

(No Model.)

A. O. DAYTON.
CAR AXLE BOX.

No. 341,096.

Patented May 4, 1886.

Fig. 1.

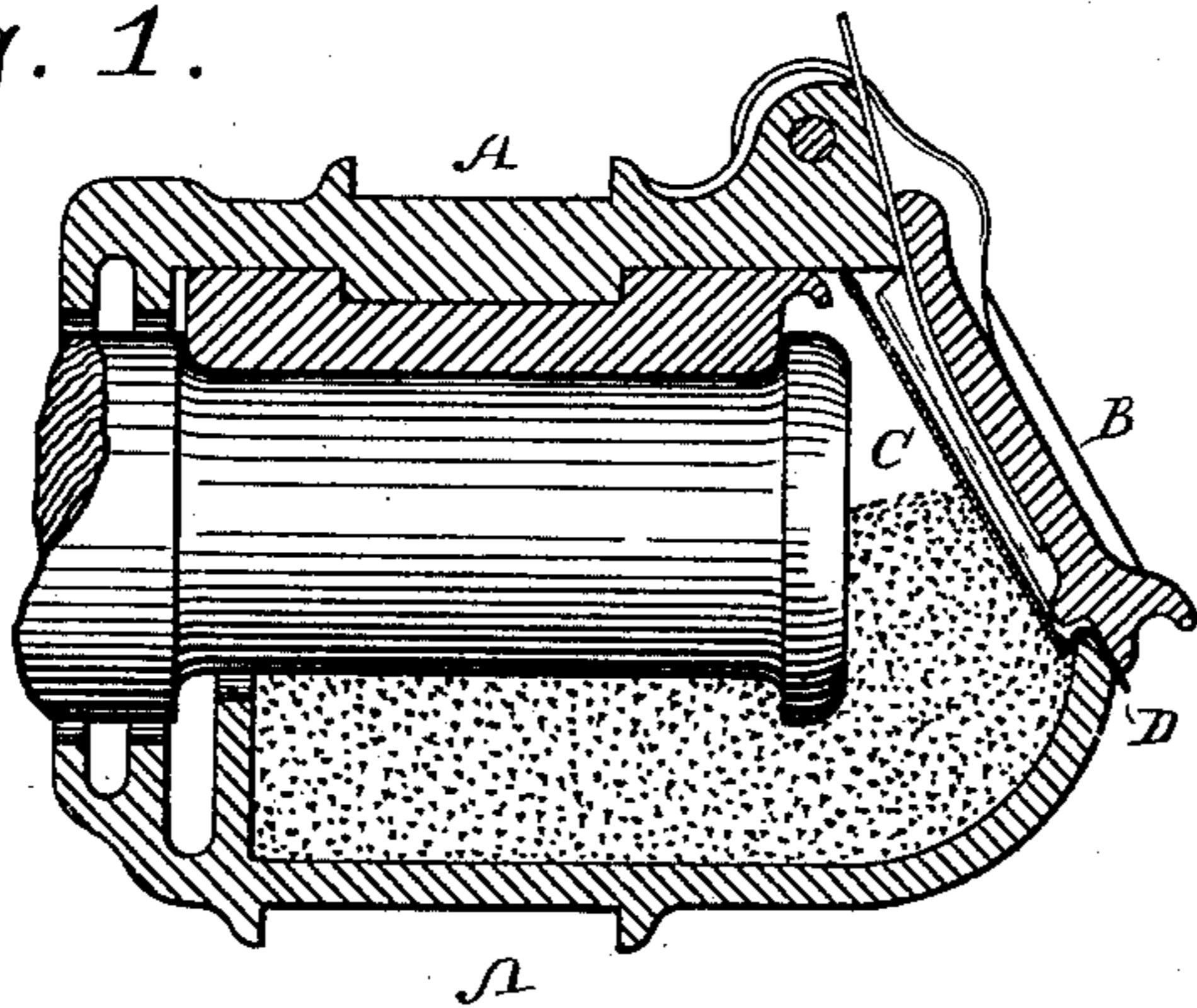


Fig. 2.

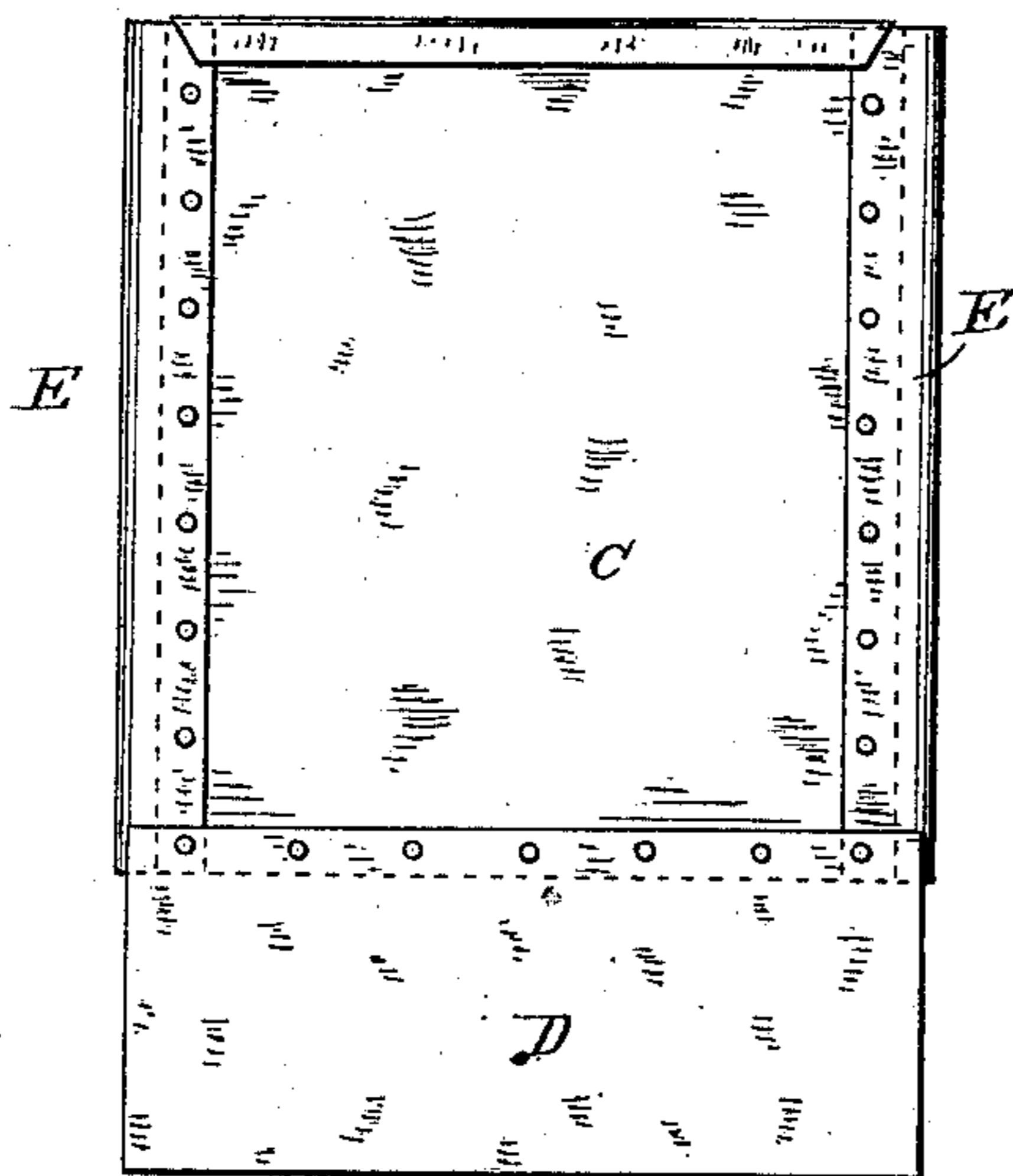


Fig. 4.

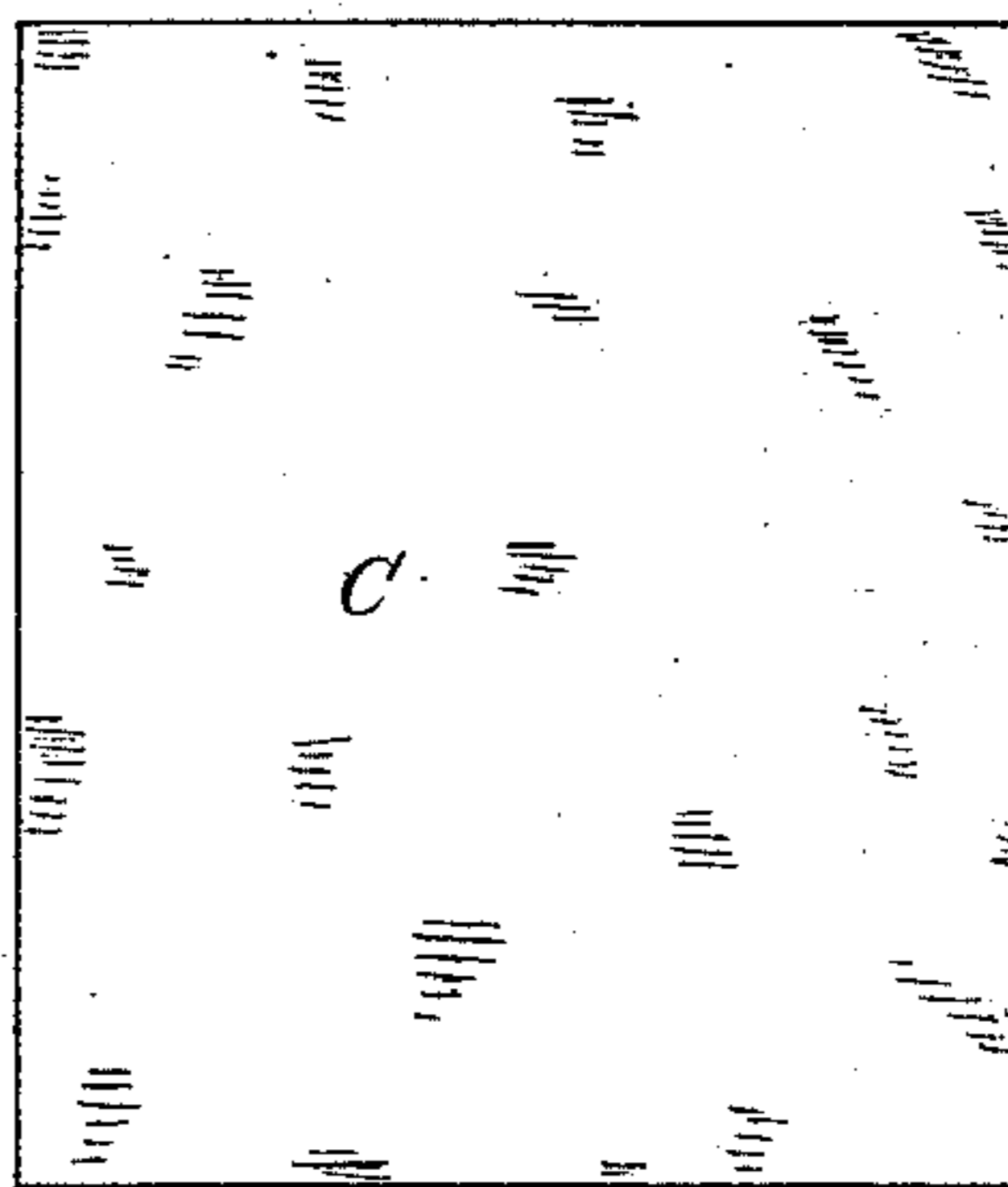


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

AARON OGDEN DAYTON, OF CAMDEN, NEW JERSEY.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 341,096, dated May 4, 1886.

Application filed November 12, 1885. Serial No. 182,545. (No model.)

To all whom it may concern:

Be it known that I, AARON OGDEN DAYTON, a citizen of the United States, and a resident of Camden, in the county of Camden and State of New Jersey, have invented certain new and useful Improvements in Dust-Guards for Car-Axle Boxes, of which the following is a specification, reference being had to the accompanying drawings.

The object of my improvements is to provide a dust-guard which shall effectually exclude from entering at the outer end of the axle-box all sand, dust, grit, or the like.

Heretofore various attempts have been made to make car-axle boxes dust-proof. Many of these have been, by way of protection, applied to the inner end of the car-axle box, and there are many devices which will prevent the ingress of dust, &c., at the inner end of a car-axle box; but I have found by experiment that the tendency of dust to enter the box is much greater from the outer end under the lid or cover than from the inner end. My experiments have shown this to be true, although I offer no theory to account for it. The many efforts to prevent the ingress of dust at the outer end of an axle-box have had relation to fitting or holding down tightly the lid or cover of the box; but all such attempts have been found more or less defective in practice, largely on account of the joint becoming defective by the necessarily frequent opening of the lid and by the continual jarring to which the box is subjected.

I am aware of United States Patent No. 138,717, in which a pad of leather or other soft material with a cement foundation is applied to the under surface of the cover or lid of a car-axle box. This is but one of the means heretofore employed in attempting to seat the lid or cover dust-tight upon the edges of the box around the opening, and is entirely different in plan and operation from my invention.

My improvements contemplate a dust-guard for the outer end of an axle-box, independent of the lid or cover, and which will even serve whether the cover be up or down or out of place entirely.

In the accompanying drawings, illustrating my invention, Figure 1 is a vertical central section of the car-axle box with a section of

the axle within the box. Fig. 2 is a view of a plate or dust-guard detached. Fig. 3 is a cross-section of the same, and Fig. 4 shows a plain plate without any marginal appliances or attachments.

Referring to the letters upon the drawings, A indicates an ordinary car-axle box, B its lid, and C my improved dust-guard, applied within the box under the lid in such a manner as to bear tightly upon all sides of the box. This dust-guard C may be composed of pasteboard, rubber, rubber-cloth goods, celluloid, or any suitable substance having a sufficient quality of flexibility and resilience. The plate C is formed slightly longer than the aperture in the box where it is to be placed, and of such width that when in place it will fit snugly at its sides to the side walls of the box. I have found a plain rectangular plate of suitable dimensions to work perfectly for months in position in a car-axle box, as indicated, being curved outwardly in its middle portion, on account of being a little longer than the aperture it is to fill, so that its resilient quality will cause it to bear tightly at its ends. The lubricating material within the box serves to keep it pressed outward, and always holds it in place. I have, however, found that with a mere plate the dust, after some length of time, by accumulating at the lower end of the plate, will make its way somewhat into the lower part of the box when the plate is taken out. Although this is but slightly injurious, being removed from immediate contact with the axle, yet it is desirable to avoid the entrance of dust altogether in all cases; and to do this I sometimes place an apron or flap, D, upon the lower end of the dust-guard C, as indicated in the drawings, so that its end may extend outside of the axle-box and be clamped by the cover or lid when down. This apron may be of tightly-woven cloth, rubber, leather, or any suitable material. It serves to convey the dust, sand, grit, &c., which accumulates on the dust-guard outside of the box. A flexible marginal bearing or packing, E, may also be provided upon either side (or upon the ends, if desired) of the dust-guard, as indicated. This may be of leather, rubber, rubber cloth, or any suitable material, being slightly resilient and flexible.

My improved dust-guard, whether provided with the marginal additions or consisting of the single rectangular plate, can be very quickly and readily applied to place, and very readily removed, and is very inexpensive.

The form of car-axle box here illustrated, to which my invention is applied, is that commonly used on the Pennsylvania and many other railroads of the United States; but my invention will apply equally well to other forms of car-axle boxes in which the openings for inserting lubricants are of different form.

I do not claim a roll-flap at the base of the dust-guard within the axle-box, as shown in the application of Flower and Ross, filed October 29, 1885, Serial No. 181,325, but limit my second claim to the combination, with a dust-guard, of a flexible flap attached to the bottom thereof and adapted to be interposed between the lid and box, as shown in Fig. 1 of the drawings.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In combination with a car-axle box, a

plate or dust-guard, C, applied within the box independent of the lid, to tightly close the lid-opening, substantially as set forth.

2. In combination with a car-axle box, a dust-guard applied within the box, and composed of a plate, C, provided with a flexible flap or apron, D, applied to the bottom thereof and adapted to be interposed between the lid and box, substantially as set forth.

3. In combination with a car-axle box, a dust-guard, C, applied within the box, and provided with flexible side bearings, E, substantially as set forth.

4. In combination with a car-axle box, a dust-guard applied within the box and consisting of a plate, C, having a flexible apron, D, at its bottom, adapted to be interposed between the box and lid, and flexible marginal bearings E, substantially as set forth.

In testimony whereof I have hereunto subscribed my name.

AARON OGDEN DAYTON.

Witnesses:

BARCLAY MOORE,

ALFRED L. SPARKS.