Sept. 20, 1955 C. D. FOSS 2,718,327

JOURNAL BOX COVER SEAL

Filed Aug. 27, 1951

FIG. 1.

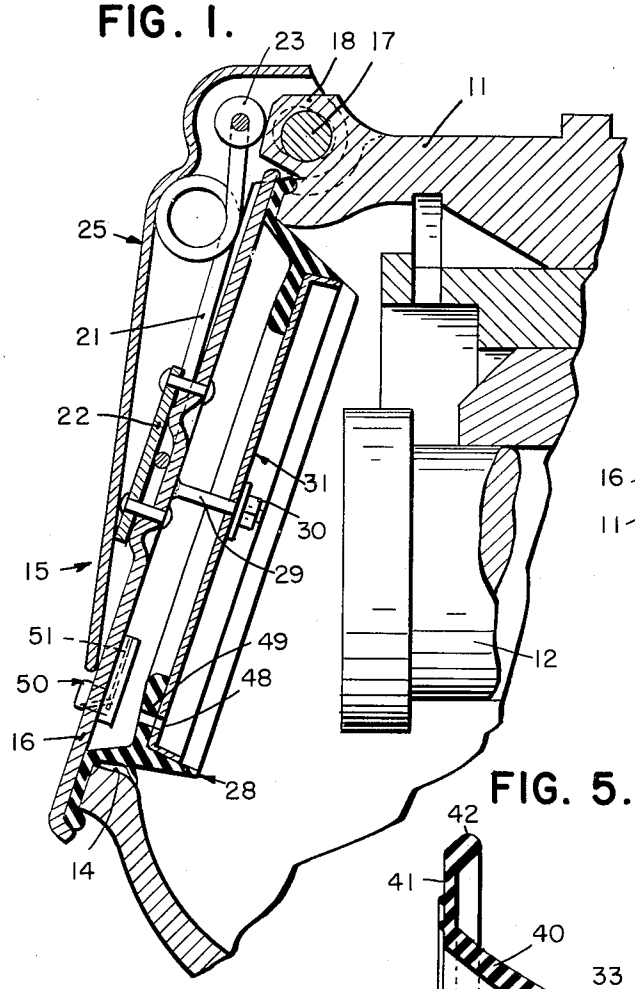


FIG. 2.

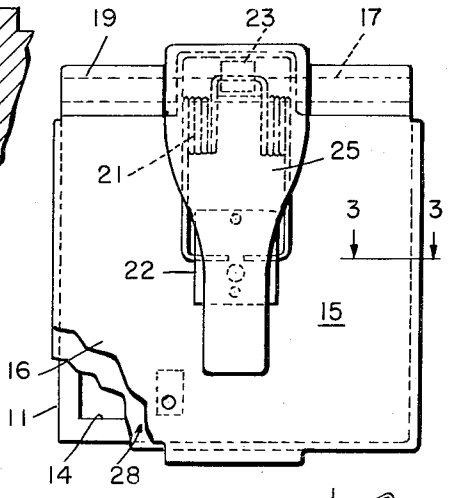


FIG. 4.

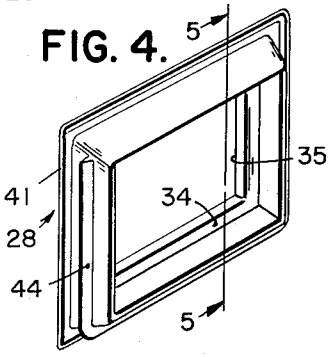


FIG. 5.

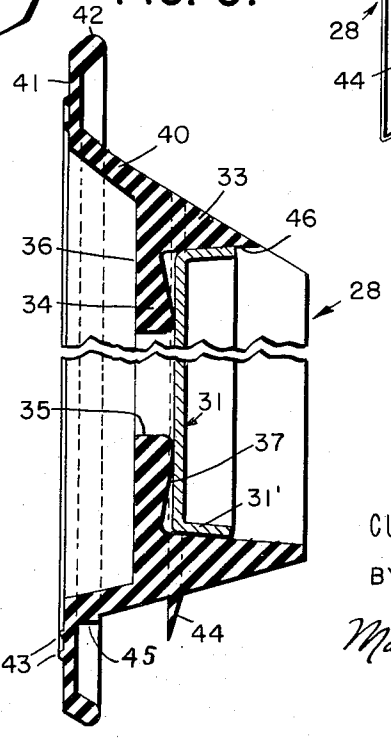
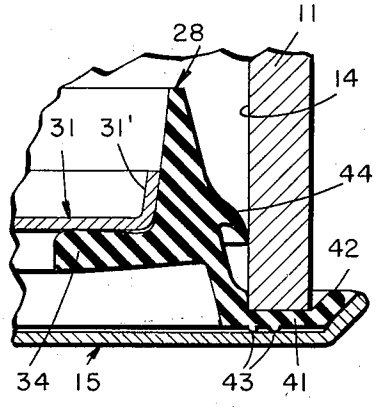


FIG. 3.



INVENTOR

CURTIS D. FOSS

BY

Mason & Graham

ATTORNEYS

United States Patent Office 2,718,327 Patented Sept. 20, 1955

2,718,327

JOURNAL BOX COVER SEAL

Curtis D. Foss, Los Angeles, Calif.

Application August 27, 1951, Serial No. 243,780

3 Claims. (Cl. 220—46)

This invention has to do with a seal for use in effecting a tight fit between the cover or lid of a railway car journal box and the box itself.

An object of the invention is to provide a novel and improved journal box cover or lid seal member.

Another object is to provide a seal member of the type indicated which is particularly designed to prevent entrance of water between the lid or between the seal member and the wall of the journal box to thereby prevent any possibility of water accumulating and freezing between the mentioned parts and forcing the lid away from the journal box by natural expansion of the water upon freezing.

A further object is to provide a seal member which is constructed in such a manner as to expand into sealing engagement with the walls of the journal box defining the opening into the box when the seal is secured to the cover or lid.

Another object is to provide a seal member of the type indicated which serves to hold the cover or lid firmly closed regardless of the vibrations and jarrings to which the lid is subjected in the normal operation of the railway car.

These and other objects will be apparent from the drawing and the following description. Referring to the drawing, Fig. 1 is a central sectional view of a railway car journal box cover or lid with a seal member embodying the invention attached thereto and a fragmentary sectional view of the journal box;

Fig. 2 is a face view of the cover or lid partially broken away;

Fig. 3 is an enlarged fragmentary sectional view on line 3—3 of Fig. 2;

Fig. 4 is a perspective view of the seal; and

Fig. 5 is a fragmentary sectional view on an enlarged scale on line 5—5 of Fig. 4.

More particularly describing the invention, numeral **11** generally indicates the body of a railway car journal box into which projects the journal or axle **12** of the car. The walls of the body **11** are formed to provide an opening **14** into the journal box. This opening is usually closed by a cover or lid generally indicated by **15**. There are several different types of covers in use today and the one shown is merely used by way of illustration. This cover comprises a plate **16** which is secured to the journal box by means of a pintle **17** which passes through a boss **18** formed on the journal box and through apertured ears **19** on the plate **16**.

The cover is shown provided with a wire spring **21** secured by a plate **22** and carrying a roller **23** which bears upon the boss **18**. The spring is covered by a housing **25** which is secured to the plate **16** in any suitable manner. The seal of my invention is generally indicated by numeral **28** and is attached to the inside of the plate **16** of the cover by a stud **29** and nut **30**, the bolt stud passing through a seal retaining and expanding plate **31**.

The seal itself consists of a body of resilient material such as a rubber or synthetic rubber composition preferably of a type which is not attacked by oil or grease. The seal is generally rectangular and has a main wall section **33** from which projects an inner flange **34** defining a substantially rectangular opening **35**. The forward side of the flange **34** and the main section **33** of the seal define a flat surface **36**. The flange **34** is so shaped as to provide a rearwardly projecting thickened portion in the region of the opening **35** as best shown in Fig. 5, the rearward surface **37** of the flange **34** receding forward from said opening toward the section **33**.

The seal extends divergently forward of the wall or main portion **33** in a somewhat thinner wall section **40** which terminates in a marginal peripheral flange **41**. This flange is formed with a rearwardly projecting rim or bead **42** and with one or more forwardly projecting continuous ribs **43**.

The seal member is also provided with a substantially centrally disposed outer flange **44** which extends across the bottom and each side of the seal in the region of the main body of section **33** thereof. Also, a plateau **45** is provided across the bottom and sides of the main body of the seal adjacent the flange **41**.

In its use or operation the seal is firmly attached to the plate **16** of the cover by means of the stud **29**, nut **30** and plate **31**. The latter is provided with a marginal diverging wall or flange **31** which has a slightly greater over-all dimension than the inside dimension of the wall **46** of the seal into which it fits. When the seal member is mounted on the cover the nut **30** is tightened sufficiently to force the plate **31** into the seal enough to cause some outward movement of the seal in a direction toward flange **44** and sufficient also to deflect the flange **34** forward. By reason of the thickening wall section of the flange **34** this deflection of flange **34** has a tendency to force the body of the seal in a direction radially or at right angles to the axis of the opening through the seal member for tight engagement with the wall of the journal box defining the opening **14** when the lid is closed. This is illustrated in Fig. 3. Also, when the lid is closed, the plateau **45** and flange **44** engage the wall of the journal box to effect a seal.

The bead or rim **42** on the flange **41** at the forward end of the seal fits tightly around the journal box wall as shown in Figs. 1 and 3 thereby preventing any entrance of water or foreign matter at this point. The ribs **43** serve to seal against the lid.

The seal should preferably be provided with a vent passage such as provided by the registering holes **48** and **49** in the plate **31** and seal member **25** respectively. Also, the lid should have a vent such as that indicated at **50** having passage **51** therethrough.

While I have shown and described a preferred form of my invention, I contemplate that various changes and modifications can be made without departing from the scope thereof as set forth in the claims.

I claim:

1. A seal member for the lid of a railway car journal box comprising a generally rectangular continuous body of resilient material defining a substantially rectangular opening, said body having a main wall providing upper and lower sections and intermediate side sections, the outer surfaces of said sections being inclined convergingly from front to rear of the seal member, an internal flange projecting from said main wall intermediate the ends thereof for a limited distance, a front peripheral flange at the forward end of said main wall, and an outer intermediate peripheral flange between the ends of said main wall extending from the lower and side sections of the main wall, said internal flange having a coplanar forward surface and having a rearwardly projecting thickened inner marginal portion.

2. Sealing means for the end of a railway car journal

[redacted]