(No Model.)

F. W. RANDOLPH.

LUBRICATING HUB.

No. 482,195. Patented Sept. 6, 1892.

Fig. 1.

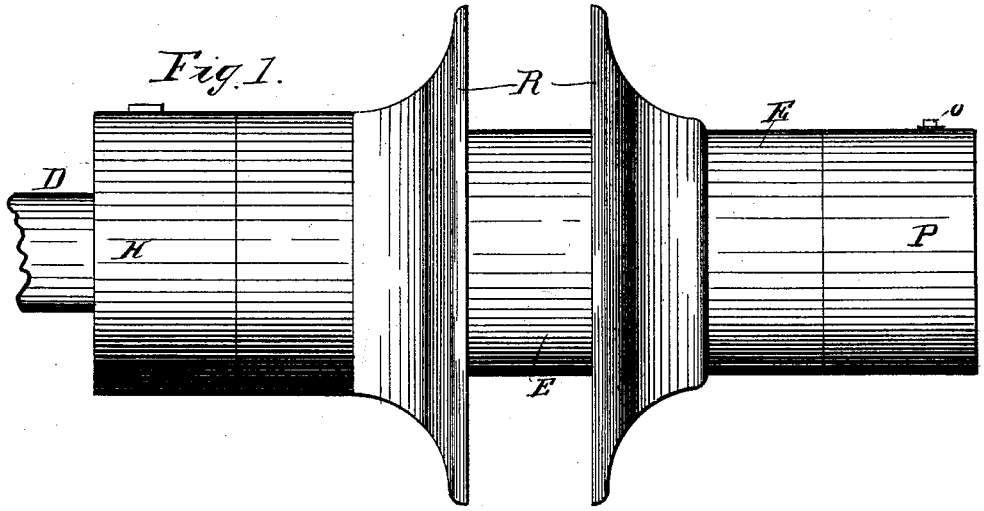


Fig. 2.

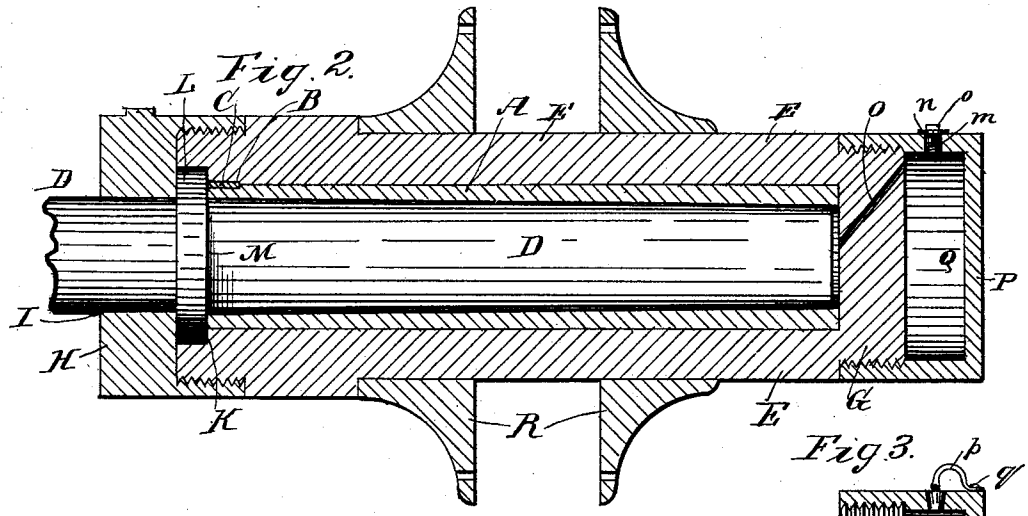
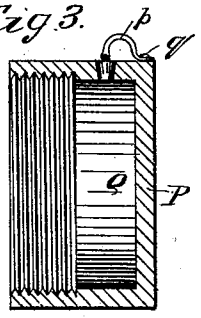


Fig. 3.



Witnesses
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK WM. RANDOLPH, OF RAYNOR, VIRGINIA.

LUBRICATING-HUB.

SPECIFICATION forming part of Letters Patent No. 482,195, dated September 6, 1892.

Application filed December 17, 1891. Serial No. 415,389. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK WM. RANDOLPH, a citizen of the United States, residing at Raynor, in the county of Isle of Wight and State of Virginia, have invented certain new and useful Improvements in Lubricating-Hubs, of which the following is a specification.

This invention relates to carriages and wagons, and particularly to hubs, and its novelty will be fully understood from the following description and claims when taken in connection with the annexed drawings.

The object of the invention is to provide a self-oiling hub for the axles of carriages and wagons.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation of my improved hub. Fig. 2 is a longitudinal section thereof. Fig. 3 shows a modified form of securing the oil-hole stopper to the front cap.

The same letters of reference denote the same parts throughout the several figures.

A refers to a cylinder made of brass and of exactly the length of the hub having a key-way B and a key C, while both ends are left open for the reception of the axle D. The main body of the hub is constructed of metal and is formed all in one piece with a straight portion E, which terminates at the front in a reduced portion G. The rear end of the portion E is left open to receive the axle D and the cylinder A and is provided with a back cap H, having a central aperture I also for the purpose of receiving the axle and the said cylinder. This cap H is screwed up to the shoulder K on the rear end of the portion E, with the collar L of the axle upon the inside of the cap H, so as to force the collar into its position and up against the shoulder M, and thereby securing the axle to the hub without the least lost motion. The front end G of the hub is formed in the same piece with the portion E and is closed or solid except for the oil-channel O, which extends from near the edge of the said end diagonally therethrough down to its inside center, and from this inside face of the end G the cylinder A tapers or gradually becomes larger to the opposite end of the hub, allowing the oil from its channel to be distributed throughout the entire length of the said cylinder and axle D, whereby they are continuously oiled. Upon this smaller portion G is screwed the front cap P, and when in position forms the self-feeding oil-cup Q between the portions G and P. This cap P has an oil-hole *m*, through which oil is supplied to the cup, and is provided with a screw-threaded stopper *n*, having the nut-head *o*.

In the modification shown in Fig. 3 the nut-head is dispensed with and the stopper is provided with a bow-spring *p*, secured to the cap P by the pivot *q*. This has been found to be most convenient, for the reason that no wrench is required to remove the stopper when it is necessary to supply the cup with oil, and when the stopper is removed from the oil-hole it has simply to be swung to one side of the said hole and is never detached.

R denotes the spoke flanges or braces, which are made of malleable iron and shrunk onto the main body or portion of the hub E, and the spokes are secured to and between them in any suitable manner.

A striking advantage of my cup is that it is always kept free from sand and dust, and the oil being closely confined there is no waste. Further, the channel being so close to the edge of the end it will continue to consume the oil as long as there is any in the cup.

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

1. The combination, with a vehicle-axle, of a lubricating-hub having an open rear end and a solid front end formed in the same piece, the said solid end having an oil-channel extending from its outer edge diagonally through to the inside center thereof and of the front cap secured to the solid end to form an oil-cup, substantially as shown and described.

2. In a self-oiling axle-hub, the combination, with the horizontal portion and the front end formed in the same piece, having an oil-channel extending diagonally therethrough, of the front cap attached to and surrounding the said end, so as to form an oil-cup between the said front end and the cap, with the rear cap adapted to confine the axle to the hub and the spoke-flanges shrunk upon the said hori-

zontal portion, substantially as shown and described.

3. In a self-oiling axle-hub, the front solid end provided with an oil-channel and the front cap secured to the said solid end to form an oil-cup between the said cap and the solid end, combined with the cylinder A and means, substantially such as described, for holding the cylinder in the hub and up to the inner face of the solid end, whereby the said cylinder is continually oiled, as set forth.

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

FREDERICK WM. RANDOLPH.

Witnesses:
W. A. LAND,
R. O. GILLIAM.