V. WILLOUGHBY.

OILER FOR MINE CAR WHEELS.

APPLICATION FILED APR. 16, 1915.

1,183,941. Patented May 23, 1916.

Fig. 1.

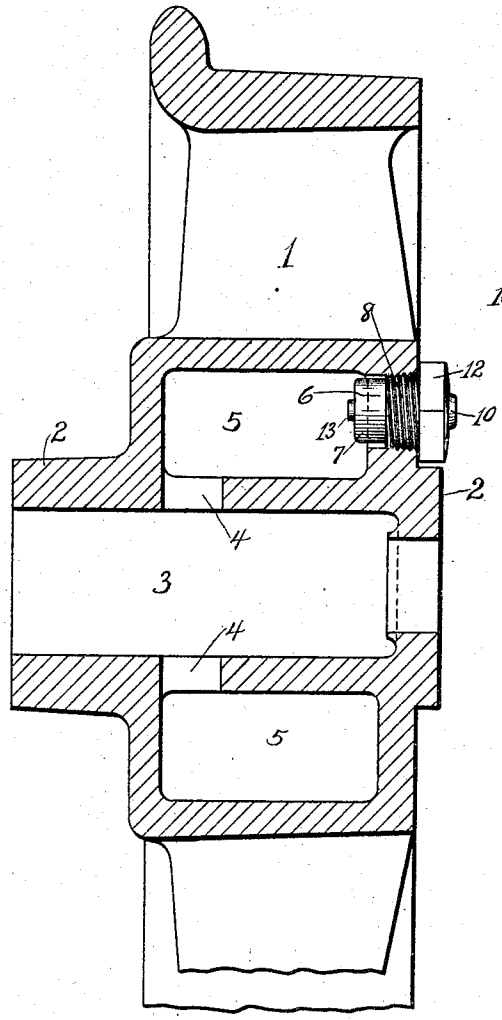


Fig. 2.

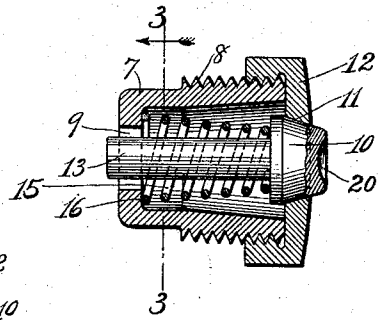


Fig. 4.

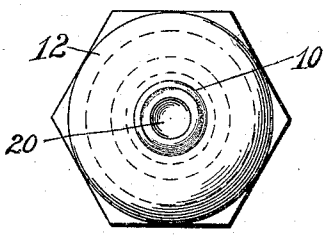
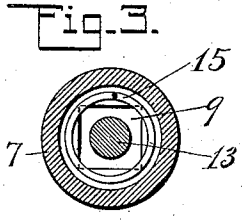


Fig. 3.



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OILER FOR MINE-CAR WHEELS.

1,183,941. Specification of Letters Patent. Patented May 23, 1916.

Application filed April 16, 1915. Serial No. 21,639.

To all whom it may concern:

Be it known that I, VICTOR WILLOUGHBY, residing at Jeffersonville, Clark county, Indiana, and being a citizen of the United States, have invented certain new and useful Improvements in Oilers for Mine-Car Wheels, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and to use the same, reference being had to the accompanying drawings, which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof will occur to persons skilled in the art.

In said drawings: Figure 1 is a vertical sectional view through a mine car wheel equipped with the invention. Fig. 2 is a central vertical sectional view through the improved oiler. Fig. 3 is a transverse sectional view, the section being taken on line 3—3 of Fig. 2. Fig. 4 is a front elevational view of the oiler.

The invention comprises means adapted to be associated with a mine car wheel for the purpose of lubricating said wheel on its axle and is intended to be associated with a lubricant chamber in a mine car wheel, which chamber is in communication with an axle bore in the hub of the wheel in which position the device is operatively combined with the wheel upon which it is locked in position

The object of the invention is to provide a self-contained oiling device which may be attached to wheels now in service, as well as new wheels, and which may be readily removed for repairs or renewal of parts at any time.

Referring to the parts, 1 indicates generally a mine car wheel provided with the hub portion 2 through which extends an axle bore 3 connecting by means of the passages 4 with the lubricant chamber 5 into which extends the oiler indicated generally by the reference numeral 6.

The oiler or lubricating device comprises features of novelty and utility which will be apparent from an inspection of the parts and comprises a valve cage 7 provided with an external screw thread 8 and open at both ends, the opening 9 at the inner end, as shown in Fig. 3, being formed non-circular or rectangular in Fig. 3—for the reception of a non-circular tool which may be employed to rotate said valve cage to screw it in position in the hub of the wheel or to remove it from such position when desired.

Mounted in the valve cage 7 is a valve 10 having a frusto-conical head portion adapted to seat itself in a suitable valve seat as 11 in the removable cap 12, said valve also being provided with a stem portion 13 which, as shown in Fig. 2, extends through the non-circular opening 9, before indicated. Within the valve cage is seated a spring 15 which bears against the inner face of the wall 16 of the valve cage at one end and against the base of the frusto-conical valve at its opposite end, thereby holding said valve normally in contact with its seat.

The removable cap 12 is screw-threaded, as best shown in Fig. 2, to adapt it for connection with the cage 7 and the cap may be removed without removing the cage, if desired. It will be noted that the valve 10 projects slightly outside of or beyond the cap and is provided with a socketed outer end 20, which is adapted to receive the end of the spout of an oil-can or other means by which the valve and its stem may be unseated and pushed into the cage far enough to permit insertion of the spout of an oil-can or other conduit for lubricant.

By reason of the frusto-conical shape of the valve, it is self-clearing and sediment which may be deposited on the projecting portion thereof may be wiped off before the valve is unseated, thereby preventing dust and foreign matter passing from the exterior of the wheel into the oil cavity 5 and to the bearing for the axle. When the lubricator is positioned as illustrated in Fig. 1, the valve cage extends within the lubricant chamber, the stem 13 of the valve projecting through the non-circular opening 9, the valve projecting at the same time through the cage, and the cap 12 serves as a jam nut to frictionally lock the device in position.

What I claim is:

1. In combination, a screw-threaded cage having an end wall with a non-circular opening therein adapted to receive and cooperate with a non-circular tool to rotate said cage, said wall forming a spring seat, a coil spring bearing on said seat, a valve

adapted to bear against the opposite end of said spring and a removable cap provided with a perforation adapted to serve as a valve seat against which said valve may be pressed by said spring.

2. In an oiler, a cage open at opposite ends, a removable cap for one end of said cage, a spring bearing on the opposite end of said cage and a valve normally projecting through said cap and being provided with a recess in its outer face.

3. In an oiler, a screw-threaded cage portion open at both ends, the inner one of the openings being non-circular, and being adapted to receive and coöperate with a non-circular tool to rotate said cage, a valve in said cage adapted to project through said non-circular opening, a closure for the outer opening of said cage, said closure being formed with a valve seat and a spring bearing on said cage and said valve.

4. An oiler for mine car wheels comprising a valve cage formed with a non-circular opening through one end, which is adapted to receive and coöperate with a non-circular tool to rotate said cage, a removable closure for the other end comprising a valve-seat forming cap, a valve seated in said cap and a spring adapted to bear on said valve.

5. In combination in an oiler for mine car wheels a screw threaded valve cage having an inner end or bottom wall provided with a non-circular opening therein adapted to receive a non-circular tool which may be employed to rotate said valve cage to screw it in position in the hub of a wheel, a coil spring bearing on said wall, a valve bearing against the opposite end of said spring and a removable perforated cap coöperating with said screw thread to lock the valve cage in position in a wheel.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

VICTOR WILLOUGHBY.

Witnesses:
ALLEN W. CLARKE,
THEODORE E. LYONS.

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