J. V. HINKLE.

Vehicle-Axle Lubricator.

No. 220,617. Patented Oct. 14, 1879.

Fig. 1.

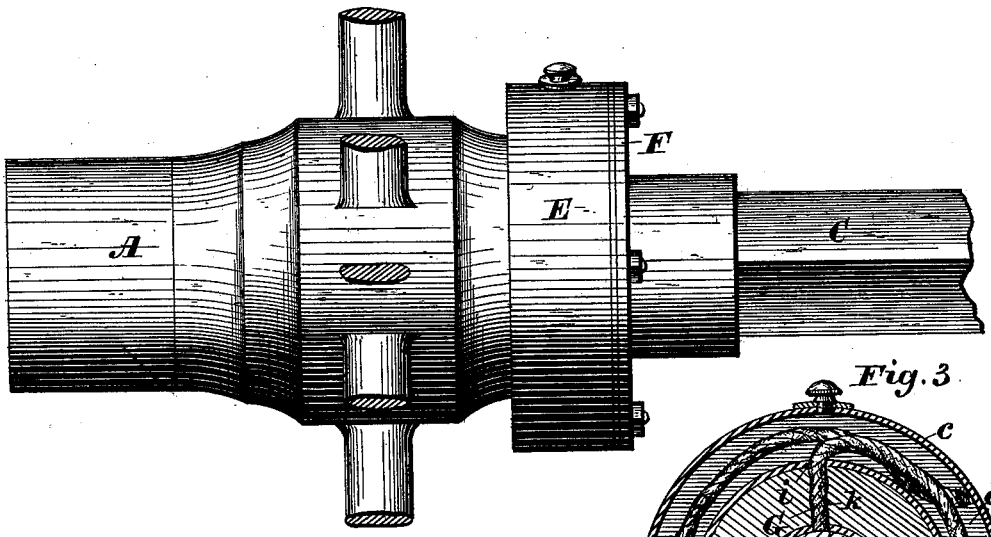


Fig. 3.

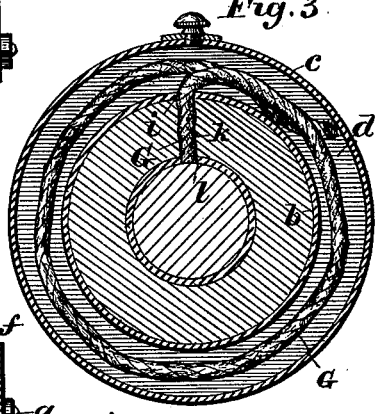
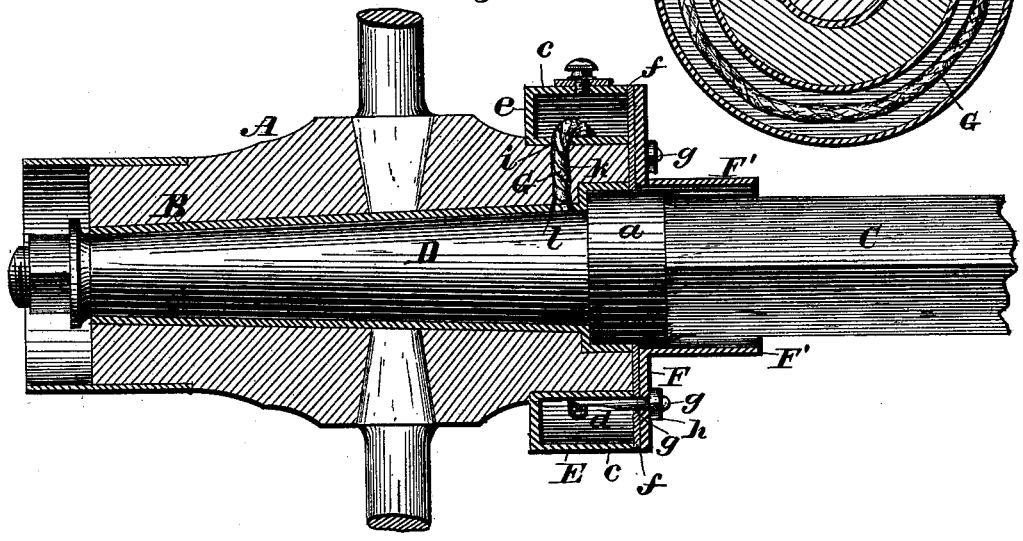


Fig. 2.



Attest:

J. Henry Kaiser.

James M. Wright.

Inventor:

James V. Hinkle.

By James L. Norris.

Atty.

UNITED STATES PATENT OFFICE.

JAMES V. HINKLE, OF HINKLE'S FERRY, TEXAS.

IMPROVEMENT IN VEHICLE-AXLE LUBRICATORS.

Specification forming part of Letters Patent No. **220,617**, dated October 14, 1879; application filed August 19, 1879.

To all whom it may concern:

Be it known that I, JAMES V. HINKLE, of Hinkle's Ferry, in the county of Brazoria and State of Texas, have invented certain new and useful Improvements in Axle-Lubricators, of which the following is a specification.

This invention relates to that class of lubricators for vehicle-axles in which the hub is provided with an oil-reservoir containing a wick for conducting and regulating the flow of the oil to the axle, and consists in providing the rear end of a hub with an annular reservoir or chamber composed of two concentric annular partitions, the inner one of which fits over the rear end of the hub, and the space between the two partitions forming the oil-chamber, the outer end wall of the chamber being formed integral with the partitions, and the inner wall of the same being formed of an annular disk, bolted or otherwise fastened to one of partitions forming the oil-chamber, and having a central aperture for the passage of the axle, a sleeve projecting laterally or outwardly from the edges of said aperture over the axle, for the purpose of forming a sand-band to prevent access of sand, &c., to the journal of the axle. The partition which fits the hub is perforated, and through the hub and axle-box extends a similar passage, through which extends one end of a wick for conducting oil to the journal of the axle, the other portion of the wick lying around within the annular oil chamber or reservoir, so as to be at all times, during the revolution of the hub, saturated with oil, and convey the same by capillary attraction to the journal, all of which will be fully hereinafter described in detail.

In the accompanying drawings, Figure 1 represents a side elevation of my invention applied to a wooden hub. Fig. 2 is a longitudinal central section of the same, and Fig. 3 is a transverse section through the center of oil-reservoir.

In the drawings, A indicates an ordinary wooden hub, which hub, however, may be of any approved construction, and within it is arranged the usual axle-box B. C indicates an ordinary axle, and D the cylindrical tapering journal of the same, fitting within the axle-box, and the collar *a* of which rests against the rear portion of the said box.

At E is shown my improved oil-reservoir, which is fitted upon and secured directly to the rear end of the hub adjacent to the collar of the axle. This reservoir consists of an inner and outer annular partition or wall, *b c*, the annular space *d* between the same constituting the oil-chamber, and the front-end wall *e* of the chamber is formed integral with the partitions. To the inner open ends of the chamber is applied a leather or other suitable packing-disk, *f*, having a central opening fitted to the collar *a*, and upon the packing-disk is arranged an annular plate, F, which is secured in place by studs *g*, secured to or formed with the inner partition, *b*, and projecting through openings in said plate, the outer projecting ends of the studs being screw-threaded and provided with nuts *h*, for clamping the plate upon the packing and making a tight joint between the same and the inner edges of the partitions *b c*, thereby completing the oil-chamber.

The plate F has a central aperture for the passage of the axle, and the edge of said aperture is provided with a sleeve, F′, which projects inwardly or laterally over the axle and its collar, and forms a sand-band, to prevent access of sand, &c., to the journal of the axle. By this construction the said plate F forms a combined sand-band and wall to the oil-reservoir.

The inner partition, *b*, is perforated at *i*, and the hub and axle-box are provided with passages *k l*, and through the same extends one end of a wick, G, the remaining portion of which is coiled entirely around within the annular oil-chamber, the object of this arrangement being to at all times supply the journal with oil, notwithstanding the rotation of the hub, inasmuch as some portion of the wick will always be saturated or immersed in the oil, and hence by capillary attraction convey the same to the journal.

I would here remark that the oil-reservoir as thus constructed is adapted to be secured to the inner side of car-wheels around the journal-box without materially affecting the scope of my invention.

A special advantage of attaching my oil-reservoir to the rear end of a hub is, that it will be isolated and out of danger of being injured by violent contact with obstructions, as

will be apparent, such arrangement overcoming the serious objections resulting from the arrangement of a reservoir on the front end of a hub, where it must sustain all shocks. Further, by my arrangement of wick, the journal of the axle is supplied at all times with oil, no matter what may be the position of the hub, and notwithstanding the rapid revolutions of the same.

What I claim is—

The combination, with the rear end of a hub, of an oil-reservoir secured thereto, and consisting of two annular partitions, *b c*, forming an intermediate annular oil-space closed at its outer end, a packing-disk, *f*, and a covering-plate, F, having a central aperture and a laterally-projecting sleeve, F′, forming a sand-band for the axle, said oil-chamber being provided with a wick wound within it, and having one end extending through the hub to the axle, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

JAMES V. HINKLE.

Witnesses:

C. P. McNEILL,

W. J. BRYAN.