J. P. THOMAS.

DUST GUARD FOR CAR JOURNALS.

APPLICATION FILED JUNE 29, 1905. RENEWED NOV. 17, 1909.

962,480.

Patented June 28, 1910.

Fig. 5.

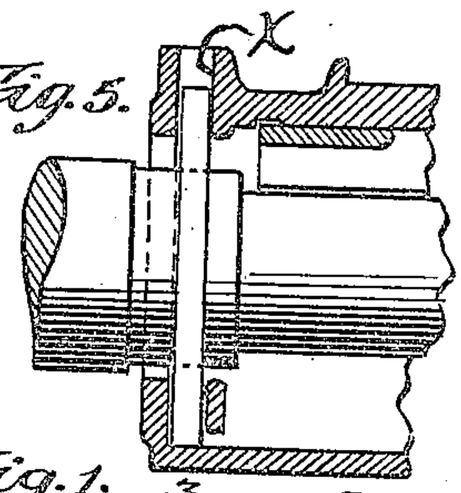

Fig. 2.6

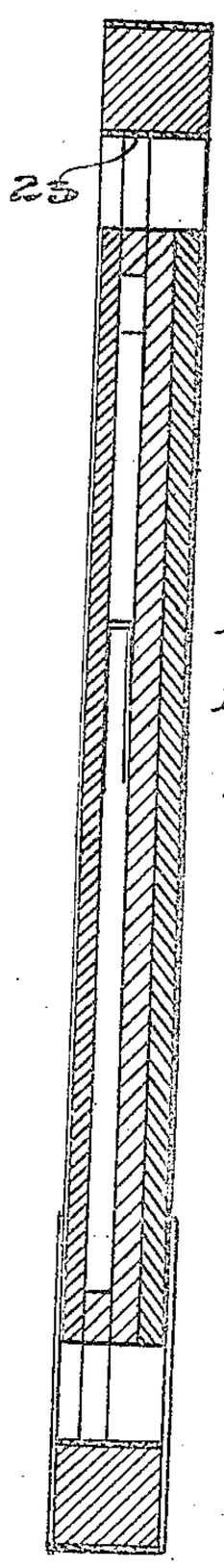

Fig. 1.

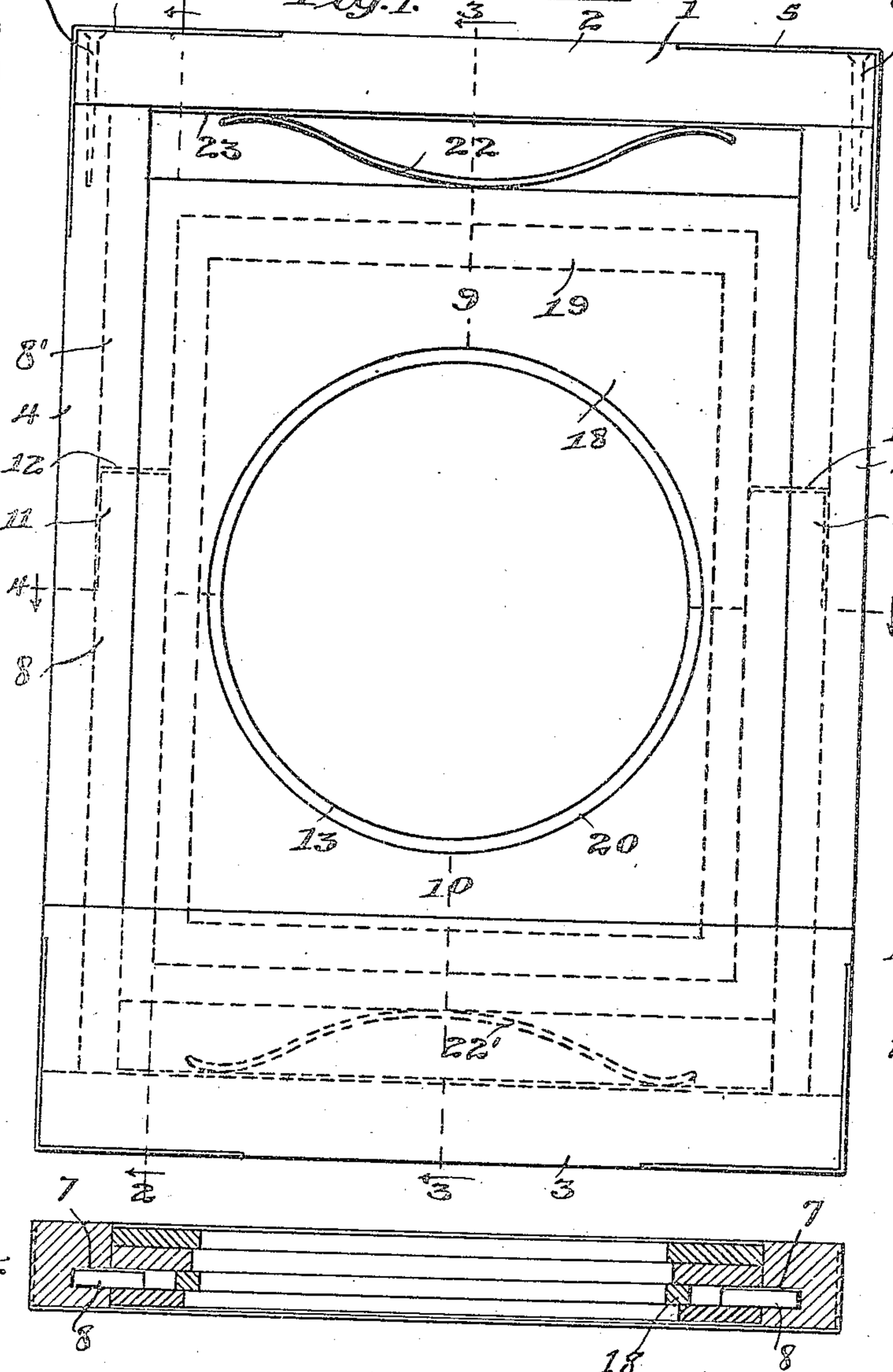

Fig. 3.

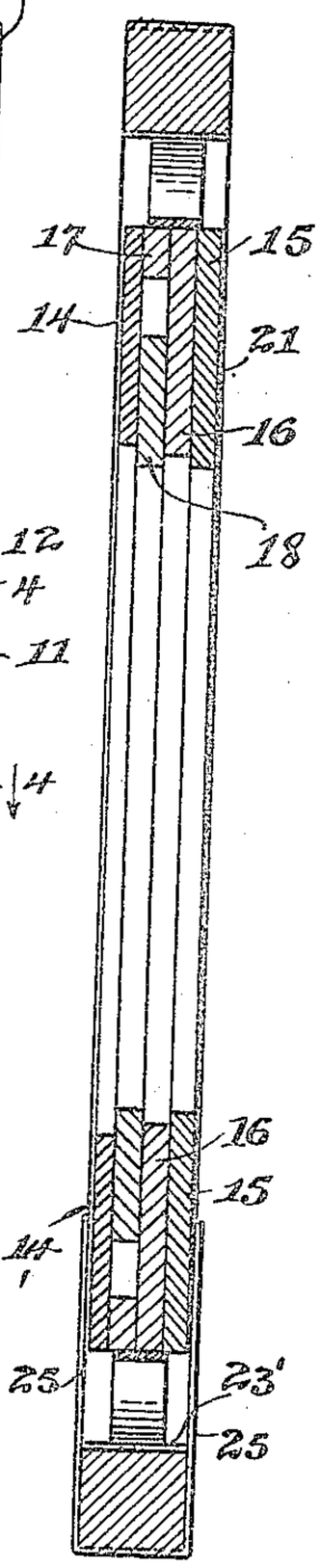

Fig. 4.

Witnesses,
F. D. McKenney,
C. E. Wessels.

Inventor,
John P. Thomas.
By Albert N. Marvel
Atty.

UNITED STATES PATENT OFFICE.

JOHN P. THOMAS, OF CHICAGO, ILLINOIS.

DUST-GUARD FOR CAR-JOURNALS.

962,480. Specification of Letters Patent. Patented June 28, 1910.

Application filed June 29, 1905, Serial No. 267,565. Renewed November 17, 1909. Serial No. 528,596.

To all whom it may concern:

Be it known that I, JOHN P. THOMAS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Dust-Guards for Car-Journals, of which the following is a specification.

This invention relates to improvements in dust guards for car journals, and it has for its salient objects to provide a construction which will automatically adjust itself to compensate for wear; to provide a construction which may be manufactured very economically and assembled with great expediency; to provide a construction which is not likely to become clogged and inoperative by the accumulation of dirt and sludge in the journal box; to provide a construction in which the part which surrounds and engages the journal is made of a yieldable, non-abrading substance such as leather, leatheroid or similar material; to provide a construction in which this journal-encircling member is free to yield in all directions independently of the frame structure of the dust guard; to provide a construction which may be bodily removed from the journal box and with equal facility placed therein, and in general to provide a simple and improved construction of the character referred to.

To the above ends the invention consists in the matters hereinafter described and more particularly pointed out in the appended claims.

The invention will be readily understood from the following description, reference being had to the accompanying drawing, in which—

Figure 1 is an elevation of a dust guard embodying a preferred form of the invention; the relative arrangement of various inner parts being indicated in dotted lines. Fig. 2 is a vertical sectional view taken on line 2—2 of Fig. 1 and looking in the direction of the arrows. Fig. 3 is a similar sectional view taken on line 3—3 of Fig. 1 and looking in the direction of the arrows. Fig. 4 is a transverse sectional view taken on line 4—4 of Fig. 1 and looking downwardly; and Fig. 5 is a sectional detail of the inner end portion of a car journal box showing the dust guard in position therein; the view being taken in a vertical plane coincident with the axis of the journal.

Referring to the drawing, 1 designates as a whole an outer rectangular frame comprising upper and lower end bars 2 and 3, respectively, and side bars 4, 4; the four frame members being suitably united to form a relatively strong though slightly elastic frame structure. These end and side bar members are desirably made of wood, and are conveniently united with each other by means of metal corner strips 5 arranged to overlie the several external angles and, if preferred, the union of the parts may be additionally strengthened by means of brads or nails, as indicated in dotted lines at 6. The side members 4 are provided with longitudinal grooves 7 formed in their inner sides to receive the tenon-like guides 8, 8′, of the upper and lower halves of the inner frame structure; those halves being designated as a whole 9 and 10, respectively.

The members 9 and 10 are each of composite structure and are substantial counterparts of each other with the exception that one of the members, the lower member in the present instance, is provided with a pair of tongues or tenons 11 which telescope and slide within corresponding mortises or recesses 12 formed in the upper member. The edges of the upper and lower members meet along a horizontal line coincident with the axis of the journal aperture 13 formed therethrough.

In the preferred construction shown each member 9 and 10 comprises a face member 14 of metal on one side, a similar face member 15 of wood on the opposite side, an intermediate plate member 16 preferably of wood and having its grain arranged transversely to that of the wooden plate member 15, and a marginal space member 17 secured between the metal face plate and the intermediate member 16, the edges of which project beyond the edges of the other members at the sides of the latter and form tongues which enter the grooves of the members 4. All of the parts of the members 9 and 10 thus mentioned are suitably secured rigidly together, as for example by brads or screws inserted therethrough. The space radially inside of the marginal space member 17 is chiefly occupied by the edges of a leather or analogous seal 18. This seal 18 is preferably made rectangular and somewhat smaller in external dimensions than the space within which it is seated so that a surrounding space, indicated in dotted lines at 19 Fig. 1, is provided which permits the

seal to shift laterally in all directions. The seal is apertured as hereinbefore mentioned to fit accurately the journal of the car, and the overlying metal plate 14 is similarly apertured but the aperture therein is made substantially larger, as indicated at 20, so that the edges of the metal can never be brought into bearing with the car journal. Similarly the wood plate 15 and intermediate plate 16 are apertured to admit the car journal but their apertures are likewise larger than that of the guard. Preferably, in order to prevent the access of dust and dirt between the outer faces of the dust guard as a whole and the guides X of the journal box within which the guard is seated (see Fig. 5), I cover one face of the guard with felt, as indicated at 21. This felt forms a compressible cushion which insures a more or less perfect dust-proof fit between the parts.

The members 9 and 10 are made somewhat shorter over all than the distance between the upper and lower frame members 2 and 3, and between the latter and the members 9 and 10 are inserted expansion springs 22 and 22′. Conveniently these springs are made in the form of bow springs of plate metal, and the surfaces upon which the ends of these springs slide as they compress and expand are surfaced with sheet metal or tin, as indicated at 23, 23′.

As a further feature of improvement I provide guard plates of sheet metal or analogous material 25 which are applied to extend across the marginal frame members at the lower end and at the sides of the frame. These guards are of sufficient width to rise well above the space intervening between the lower end of the lower inner frame member and the end frame member, within which the bow spring 22′ is arranged. The object of these guards is to prevent the entrance of dust or sludge which may accumulate by wear of the journals or otherwise in the lower part of the journal box and find its way into the lower part of the dust guard thus interfering with the free movement of the latter.

The operation of my improved device will be readily understood from the foregoing description, but it is to be noted that the guard possesses certain advantages in operation, not heretofore indicated. By reason of the yielding mountings of the two inner frame members, the latter are free to adjust themselves accurately to the journal, and as the brasses wear away and the journal rises relatively to the journal box these inner frame members follow the journal and follow each other without separation. The minor vibrations of the journal are provided for by the freedom of movement of the inner leather or analogous dust seal 18 without disturbing or moving the dust guard frame. Moreover the fact that the leather or analogous guard 18 is free to move laterally in all directions prevents any weight or pressure being brought to bear upon the journal by this member, other than its insignificant weight, and accordingly it does not wear away appreciably during a long period of service but forms a dust-proof joint around the journal. The construction of the outer marginal frame is such that a certain amount of resiliency is afforded which enables the guard to adjust itself to the journal box, should the latter be more or less untrue as to its recess which receives this guard. The provision of the felt or analogous cushioning facing is of importance since it forms a more or less perfect dust-proof joint around the margins of the frame and thus prevents the entrance of dust and dirt to any part of the rear end of the journal box.

I claim as my invention:

1. A dust guard for car journals comprising an outer marginal frame, two oppositely disposed inner frame members mounted to reciprocate in said outer frame and provided with a journal aperture formed partly in each, springs yieldably pressing said inner frame members toward each other, and a dust seal of non-abrading material mounted partly on each of the two inner frame members and encircling said journal aperture, the seat within which said seal is mounted being larger in all lateral dimensions than the seal and the seal having unrestricted movement therein.

2. A dust guard for car journals comprising an outer marginal frame, two oppositely disposed inner frame members mounted to reciprocate in said outer frame and provided with a journal aperture formed partly in each, springs yieldably pressing said inner frame members toward each other, said frame members being respectively provided in their journal-encircling portions with parallel sided guide recesses or seats, and a dust seal of resilient fibrous material seated in the guide recess of said frame members and encircling said journal aperture, said seal member being circumferentially uninterrupted and of less external dimensions than the seat within which it is mounted and having unrestricted movement therein laterally in all directions.

JOHN P. THOMAS.

Witnesses:
I. V. Traver,
Emilie Rose.