No. 849,963. PATENTED APR. 9, 1907.

H. BENSCH.

DUST GUARD.

APPLICATION FILED APR. 25, 1906.

Fig. 1

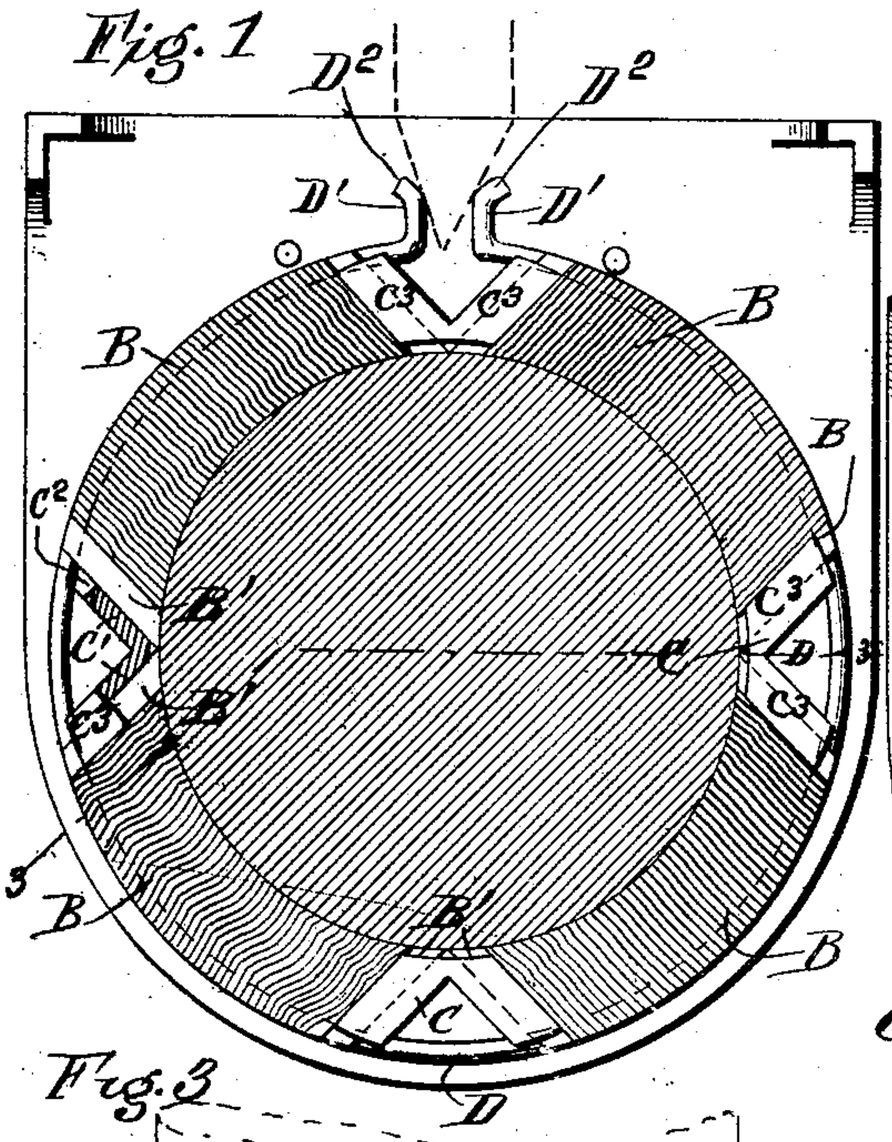


Fig. 2

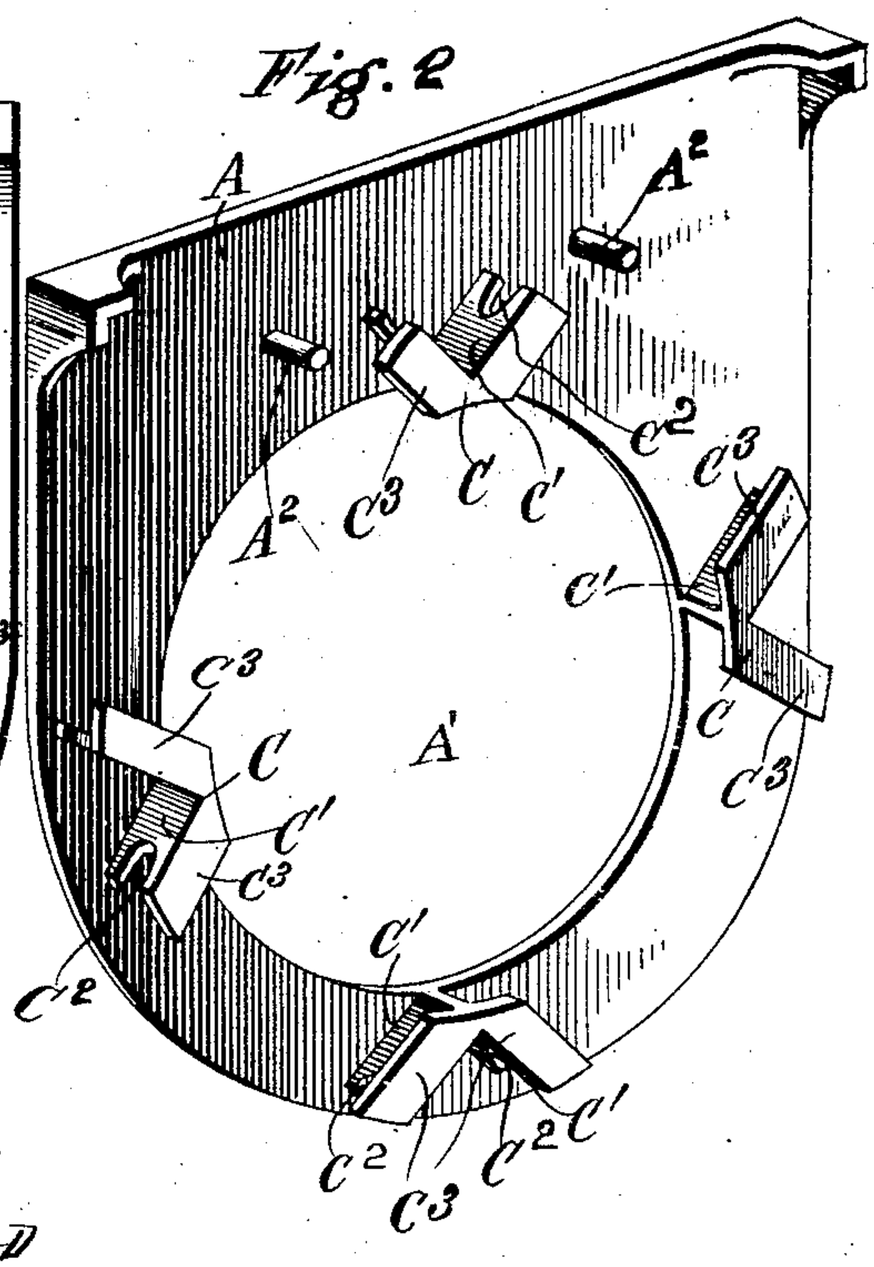


Fig. 3

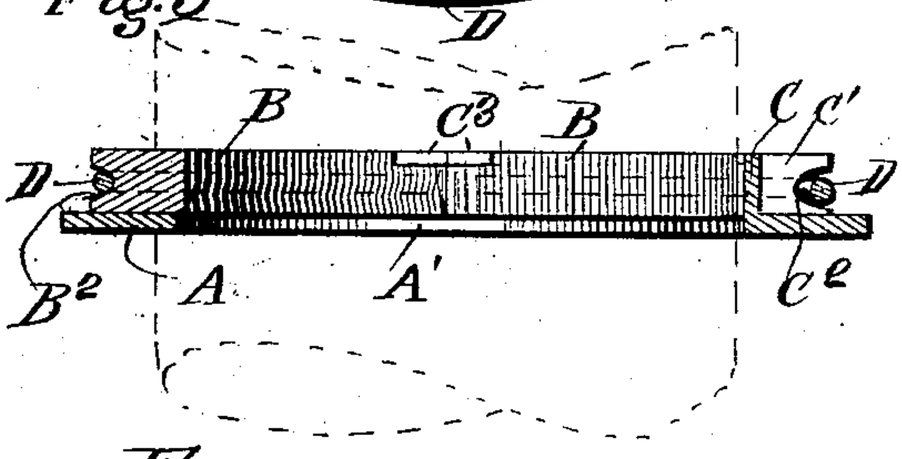


Fig. 4

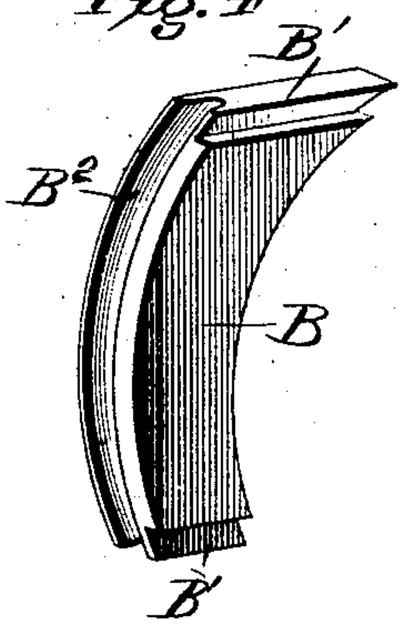
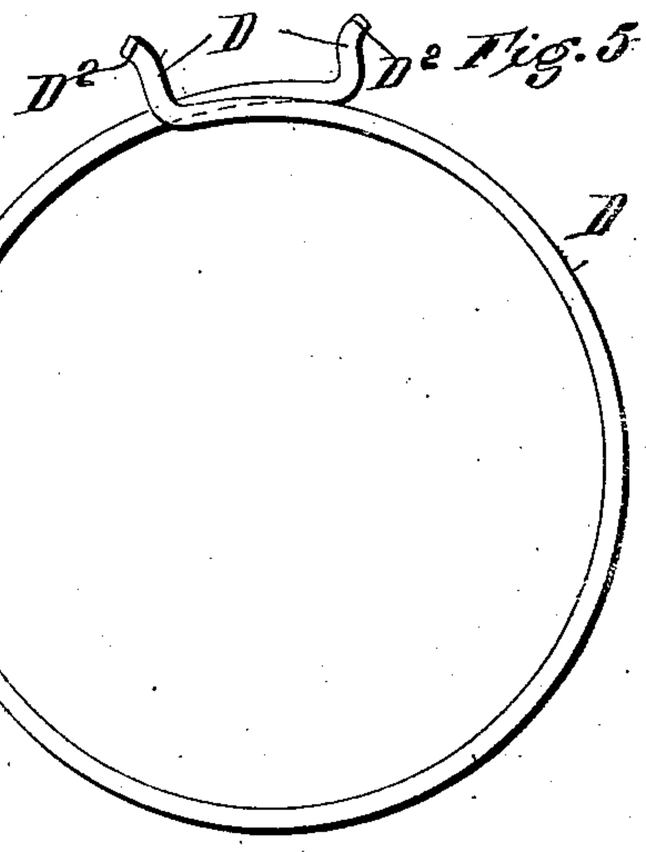


Fig. 5



WITNESSES

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DUST-GUARD.

No. 849,963. Specification of Letters Patent. Patented April 9, 1907.

Application filed April 25, 1906. Serial No. 313,597.

To all whom it may concern:

Be it known that I, HERMAN BENSCH, a citizen of the United States, and a resident of Davenport, in the county of Scott and State of Iowa, have invented 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 journal-boxes of railway-vehicles; and 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 side elevation of my dust-guard applied to a journal, the latter being shown in section and the guard being partly broken away in section. Fig. 2 is a detail perspective view of the carrier-plate. Fig. 3 is a cross-section on about line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of one of the packing-blocks, and Fig. 5 is a side view of the spring-lock.

By my invention I seek to provide a dust-guard which can be readily inserted in any of the ordinary journal-bloxes now in general use and which will comprise a series of radially-movable packing-blocks with the spring embracing the series and adapted to exert an inward tension on the several blocks, the blocks being movably held in suitable guides on a carrier-plate, as will be more fully described.

In the construction shown the carrier consists of a plate A, having a central opening A′ for the passage of the journal and provided with guides for the packing-blocks B, said guides C being arranged in a circular series surrounding the opening A′. These guides are in the form of projections on the face of the plate A, and consist of the outwardly-projecting plates C′, notched in their outer edges at C^2 for the spring-rod D, and the flange-plates C^3 projecting from the outer edges of the plate C′ in a plane parallel with the plate A and forming grooves in which the ends B′ of the packing-blocks B are movable in and out, said ends B′ of the blocks B being preferably tenoned, as best shown in Figs. 1 and 4. It will be noticed that the guides each have a plate C′ projecting laterally from the carrier-plate and extending parallel to a line radial to the axis of the journal-opening, and the flange-plate C^3 projects from the outer edge of said first plate in a plane approximately parallel with that of the carrier-plate, and these plates C and C^3 form keepers in which the packing-blocks move radially in the operation of the invention. The blocks B are, by preference, of wood with the grain running transversely, so that the said grain will be presented approximately in a radial direction with respect to the journal in order to secure the maximum wear in the use of the invention.

The blocks B fit and are movable radially in the guides of the carrier, and their ends abut at their inner edges to form a closure throughout the circle of the journal.

The rod D embraces the series of blocks B and the guides therefor and fits and operates within grooves B^2, formed longitudinally in the outer edges of the blocks B, and also in the notches C^2 in the outer edges of the guides, whereby the said rod is held from displacement and is permitted to exert a contracting tension in such manner as to force the series of blocks radially inward. The ends of the spring-rod D are slightly separated when applied, as shown in Fig. 1, and when it is desired to release the tension on the blocks B for any purpose, such as in applying the dust-guard to the journal, any suitable form of wedge-block may be inserted between arms D′, extended outwardly from the ends of the spring-rod, and flared at D^2, as best shown in Fig. 1, in order to expand the spring-rod slightly to release the tension on the blocks. This construction of the spring-rod with the outwardly turned and flared ends facilitates the spreading of the spring to release the tension on the blocks, as will be readily understood from Fig. 1 of the drawings.

To prevent the shocks and jars experienced in use from forcing the plate downwardly, so that its edge will come in contact with the journal, I provide stops for engagement by the upper portion of the spring-rod to limit the downward movement of the plate A relative to the packing-blocks B. These stops, as shown, consist of pins or studs A^2, projecting from the face of the plate A, in position to engage the spring-rod near the separated ends thereof, as shown in Fig. 1, whereby to prevent the plate from coming in contact with the journal on any downward movement which may be given to the plate A in the use of the invention.

The construction is simple, easily operated, facilitates the exertion of a uniform tension on the several packing-blocks of the

series, enables me to release such tension on all of the blocks at the same time, and may be supplied at a small cost and will be durable in use, the blocks B because of the arrangement of the grain having great endurance, and such blocks when finally worn may be replaced at small cost.

I claim—

1. A dust-guard substantially as herein described, comprising a carrier-plate provided with an opening for a journal and with a circular series of guides surrounding said opening and having plates projecting outwardly from the carrier-plate and notched in their outer edges and also provided with flange-plates projecting from the outer edges of said first plates in a plane approximately parallel with that of the carrier-plate, stop-pins projecting from the carrier-plate adjacent to the upper portion thereof, packing-blocks held at their ends in the guides of the carrier and movable radially toward and from the opening for the journal, and a spring-rod encircling the series of packing-blocks and engaging therewith to exert an inward tension thereon, the upper portion of said spring-rod lying below the stop-pins of the carrier-plate and having between said pins the outwardly turned and flared ends, substantially as and for the purpose set forth.

2. A dust-guard comprising a carrier-plate having an opening for a journal and provided with a circular series of guides surrounding the same and consisting of plates projecting outwardly from the carrier-plate and notched in their outer edges for a spring-rod, and flange-plates projecting from said outwardly-projecting plates and forming guides for the ends of the packing-blocks, packing-blocks held in said guides and movable therein toward and from the journal-opening, and the spring-rod embracing the series of packing-blocks and lying in the notches in the plates of the guides, substantially as set forth.

3. The combination in a dust-guard with a carrier and a circular series of packing-blocks held thereto and movable radially, of a spring-rod encircling the series of packing-blocks and exerting an inward tension thereon and having the outwardly turned and flared extremities, the ends of the spring-rod in use not overlapping but being spaced apart whereby a wedge may be driven between the flared extremities to expand the spring-rod, substantially as set forth.

4. A dust-guard comprising a carrier-plate having on one side a series of guide projections provided at their ends with keeper projections or flanges for the packing-blocks and notched in their outer edges for the spring-rod, the packing-blocks having at their ends tenons fitting in the guides of the keepers and grooved longitudinally in their outer edges to receive the spring-rod, and the spring-rod fitting in the notches of the guides and in the longitudinal grooves of the packing-blocks, substantially as set forth.

5. A dust-guard having a carrier-plate provided with an opening for a journal and also having a circular series of guides around said opening and each having a plate projecting laterally from the carrier-plate and extending parallel to a line radial to the axis of the journal-opening and flange-plates projecting from the outer edge of said first plates in a plane approximately parallel with that of the carrier-plate whereby to form keepers in which packing-blocks may move radially, substantially as set forth.

HERMAN BENSCH.

Witnesses:
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