P. E. PROUST.

Car-Axle Box.

No. 46,856. Patented Mar. 14, 1865.

Fig. 1

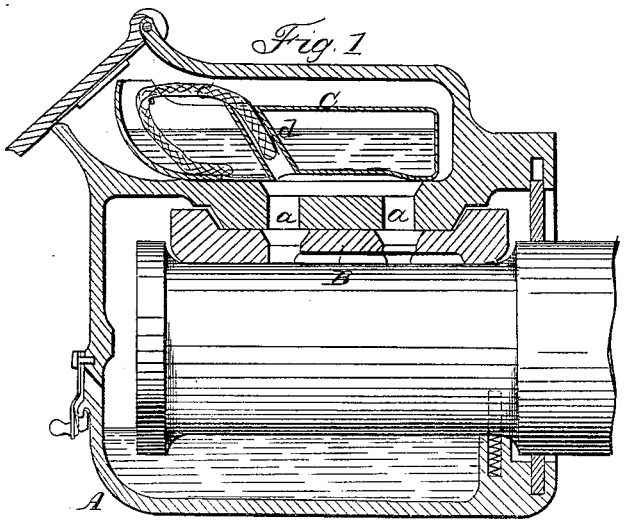


Fig. 2

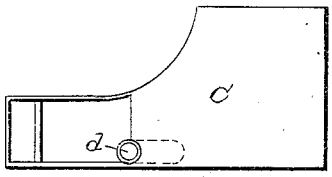
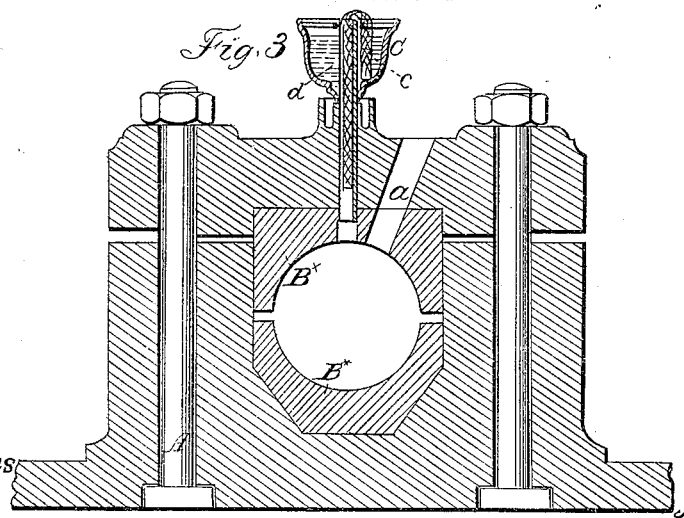


Fig. 3



Witnesses

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UNITED STATES PATENT OFFICE.

PIERRE ETIENNE PROUST, OF PARIS, FRANCE.

IMPROVED METHOD OF LUBRICATING MACHINERY.

Specification forming part of Letters Patent No. **46,856**, dated March 14, 1865.

To all whom it may concern:

Be it known that I, PIERRE ETIENNE PROUST, of Paris, in the Empire of France, have invented a new and Improved Method of Lubricating Journals, &c.; 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 fully understand and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section of an axle-box lubricated according to my invention. Fig. 2 is a plan or top view of the water-supply chamber detached. Fig. 3 is a transverse vertical section of an axle-box constructed somewhat different from that shown in Fig. 1, but lubricated according to my invention.

Similar letters of reference indicate like parts.

This invention consists in the simultaneous use of grease and water for the purpose of lubricating journals or axle-boxes of any description in such a manner that a considerable saving in the expenditure of grease is effected, and, furthermore, the hardening of the grease is prevented and the friction between the rubbing-surfaces and the consequent wear are materially reduced.

In order to execute this invention, I have added to the axle-box a cup, containing water, and provided with a discharge-tube and wick, which serves to conduct the water from the cup gradually and slowly down on the journal.

The axle-box A is constructed in the usual manner, and it is provided with a half-shell, B, as shown in Fig. 1, or with a full shell, B*, as shown in Fig. 3, according to the place where the box is to be used. The material generally used for lubricating purposes is tallow, which is placed in a chamber or cup on top of the axle-box and channels *a*, leading from said chamber or cup down to the axle to conduct the tallow, which gradually melts by the heat produced by the friction, down to the rubbing-surfaces. Grease applied in this manner soon becomes hard and gummy, and in this state it cuts the rubbing-surfaces and causes them to work hard and to wear out rapidly. This difficulty is avoided by using water simultaneously with grease. The water may be contained in a box or cup, C, which is provided with a wick, *c*, and wick-tube *d*. By the action of the wick the water contained in the box or cup is conducted down upon the journal simultaneously with the grease, and the latter is prevented from becoming hard and gummy.

In order to collect the water and grease dripping off from the journal, the journal-box A may be provided with a chamber below, and, if desired, this chamber may take the place of the water-supply chamber.

It will be readily understood from this description that the apparatus used to carry out my invention can be changed in many different ways, and, in fact, it must be changed to accommodate itself to the various forms of journal-boxes now in use.

I do not wish to confine myself therefore, to any particular apparatus or device, but reserve the right to change the same as circumstances may make desirable.

I claim as new and desire to secure by Letters Patent—

The method, substantially as herein described, of lubricating journals, consisting of the simultaneous application of water and grease, as set forth.

PIERRE ETIENNE PROUST.

Witnesses:

E. SHERMAN GOULD,

C. MOTT.