No. 608,329. Patented Aug. 2, 1898.

# E. W. HANCOCK.

## CAR AXLE LUBRICATOR.

(Application filed Nov. 13, 1897.)

(No Model.)

Fig. 1.

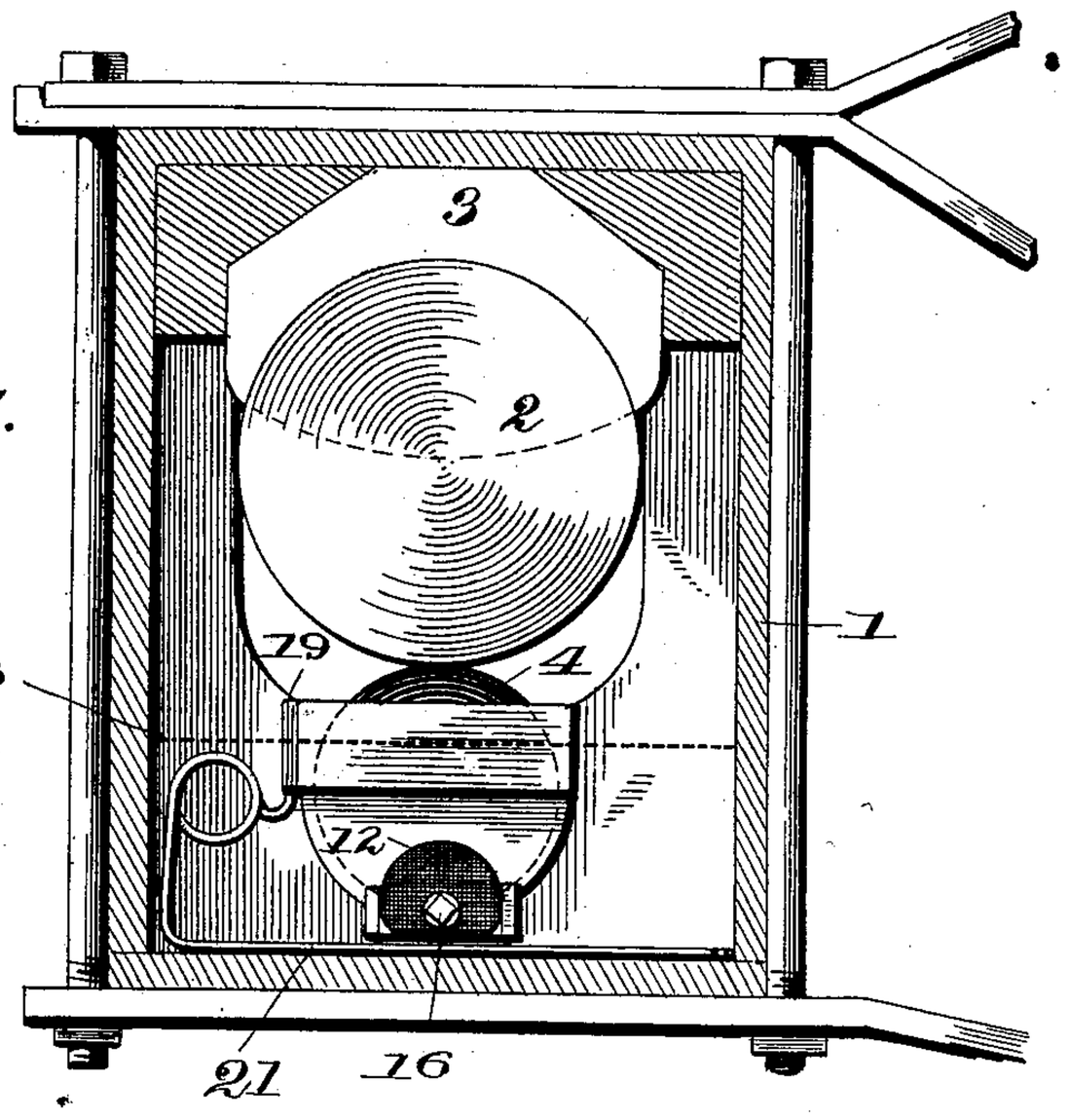



Fig. 2.

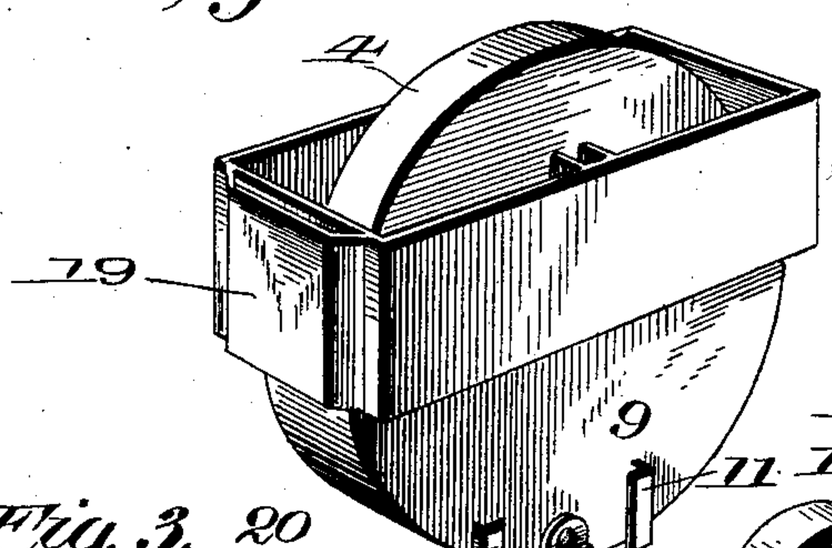



Fig. 3.

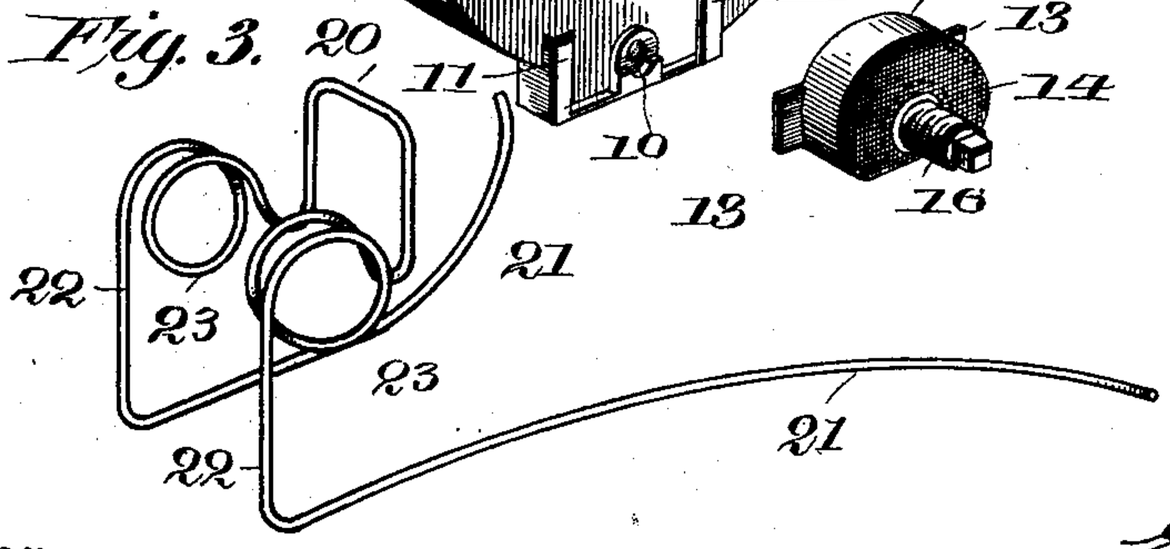
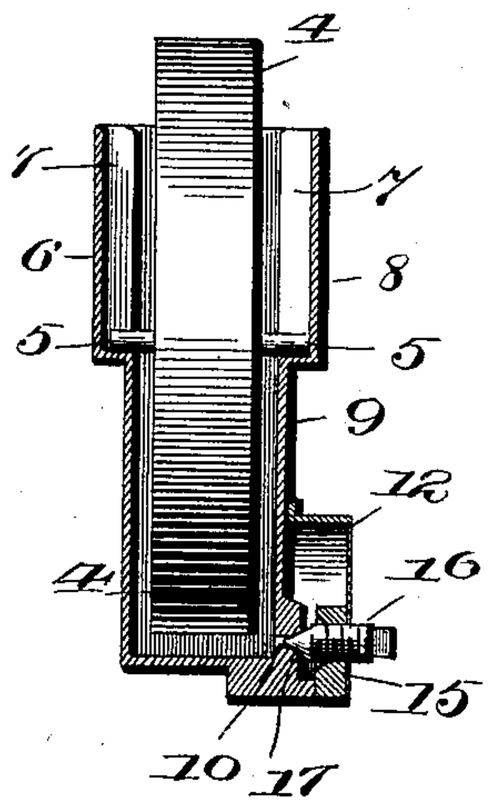



Fig. 4.




Fig. 5.




Witnesses

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# UNITED STATES PATENT OFFICE.

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## CAR-AXLE LUBRICATOR.

SPECIFICATION forming part of Letters Patent No. 608,329, dated August 2, 1898.

Application filed November 13, 1897. Serial No. 658,428. (No model.)

*To all whom it may concern:*

Be it known that I, EDDIE W. HANCOCK, a citizen of the United States, residing at Epping, in the county of Montgomery and State of Georgia, have invented certain new and useful Improvements in Car-Axle Lubricators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to lubricating devices adapted to be located in car-axle boxes; and it consists in the novel construction and arrangement of its parts, as hereinafter described.

The object of the invention is to provide a roller adapted to come in contact with the under portion of the car-axle, the lower portion of the said roller being submerged beneath the surface of the oil within the box, and thus as the car-axle revolves the roller is revolved and sufficient oil adheres to the periphery of the roller. This oil, being elevated, comes in contact with the surface of the axle and is carried up and lubricates the axle as it comes in contact with the lower surface of the brass. The roller, located within the box, is mounted in a suitable casing, said casing having in its lower end a suitable oil-inlet and a means located over said inlet for straining the oil. Thus nothing but pure oil is permitted to enter the casing, and this pure oil is elevated, as above intimated. The casing is mounted on a spring which at all times maintains the periphery of the roller in contact with the axle, the spring compensating for any perpendicular motion that the axle might have relative to the box.

The device is adapted to be placed in any ordinary axle-box now in use without altering the construction of the box in any respect whatever, and such a device when used entirely does away with the necessity of waste.

In the accompanying drawings, Figure 1 is a sectional view of the box, showing the roller located in its relative position to the axle. Fig. 2 is a perspective view of the roller and casing. Fig. 3 is a perspective view of the spring for supporting the casing. Fig. 4 is a perspective view of the straining device for the casing; and Fig. 5 is a transverse sectional view of the casing, showing the roller located therein.

As above stated, the axle-box 1 is of the ordinary construction, as is also the axle 2 and the brass 3. The roller 4 is provided with the extending axle ends 5 5. The casing 6 is adapted to surround the lower portion of the roller. Said casing is provided in its interior with the opposite perpendicular guides 7 7, said guides having between them recesses adapted to receive the axle ends 5 5. The upper portion 8 of the casing 6 is wider than the lower portion 9, and the axle ends 5 5 are adapted to rest against the bottom of the wide portion 8 and also against the top of the narrow portion 9, as shown in Fig. 5. Thus a bearing for the axle ends is formed. The lower portion of the casing 6 is provided with a perforation 10, and on the outside of the said casing and on opposite sides of the perforation 10 the perpendicular guides 11 11 are located. A screening device 12 is provided at each side with the flanges 13 13, said flanges being adapted to slip perpendicularly within the guides 11 11, and thus the screening device 12 is held in its proper position against the side of the casing 6 and over the perforation 10, as shown in Fig. 5.

The device 12 is provided with the screen 14 and the perforated section 15, the perforation of the said section 15 being adapted to be directly opposite the perforation 10 when the screening device 12 is in its proper position on the casing. The perforation of the section 15 is internally threaded and is adapted to receive the thread of the pin 16. Said pin is provided at its inner end with a point 17, said point being adapted to enter the perforation 10, as shown in Fig. 5. By revolving the pin 16 the point 17 will be carried away from or brought nearer to the perforation 10, and thus the flow of the oil into the interior of the casing 6 may be regulated.

In Fig. 1 the line 18 indicates the height of the oil. Thus it will be seen that the screening device 12 and the lower portion of the casing 6 are submerged beneath the surface of the oil, and thus the oil in passing through the screen 14 is relieved of any foreign matter—such as dust, dirt, cinders, &c.—and the oil entering the casing 6 is to all intents and purposes pure. At the same time it will be

observed that when the point 17 is within the outer portion of the perforation 10 the screening device 12 cannot be moved perpendicularly. Therefore the said point 17, when engaging the perforation 10, prevents the removal of the screening device 12. In order to remove the device, the pin 16 is revolved until the point 17 is clear of the outer end of the perforation 10, and then the screening device 12 may be readily lifted and the flanges 13 13 disengaged from the guides 11 11. The front end of the casing 6 is provided with a strip 19, said strip being secured at its ends to the end of the casing 6, the said strip extending out away from the casing and forming between its inner surface and the outer surface of the casing a pocket adapted to receive the central section 20 of the supporting mechanism. The supporting mechanism consists of a spring-rod having the outwardly-extending ends 21 21. The said ends are adapted to rest on the bottom of the box 1, the extremities of the ends being adapted to enter the corners of the box, and thus retain the supporting mechanism in its proper position. The ends 21 21 merge into the perpendicular sections 22 22, the said sections extending up along the inner side of the box, as shown in Fig. 1, the said sections 22 22 merging into the coil-springs 23 23, the said springs in turn merging into the central section 20, said section 20 being substantially perpendicular and adapted to enter the pocket behind the strip 19, the ends 21 21 having sufficient elasticity to adapt themselves to either a narrow or wide box and thus the supporting mechanism will adjust itself to a box of any size, the casing 6 being mounted on the central section 20, and the said section merging into the coil-springs 23 it will be observed that the roller 4 can be slipped under the axle 2 irrespective of the relative position of the said axle with the bottom of the box, and, furthermore, should the said axle 2 have a slight perpendicular play independent of the box 1 the said springs 23 23 will compensate for such play and at all times retain the periphery of the roller 4 in contact with the axle 2. As the axle 2 revolves the roller 4 is also revolved by the frictional contact with the said axle. The roller 4 will elevate such oil as adheres to its periphery. This oil comes in contact with the axle 2 and is carried up until it comes in contact with the edge of the brass 3. At this point the brass spreads the oil, and the oil that does not follow the axle in under the brass 3 is forced back into the body of the box. The oil that passes with the axle under the brass 3 lubricates the journal and maintains it in proper condition.

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

1. A car-axle lubricator comprising a roller adapted to come in contact with the axle, a casing containing said roller, a spring-support for said casing, said casing having a suitable oil-inlet, a straining device located over said inlet, a means for regulating the flow of the oil through said inlet.

2. A car-axle lubricator comprising a roller, a casing containing said roller, a spring-support for said casing, said casing having a suitable oil-inlet, a straining device located over the inlet, a device adapted to regulate the flow of the oil through the inlet, said device being also adapted to maintain the straining device in its proper position.

3. A car-axle lubricator comprising a roller, a casing containing said roller, said casing having a suitable oil-inlet, a supporting mechanism for the casing, said mechanism consisting of a spring-rod having outwardly-curved ends, said ends merging into perpendicular sections, the said sections merging into coil-springs, said springs merging into a central section, the central section coming in contact with the casing and supporting the same.

4. A car-axle lubricator comprising a roller, a casing containing said roller, said casing having a suitable oil-inlet, a pocket formed at the end of said casing, a supporting mechanism consisting of a spring-rod having outwardly-extending ends, said ends merging into the perpendicular sections, said sections merging into coil-springs, said springs merging into a central section, the said central section being adapted to enter the pocket formed on the casing and supporting the casing.

5. A car-axle lubricator comprising a roller adapted to come in contact with the axle, said roller having an axle provided with extended ends, a casing adapted to contain said roller, said casing having a suitable oil-inlet, said casing being suitably supported, perpendicular guides located in the interior of said casing, said guides being adapted to receive the extended axle ends of the roller.

6. A car-axle lubricator comprising a roller adapted to come in contact with the axle, a casing containing said roller, a suitable support for said casing, said casing having an oil-inlet, perpendicular guides located on the outside of the casing and on opposite sides of the oil-inlet, a straining mechanism having suitable flanges adapted to enter said guides, and a screen located on the straining mechanism.

7. A car-axle lubricator comprising a roller adapted to come in contact with the axle, a casing for said roller, said casing having a suitable oil-inlet, a suitable support for said casing, guides located on the outside of the casing and on opposite sides of the oil-inlet, a straining mechanism having flanges adapted to enter said guides, a screen located on the straining mechanism, a movable pin carried by said straining mechanism, said pin having its end pointed and being adapted to enter the oil-inlet of the casing.

8. A car-axle lubricator comprising a roller, a casing containing said roller, a suitable support for said casing, said casing having an

oil-inlet, guides located on the outside of the casing and on opposite sides of the oil-inlet, a straining mechanism having flanges adapted to enter said guides, a screen located on said straining mechanism, a perforated section having an internal thread located on the straining mechanism, a threaded pin adapted to enter said perforation, said pin being pointed at its inner end, the point of said pin being adapted to enter the oil-inlet of the casing.

In testimony whereof I affix my signature in presence of two witnesses.

EDDIE W. HANCOCK.

Witnesses:
C. M. ADAMS,
G. L. ADAMS.