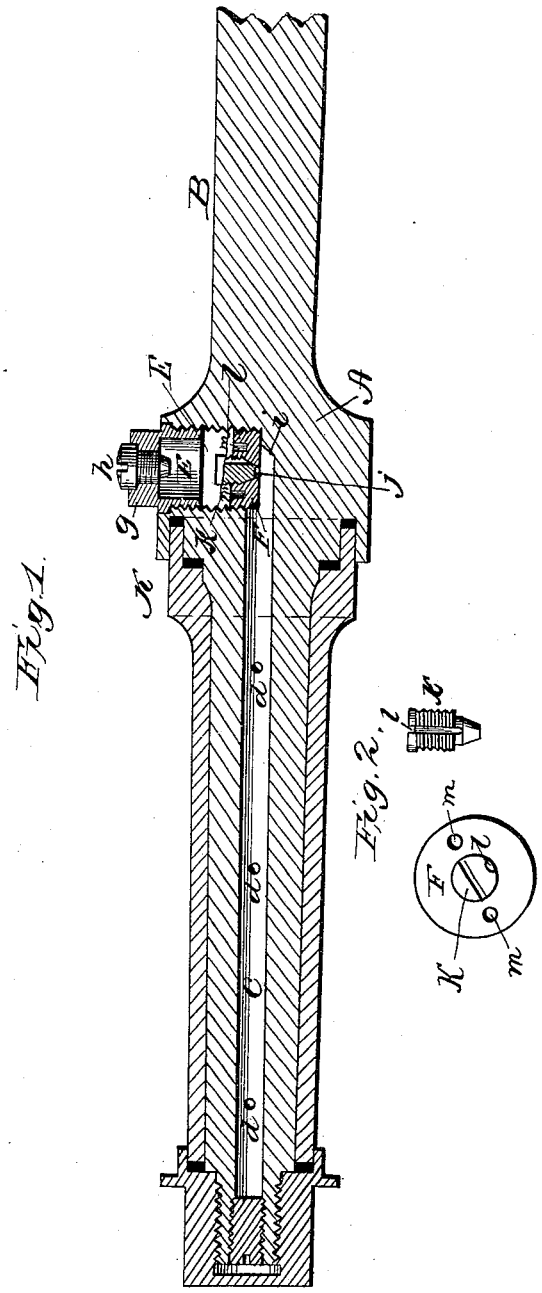
(No Model.)

L. H. FISHER.

SELF OILING AXLE FOR VEHICLES.

No. 265,254. Patented Oct. 3, 1882.



WITNESSES

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LEWIS H. FISHER, OF WALPOLE, MASSACHUSETTS.

SELF-OILING AXLE FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 265,254, dated October 3, 1882.

Application filed February 25, 1882. (No model.)

To all whom it may concern:

Be it known that I, LEWIS H. FISHER, of Walpole, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Lubricating Axles for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention is a further improvement on that shown in the Patent No. 133,769, granted to me December 10, 1872, and I use an oil chamber or reservoir in the axle-collar, and an axial or central passage leading from such chamber and having lateral outlets; but the devices within the chamber differ essentially from those in that patent, and may briefly be stated as consisting substantially in a removable or false bottom located within and at the bottom of the oil-reservoir, so that the main body of the oil shall be above such false bottom, and as further consisting in an adjustable screw-valve located in the removable false bottom to regulate the flow of oil through such bottom to the ducts or oil-passages.

Figure 1 represents a longitudinal section of an axle embodying my invention. Fig. 2 represents details of the false bottom and screw-valve of the oil-chamber.

A is a solid collar of the axle B, the latter having an axial bore or passage, *c*, and small lateral ducts *d d*.

E denotes the oil chamber or reservoir, bored down into the top of the collar A to the center of the axle and of the axial oil-passage *c*, and it is screw-threaded to permit the removable bottom F to be screwed down to its place, as shown, the same screw-thread also permitting the insertion and securing to place of the cap *g*, which serves as a cover to the oil-chamber E, and in this cover I fit a screw-plug, *h*, having a slot in its head like a common screw, and the removal of this screw allows the pouring in of oil to supply the chamber without removing the cap *g*.

The false bottom F, when screwed down to its lowest position, rests on a ledge or support, as shown, about in line with the center or axis of the axle-arm, and the axial passage is bored to about the point *i*, or, at least, beyond the valve-opening *j* in this false bottom. This opening has its upper portion screw-tapped to receive an adjustable screw-valve, K, for regulating the flow of oil from the chamber, and its lower portion is conical, being reamed to afford a valve-seat for this threaded and conically-tipped valve, which, when screwed down, fits the valve-seat, but which, when raised, permits the oil to flow down through a groove, *l*, cut traversely of the threads. Any desired adjustment of this screw-valve K may be made, to vary the amount or flow of oil which shall pass from the chamber E through the false bottom to the passages *c* and *d*, by removing the screw-plug *h* and applying a screw-driver to a slot made in the top of the valve.

The chamber E may be filled or supplied with oil by removing plug *h* and without removing the screw-cap *g*; but when it is desired to clean the axial oil-passage the cap *g* is first removed, and this then permits the unscrewing and removal of the false bottom F, thus leaving the entire interior cavity and passages free to be thoroughly cleansed.

For the purpose of its removal, and for screwing it to its place, the false bottom has two small holes, *m m*, in its upper surface to receive the prongs of a pronged screw-driver.

It will now be perceived that the oil chamber or reservoir is entirely above the false bottom; that this bottom supports the main body of the oil, separating it from the duct *c*; that the oil passes through this bottom only as permitted by the valve; that the valve-seat is in this false bottom, and that the valve is adjustable therein by means of its thread and can be entirely closed, if desired; that cleaning of the passages will seldom be required, because most of the sediment which may be deposited would be left on the upper surface of the false bottom and around the top part of the screw-valve, and, as the false bottom has no hole through it except the one for its valve, that by closing up this valve before filling the chamber no excess of

oil, and, in fact, no oil, can pass into the axial passage, except when and as desired, even when the chamber is full, and then only to the extent desired, and which is determinably by the adjustment of the valve.

I claim—

1. The removable or false bottom F, located within and at the bottom of the oil-reservoir E, and made secure at that place, and adapted to be used substantially as shown, and for the purpose described.

2. The adjustable screw-valve K, combined with and located in the removable or false bottom F, to regulate the flow of oil, substantially as shown and described.

LEWIS H. FISHER.

Witnesses:
ISAAC NEWTON LEWIS,
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