

No. 742,750.

PATENTED OCT. 27, 1903.

J. W. STEPHENSON.
DUST GUARD FOR JOURNAL BOXES.

APPLICATION FILED JAN. 10, 1903.

NO MODEL.

Fig. 2.

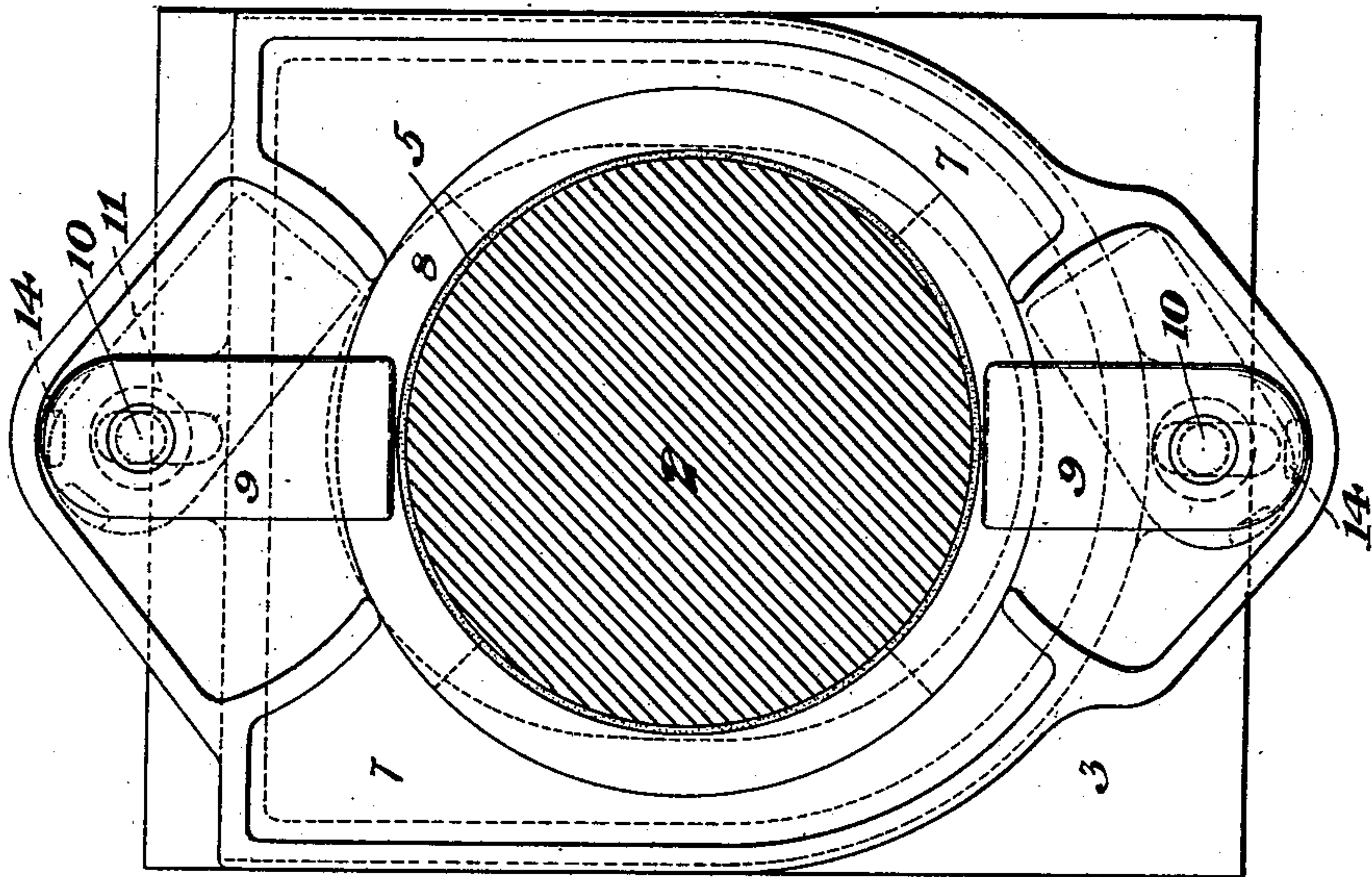


Fig. 3.

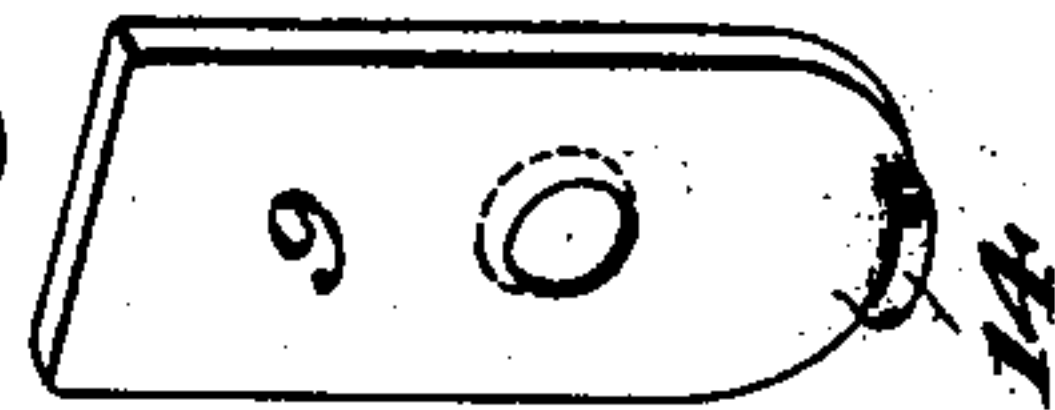


Fig. 1.

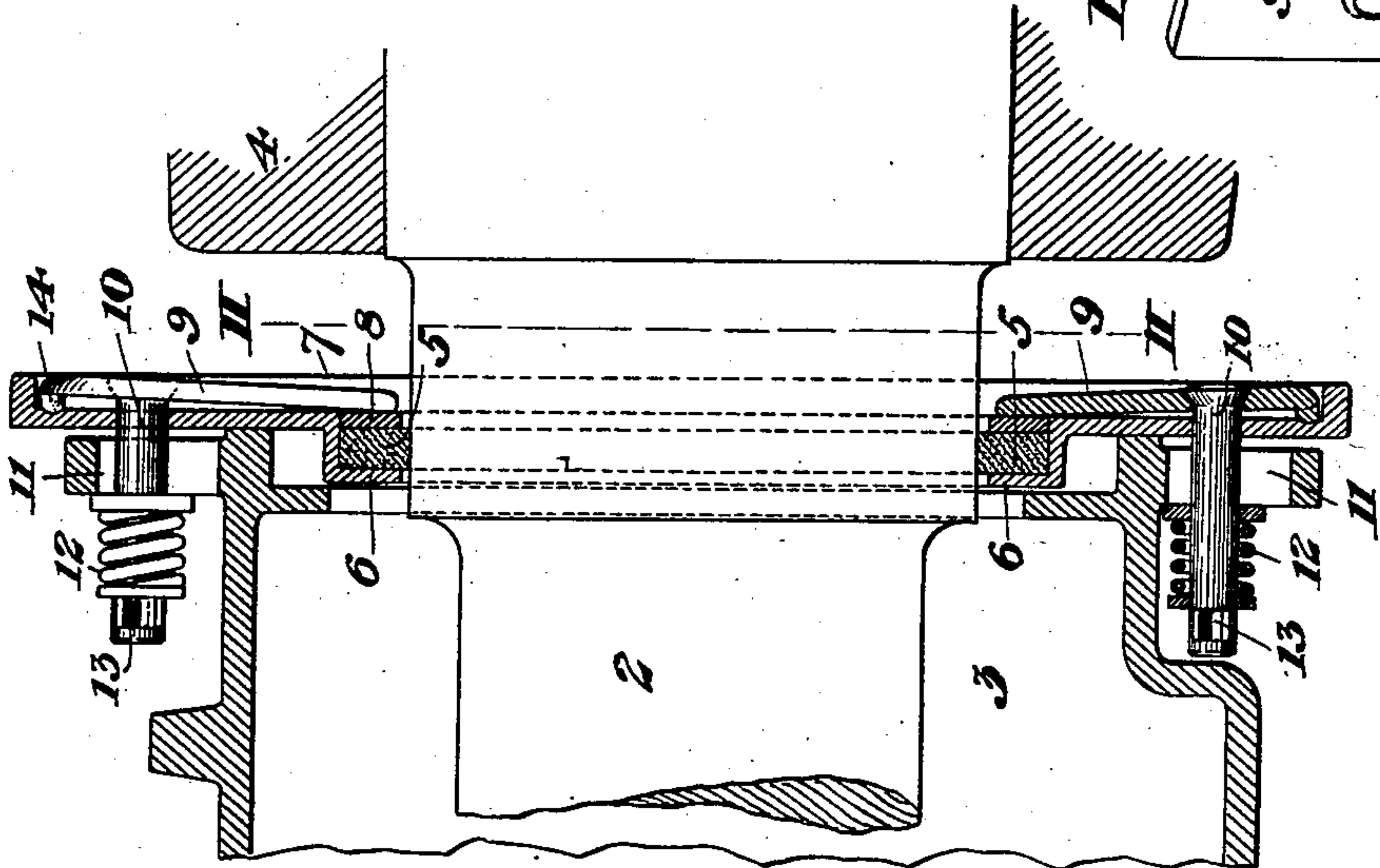
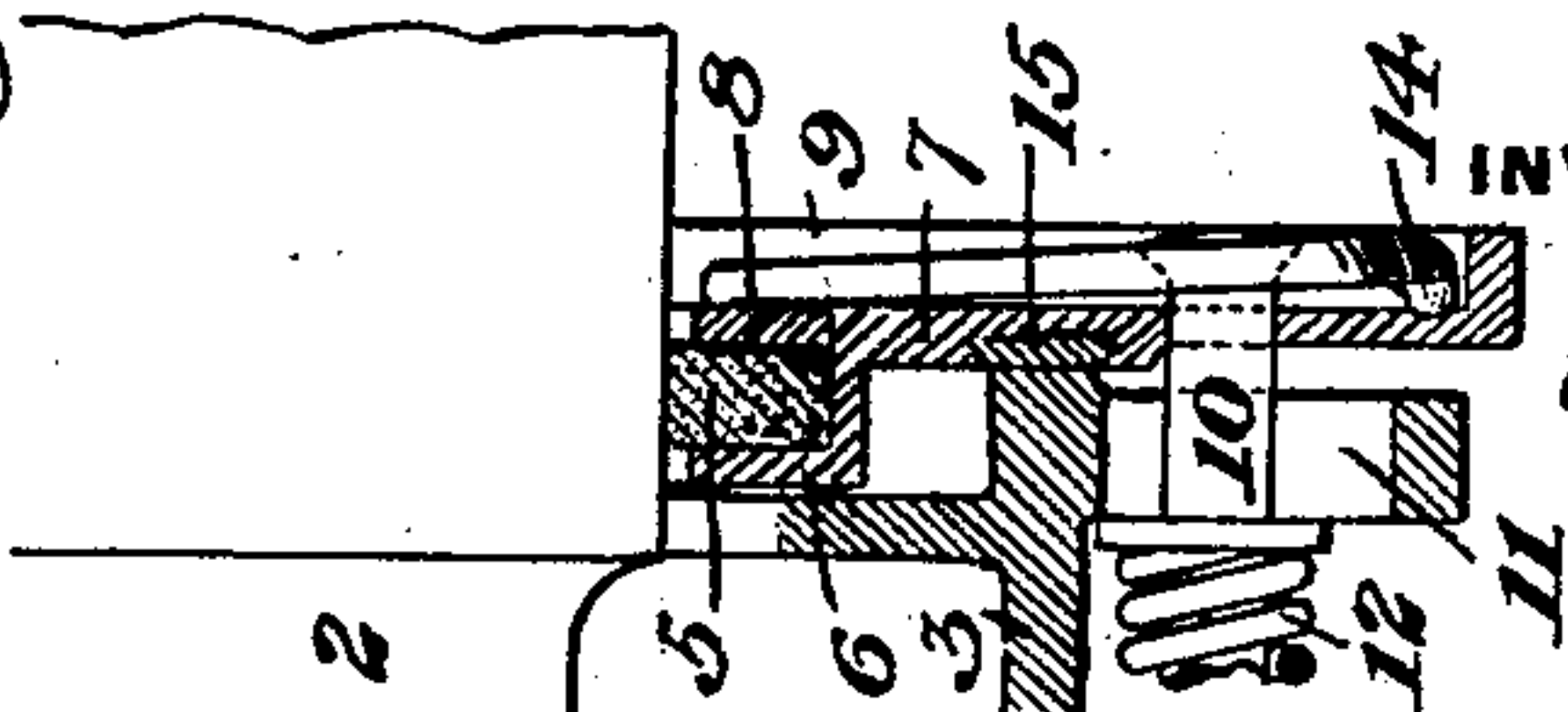


Fig. 4.



WITNESSES

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DUST-GUARD FOR JOURNAL-BOXES.

SPECIFICATION forming part of Letters Patent No. 742,750, dated October 27, 1903.

Application filed January 10, 1903. Serial No. 138,540. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. STEPHENSON, of Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Dust-Guard for Journal-Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows in vertical longitudinal section an axle-box having a dust-guard constructed in accordance with my invention. Fig. 2 is a vertical section on the line II II of Fig. 1. Fig. 3 is a rear perspective view of the lock. Fig. 4 is a view similar to Fig. 1, showing the lower half of the box with parts of modified construction.

The purpose of my invention is to provide an axle-box for a car adapted to exclude the dust from entering the box. Many devices have been tried for this purpose heretofore; but none of them, so far as I know, have given entire satisfaction. Most of them have been objectionable because of their complicated construction, which renders them expensive to make and difficult to keep in repair, and many of them have been so constructed that they cannot be applied to boxes of the present type without radical changes in the lines and proportions of the box. All these difficulties are obviated by my invention, which is simple and very efficient. It can be applied without difficulty to boxes of standard form, and the dust-ring can be removed without difficulty and without need of removing the box from the axle.

Referring to the drawings, 2 is the journal of the car-axle.

3 is the rear portion of the journal-box, and 4 is the hub of the car-wheel. Where the axle enters the rear end of the box it is encircled by a dust-ring 5 of any suitable material, preferably of antifriction metal and preferably made in segments, as shown in Fig. 2. This ring is seated in a recess 6 on the rear cover-plate 7 of the axle-box. This recess is open on the side next to the hub of the wheel and extends back within the vertical limit of the axle-box 3, so that the ring 5, which is seated therein, also extends with-

in the vertical limit of the box. This affords ample room between the ring and the car-wheel to enable the ring to be set in place and removed. The providing of room for this purpose is an important feature of my invention and distinguishes it from all prior devices known to me, in which the complication of the parts and the narrowness of the space afforded for access to the ring rendered them very objectionable. The ring 5 is held in place by a cover-ring 8, which preferably also fits within the recess 6, and the ring 8 is retained by means of locks 9, which are pivoted on bolts 10, extending through the locks, the cover-plate 7, and a lug 11 on the journal-box, which lug is slotted to permit the box to be moved relatively to the cover-plate when it is desired to lift the box for the purpose of removing the wedge and journal-brass. The locks 9 are held by springs 12 and cotters 13. The springs serve not only to hold the locks against the retaining-ring 8, but also to hold the cover-plate 7 to its seat on the box. If desired, the retaining-ring 8 may be omitted and the locks caused to bear directly on the dust-ring. The outer ends of the locks 9 are held out from the cover-plate 7 by projections 14, so that when the locks are in the position shown in Fig. 1 and by full lines in Fig. 2 their inner end shall be pressed firmly by the spring against the retaining-ring 8, thus holding it in place and keeping the dust-ring 5 to its seat in the recess 6. When thus held, it is clear that no dust can enter the axle-box around the axle, and as the springs 12 also hold the cover-plate 7 firmly to the box the entrance of dust between this plate and the box is prevented. If it is desired to remove the ring 5, the locks 9 are turned laterally on their pivots, as shown by dotted lines in Fig. 2, so as to free the retaining-ring 8 and render it removable from the dust-ring 5, which can thus be removed without removing the journal-box. When the locks 9 are in locking position, as shown in Fig. 1, the projections 14 fit in small recesses in the face-plate 7, so as to afford resistance to displacement of the locks.

In Fig. 4 I show a modification in which a gasket 15 is set at the place of contact of the

cover-plate 7 with the journal-box to aid in excluding the dust.

The skilled mechanic will be able to modify the parts of the device in many ways without
5 departure from my invention as defined in the following claims.

I claim—

1. In combination with a journal-box, a cover-plate, a dust-ring extending within the
10 vertical limit of the box, and means on the box for holding the dust-ring in place; substantially as described.

2. In combination with a journal-box, a cover-plate, a dust-ring extending within the
15 vertical limit of the box and set in a seat accessible from the back of the box, and a lock attached to the rear end of the box and adapted to hold the dust-ring in place and movable
20 to free the dust-ring; substantially as described.

3. In combination with a journal-box, a cover-plate, a stationary dust-ring fitted in a recess in the cover-plate accessible from the back of the box and extending within the
25 limit of the box; substantially as described.

4. In combination with a journal-box, a cover-plate, a dust-ring extending within the vertical limit of the box and set in a seat accessible from the back of the box, and a lock

pivoted to the box and adapted to hold the
dust-ring in place; substantially as described. 30

5. In combination with a journal-box, a cover-plate, a dust-ring extending within the vertical limit of the box and set in a seat accessible from the back of the box, and a lock
35 pivoted to the margin of the box extending inwardly opposite to the dust-ring; substantially as described.

6. In combination with a journal-box, a cover-plate, a dust-ring adapted to fit around
40 the axle, a lock pivoted to the box and adapted to hold the dust-ring in place, a bolt on which the lock is pivoted, and a spring on the bolt; substantially as described.

7. In combination with a journal-box, a cover-plate, a dust-ring adapted to fit around
45 the axle, a lock attached to the box and adapted to hold the dust-ring in place, and a spring which holds the lock, said lock having a projection adapting it to bear at the ends on the
50 dust-ring and against a fixed bearing; substantially as described.

In testimony whereof I have hereunto set my hand.

JOHN W. STEPHENSON.

Witnesses:

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