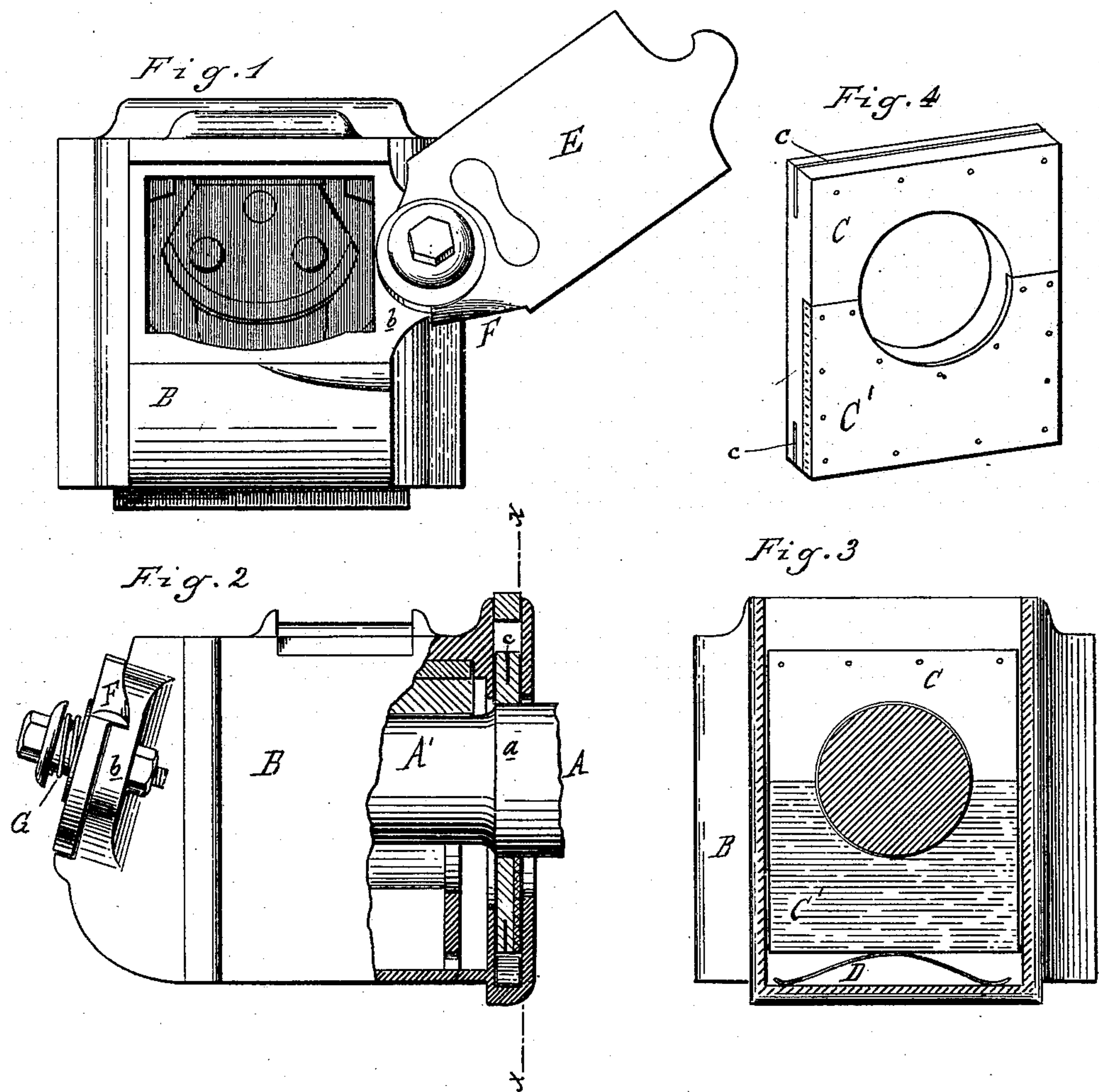


T. A. BISSELL.
Car-Axle Box.

No. 221,278.

Patented Nov. 4, 1879.



Attest:

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UNITED STATES PATENT OFFICE.

THOMAS A. BISSELL, OF DETROIT, MICHIGAN.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **221,278**, dated November 4, 1879; application filed September 2, 1879.

To all whom it may concern:

Be it known that I, THOMAS A. BISSELL, of Detroit, Wayne county, Michigan, have invented an Improvement in Car-Axle Boxes, of which the following is a specification.

The nature of this invention relates to certain new and useful improvements in the construction of car-axle boxes, and is especially designed as an improvement upon the patent granted to me July 31, 1877, No. 193,593.

The invention consists in the peculiar construction of the dust-excluding packing, and, further, in the peculiar construction and manner of pivoting the door, all for the purposes hereinafter explained.

In the drawings, Figure 1 is an end elevation of a car-axle box with the door open. Fig. 2 is a side elevation of the same with the door closed. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is a perspective of my improved dust guard or packing.

In the accompanying drawings, which form a part of this specification, A represents the axle, having the usual journal A' and collar *a*. B is the box, provided with the dust guard or packing C. This packing consists of a single piece of wood with a central hole for the journal to pass through. Its outer face is recessed on its lower half, which is covered with a piece of leather, C'. This leather face presses against the rear wall of the box, forming a tight joint therewith, and preventing the oil from working out. The top and bottom of the wood packing C are cut with narrow recesses or grooves, in which are placed strips *c* of metal, which are secured by brads or screws and take the wear at the top and bottom of the packing.

A spring, D, is placed in the bottom of the packing-slot to keep the packing up against the axle.

E represents a door or cover to the box B, one end of which is pivoted to a lug, *b*, which projects laterally from the side of the box, and is kept in its closed position by means of the spring G.

My invention in this connection consists in casting upon and with the door E a stop, F, which projects over the edge of the lug *b*, and which, when the door is opened, strikes against the lower edge of said lug, as is clearly shown in Figs. 1 and 2. This prevents the cover from falling down when opened beyond position shown in Fig. 1, and compels its being closed in the right direction, whereas in the old construction it is often broken off by attempting to close it by turning it clear around or with a motion from below.

What I claim as my invention is—

1. In a car-axle box, the wood-dust packing provided with the strips of metal *c*, inserted in its top and bottom edges, substantially as described and shown.

2. The dust-excluding packing described, consisting of the recessed wood piece C, having leather facing C' and metal strips *c*, substantially as set forth and shown.

3. In combination with a car-axle box, and as a means of excluding dust from the outer end thereof, the door E, pivoted as described, and actuated by the spring G, and provided with the stop F, substantially as specified.

THOMAS A. BISSELL.

Witnesses:

H. S. SPRAGUE,
CHAS. J. HUNT.