

(No Model.)

J. EISELE.  
CAR AXLE BOX.

No. 267,337.

Patented Nov. 14, 1882.

Fig. 1.

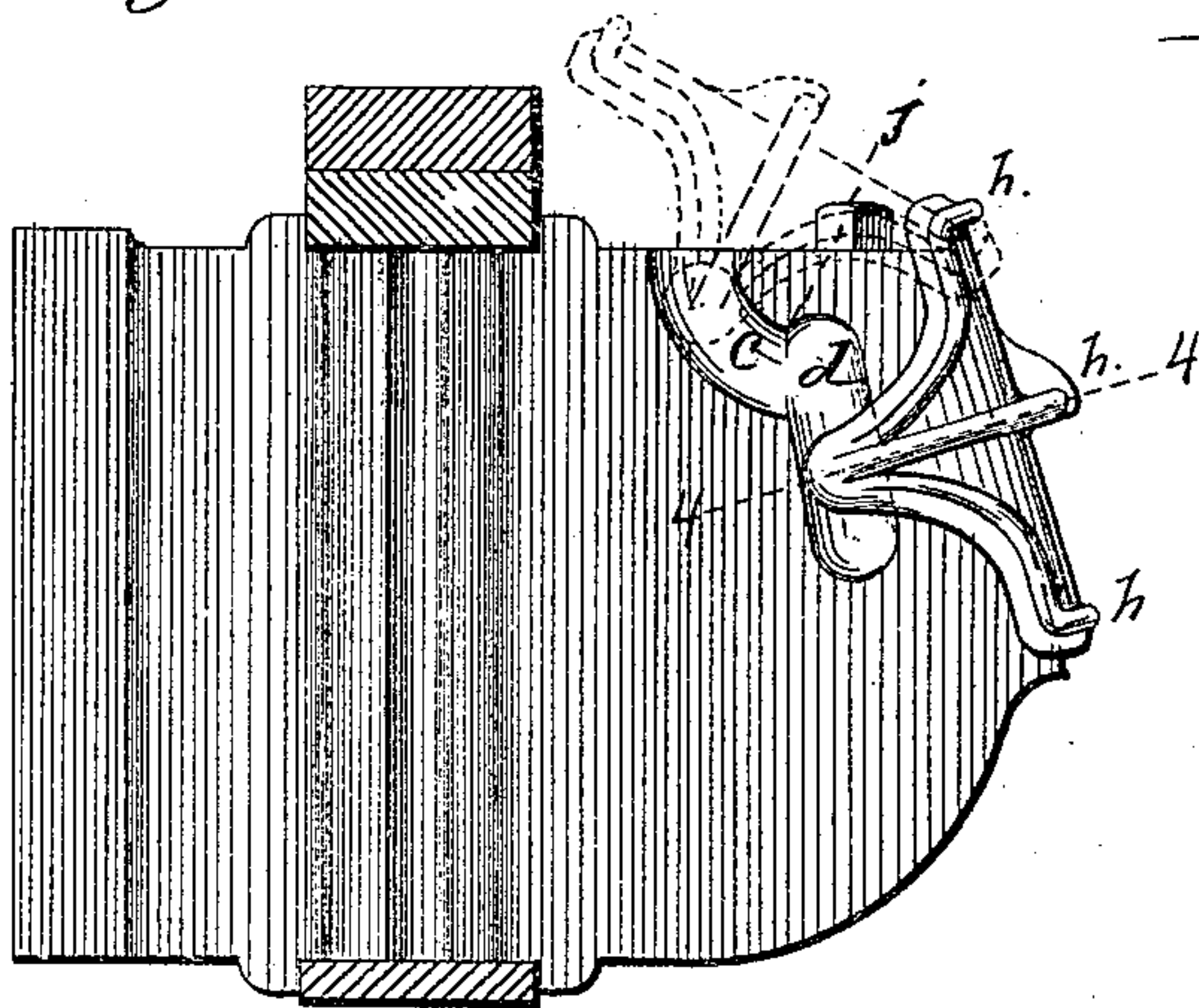


Fig. 2.

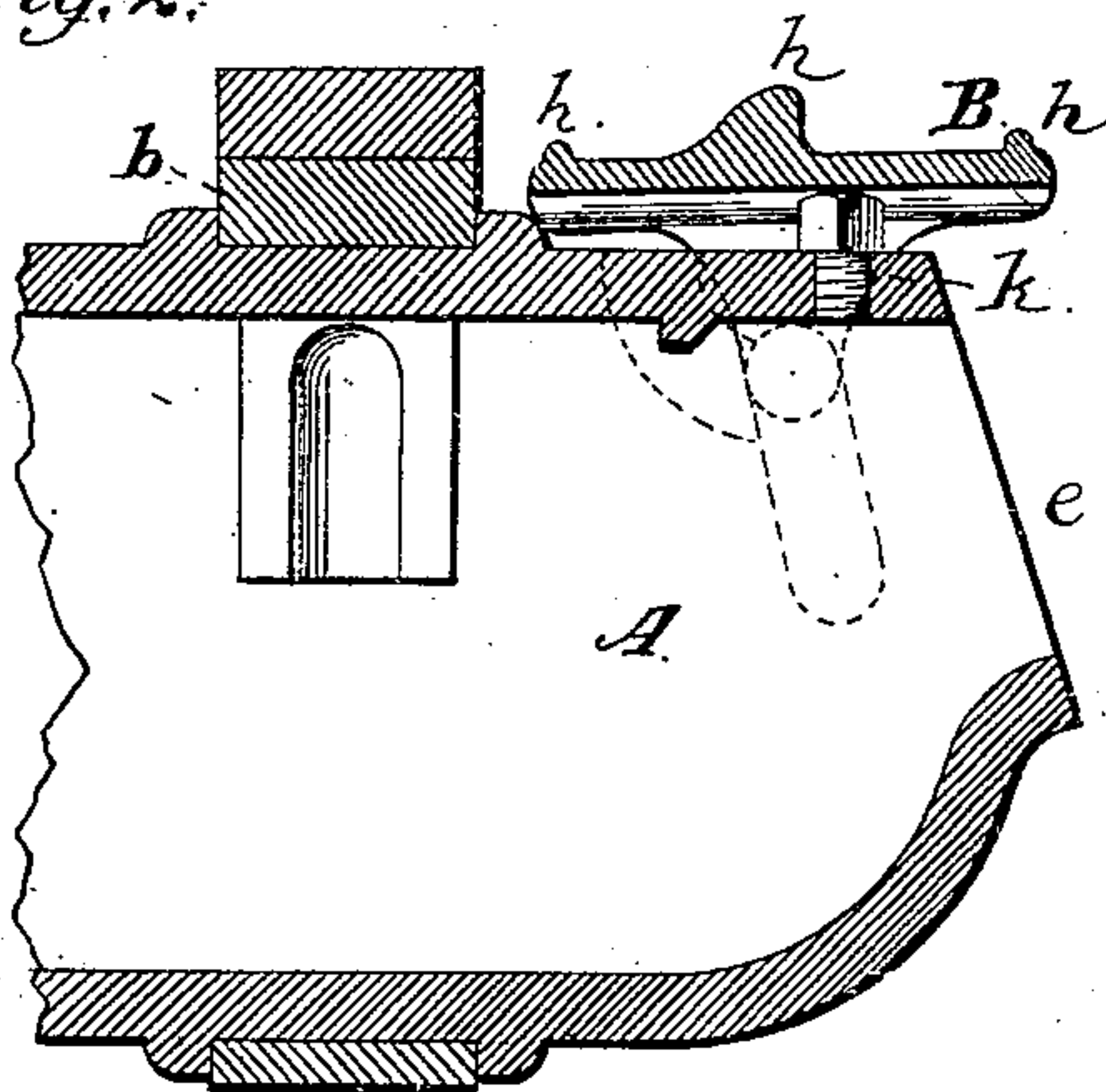


Fig. 3.

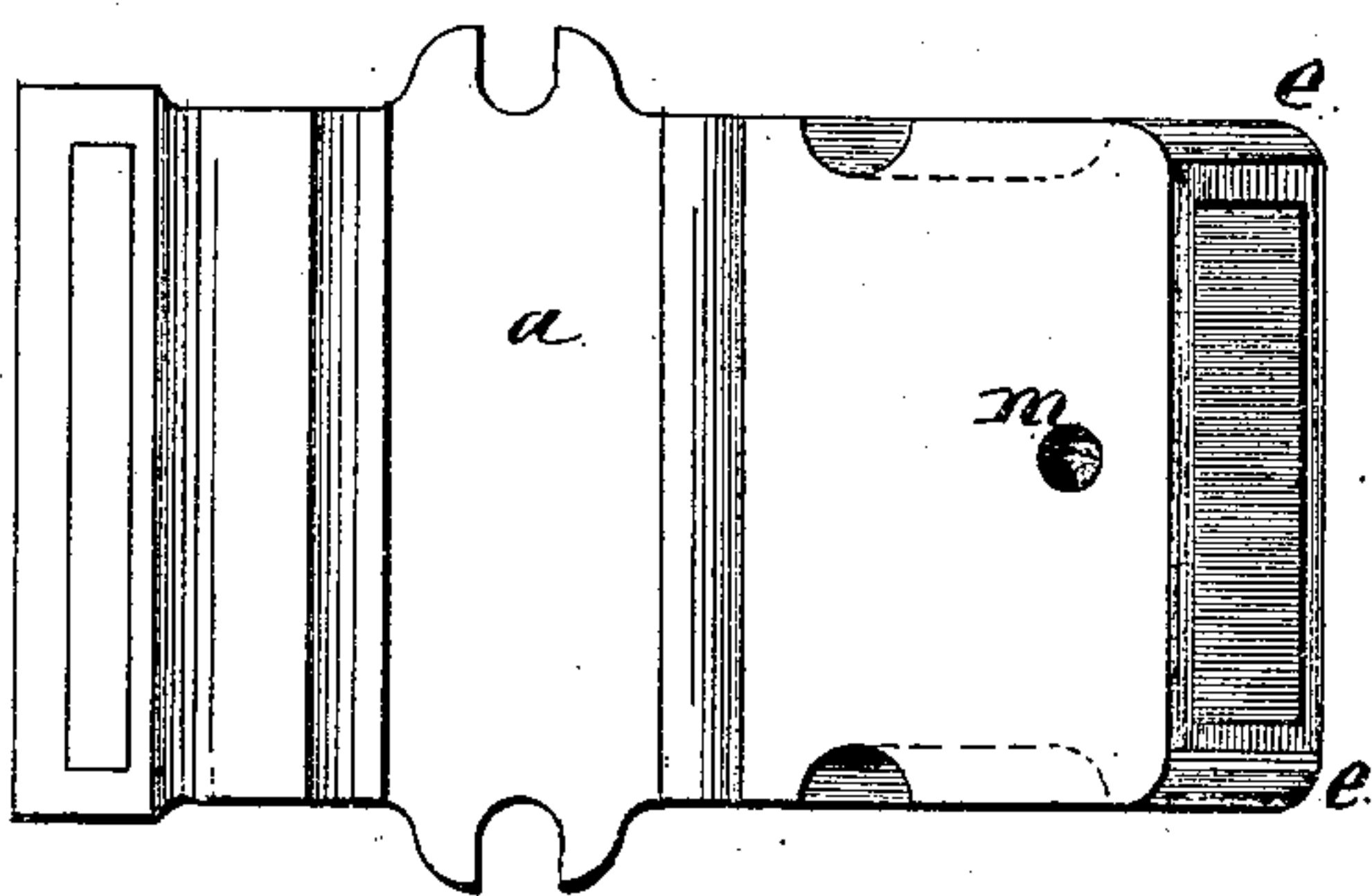
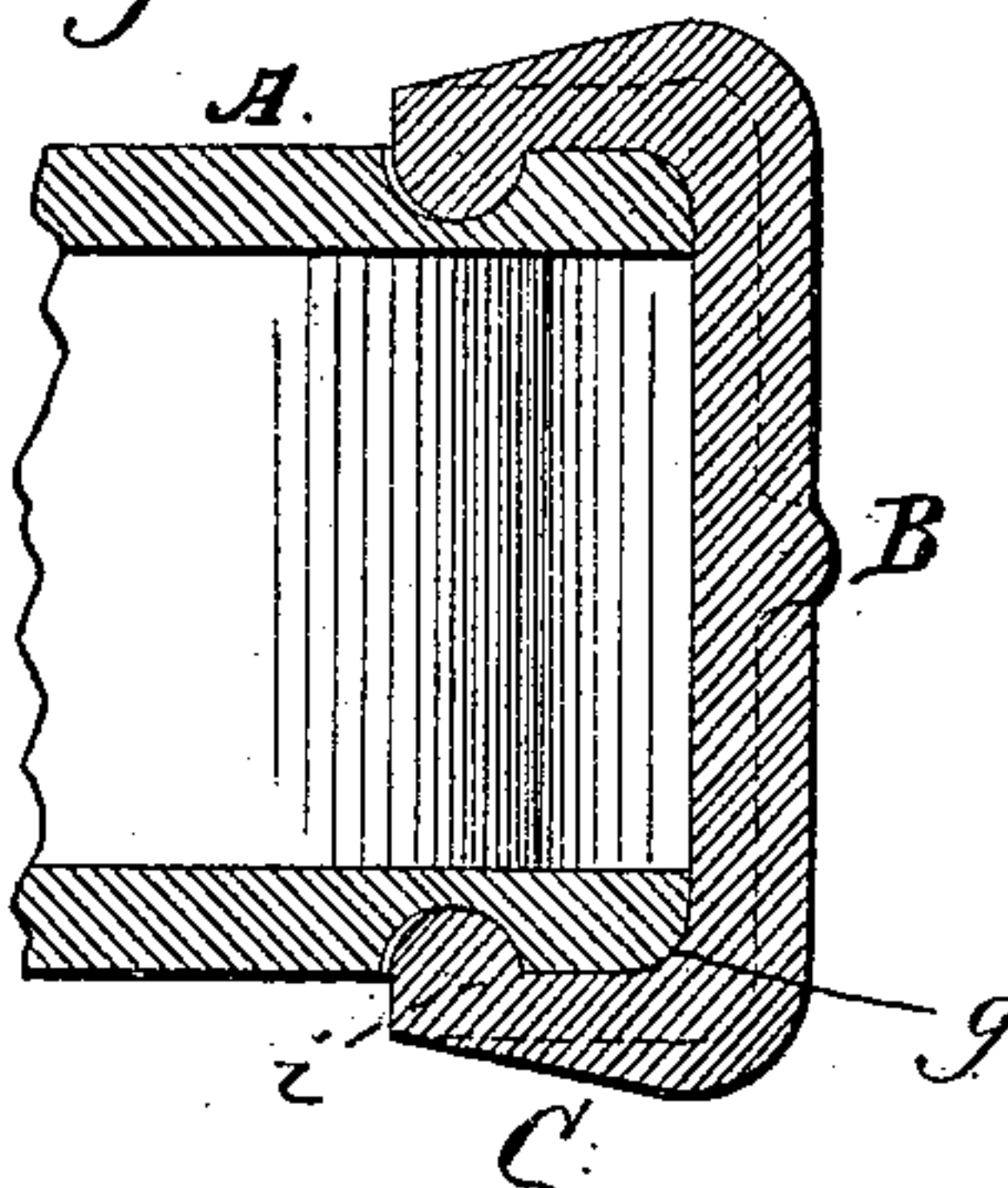


Fig. 4.



Witnesses:

Chas. O. Gaylord.  
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Inventor:

Joseph Eisele  
per Bruce Fisher  
his Attorneys:



# UNITED STATES PATENT OFFICE.

JOSEPH EISELE, OF LAFAYETTE, INDIANA, ASSIGNOR OF TWO-THIRDS TO  
BENJAMIN F. MASTERS AND CHARLES E. GOVE, BOTH OF SAME PLACE.

## CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 267,337, dated November 14, 1882.

Application filed June 30, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH EISELE, a citizen of the United States of America, residing at Lafayette, county of Tippecanoe, and State of Indiana, have invented certain new and useful Improvements in Car-Axle Boxes and Lids therefor; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a view in side elevation of the improved car-axle box with the lid in place thereon. Fig. 2 is a longitudinal central section; Fig. 3, a view in plan with the lid removed, and Fig. 4 a sectional view on line 4 4 of Fig. 1.

In the trucks of railroad or like cars the boxes which inclose the journals of the car-wheel axle and carry the "brasses" or bearings for said journals and the necessary lubricant are usually provided with a lid or flap on their outer side, whereby the interior of the box is readily accessible and the condition of the journals, brasses, packing, and lubricant open to quick inspection at all times when the car is at rest.

My invention relates to car-axle boxes and lids therefor; and it consists of certain improvements in construction and combination of parts, all as hereinafter set forth, and more particularly defined in claims.

Referring to the drawings, A represents the casing or car-axle box proper, formed preferably of cast metal, having the flanged seat *a* to receive the arch-bars *b* of the car-truck, as usual, and constructed upon its interior in any well-known manner—that is to say, my invention is not dependent upon any peculiarities of internal structure, but is equally applicable to the boxes of most diverse pattern.

From the upper face of the box A, and somewhat in front of the flanged seat *a*, there is formed in each side wall of the box a groove, *c*, of nearly semicircular cross-section, that runs downwardly and outwardly in said side wall, approximately on the arc of a circle, until it intersects and merges into a lateral groove, *d*, of like contour or cross-section, the front edge of which said groove *d* is in a right line, slightly

divergent or out of a parallel, with the front or bearing face, *e*, of the box A as descent is made in said groove *d*. The front or bearing face, *e*, of the box A is slightly beveled or rounded at its outer corners to snugly fit a corresponding fillet, *g*, formed along the inner corner of the box-lid B, now to be described.

The lid B consists of a flat plate that rests with its inner face against the bounding-surfaces of the opening in the box A, and has upon its outer face the raised ribs or projections *h* to strengthen it, which ribs are continuous with like ribs formed on the flanges or arms C, that depend at right angles from both sides of the plate B. The arms C have upon their lower ends and at the inner side a hemispherical lug, *i*, which snugly fits, in manner free to move, the grooves *c d*, formed, as described, in the side walls of box A. At the junction of the depending arms C with the body of the lid B the inner corner or edge, instead of being a right angle, is made with a rounded fillet, *g*, which affords greater strength to the casting, and has certain other incidental advantages, presently to be detailed. A set-screw, bolt, pin, or the like, *k*, is inserted into a perforation, *m*, made in the upper face of the box A, near its front end. The box A being in position upon the car-truck, with the journal of the car-wheel axle, the brasses, &c., in place therein, the lid B is applied to the box by arranging said lid in position (shown by dotted lines, Fig. 1) so that the lugs *i* shall enter and follow the grooves *c d*, the lid as it drops in said grooves being turned to the front, so that its face shall bear against the sloping face of the box, the divergent edge of groove *d* causing the lid to be drawn more tightly to its seat the farther that arms C and attached lugs *i* descend in said grooves, so that at the end of its travel the lid makes a practically dust-proof joint with the box, and effectually secures the journal and brasses from destructive "cutting" or the lubricant from waste. The pin *k* is now inserted in the perforation *m*, whereupon the lid may not be removed, shaken off, or lost, for it will be noted that when said lid is raised, as shown in Fig. 2, to allow access to the interior of the box, the pin *k* is of such height as to sustain the lid in part, so that



the lugs *i* on the arms *C* of the lid are seated in the upper ends of the transverse grooves *d*, and may not drop down far enough to clear the sharp corner or junction *j* of the grooves *c d*, and so pass upward in said grooves *c*; and yet it will be noted that by simply taking out the pin *k* before the lid is lifted the lugs *i* will be free to travel in both of the grooves *c d* and the lid be removed entirely from the box, if at any time desired, which facility of operation distinguishes my device from others of like character—for example, Patent No. 192,199, Susemihl and Hewitt, June 19, 1877, wherein the truck must be jacked and the arch-bars *b* taken off before the lid can pass back and out of the lugs on the axle-box, by which it is retained.

Aside from the obvious advantages which my device possesses, in common with others of its class—that is, sliding or wedge lids—over the old form of hinged lids having bolts, pins, or springs to hold them in place, which various parts must be fitted, and which are apt to work loose, to become broken and lost. Said device possesses some advantages peculiar to itself. Thus when the box *A* is molded the side grooves of the box, being cut in the pattern itself, form their own core or mold, so that they are always in the precise position desired, leaving no film to be cut away, which results from a displaced core when the box is cast with projecting ears or lugs. The front vertical edges of the box being rounded, instead of angular, take a sharper cast, so that they closely fit into the fillets *g* of the lid and secure a dust-proof joint without need of extra labor in fitting.

The relation of the side grooves is such as to always retain the lid tightly in place, and yet to allow for its being quickly lifted or entirely removed at any time when the car is at rest without delay of any kind. Broken lids or lids carelessly lost may be manifestly replaced upon discovery of defect, subjecting the journal and brasses to no destructive exposure, which must be necessarily incurred for want of a jack or the like when using the other forms of box. There being no projecting ears or lugs to the box, it is less liable to damage, and the delays in use of a car, made necessary in restoring a broken box, materially diminished. The guard-pin *k* is subject to no strain,

and is consequently always in position with respect to the lid, is neither lost itself, nor permits the loss of the lid from any jolt or jerk of the car.

The shape and proportions of the several parts herein described as distinctive of my device may be varied to adapt said parts to the several kinds of journal-boxes now in use upon railways without departing from my invention, which is not confined in strictness to the precise details as set forth, but includes as well their substantial equivalents.

I am aware that it has been proposed to provide a car-axle box with grooves; but,

Having thus described the invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A car-axle box having intersecting grooves in its side walls to receive the arms depending from the lid of said box, substantially as described.

2. The lid of a car-axle box, the depending arms of which are provided with projecting lugs, substantially as set forth.

3. The combination, with a car-axle box having grooves in its side walls, of a sliding lid, the depending arms of which are provided with projecting lugs to enter said grooves, substantially as described.

4. The combination, with a car-axle box having intersecting grooves in its side walls, of a sliding lid, the depending arms of which are provided with projecting lugs to enter said grooves, substantially as described.

5. The combination, with a car-axle box having intersecting grooves in its side walls, of a guard-pin and a sliding lid, the depending arms of which project into said grooves, substantially as set forth.

6. The combination, with a car-axle box having intersecting grooves in its side walls of substantially semicircular cross-section, of a removable guard-pin and a sliding lid, the depending arms of which have approximately-hemispherical projections to fit said grooves, substantially as described.

In testimony whereof I have hereunto set my hand this 17th day of June, A. D. 1882.

JOSEPH EISELE.

Witnesses:

F. S. CLARK,  
F. M. CARY.