(No Model.)

D. WEIR.

CAR AXLE BOX.

No. 442,562. Patented Dec. 9, 1890.

Fig. 1.

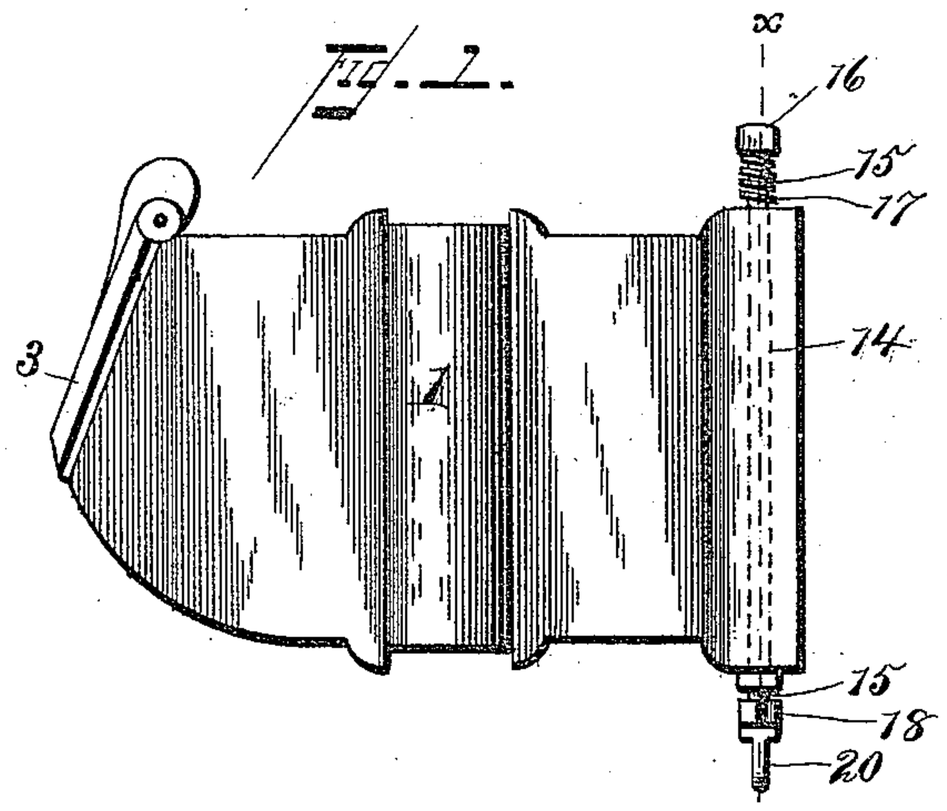


Fig. 4.

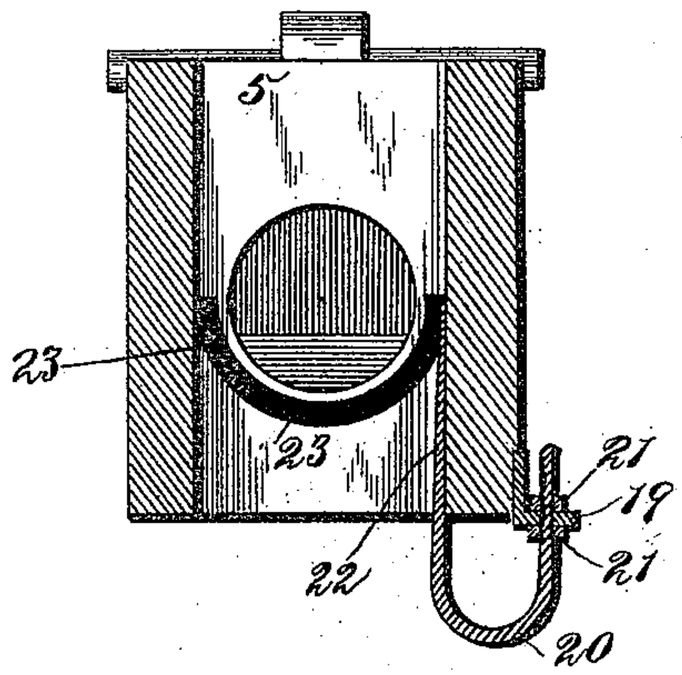


Fig. 2.

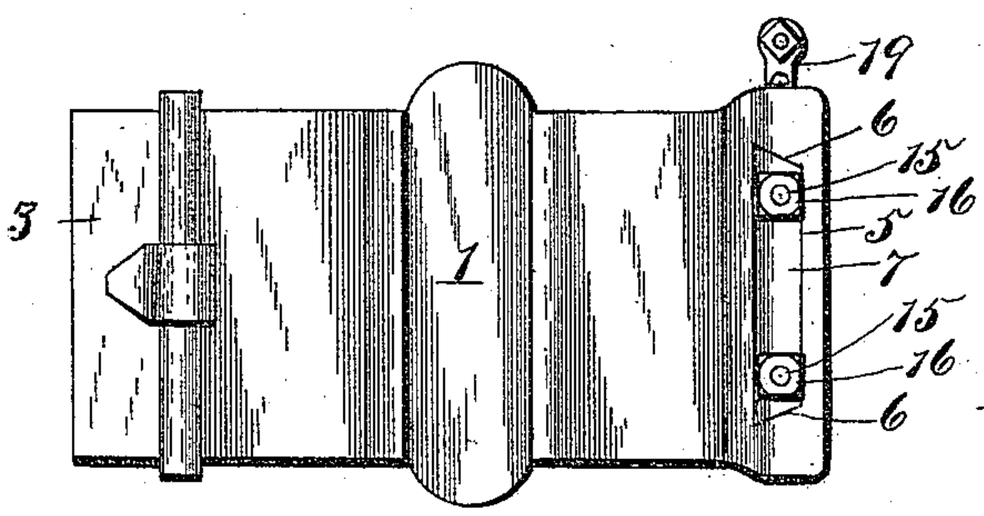


Fig. 5.

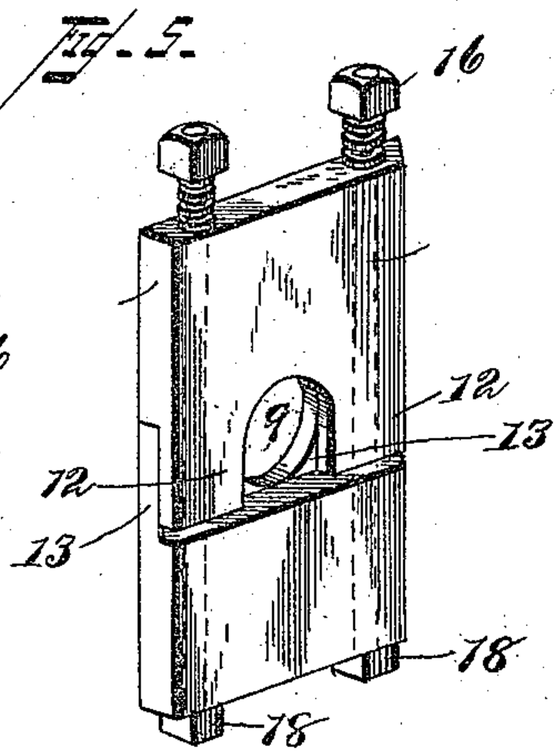


Fig. 3.

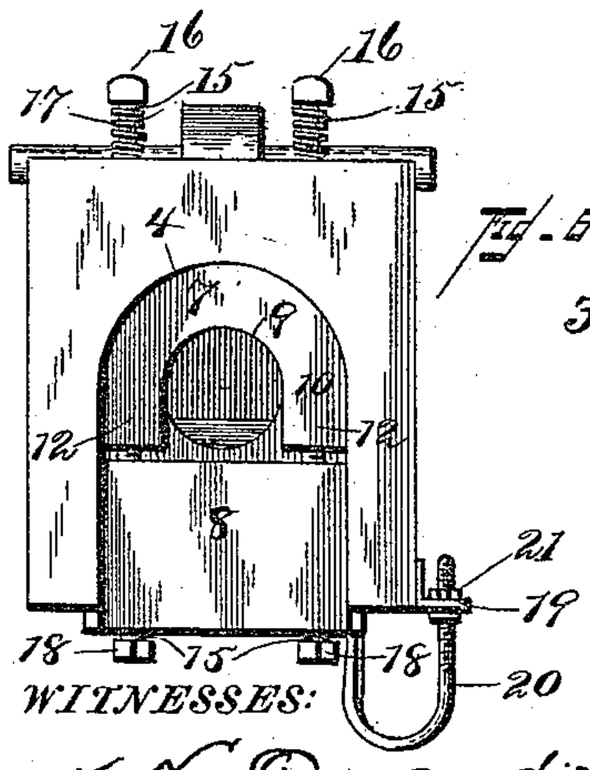
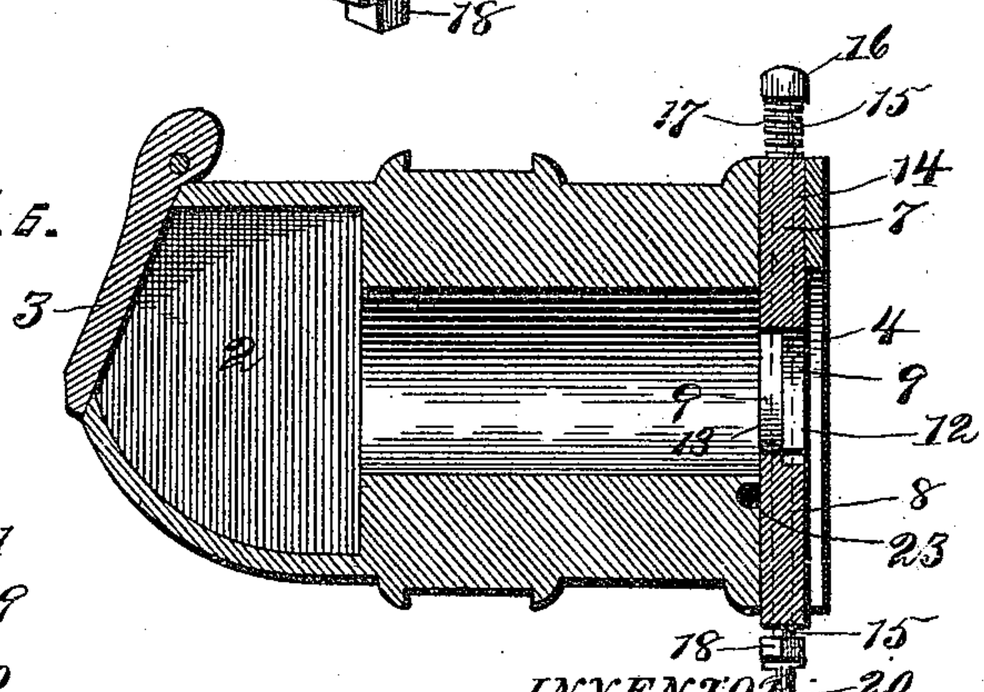


Fig. 6.



WITNESSES:

Frank A. Durand.

W. L. Coombs

INVENTOR:

Duncan Weir,

by J. Lewis Bagger & Co.,

Attorneys.

UNITED STATES PATENT OFFICE.

DUNCAN WEIR, OF WILKES-BARRÉ, PENNSYLVANIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 442,562, dated December 9, 1890.

Application filed August 7, 1890. Serial No. 361,262. (No model.)

To all whom it may concern:

Be it known that I, DUNCAN WEIR, a citizen of the United States, and a resident of Wilkes-Barré, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Car-Axle Journal-Boxes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in car-axle journal-boxes.

The object of the invention is to provide an an improved journal-box for car-axles which shall be dust-proof, whereby dust and grit are prevented from gaining access to the axle and injuring or damaging the same, and also to provide means for forming an oil-tight joint to prevent the escape of lubricating material.

The invention consists in the novel construction and combination of parts hereinafter fully described, and definitely pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of a journal-box constructed in accordance with my invention. Fig. 2 is a plan view of the same. Fig. 3 is an end view looking from the inside. Fig. 4 is a sectional view on the line *x x*, Fig. 1, with the removable plates detached therefrom and showing the groove to receive a packing for making an oil-tight joint. Fig. 5 is a view of the removable plate detached. Fig. 6 is a central longitudinal section of the box.

In the said drawings, the reference-numeral 1 designates the body of the box, having the usual cylindrical bore to receive the car-axle, and the oil-well 2 and cover 3. The inner or back end of the box has a recess 4, commencing just above the top of the bore and conforming in shape thereto and terminating at the bottom of the box. The upper side or top of the box at this end is provided with a slot 5, intersecting the recess 4, and the sides of the box formed with beveled grooves 6 to receive the similarly-beveled plates 7 and 8. These plates may be made of wood, soft metal, or other similar material rectangular in shape, with their side edges beveled to correspond with the beveled grooves 6, and each having a semicircular recess 9 at one end. These plates are also cut away, forming two arms 12 12 and 13 13, which overlap each other when the plates are inserted within the grooves in the box, as seen in Fig. 5. These plates are also provided with vertical apertures to receive the rods 15, having heads 16 and screw-threaded at their opposite ends. These rods are of sufficient length to extend somewhat above the top of the box, and are provided with short coiled springs 17 and nuts 18, so as to allow a slight play of said plates to compensate for vibrations of the axle, as will be obvious. At the lower part of the box is secured angular arm 19, having a recess through which passes one end of a bent bar 20, being secured thereto by means of the nuts 21. The inner end 22 of this bar is extended upwardly and is made tapering or wedged-shaped and rests in one of the grooves 6 of the box, and the purpose thereof is to take up any wear in the box.

The numeral 23 designates a semi-cylindrical or half-round groove in the rear or inner face of the box to receive any suitable packing whereby an oil-tight joint is formed, provided between the bottom plate 8 and the axle.

The operation of the invention will be readily understood. The box being applied to a car-axle, the plates 7 and 8 are inserted in the grooves 6, with their recessed ends innermost and overlapping each other and embracing the axle. The rods 15 are then passed through the apertures in the plates, the springs 17 placed thereon, and the nuts 18 applied, by which the plates are securely held in position, the springs allowing for any vibration of the box and the wedge 22 providing or compensating for any wear of the lower plate 8. The packing in the groove 23 also provides a tight joint and prevents escape of the lubricating material.

The invention is simple and economical in construction and will be found very efficient in use, as a dust and oil tight box is provided whereby dirt, grit, and other injurious substances are prevented from gaining access to the axle and the lubricating material prevented from escaping.

Having thus described my invention, what I claim is—

1. The combination, with a car-axle journal-box having a slot at its inner or rear end, the plates inserted in said slot with their meeting ends recessed and overlapping each other, of the wedge-arm secured to the lower end of said box and projecting into the lower end of the slot and bearing upon the lower plate, substantially as described.

2. The combination of a car-axle journal-box having a semicircular groove in the inner face thereof and a packing and a slot at its inner or rear end, and the plates inserted in said slot with their meeting ends recessed and overlapping each other, substantially as described.

3. The combination of the box having a slot in its inner end and a semicircular groove with a packing therein, the beveled plates inserted in said slot with their inner or meeting ends recessed and overlapping each other, the headed rods, springs, and nuts for securing the plates in position, and the wedge-arm secured to said box and projecting into the lower end of said slot, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

DUNCAN WEIR.

Witnesses:
J. P. EVANS,
J. C. KAUFER.