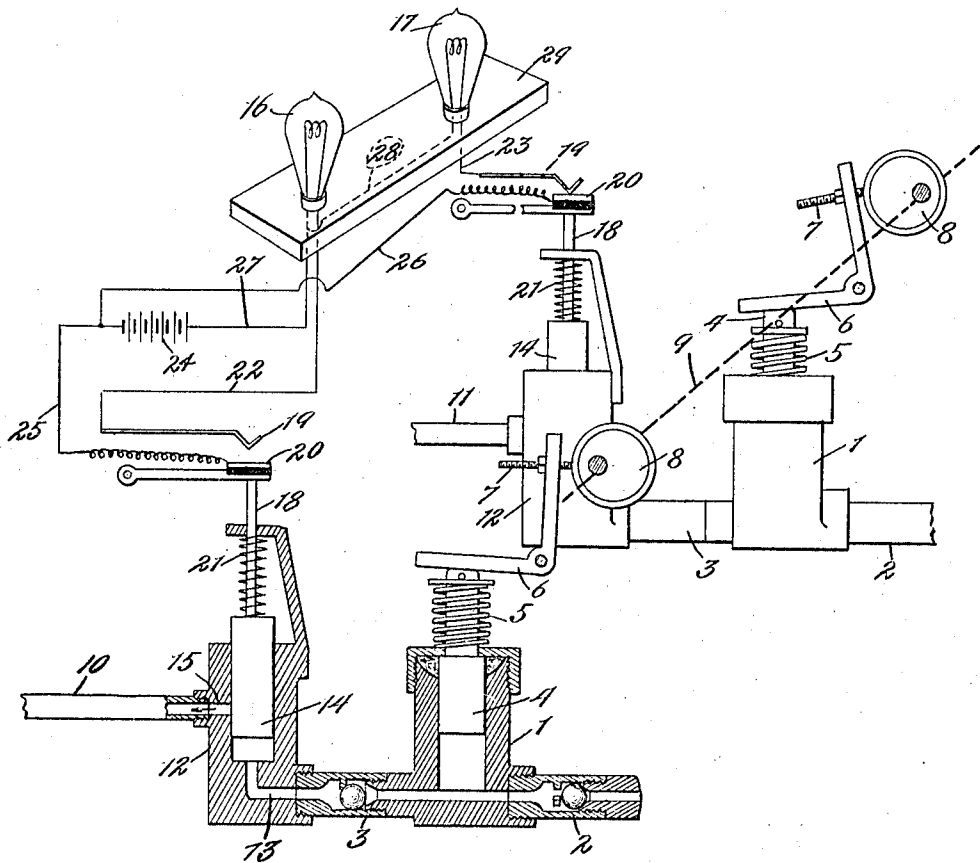


H. WEIHMAN.
SIGHT FEED LUBRICATOR.
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949,339.

Patented Feb. 15, 1910.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY WEIHMANN, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO EDWARD DIETERLA, OF CHICAGO, ILLINOIS.

SIGHT-FEED LUBRICATOR.

949,339.

Specification of Letters Patent.

Patented Feb. 15, 1910.

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To all whom it may concern:

Be it known that I, HENRY WEIHMANN, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Sight-Feed Lubricators, of which the following is a full, clear, and exact specification.

This invention relates to that class of lubricators which are provided with means for producing a visual signal each time a drop or predetermined quantity of lubricant passes to the bearing and for the want of a more apt term I have designated it as a sight feed lubricator.

The primary object of this invention, however, is to provide improved, simple and efficient means whereby an electric circuit will be closed through an electric lamp each time a drop or predetermined quantity of lubricant passes out of the lubricator on its way to the bearing to which the lubricator is attached, and the size or volume of the drop may be indicated by the duration of the illumination.

With a view to the attainment of these ends and the accomplishment of certain other objects which will hereinafter appear, the invention consists in the features of novelty which will now be described more fully with reference to the accompanying drawing and then particularly pointed out in the claims.

The said drawing is a diagrammatic perspective view of a lubricator embodying this invention, a portion of the apparatus being shown in section.

In carrying out the invention any suitable means may be employed for forcing the lubricant from a tank or other source of supply in predetermined quantities. There are various devices for accomplishing this result and the particular form of the same is immaterial so far as the present invention is concerned. In this illustration I have shown the device as being adapted for a plurality of feeds, two being indicated and for each feed is employed an independent means whereby the quantity of lubricant injected into the feed pipe may be regulated at will. As a simple and convenient illustration for each of such devices I have shown a pump comprising a barrel or cylinder 1 having a valved inlet 2 leading from any suitable source of supply not necessary to illustrate, and the valved outlet 3, the valved inlet be-

ing adapted to prevent retrograde movement of the oil in the direction of the supply and the valved outlet to prevent retrograde movement of the lubricant in the direction of the pump. In barrel 1 is situated a plunger or piston 4 provided with a spring 5 which tends to elevate it or withdraw it and thereby draw in a quantity of the lubricant.

In practice it is customary to provide the plunger 4 and each of the pumps with means operatively connected with the engine or other machine to be lubricated, for depressing the plunger a greater or less extent and thereby forcing out of the pump barrel a greater or less quantity of lubricant. In this example of the invention I have shown for each of the plungers a bell crank lever 6 having one arm bearing against the upper end of the plunger and the other arm provided with an adjusting screw 7 arranged to be engaged by a cam or eccentric 8 mounted upon any suitable driving shaft, all of the eccentrics 8 being arranged on the same shaft and in this illustration the shaft is indicated by heavy dotted line 9. The shaft may be operated by any suitable connection with the engine or other machine to be lubricated, as is well understood and not necessary to illustrate.

10 and 11 are the feed pipes which conduct the lubricant to the various bearings, not shown, to be lubricated. In this exemplification of the invention these feed pipes are connected with a suitable device or means adapted to receive impulses by the volume of oil injected from the pumps respectively. An example of such a device is indicated in section at the bottom of the figure and consists of a barrel 12 connected by port 13 to the valved outlet 3 and containing a piston or plunger 14 which is adapted to be elevated or moved in the barrel 12 by the lubricant entering from the pump 1. At a suitable distance from the inlet port 13 the barrel 12 is provided with an outlet port 15 through which the lubricant escapes into the feed pipe 10 when the volume and pressure in the barrel 12 becomes sufficient to lift the plunger 14 beyond the port 15. Consequently the larger the volume of lubricant the longer the plunger 14 will remain in its elevated position. This lifting of the plunger and the duration of time it remains in its elevated position are regulated for closing the electric circuit through the electric

lamps 16, 17, corresponding in number to the number of feeds which may of course be multiplied *ad libitum*. To that end the upper end of each plunger 14 is provided with a push rod 18 adapted to close two contacts 19, 20, when the plunger is elevated by the pressure of the lubricant in the barrel 12, and when such pressure ceases the plunger is returned by the spring 21 and the contact 20 drops away from the contact 19. Each of the contacts 19 is connected with one terminal of each lamp by means of conductors 22, 23 respectively and the contacts 20 are connected with one pole of a battery 24 by conductors 25, 26, respectively while the other pole of the battery is connected by conductors 27, 28, with the remaining pole of each lamp or any other system of wiring may be inserted that will cause the movement of the plunger 14 to close the circuits through their respective lamps independently.

A lubricator thus constructed it will be seen is eminently appropriate for use on motor vehicles where it is desirable to have the sight feed situated upon the dashboard of a vehicle at a considerable distance from the parts to be lubricated as well as from the pump and other mechanism provided for forcing the lubricant to the bearings which according to modern practice is placed close to the engine in order that the lubricant may be warm in cold weather and in order furthermore that the dash of the vehicle may be free from oil and grease. With the lubricator thus provided with the luminous sights or indicators the small lamp globes 16, 17, may be attached by any simple means to a bar or plate 29 capable of being attached to the dash of a vehicle, and of course, if desired, these lamps may be attached directly to the dash and in either event it is apparent that the objectionable mutilation of the dash heretofore necessary for the attachment and accommodation of the various pipes and fittings employed where the lubricant is obliged to pass through the sight feed on the dash, is entirely obviated.

In order that my invention may be un-

derstood by those skilled in the art, the details of this exemplification thereof have been thus specifically described, but

What I claim as new therein and desire to secure by Letters Patent is this:

1. In a sight feed lubricator, the combination of means for forcing the lubricant to the bearing to be lubricated, an electric lamp, a source of electric energy and a means for closing the circuit through the lamp when a volume of lubricant passes the said forcing means.

2. In a sight feed lubricator, the combination of a plurality of means for supplying respectively a plurality of bearings with lubricant, means adapted to be moved by the passage of the lubricant to said bearings respectively independently of each other, electric lamps equal in number to the bearings to be lubricated, a source of electric energy, and means for closing a circuit through said lamps respectively independently of each other, when a volume of lubricant passes through the said means for supplying the bearings respectively.

3. In a sight feed lubricator, the combination of means for forcing lubricant to the bearings to be lubricated, means capable of being displaced and maintained in its displaced position a greater or less duration of time by the lubricant passing to the bearing, according to the volume of said lubricant, an electric lamp, a source of electric energy, and means operatively related to the second said means for closing the electric circuit through said lamp when said second means is displaced, a longer or shorter duration of time in accordance with the duration of time the said second means is displaced.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 8th day of June A. D. 1908.

HENRY WEIHMANN.

Witnesses:

J. H. JOCHUM, Jr.,

M. W. CANTWELL.