(No Model.)

V. H. TOMLINSON.

APPARATUS FOR DISTRIBUTING MOTIVE AGENTS.

No. 423,192. Patented Mar. 11, 1890.

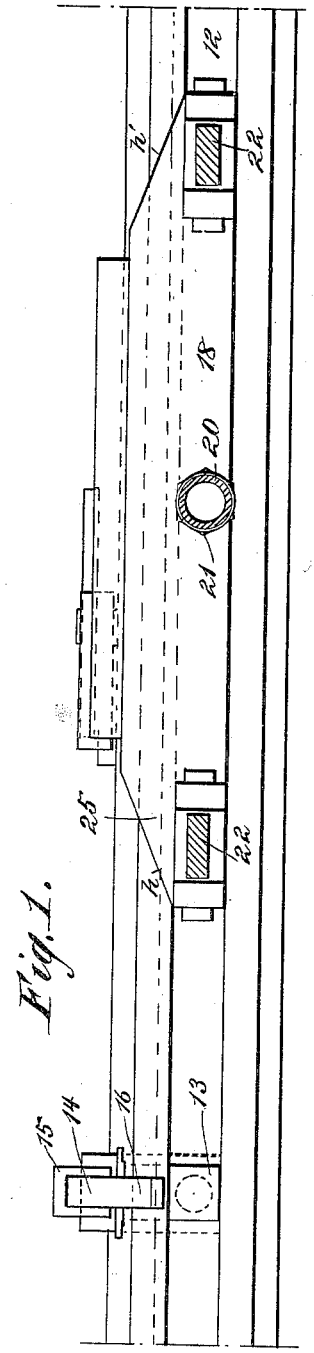

Fig. 1.

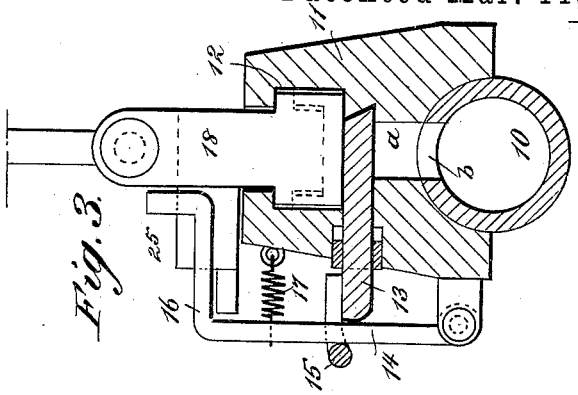

Fig. 3.

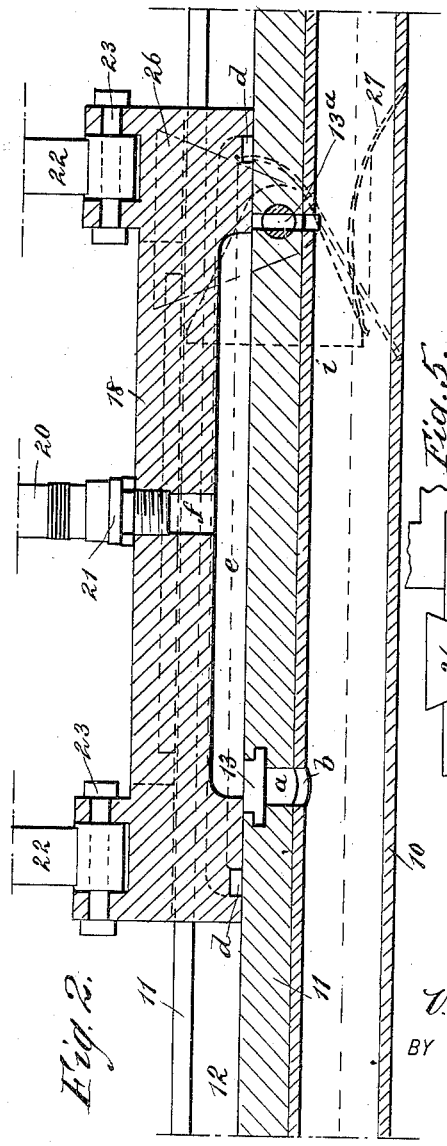

Fig. 2.

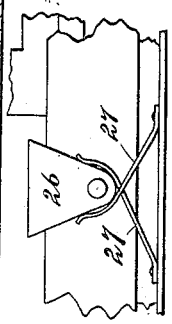

Fig. 5.

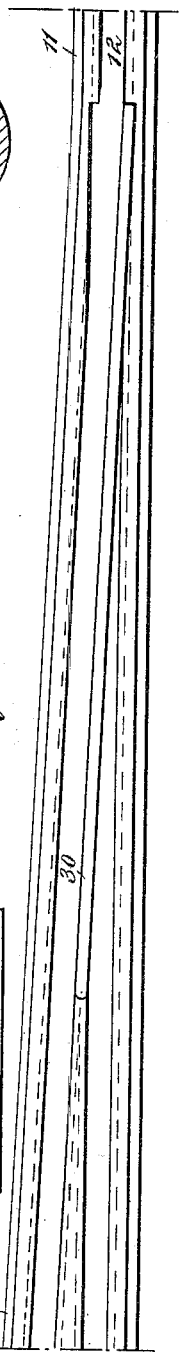

Fig. 4.

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APPARATUS FOR DISTRIBUTING MOTIVE AGENTS.

SPECIFICATION forming part of Letters Patent No. 423,192, dated March 11, 1890.

Application filed August 20, 1889. Serial No. 321,342. (No model.)

To all whom it may concern:

Be it known that I, VICTOR H. TOMLINSON, of Hudson, in the county of Weld and State of Colorado, have invented a new and Improved Apparatus for Distributing Motive Agents, of which the following is a full, clear, and exact description.

This invention relates to an apparatus by means of which motive agents—such as steam or compressed air—may be conveyed along a line of road and delivered to a motor as such motor is driven forward over the road.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of a section of my improved apparatus for delivering motive agents, parts being shown in section. Fig. 2 is a central longitudinal sectional view of a section of the apparatus. Fig. 3 is a cross-sectional view. Fig. 4 is a plan view of a switchway, and Fig. 5 is a view of a modified form of valve.

In the drawings, 10 represents a pipe or tube to which the motive agent is delivered from a central station. Upon the upper face of this pipe or tube I secure castings 11, in the upper faces of which there are formed undercut grooves 12, the lower faces of the castings being arranged to fit closely against the tube 10. These castings are arranged end to end throughout the length of the tube, and at stated intervals the castings are provided with ports *a*, which register with ports *b*, that are formed in the tube 10.

The ports *a* are controlled by valves 13, and said valves are in turn engaged by levers 14, any proper connection between the valves and levers being employed—as, for instance, such a connection as that shown in the drawings, wherein the valve 13 is represented as being provided with a staple 15, through which the lever 14 passes. The lever 14 is provided with an inwardly-extending arm 16, which projects over the upper face of the casting 11, the parts being normally held in the position in which they are shown in the drawings by a spring 17.

Within the undercut groove of the casting 11, I mount a receiver 18, said receiver being formed with recesses or grooves *d*, adapted to receive any proper packing material, such recesses or grooves being carried across the under face of the ends of the receiver and along the side faces of such receiver. The receiver is also formed with a central recess *e* and with a port *f*, a flexible pipe 20 being placed in communication with the port *f* through the medium of a coupling 21. The pipe 20 leads to the steam-chest of the motor or to a reservoir carried by the motor, and the receiver is held to the motor by upwardly-extending standards 22, that are connected to the receiver by bolts 23. At one side of the receiver there is a laterally-extending projection 25, formed with inclined ends *h h'*.

In building the apparatus above set forth the only requirement as to the distance between the ports *a* is that such distance should be about equal to the length of the receiver-recess *e*. Then as the receiver is forced forward by the onward movement of the motor one of its inclined faces *h* or *h'* will bear against the inwardly-extending projection 16 of the lever 14, and the lever will be forced outward, and in moving outward will draw one of the valves 13 so as to open the way to the recess *e* from the tube or pipe 10, and just as one of the valves is opened another valve at the rear is closed, as will be readily understood.

Instead of using a slide-valve, as is illustrated in Fig. 3 and upon the left in Figs. 1 and 2, I might employ a rotary valve 13ª, such as is shown upon the right in Fig. 2, and to the stem of the valve 13ª, I would connect an inclined-faced block 26, which is normally held in the position in which it is shown in Fig. 5 by springs 27; but as the motor moves forward, and the inclined faces *h* or *h'* of the projection 25 are borne against the block 26, said block would be forced to the position indicated by dotted lines at *i* in Fig. 2, thus opening the valve, the compressing-springs 27 acting to return the valve to its normal position.

In Fig. 4 I illustrate a switch such as would be employed in case it was desired to run upon a side track, the switch consisting of a pivotally-mounted tongue 30, arranged to be thrown to the position shown in full lines in Fig. 4, or to the position indicated by dotted

lines therein, thus guiding the motor from the undercut groove 12 of the casting 11 to the casting 11^a, leading to a siding, or permitting the motor to move straight onward, as will be readily understood.

It will of course be understood that instead of having a continuous casting 11, the casting might be arranged at intervals and the motive agent transferred to storage-tanks carried by the motor. In this case the casting would be formed with flaring mouths adapted to guide the receiver to the undercut groove.

The economy of such a system of distribution as the one above set forth will be readily appreciated when it is considered that the cost of generating the motive agent from a central station is less than forty per cent. of the cost required to generate it independently for each motor.

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

1. In an apparatus, substantially as described, the combination of the distributing-tube having at intervals outlet-ports, a receiver adapted for connection with a motor and having a recess formed to extend between two adjacent outlet-ports of the distributing-tube, whereby the said recess is constantly in communication with one of such ports, valves for such ports, and means for operating such valves, substantially as set forth.

2. In an apparatus, substantially as described, the combination of the distributing-tube having at intervals outlet-ports and provided with independent valves for such ports, and the receiver adapted for connection with a motor arranged to open the valves of the distributing-tube and constructed to extend between two of said valves, whereby one will be opened before the other is closed, substantially as set forth.

3. The combination, with a receiver arranged for connection with a motor formed with a laterally-extending inclined-faced projection and provided with a tube which leads from the receiver-chamber to a receiving-chamber upon the motor, of a casting formed with a groove in which the receiver fits, a distributing-tube aranged to convey the motive agent, valves which control ports in the casting and tube, levers connected to the valves, and springs arranged in connection with the levers, the levers extending within the line of travel of the receiver projection, substantially as described.

4. In an apparatus, substantially as described, the combination of the distributing-tube having an outlet-port, a valve controlling such port, a lever connected with and arranged to operate such valve, and the receiver arranged to operate said lever and valve and adapted to convey the motive agent from the distributing-tube to the motor, substantially as set forth.

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