Oct. 7, 1930. G. H. ZOUCK 1,777,540

LOCOMOTIVE DRIVING BOX LUBRICATOR

Filed Jan. 18, 1927

Fig: 1.

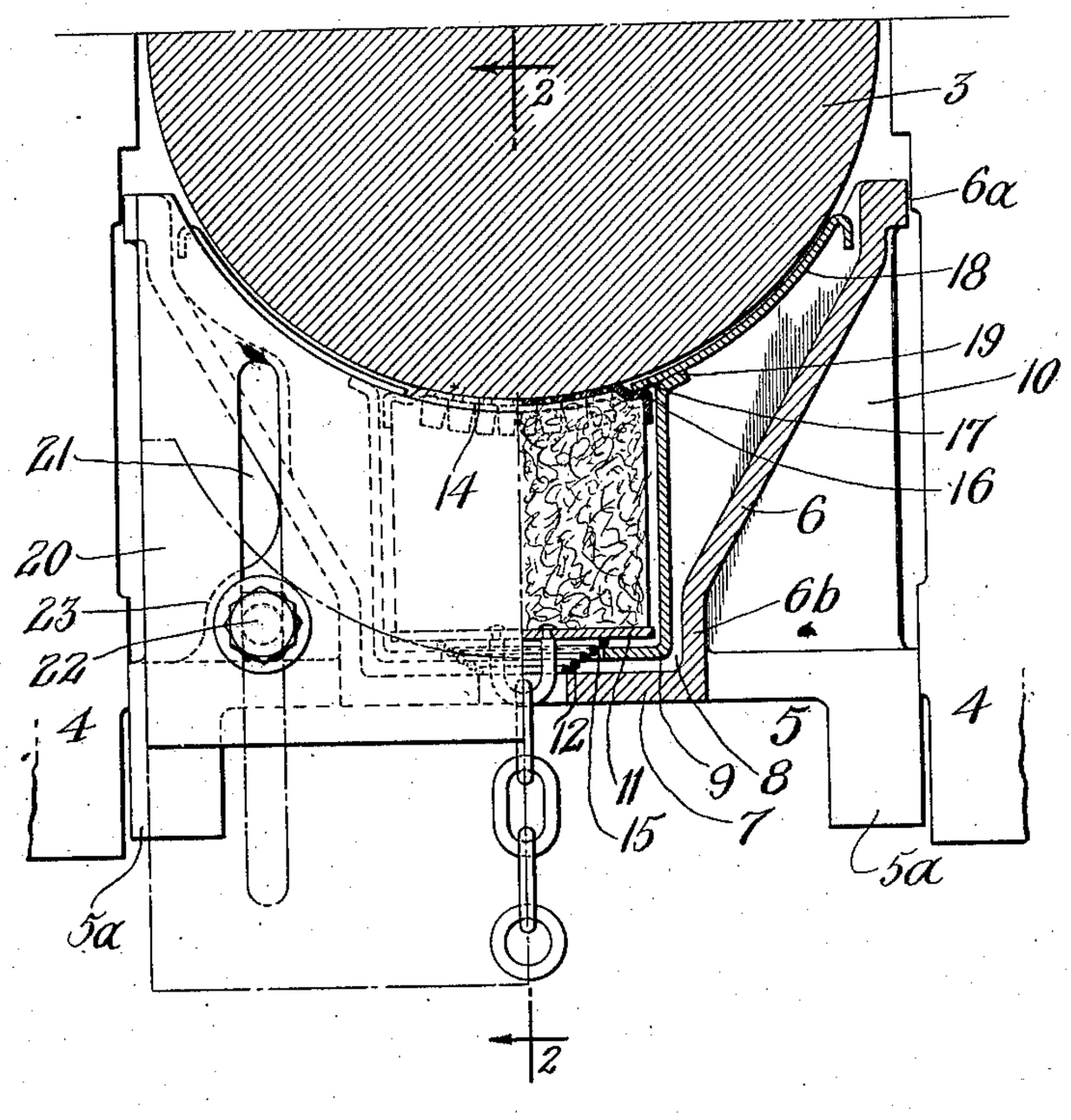
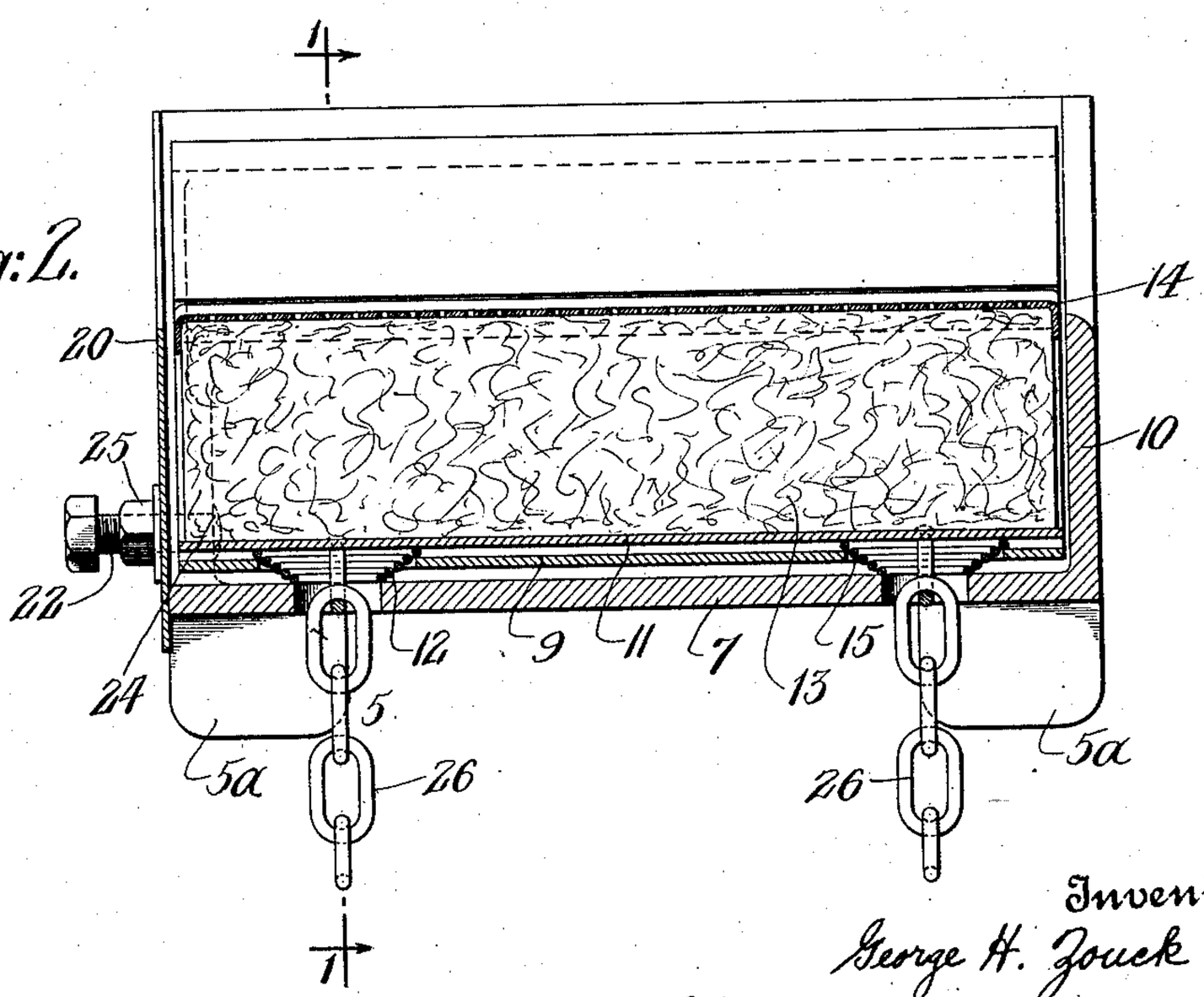


Fig: 2.



Inventor
George H. Zouck
By his Attorneys
Symmestvedt & Lechner

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GEORGE H. ZOUCK, OF ORANGE, NEW JERSEY, ASSIGNOR TO FRANKLIN RAILWAY SUPPLY COMPANY, OF NEW YORK, N. Y., A CORPORATION OF DELAWARE

LOCOMOTIVE DRIVING-BOX LUBRICATOR

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This invention relates to lubricators for locomotive driving boxes, particularly to that type which includes a lubricant cellar of a width substantially less than the diameter of the journal or the distance between the box legs.

This particular type of lubricator is more efficient in the use of the grease or lubricant, than the type which provides for the use of a grease cake of substantially the same width as the diameter of the journal. The larger grease cake, with its extended upper surface contacting with the journal, is fed to the journal relatively slowly and hence its lubricating qualities deteriorate, at times, to an extent which impairs the lubrication of the journal before the cake is entirely used up. In order to maintain proper lubrication of the journal the cake must, therefore, be renewed before it is entirely used up. The smaller grease cake, with its relatively small surface contacting with the journal, is fed to the journal more rapidly. The use of a smaller cake thus eliminates waste but it also presents the problem of providing protection, particularly from dirt, for those portions of the journal which contact with and are protected by the extended surface of the larger cake.

The primary objects of the present invention are to provide means for effectively protecting the journal between the sides of the grease cake and the box legs and to provide means which will automatically advance the protecting means as wear occurs in the bearing brass so that the protecting means will remain adjacent the journal at all times.

More specifically I provide a lubricant container or cellar having outwardly extending flanges secured to the top edges of its side walls, said flanges and cellar being supported by the grease cake.

How the foregoing together with other objects and advantages are obtained will be clear from the following description considered in connection with the accompanying drawings, wherein,

Fig. 1 is a front view, half in elevation and half in section of a locomotive driving box embodying my improvements, the section being taken on the line 1—1 of Fig. 2.

Fig. 2 is a longitudinal sectional view taken on the line 2—2 of Fig. 1, the journal being omitted.

Referring now to the drawing, the reference numeral 3 indicates the journal and 4, 4 the legs of the driving box. A spreader member indicated as a whole by the reference numeral 5 is positioned between the box legs. The spreader member comprises a bottom 7 substantially smaller in width than the distance between the box legs 4, 4; side walls 6 which extend vertically upward for a short distance and then extend diagonally to the point 6^a, as indicated in Fig. 1; lugs 5^a, which may be machined to fit any particular width of box, extending laterally from each corner of the bottom 7; and a rear wall 10 of substantially the overall width of the spreader.

The lower vertical portions 6^b of the side walls 6 and the bottom 7 form a guiding pocket for the lubricant container or cellar 9.

A grease cake 13 is supported in the cellar on a follower plate 11 which, in turn, is supported by the springs 12 extending downwardly through the openings 15 provided in the bottom of the cellar 9 and seating on the spreader member 5. A perforated plate 14 is interposed between the journal and the grease cake and is provided with shoulders 16 which are adapted to engage the inwardly extending edges 17 of the flanges 18. The flanges 18 are welded to the top of the cellar walls at 19. Thus the springs 12 do not only serve to advance the grease cake but also to keep the protecting flanges 18 adjacent the journal at all times.

The cover plate 20 for the lubricating elements is provided with vertically extending slots 21 through which the bolts 22 extend. These bolts 22 are riveted at their inner ends, onto the ears 23 provided on the spreader member 5, as shown at 24 in Fig. 2. Lock nuts 25 are provided on the bolt shanks so that the cover plate may be firmly secured in place. This securing arrangement for the cover plate provides easy access to the lubricator and, at the same time, eliminates the

danger of losing the plate as it is not detachable.

The usual chains 26 are provided on the follower for the purpose of inspecting the lubricator and also for relieving the follower tension when inserting a new cake of grease.

According to the foregoing I provide journal protecting flanges secured to the cellar and means for carrying said flanges and cellar on the grease cake, thus keeping the flanges adjacent the journal as it moves and wear occurs in the bearing brass.

I claim:—

1. A journal lubricator comprising in combination with the box legs, a grease cake of substantially less width than the distance between said legs, means for urging said grease cake upwardly against said journal, a perforated plate interposed between said cake and said journal having shoulders along its edges, and means engaging said shoulders for protecting the journal at the sides of the grease cake.

2. In a journal lubricator, the combination of a cellar member having means secured thereto for protecting a portion of the journal bearing surface on each side of said cellar, a grease cake in said cellar, means for urging said cake upwardly against said journal, a perforated plate interposed between said cake and said journal having means thereon for engaging said protecting means and thereby support said protecting means and said cellar.

3. A journal lubricator comprising in combination with the box legs, a spreader member between said legs having downwardly converging side walls, a cellar member of substantially the same width as the distance between said walls at the bottom thereof, a grease cake in said cellar, means for urging said cake upwardly against the journal and means supported by said cake and secured to said cellar for protecting the bearing surface of the journal at the side of said cake.

In testimony whereof I have hereunto signed my name.

GEORGE H. ZOUCK.