

(No Model.)

W. McKENZIE.
DUST GUARD FOR CAR AXLES.

No. 446,003.

Patented Feb. 10, 1891.

Fig: 1.

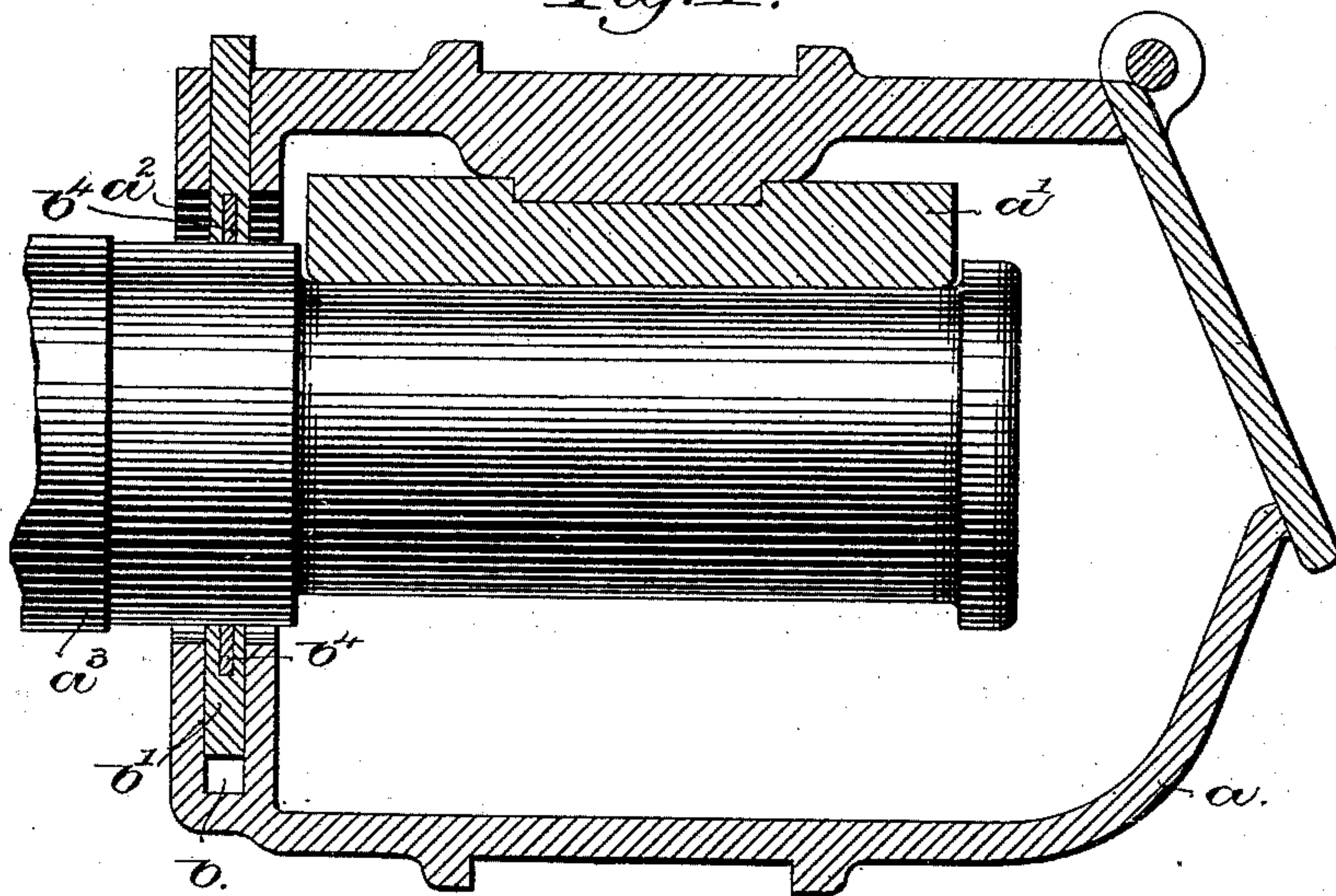


Fig: 2.

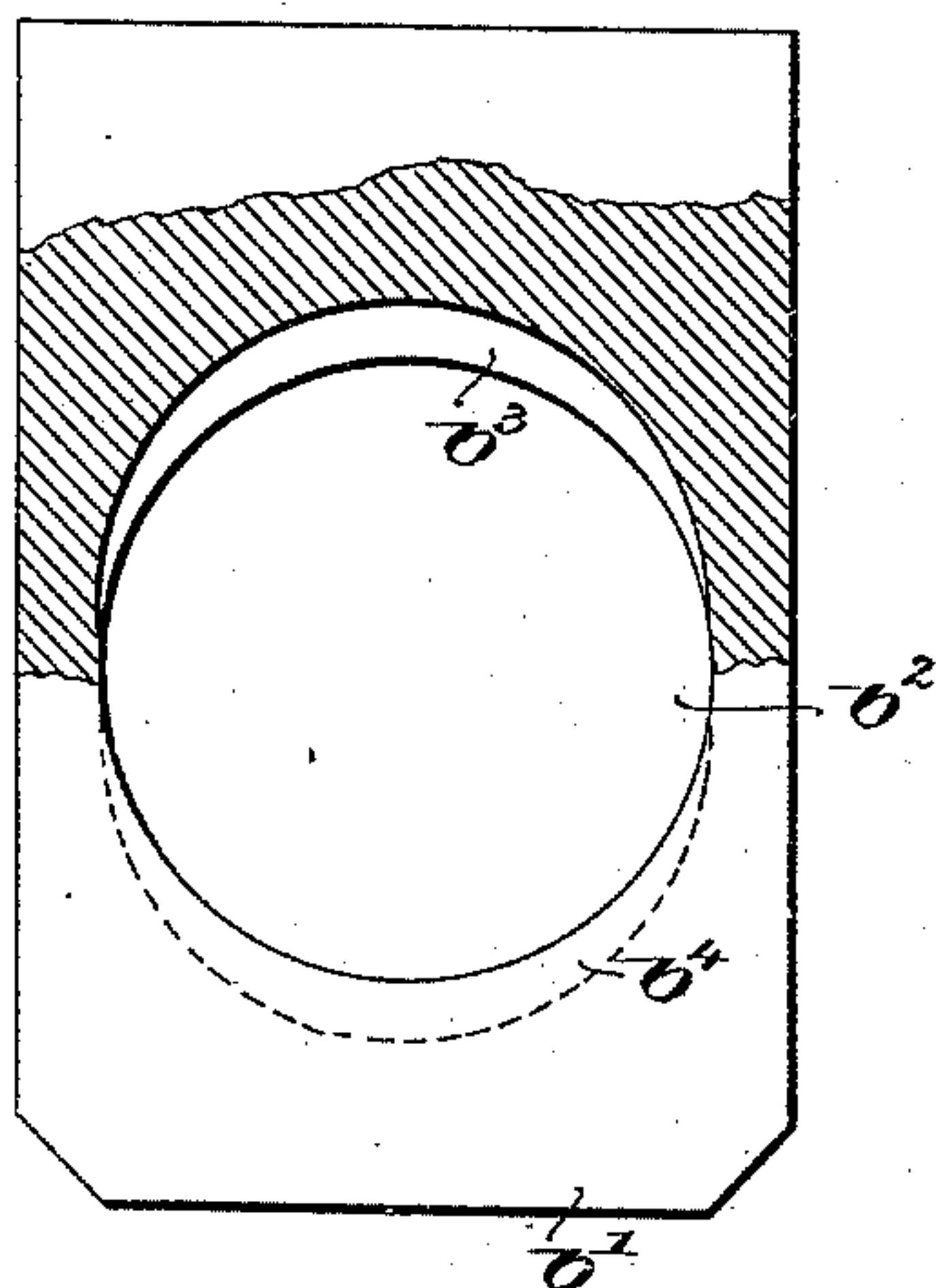


Fig: 3.

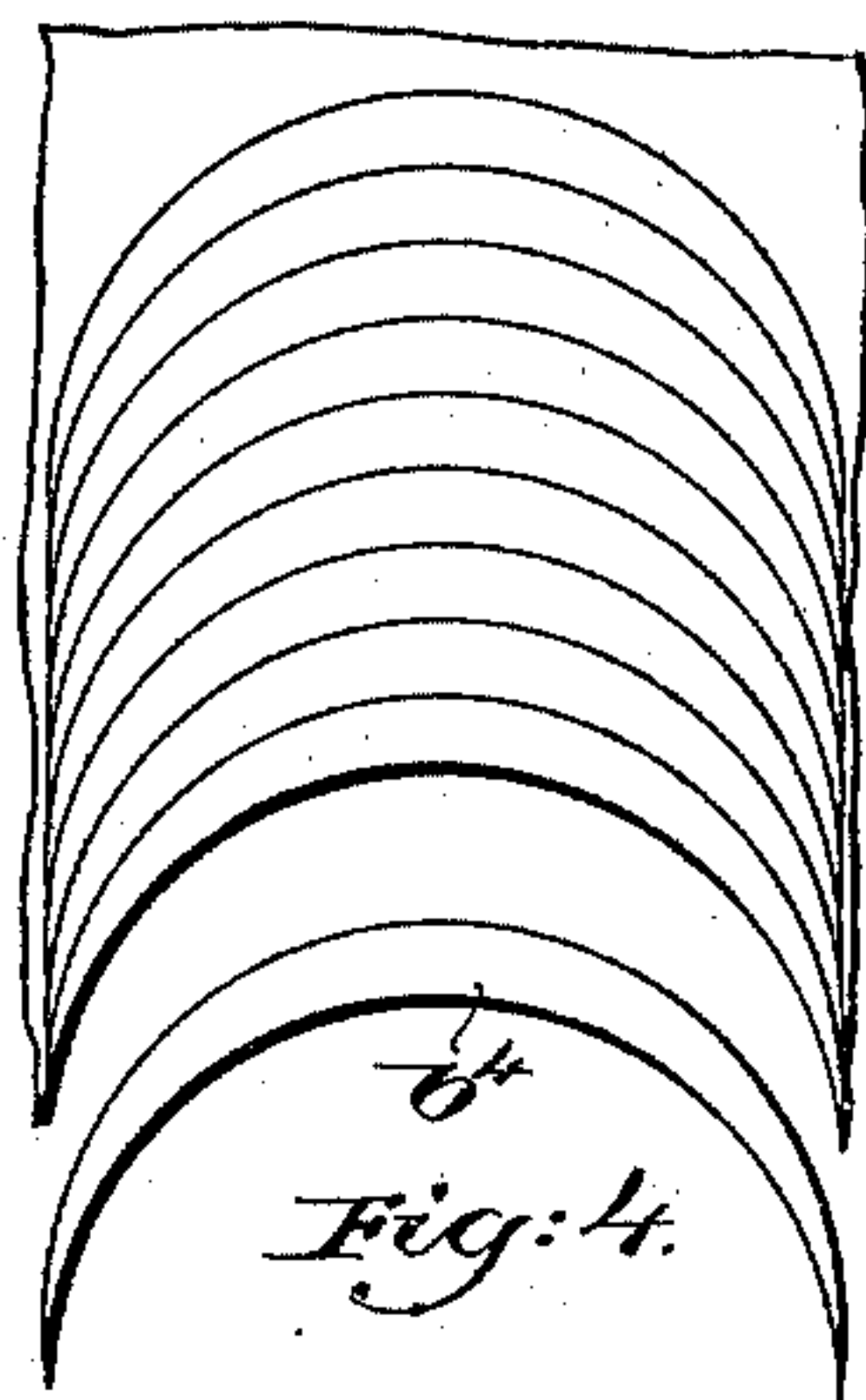


Fig: 4.

witnesses.

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WILLIAM MCKENZIE, OF BOSTON, MASSACHUSETTS.

DUST-GUARD FOR CAR-AXLES.

SPECIFICATION forming part of Letters Patent No. 446,003, dated February 10, 1891.

Application filed July 24, 1890. Serial No. 359,744. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM MCKENZIE, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Dust-Guards for Car-Axles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention relates to dust-guards especially adapted to be used on car-axles, and has for its object to improve the construction of the same, whereby a stronger, more durable, and efficient dust-guard may be made at a minimum expense.

In accordance with my invention the body of the dust-guard is made of a single piece of wood or other suitable material, which is provided with a circular opening, and preferably at both the top and bottom portions of the said opening the said body is provided with a slot, preferably made crescent-shaped, the outer circumference of the said slot being struck from a different center than the center of the circular opening, thereby leaving the sides of the body portion intact, and as a result greatly increasing the strength of the dust-guard. The preferably crescent-shaped slots in the top and bottom of the dust-guard body have fitted into them preferably crescent-shaped pieces of leather, rawhide, or like packing material, the said rawhide pieces being secured in place preferably by glue. The slots in the dust-guard are preferably made crescent shaped, as a very considerable saving may be effected.

My invention therefore consists in a dust-guard consisting of a body provided with an opening and having a slot in its upper portion and a packing in said slot, whereby the packing is protected, substantially as will be described.

Other features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 represents a longitudinal vertical section of a railway-car axle-box provided with a dust-guard embodying my invention, the car-axle being shown in elevation; Fig. 2, a detail in elevation, partially broken out, of the dust-guard removed; Fig. 3, a detail showing a strip of material from which the crescent-shaped

pieces are cut, and Fig. 4 a detail of one of the crescent-shaped pieces.

The axle-box a and the bearing a' are and may be of any usual construction, the said box being provided at its rear side with the opening a^2 , through which is extended the axle a^3 . The axle-box is provided with a slot or groove b , into which is fitted my improved dust-guard, consisting of the body b' , substantially oblong in shape, and preferably made of a single piece of wood or other suitable material. The body b' is provided with a circular opening b^2 through which the car-axle is extended, and the said body is provided preferably at both the top and bottom portions of the opening b^2 , with preferably crescent-shaped slots b^3 , into which are fitted crescent-shaped pieces b^4 of packing material, preferably rawhide. The inner circumference of the crescent-shaped slot b^3 is concentric with the circumference of the opening b^2 , and therefore the inner circumference of the crescent-shaped packing, when fitted into the said slot, will be concentric with the opening b^2 .

In practice the wear upon the dust-guard is greatest upon the top and bottom portions of the opening through which the axle is extended, and with my improved crescent-shaped packing the thickest portion of the packing occupies a position to receive and resist the wear upon the dust-guard.

The outer circumference of the slot b^3 is struck from a different center from the center of the opening b^2 , and the sides of the body portion near the horizontal diameter of the opening b^2 remain intact and are not weakened in any manner.

The space between the outer vertical edges of the guard and the circumference of the axle-opening is small at best, owing to the size of the groove in the standard axle-boxes, and by leaving this space intact as much of the material of the guard is left as is possible. As there is practically no wear at the sides of the axle-opening, no packing is necessary there.

The top and bottom packings are independent and disconnected from each other and do not contract or pull the sides together as the packing and dust-guard body are worn at their top and bottom, such as is now the

case where the packings are secured together and to the body b' at its sides. Furthermore, the crescent shape of the packing b^4 permits a maximum number of pieces to be cut out from a given amount of material, as clearly shown in Fig. 3, thereby avoiding a considerable waste in stock or material.

In practice the slots b^3 are preferably made by means of a revolving saw or cutter, against which the top and bottom portions of the opening b^2 are forced.

I prefer to fasten the crescent-shaped pieces of packing by means of glue, as it frequently happens in practice that the dust-guard must be thinned off or reduced in thickness to fit the groove b in the axle-box.

I prefer to make two slots b^3 in the dust-guard; but I do not desire to limit myself to this construction, as the lower slot b^3 may be omitted.

It will be noticed that the packing in the slot is completely protected against displacement and cannot be removed from its slot by actual use without breaking the dust-guard.

I claim—

1. A dust-guard consisting of a body provided with a circular opening and having a

slot extended part way and into and between the faces of the body from said opening, the ends of the slot intersecting the opening at one side of its transverse diameter, and a rawhide packing rigidly held in the slot and presenting a bearing-surface less than a semi-circle, substantially as described.

2. A dust-guard consisting of a body provided with a circular opening and having a crescent-shaped slot extended into the body from said opening, and a crescent-shaped packing in said slot, substantially as described.

3. A dust-guard consisting of a body provided with a circular opening and having independent oppositely crescent-shaped slots extended into the body from the said opening, and crescent-shaped packing of rawhide in said slots, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM MCKENZIE.

Witnesses:

JAS. H. CHURCHILL,
EMMA J. BENNETT.