



For further particulars and prices apply to—

**THE ARMSTRONG OILER CO. LTD.**  
**YORK, ENGLAND.**

Telegraphic Address: "OILER, YORK."

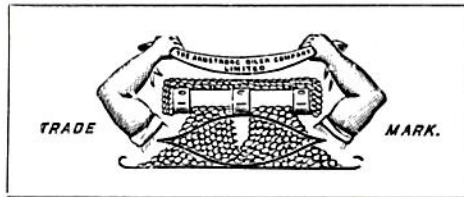
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THE  
"ARMSTRONG OILER,"

Patented in Great Britain, United States, France,  
Germany, India, Australia, Egypt, Canada, Belgium,  
Spain, Russia, Austria, Hungary,  
Mexico, etc.

*Efficient.*



*Economical.*

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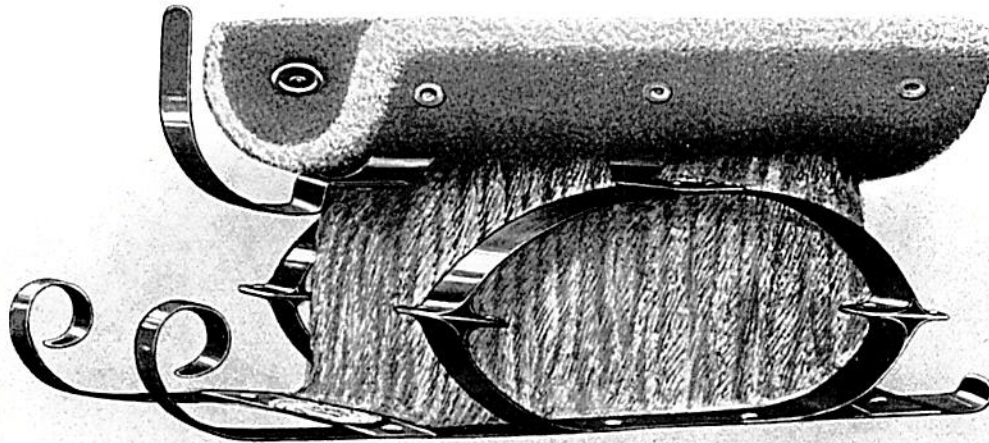
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THE  
"ARMSTRONG OILER"

FOR  
Locomotive, Tender, Carriage, Wagon and Tramcar  
Axle-boxes.

THE efficient and economical lubrication of axles is daily becoming a matter of increased importance to chief engineers, the general demand for high speed transit, and heavier loads, making it imperative that delay caused by hot axle-boxes should be practically an impossibility.

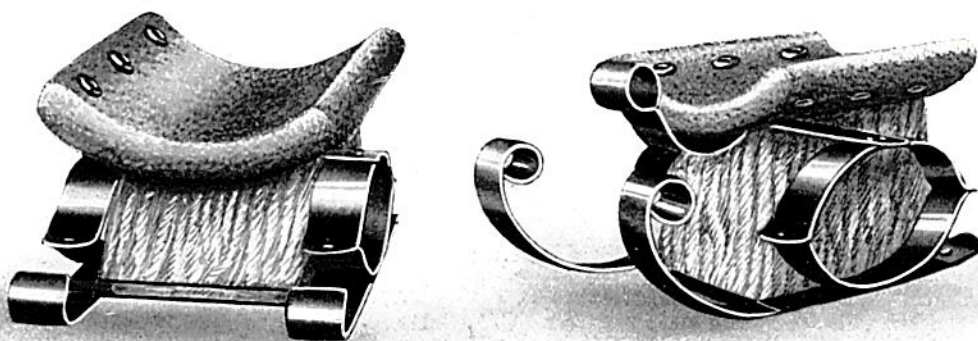


"ARMSTRONG OILER" AS SUPPLIED FOR RAILWAY TENDER AXLE-BOXES.

For some years we have made a special study of the manufacture of lubricators for axle-boxes, experimenting continually in order to obtain a lubricator which we could offer with confidence as being, not only efficient so far as lubrication was concerned, but also economical in every way. As a result the "ARMSTRONG OILER" is now, without doubt, infinitely superior to any other system of axle lubrication on the market. Every detail of its manufacture has been carefully considered by experts, and no expense has been spared in order to ensure every Oiler we manufacture being absolutely perfect.

The "ARMSTRONG OILER" consists of a specially-woven pad attached to a light steel frame supported by highly-resilient springs. All the pads are woven by our own employees on looms specially designed for us. They are woven in such a manner as to ensure the points only of the pile lightly touching the journal when the Oiler is in position. To obtain a sufficient and continuous supply of oil to the pad, cotton feeders are woven into it by a special process, so that after coming through the pad foundation they lie between the rows of pile; no amount of top pressure can therefore impede the oil circulation. In order to prevent the possibility of undue top pressure lignum vitæ buttons are embedded in the pad surface at intervals, and these, whilst not being sufficiently hard to cut the journal, prevent the pad pile from being flattened out and glazed. In this way the capacity of the pad for supplying oil to the journal surface remains unimpaired throughout.

It has been our experience that whilst one type of spring will give perfect results in a particular design of axle-box, a very slightly different box may call for a spring of altogether different construction. We, therefore, make a special study of every design of axle-box for which we make an Oiler, our chief aim in every case being to ensure *perfect lubrication, coupled with the most economical use of oil and labour.* All springs



"ARMSTRONG OILERS" AS SUPPLIED FOR RAILWAY CARRIAGE AND WAGON AXLE-BOXES.

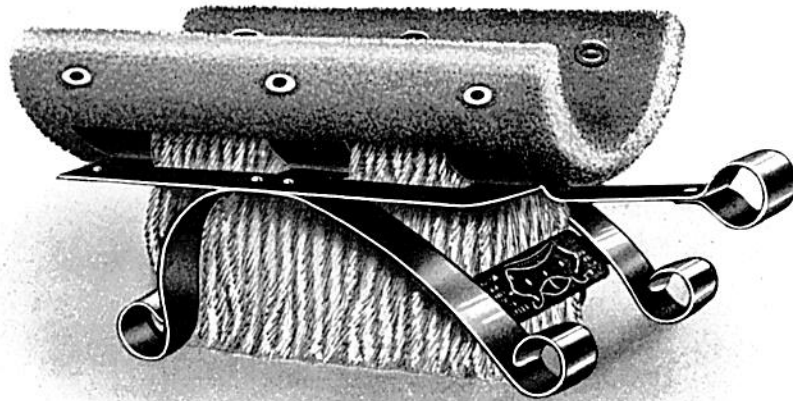
are specially adjusted to give just the right amount of pressure, the design in each case being particularly adapted for the style of axle-box and journal for which the Oiler is made.

Every "ARMSTRONG OILER" is guaranteed to run 100,000 MILES WITHOUT RENEWAL OF PAD, and under ordinary conditions considerably over double that distance can be run without such renewal being necessary.

The saving in oil and labour effected by the use of the "ARMSTRONG OILER" is a very important item, amounting to from 60 to 80% against any other system of axle lubrication. Once the Oilers are placed in the axle-boxes with a small supply of oil, no further attention is required except the addition of a little oil about every three months.

An eight-wheeled railway vehicle fitted with "ARMSTRONG OILERS" will run 20,000 MILES USING ONLY ONE GALLON OF AXLE OIL.

"ARMSTRONG OILERS" are not affected by climatic conditions. They are giving equally good results on railways within the Arctic Circle, on British and Continental railways, and on roads where the most extreme heat is experienced.

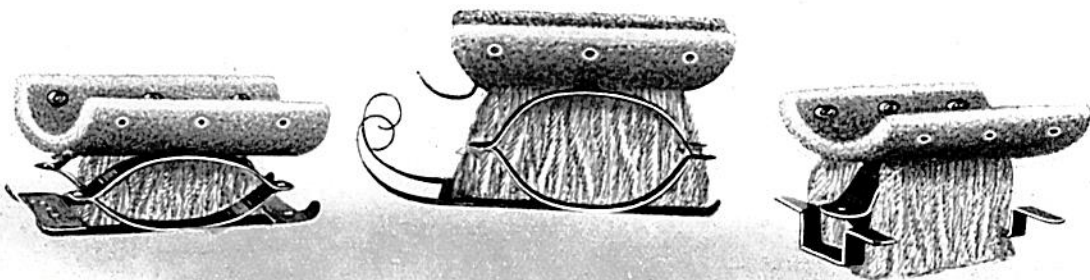


"ARMSTRONG OILER" AS SUPPLIED FOR RAILWAY CARRIAGE AND WAGON  
AXLE-BOXES.

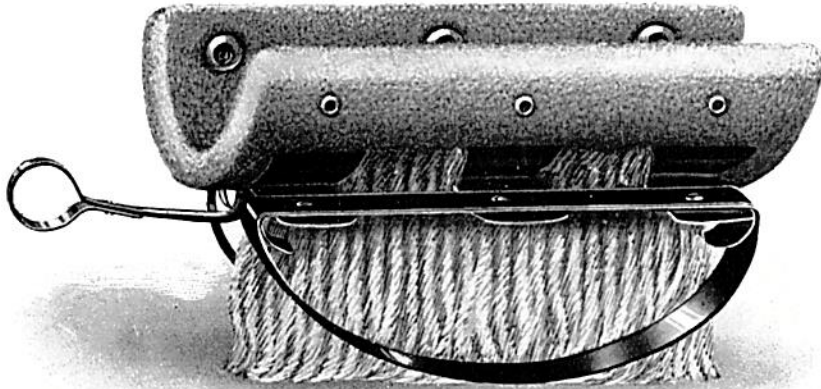


"ARMSTRONG OILER" DESIGNED FOR USE IN LOCOMOTIVE AXLE-BOX WHEN SPRING SUSPENSION LINK PIN PASSES THROUGH OIL WELL.

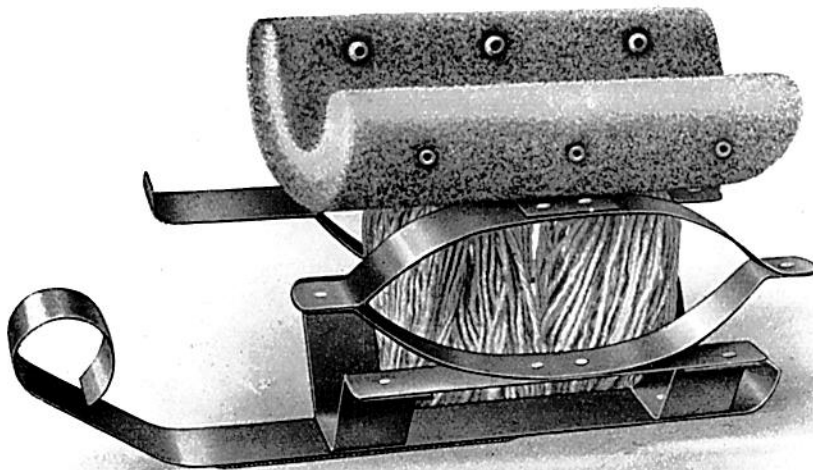
If you are not using the "ARMSTRONG OILER," or if you wish to try it in an axle-box which has previously been a source of trouble and expense to you, please send us a print or rough sketch showing inside dimensions of box with the journal in position, and we will make and send you a sample set of Oilers for trial entirely free of charge.



"ARMSTRONG OILERS" AS SUPPLIED FOR TRAMWAY AXLE-BOXES.



SPECIAL DESIGN OF "ARMSTRONG OILER" FOR RAILWAY CARRIAGE AND WAGON AXLE-BOXES OF A PARTICULAR TYPE.



AN "ARMSTRONG OILER" DESIGNED FOR THE MASTER CAR BUILDERS' ROUND BOTTOMED AXLE-BOX.

## Directions for Use.

First be sure that new oilers are perfectly dry. They should then be soaked in oil for about twelve hours before being placed in working position.

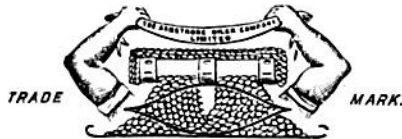
About one pint of oil should be supplied to each railway axle-box, or sufficient to cover the bottom of the well to the depth of  $\frac{1}{2}$ -inch, and a small quantity added about every three months.

For tramway stock the oiling should be carried out in a similar way, except that one pint of oil should be sufficient for about four axle-boxes, or about  $\frac{1}{4}$ -inch depth of oil in the axle-box well.

If the axle-boxes are dust-proof, and the oilers are kept free from grit, and properly fitted, they will last at least 250,000 miles without repair or removal. They are guaranteed for 100,000, after which distance it would be well to examine them to see under what conditions they are working.

Under no circumstance, except the repair of the axle-box itself, should an oiler be disturbed in any way.

Oilers must only be used for the boxes for which they are made.



Please specify Armstrong Oilers for all new Stock.

Manufactured only by

**The ARMSTRONG OILER COMPANY, Ltd.,**  
**LENDAL BRIDGE WORKS,**

Tel. Address: "OILER, YORK."

Telephone No. 46.

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Western Union.

**YORK, England.**



