

(No Model.)

2 Sheets—Sheet 1.

D. S. STIMSON.

CAR AXLE BOX.

No. 298,253.

Patented May 6. 1884.

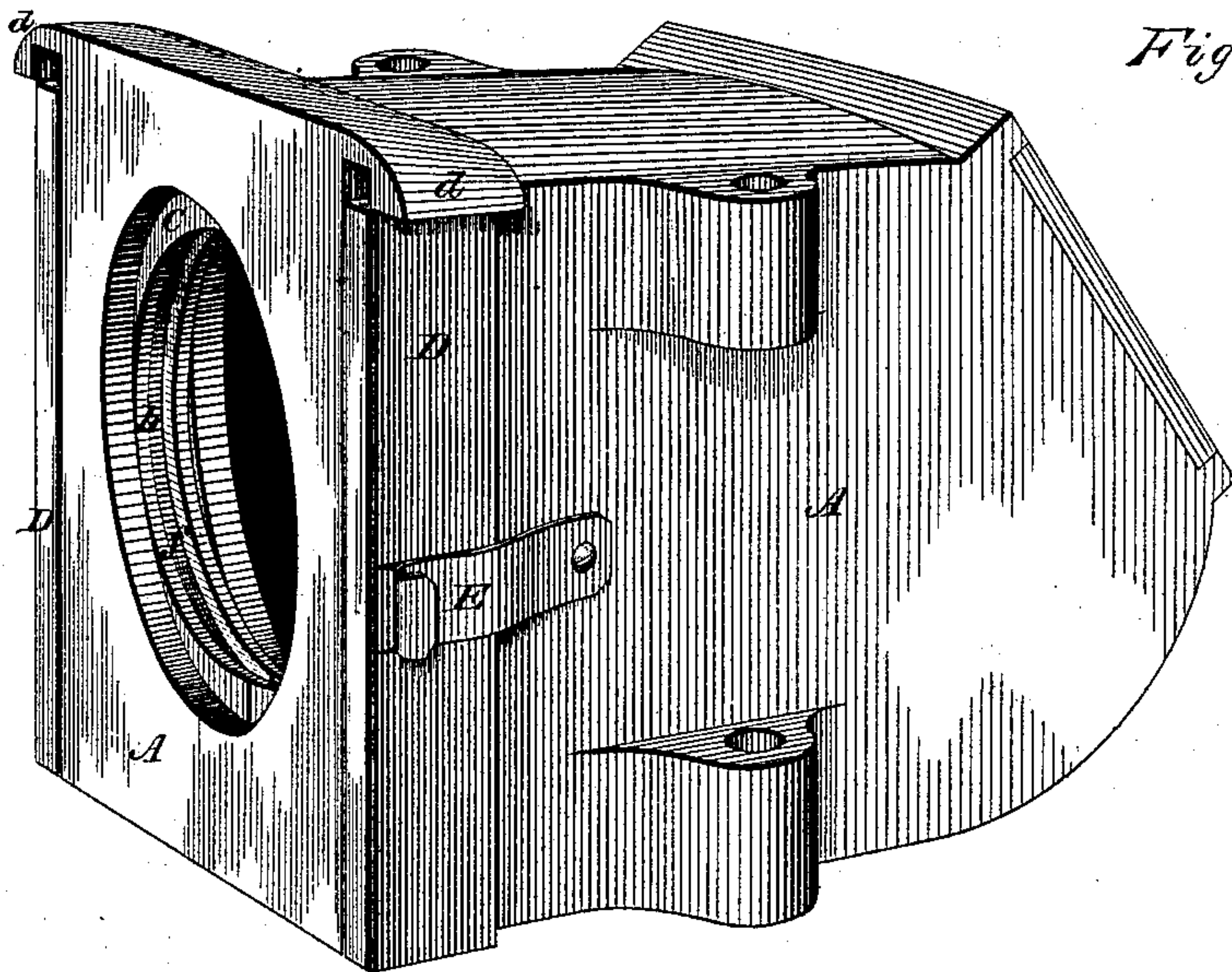


Fig 1.

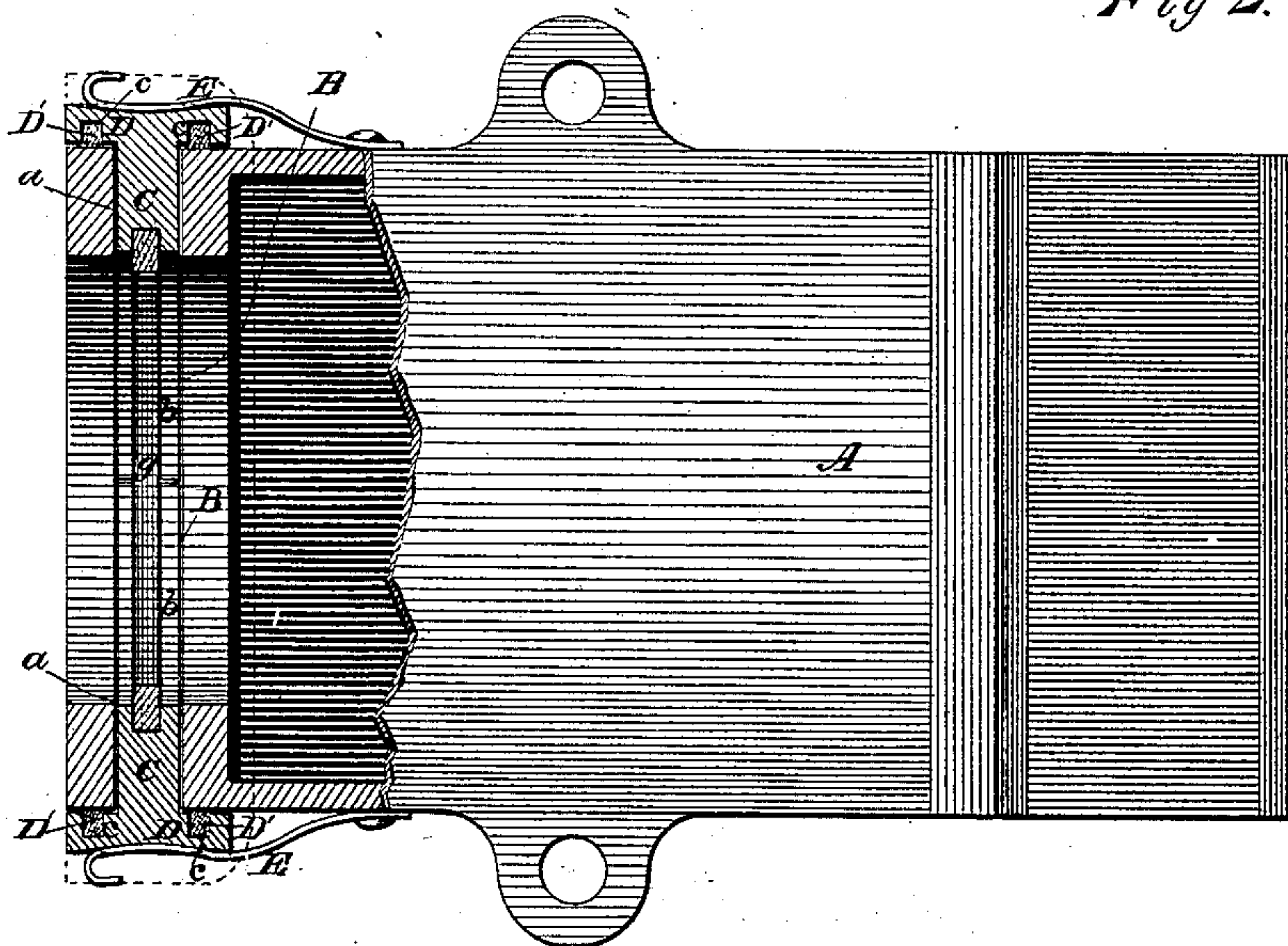
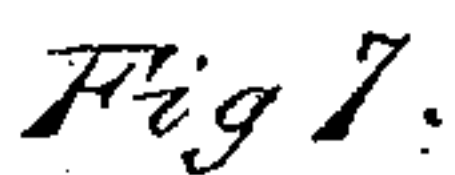


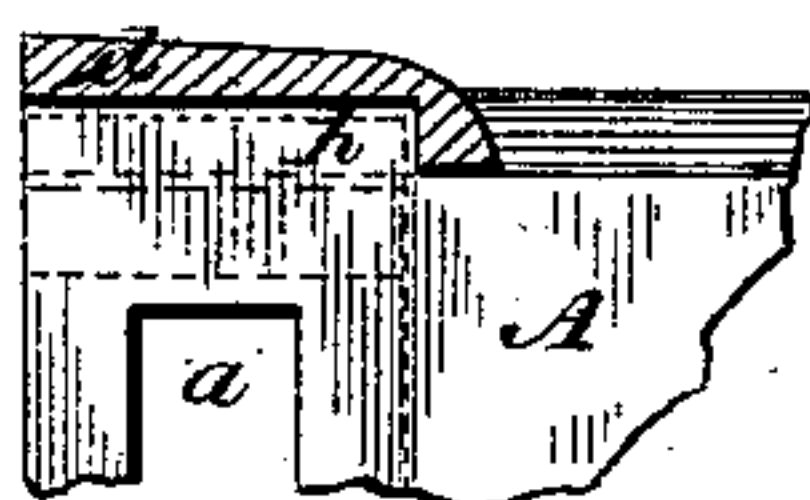
Fig 2.



WITNESSES

Harry King

Howard Edmonds



INVENTOR:

D. S. Stinson
 By J. C. Somes
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Attorney

(No Model.)

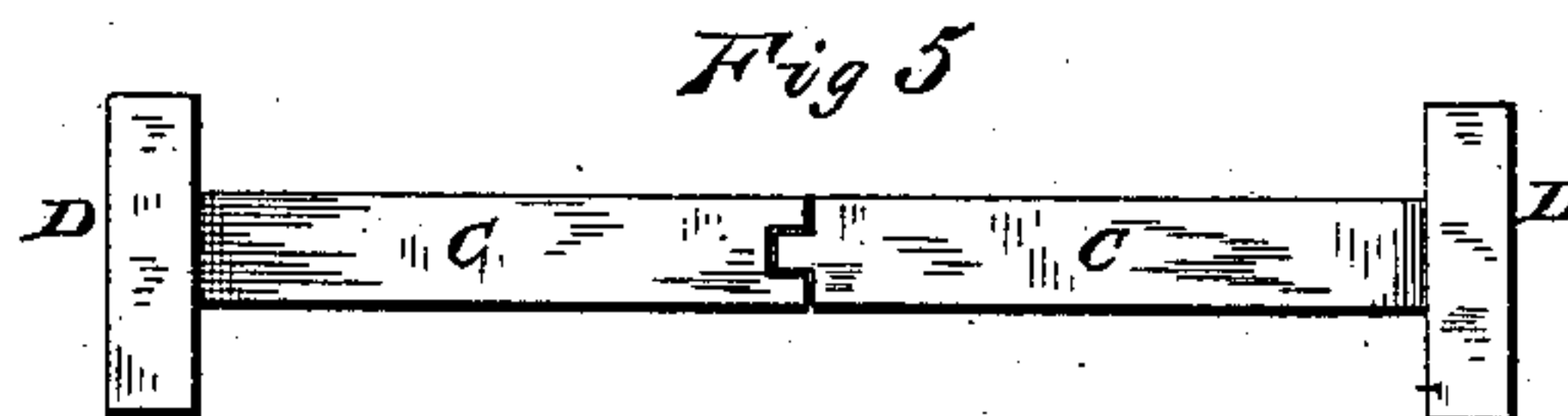
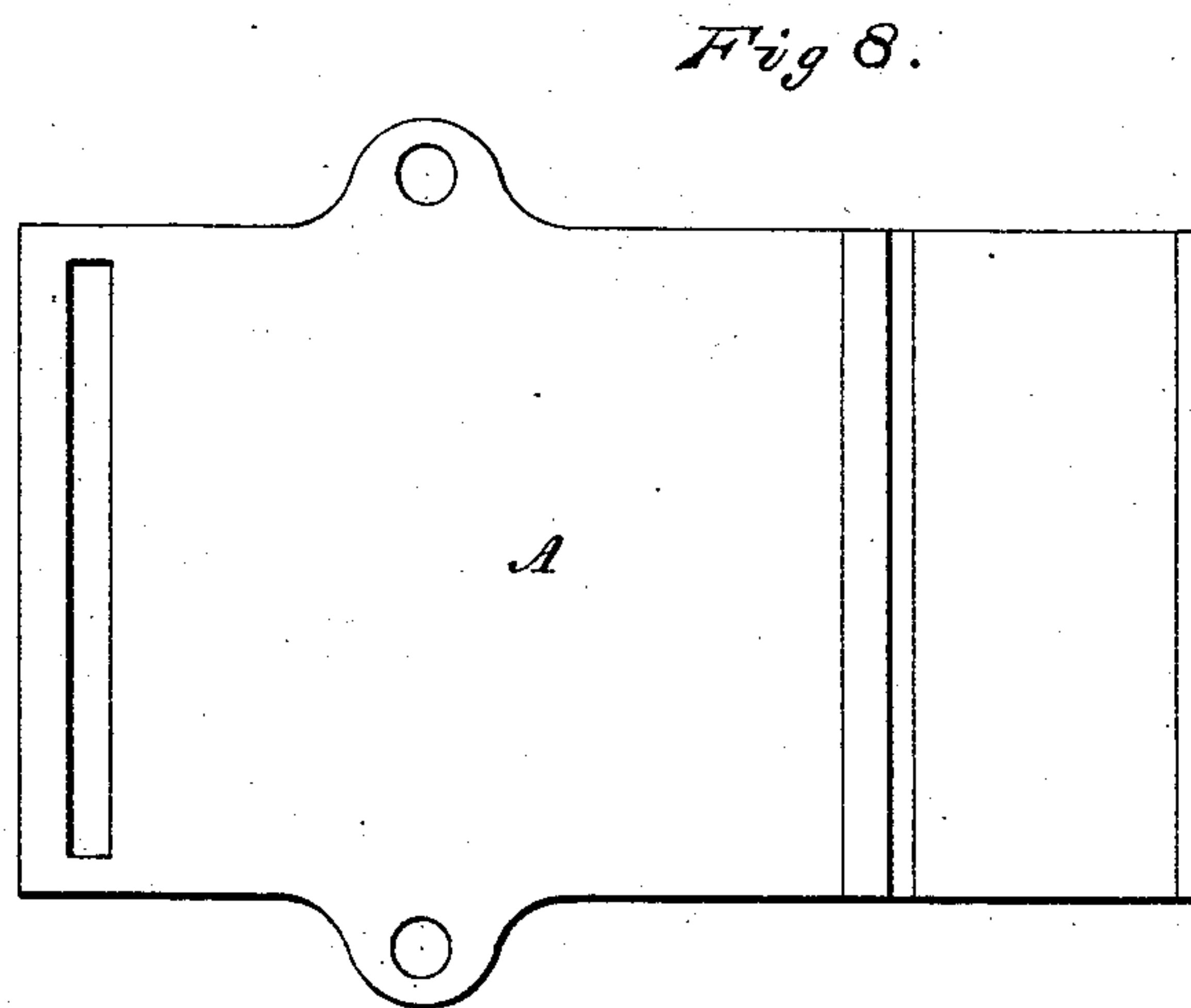
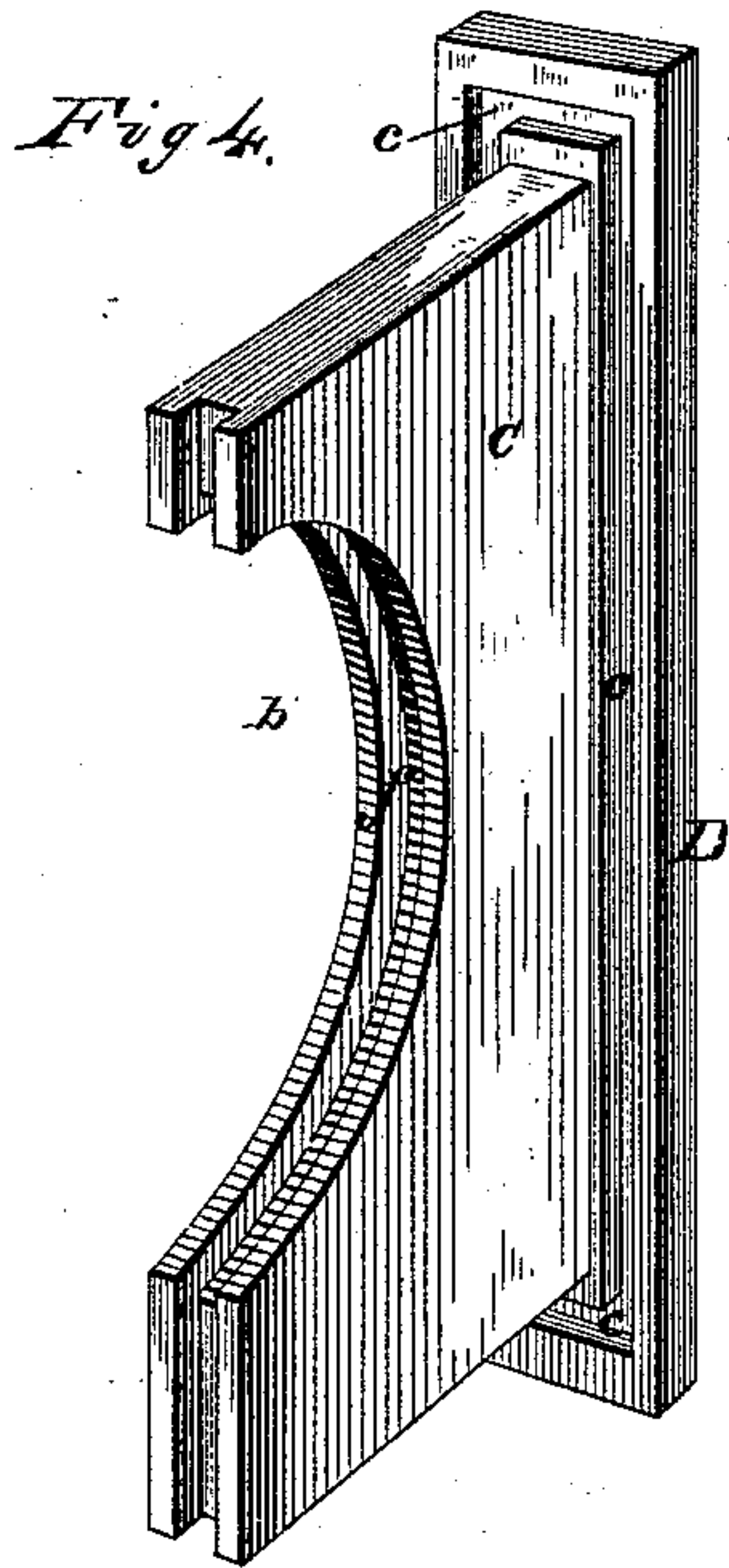
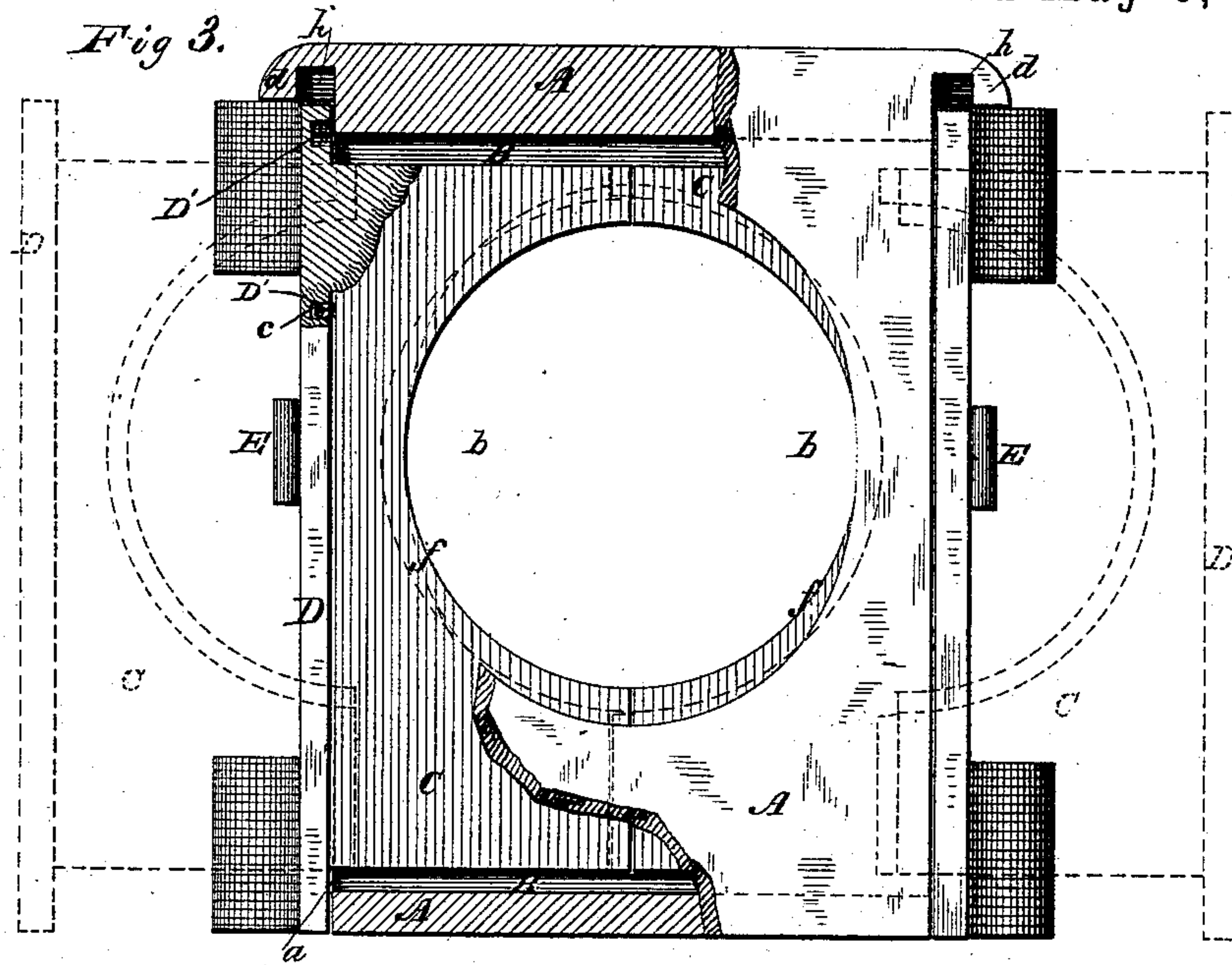
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Fig 6



INVENTOR:

D. S. Stimson

J. C. Jones
Attorney

UNITED STATES PATENT OFFICE.

DAVID S. STIMSON, OF CONCORD, NEW HAMPSHIRE.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 298,253, dated May 6, 1884.

Application filed October 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, DAVID S. STIMSON, a citizen of the United States, residing at Concord, in the county of Merrimac and State of New Hampshire, have invented certain new and useful Improvements in Car-Axle Boxes, of which the following is a specification, reference being had therein to the accompanying drawings.

The object of my invention is not only to render the master car-builders' standard axle-box entirely dust and oil proof by preventing the entrance of dust and the escape of oil around the axle, but also to furnish a dust-guard that can be applied and removed with facility.

Figure 1 of the accompanying drawings is a perspective view of an axle-box provided with this improvement. Fig. 2 is a top view thereof, partly in horizontal section, showing the dust-guard in position. Fig. 3 is a back view, partly in elevation and partly in transverse section, a portion of the back plate being broken away. Fig. 4 is a perspective view of one section of this separable dust-guard, provided with a groove for packing. Fig. 5 is a back view of the dust-guard removed from the axle-box, showing the two sections joined together by a tongue-and-groove joint. Fig. 6 represents various forms of the joint which may be used in place of the tongue-and-groove joint shown in Fig. 5. Fig. 7 is a side elevation of one corner of the car-axle box, the horizontal dotted lines being designed to represent the extreme upper, extreme lower, and intermediate positions of the upper edge of the flange of one section of the dust-guard, the distance between the upper and lower lines indicating the depth of vertical play which the dust-guard has when within the dust-guard chamber. Fig. 8 is a top view of an axle-box now in ordinary use, having an opening in its top plate for the insertion of the dust-guard.

The axle-box A is of any ordinary or suitable construction, preferably of the kind known as the "master car-builders' standard axle-box." The inner end of this box is provided with a chamber, B, known as the "dust-guard chamber," and when constructed in accordance with my improvement the box is provided with slots *a*--one on each side--opening into said chamber, through which slots the

sections of the dust-guard are inserted and removed. The top plate of the axle-box is made without an opening into the dust-guard chamber.

The dust-guard C, constructed of wood or any suitable material, is composed of sections, which, when the dust-guard is in its normal position, are separable or adapted to move apart in a horizontal direction, the dust-guard being divided from its upper to its lower edge, preferably in a vertical line. Each section is provided at its inner end with a semicircular recess, *b*, and on its outer end with a flange, D. The dust-guard is somewhat narrower from its upper to its lower edge than the vertical depth of the dust-guard chamber, so that it has a slight vertical play within said chamber. When the two sections of the dust-guard are inserted in the dust-guard chamber through the side openings in the axle-box, the recessed ends of the sections close around the dust-guard bearing, and the flanges D at the outer ends of said sections rest against the sides of the axle-box and close the openings therein, preventing the admission of dust to the dust-guard chamber. These flanges extend above and below the upper and lower edges of the dust-guard, so as to keep the slots covered their entire length, notwithstanding the vertical play of the dust-guard. The flanges D are preferably provided with suitable packing, D', composed of rubber, leather, or some elastic or flexible material, inserted in grooves *c* on the inner faces of said flanges, or otherwise attached thereto. This packing serves to further prevent the entrance of dust into the dust-guard chamber by keeping a tight joint between the flanges and the sides of the axle-box, even though the dust-guard be allowed lateral play.

The top plate of the axle-box, directly above the slots in which the parts of the dust-guard slide, is provided with projecting lips *d*, which cover the tops of the flanges on said dust-guard when the latter is in place in the box. These lips may be recessed, as shown at *h*, or provided with slight downward projections over the outer face of the dust-guard, sufficient room being left for lateral and vertical play.

The meeting ends of the two sections of the dust-guard may be constructed with any suitable joint, as square, beveled, rabbet, tongue-

and-grooved, semicircular, V-shaped, or otherwise. The concave edges of the dust-guard sections are preferably provided with a groove, *f*, for the insertion of a packing, *g*, of elastic or flexible material, such as india-rubber or leather.

The axle-box is provided at the sides with devices for holding the sections in place, those shown being steel springs *E*, the inner ends of which rest against the outer ends or flange of the dust-guard sections and press the latter closely around the axle. These springs may be made to turn on pivots, so that they may be swung off from contact with the dust-guard to enable the two sections of the latter to be readily removed from the box. These springs permit a lateral play of the dust-guard in its chamber.

To remove the dust-guard from the axle-box, it is only necessary to swing off or disengage the holding devices, and then draw out the sections laterally through the slots in the sides of the box; and to apply the dust-guard the two sections are inserted through the vertical slots from opposite sides of the axle-box, and the holding devices swung into contact with the outer ends of said sections.

What is claimed as the invention is—

1. A dust-guard for axle-boxes, composed of sections separable in a horizontal direction, the inner ends of which are provided with semicircular or concave recesses adapted to fit around the axle, and the vertical outer ends with flanges adapted to shut over slots in the sides of the axle-box when the dust-guard is in position, substantially as set forth.

2. A dust-guard for axle-boxes, composed of sections separable in a horizontal direction, the inner ends of which are provided with semicircular or concave recesses adapted to fit around the axle, and the vertical outer ends with flanges adapted to shut over slots in the sides of the axle-box, said flanges having suitable packing, substantially as set forth.

3. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard chamber, a dust-guard composed of sections separable in a horizontal direction and adapted for insertion and removal through said side slots, said sections being provided with flanges at their outer ends, adapted to shut over said side slots, and means for retaining said dust-guard in position in the axle-box.

4. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard

chamber, a dust-guard composed of sections separable in a horizontal direction and adapted for insertion and removal through said side slots, said sections being provided with packed flanges at their outer ends, adapted to shut over said side slots, and means for retaining said dust-guard in position in the axle-box.

5. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard chamber, a dust-guard composed of sections separable in a horizontal direction, and provided with flanges at their outer ends, adapted to shut over said side slots, and spring fastening devices at the sides of said axle-box for holding said dust-guard in place.

6. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard chamber, a dust-guard composed of sections separable in a horizontal direction and adapted for insertion and removal through said side slots, said sections being provided with packed flanges at their outer ends, adapted to shut over said side slots, and spring fastening devices at the sides of said axle-box for holding said dust-guard in position.

7. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard chamber, and with laterally-projecting lips above said slots, and a sectional dust-guard having flanges adapted to shut over said slots and under said lips.

8. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard chamber, and with laterally-projecting lips above said slots, and a sectional dust-guard having flanges adapted to shut over said slots and under said lips, said lips being recessed to receive the upper ends of said flanges.

9. The combination, substantially as set forth, of an axle-box provided with slots in its vertical sides opening into the dust-guard chamber, and with laterally-projecting lips above said slots, a sectional dust-guard having flanges adapted to shut over said slots and under said lips, and fastening devices at the sides of the box for holding said dust-guard in place.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID S. STIMSON.

Witnesses:

NATHL. E. MARTIN,
FRED H. GOULD.