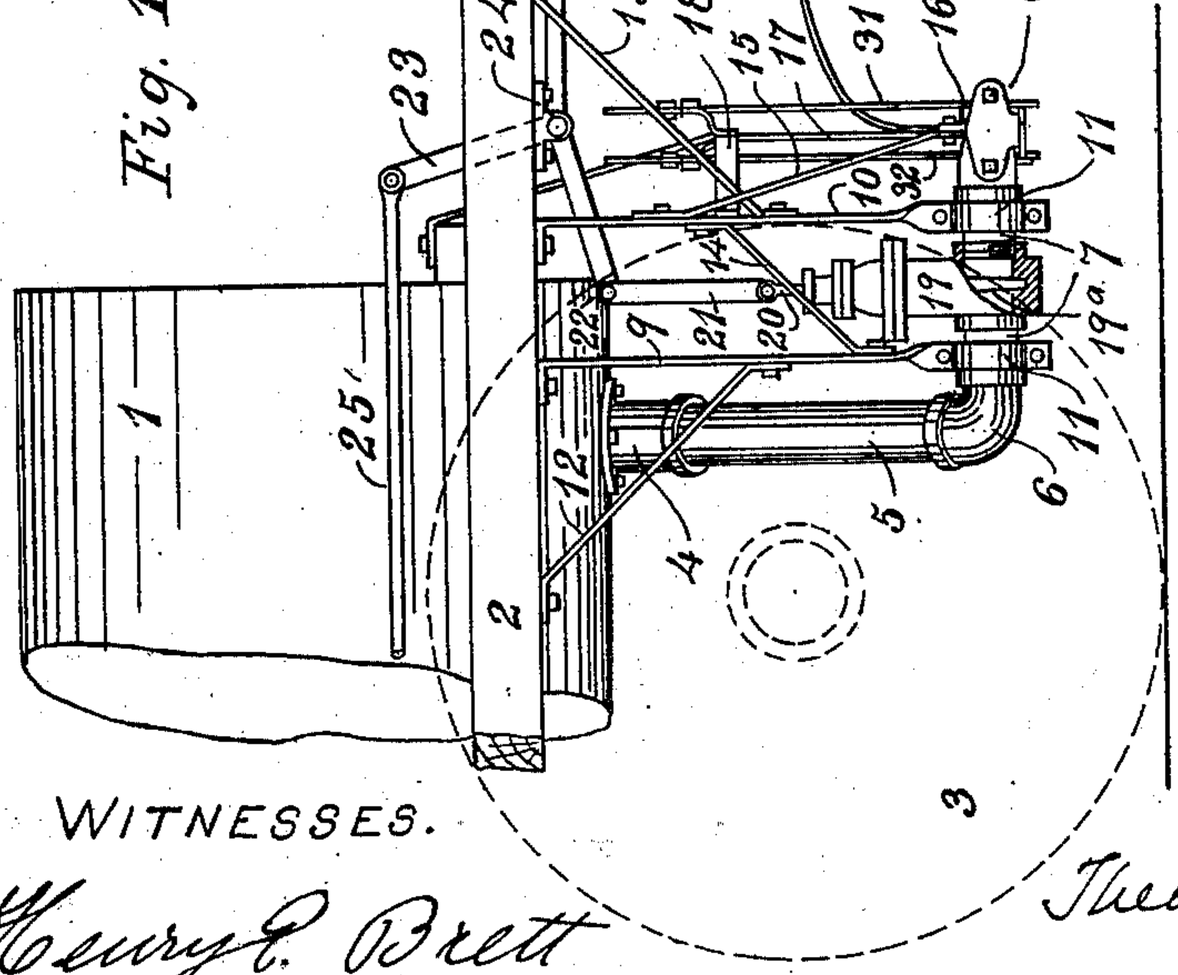


Fig. 4.

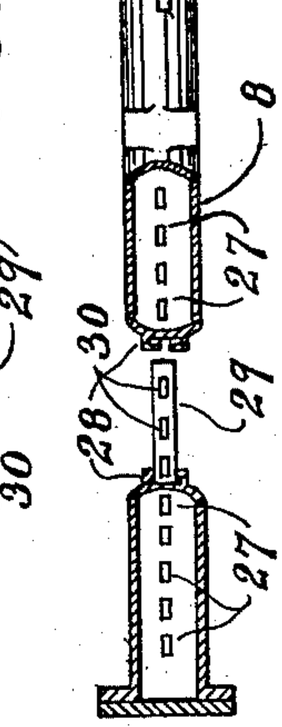
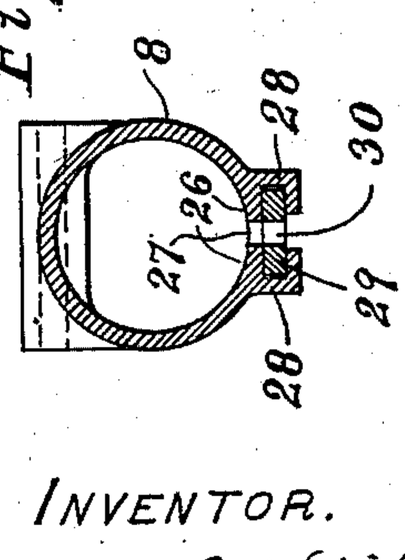


Fig. 5.

Fig. 3



WITNESSES.

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No. 741,862. Patented October 20, 1903.

UNITED STATES PATENT OFFICE.

THEODORE F. WHITE, OF CHINO, CALIFORNIA.

OIL-DISTRIBUTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 741,862, dated October 20, 1903.

Application filed May 10, 1902. Serial No. 106,834. (No model.)

To all whom it may concern:

Be it known that I, THEODORE F. WHITE, a citizen of the United States, residing at Chino, in the county of San Bernardino and State of California, have invented a new and useful Oil-Distributing Apparatus, of which the following is a specification.

This invention relates to apparatus for distributing liquid, and particularly to an apparatus for distributing oil upon roads and other places; and some of the objects of the invention are to provide an apparatus of this general character which will be simple and cheap in construction and at the same time efficient for the purpose intended.

Another object of this invention is to provide an apparatus particularly adapted for the use of cold and heavy oil and to employ an intermediate flexible section in the connecting-pipes to allow for the vibration occasioned in transporting the apparatus.

It is also an object of the invention to provide a distributing-pipe of one or more sections having spaced openings in the flattened wall thereof and a slide-valve operating on said flattened wall to control said openings and devices for operating and regulating the position of said valve.

With these and other objects in view the invention consists, essentially, in the construction, combination, and arrangement of parts, substantially as more fully described in the following specification, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevational view of a portion of a vehicle to which the invention is illustrated as applied. Fig. 2 is a rear elevational view of the same. Fig. 3 is a transverse sectional view, on an enlarged scale, of the distributing-pipe and valve. Fig. 4 is a detail view, partially broken away, of the distributing-pipe; and Fig. 5 is a detail view of the slide-valve.

Similar characters of reference designate corresponding parts throughout the several views.

Referring to the drawings, the reference character 1 designates any suitable tank or reservoir for the liquid employed, which is preferably oil, and the tank 1 may be mounted upon a suitable frame 2, carried by wheels 3 in the usual manner.

Formed on or connected with the bottom of the tank 1 is a coupling or connection 4, here shown as branched or Y-shaped and constructed to receive pipes or sections 5, which are preferably constructed of flexible material to allow for the vibration occasioned during the transportation of the apparatus, and upon the other end of the pipes 5 are secured elbows 6, having connected therewith pipes or connections 7, formed on or connected with the distributing-pipe 8, desirably intermediate of the length of the sections of said pipe, substantially as illustrated.

It will be understood that this invention is not limited to the employment of two or more pipes connecting the tank 1 and the distributing-pipe, as it will be understood that a single connecting-pipe may be employed in lieu of the two connecting-pipes 5 illustrated, and it will be understood that one continuous distributing-pipe may be employed instead of the sectional pipe shown in the drawings.

A hanger-frame may be employed to support the pipes 5, 6, 7, and 8 and the other parts of the apparatus, and this hanger-frame may embody depending members 9 and 10, suitably connected with the frame 2 and preferably constructed with clamps 11 to encircle the pipes 7, substantially as shown in Figs. 1 and 2 of the drawings, and diagonal braces 12 and 13 may be secured to the frame 2 and to the depending members 9 and 10 to afford additional support thereto, and an intermediate brace 14 may be provided between the depending members 9 and 10, if found desirable in practice. The distributing-pipe 8 is partly supported by end braces 15, secured to the depending members 9 and 10 and to lugs 16 upon the ends of the distributing-pipe, and the intermediate portion of the latter pipe may be provided with a support 17, attached to a horizontal brace 18, carried by the depending members 9 and 10, Fig. 2 of the drawings.

By means of the construction just described a simple, cheap, and efficient support is provided for the pipes employed in the apparatus and one which does not interfere with or obstruct the operative parts of the apparatus.

The pipes or connections 7 are preferably provided with valve-casings 19, wherein are mounted suitable valves 19ª, having stems

20, pivotally connected with links 21, attached at 22 to elbow-levers 23, movably mounted in bearings 24 upon the frame 2 and connected with a pull-rod 25, preferably extending adjacent to the seat of the driver or operator and being there provided with a lever or handle in the usual manner, and it will be understood that there are two valve-casings and valves, one in each pipe or connection 7, and that there is preferably a pull-rod 25, elbow-lever 23, and link 21 at each side of the apparatus, as shown in Fig. 2 of the drawings, in order that one or both of the pipes 7 may be opened or closed, as desired, without the necessity of the driver or operator leaving his seat.

A distributing-pipe 8 is preferably constructed with a flattened wall or portion 26, wherein are formed openings 27, (see Figs. 3 and 4 of the drawings,) and there is preferably formed on or connected with the flattened wall or portion 26 a guideway or set of parallel flanged cleats 28, constructed to receive a slide-valve 29, provided with openings 30, constructed to register with the openings 27 in the distributing-pipe 8 when the slide-valve is in one position and to partially or entirely close the openings 27 when the slide-valve is in different positions. By means of this construction the discharge of liquid can be regulated with great accuracy or shut off entirely, and as the slide-valve is preferably constructed in a plurality of sections all or any part of the distributing-pipe may be used to distribute the liquid upon any part of the surface to be treated.

In order to provide for the movement and retention of the separate sections of the slide-valve, ratchet-levers 31 and 32 are preferably pivotally mounted upon opposite sides of the distributing-pipe, as at 33, Fig. 2, and the ratchet-levers 31 are desirably directly connected with wrist-pins 34 upon two sections of the slide-valve, while the ratchet-levers 32 are desirably connected by a link 35 with similar pins upon the end section of the slide-valve, and rack-bars 36 are preferably secured to the brace 18 to retain the ratchet-lever of the different sections of the slide-valve in a predetermined position, as will be readily understood.

Although the construction of the distributing-pipe and slide-valve therefor as hereinbefore described is considered a preferable construction, yet a cylindrical distributing-pipe may be employed provided with circumferential guides or ways constructed to receive semicylindrical valves or closures for the openings in the distributing-pipe, which closures may be provided with a handle or lever for the purpose of operating the same.

The operation of this invention will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following explanation thereof: The liquid to be used, preferably oil, is introduced into the tank 1 in any suitable manner and passes therefrom into the pipes 5 and into the connections 7 and distributing-pipe 8 when both or one of the valves in the valve-casing 19 are open through the action of the pull-rods 25, elbow-levers 23, links 21, and valve-stems 20. Then one or more of the sections of the slide-valve are opened by means of the ratchet-levers 31 and 32, and the oil is discharged through the openings 27 in the distributing-pipe 8 and the openings 30 in said slide-valve upon the surface to be treated with the oil. As before stated, all or any number of the sections of the slide-valve may be brought more or less into registering position with the openings 27 in the distributing-pipe, so that the openings 27 and 30 register completely or partially, according to the amount of oil to be discharged, or one section may be thrown completely out of registering position and that part of the distributing-pipe may be closed while the other parts thereof are in use for the purpose of distributing the oil.

It is not desired to confine this invention to the specific construction, combination, and arrangement of parts herein shown and described, and the right is reserved to make all such changes in and modifications of the same as come within the spirit and scope of the invention.

If preferred, a hand-lever 37 may be formed on or connected with each of the elbow-levers 23 to provide for the operation thereof and of said valves 19^a from the rear when two operators are employed, in which case a seat 39 may be mounted upon a support 38, connected with the brace or support 17, substantially as illustrated in Fig. 1 of the drawings, and in this case the pull-rods 25 may be dispensed with either permanently or temporarily.

I claim—

1. A distributing apparatus provided with a reservoir having supporting means, hanger members secured thereto and provided with clamps, a distributing-pipe connected with said hanger members, connections between said pipe and reservoir and supported in said clamps, braces between said means and hanger members and between each of said hanger members, an end brace between each of said hanger members and a support connected therewith and with the middle of the distributing-pipe.

2. A distributing apparatus provided with a reservoir, a sectional distributing-pipe having a longitudinal external guideway, connection between said pipe and reservoir, sectional valves slidably mounted in said guideway and means for operating said valves singly or collectively.

3. A distributing apparatus provided with a reservoir, a distributing-pipe having a longitudinal flattened portion extending the entire length thereof and constructed with a guideway on each side of said portion and flat valves mounted in said guideways over said portion and means for actuating the valves.

4. A distributing apparatus provided with a reservoir, a distributing-pipe having a perforated flattened exterior portion extending the entire length thereof, and constructed with a longitudinal guideway on each side of said portion and valves having openings to register with the perforations in said portion and being slidably mounted in said guideway to close said perforations when not in registering position therewith.

5. A distributing apparatus provided with a reservoir, a distributing-pipe having a longitudinal flattened discharging portion and constructed with a guideway on each side of said portion, valves slidably mounted in said guideways over said portion and levers pivoted to said pipe and connected with said valves.

6. A distributing apparatus provided with a reservoir, a distributing-pipe having a longitudinal flattened discharging portion and constructed with a guideway on each side of said portion, valves slidably mounted in said guideways over said portion, levers pivoted to said pipe and connected with said valves and means for retaining said levers in a predetermined position.

7. A distributing apparatus provided with a reservoir, a distributing-pipe having a longitudinal exterior flattened portion and constructed with parallel guideways on each side of said portion, connections between said pipe and reservoir, straight valves mounted in said guideways, levers mounted upon said pipes and connected with said valves and rack-bars engaged by ratchets on said levers to retain the latter in position.

8. A distributing apparatus provided with a reservoir having a branched coupling, a hanger-frame, a distributing-pipe having an exterior flattened portion bordered by guideways, rigid valved pipes connected with said distributing-pipe and mounted in said frame, flexible connections between said rigid pipes and coupling, a straight flat valve mounted in said ways and means for operating said valves singly or collectively.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THEODORE F. WHITE.

Witnesses:
ALBERT M. NORTON,
L. B. ALDERETE.