R. C. MORRIS.
Car-Journal Cooler.

No. 207,336. Patented Aug. 20, 1878.

Fig. 1.

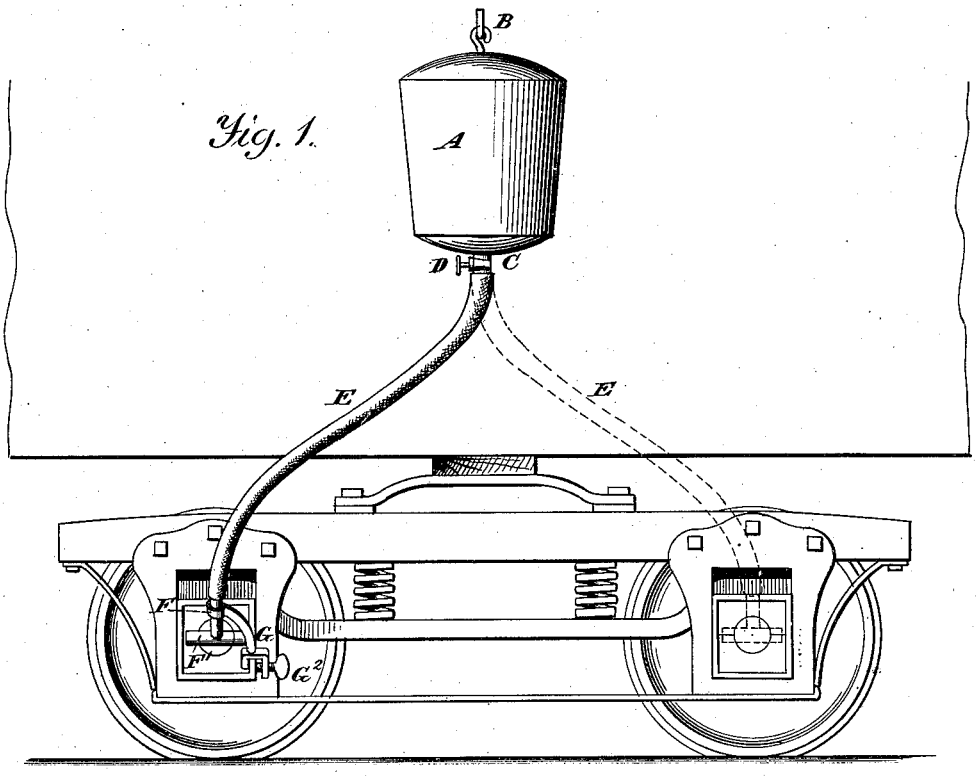


Fig. 2.

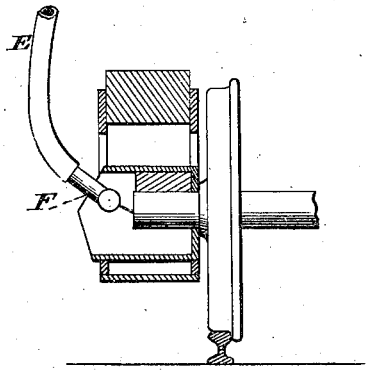
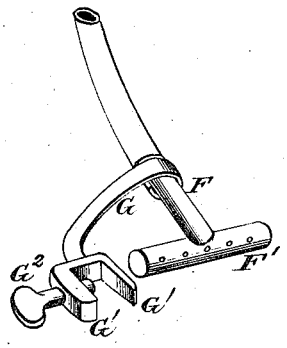


Fig. 3.



Witnesses.
A. Ruppert.
C. M. Connell

Inventor:
Robert C. Morris
Per Jas M Blanchard
attorney.

UNITED STATES PATENT OFFICE.

ROBERT C. MORRIS, OF OLNEY, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO HIRAM H. McLANE, OF SAN ANTONIO, TEXAS.

IMPROVEMENT IN CAR-JOURNAL COOLERS.

Specification forming part of Letters Patent No. **207,336**, dated August 20, 1878; application filed August 6, 1878.

To all whom it may concern:

Be it known that I, ROBERT C. MORRIS, of Olney, in the county of Richland and State of Illinois, have invented certain new and useful Improvements in Journal-Coolers; and I do hereby declare that the following is a full, clear, and exact description thereof, 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 a side elevation of a portion of a car having my improved journal-cooler attached thereto, it showing an elevated water-reservoir, a cock or valve for regulating the flow of the water, a pipe for conducting it to the housing of the journal, and a perforated discharge-pipe for directing the water upon the journal. Fig. 2 is an elevation, partly in section, showing one wheel of a car, a portion of the axle, the housing and box, and a portion of the jaw and of the pipe for conducting the water to the housing; and Fig. 3 is a perspective view, showing a portion of the water-conducting pipe, the perforated pipe for delivering the water upon the journal, and an adjustable clamp for securing the pipes to the housing.

Corresponding letters denote like parts in all of the figures.

This invention relates to a device for cooling the journals of railroad-vehicles when they have become heated from want of proper lubrication or from undue friction while in use, but which may, if found desirable, be used to prevent the heating of such journals by causing a stream or streams of water to be applied to them before such heating takes place.

The danger arising from the overheating of car-journals when in use, as well as the delay and expense resulting therefrom, are well-known and serious disadvantages, and hence the necessity for providing some remedy for such defects, which is the object of my present invention, it consisting in providing a reservoir for water, which may be attached to any railroad-car or other vehicle at any point sufficiently elevated above the journals thereof to cause the water to flow therefrom to the housings which surround the journals, such reservoir being capable of being detached from any position in which it may be placed and removed to any other where it may be required; and the invention further consists in certain combinations and arrangements, as will be more fully explained hereinafter.

In constructing journal-coolers of this type a reservoir, A, of any flexible material, such as rubber, gutta-percha, or canvas saturated with glycerine, is used; or it may be constructed of wood or metal, and of such form as to cause it to be easily attachable to the side or end of a car, or to its roof, or to any point sufficiently elevated to cause water to flow from it by its own gravity to the journals of the vehicle. When this vessel is placed on the side or end of a car its upper end is provided with an eye-bolt, B, or other suitable device with which to attach it, and it is to have an aperture formed in its cover through which to pour the water. The lower end of this reservoir is provided with a short metallic pipe, C, in which there is placed a cock or valve, D, for regulating the flow of water. If preferred, this cock or valve may be inserted in any other portion of the conducting-pipe—for instance, in its lower end, and near the point where it enters the housing of the journal—at which latter place it will be more readily accessible than when placed near the reservoir.

Connected to the reservoir, or to the short pipe attached thereto, is a pipe, E, which, by preference, is made of rubber, canvas, or other flexible material, but which may be made of metal and provided with suitable joints to allow for the varying movements of the car-body and the truck. This pipe conducts water from the reservoir to a pipe, F, which is made attachable to and detachable from the housing in a manner soon to be described, the pipe E being branched, as shown in dotted lines, if preferred, so as to conduct water to both of the journals of one side of a truck at one and the same time.

The pipe F above alluded to is, by preference, in the form of the letter T, in order that a series of jets of water may be discharged upon the journal at different points at the same time. In practice that portion of this pipe which is lettered F′ is placed in the housing

of a journal at about the point indicated in Figs. 1 and 2, and the perforations therein are in such a position as to direct the jets of water against the end of the journal; or it may be attached to the housing at a lower point, so as to allow it to be below said journal, and then the perforations may be in such a position as to cause the jets of water to come in contact with the whole length of the same and upon its lower portion.

I wish it understood, however, that I do not confine my invention to the form of the pipe which delivers the water upon the journal, as it is evident that a single jet directed either against the end or the under side thereof will produce a beneficial effect.

For securing the pipe to the housing in such a manner that it may be readily detachable, there is provided a clamp, G, one end of which is adjustably attached to the pipe F, while the opposite one is provided with jaws G^1 G^1 and a set-screw, G^2, for attaching it to the housing, as shown in Fig. 1.

From the above description it will be seen that this device is one which may at any time be attached to a car or other railroad-vehicle when necessary to cool the journal or to prevent the heating thereof, and one which may be as readily detached therefrom and placed in the car or in any convenient place for transportation, and thus become a part and parcel of regular railroad supplies.

Some of the advantages growing out of the use of a device of this character may be stated as follows: It can be constructed at small expense, is readily applicable when required for use, does not remove or destroy the lubricating material used on the journals, but, on the contrary, facilitates the lubrication by mingling water with the oil, so that in the event of sufficient heat being generated the two together become an excellent lubricant, which will prevent the excessive heating if applied in season, and will reduce the temperature of the parts when it has been raised so high as to become destructive or dangerous.

I am aware that water has heretofore been applied to car-journals for the purpose of cooling them when heated, and also that such water has been conveyed to the housings thereof through pipes, and hence I do not claim, broadly, the use of water for such purposes; neither do I claim, broadly, the combination of a reservoir for water and a pipe for conducting water to the housing of a journal; but,

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

1. In an apparatus for cooling the journals of railroad-vehicles, the combination of an attachable and detachable reservoir for containing water, a regulating-cock or equivalent device for controlling the flow of water therefrom, a pipe for conducting the water to the housing, and a pipe for directing it upon the journal, substantially in the manner and for the purpose set forth.

2. In an apparatus for cooling the journals of railroad-vehicles, the combination of an attachable and detachable reservoir, a hose or pipe for conducting the water to the housing, and an adjustable clamp for attaching said hose to the housing, the parts being arranged to operate substantially as set forth.

3. In an apparatus for cooling the journals of railroad-vehicles, the combination of the T-shaped pipe F F′, the conducting-pipe E, regulating-cock or valve D, and the attachable and detachable reservoir A, the parts being constructed and arranged for operation substantially as set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ROBERT C. MORRIS.

Witnesses:
C. M. CONNELL,
H. H. MCLANE.