R. C. MORRIS & H. H. McLANE.

Car-Axle Box.

No. 218,131. Patented Aug. 5, 1879.

Fig. 1.

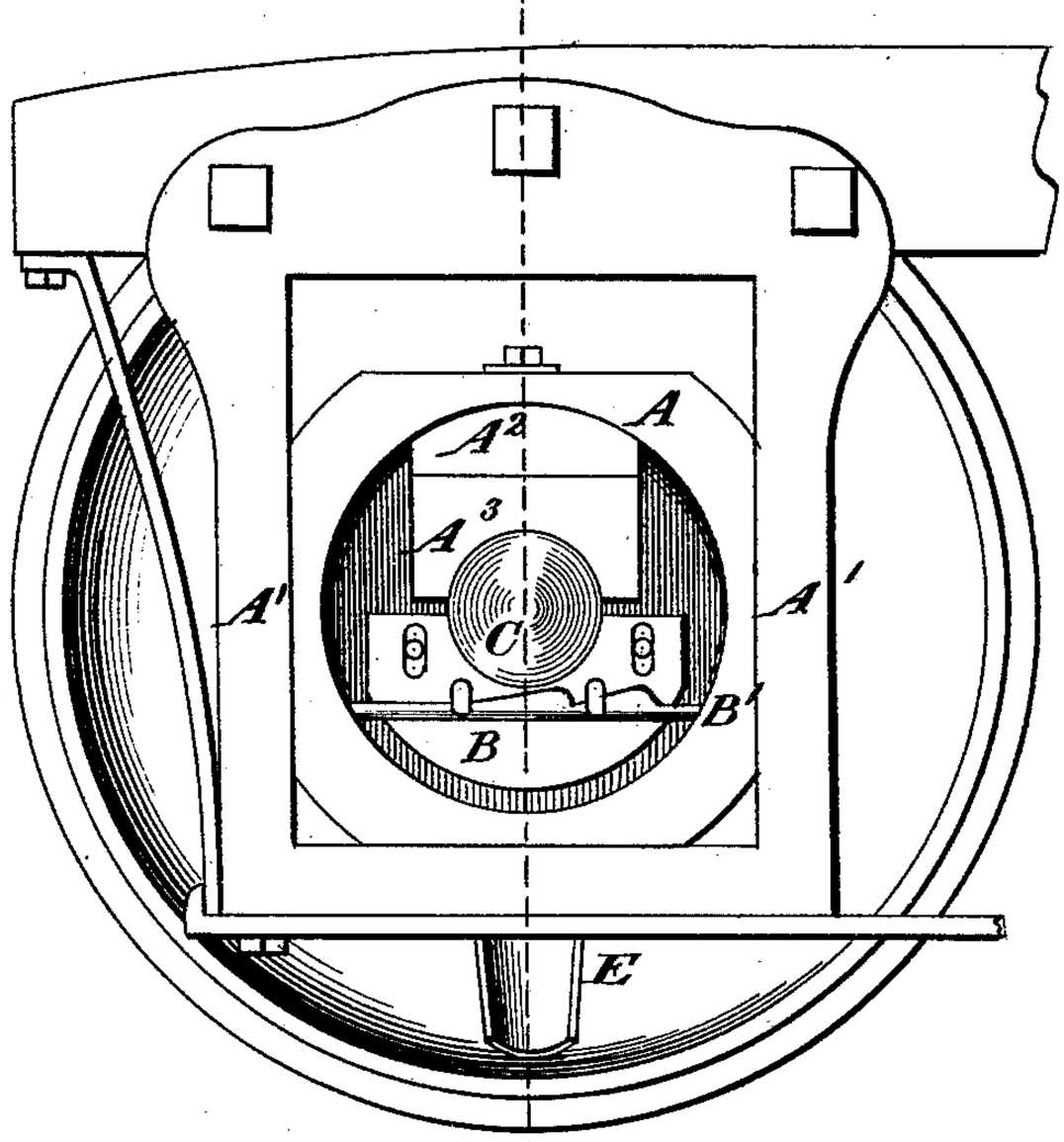


Fig. 2.

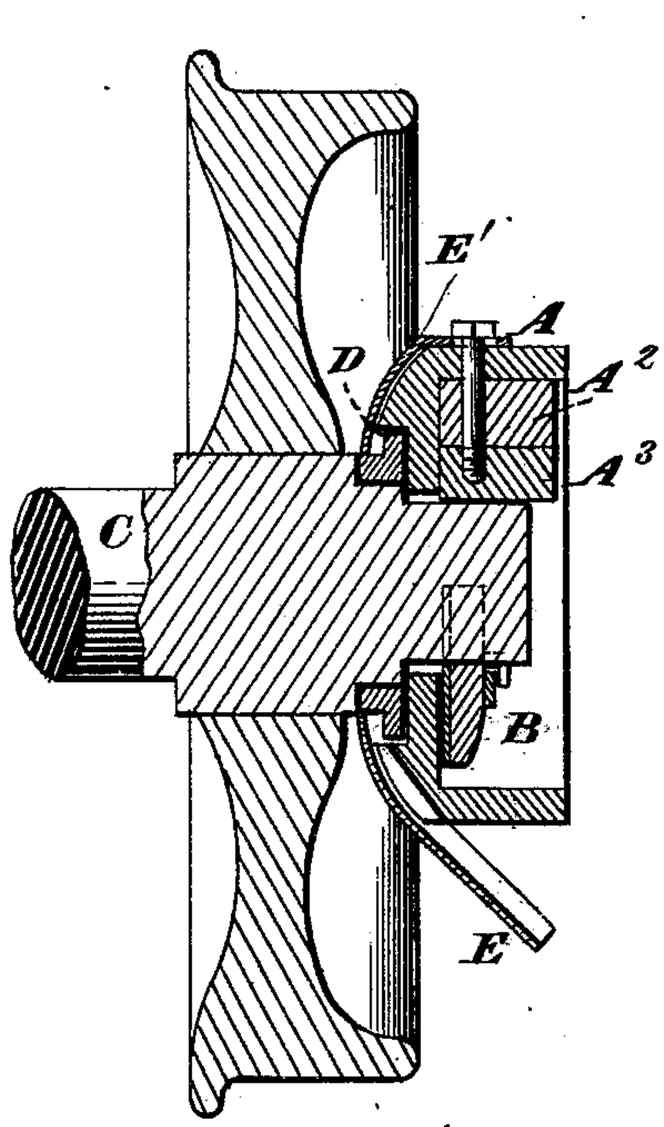


Fig. 3.

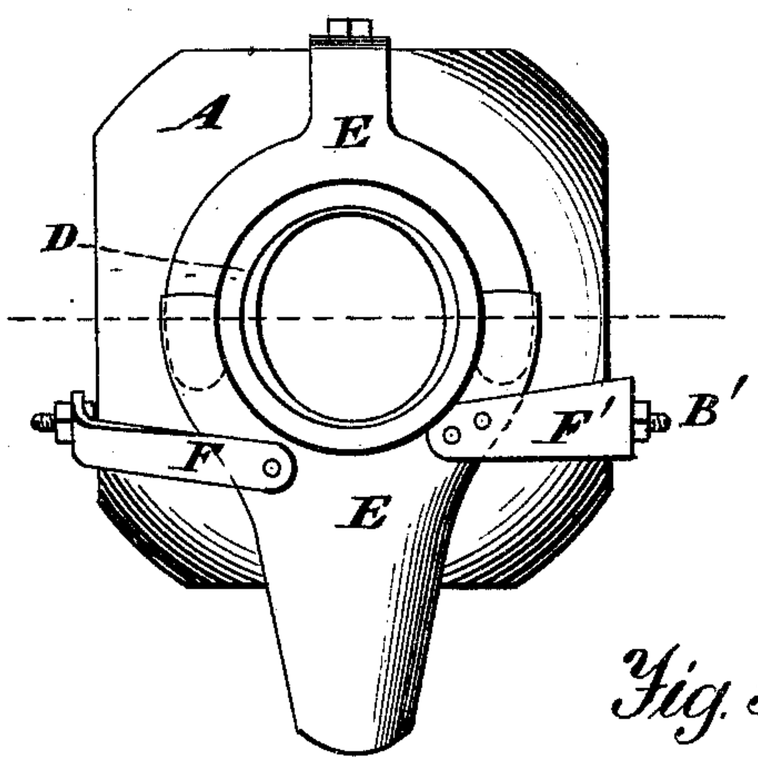


Fig. 4.

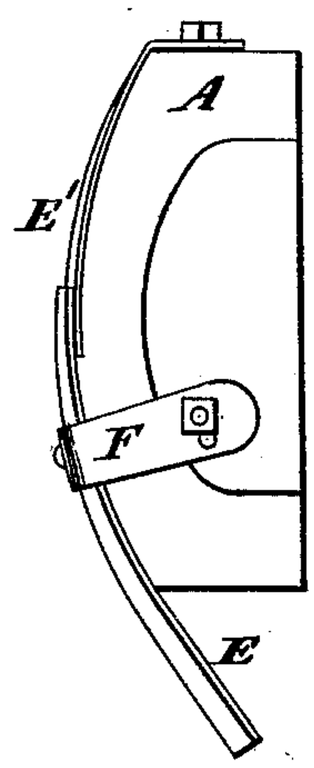
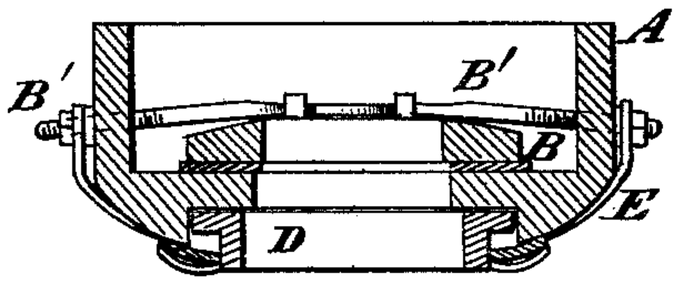


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

ROBERT C. MORRIS, OF OLNEY, ILLINOIS, AND HIRAM H. McLANE, OF SAN ANTONIO, TEXAS.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **218,131**, dated August 5, 1879; application filed March 29, 1879.

To all whom it may concern:

Be it known that we, ROBERT C. MORRIS, of Olney, Richland county, State of Illinois, and HIRAM H.. MCLANE, of San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Oil-Collectors for Railroad-Journals; and we 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—

Figure 1 being an elevation of a portion of the frame of a car-truck, showing also the jaw in which the housing and oil-reservoir moves, it having in it a box resting upon the journal of the axle, and a sliding plate for preventing the passage of the oil from said reservoir, and inclined surfaces for keeping the same in contact with the journal. Fig. 2 is a transverse sectional elevation of a car-wheel and a portion of an axle, showing our improvement in connection therewith, the box, the sliding plate, and the oil-collector or shield being shown in position. Fig. 3 is a rear-side elevation of the housing, showing the packing-ring or collar placed upon the axle, and the shield or oil-gatherer for keeping the grease from falling upon the truck or getting upon the face of the wheel, together with the devices for attaching it to the housing or oil-reservoir. Fig. 4 is a vertical sectional elevation of the housing or oil-reservoir and the shield, and the manner of applying the latter; and Fig. 5 is a transverse section of the same, showing also the collar or packing-ring, a slide for preventing the oil from passing out of its reservoir, a bar having upon it inclined surfaces for keeping it in contact with the axle, and a packing-plate placed between said slide and the housing.

Corresponding letters denote like parts in all the figures.

It is well known that, as the housings of railroad-journals and their oil-reservoirs are usually constructed, a considerable amount of the oil passes out through the aperture formed in them for the entrance of the journal of the axle, and that as a consequence it is liable to fall upon the rails, and thus cause more or less slipping of the driving-wheels of the engine; and, further, that it covers the outer faces of the car-wheels, and thus causes them to retain the dust and dirt thrown thereon, which disfigures them to such an extent as to make it necessary that they should be frequently cleaned, and that more or less of it ultimately finds its way into the housing, where it comes in contact with the journal, thus causing the rapid wearing away of the same and of the box in which it revolves.

This invention has for its object the providing of a remedy for the objections existing to the housings now in use as above enumerated; and to this end it consists, first, in providing a slotted plate of metal, or other suitable substance, which is placed in the housing, and is made to move vertically therein by inclined surfaces, so that it may be kept in contact with the under surface of the journal, and thus, in conjunction with suitable packing, prevent the passage of oil from the housing to the outside thereof, caused by the centrifugal action of the under portion of the journal; and, secondly, it consists in the combination, with the housing or oil-reservoirs of car and other railroad journals, of an annular flanged ring and a shield or oil-gatherer, said ring being placed upon the axle, outside of the wheel, but within the housing upon its rear side, it being firmly secured to the axle, the purpose being to collect any oil that may pass out of the reservoir rearward, and conduct it away from the rails and from the wheels; and it further consists in certain combinations, as will be more fully explained hereinafter.

In putting our improved device into operation we apply to any of the well-known forms of car jaws and axles a peculiar form of housing, A, which is provided with ribs or grooves for keeping it in position in the jaws A^1. This housing is provided with a seat, A^2, for the box A^3, its lower portion constituting an oil-reservoir similar in form to those now in use.

To prevent the centrifugal action of the journal from forcing the oil out of the housing upon the wheel, a sliding plate, B, is attached

to the inner face of the inner wall of the housing A, it being provided with vertical slots, so that when the concave portion of its upper surface becomes worn away it can be raised up, and thus said surface be kept in contact with the journal, which will prevent the oil from being forced past it. For adjusting the sliding plate B in its required position, a bar, B′, is provided, which passes through the walls of the housing, its outer ends being supplied with screw-threads and nuts for moving it longitudinally and securing it in place. Upon the upper edge of this bar inclined surfaces are formed, so that in moving it, as above described, said surfaces will act upon projections from the face of the plate and raise it up, as described. Between this plate B and the wall of the housing there is placed a sheet of leather, rubber, or other suitable packing, the upper concave surface of which also comes in contact with the journal, and thus prevents any oil from passing out around the lower portion thereof should any pass the plate B.

For the purpose of further preventing the passage of the oil inward from the reservoir there is shrunk or otherwise fastened upon the axle C a flanged collar, D, the inner edge of which bears upon the surface of the housing, while its outwardly-projecting flange extends beyond the edge of the shield E, soon to be described, as shown clearly in Fig. 2, as a consequence of which any oil that may pass out of the housing and come in contact with the outer face of the collar will be by it directed into said shield, which consists of plates of metal, E and E′, the latter being secured to the upper surface of the housing, substantially in the manner shown in Fig. 4, its lower portion partially surrounding the axle and forming a reservoir, into which any oil that may pass the flanged ring or collar D is directed, and carried into the lower portion, E, of the shield or oil-gatherer, its lower ends passing below the upper portion of the part E.

The portion E of the shield is similar in form to that already described; but it has a spout or conduit formed on its lower end, for conducting outward from the wheels and away from the rails any oil that may find its way into it, and, if found necessary, it may be provided with a receptacle for gathering and retaining such oil.

For the purpose of facilitating the passage of the oil from the reservoir formed in the shield, the rear portion of the housing may be furnished with a groove, as shown in Fig. 2. The parts of this shield are secured in position on the housing by lugs or strips of metal, F and F′, as shown in Fig. 3.

Having thus described our improved device, what we claim, and desire to secure by Letters Patent, is—

1. The combination of the annular flanged ring and the shield or oil-gatherer, for aiding in arresting the inward passage of any oil that may pass the vertically-adjustable plate, and directing it to a point outside of the rails of the track, substantially as described.

2. The shield or oil-gatherer composed of the parts E E′, for collecting any oil that may pass the flanged ring and directing it to a point outside of the wheels of the vehicle and the rails of the track, the parts being constructed and operating substantially as described.

3. The combination of the vertically-adjustable plate B and inclined surfaces B′ B′, when used in connection with the journal A of a railroad-vehicle, substantially as and for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

ROBERT C. MORRIS.
HIRAM H. McLANE.

Witnesses to the signature of Robert C. Morris:

SAM. B. WINSOR,
CHAS. G. COONS.

Witnesses to the signature of Hiram H. McLane:

EDWARD MILES,
D. W. HEARD.