

S. USTICK.

2 Sheets--Sheet 1.

Improvement in Lubricators for Car-Axle Journals.

No. 129,500.

Patented July 16, 1872.

FIG. 1

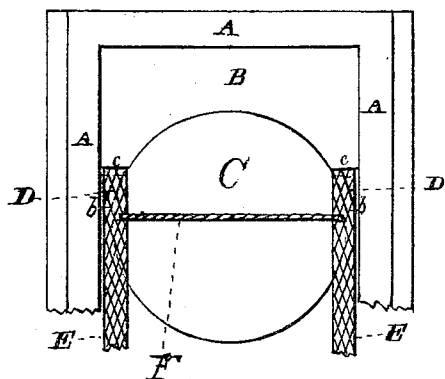


FIG. 2

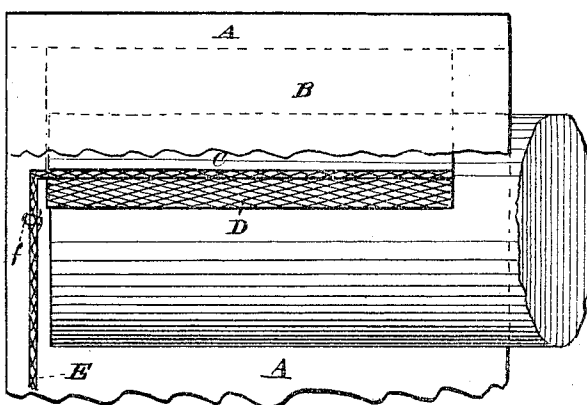


FIG. 3

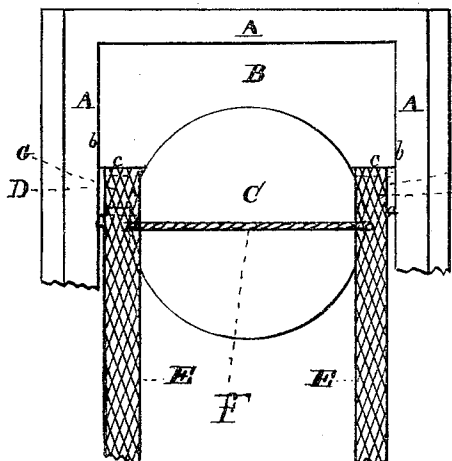


FIG. 4

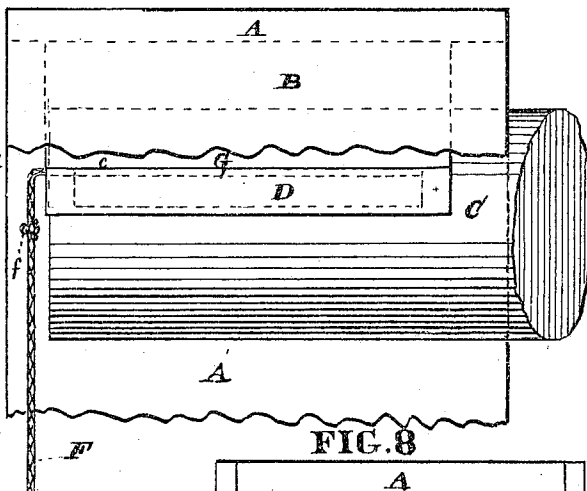


FIG. 5

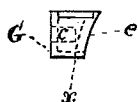


FIG. 6

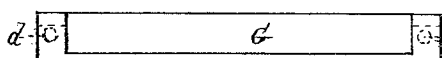


FIG. 7

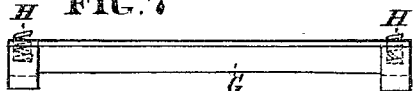
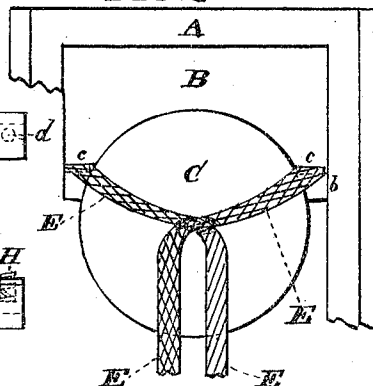


FIG. 8



WITNESSES

Thomas J. Bewley
Isaac Rindge

INVENTOR.

Stephen Ustick

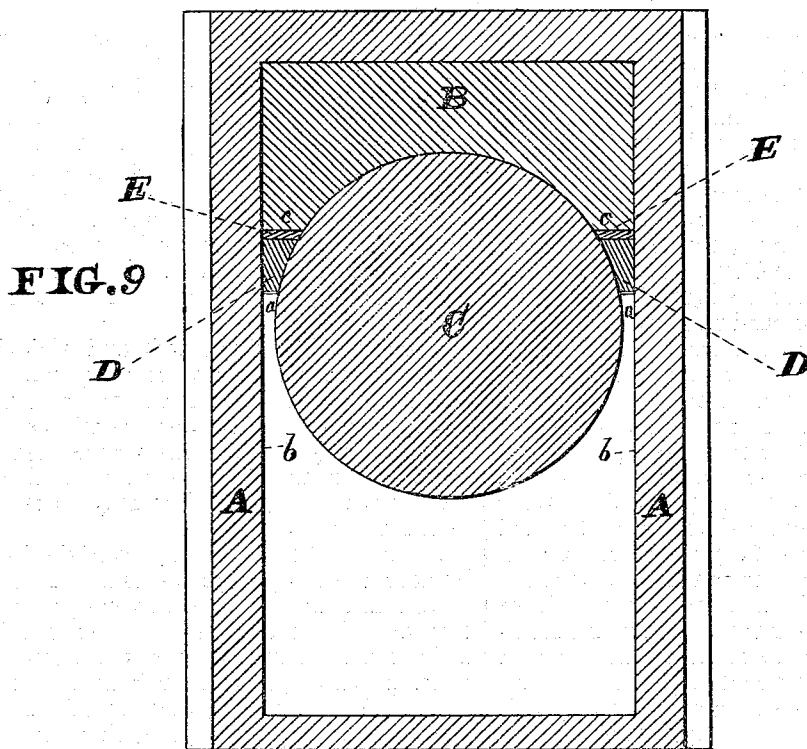
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Improvement in Lubricators for Car-Axle Journals.

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Witnesses

Isaac P. Mudgett
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UNITED STATES PATENT OFFICE.

STEPHEN USTICK, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN LUBRICATORS FOR CAR-AXLE JOURNALS.

Specification forming part of Letters Patent No. 129,500, dated July 16, 1872.

Specification describing certain Improvements in Lubricating Car-Journals, invented by STEPHEN USTICK, of the city of Philadelphia, in the State of Pennsylvania.

My invention is an improvement on the one for which Letters Patent were granted to me on the 5th day of December, 1871, and relates to the combination of oil-distributing pads with the journal and bearing, by so constructing and placing them as to fill up the spaces formed by the journal, the lower edges of the bearing, and the sides of the car-box above the center of the journal. The pads are held intact against the lower edge of the bearing and the periphery of the journal without the use of the devices shown in my former patents. Wicks for conveying the oil from the lower part of the journal-box or other oil-chamber are combined at their upper ends with the pads. Said wicks may be connected together at the front end of the bearing by means of a cord or strip of suitable material, for the purpose of conveying the oil to either pad, which may at any time have a deficiency of oil, from the pad having a greater supply of oil. The distributing pad and wick at each side of the journal may be in a single piece, if desired. This plan answers very well when the spaces to be filled up by the pads are very small; but when the spaces are large I prefer using separate wicks. When the spaces are large the pads may be placed in boxes or cases, open at the sides contiguous to the journal and lower edges of the bearing, the said cases being provided with any suitable springs to bear against the sides of the journal-box. The springs, being intended to merely press the pads forward to compensate for their slight wear, may have but little strength.

Figure 1 is an end elevation of an upper portion of the journal-box A, bearing B, and journal C, with the improvements attached. Fig. 2 is a side elevation of the same. Figs. 3 and 4 are like views, showing the cases G G containing the pads D D and wicks E E. Fig. 5 is an end view of one of the cases G. Figs. 6 and 7 are a side elevation and a top view of the same. Fig. 8 is an end view of the box A and parts attached, showing a looped connection of the wicks E E. Fig. 9, Sheet 2, is a cross-section of the car-box A, journal-bearing B, journal C, pads D D, and wicks E E, on an enlarged scale.

Like letters in all the figures indicate the same parts.

A represents a car journal-box; B, the bearing; and C, the journal. D D are pads of fibrous material for distributing the oil upon the periphery of the journal. E E are wicks which convey the oil to said pads from the lower part of the journal-box, the pads and wicks filling up the spaces *a a* between the sides *b b* of the box A and the journal C, immediately beneath the lower edges *c c* of the bearing, as seen in Figs. 1 and 2.

The operation of the pads and wicks being so fully set forth in my former patents as to supersede the necessity of an explanation here, I will merely state that, as the oil is supplied to the pads by means of the wicks so as to keep them well saturated, it is distributed on the periphery of the journal as may be required, as the latter revolves.

The pad in front of the motion of the journal, by acting as a wiper, prevents a large amount of oil being carried around by the journal and thrown off in its rapid revolutions; and hence a sheet of oil may always be kept between the bearing and the journal for their perfect lubrication. Besides this advantage gained by the use of the distributing-pads, there are others of an important character, viz.: The pad in the rear of the motion of the journal acts as a wiper to throw down any dirt which might collect on the under side of the journal-box; and the oil not being permitted to be thrown off of the face of the journal in its revolutions, as it continuously passes from the bearing, a very moderate supply of oil to the distributing-pads is only necessary to keep up a perfect lubrication, and hence very small wicks may be used. All of these advantages are gained in my former patents; but the additional advantages gained by my present invention are in its adaptation to all car-bearings in use, without requiring any alteration of or additions to the bearings, whereby much time and expense are saved.

I provide for conveying the oil to either pad which may have a deficiency of oil from the other pad having a greater amount of oil, or directly from the wick in connection therewith by means of a strip or cord, F, which is connected at its ends to the wicks at the front end of the journal. The cord F may be dis-

pensed with by looping the wicks together, as shown in Fig. 8. When the width of the journal-box is much greater than the diameter of the journal, so as to make the spaces *a a* to be filled up by the pads wide across, I design placing the pads *D D* in metallic cases *G*, as seen in Figs. 3 and 4. One of the cases is represented in detail in Figs. 5, 6, and 7. The cases are provided at each end with a suitable spring, *H*, which bears against the vertical sides *b b* of the car-box *A*. When spiral springs are employed I set them in the recesses *d* of the cases, as shown in Fig. 7. The cases may have concave surfaces *e* at their ends to bear against the journal; or, if desired, the cases may be recessed also at the ends deep enough, as represented by a dotted line at Fig. 5, to admit of the pads touching the journal the whole length of the bearing.

Instead of employing whole strips of felt, as represented, to form the pads *D D*, cotton waste, or other loose material, may be packed

in the cases *G G*. Increased elasticity may be given to the pads by combining a small quantity of curled hair with their outer sides, to press them forward against the journal.

I claim as my invention—

1. The combination of the pads *D D*, with or without the cases *G G*, with the vertical sides *b b* of a car-box, the lower edges *c c* of the journal-bearing and the periphery of the journal, so as to fill up the downwardly diminishing spaces *a a*, and thus be held intact against the lower edges of the bearing and the periphery of the journal for lubricating the latter, substantially described.

2. The combination of the cord *F* with the wicks *E E*, substantially in the manner and for the purpose set forth.

STEPHEN USTICK.

Witnesses:

THOMAS J. BEWLEY,
ISAAC RINDGE.