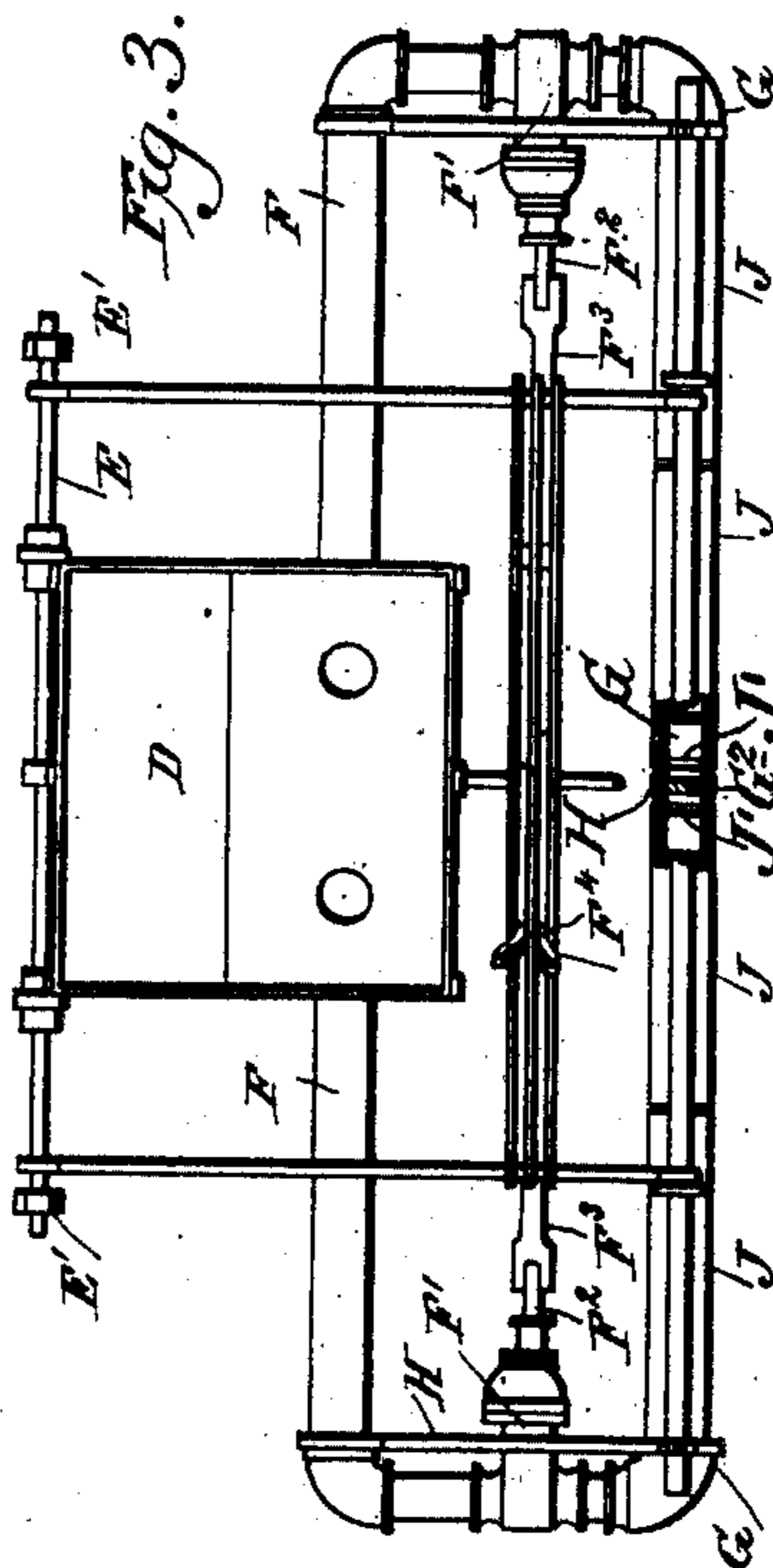
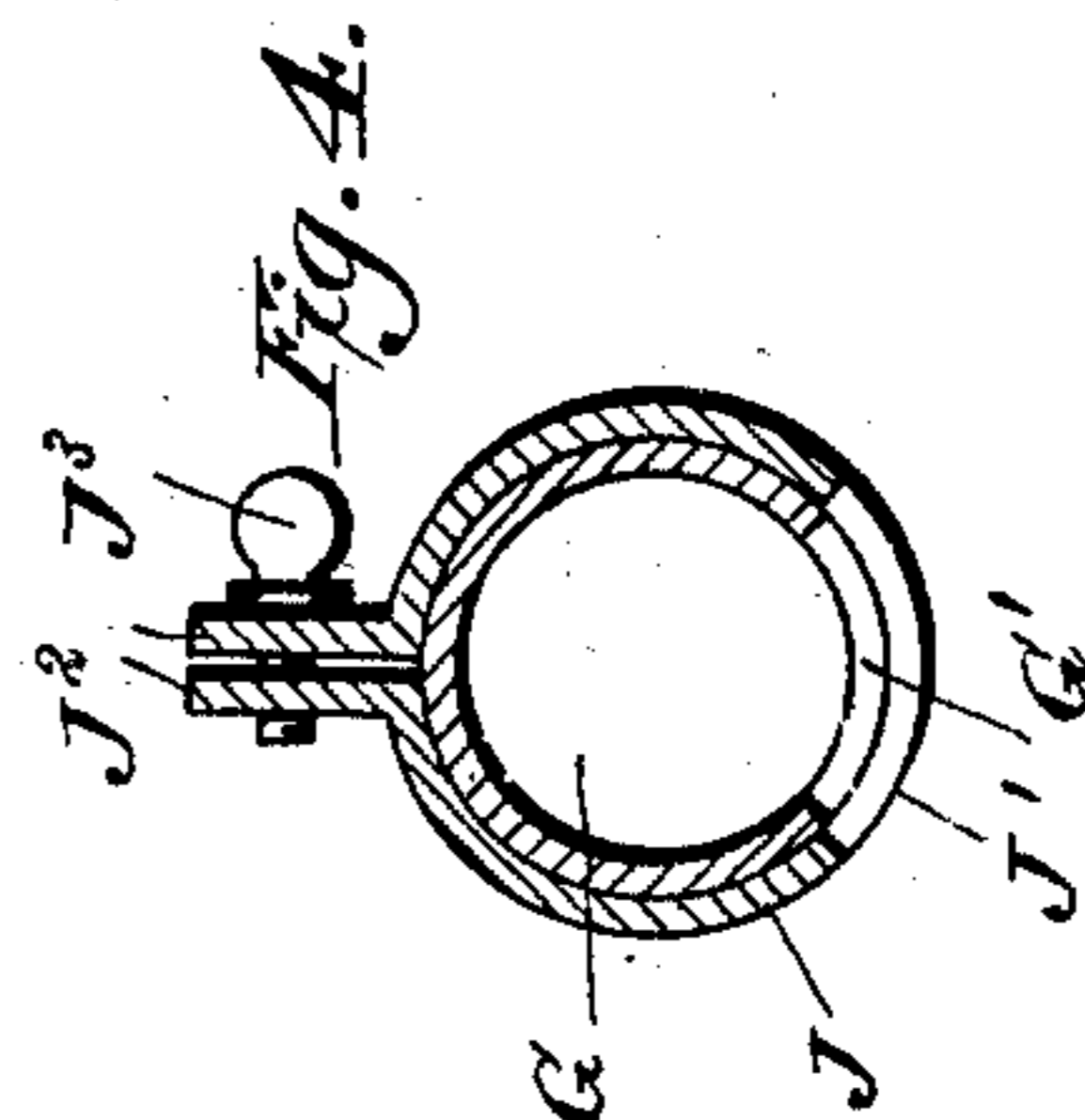
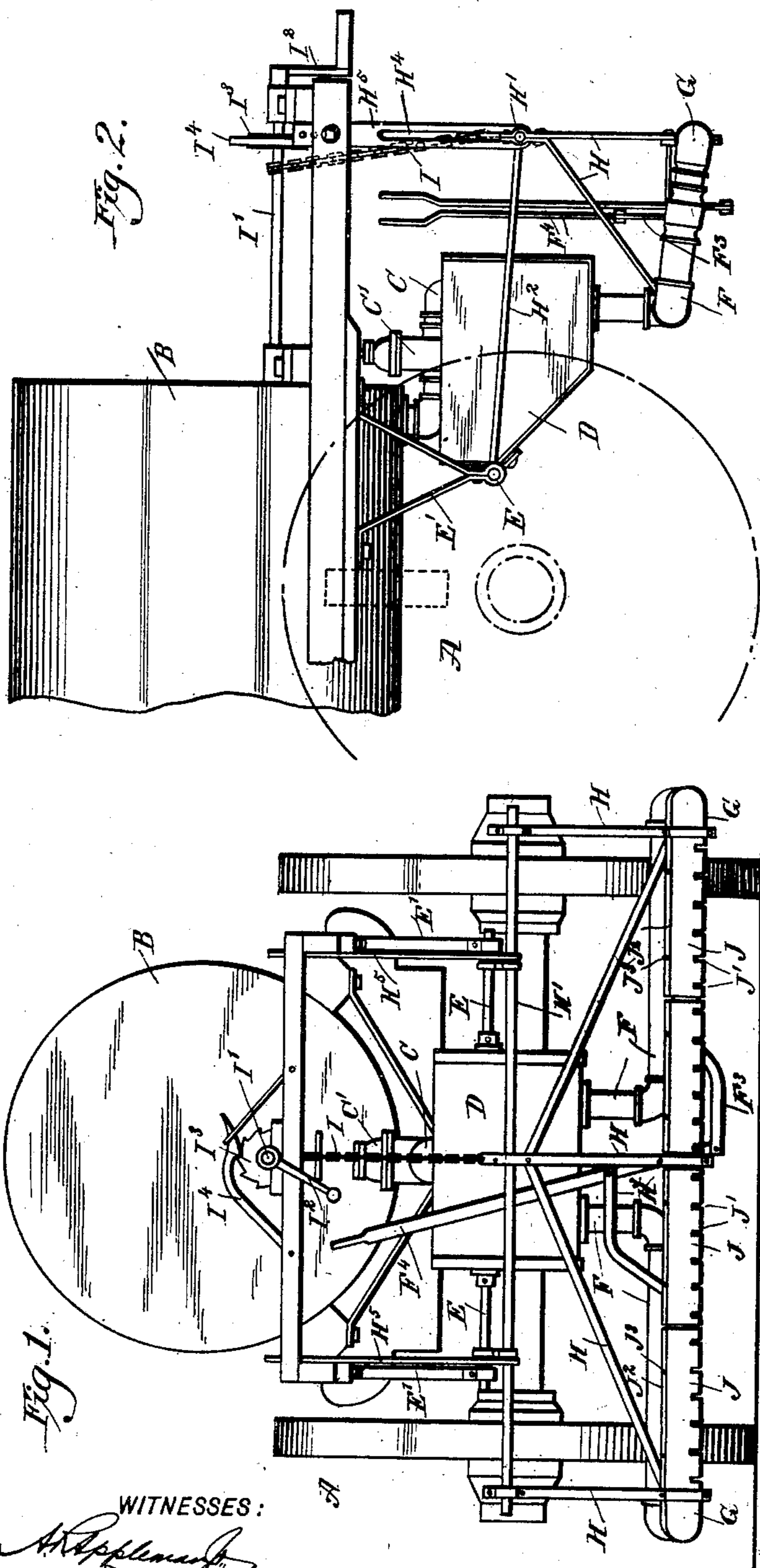


No. 703,327.

Patented June 24, 1902.

T. F. WHITE.
ROAD OILING MACHINE.
 (Application filed Sept. 12, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

THEODORE F. WHITE, OF CHINO, CALIFORNIA.

ROAD-OILING MACHINE.

SPECIFICATION forming part of Letters Patent No. 703,327, dated June 24, 1902.

Application filed September 12, 1901. Serial No. 75,187. (No model.)

To all whom it may concern:

Be it known that I, THEODORE F. WHITE, a citizen of the United States, and a resident of Chino, in the county of San Bernardino and State of California, have invented a new and Improved Road-Oiling Machine, of which the following is a full, clear, and exact description.

The invention relates to machines used in making and preserving roads, paths, &c.

The object of the invention is to provide a new and improved road-oiling machine which is simple and durable in construction and arranged to conveniently and regularly distribute the petroleum over the whole surface to be oiled, to gage the amount distributed, and to allow of discharging different quantities of petroleum on different portions of the width of the road, according to the condition and requirements of the road-surface.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a rear end elevation of the improvement. Fig. 2 is a side elevation of the same. Fig. 3 is a plan view of the improvement with parts broken out and the vehicle omitted, and Fig. 4 is an enlarged transverse section of the distributing-pipe and its gage.

The road-oiling machine preferably forms part of an oil-tank wagon or other vehicle A, supporting a storage tank or reservoir B for containing a large quantity of crude petroleum or similar liquid. This tank B is provided with an outlet-pipe C, having a valve C' under the control of the operator, the pipe opening into a distributing box or tank D, secured to a pivot E, mounted to turn in suitable brackets E', attached to the frame of the vehicle A. From the bottom of the distributing box or tank D lead the connecting-pipes F, opening into the ends of a distributing-pipe G, extending transversely and having openings G' at or near the bottom thereof and spaced suitable distances apart to distribute the petroleum over the road-surface.

The pipes G and F are hung on a suitable framework H, secured to the pivot E and supporting a transverse rod H', connected with one end of a chain I, extending upwardly and winding on a shaft I', journaled in suitable bearings carried by the vehicle-frame. On the shaft I' is held a crank-arm I² under the control of the operator for turning the shaft I' to wind up or unwind the chain I to swing the frame H, and with it the pipes F G and the distributing-box D, upward or downward into an active or inactive position. A ratchet-wheel I³ is secured on the shaft I' and is engaged by a pawl I⁴ to lock the said ratchet-wheel and the shaft I' in either of their two positions—that is, when the pipes F G and the box D are in a raised or a lowermost position. The pipes F are provided with gate-valves F', having their stems F² connected by links F³ with levers F⁴, fulcrumed on the frame H and independently under the control of the operator, so that either or both valves F' can be opened or closed, as desired. The distributing-pipe G is preferably plugged at or near the middle thereof, as indicated in Fig. 3, so that either or both sides of the said distributing-pipe G can be filled with petroleum by opening the valves F'. One of the levers F⁴ is connected with its link F³ above the lever's fulcrum, and the other is connected with its link below the fulcrum, so that the operator grasping both levers and moving the same to the right or left simultaneously opens or closes both valves F'. The distributing-pipe G is provided on opposite sides of its middle or plugged portion with gages J, each having a plurality of openings J', somewhat larger than the openings G' and in register therewith, the said gages J being adapted to be turned independently of each other on the distributing-pipe G, so as to bring the openings J' in more or less register with the openings G'. Each of the gages J is preferably made in the form of a sleeve divided longitudinally into sections which are of segmental form in cross-section and are fitted snugly around the distributing-pipe. The sections of each gage are provided with clamping-arms J², engaged by clamping-screws J³ to securely hold or clamp each gage J on the distributing-pipe G after the gage shall have

been adjusted axially on the distributing-pipe and set to allow a desired amount of petroleum to flow through the registering openings G' J'. The rod H', previously mentioned, 5 is pivotally connected by braces H² with the pivot E, and the said rod H' is adapted to rest on the bottoms of slots H⁴, formed in depending arms H⁵, secured to the frame of the wagon or vehicle A, so that when the frame 10 H and parts carried thereby are in lowermost position it is securely held against further downward movement by the arms H⁵.

The operation is as follows: When the device is in use, the several parts are in a lowermost position, as illustrated in the drawings, and the distributing box or tank D is filled with petroleum from the storage-tank B by the operator opening the valve C'. As the vehicle is drawn over the road the operator opens either or both valves F', so as to allow the petroleum to flow from the distributing-box D, by way of the pipes F, into the distributing-pipe G, from which passes the petroleum in thin streams through the registering openings G' J' onto the road-bed. It is understood that while the vehicle is in motion the operator watches the filling of the box D with oil from the storage-tank B, so that the said box D does not overflow. In case there is a tendency to overflowing the operator shuts down on the valve C' to regulate the amount flowing from the tank B into the box D. When the end of the road or the end of the section to be oiled is reached, the 35 valves F' on the connecting-pipes F are closed by the operator manipulating both levers F⁴ at the same time, and then the valve C' is closed.

Should it be desired to put on a strip of oil one-half the width of the machine, as often happens in going over a road the second time to retouch the loose places, then one of the levers F⁴ only is used for opening the valve F' on the corresponding side. Should it be 45 desired to put on a strip of oil less than half the width of the machine, then all the gages J, with the exception of one, are closed. Should it be desired to put on a strip of oil more than half the width of the machine, then one gage J only is closed and the remaining ones left open. In case it is desired to put on different quantities of oil on different sections of the width of the machine, as is sometimes required on a road which is looser in 55 some parts of its width than in other parts, then the gages J are set differently one from the other, so as to allow more oil to pass out of one portion of the distributing-pipe G than of another. In case the machine is moved about from place to place then the operator turns the crank-arm I², so as to wind up the chain on the shaft I', and thereby raise the working parts to clear obstacles which may be in the road.

65 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a road-oiling machine, the combination with a storage-tank, of suitable hangers, a frame suspended by said hangers, a distributing-tank carried by the frame and in communication with the storage-tank, a distributing-pipe connected with the distributing-tank and supported on the frame, and means for vertically adjusting the frame and the devices thereon. 70 75

2. In a road-oiling machine, the combination with a tank, of front hangers, rear hangers having suitable guideways, a frame pivoted to the front hangers and confined in the guideways of the rear hangers, a distributing-pipe carried by the frame and having communication with the tank, and means for adjusting said frame and the devices supported thereon. 80 85

3. In a road-oiling machine, the combination with a suspended frame, and an elevated tank, of a perforated distributing-pipe carried by the frame and having a plug, connecting-pipes leading from the tank and communicating with the ends of the distributing-pipe, controlling-valves fitted in the connecting-pipes, levers independently mounted on the frame at points between the valves and disposed in close relation for simultaneous operation, and individual connections between the levers and the valves. 90 95

4. In a road-oiling machine, the combination with a perforated distributing-pipe, of a gage clamped circumferentially to said pipe and adjustable axially thereon, said gage being provided on its under side with a series of transverse slots, and the upper side of said gage being divided longitudinally and flanged to receive suitable transverse fasteners. 100 105

5. A road-oiling machine, having a distributing-pipe provided with discharge-openings and slotted gages arranged longitudinally on said distributing-pipe and adjustable axially thereon to change the relation of the slots in the gages to the openings in the distributing-pipe, and gages being adjustable independently one of the other. 110

6. A road-oiling machine, having a distributing-pipe provided with discharge-openings, slotted gages arranged longitudinally on said distributing-pipe and adjustable axially thereon, the gages being adjustable independent one of the other, and means for clamping the gages circumferentially around the distributing-pipe. 115 120

7. In a road-oiling machine, the combination of a perforated distributing-pipe, means dividing said pipe into sections, valved feed-pipes arranged to control a liquid-supply to independent sections of said pipe, and a series of gages having openings and arranged lengthwise of the perforated distributing-pipe, each gage being adjustable axially on said distributing-pipe to vary the relation of its openings to the openings in the distributing-pipe. 125 130

8. In a road-oiling machine, the combination with a suitable vehicle, and a tank, of

the front and rear hangers, a frame pivoted to the front hangers and suspended in its operative position by the rear hangers, an adjusting-shaft having operative connection
5 with the frame to adjust the latter vertically, and distributing devices carried by said frame.

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

THEODORE F. WHITE.

Witnesses:

G. W. SMITH,
HUGH PERCY.