No. 708,491. Patented Sept. 2, 1902.

J. S. PATTEN.

DUST GUARD.

(Application filed June 3, 1901.)

(No Model.)

Fig. 1

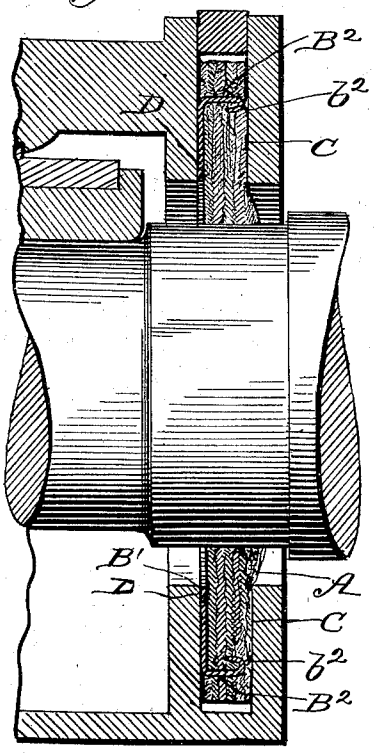


Fig. 2.

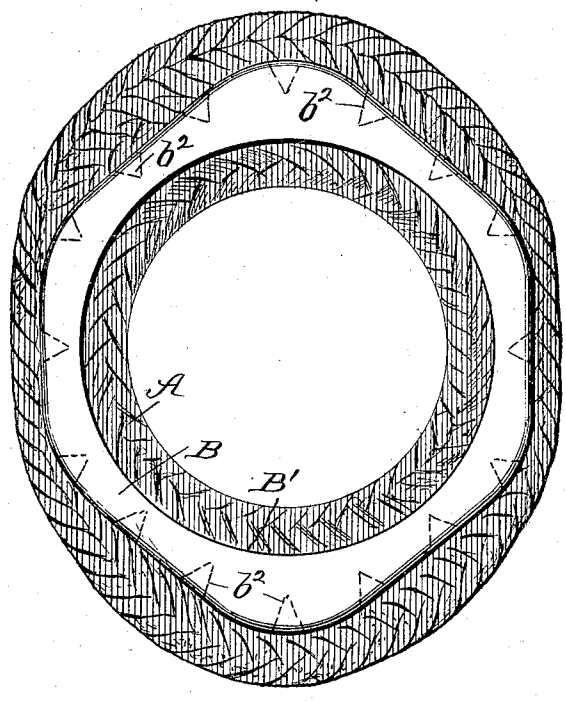


Fig. 3

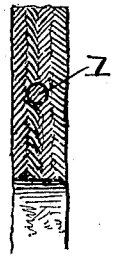


Fig. 4

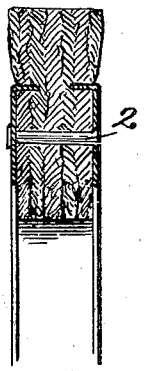
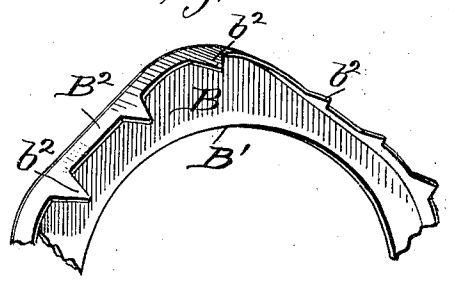


Fig. 5



WITNESSES:
Jos. A. Ryan
Percy B. Surpin

INVENTOR
James S. Patten
BY Munn & Co.

ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JAMES S. PATTEN, OF BALTIMORE, MARYLAND, ASSIGNOR TO METAL DUST GUARD COMPANY OF BALTIMORE CITY, A CORPORATION.

DUST-GUARD.

SPECIFICATION forming part of Letters Patent No. 708,491, dated September 2, 1902.

Application filed June 3, 1901. Serial No. 62,987. (No model.)

To all whom it may concern:

Be it known that I, JAMES S. PATTEN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have made certain new and useful Improvements in Dust-Guards, of which the following is a specification.

My invention is an improvement in dust-guards for use in the boxes of railway-cars, and has for an object, among others, to provide a simple, cheap, and efficient construction which can be applied to the ordinary box without necessitating any change of structure therein.

The invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a sectional view of my improved guard in position on an axle and in the box, parts being broken away. Fig. 2 is a face view of the guard. Figs. 3 and 4 show somewhat different constructions within the broad principles of my invention, and Fig. 5 is a detail perspective view of a portion of the bracing-frame for the annular packing.

In carrying out my invention I employ a packing of flax, which may be plaited or otherwise brought into the desired form to serve the purpose. While it is preferred to employ flax, I do not desire to be limited in the broad features of my invention thereto.

In the construction shown the packing-strip A is in the form of an annular plaited flax strip having a central opening of the desired bore and made of the general elongated form shown to hold it from turning with the axle in the box. In connection with this annular packing strip or ring I employ a bracing-frame by which to preserve the same generally in the position for use, as shown in Figs. 1 and 2. This bracing-frame might be made in the form of a wire ring 1, incorporated in the packing-ring, as shown in Fig. 3, or I might employ bracing-frames of the general form shown in Fig. 5 on both sides of the packing-ring and secured together and to such ring by rivets 2, as will be understood from Fig. 4; but I prefer in practice to employ the bracing plate or frame on one side only of the packing-strip, as shown in Fig. 1, and to construct said frame as shown in the said Fig. 1 and in Figs. 2 and 5, as will be more fully described.

In the construction shown in Figs. 2 and 5 the frame is in the form of an annulus having a face-plate B, provided with a central opening B′, and the flange B^2, extending around the outer edge of the face-plate B and in a plane at right angles thereto, so the said flange will bite into the side of the yielding packing-ring and aid in bracing the same against outward pressure. This frame B is secured to the annular packing-ring. In doing this I might employ rivets, such as shown at 2 in Fig. 4, or I may provide spurs or prongs b^2, projecting at intervals from the edges of the flange B^2 and adapted to be forced through the packing-ring and be clenched on the opposite side of the packing-ring from the face-plate B, as will be understood from Figs. 1 and 2. When this is done, the spurs operate to secure the bracing-frame to the packing-ring as desired and also to brace the packing-ring on the side opposite the face-plate B against outward pressure, as will be understood from Fig. 1.

It will be noticed that my packing-ring extends within the bracing-plate to serve its function in packing the axle and also projects outwardly beyond the said frame to operate as means for preventing the guard from turning in the box. I thus provide a dust-guard which comprises an annular packing-section and a brace or frame section secured to and carrying the packing-section and construct the said packing-section so it serves its main purpose and also serves a minor purpose—to wit, to hold the guard from turning in the car-axle box.

In placing the guard in the car-axle box it is arranged with its full packing surface or side opposite the face-plate B, next to the inner wall C of the recess for the dust-guard, so the dust cannot enter at the inner side of the box and so the inner edge of the face-plate at D will operate to resist the inward movement of the central portion of the packing-ring in introducing the outer end of the car-axle through the dust-guard into the car-axle box.

As illustrated in the accompanying draw-

ings, the packing-section is ring-like, is continuous or unbroken, and the bracing frame or ring is secured thereto between the inner and outer edges of the packing-section, so it will not obstruct either edge of the packing-section. The flange B^2 of the ring-like brace by biting into the face of the packing-section operates to compress such section and so prevent the lubricating material from passing outward past the bracing-frame.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The improved dust-guard herein described comprising the annular packing-section, and the frame-section secured to the packing-section between the inner and outer edges thereof whereby the portion of the packing-section within the frame-section may operate as a packing and the portion of the packing-section outside the frame-section may operate to hold the guard from turning in the car-axle box, and the said frame-section being composed of the face-plate, the inwardly-projecting flange at the outer edge of the face-plate and the spurs projecting from the edge of said flange and penetrating through the packing-section and clenched on the side thereof opposite the face-plate substantially as set forth.

2. A dust-guard composed of a ring-like packing-section, and a ring-like frame-section secured to one face of the packing-section between the inner and outer edges thereof and lying wholly between said inner and outer edges.

3. A dust-guard comprising the annular packing-section, and an annular brace or frame section secured to the packing-section between the inner and outer edges thereof, the inner edge of the packing-section being arranged to operate as a packing and its outer edge being formed to hold the guard from turning in the car-axle box substantially as set forth.

4. A dust-guard composed of a continuous unbroken ring-like packing-section, and a continuous ring-like frame-section secured to the side face of said packing-section and lying between the inner and outer edges thereof.

5. A dust-guard comprising an annular yielding packing-section, a frame to brace said section and fastening means for said frame which fastening means project through the packing-section and operate to brace the same on the opposite side thereof from the frame substantially as set forth.

6. A dust-guard composed of a ring-like packing-section, a ring-like frame-section fitted against one face of the packing-section between the inner and outer edges thereof, and securing devices extending from the frame-section through the packing-section.

7. A dust-guard comprising an annular packing-section and an annular brace secured positively in connection with the packing-section, said brace occupying, throughout its full length, a position between the inner and outer edges of the packing-section whereby portions of the packing-section within and without the brace will be unobstructed by the latter substantially as set forth.

8. A dust-guard composed of a continuous unbroken ring-like packing-section, and a continuous unbroken ring-like brace secured to and against one face of the packing-section between the inner and outer edges of said packing.

9. A dust-guard composed of a ring-like packing-section having its outer edge entirely exposed and unobstructed and a frame or brace secured to one face of said packing-section and occupying a position entirely within the outer edge of the packing-section, substantially as set forth.

10. A dust-guard composed of a ring-like packing-section and a ring-like brace-frame secured to and against one face of the packing-section and lying wholly between the inner and outer edges thereof, substantially as set forth.

JAMES S. PATTEN.

Witnesses:
SOLON C. KEMON,
PERRY B. TURPIN.