

(No Model.)

W. G. RAOUL.
Car Axle Box.

No. 243,620.

Patented June 28, 1881.

Fig. 1.

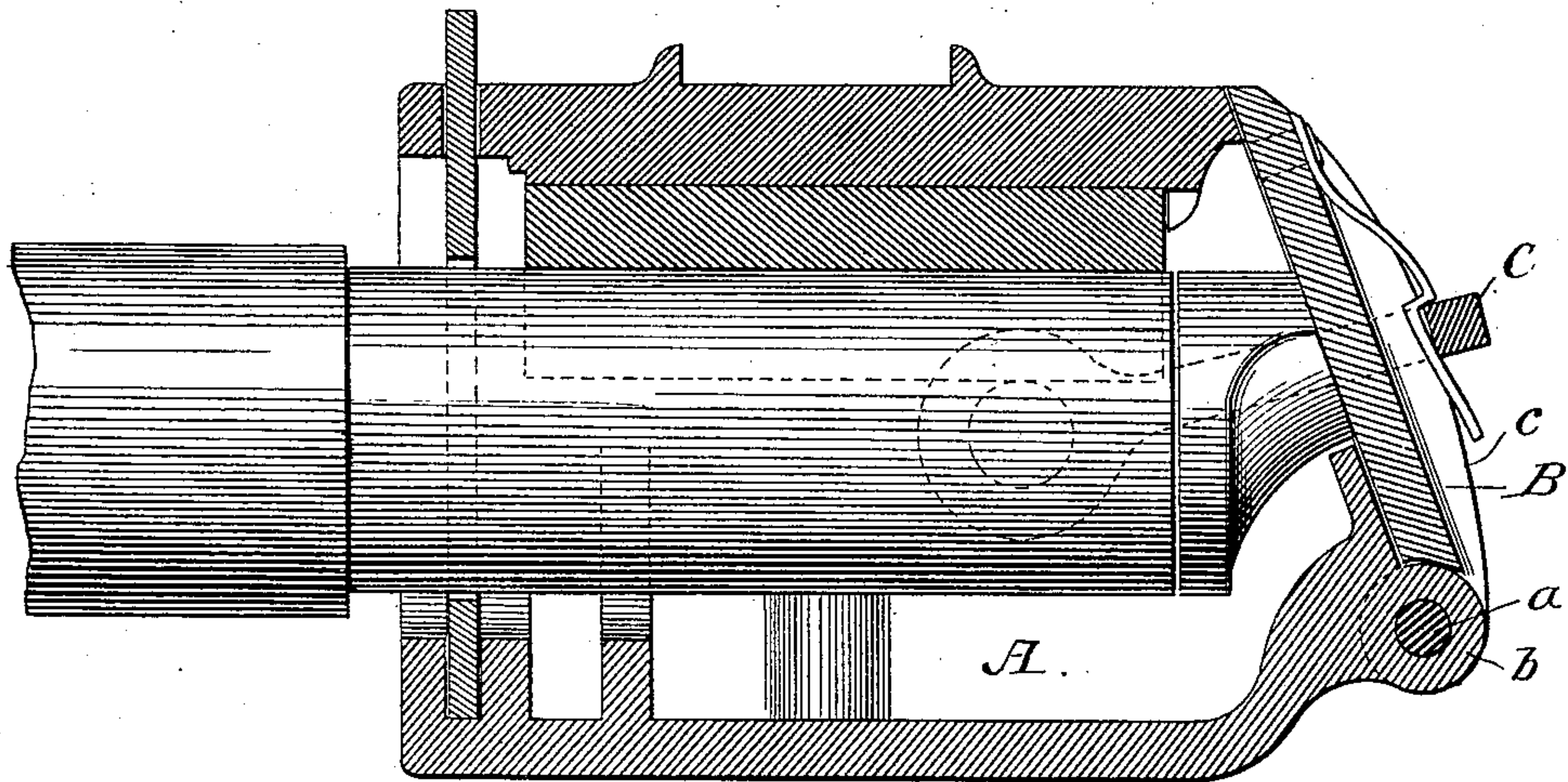


Fig. 2.

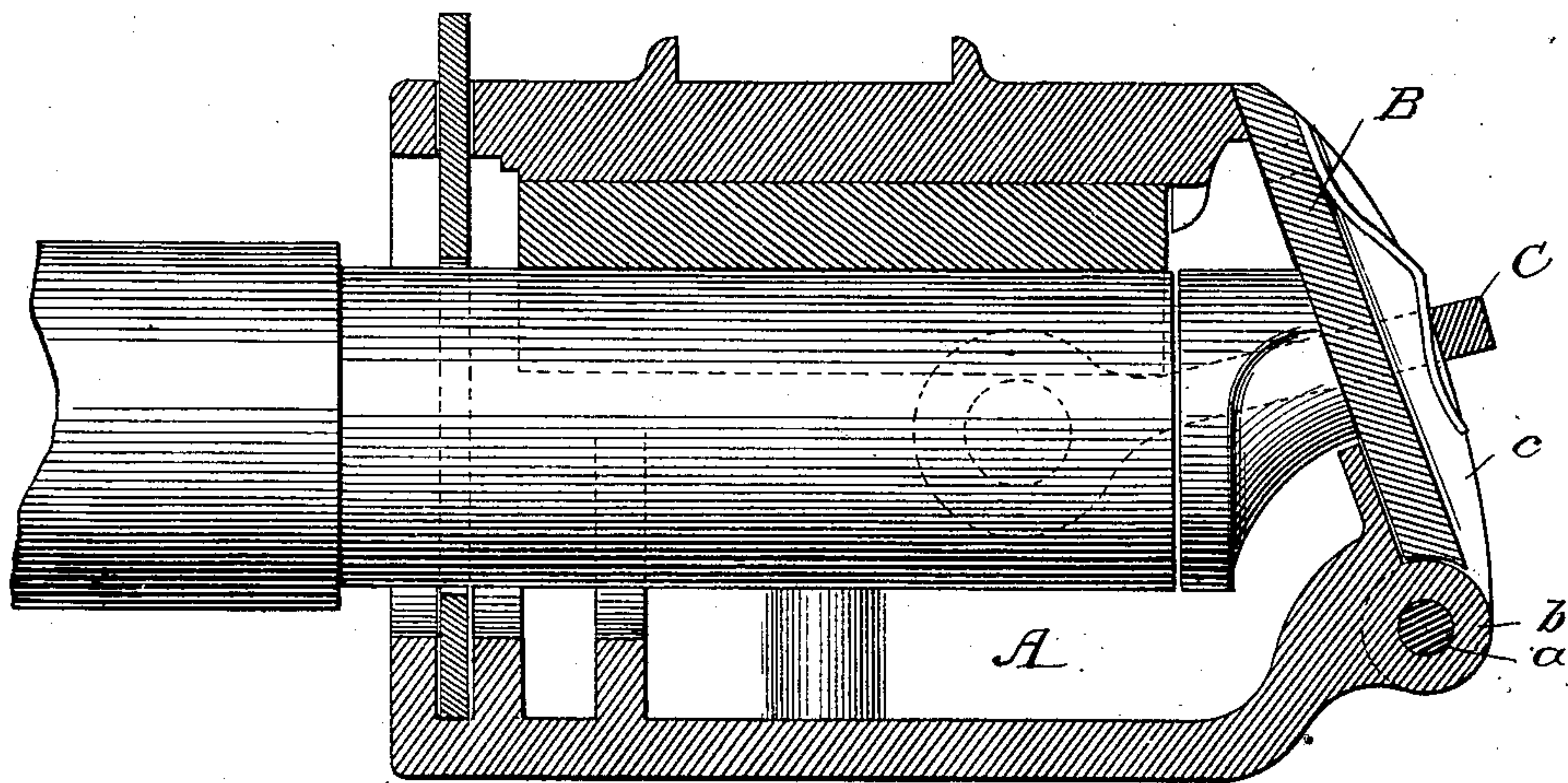


Fig. 3.

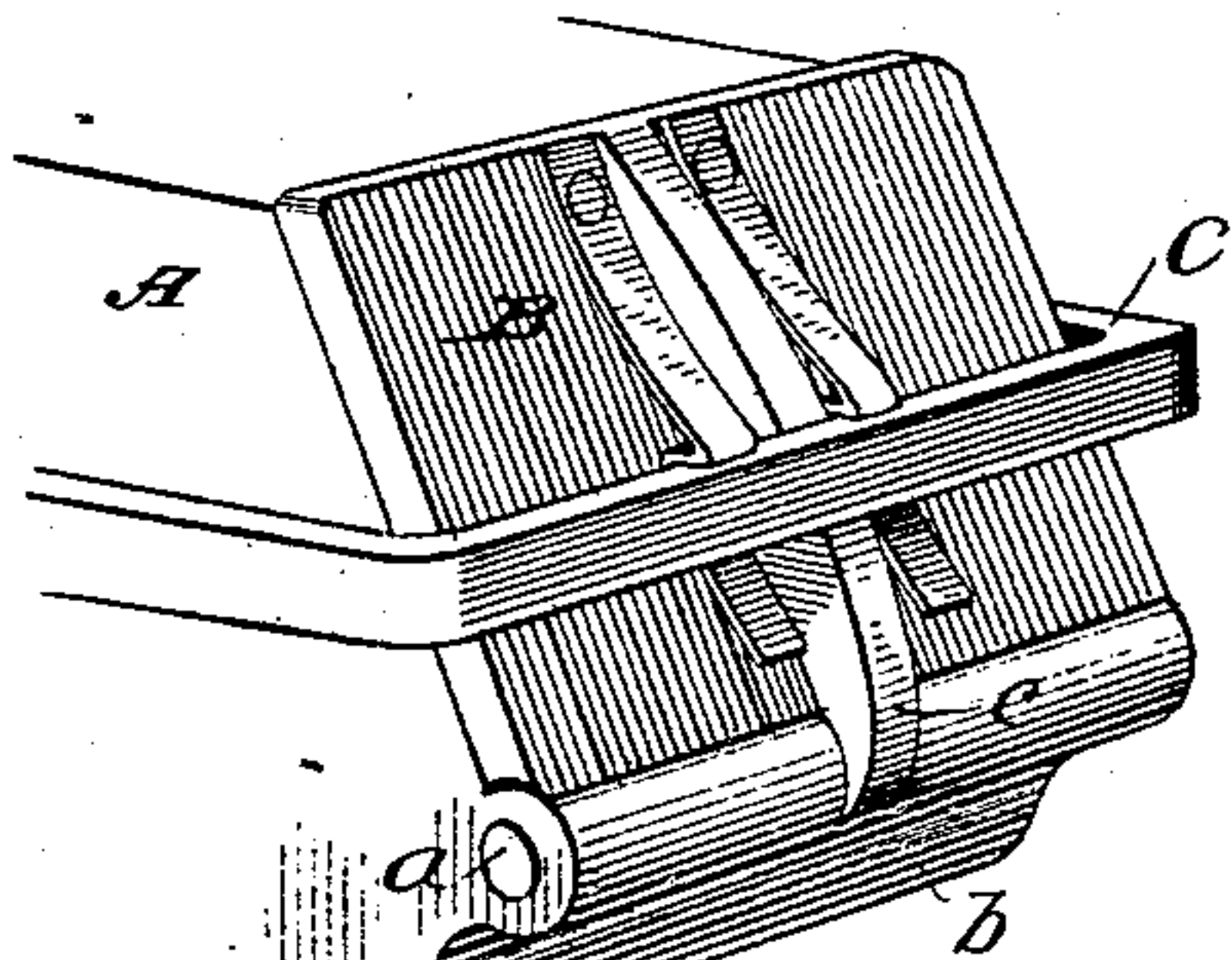
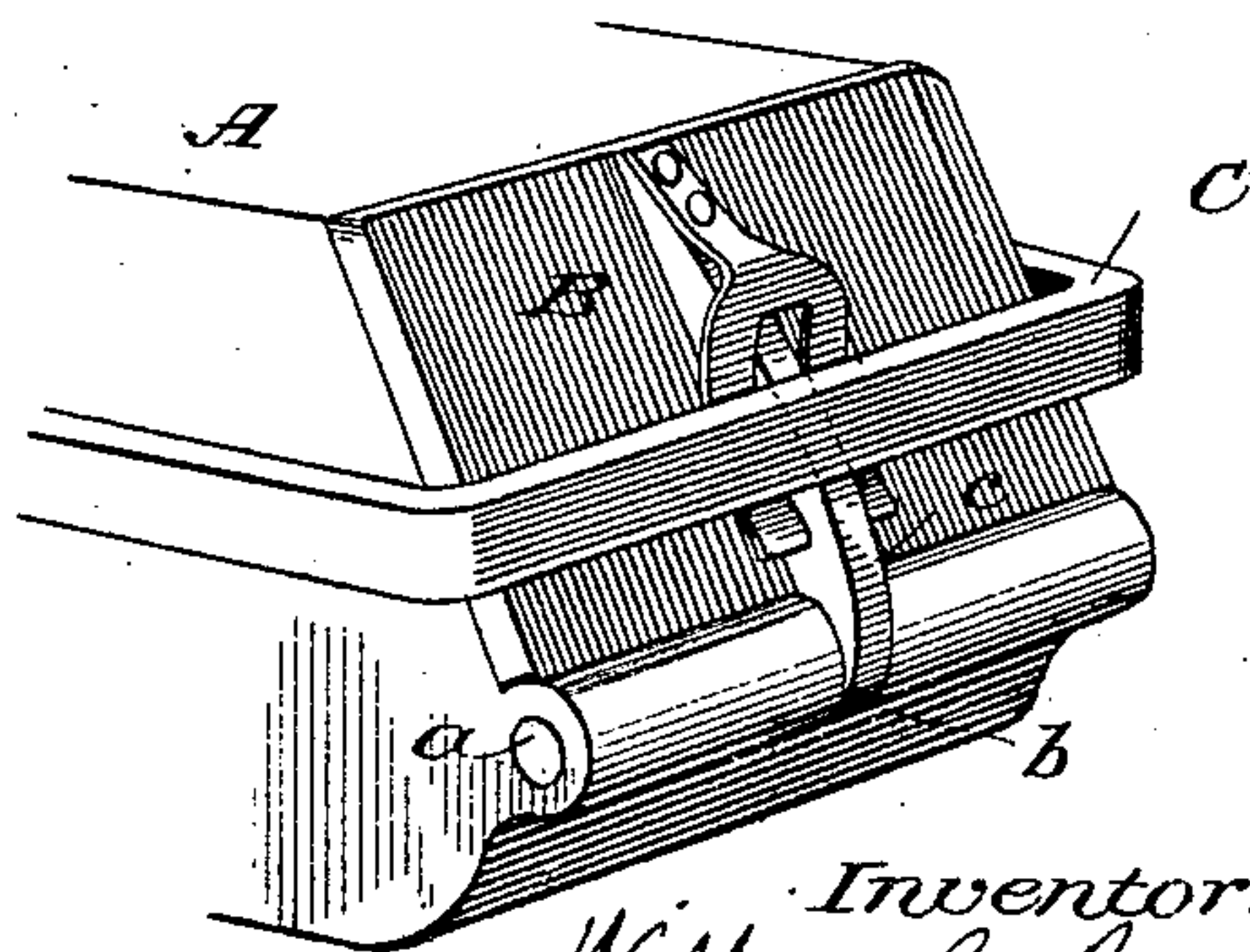


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM G. RAOUL, OF SAVANNAH, GEORGIA.

CAR-AXLE BOX.

SPECIFICATION forming part of Letters Patent No. 243,620, dated June 28, 1881.

Application filed May 10, 1881. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM G. RAOUL, of the city of Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Car-Axle Boxes, of which the following is a specification.

This invention is designed as an improvement upon that described in my Letters Patent No. 238,610, granted March 8, 1881. In that invention a lid or cover hinged to the axle-box is used in connection with a stirrup, which is attached to the box, and swings over the lid to hold it in place against the end-thrust of the axle, which is received by a projecting boss formed on the inner side of the lid or cover.

My present invention has for its object to hold the stirrup firmly in place; and in its preferred form consists of a plate-steel spring, which is riveted or otherwise secured to the box lid or cover, and projects down below the position assumed by the stirrup when locked, which spring is provided with a notch or frictional surface which interlocks with or frictionally secures the stirrup.

In the accompanying drawings, Figure 1 is a longitudinal section of an axle-box embracing my invention. Fig. 2 is a similar section, showing the invention in a modified form. Figs. 3 and 4 are perspective views, showing further modifications, as hereinafter described.

Similar letters of reference indicate similar parts in the several figures.

A is the axle-box.

B is the cover or lid, hung by the pivot *a* to lugs *b b*, formed upon the box, the cover B opening downward instead of upward, which latter is the more common plan.

C is the stirrup, which is pivoted at the sides of the box, and when used for locking the lid or cover is swung to a horizontal or other suitable position over the cover, and thus holds it tightly closed, the stirrup engaging the sloping or tapering ribs *c* upon the outside of the cover, as in my said prior patent.

To the outside of the lid is riveted a plate-spring, which, as shown in Fig. 1, is provided with a square shoulder, and in Fig. 2 with an inclined plane or frictional surface. The elasticity of the spring has the tendency of keep-

ing it, when not acted on by the stirrup, forced beyond the outer limit of the sloping ribs, and consequently when the stirrup is forced to its closed position over said ribs it depresses the spring until it passes over its highest point, after which the spring is forced out by its own elasticity, locking the stirrup either by the square shoulder, as is seen in Fig. 1, or by the inclined plane or frictional surface, as is shown in Fig. 2. If two ribs are used the spring is placed between them, which is the construction supposed in Figs. 1 and 2. If only one rib is used one spring or one at each side of the rib may be used, the latter construction being shown in Fig. 3; or the spring might be forked or divided, so as to straddle the rib, as shown in Fig. 4. The free end of the spring extends below the stirrup, so as to furnish means for pressing it inward when it is designed to release the bail.

It will be seen that this invention will effectually hold the stirrup in place and prevent its accidental displacement.

The spring, when formed with a square shoulder, must, of course, be depressed or pushed in when it is desired to raise the stirrup; but when the spring is used simply with an inclined frictional surface the stirrup may be raised by imparting a sharp blow to it underneath. The inclined friction-surface has the effect of continually pressing the stirrup downward, and thus aids in keeping the cover or lid to its closed position.

I claim as my invention—

1. In a car-axle box, the combination of a cover or lid hinged to the end of the box, a stirrup pivoted to the box and adapted to fit over and hold the cover in place, and a spring-locking device operating to secure the stirrup, substantially as set forth.

2. In a car-axle box, the combination of a cover or lid hinged to the end of the box and forming a bearing to receive the end-thrust of the axle, a stirrup pivoted to the box, and adapted to be thrown over and secure the hinged lid when closed, and a spring attachment operating to lock the stirrup, substantially as set forth.

3. In a car-axle box, a lid or cover hinged to the end of the box and opening downward,

and a stirrup pivoted to the sides of the box
and adapted to swing over and secure said lid,
combined with a plate-spring device riveted
to the top of the box-lid, and having a lock-
5 ing-surface wherewith to engage with and lock
the stirrup, and a free-ended lower projection,
whereby it may be depressed when it is de-
sired to release the stirrup, substantially as
set forth.
10 4. In a car-axle box, the combination of a
hinged lid having sloping ribs, a pivoted stir-

rup, and a spring-locking device, the latter op-
erating, in connection with the sloping ribs of
the lid and the stirrup, to secure the lid when
closed, substantially as set forth.

Witness my hand this 20th day of April,
A. D. 1881.

WM. GRUNE RAOUL.

Witnesses:

ANDREW ANDERSON,
E. L. HACKETT.