No. 652,089. Patented June 19, 1900.

H. DANGLER.

LUBRICATING APPARATUS.

(Application filed Sept. 23, 1899.)

(No Model.)

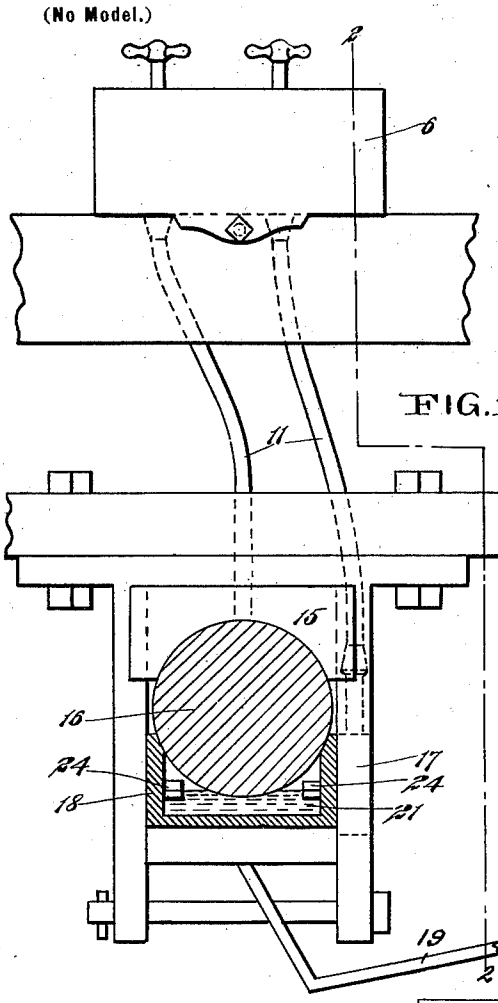


FIG. 1.

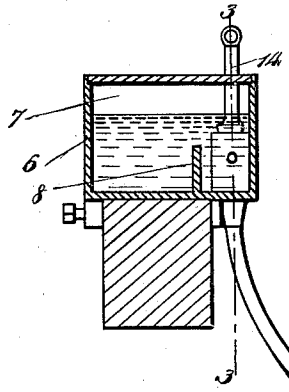


FIG. 2.

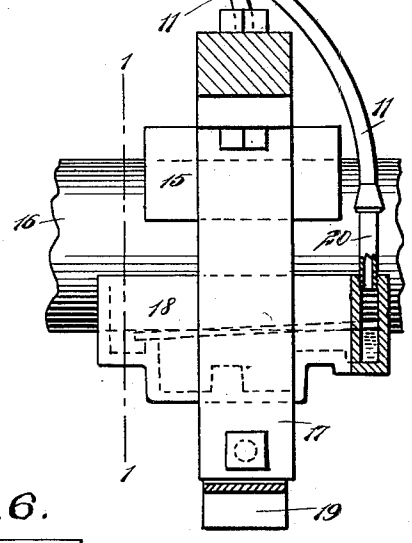


FIG. 6.

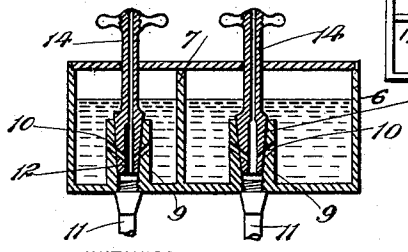


FIG. 3.

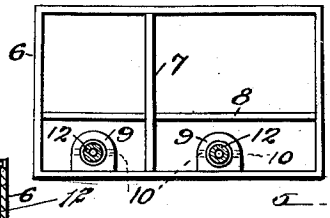


FIG. 4.

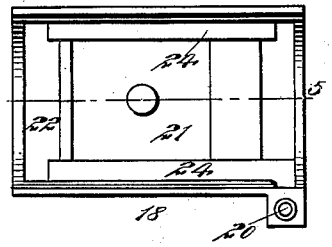
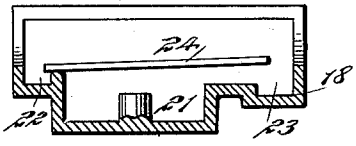


FIG. 5.



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HANK DANGLER, OF CLEBURNE, TEXAS.

LUBRICATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 652,089, dated June 19, 1900.

Application filed September 23, 1899. Serial No. 731,426. (No model.)

To all whom it may concern:

Be it known that I, HANK DANGLER, of Cleburne, in the county of Johnson and State of Texas, have invented a new and Improved Lubricating Apparatus, of which the following is a full, clear, and exact description.

This invention relates to an appliance for lubricating the bearings of locomotives, the invention embodying certain means by which the bearings may be lubricated automatically either during the movement of the locomotive or when it is standing still, the invention also embodying certain novel constructions permitting the lubrication of the engine manually whenever desired and independently of the lubricating apparatus.

This specification is the disclosure of one form of my invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the invention with parts in section on the line 1 1 of Fig. 2. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a section of the oil-reservoir on the line 3 3 of Fig. 2. Fig. 4 is a plan view of the cellar for holding the lubricant against the under side of the journal or axle. Fig. 5 is a section thereof on the line 5 5 of Fig. 4, and Fig. 6 is a plan view of the oil-reservoir.

The oil or other lubricant is placed in a box or reservoir 6, which is provided with a vertical partition 7, dividing it into two compartments, the partition 7 extending transversely of the box throughout the height and breadth thereof. The box is further provided with a partition 8, extending across the partition 7 and projecting above the bottom of the box or reservoir. This partition 8 serves to divide each compartment of the box into two divisions, which communicate with each other at their tops, as shown in Figs. 2 and 3, the oil in each compartment flowing over the top of the partition 8. By this partition sediment in the divisions of the compartments of the reservoir is prevented from passing from one division to the other. The reservoir 6 is provided in each of the compartments formed by the partition 7 with a nipple 9, the nipples communicating with orifices in the bottom of the reservoir and having openings 10, through which the lubricant may pass into the nipples and outward from the reservoir by means of pipes 11. Working in the nipples 9 are valve-plugs 12, which are hollow and provided with orifices capable of registry with the orifices 10 of the nipples 9. By turning the valve-plugs 12 so that the orifices therein register with the orifices in the nipples the lubricant may be permitted to flow from the reservoir 6 into the pipes 11. The valve-plugs 12 are provided with stems 14, by which they may be operated, and these stems are hollow, so that the oil may, if desired, be poured from an oil-can through the stems 14 and valve-plugs 12 into the pipes 11, thus lubricating the journals and cellar manually without the assistance of the other parts of the device. When the orifices in the valve-plugs 12 register with the orifices 10 in the nipples 9, the lubricant flows freely through the pipes 11. The pipes 11 are two in number and one of the pipes leads downward through journal-bearings 15, which are engaged by the axle or journal 16 and held in the pedestal 17 of the locomotive. This pipe supplies oil directly to the top of the journal. The lubricant cellar or receptacle 18 is held against the under side of the journal by means of a spring 19, mounted in any suitable manner. This cellar or receptacle 18 receives the lubricant from the other pipe 11, such remaining pipe 11 communicating with a nipple 20, passing upward from the oil cellar or receptacle at one side thereof. By this arrangement the lubricant is supplied uniformly to the journal at the top and bottom thereof. This receptacle is provided with depressed portion 21 in its bottom, in which the main portion of the lubricant is contained. As shown in Fig. 1, the journal or axle 16 in turning through this depression raises the oil to the sides of the cellar and the oil then falls back upon ledges 24, secured to the inner sides of the cellar. These ledges are inclined to the end of the pan opposite the end at which the nipple 20 is carried and lead the oil back to this point, at which point there is formed a small auxiliary reservoir or depression 22. The opposite end of the pan or reservoir is formed with a similar depression 23. In these

three depressions 21, 22, and 23 the lubricant is contained and by these means it is effectively applied to all portions of the journal. It may be observed by reference to Figs. 2 and 4 that the nipple 20 discharges the oil directly upon one of the ledges 24 and that this ledge causes the oil to be spread throughout the extent of the cellar.

The locomotive apparatus thus constructed acts automatically to supply the journal with a lubricant and spreads the same throughout the entire surface engaged. By turning the stems 14 the plugs 12 may be adjusted to regulate the flow of the lubricant and the apparatus is always ready to be used manually by simply pouring the oil through the hollow of the stems 14. It will be observed that the operation goes on automatically as long as the reservoir 6 is filled and that this operation is not dependent upon the movement of the engine.

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

1. In a lubricating apparatus, a reservoir having a partition therein, the partition extending throughout the height and breadth of the reservoir and forming it into two compartments, a second partition extending up from the bottom of the reservoir and forming each compartment into two divisions, the second partition being arranged to have the oil flow over the top thereof from one division to the other, and one division of each compartment having a discharge-orifice.

2. A lubricating apparatus, having a reservoir, a nipple situated in the reservoir and communicating with the discharge-orifice thereof, the nipple having openings in its side, and a hollow plug mounted to turn in the nipple and having an opening capable of registry with the opening in the nipple, whereby to open and close the reservoir.

3. In a lubricating apparatus, valve devices for controlling the supply of lubricant, such devices comprising a hollow stem through which the oil may be introduced independently of the action of the valve devices.

4. In a lubricating apparatus, the combination with the journal to be lubricated, of a bearing-block at the top thereof, a lubricating-cellar held against the under side of the journal, a reservoir, and two tubes leading from the reservoir, one of said tubes conducting the lubricant to the bearing-block and the other to the lubricating-cellar.

5. A lubricating apparatus, having an oil-cellar provided with an oil-supply device at its upper portion, and an inclined ledge mounted in the cellar and running from said oil-supply device longitudinally of the cellar, for the purpose described.

6. A lubricating apparatus, provided with an oil-cellar, the bottom of which is formed with a number of oil-cavities therein, the oil-cellar having an oil-supply device at its upper portion, and ledges running longitudinally of cellar along the inner sides thereof, one of the ledges leading from the oil-supply device.

7. In a lubricating apparatus, the combination with a journal-bearing, of an oil-reservoir, a cellar mounted below the journal, a tube passing from the oil-reservoir to the oil-cellar, and a second tube passing from the oil-reservoir to the bearing at the top of the journal.

8. In a lubricating apparatus, a reservoir having a partition therein forming it into two compartments, a second partition in the reservoir and forming each compartment into two divisions, and means for carrying off oil from each compartment, such means passing from one division of each compartment.

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