

(No Model.)

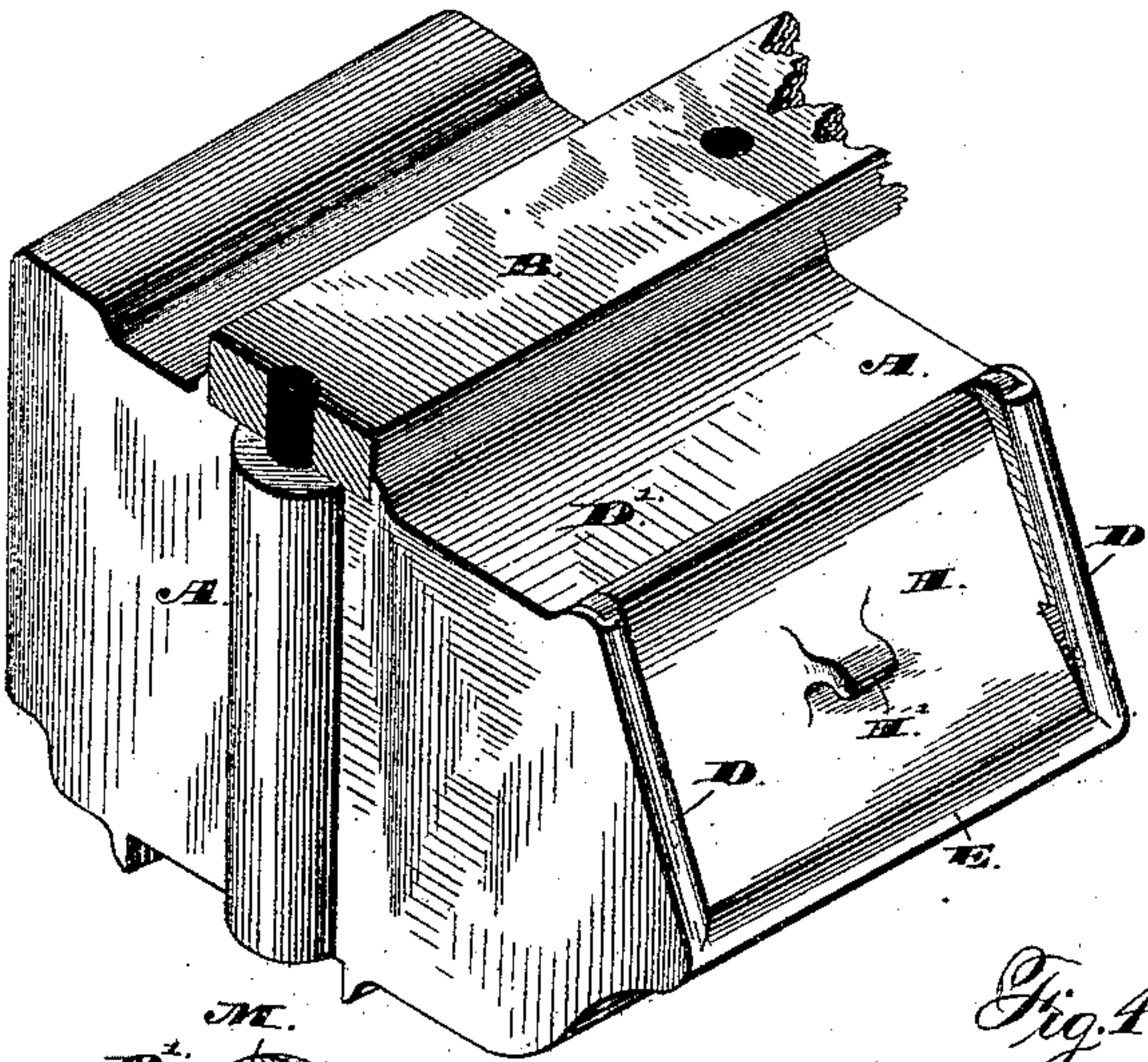
T. H. HABERKORN.

CAR AXLE BOX LID.

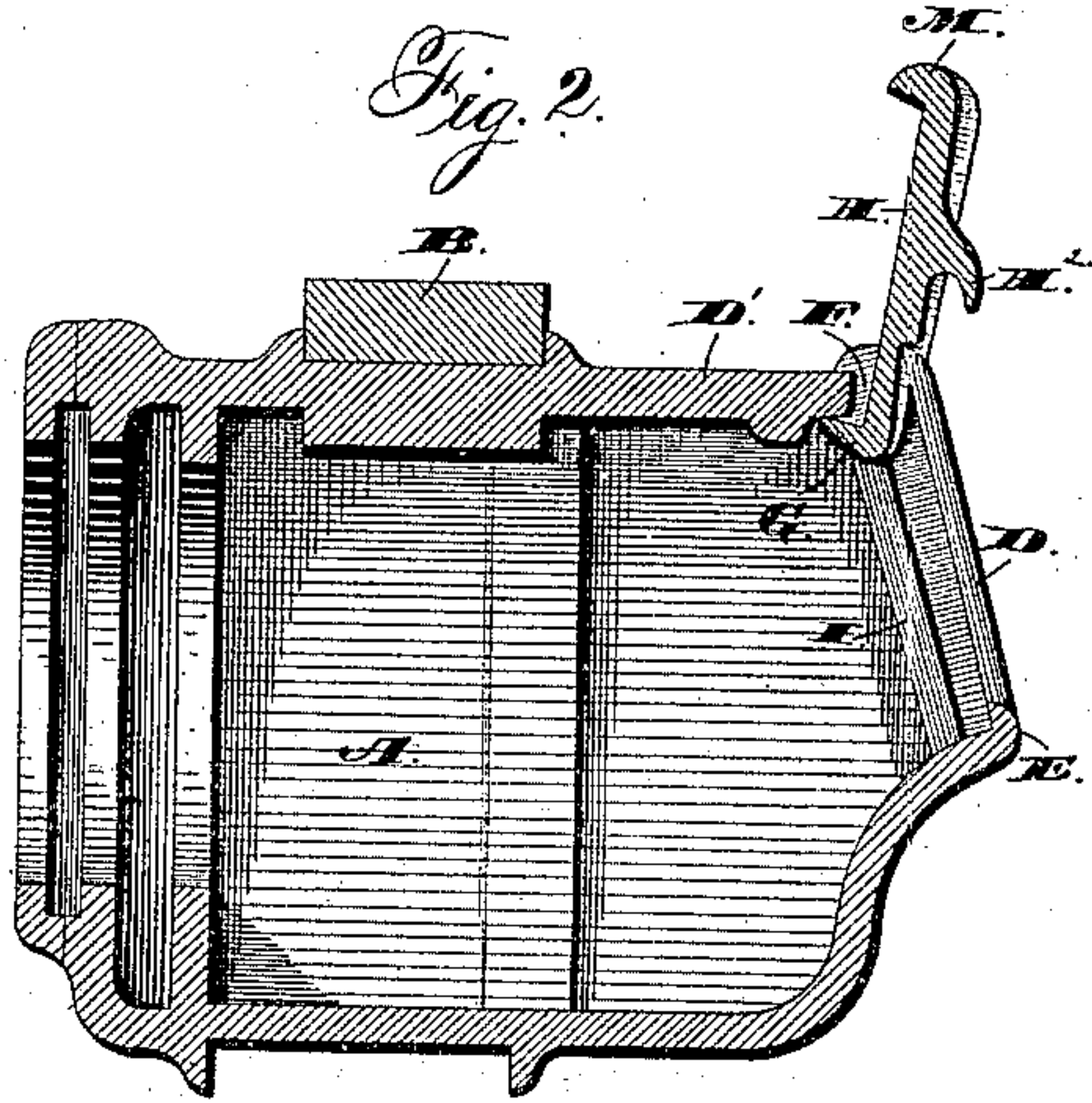
No. 310,820.

Patented Jan. 13, 1885.

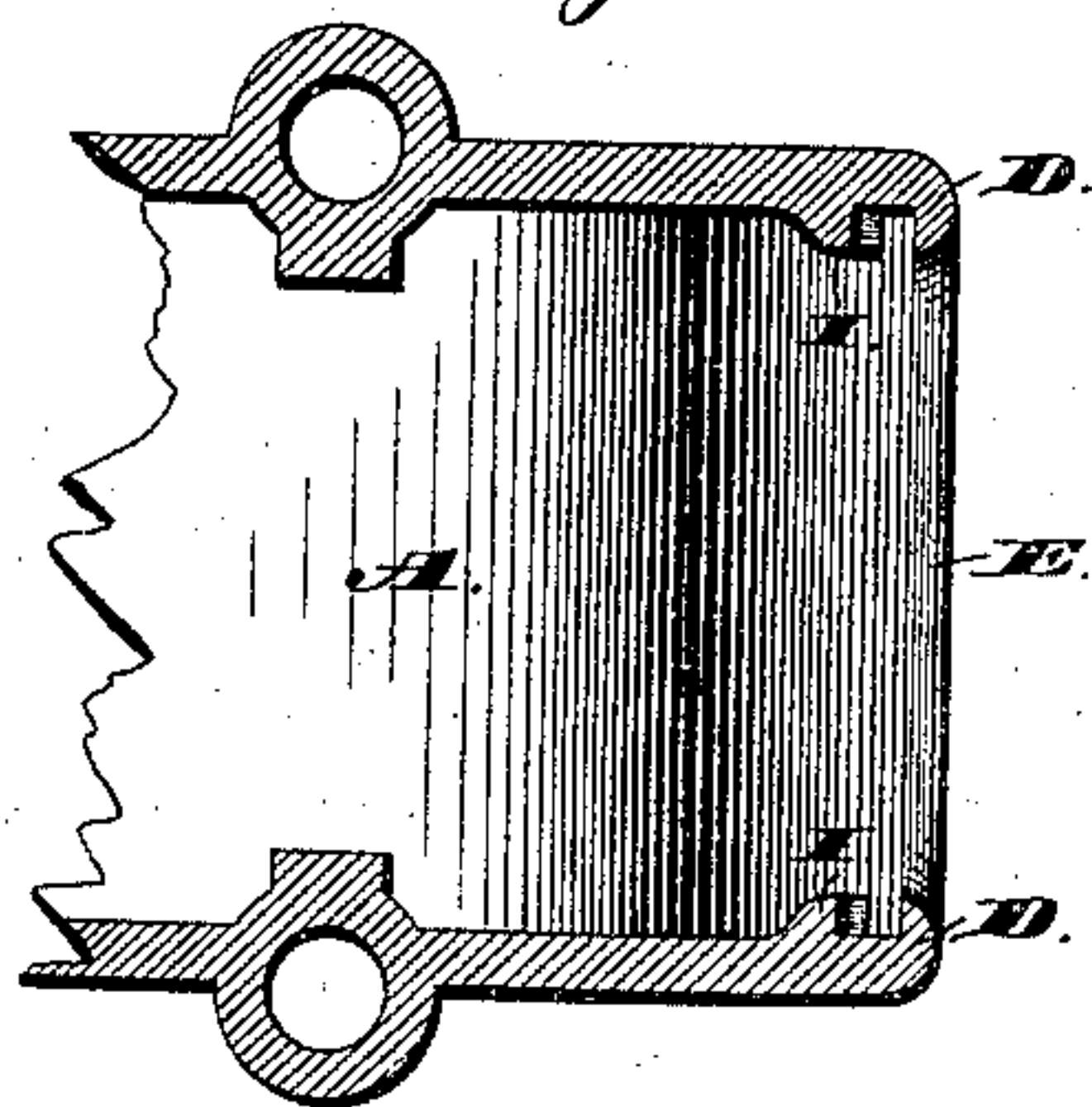
*Fig. 1.*



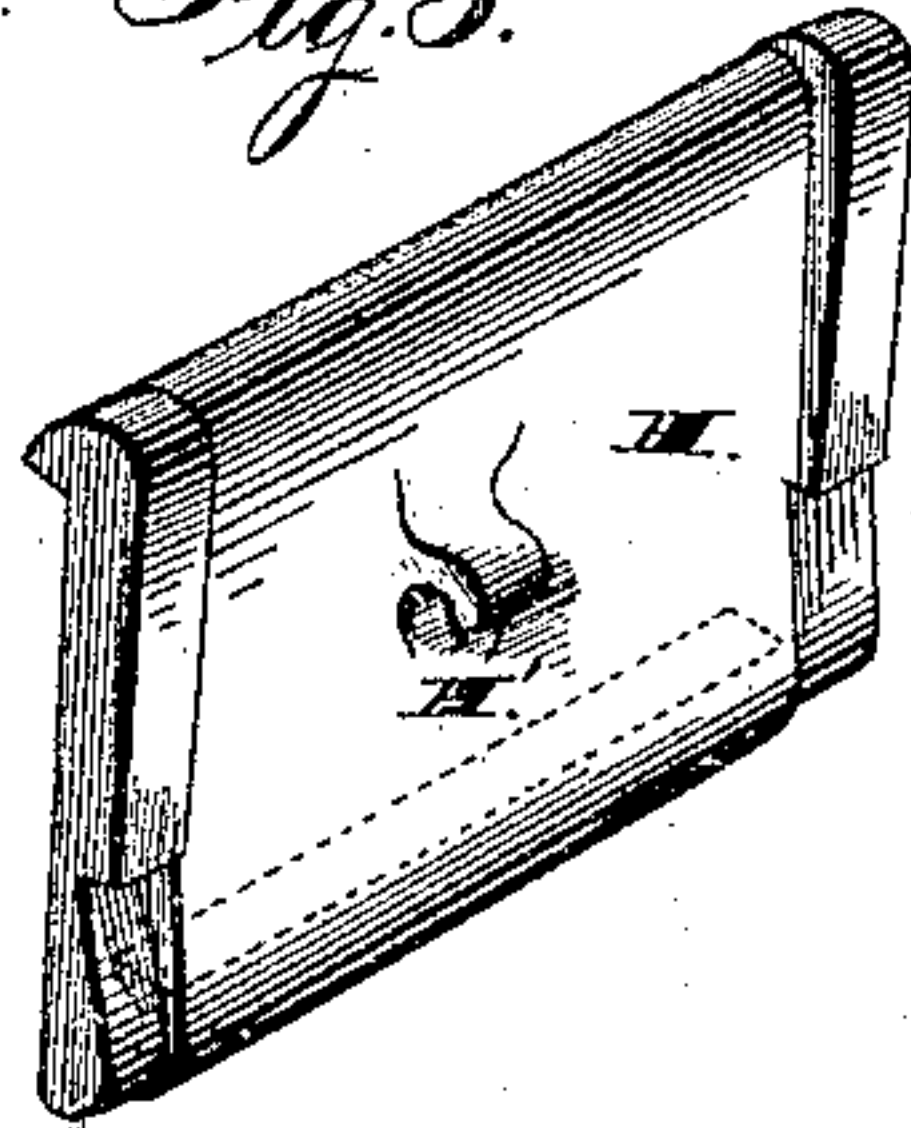
*Fig. 2.*



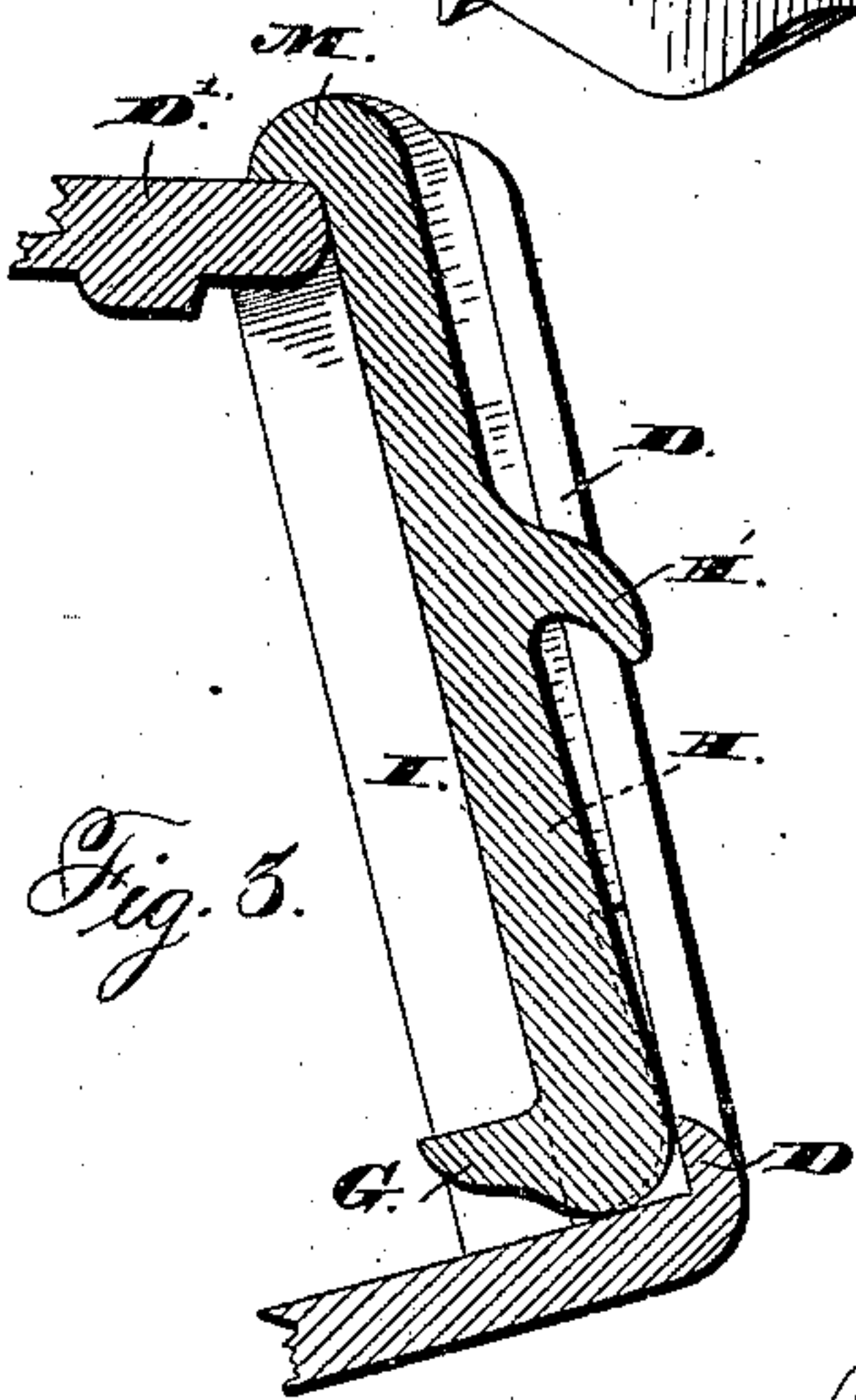
*Fig. 3.*



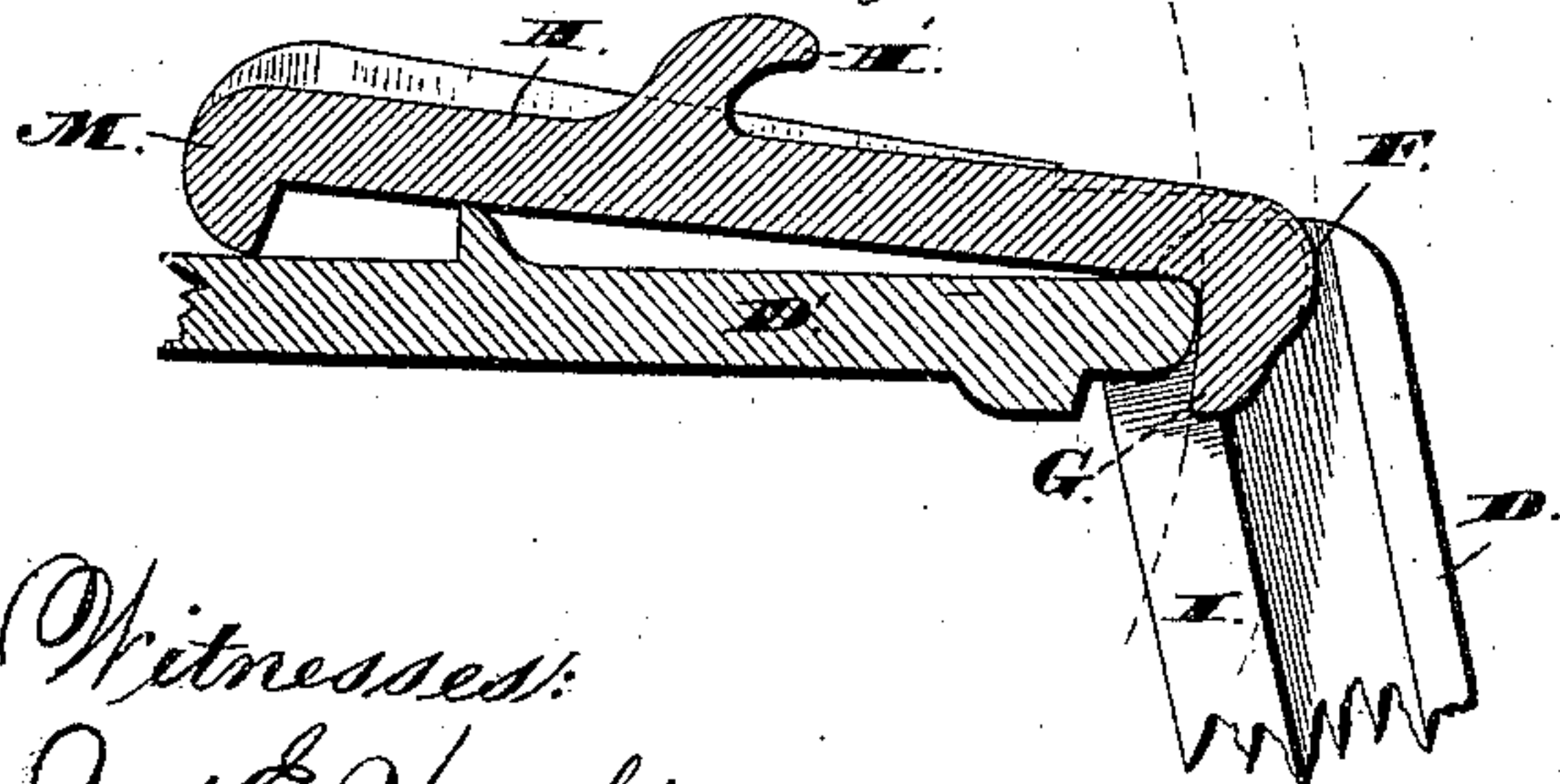
*Fig. 4.*



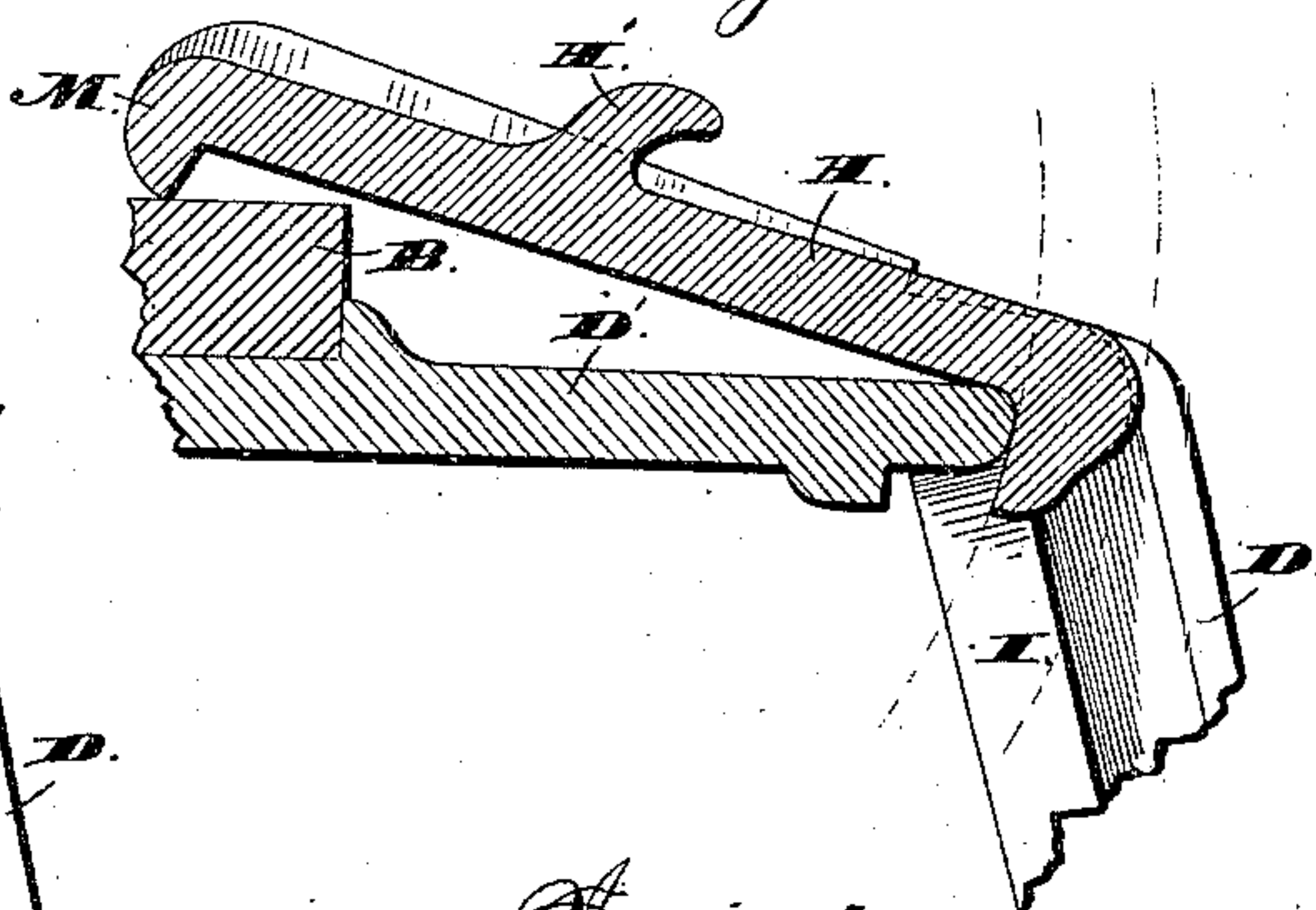
*Fig. 5.*



*Fig. 6.*



*Fig. 7.*



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# UNITED STATES PATENT OFFICE.

THEODORE H. HABERKORN, OF FORT WAYNE, INDIANA.

## CAR-AXLE-BOX LID.

SPECIFICATION forming part of Letters Patent No. 310,820, dated January 13, 1885.

Application filed June 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, THEODORE H. HABERKORN, of Fort Wayne, in the county of Allen, and in the State of Indiana, have invented certain new and useful Improvements in Car-Box Lids; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

Figure 1 shows a perspective view of a car-axle box provided with my improved lid; Fig. 2, a vertical central section of the same with the lid open; Fig. 3, a similar view with the lid closed; Fig. 4, a horizontal section of the box with the lid removed; Fig. 5, a detail perspective view of the lid; Fig. 6, a detail sectional view showing how the lid can be inserted in place or taken out when the arch-bar is removed; Fig. 7, a similar view showing the operation of the lower flange in preventing the taking out of the lid when the arch-bar is in place.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to provide a lid for a car-axle box which can be easily and readily inserted in place or taken out before the arch-bar is in place, which will close the box tightly, and which cannot be removed while the arch-bar is in place on the top of the box; and to this end it consists in the construction, arrangement, and combination of parts, as hereinafter described, and more specifically pointed out in the claims.

In the drawings, A designates the car-axle box, and B the arch-bar, extending over and fixed in place upon the top of the box in the ordinary way. The end of the box through which the axle projects is of the usual construction, and need not be described herein. The outer open end of it is inclined downward and outward, as shown in the drawings.

On either side of the opening C in the box are the flanges D D, which project from the edges of the box inward over the opening C a short distance. A similar flange, E, projects upward from the lower edge of the opening. The top of the box D' is cut away at its outer edge to leave the space F between it and each

of the flanges D D. This space is just large enough to admit the upper portion of flange G on either side of the lid H, which is adapted to slide down over the box-opening. As shown, the ribs or flanges G G are larger at their upper ends than at the bottom of the lid, being inclined upward and outward from the bottom of the lid toward its top.

On the inner sides of the box-sides are the ribs I I, which are gradually inclined outward and downward to approach the flanges D D at their lower ends. The angle of inclination is such that a way is formed between the ribs and flanges, which will receive closely the sides of the box-lid with the downward tapering flanges or ribs thereon. With this construction, when the lid is slid down into place it will tightly close the box-opening, resting at its lower end on the bottom of the box just inside of flange E thereon. The lid is provided with notches at the sides of its outer face, which, as shown in Fig. 2, engage the upper ends of flanges D D when the cover is raised and swung outward, so that the cover will be supported in its raised position. The lid is on its outer face provided with a suitable handle, H, for convenience in raising it. As the portions of the lid which slide between the flanges D D and the ribs I I are tapered downward, to correspond with the taper of the way between such flanges and ribs when the lid is down, it will be seated firmly and closely; but when it is started upward it can be easily raised without any binding. On the rear side of the lid, at its upper end, is the projecting portion K, which rests upon the box-top when the lid is down, as shown in Fig. 3. At the lower end of the inner side of the lid is a transverse inwardly-projecting rib, L, rounded on its lower face, and on its upper preferably curved on a circle having for its center a point on the rear edge, M, of the projecting rib K on the upper end of the lid. The distance from the lower edge of the lid to the upper concave face of the flange L, measured on a radius from the center of curvature of said face, is, as shown in Fig. 6, a little less than the space between the upper end of the flanges D D and the outer edge of the box-top D'.



With this construction, when the arch-bar B is removed and the lid is pushed up and laid back upon the top of the box, as shown in Fig. 6, so that the edge M of the rib K rests upon the box-top at the place occupied by the arch-bar when it is in position, the lid can be swung upward with the edge M as an axis of rotation. The rib L will then pass freely up over the front edge of the box-top. The outer edge or end of the lid at its sides swings up by the rear sides of the upper ends of flanges D D. When the arch-bar is removed, the edge of the rib K can drop so low to rest on the box-top that the arcs of the upward movement of the concave upper surface of the rib L and the lower end of the lid will be tangent, or nearly so, to vertical planes through the edge of the box-top and the inner sides of flanges D D. As indicated above, the end of the lid, with its rib, can then be swung up and out freely and the lid be removed. When the arch-bar is in position, the edge M of the rib K strikes upon the top of the bar and cannot fall as low as before. The arc of movement of the lower and outer edge of the lid will then intersect the upper ends of flanges D D, so that the end of the lid cannot be swung up and out, for the upper face of rib L will bear against the box-top, and the lower edge of the lid will at each side strike one of the guide-flanges D D. While the arch-bar is in position, then, it is impossible to remove the box cover or lid, though the same can be raised freely. The rib or flange L on the lower end of the cover is longer than is necessary, to prevent the cover being removed, as above described. It is so made to catch the waste within the box, which tends to hold the lid shut. As the lid closes inside of the flanges D D and E, it keeps the oil from being spattered out by the motion of the cars, and the waste pressing upon it from within tends to keep it close shut. The rib L need not be curved on its upper side, as shown and described, but can be made shorter and substantially straight on said face. The flanges D D project slightly above the top of the box.

I do not claim, broadly, herein a lid for a car-axle box sliding in ways at the side of the opening, in combination with the box provided with means for preventing the lid from being drawn out and removed; nor do I claim, broadly, a car-axle-box lid provided with notches at its sides to engage portions of the box when the lid is slid up and inclined outward; neither do I claim as my invention a sliding lid for a car-axle box, provided at its lower edge with a lug or projection adapted to guide the lower end of the cover into place as it is slid down. Finally, I do not desire or intend to claim as my invention a car-axle-box lid sliding in ways and provided with inclined lugs adapted to engage correspondingly-formed lugs or projections on the ways, so as to force the lid close when it is slid down to close the box.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. In combination with the box provided upon each side of its open end with the flanges or ribs D and I, inclined downward and outward and approaching each other at their lower ends, the upturned flange on the outer edge of the box-bottom, and the sliding lid provided at the sides of its outer face with flanges diminishing in height toward the lower end, so that the box edges and flanges will fit closely the way between the ribs or flanges D and I when the lid is down, substantially as shown and described.

2. In combination with the car-axle box having at the sides of its open end suitable guideways, the lid sliding in such ways with its inner face close to the front edge of the box-top, and provided with the rib or flange G on the inside of its lower end, projecting into the box and adapted to come into contact with the edge of the box-top when the lid is raised and prevent the lid from being slid directly out of the ways, substantially as shown and described.

3. In combination with the car-axle box provided on the sides of its open end with ways, the lid guided and supported at its sides in such ways, sliding close to the outer or front edge of the box-top, and provided with a rib or lug projecting inward substantially at a right angle to the lid-face to such a distance as to project under the box-top when the lid is slid up in its ways, and having its upper face at a distance from the lower end of the lid less than that from the outer side of the way and the edge of the box-top, so that when the lid is pushed up and swung down flat upon the box-top the rib or lug can pass up over the edge of the box-top, substantially as shown and described.

4. In combination with a car-axle box having the ways at the sides of its open end, the lid at its sides fitting and sliding in such ways, with its inner face close to the outer edge of the box-top, provided with a lug or rib at its upper end resting on the box-top, and with a lug or rib at its lower end projecting inward into the box substantially at a right angle to the lid, and of such thickness that when the lid is raised and thrown back on the box-top, with the upper lug resting thereon, the arcs of movement of the lower edge of the lid and the upper face of the lower lug as the lid is swung upward will pass between the planes of the outer side of the way and the edge of the box-top, substantially as and for the purpose described.

5. The cover for a car-axle box, at its sides fitting and sliding in ways in the sides of the box, and provided at its lower end with an inwardly-projecting lug or rib projecting beyond the ways into the box, adapted, when the lid is down, to be engaged by the con-



tents of the box, to strike against the under  
side of the box-top as the lid is slid up, and  
to pass up over the edge of the top when the  
lid is raised and swung down upon said box-  
5 top, and with a lug at its upper end adapted  
to come in contact with and rest upon the arch-  
bar when the latter is in position, whereby  
the lid is prevented from being swung down  
upon the box-top, substantially as and for the  
10 purpose described.

In testimony that I claim the foregoing I  
have hereunto set my hand this 20th day of  
May, 1884.

THEODORE H. HABERKORN.

Witnesses:

ROBERT S. ROBERTSON,  
THOMAS A. NOFTZGER.