

(No Model.)

G. W. CUSHING.
Car-Axle Box.

No. 227,220.

Patented May 4, 1880.

Fig 1.

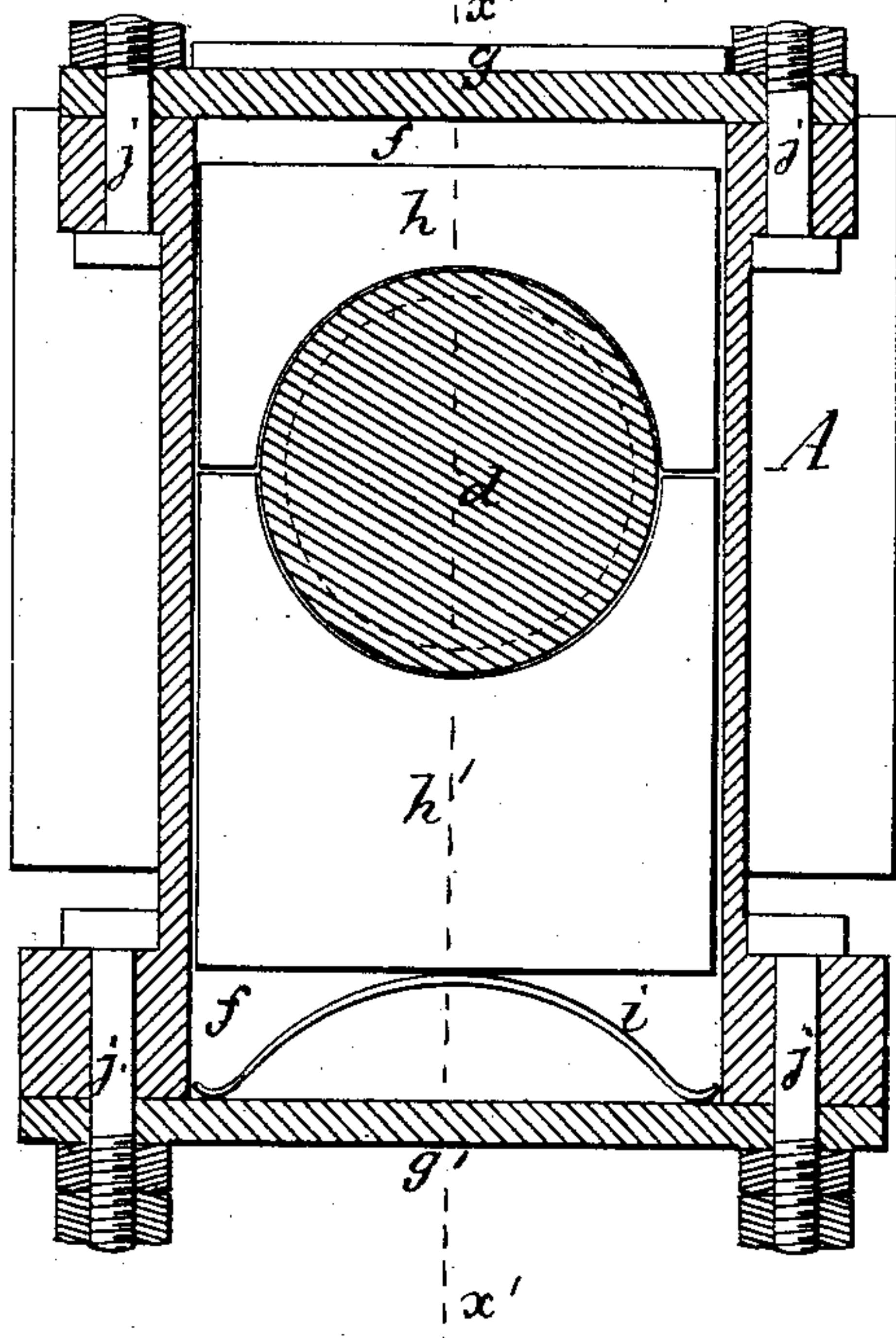


Fig 2.

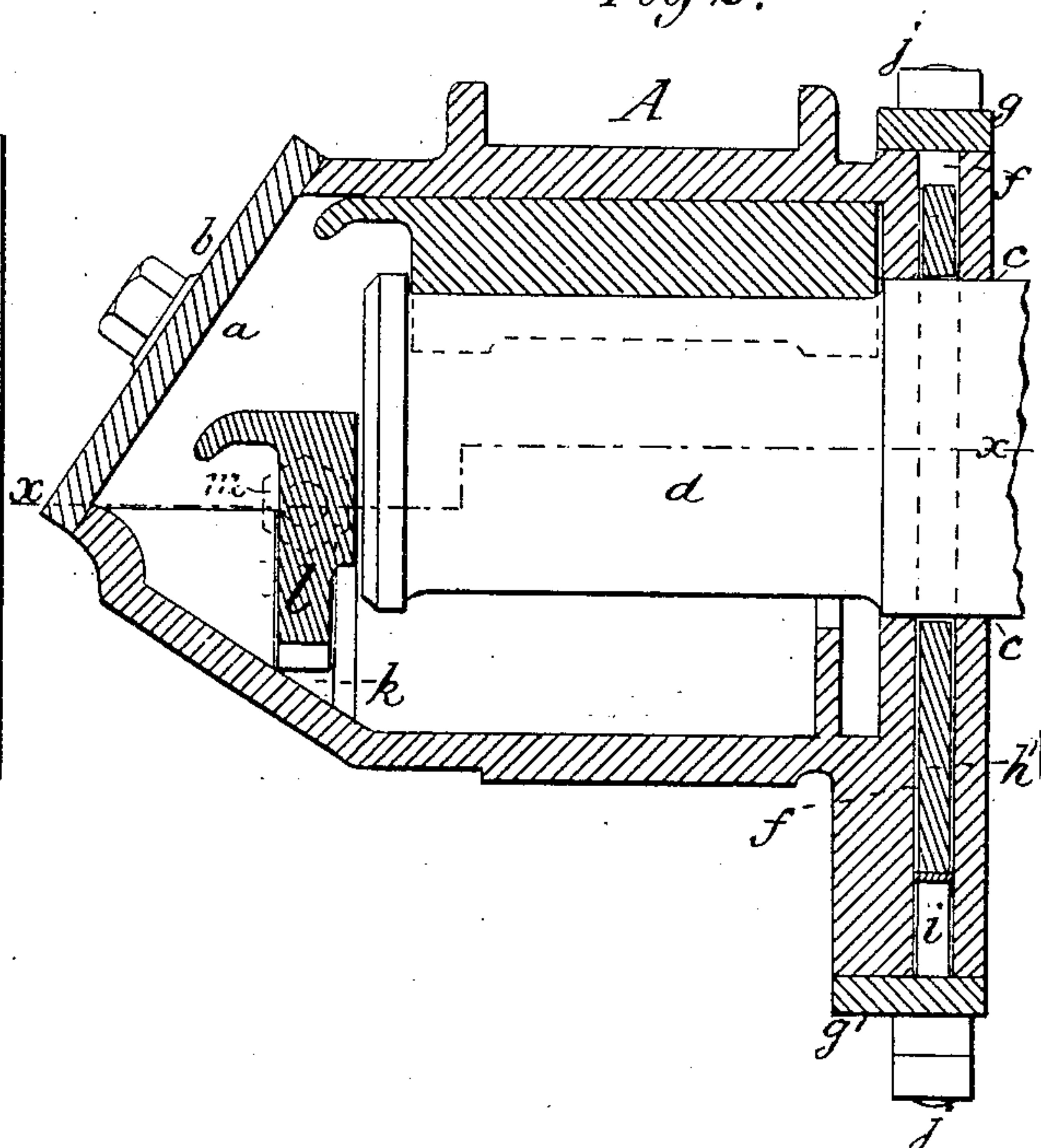
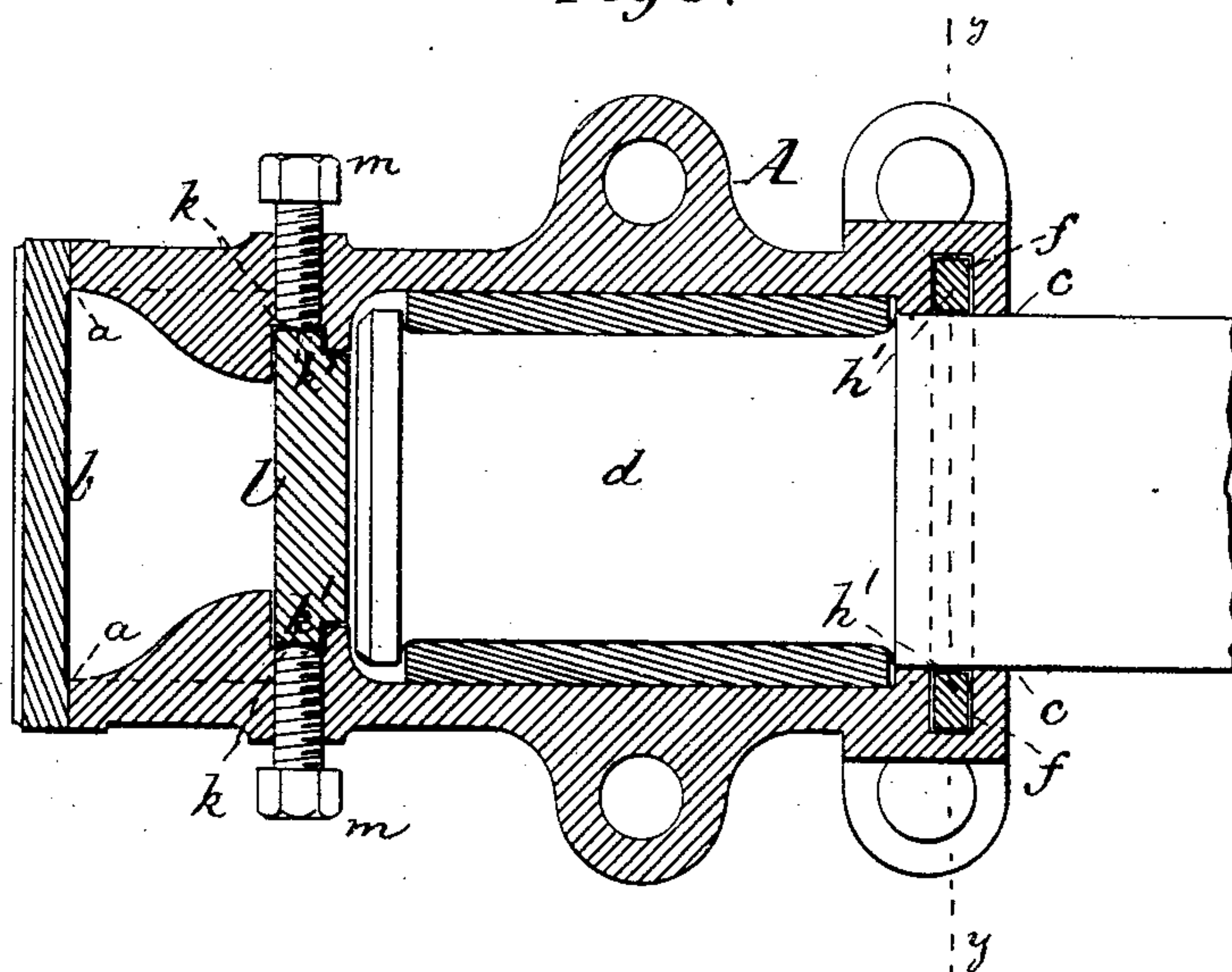


Fig 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE W. CUSHING, OF SEDALIA, MISSOURI.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 227,220, dated May 4, 1880.

Application filed March 16, 1880. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. CUSHING, a citizen of the United States, residing at Sedalia, in the county of Pettis and State of Missouri, have invented a new and useful Car-Axle Oil-Box, of which the following is a specification.

My invention relates to improvements in car-axle oil-boxes in which dust is prevented from entering and oil from escaping by means of follower-plates applied in the boxes at their inner ends, and which boxes also are provided with end stop-blocks for the ends of the axles to abut against; and the objects of my improvements are, first, to provide a vertical channel in the car-axle box for the reception of the lower spring follower-plate and the upper gravitating plate, and to provide top and bottom straps for closing the channel and confining the plates in position, and for facilitating the insertion, withdrawal, and adjustment of the plates; second, to provide side guides and confining and adjusting screws, in connection with the end bearing or stop-block of the box, whereby the said block is kept in position, and can be set higher or lower as wear or other causes may require.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a vertical transverse section in the line $y y$ of Fig. 3. Fig. 2 is a vertical longitudinal section in the line $x' x'$ of Fig. 1. Fig. 3 is a horizontal section in the line $x x$ of Fig. 2. Similar letters refer to similar parts throughout the views.

The oil-box A is cast with the usual opening a at its outer end, and provided with a screw-plate, b , for covering said end opening. It also is cast with the usual opening c at its inner end, through which the arm of the axle d is inserted. The inner end plate of the box is cast hollow from top to bottom, thus forming a rectangular channel, f , on all sides of the central opening, c , as shown in the drawings, said channel being open at top and bottom, closed on the outer vertical sides, and open at the place where the central opening, c , is cast in the plate. Upon the top and bottom ends of the said inner plate of the box straps g and g' are screwed for the purpose of closing the

top and bottom ends of the channel f . Within the channel f follower plates or pieces $h h'$ are fitted, being placed in contact with the axle, for the purpose of excluding dust and water, and also retaining the oil in the box. These follower-plates h and h' may be of any suitable material, such as brass, leather, or vulcanized fiber, preferably the latter material.

The follower-piece h' is held in contact with the axle by a semi-elliptic spring, i , which rests down upon the strap g' , and the follower h is confined in place and acts by gravity against the axle, the strap g preventing it from rising too high in the channel f . The screws $j j$ fasten the straps upon the box, and by unscrewing them the follower-pieces $h h'$ can be readily inserted or removed or adjusted as circumstances may require.

The box thus provided with a channel, f , can be cast with entrances for the introduction of the follower-pieces into the channel, and great cheapness, convenience, and durability are secured.

At the outer part of the box, near the end, two guide-channels, $k k$, are cast on the inside of the side plates, and the end block, l , against which the axle-arm bears with its end, is provided with rabbeted side edges, $l' l'$, which match the channeled side surfaces of the side plates of the box, as shown. $m m$ are confining set-screws, extending from the outside of the box into the channels $k k$ and binding against the tongue portions of the end block. The end block, l , can be raised and lowered in the channels $k k$, but it cannot move horizontally to any great extent therein.

The offsets in which the channels are cast or formed are of less height than the box, in order that the end block may be inserted into the channels through the opening a , covered by the plate b . This feature of invention in my improved box, in connection with the channel for the follower-pieces $h h'$, enables me to make a car-axle oil-box which can be cast all in one piece, except the straps $g g'$ and screw-plate b , and while this is the case the parts $h h'$ and l can be conveniently adjusted and removed and replaced.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The axle-box comprising in its construc-

tion the part A, having top and bottom bolt-
ing-lugs, and having a channel, *f*, cast entirely
through it, sectional packing or follower pieces
h h', spring *i*, top and bottom straps, *g g'*, and
5 vertical bolts *j j*, all in the manner shown and
described.

2. The improved car-axle oil-box provided
with the guide-channels *k k*, set and confining

screws *m m*, and the end bearing-block having
its ends rabbeted, substantially as and for 10
the purpose described.

GEORGE W. CUSHING.

Witnesses:

WM. H. FLETCHER,
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