M. B. STAFFORD.
Car Axle-Box.

No. 205,768. **Patented July 9, 1878.**

Fig. 1.

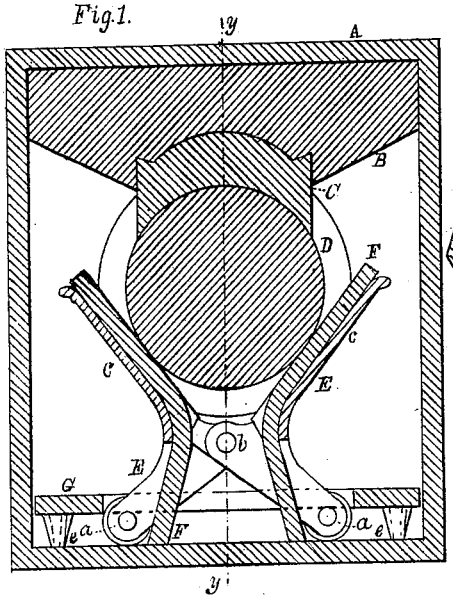


Fig. 2.

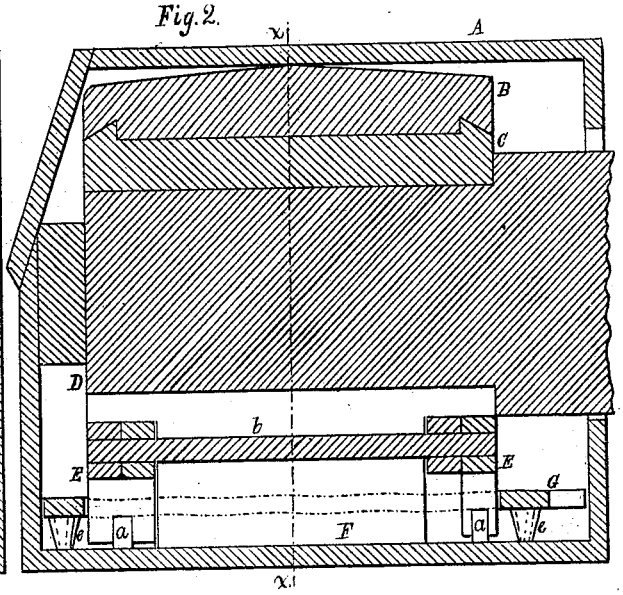


Fig. 4

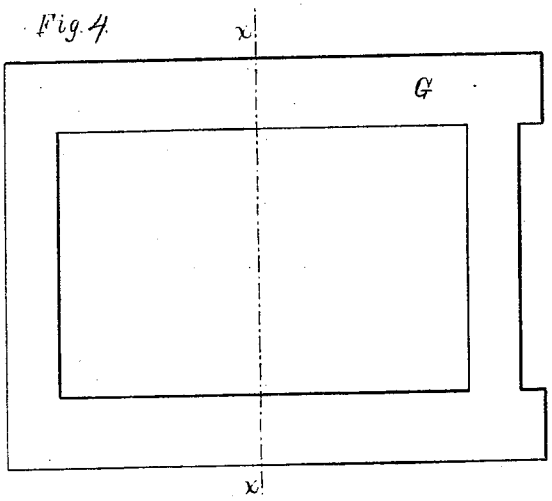
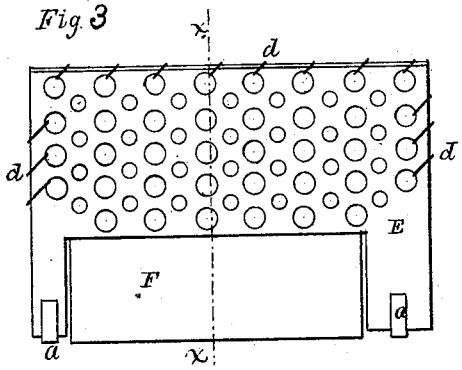


Fig. 3



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UNITED STATES PATENT OFFICE.

MARSHALL B. STAFFORD, OF NEW YORK, N. Y.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **205,768**, dated July 9, 1878; application filed March 15, 1878.

To all whom it may concern:

Be it known that I, MARSHALL B. STAFFORD, of the city, county, and State of New York, have invented an Improved Oiler and Wiper for Journals of Railroad-Cars, of which the following is a specification:

This invention relates to a device for bringing up the oil to the journals of the axles of railroad-cars and wiping the dirt from said journals; and consists in the features of invention hereinafter set forth, whereby the conductors of oil from the lower part of the housing are made, by the gravity or weight of parts of the structure, to bear against the journal and adapt themselves to it as the brasses or other parts are worn away, substantially as hereinafter more fully set forth.

Said invention also consists in the combination, with the journal and housing of a railroad-car, of strips of felt or equivalent textile fabric extending from the lower part of the housing up against the sides of the journal, said strips of felt or other textile fabric being connected together and supported upon rollers, as described, whereby they are made to move together in adapting themselves to the motion of the journal in the housing, substantially as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a vertical section, on the plane indicated by the line *x x* of Figs. 2, 3, and 4, of my apparatus arranged in a housing for use. Fig. 2 is a vertical axial section of the same on the plane indicated by the line *y y*, drawn across Fig. 1. Fig. 3 is an elevation of that portion of my apparatus which conveys the oil to the journal, and of most of the operative parts. Fig. 4 is a plan of a plate designed to keep the remainder of my apparatus in proper operative position.

A is the housing for the journal-box and concomitant parts. B is the backing of the box, and C is the bearing brass or box. D is the journal of one of the axles, to which the car-wheels are attached. All these parts are constructed substantially like those now in common use.

E E are two frames, which are jointed together upon an axis, *b*, and preferably provided with rollers *a a* at their lower ends, to rest upon the lower plate of the housing, to facilitate the self-adjustment of the oilers and wipers to the axle, the rollers giving greater ease of motion of the frames E E upon the bottom of the housing. The upper part of each of the frames E E is shown in the drawings as formed of a plate, *c*, which is reticulated, as shown, to allow free exit to the superfluous oil and other matters.

F F are strips of felt attached, by stitches *d* or otherwise, to the plates *c c*, and extending upward from the bottom of the housing to the sides of the axle, as shown. These strips of felt, by capillary attraction, take the oil from the lower part of the housing and convey it to the axle, so that the axle is always supplied with oil, so long as there is any in the housing to supply it. They also have the further advantage of wiping the journal constantly, so that any dirt or other impurities which would otherwise gather upon the journal and cause it to cut in the box, are taken off and transferred to the felt, where they do no very material harm.

I have described the strips of felt F F as being sewed or stitched to the plates *c c;* but they may be attached to other and separate plates, which are adapted to fit upon the plates *c c*, or upon the end pieces thereof, in such a way as to secure such separate plates in position, and at the same time make them removable without the necessity of removing the frames E E from the housing at all—as, for example, they might be attached to separate plates fitted to dovetail into the plates *c c*, or to separate plates having pins or projections to fit into some of the holes in the plates *c c*, to hold them in place, when it is obvious that the felts might be removed and replaced without removing the frames E E from the housing.

G is a plate placed in the lower part of the housing to keep the frames E E in place. It is shown as being supported on legs *e e;* but these legs may be made flat and placed opposite the rollers *a a*, and made to operate as stops to the said rollers, so as to prevent their going beyond a certain position, if found desirable. This plate G also serves the further and important purpose of checking the surging of the oil in the housing which would otherwise be caused by the motion of the truck in passing over the inequalities of the road, and effectually keeps it from being thrown out

of the housing by such motion and wasted upon the wheels of the car, thereby effecting a very great saving in lubricating material.

In the foregoing description I have represented the textile strips F F as being kept up against the axle by the weight of the frames E E, and I regard this device for keeping said strips in contact with the journal as an important part of the said invention; but the strips F F, extending from the lower part of the housing up against the sides of the journal, and connected together so as to move together in adapting themselves to the vibrations of the journal, and thereby preserve the contact of both with the journal, present important advantages, irrespective of the particular device by which they are kept in contact with the said sides, and their combination with the journal, and irrespective of the mode of applying yielding pressure to keep them in such contact and adapt them to the position of the journal, is also an important part of the said invention.

An inspection of the drawings will show that the form of the frames E E is such that their weight, resting upon the rollers *a a*, tends to bring the felt into contact with the axle, and that therefore they will always bear upon the journal from the force of gravity of the parts and no springs are necessary to keep them against the journal and in operative position.

I claim as my invention—

1. The combination, substantially as hereinbefore described, of the frames E E and the conducting-strips F F, adapted to be used in combination with the journal D, as set forth.

2. The combination, with the frames E E, of the adjusting-plate G, substantially as hereinbefore set forth.

3. The combination, with the journal and housing of a railroad-car, of strips of felt connected together by supporting frame-work, and extending from the lower part of the housing up against the sides of the journal, and the rollers *a a*, attached to said supporting frame-work and resting on the bottom of the housing, whereby the said strips of felt are adapted to move easily in unison to adjust themselves to the motion of the journal, substantially as hereinbefore set forth.

MARSHALL B. STAFFORD.

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