D. T. MAIN.

AUTOMATIC LUBRICATOR.

APPLICATION FILED SEPT. 28, 1911.

1,049,503. Patented Jan. 7, 1913.

Fig. 1.

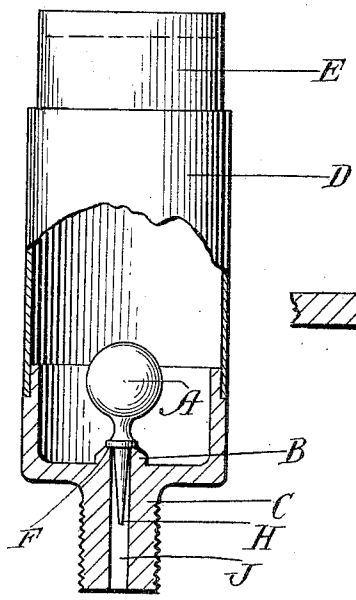
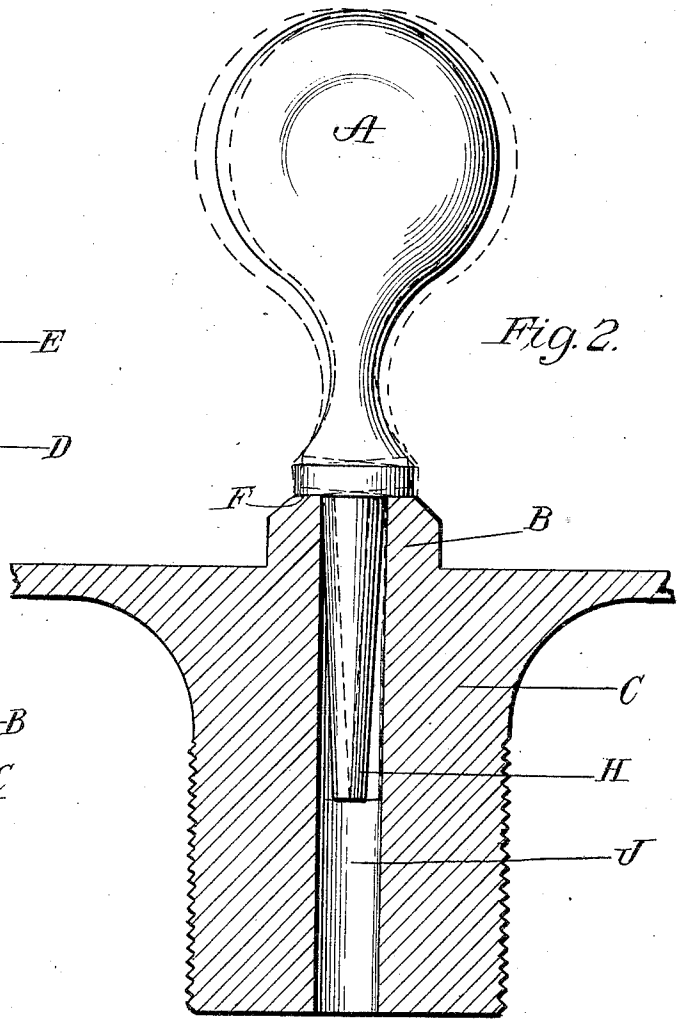


Fig. 2.



Witnesses

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AUTOMATIC LUBRICATOR.

1,049,503. Specification of Letters Patent. Patented Jan. 7, 1913.

Application filed September 28, 1911. Serial No. 651,843.

To all whom it may concern:

Be it known that I, DANIEL TODD MAIN, a British subject, residing at Nelson, in the county of Kootenay, in the Province of British Columbia, Canada, have invented certain new and useful Improvements in Automatic Lubricators, of which the following is a specification.

My invention relates to lubricators adapted to automatically lubricate the bearings of moving locomotives or cars, and has for its objects the provision of a lubricator which is simple in construction, inexpensive to manufacture and which is actuated by the vibration caused by the movement of the locomotive or car, whereby the lubricant is permitted to flow to the bearings only when the locomotive or car is in motion. I attain these objects by the mechanism illustrated in the accompanying drawing, in which:

Figure 1 is an elevation of the lubricator with a portion of the cup shown in section. Fig. 2 is an enlarged vertical section of a portion of the base of the cup and showing the valve in different positions in dotted lines.

Similar letters refer to similar parts throughout the several views.

The base C of the lubricator may be made of cast-iron, brass, or other suitable metal and has the casing D brazed or otherwise secured. The casing D may be made of tin or other suitable material and is provided with a cover E to prevent the spilling of the oil.

B, is the valve seat which is raised above the bottom of the lubricator to enable the valve seat to be faced off when it becomes worn by the action of the valve. The valve is made preferably of wrought iron on account of weight, and symmetrically formed so that it may be turned up in a lathe. The valve is provided with the ball top A and the collar F, the lower face of which engages the upper face of the valve seat B. The valve is also provided with the downwardly projecting tail or guide H which is preferably tapered, the degree of taper being dependent upon the rate of flow of oil desired. The tail or guide H projects into a suitable outlet passage J in the base C.

By providing the heavy weight A at the top of the valve, above the seat B, the valve will be "top heavy" and thus be easily shifted into the dotted positions, shown in Fig. 4, by the motion of the locomotive or car. The weight A also holds the valve tightly against its seat when the motion of the car ceases.

The shifting of the valve lifts one portion or another of the collar F from the seat B and thus permits the oil to flow through the valve from the casing into the passage J and thence to the part to be lubricated.

Having thus described the invention what is claimed as new is:

In a lubricator, the combination of a casing having a substantially vertical outlet passage from the bottom wall thereof and a raised valve seat surrounding said outlet passage, a valve member for closing said passage and comprising a disk adapted to rest on said valve seat, a comparatively heavy ball of larger diameter than the disk secured thereto and arranged in the casing above the disk and a tapering stem secured to the lower side of the disk and arranged in said passage and adapted to limit the rocking movement of the disk on the valve seat, the ratio of the weight of said ball to the remaining portions of said valve member being such that the center of gravity of the valve member is located above said valve seat and close to the center of gravity of the ball.

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Witnesses:

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