

P. J. HARRIGAN.

DUST GUARD.

APPLICATION FILED JAN. 3, 1908.

Fig. 1.

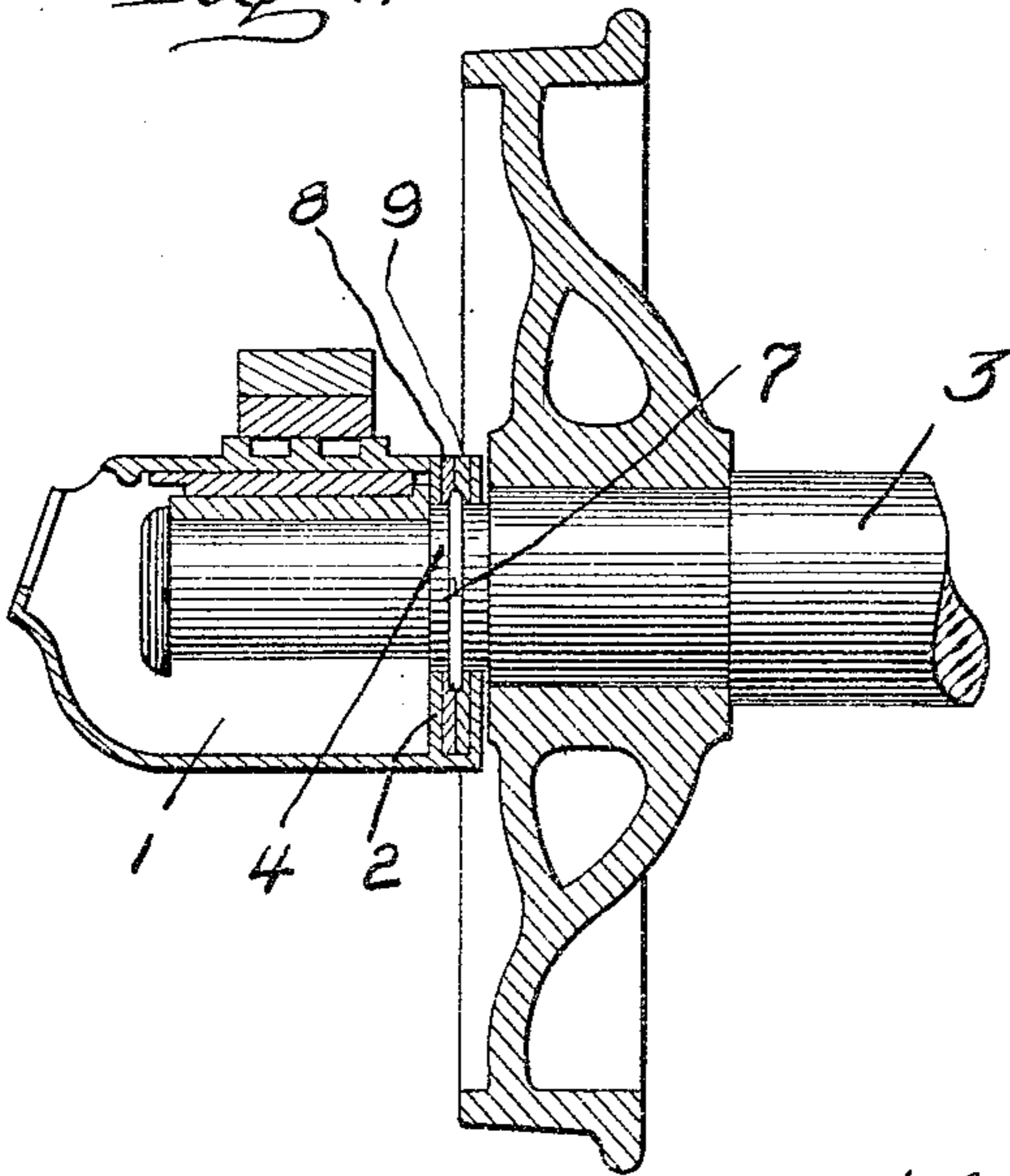


Fig. 2.

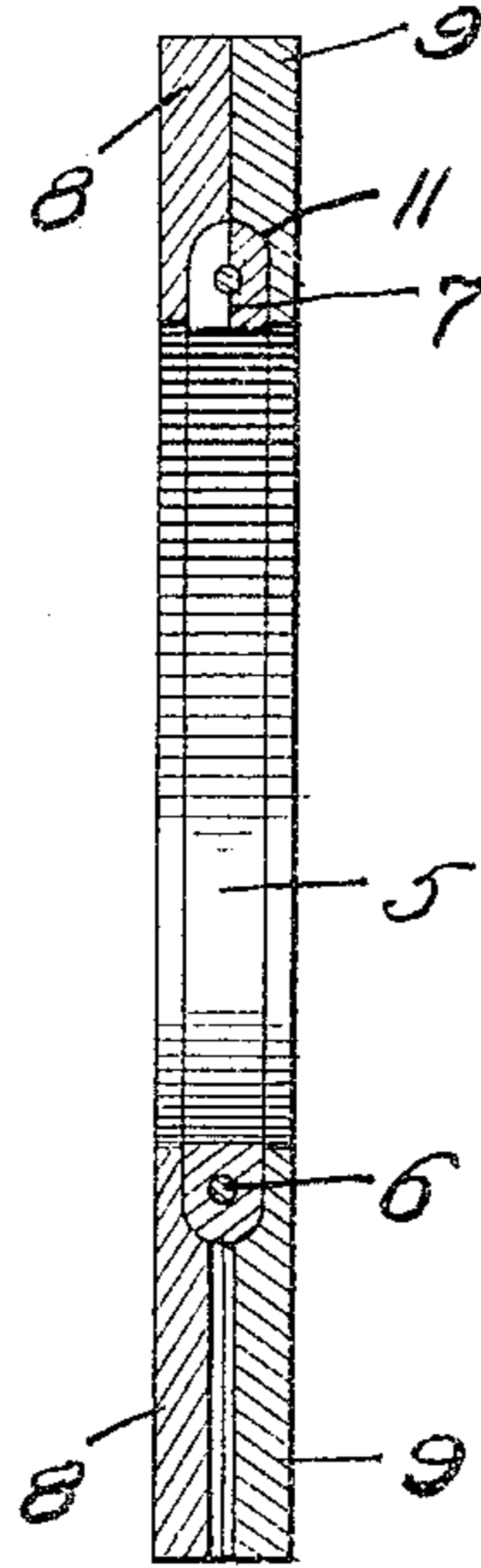
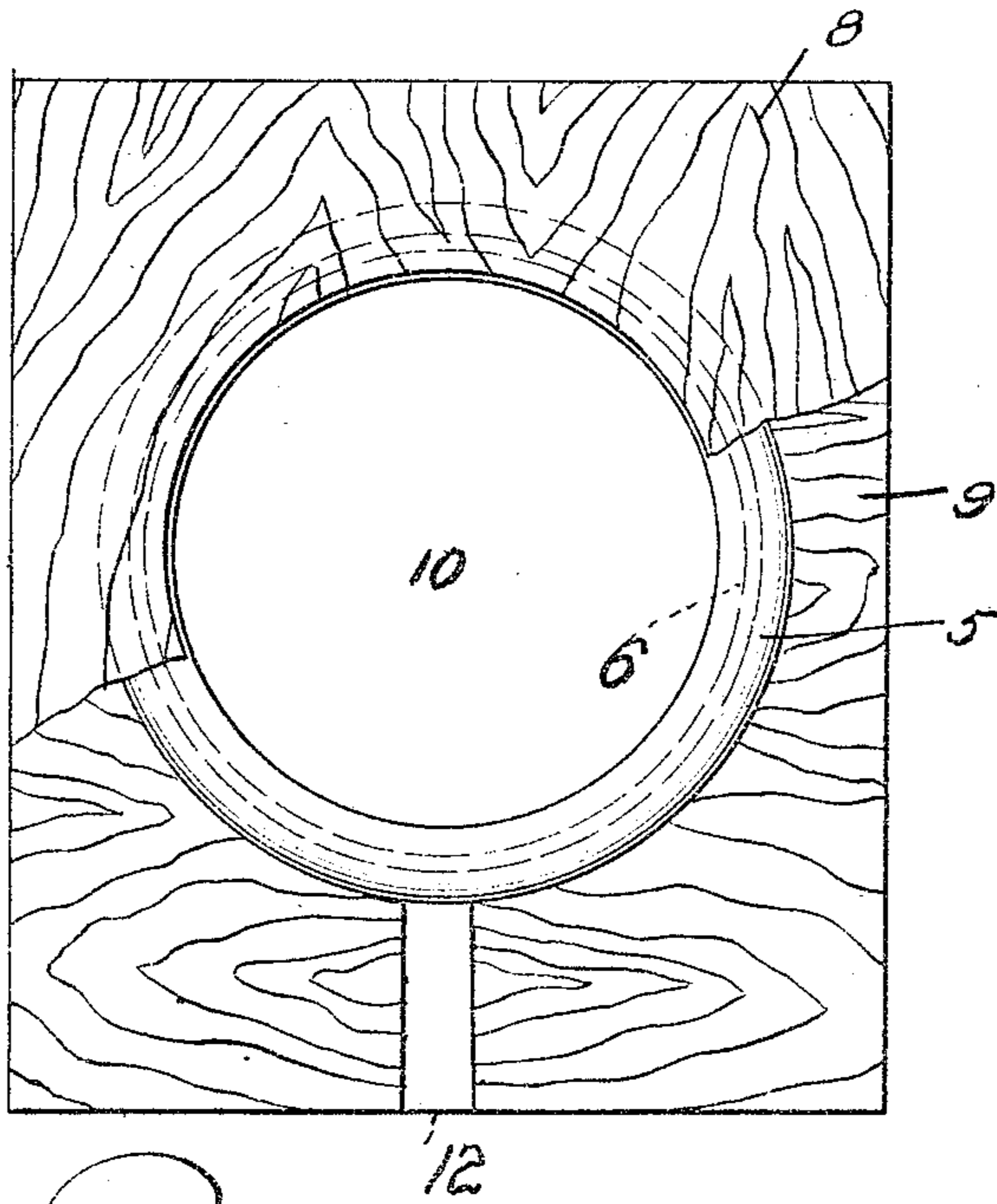


Fig. 3.

Witnesses

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# UNITED STATES PATENT OFFICE.

PATRICK J. HARRIGAN, OF McKEESPORT, PENNSYLVANIA.

## DUST-GUARD.

No. 897,097.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed January 3, 1908. Serial No. 409,136.

*To all whom it may concern:*

Be it known that I, PATRICK J. HARRIGAN, a citizen of the United States of America, residing at McKeesport, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Dust-Guards, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to certain new and useful improvements in dust guards, particularly designed for the boxes of railway cars.

The primary object of my invention is not only to render the Master Car-Builders' standard axle-box entirely dust and oil proof by preventing the entrance of dust and the escape of oil around the axle, but also to furnish a dust guard that can be easily applied and removed with facility.

20 Another object of this invention is to provide a novel dust guard that can be inexpensively manufactured, the dust guard being light, simple, durable and reliable as a medium for preventing particles from entering a journal box.

To this end, I have devised a novel dust guard adapted to relieve a journal from the wear and friction as heretofore experienced with tightly closed dust guards. It is a well known fact that particles of matter, of a cutting or gritty nature often work their way between the journal and a dust guard, causing the journal and dust guard to wear to such extent as to allow foreign matter to pass into the journal box. I obviate the above defects by providing a dust guard wherein all the wear and tear upon a journal is entirely eliminated. This is accomplished by using an elastic ring which is placed upon a journal in such a manner as to revolve therewith, and at the same time allow lateral movement of the journal with relation to the ring. The ring is surrounded by a dust guard and is adapted to revolve within said guard, thus providing a wall over which it will be practically impossible for dirt or foreign matter to pass in order to enter a journal box.

The nature, characteristic features, and scope of the invention will be more fully understood from the following description, taken in connection with the accompanying drawings, forming a part of this specification, and in which:

55 Figure 1 is a vertical sectional view of my dust guard as applied to a journal box and an axle, Fig. 2 is an elevation of my dust guard,

partly broken away, and Fig. 3 is a vertical sectional view of the same.

In the accompanying drawings, 1 designates a journal box of a conventional form, the rear end of this box having a dust guard casing 2 through which protrudes the end of an axle 3, said axle being formed with an annular enlargement 4 for the dust guard, which is placed within the casing 2.

65 In practice, I construct my dust guard of two movable parts, one constituting an annulus or ring, and the other a housing for said annulus or ring. The annulus or ring 5 is constructed of lead, fiber, leather, or similar material, in which is embedded an annular member 6 of wire, the member 6 having sufficient resiliency to maintain the ring or annulus 5 in a circular form. This ring or annulus 5 is formed with overlapping ends, as indicated at 7, whereby the ring or annulus 5 can be easily placed upon the annular enlargement 4 of the axle 3. When placed thereon, the resiliency of the member is adapted to firmly hold the same, as though it were formed integral with the axle, at the same time allowing longitudinal movement of the axle with relation to said ring.

The ring or annulus 5 is inclosed by a guard or housing, comprising two wooden sections or plates 8 and 9 which are so disposed that the grain of one section will extend in an opposite direction with respect to the grain of the other section. The plates are suitably secured together, to provide a durable guard or housing for the annulus or ring 5. In order that the axle can extend through said plates, the plates are provided with an opening 10, corresponding in diameter to the annular enlargement 4 of the axle 3.

To accommodate the annulus or ring 5 within the guard or housing, the confronting inner edges of the plates 8 and 9 are beveled or recessed, as at 11, providing an annular groove, adapted to snugly engage the annulus or ring 5, to permit of said annulus or ring revolving in the guard or housing.

105 A guard or housing carrying the annulus or ring 5 is placed within the casing 2 of the journal box 1, and then the journal 3 placed in position. Immediately upon the axle being in position, the annulus or ring 5 is adapted to firmly grip the enlargement 4 of the axle and revolve therewith, whereby it will be impossible for dirt or foreign matter to pass under the annulus or ring, and

equally as impossible to pass over said annulus or ring.

Should dirt or foreign matter mount the annulus or ring 5, the rotary movement of the axle in said ring will have a tendency to force the dirt towards the bottom of the guard or housing, and in order to remove the dirt therefrom, I have provided the plates 8 and 9 of the guard or housing with confronting grooves 12, these grooves providing an opening through which dirt or foreign matter may pass into the casing 2, and thus be separated from the journal box proper.

My invention in the present case principally resides in the guard or housing in combination with the resilient annulus or ring, this annulus or ring forming the subject-matter of a companion application.

Having now described my invention what I claim as new, is:—

The combination with a journal box and an axle extending therethrough, of an annulus clamped upon said axle, and having a

resilient member embedded therein approximately centrally thereof and a sectional guard positioned within said journal box, said guard adapted to receive said annulus, the sections of the guard being formed of wood with the grain of one section extending in an opposite direction with respect to the grain of the other section, said sections secured together and having their confronting edges recessed to receive said annulus, and each of said sections further provided with a groove, the grooves of said sections extending in a vertical direction and associating with each other, whereby an outlet for the accumulation of foreign matter in said groove is provided, and said annulus directly engaging throughout the wall of said groove.

In testimony whereof I affix my signature in the presence of two witnesses.

PATRICK J. HARRIGAN.

Witnesses:

A. J. TRIGG,

MAX H. SROLOVITZ.