June 24, 1930. G. M. STONE ET AL 1,767,411

LOCOMOTIVE JOURNAL BOX

Filed Feb. 9, 1928 2 Sheets-Sheet 1

Fig. 1.

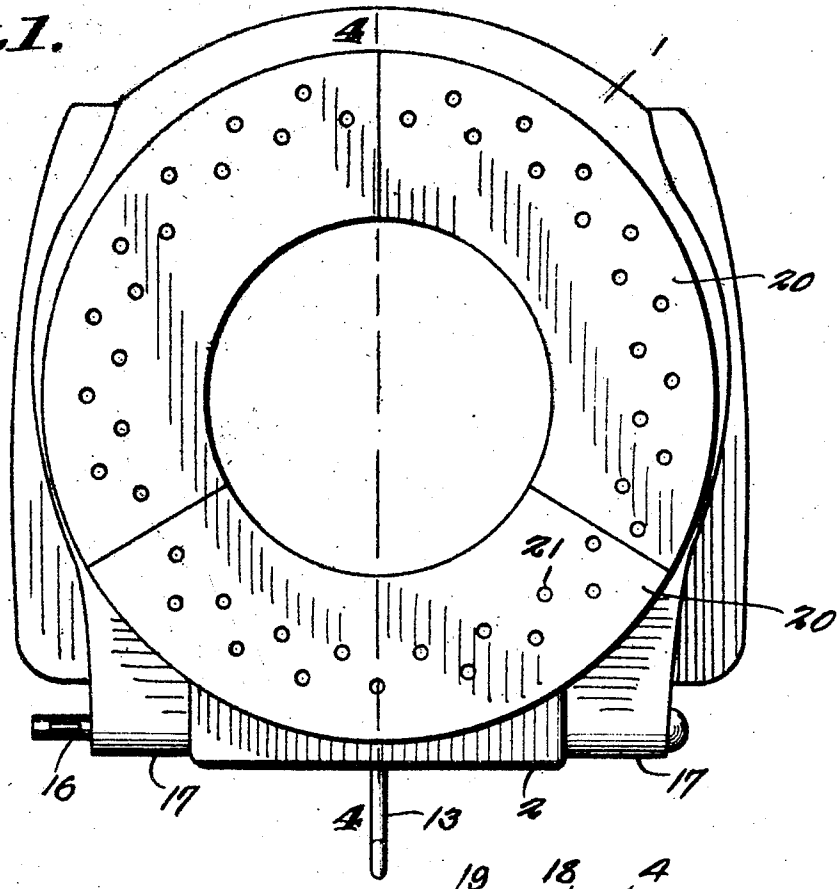
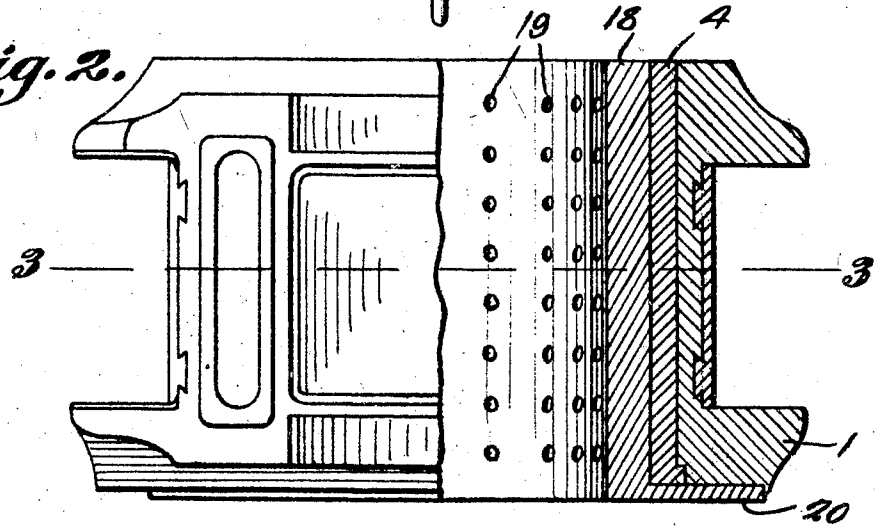



Fig. 2.




George M. Stone
George W. Cuyler
Inventor

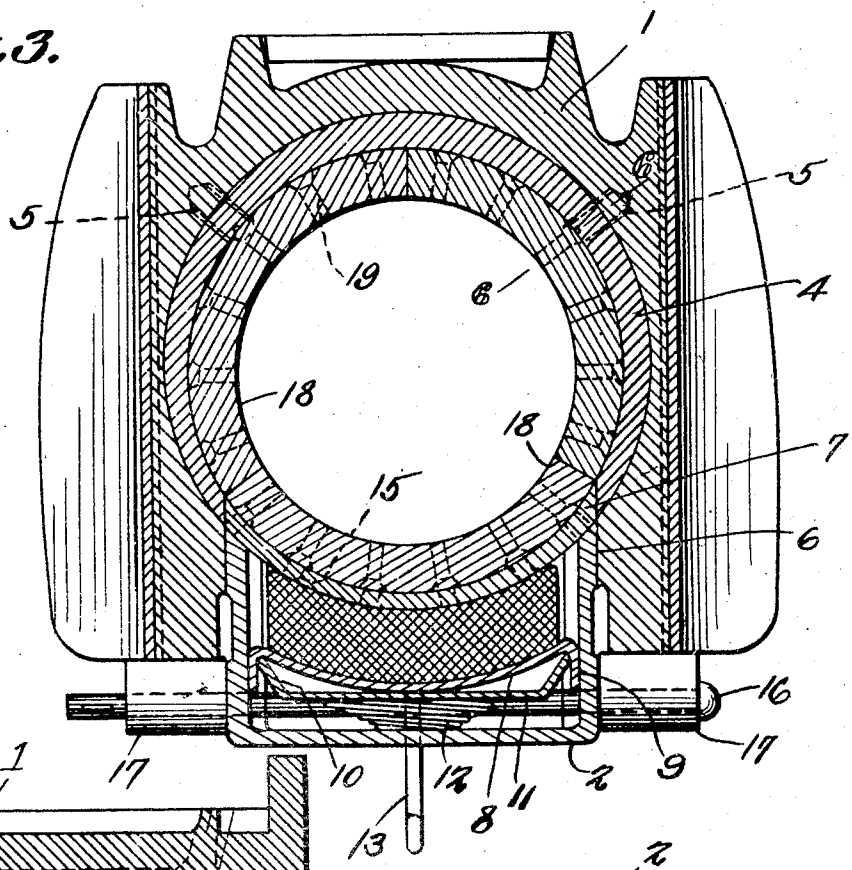
By Cachow & Co.
Attorneys.

June 24, 1930. G. M. STONE ET AL 1,767,411

LOCOMOTIVE JOURNAL BOX

Filed Feb. 9, 1928 2 Sheets-Sheet 2

Fig. 3.



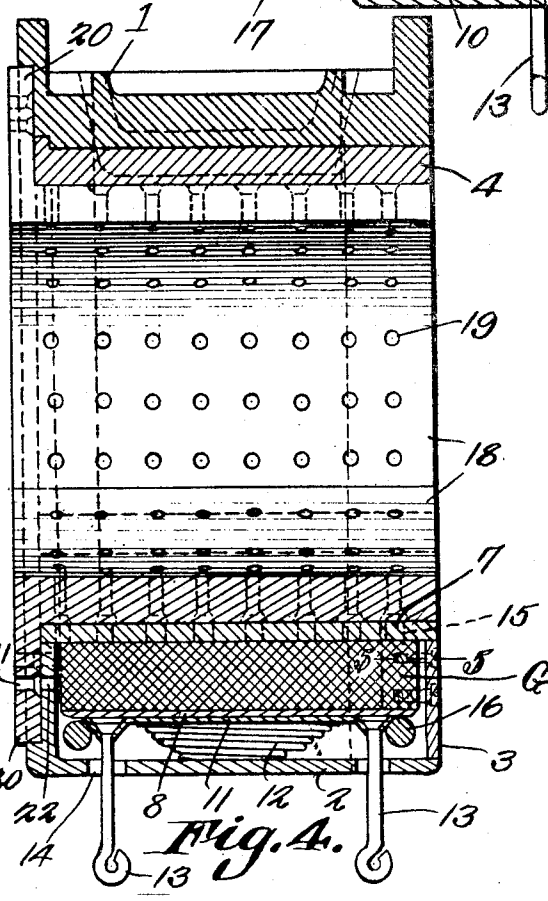




Fig. 4.

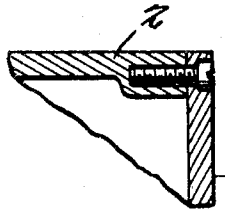



Fig. 5.

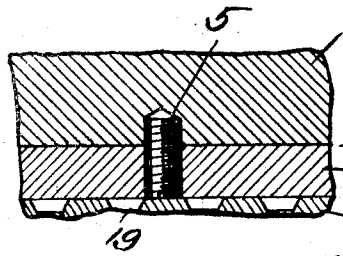



Fig. 6.

George M. Stone
George W. Cuyler
Inventor

By Cushman & Co.
Attorneys.

Patented June 24, 1930 1,767,411

# UNITED STATES PATENT OFFICE

GEORGE M. STONE AND GEORGE W. CUYLER, OF CEDAR RAPIDS, IOWA

## LOCOMOTIVE JOURNAL BOX

Application filed February 9, 1928. Serial No. 253,091.

This invention relates to a locomotive journal box, one of the objects being to provide a brass which can be removed without the necessity of taking the driving box off of the axle.

Another object is to provide a device of this character in which the brass is mounted for rotation within the box, simple and efficient means being provided whereby the working parts can be properly lubricated.

Another object is to provide a floating bushing which requires no adjustment after being put in place and necessitates only a slight modification of the journal boxes now in use.

A still further object is to provide a bushing applicable to all kinds of axles.

Another object is to provide a sectional bushing mounted for rotation in an eccentric wear member, the parts of the bushing being of such length as to be removable readily through the opening in which the cellar of the box is removably mounted.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings,

Figure 1 is a side elevation of a box having the present improvements combined therewith.

Figure 2 is a view partly in top plan and partly in horizontal section through the structure disclosed in Figure 1.

Figure 3 is a section on line 3—3, Figure 2.

Figure 4 is a section on line 4—4, Figure 1.

Figure 5 is an enlarged section through a portion of the structure taken on line 5—5, Figure 4.

Figure 6 is an enlarged section on line 6—6, Figure 3.

Referring to the figures by characters of reference 1 designates a driving box provided with a cellar 2 having a removable end plate 3. An eccentric bushing 4, preferably of steel, is fitted snugly in the box 1 and held in position by anchor screws 5 one of which is shown in detail in Figure 6. The bushing 4 terminates flush with opposed walls of the opening 6 in which the cellar 2 is mounted and arranged across this opening and between the ends of the bushing 4 is a removable bushing 7 which rests on the cellar 2 and, when in position, constitutes a continuation of the bushing 4. A follower plate 8 having a concave active face is slidable in the cellar and has downturned opposed flanges 9 between which are received the upturned sides 10 of a stiffening plate 11. A spring 12 is interposed between the stiffening plate and the bottom of the cellar, this spring being located between a pair of indicator pins 13 which are attached to the stiffening plate and are slidable within openings 14 in the bottom of the cellar. Apertures 15 are formed in the bushing 7 as indicated by dotted lines in Figure 4 so that a lubricant can thus pass through the bushing 7 from a grease cake G held between the follower plate 8 and the bushing 7. Obviously this cake is constantly pressed against the bushing 7 by the spring 12. The cellar 2 is held removably in position by any suitable means such as cross pins 16 extending transversely therethrough and through ears 17 extending from the box 1.

Mounted for rotation in the space surrounded by the bushings 4 and 7 is a floating brass 18 which, as shown in the drawings, is formed of three sections placed end to end and of the same length. The length of each section is slightly less than the width of the opening in which the cellar 2 is mounted so that, by removing the cellar the sections can be successively removed from or placed in position within the box. In the structure illustrated the sections of the box have their ends radially disposed but it is to be understood that these ends can be arranged at any desired angles. All of the sections of the brass are perforated as at 19, thereby to permit the passage of grease to the member jour-

nalled in the box. A perforated flange 20 may be located at one end of each of the sections of the brass so that when the sections are assembled these flanges will form a continuous annular flange. Apertures 21 are extended through the flanges and are adapted during the rotation of the brass, to move into and out of register with corresponding apertures 22 formed in one end wall of the removable cellar.

Importance is attached to the fact that the sections of the brass can be placed in and removed from position without first removing the wheels or renewing the whole bearing. Furthermore it is possible with this structure to utilize the designs of boxes already in use. In order to renew the brass it is merely necessary to jack up the box after which the sections of the brass can readily be inserted and slid into position or vice versa. The practice heretofore has been to press a half of a brass into the box with about fifty tons pressure so as to cause the brass to hold fixedly in the box. It has been found, however, that the brass constantly works loose, thereby creating a defect which must be taken care of. In the present structure, however, the floating brass has a neat but rotating fit and the openings therein provide a means whereby grease can be supplied constantly to all parts of the bearing surfaces. While the structure is designed for use in driving boxes, it can also be employed to advantage on trucks of all kinds of locomotives.

What is claimed is:

The combination with a box having an opening, a cellar removably mounted in the opening, and a spring pressed follower in the cellar for supporting a lubricant, of a sectional brass mounted for rotation in the box and having apertures for receiving lubricant from the cellar, the sections of the brass being removable separately through the opening after the removal of the cellar, and apertured flanges carried by the sections at one end cooperating to provide a continuous annular flange outside of the box, there being apertures in the cellar for supplying lubricant to the apertures in the flanges.

In testimony that we claim the foregoing as our own, we have hereto affixed our signatures.

GEORGE M. STONE.
GEORGE W. CUYLER.