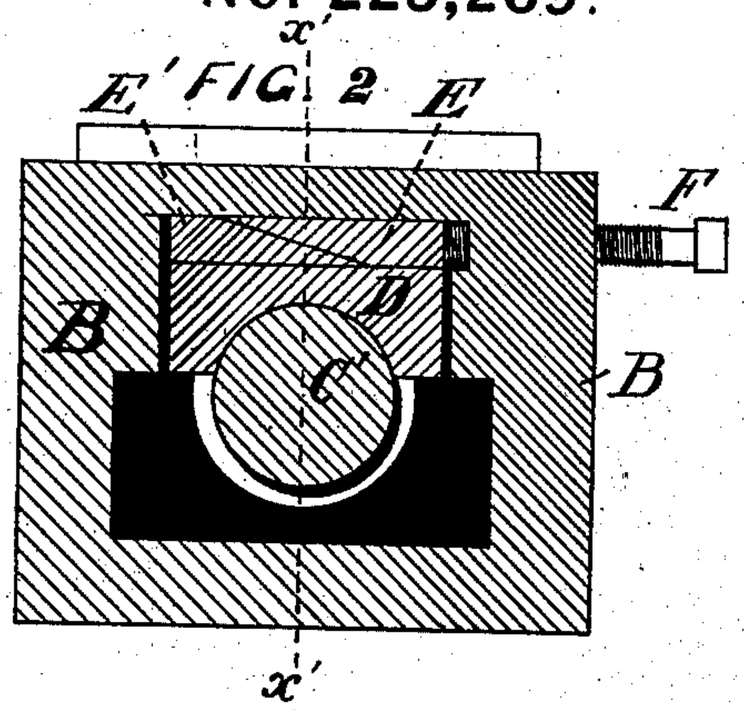
G. W. BROWNELL.

Car-Axle Box.

No. 225,269. Patented Mar. 9, 1880.



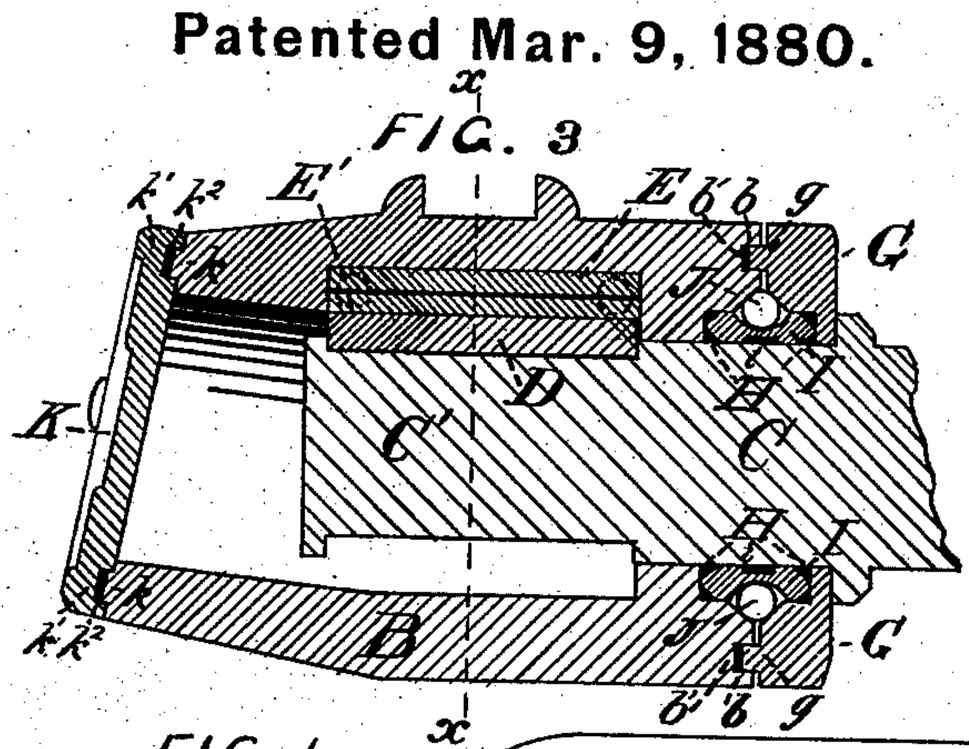


FIG. 1

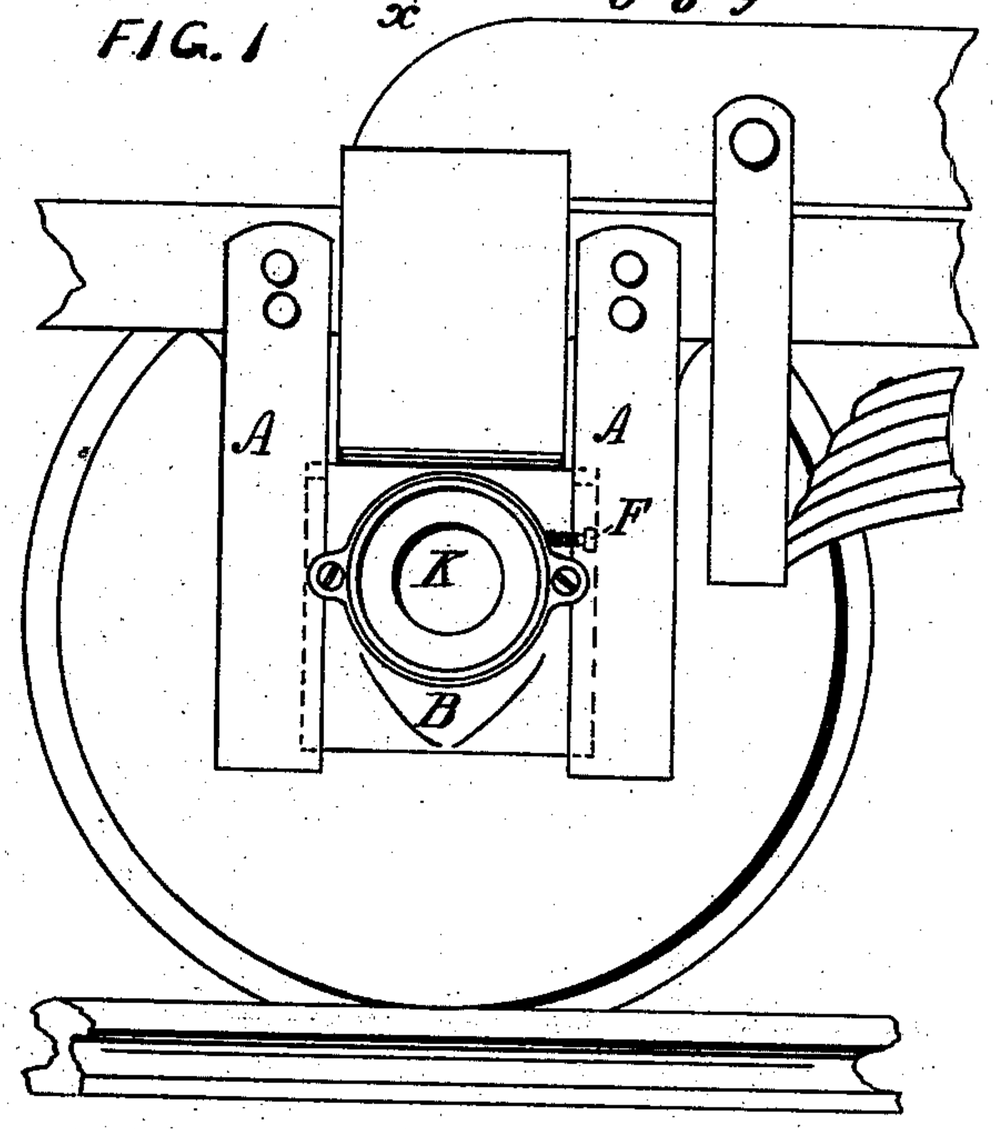


FIG. 4

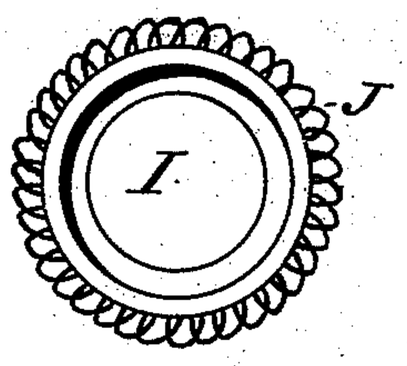


FIG. 5

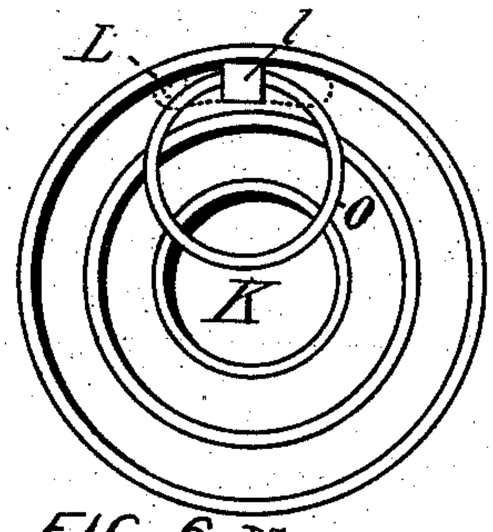


FIG. 6

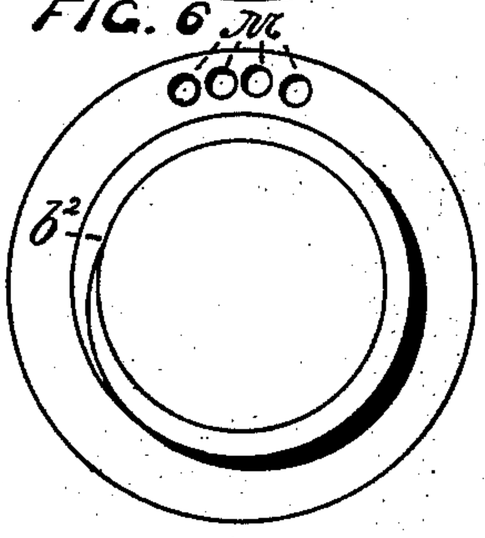
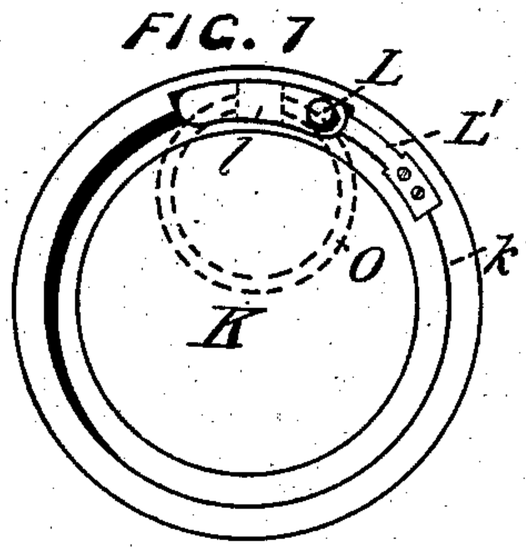


FIG. 7



ATTEST.

Geo. H. Knight.

Walter Allen

INVENTOR

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UNITED STATES PATENT OFFICE.

GEORGE W. BROWNELL, OF ST. LOUIS, MISSOURI.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 225,269, dated March 9, 1880.

Application filed May 3, 1878.

To all whom it may concern:

Be it known that I, GEORGE W. BROWNELL, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Car-Axle Boxes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My improvement consists, first, in the combination, with a rubber collar centrally grooved to receive other packing material, of a coiled metal spring surrounding said collar and tending to press it inward toward the axle.

The second part of my invention consists in the construction of the removable cap of the grease-box. This screws in and is prevented from unscrewing by a spring-catch, as described.

In the drawings, Figure 1 is an end view. Fig. 2 is a transverse section at *x x*, Fig. 3. Fig. 3 is a longitudinal section at *x' x'*, Fig. 2. Fig. 4 is a side view of the rubber collar with surrounding metal spring. Fig. 5 is an outside view of my preferred grease-box cap. Fig. 6 is an end view of the grease-box with the cap removed. Fig. 7 is an inside view of the cap.

A is the pedestal of a car-truck. B is the main part or body of the grease-box, working vertically in the pedestal, as usual.

C is the axle, of which C' is the journal, having bearing in brass D.

E E' are wedges interposed between the top of the brass D and the grease-box. F is a screw screwing in the side of the grease-box and whose point bears against the wedge E so as to force it in as the journal and brass wear away, to compensate for the wear, and to keep the axle in the same position in the grease-box, and at the same time to preserve the brass in its horizontal position.

G is a cap-ring, bolted to the inner end of the grease-box and surrounding the axle.

The cap is fitted to the inner end of the grease-box with an annular tongue-and-groove joint, *b g*, made oil and dust tight by a gasket, *b'*, of rubber, leather, or other suitable material.

H is an annular groove made in the parts B and G, and containing a ring, I, of vulcanized caoutchouc, made to fit closely to the axle, except at its middle, where is an annular groove to contain hemp or other packing material *i*. The ring is surrounded by a spiral metal spring, J, which tends to keep the inside of the ring I in contact with the axle as it may wear away or lose its elasticity.

In Figs. 1 and 3 I have shown a simple round cap, K, with an annular tongue-and-groove joint, *k k'*, and a rubber, leather, or other suitable gasket, k^2; but my preferred construction of cap is shown in Figs. 5 and 7, the former being an outside and the latter being an inside view of the cap, and Fig. 6 showing the end of the grease-box constructed to receive it.

In this construction the cap K has a screw-neck, *k*, which screws into a screw-socket, b^2, of the grease-box, and when the cap is screwed up tightly against the end of the grease-box it is prevented from unscrewing by a spring-catch pin, L, which enters one of the holes M, being forced into said hole by a spring, L'.

The catch is secured to the cap by a lug, *l*, which passes loosely through the cap, and through the lug passes a ring, O, by which the catch is drawn out of the hole M to enable the unscrewing of the cap.

I claim as my invention—

1. The combination of the rubber packing-ring I, centrally grooved to receive other packing material, and the spiral metallic spring J for encircling the rubber ring, as set forth.

2. The cap K, having screw-connection $k\ b^2$ with the grease-box B and retaining spring-catch L L', substantially as set forth.

GEORGE W. BROWNELL.

Witnesses:

SAML. KNIGHT,

GEO. H. KNIGHT.