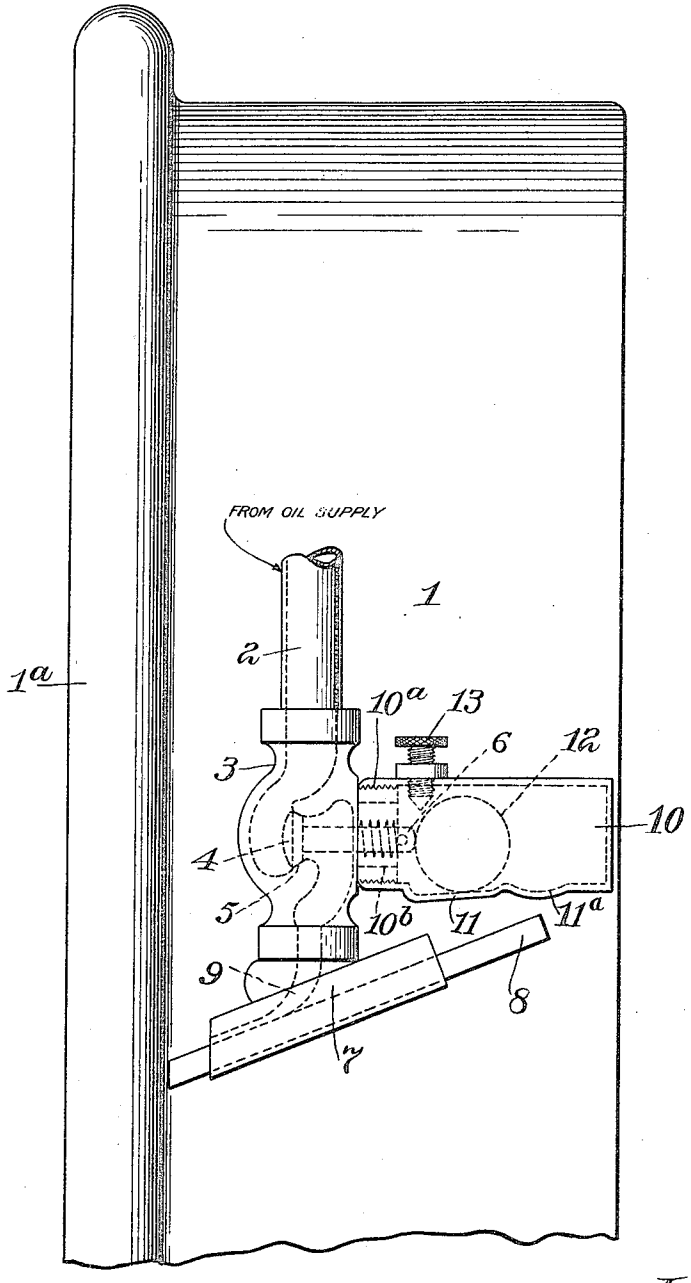
J. H. MINER.

WHEEL FLANGE LUBRICATOR.

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1,213,676. Patented Jan. 23, 1917.



Inventor:

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UNITED STATES PATENT OFFICE.

JAMES HENRY MINER, OF LUMBERTON, MISSISSIPPI.

WHEEL-FLANGE LUBRICATOR.

1,213,676. Specification of Letters Patent. Patented Jan. 23, 1917.

Application filed April 15, 1916. Serial No. 91,431.

To all whom it may concern:

Be it known that I, JAMES H. MINER, a citizen of the United States, residing at Lumberton, Mississippi, have invented certain new and useful Improvements in Wheel-Flange Lubricators, of which the following is a specification.

The present invention relates to improvements in wheel flange lubricators and pertains more particularly to that type of lubricators in which a variable flow of lubricant is supplied to the wheel flange dependent upon the swing of the engine as it rounds a curve.

The principal object of the invention consists in providing a wheel flange lubricator of the class described, which is adapted to be located adjacent the wheel that is to be lubricated, and which will automatically feed oil onto the flange as the engine is tilted or inclined in going around a curve.

A further object of the invention is to provide valve mechanism which will automatically control the flow of the lubricant through the lubricator to the wheel and which will remain closed so long as the engine is running on level track.

With these and other objects in view the invention consists in the combination and arrangement of parts, more fully described in the following specification, illustrated in the accompanying drawing and pointed out in the appended claims.

The drawing represents in side elevation a fragmentary view of a wheel flange with one embodiment of the present invention applied thereto.

Referring by reference characters to this drawing, I have shown at 1 a portion of one of the wheels of a steam or electric locomotive, the flange being indicated at 1^a.

2 designates an oil supply pipe, leading from any suitable source (not shown) and communicating with a valve casing 3. A valve 4 is provided within the casing 3 and is adapted to normally close the valve port 5 controlling the passage of oil from the upper oil supply to the lower lubricator. The valve 4 is vertically disposed in respect to the valve seat and is provided with a horizontally projecting valve stem 6 extending through the casing on the side opposite the wheel flange. A coiled spring encircling the valve stem 6 and bearing at its inner end against the casing, tends to hold the valve 4 normally closed. Below the valve casing 3 a suitable container or holder 7 is secured so as to incline slightly downward toward the wheel flange 1^a. A bar 8 of hard wood, graphite or other suitable material is carried within the holder 7 and is adjustably secured so as to have its lower end constantly held at a point in contact with, or at least in close proximity to the wheel flange 1^a. A diminishing passage way 9 communicates with the container 7 from the valve casing 3 and serves to conduct the lubricant to the surface of the bar 8, which in turn acts as a carrier and directly applies the lubricant to the wheel flange. At the rear of the casing 3 a horizontal tube 10 is attached thereto, as by screw-threads 10^a. The tube 10 is provided with an opening 10^b at its end adjacent the valve casing 3, through which the valve stem 6 projects. The tube 10 is also provided with two spaced depressions 11 and 11^a. A ball weight 12 is loosely carried within the tube 10, being free to roll therein. A set screw 13 is suitably located in the upper part of the tube 10 and projects sufficiently into the tube to serve as an adjustable stop for limiting the movement of the ball weight in one direction and hence the movement of the valve.

From the foregoing description, the operation of my invention will be apparent. When the wheel figured is on the outside of a curve the ball 12 will impinge the valve stem 6 with considerable force, that as the track straightens and becomes level the ball owing to the inclination of the depression 11 will gently impinge the valve stem, and that when the wheel is on the inside of a curve and leans in the opposite direction, the ball 12 enters the depression 11^a where it remains when the car returns to a level track. The amount of movement imparted to the valve by the ball 12 may be conveniently regulated by the adjustment of the set screw 13. Thus the elevation of this wheel when upon the outside of a curve will roll the ball out of depression 11^a into depression 11 causing it to strike the valve

stem with considerable force, the amount of which will depend on the inclination of the track.

It will be understood that the wheel upon the opposite side of the engine will be provided with corresponding parts reversely arranged.

What I claim is:

1. In a wheel flange lubricator a valve, a horizontal tube, a movable weight therein, one end of said tube having a depression in the bottom, inclined so as to cause said movable weight to exert a greater force against the valve while rounding a curve.

2. In a flange lubricator, a horizontal tube, a movable weight therein, said tube having a decline from the center each way toward the ends.

3. In a flange lubricator, a container, a movable weight therein, each end of said container being depressed and lower than the intermediate portion and forming a temporary resting place for said weight.

In testimony whereof, I affix my signature.

JAMES HENRY MINER.

Witnesses:
R. W. HINTON,
D. P. HINTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."