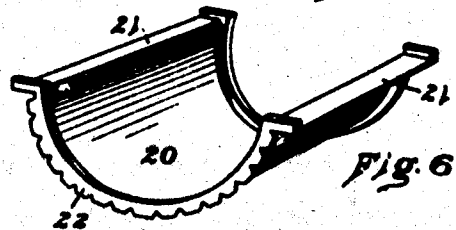
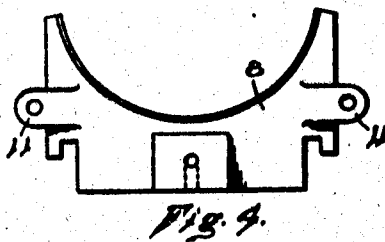
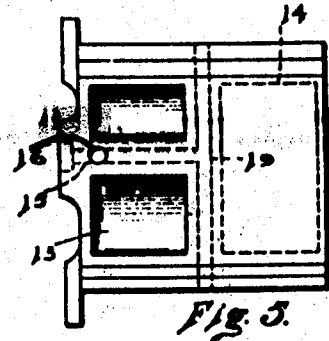
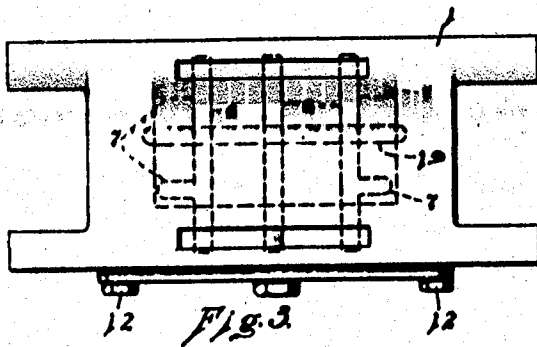
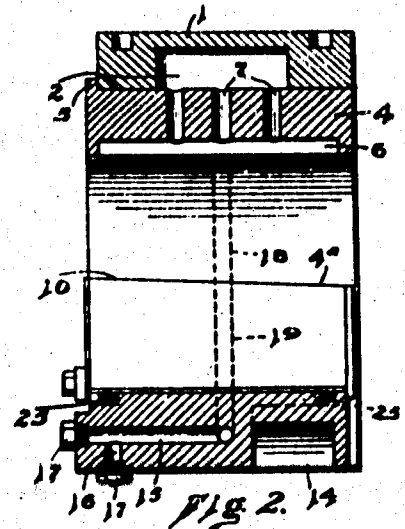
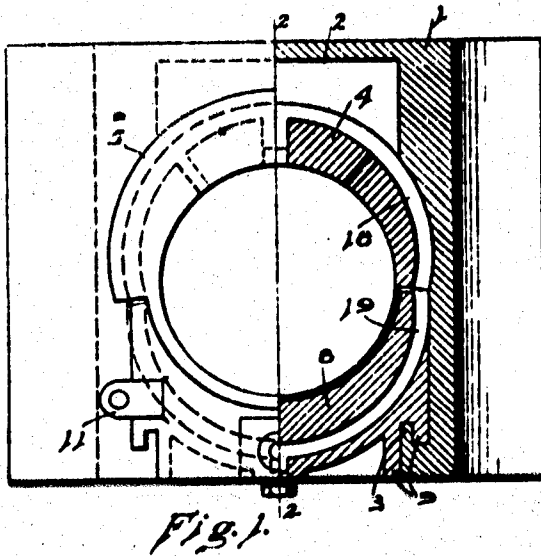


L. K. SMITH.
LUBRICATING DEVICE.
APPLICATION FILED NOV. 2, 1909.

972,659.

Patented Oct. 11, 1910.



Witnesses

J. S. Freeman
B. P. Kirkham

384

Inventor
Luther K. Smith.

C. L. Parker
Attorney

UNITED STATES PATENT OFFICE.

LUTHER K. SMITH, OF MOBERLY, MISSOURI.

LUBRICATING DEVICE.

972,659.

Specification of Letters Patent.

Patented Oct. 11, 1910.

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To all whom it may concern:

Be it known that I, LUTHER K. SMITH, a citizen of the United States, residing at Moberly, in the county of Randolph and State of Missouri, have invented certain new and useful Improvements in Lubricating Devices, of which the following is a specification.

My invention relates to journal boxes especially adapted to the journals of locomotive driving wheels, and other similar heavy journals, and my object is to provide a simple, strong and durable construction, which will be compact and generally free from the complications of the ordinary journal boxes used in this class of work.

A further object of my present invention is to provide a journal box so constructed as to permit of the withdrawal of the brass and cellar block, without disturbing the box body, and without jacking up the journal.

A further object of my invention is to provide a device of the above character, embodying means for feeding a lubricant to a journal.

In the accompanying drawings, which illustrate my invention and form a part of this specification, Figure 1 is a front view partly in elevation and partly in section, of a journal box constructed in accordance with my invention. Fig. 2 is a central vertical cross section thereof on the line 2-2 of Fig. 1. Fig. 3 is a top plan view thereof. Fig. 4 is a front elevation of the cellar block removed. Fig. 5 is a plan view thereof, and, Fig. 6 is a perspective view of the dust and dirt guard.

In the practical embodiment of my invention, I provide a journal box comprising a body member 1, which, as is ordinary, is provided with the journal opening extending through the lower portion thereof, whereby the same may be inserted about the journal, thus rendering the said body member of substantially inverted U-shape.

In accordance with my invention, I provide the said body member 1 with a chamber 2, which is cored out internally thereof, at the upper end of its said journal opening, and I further provide said member with internal shoulders at the lower end of the said journal opening, which shoulders have upstanding flanges 3, offset from the body of said member 1.

The "brass" 4 of the usual semi-cylindrical form is disposed within the upper

portion of the journal opening of body member 1, and in accordance with my invention, is provided with a curved upstanding flange 5 upon one end of which abuts the front surface of said body member and with its longitudinal edges inclined longitudinally and downwardly toward the rear of said body member. The "brass" is also provided with spaced parallel longitudinal slots 6 in its inner concave surface, which slots communicate, by radial transverse openings, 7 with the chamber 2 of the body member 1.

The cellar block 8 is provided with spaced longitudinal flanges 9 at the sides thereof, for relatively slidable interlocking engagement with the flanges 3 of the lower portion of body member 1, and also with downwardly and rearwardly inclined longitudinal edges 10 for engagement with the edges of the "brass" 4, whereby to prevent movement of said "brass" in one direction, the relative engagement of its flanges 5 preventing the same from moving in the opposite direction. Said cellar block 8 is also provided with sidewise projecting lugs or ears 11, which are apertured to receive suitable machine bolts 12, whereby to rigidly secure the same upon the body member 1, and maintain the "brass" in position as just described. Thus, it will be seen that by virtue of its slidable interlocking engagement with the lower portion of the body member 1, said cellar block rigidly connects the side portions of said body member and materially aids in preventing breaking and cracking of the same by the journal.

Besides having relatively abutting longitudinally inclined longitudinal edges, "brass" 4 and cellar block 8 further have the said edges thereof, transversely inclined as will be seen by reference to Figs. 1 and 4, whereby to prevent the lower portions of said brass from clamping inwardly upon the journal by reason of the great pressure exerted by the said journal against the upper central portion thereof.

The cellar block 8 is cored out on its upper face as shown at 13 (Fig. 5) and in its lower face as shown at 14 (Fig. 2), to lighten the same and said block is further provided with a longitudinal channel 15 extending inwardly and centrally from its front face and communicating adjacent its outer end with a transverse channel 16, opening through the lower face of said block, the

outer ends of said channels 15 and 16 being closed by suitable cap nuts 17. The "brass" 4 and cellar block 8 are also provided with curved communicating channels 18 and 19, which communicate between the inner end of the channel 15 of the cellar block, and the chamber 2 of the body member 1. Thus, a lubricant may be forced through the outer end of cellar block channel 15, or through its channel 16, and upwardly through channels 19 and 18 to the chamber 2 of body member 1, and fed from the latter through openings 7 into slots 6 upon the inner surface of "brass" 4 to be taken up by the journal as it is needed.

A dust and dirt guard is provided in connection with my improved journal box, and is shown in detail in Fig. 6 and comprises a curved plate 20, disposed upon the upper concave surface of the cellar block 8, and provided with longitudinal side flanges 21, which may be disposed between the abutting edges 4 and 10 of "brass" 4 and cellar block 8 to hold said plate in position, said plate 20 being further provided with end flanges 22 which extend above and below the same, the upper edges of said flanges 22 abutting the periphery of the journal and the lower portions of said flanges extending against the outer front and rear surfaces of cellar block 8 to further hold the same in position. Springs 23 compressed between the upper surface of cellar block 8 and plate 20 serve to press the upper edges of its said flanges 22 against the journal.

Having fully described my invention, I claim:

1. In a journal box, a body portion provided with an opening, a brass arranged within said opening, a cellar block arranged within said opening, said body portion being further provided with an oil chamber at the upper portion thereof, said cellar block being provided with a longitudinally arranged channel communicating with a curved channel, said brass being provided with a channel communicating with said oil

chamber and registering with said curved channel and means for conducting the oil from said oil chamber to the journal.

2. In a journal box, the combination of a body member provided with a journal opening and with an internal chamber cored out in the upper portion thereof, a brass located in the upper portion of said body member, and a cellar block located in the lower portion of said body member, and provided with a horizontal channel extending inwardly from one face thereof, and with a communicating vertical channel extending from its base, said brass and said block having communicating channels leading from said first named channels to said chamber of said body member, and said brass being provided with longitudinal grooves upon its inner surface, and with openings therethrough communicating between said grooves and said chamber of said body member, substantially as described.

3. In a journal-box, a body portion provided with a central opening, a brass and cellar block disposed within said central opening, said body portion being provided with an internal oil chamber cored out of the upper portion of said body portion and communicating directly with said central opening, said brass extending within said oil chamber, said brass being provided with a plurality of radially disposed feed channels for supplying oil to an axle, said brass being provided with curved supply channels, said block being provided with curved supply channels registering with said first named supply channels, and a channel formed in the lower portion of said block and communicating with said last named supply channels, for supplying a lubricant to the oil chamber.

In testimony whereof I affix my signature in presence of two witnesses.

LUTHER K. SMITH.

Witnesses:

F. E. MURRAY,
J. W. WIGHT.