J. C. HILL.

SIGHT FEED.

APPLICATION FILED APR. 17, 1908.

945,844. Patented Jan. 11, 1910.

Fig. 1.

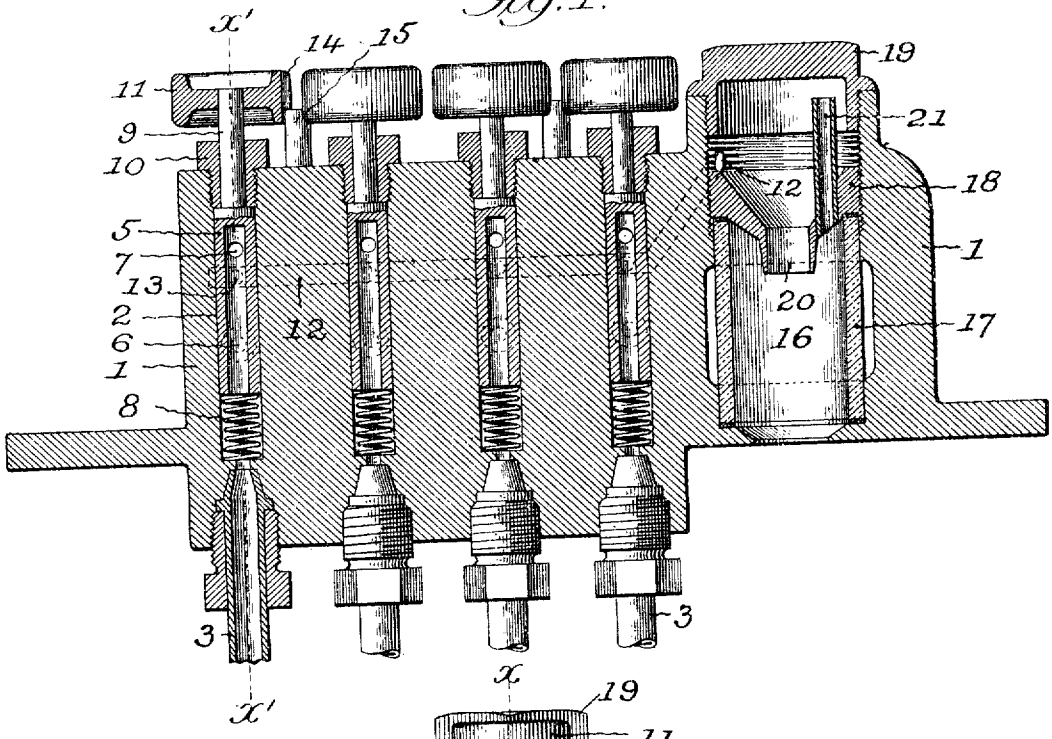


Fig. 2.

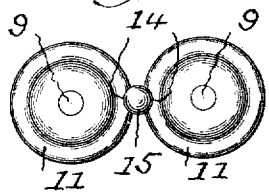
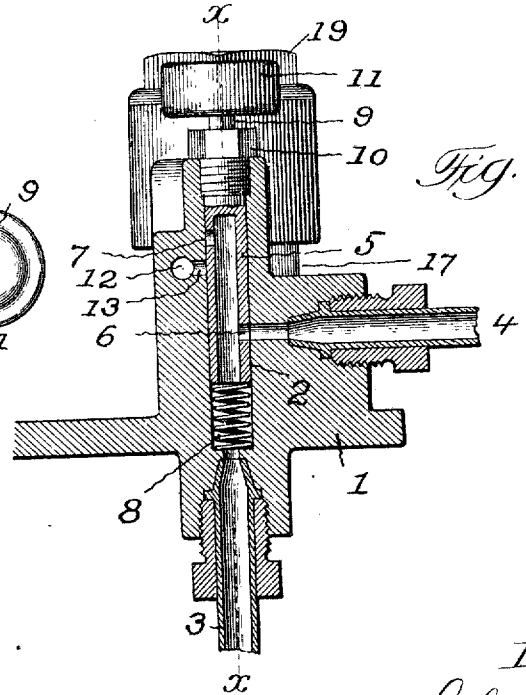


Fig. 3.



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SIGHT-FEED.

945,844. Specification of Letters Patent. Patented Jan. 11, 1910.

Application filed April 17, 1908. Serial No. 427,619.

To all whom it may concern:

Be it known that I, JOHN C. HILL, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Sight-Feeds, of which the following is a specification.

This invention relates to that type of feed indicators for multiple discharge lubricators, in which means under the control of the operator can be brought into action to visibly indicate the flow of the lubricant through any particular discharge; and the present improvement has for its object to provide a simple and efficient structural arrangement and combination of parts whereby the discharge from any one of the series of discharges can be brought to a general sight feed tube or view passage to give an indication of its flow, when required by the operator, all as will hereinafter more fully appear.

In the accompanying drawings:—Figure 1, is a longitudinal section on line *x*—*x* Fig. 3, the series of outlet passages in front of the plane on which the section is taken being shown in dotted lines. Fig. 2, is a detail plan view. Fig. 3, is a transverse section on line *x'*—*x'* Fig. 1.

Similar numerals of reference indicate like parts in the different views.

Referring to the drawings, 1 represents the main trunk or housing, which may be the cover portion of a lubricator casing as shown. As in my former patented construction No. 853,695 of May 14, 1907, such housing is formed with a series of vertical passages 2, the upper portions of which form the seats for the series of controlling piston valves, hereinafter described.

3, are a series of inlet tubes or passages, connecting the multiple discharges of the pumping mechanism with the lower end of the passages 2 aforesaid.

4, are a series of outlet tubes or passages connecting with the aforesaid passages 2, midway the height of the same, and adapted to conduct the lubricant to the different points of use.

5, are a series of tubular piston valves sliding in the upper portions of the vertical passages 2, and each formed with a pair of ports 6 and 7 in vertical separated relation. Each of said valves in its upper and normal position as shown in Fig. 3, is adapted to register a passage 2, through a lower port 6, with an outlet passage 4, to cause a direct flow of lubricant to the point of use. In its other and down position such valve is adapted to register a passage 2, through an upper port 7, with an individual branch of a common passage hereinafter described, at the same time closing the communication between the aforesaid lower port 6 and the outlet passage 4.

8, are a series of springs arranged beneath the tubular piston valves 5, with a tendency to maintain said valves in the upper position above set forth.

9, are a series of stems attached to the upper ends of the piston valves 5, and passing through guide bushings 10 screwed into the upper ends of the series of vertical passages 2, aforesaid.

11, are a series of handles or buttons carried on the upper ends of the stems 9 aforesaid, and affording a convenient means for the manual depression of any individual valve, when desired.

12, is a transverse passage formed in the housing 1 and having individual ports or branches 13 connecting with the vertical passages 2, and adapted to register with the upper ports 7 of the valves 5 when the same are depressed in the manner above set forth.

14, are individual notches formed in opposed relation in the peripheries of pairs of the handles or buttons 11 and adapted to form guide grooves therefor having sliding engagement with stationary vertical guide pins 15 on the casing or housing 1, to prevent a turning movement of said handle and attached piston valves and in consequence maintain the ports 6 and 7 of the valves in proper line with the ports 4 and 13 of the casing, during the continued use of the apparatus.

16, is a vertical passage formed in the casing 1, with its side wall made transparent in any usual manner, preferably by means of a tube of glass 17 secured in top and bottom seats by a holding gland 18 screwed into the upper part of said passage as shown. At top the passage 16 is in communication with the transverse passage 12, at a point above the gland 18, and at bottom is in communication with the interior of the lubricator casing, so that the lubricant passing through the passage 16 will be returned to said casing. 19, is a screw cap closing the upper end of the passage 16 aforesaid.

20, is a central depending nipple or funnel shape partition which is preferably formed as an integral part of the gland 18, and adapted to collect the lubricant coming through the passage 12 and discharge the same centrally down through the view tube 17 aforesaid.

21, is a vertical vent pipe attached to the gland 18 and adapted to aid in the free flow of the lubricant through the nipple 20, by the passage of the air in the view tube from a point below to a point above said gland.

With the present construction, any particular discharge can be made to give a visible indication of its flow, by a manual depression of its handle or button 1, to cause a flow of the lubricant through the single view tube common to the whole series of discharges. With the normal or raised condition of said handles the flow of the lubricant is direct and without visible indication.

Having thus fully described my said invention what I claim as new and desire to secure by Letters Patent, is:—

1. An indicator for lubricators and the like comprising, a housing formed with a series of main passages, individual inlet passages communicating with said main passages, pairs of outlet passages communicating with said main passages at different points in their length, a series of tubular piston valves moving in the main passages and provided with lateral ports adapted to control the flow of fluid from said main passages, means for imparting sliding movement to said valves, a transverse passage common to one series of outlet passages, and a view device having a transparent lower chamber, an intermediate funnel shaped partition and an upper chamber with which the aforesaid transverse passage is connected.

2. An indicator for lubricators and the like comprising, a housing formed with a series of main passages, individual inlet passages communicating with said main passages, pairs of outlet passages communicating with said main passages at different points in their length, a series of tubular piston valves moving in the main passages and provided with lateral ports adapted to control the flow of fluid from said main passages, a transverse passage common to one series of outlet passages, a view device having a transparent lower chamber, an intermediate funnel shaped partition and an upper chamber with which the aforesaid transverse passage is connected, a series of springs, tending to maintain said valves in one position, and manual means for moving said valves into their other position.

3. An indicator for lubricators and the like comprising, a housing formed with a series of main passages, individual inlet passages communicating with said main passages, pairs of outlet passages communicating with said main passages at different points in their length, a series of tubular piston valves moving in the main passages and provided with lateral ports adapted to control the flow of fluid from said main passages, a transverse passage common to one series of outlet passages, a view device having a transparent lower chamber, an intermediate funnel shaped partition and an upper chamber with which the aforesaid transverse passage is connected, a series of springs tending to maintain said valves in one position, and manual means for moving said valves into their other position, the same comprising a series of stems on the valves and a series of buttons on the ends of said stems.

4. An indicator for lubricators and the like comprising, a housing formed with a series of main passages, individual inlet passages communicating with said main passages, pairs of outlet passages communicating with said main passages at different points in their length, a series of tubular piston valves moving in the main passages and provided with lateral ports adapted to control the flow of fluid from said main passages, a transverse passage common to one series of outlet passages, a view tube connected to said transverse passage, a series of springs tending to maintain said valves in one position, a series of stems on the valves, a series of buttons on said stems formed with opposed peripheral guide grooves and guide stems on the casing engaging said guide grooves.

Signed at Chicago, Illinois, this 14th day of April 1908.

JOHN C. HILL.

Witnesses:
ROBERT BURNS,
HENRY MOE.