

(Model.)

J. R. BAKER.
CAR AXLE BOX LID.

No. 270,172.

Patented Jan. 2, 1883.

Fig. 1.

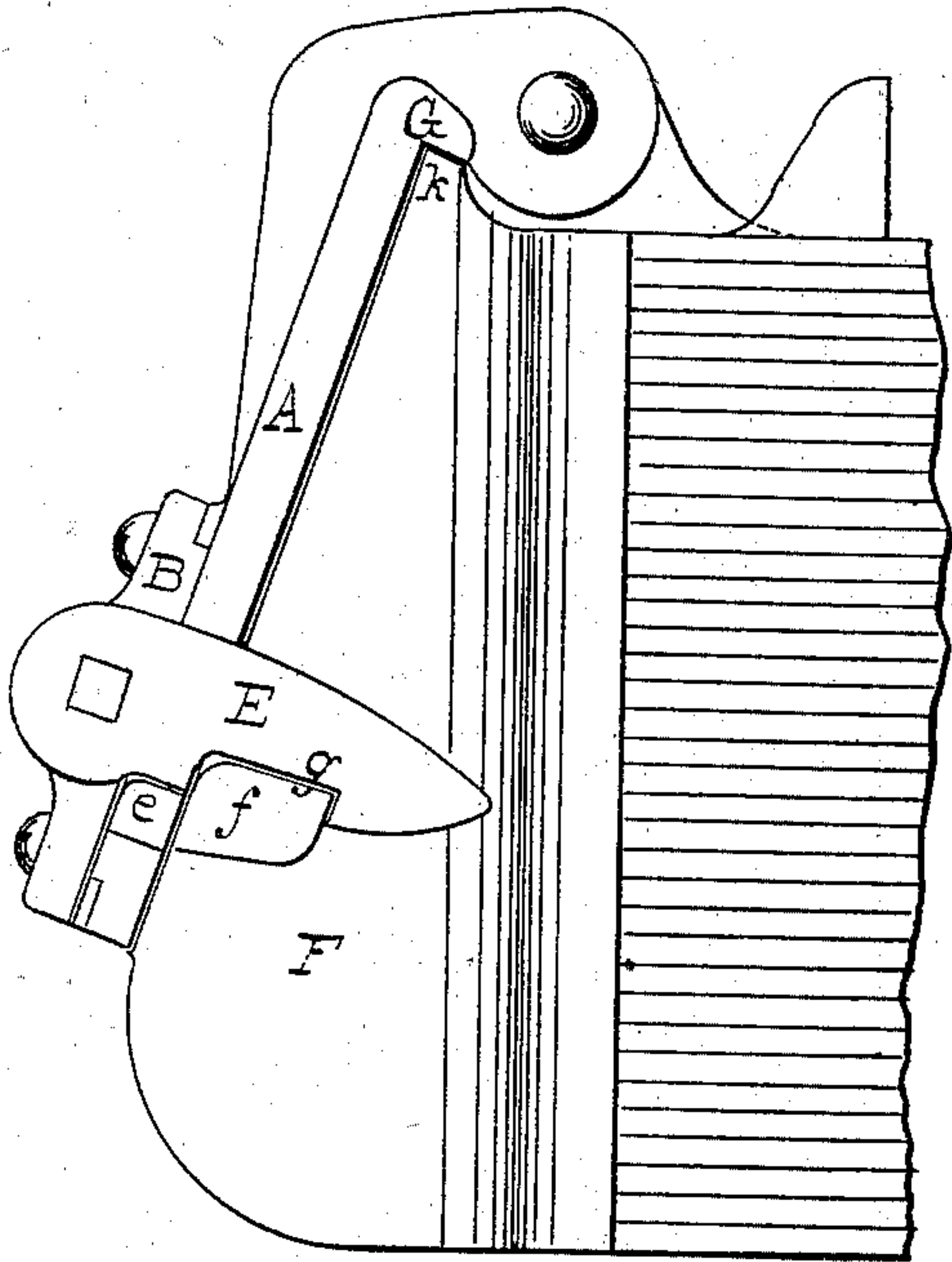


Fig. 2.

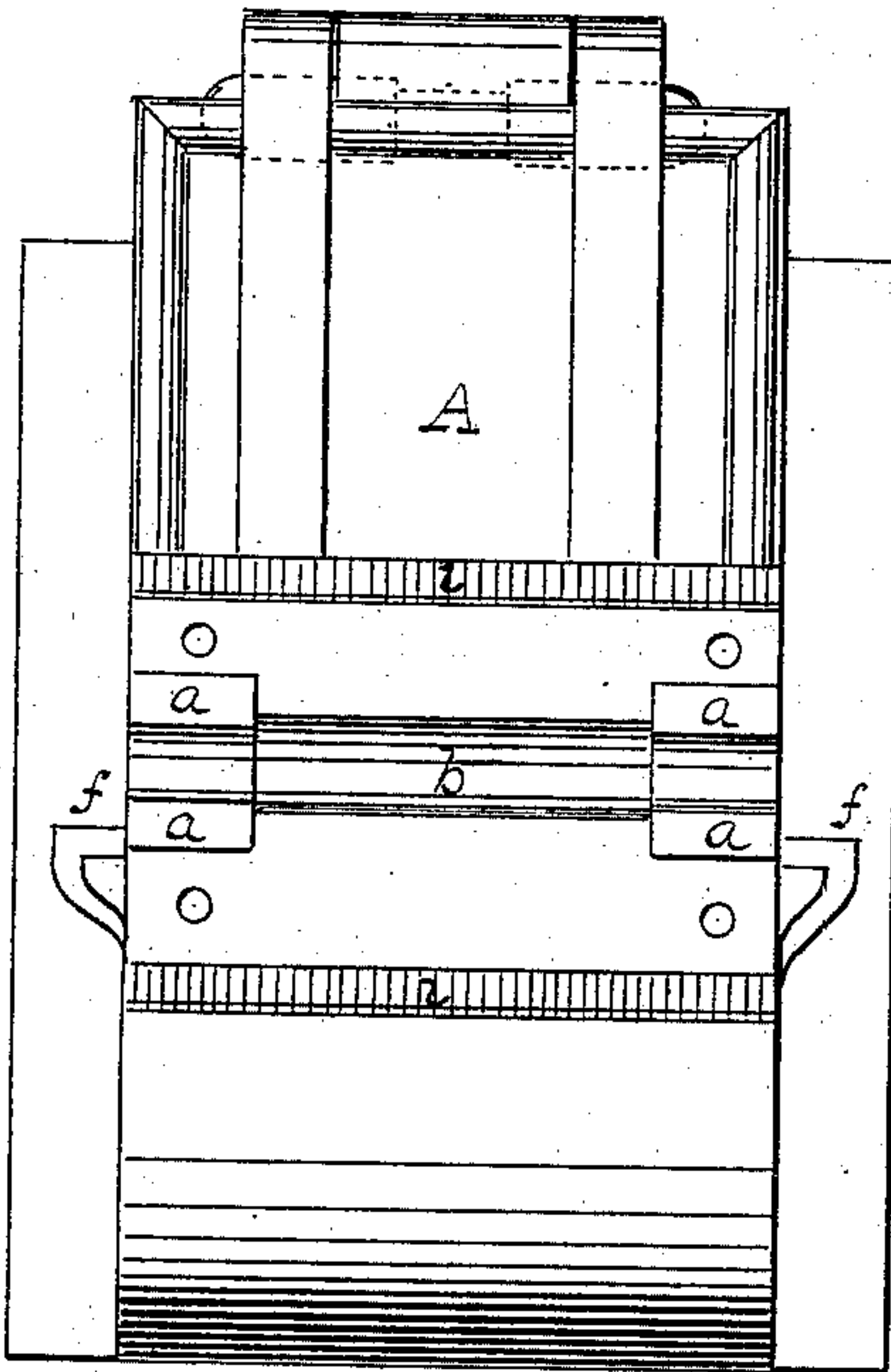


Fig. 4.

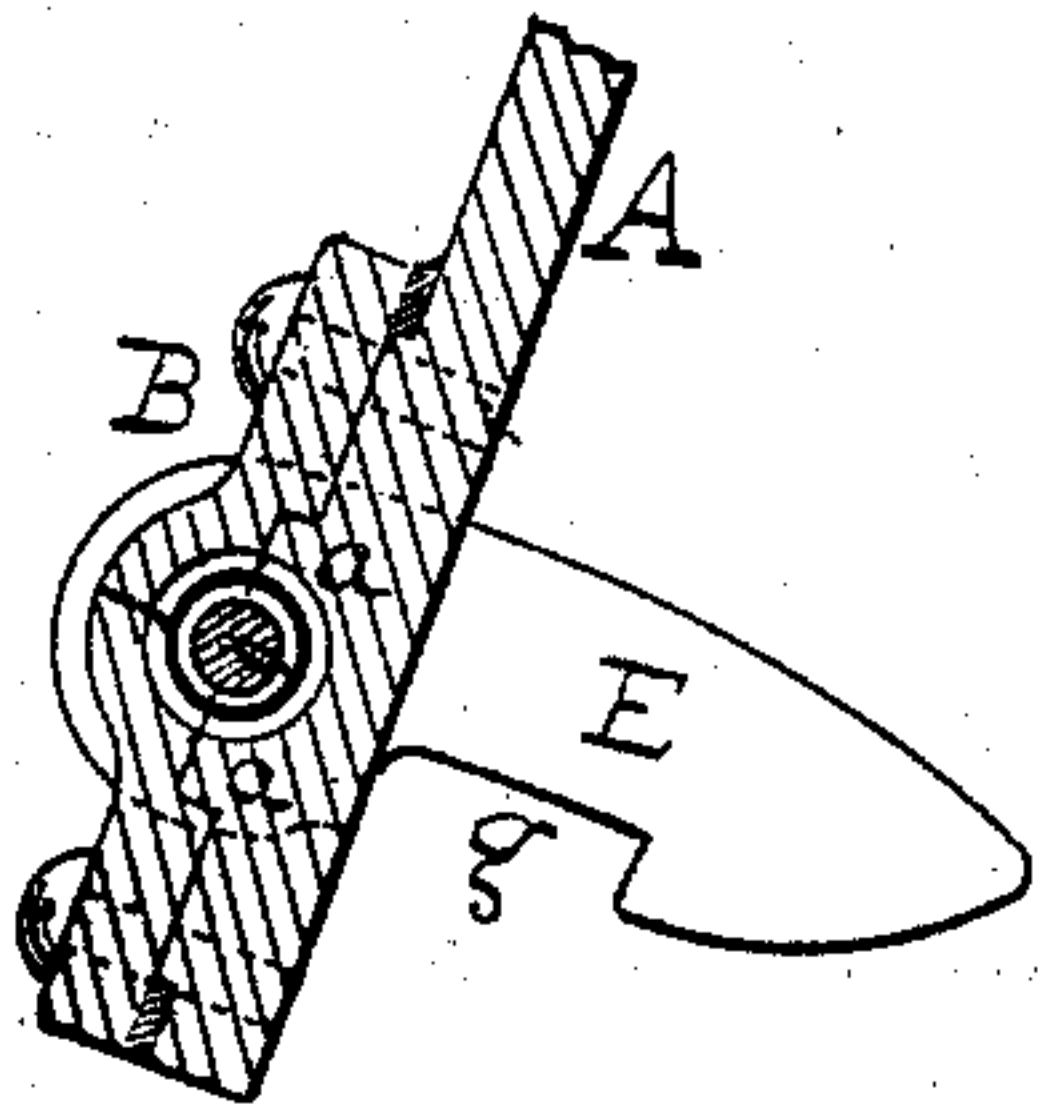
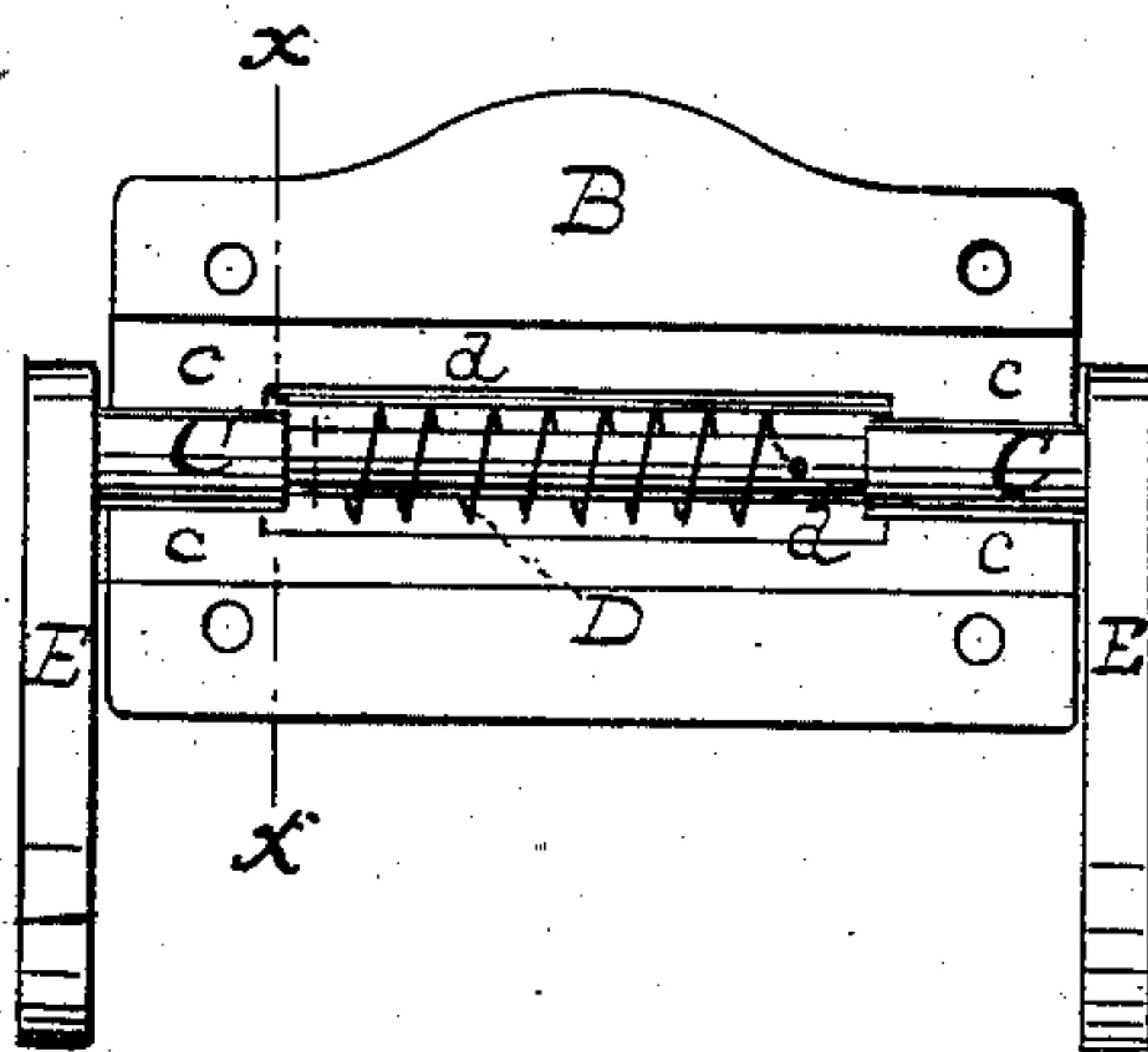


Fig. 3.



WITNESSES:

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JACKSON R. BAKER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO THE
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CAR-AXLE-BOX LID.

SPECIFICATION forming part of Letters Patent No. 270,172, dated January 2, 1883.

Application filed March 30, 1882. (Model.)

To all whom it may concern:

Be it known that I, JACKSON R. BAKER, of Jersey City, Hudson county, State of New Jersey, have invented a new and useful Improvement in Locks for the Lids of Car-Axle Boxes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying sheet of drawings, making part of this specification.

This invention is in the nature of an improvement in locks for the lids of car-axle boxes; and the invention consists in a car-axle-box lid provided with a shaft, with locking devices fixed to its ends and resting in bearings, in combination with a spiral spring and lugs cast on the side of the box to engage with the locking devices; and the invention also consists in the means, hereinafter described, for excluding dust from the interior of the box, and from said shaft and its bearing and spring.

In the accompanying sheet of drawings, Figure 1 is a side view of my invention; Fig. 2, a front view of same; Fig. 3, a view of under side of plate, shaft, and spring; Fig. 4, a cross-section of plate, box, and shaft, taken in the line *x x*, Fig. 3.

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

The purpose of this invention is to construct the lid of a car-axle box so that it can be readily opened and as readily fastened or locked without employing a wrench, and without liability of becoming detached or the lid unfastened. To that end I construct the lid A of the axle-box with bearings *a* cast on the face thereof, a recess, *b*, being also cast on the face of this lid. A plate, B, is provided, of cast metal or otherwise, with bearings *c* also formed thereon, and a cavity, *d*, extending the entire length thereof, between the bearings *c*. Resting in the bearings *a* is placed a shaft, C, so that it may freely turn in said bearings, and surrounding this shaft, with one of its ends fixed thereto and its other end fixed to the plate B, is a spiral spring, D.

To the ends of the shaft C, which ends project on each side of the plate B, are secured lock-catches E, and onto the lid A are cast lugs *e*, and to the sides of the box F are also cast lugs *f*. The upper edge or side of the lid

A has formed on it a lip, G, and the face of the box F, to which the lid A is secured, extends upward, as at *k*, Fig. 1.

Now, when my lid and box are constructed substantially as above described, the shaft C is turned on the bearings *c* until the spiral spring D has a sufficient amount of tension given to it, and when the plate B is placed on the face of the lid A, so that the shaft C will be received in the bearings *a* on the face of the lid and the spring D and shaft C will be received within the recess *b* therein, the plate B is screwed fast to the lid A. The locking-catches E then being in contact with the lugs *e* of the lid, they prevent the shaft C from revolving in a way that would uncoil to some extent the spring D, and thereby lessen its tension. The lugs *f* on the side of the box F, having entered into notches *g*, formed in the under side of the locking-catches E, effectually lock the lid A in place to the box F and close the opening therein. Now, to unlock the catches E it is simply necessary to raise them until the notches *g* therein clear the lugs *f* on the side of the box F, (the shaft C turning in its bearings, admitting of this operation.) The lid A being open, it will close and lock by its own gravity. For this purpose the front ends of the locking-catches E are beveled, and the front of the lugs *f* on the sides of the box F are somewhat rounded, so that as the lid descends by gravity the beveled ends of the locking-catches E are brought in contact with the lugs *f*, causing the shaft C and its spring D to yield until the lid is locked, as before described, by the entering of the lugs *f* of the box F into the notches *g* of the lock-catches E. When the lid A is in this way locked to the box F the lip G on the upper side of the lid A fits over the projecting part *k* of the face of the box F, thereby excluding dust from the axle-journal within the box F.

To also exclude the dust from the bearings *a c* and the shaft C and the spring D, I form recesses *l* in the face of the lid A, into which recesses is run a soft metal alloy, similar to the Babbitt metal, this metal forming a soft bearing-surface between the lid A and the plate B, and effectually closing the joint between them and preventing the dust from entering.

Having now described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A car-axle box with its lid provided with a rotating shaft and a coil-spring around the same, and with lock-catches fixed to the ends of said shaft, in combination with lugs cast on said box to engage with said lock-catches, whereby the lid is secured to the box, substantially as is shown and described.
2. The box provided with the projecting portion *k* and the lid *A*, hinged to said box and having the lip *G*, engaging said portion, combined with the lid-fastening devices secured by a packed joint to said lid, substantially as

shown and described, for the purpose of excluding dust from the box and fastening. 15

3. In a car-axle box, the combination of a rotating shaft with a removable plate and beveled and notched locking-catches, substantially as is shown and described. 20

4. In a car-axle box, the combination of a rotating shaft and locking-catches fixed thereto, with lugs *e*, secured to the lid *A* of said box, substantially as and for the purpose described.

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Witnesses:

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