

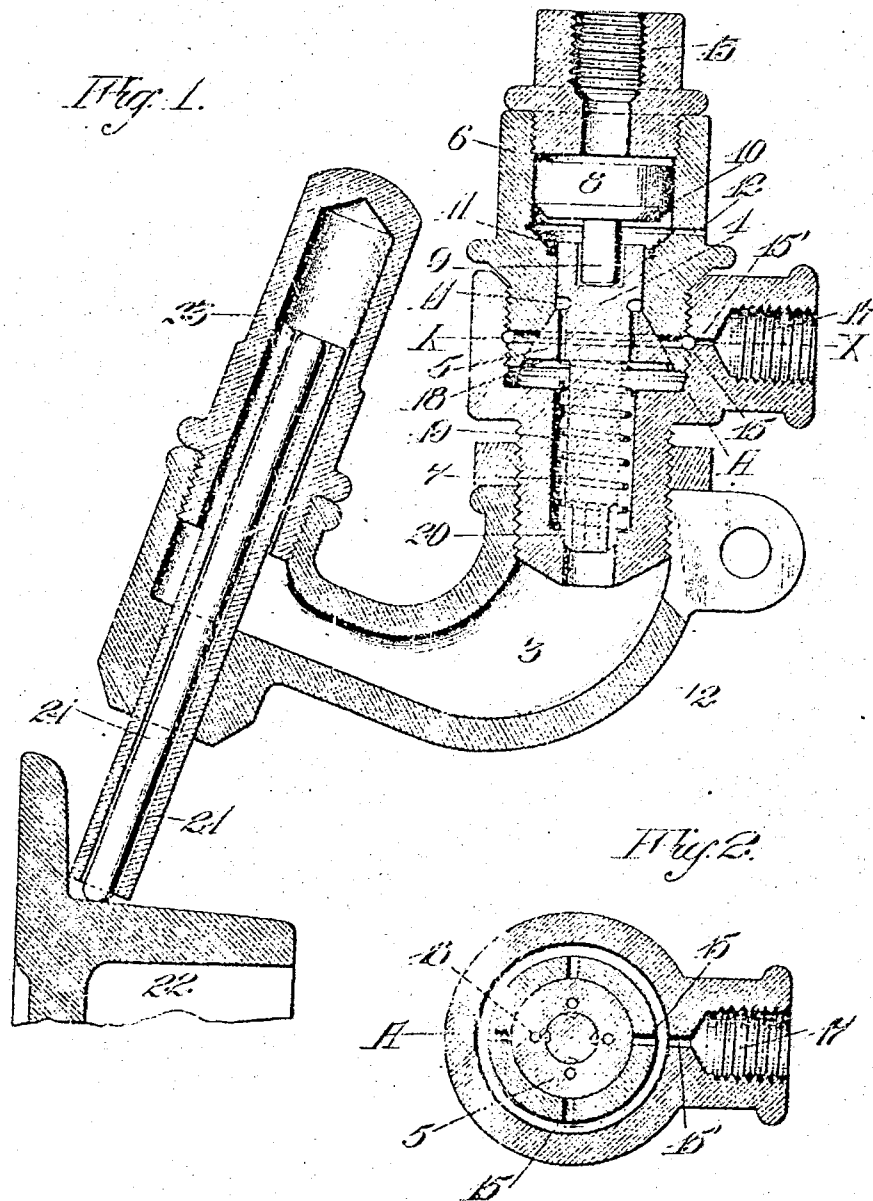
T. GARRICK & W. A. BAISLEY.

WHEEL FLANGE OILER.

APPLICATION FILED FEB. 4, 1909.

988,545.

Patented Apr. 4, 1911.



Witnesses.
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UNITED STATES PATENT OFFICE.

THOMAS CARRICK AND WALTER A. BAISLEY, OF SAN FRANCISCO, CALIFORNIA.

WHEEL-FLANGE OILER.

988,545.

Specification of Letters Patent.

Patented Apr. 4, 1911.

Application filed February 4, 1909. Serial No. 476,150.

To all whom it may concern:

Be it known that we, THOMAS CARRICK and WALTER A. BAISLEY, both citizens of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Wheel-Flange Oilers, of which the following is a specification.

This invention relates to wheel flange oilers, and pertains especially to a means for directing lubricant on to the flange and directly into the fillet of the wheel where the greatest wear is.

The object of the present invention is to provide a device for directly applying the oil into the fillet of locomotive wheels and the like, for the purpose of preventing wear on the flanges.

The especial object is to provide an oiler which will be operated by steam, or other fluid pressure, and in which there will be no opportunity for the steam leaking into the oil ducts to prevent the flow of the oil; also, in which device the oil will be so directed against the flange that it will not spatter on to the tread of the wheel.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section. Fig. 2 is a section on line X—X, Fig. 1.

A represents a valve casing, screwing, or otherwise secured, into an elbow 2, which latter incloses a chamber 3. The casing A is cored out to accommodate a plug 4 which has an upwardly seating valve portion 5 adapted to fit against the corresponding seat 10 formed in a nipple 6 which screws into the casing. The plug is pressed normally against its seat by means of a spring 7. The portion of the nipple 6 above the plug is enlarged to accommodate a piston 8 which has a snug sliding fit within the cylindrical enlargement, with the lower end of the piston having a guide stem 9 which fits in the top of the plug 4 and centers the piston with respect to the plug. The under side of the piston has a seat portion 10 movable toward and from the corresponding seat 11 in the nipple; an air-vent 12 allowing a free action of the piston and plug. A union 13 screws into the top of the nipple 6, and this union is connected with a steam or other fluid pressure supply pipe receiving steam from

the steam-chest, or other appropriate source of fluid pressure supply. Whenever the steam pressure is on the top of the piston 8, the latter is moved down to close on the seat 11, at the same time pushing down on the plug 4, compressing the spring 7, and bringing an annular port 14 in the plug into register with a port or ports 15 which extend radially outward through the nipple 6 to connect with the port 15' in the casing, which latter communicates with the oil supply inlet 17. When these various ports 14—15—15' are in register, the oil from 17 will pass down through longitudinal grooves 18 in the plug and through the space 19 around the reduced portion of the plug, and thence through the longitudinal grooves 20 into the chamber 3 to be thence discharged on to the wheel flange, in a manner shortly to be described. When the steam pressure is released on the piston 8, the spring 7 will act expansively to lift both the plug and the piston, closing the plug valve 5 and opening the piston valve 10; the valve 5 cutting off the further flow of oil in the lubricator.

The object of providing the piston with its valve seating portion 10 and the corresponding seat 11 is to prevent any escape of the steam around the piston and plug and into the oil ducts to cut off or interfere with the flow of oil when the valve 5 is opened. With this arrangement, if any steam should pass around the piston it will escape to the atmosphere through the vent 12.

The outer rim of the elbow 2 carries a tube 21 which has its lower end projecting downward in such fashion that when the lubricator is in position on a locomotive or car, the end of the tube 21 will be pointed into the fillet or space between the flange and tread of the wheel 22. The upper end of the tube 21 is closed by a screw cap 23 which screws into the tube of the elbow.

24 is a loose piece of round iron inside the pipe 21, adapted normally to rest on the wheel to be lubricated and in the angle between the flange and tread. Sufficient space is left around the cap 23 and the inner portion of the tube, and between the tube and the loose plug 24, for the oil to pass from the chamber 3 up into the top of the cap, thence down through the tube around the plug or rod and on to the wheel flange.

In operation, the steam or air is admitted to the top of the piston 8, which results in

a downward movement of the plug 4 to bring the ports 14-15-15' into register and allow the oil to flow through the inlet 17 into the chamber 3; the oil thence passing upward around the tube into the top of the cap 23, and thence down through the tube and around the rod or plug 24. Since this rod or plug always remains in contact with just that portion of the flange which is to be oiled, it is manifest that the oil is conducted directly to the flange, and without any chance of spattering of the oil on to the tread of the wheel.

Whenever the rod or plunger 24 becomes worn out it is easily replaced.

By using a large piston 8, leakage of steam is prevented into the oil conduits; and also, it makes the lubricator more sensitive, because a low pressure is sufficient to actuate the valve plug 4.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. In a lubricator, the combination of a casing having an inlet and an outlet, a nipple screwing into the casing and having a valve seating portion in line with the outlet, said valve seating portion having ports connecting with the inlet, a normally closed valve in the casing and seating on said valve

seating portion, said valve having ports registerable with the inlet ports and controlling communication between the inlet and outlet, said nipple having a cylindrical portion above the valve, and a plunger in said cylindrical portion and seating on said valve.

2. In a lubricator, the combination of a casing having an inlet and an outlet, a nipple screwing into the casing and having a valve seating portion in line with the outlet, said valve seating portion having ports connecting with the inlet, a normally closed valve in the casing and seating on said valve seating portion, said valve having ports registerable with the inlet ports and controlling communication between the inlet and outlet, said nipple having a cylindrical portion above the valve, and a plunger in said cylindrical portion and seating on said valve, said plunger and nipple having surfaces which correspondingly seat when the plunger is moved to open the valve.

In testimony whereof we have hereunto set our hands in presence of two subscribing witnesses.

THOMAS CARRICK
WALTER A. BAISLEY.

Witnesses:

CHARLES L. SMITH
RICHARD ROCHE