J. C. TUCK.

Car-Axle Boxes.

No. 156,070. Patented Oct. 20, 1874.

FIG. 1.

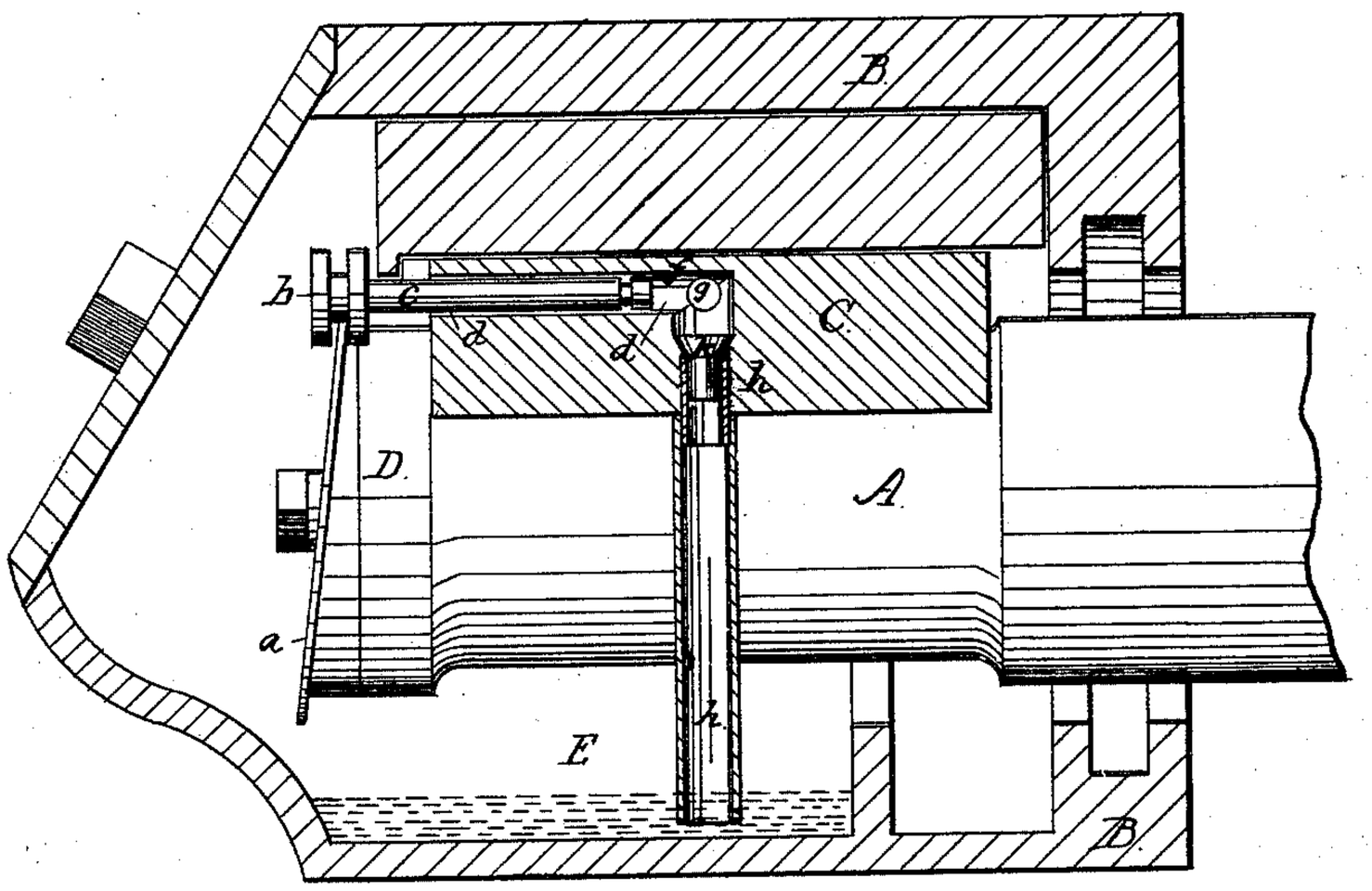


FIG. 2.

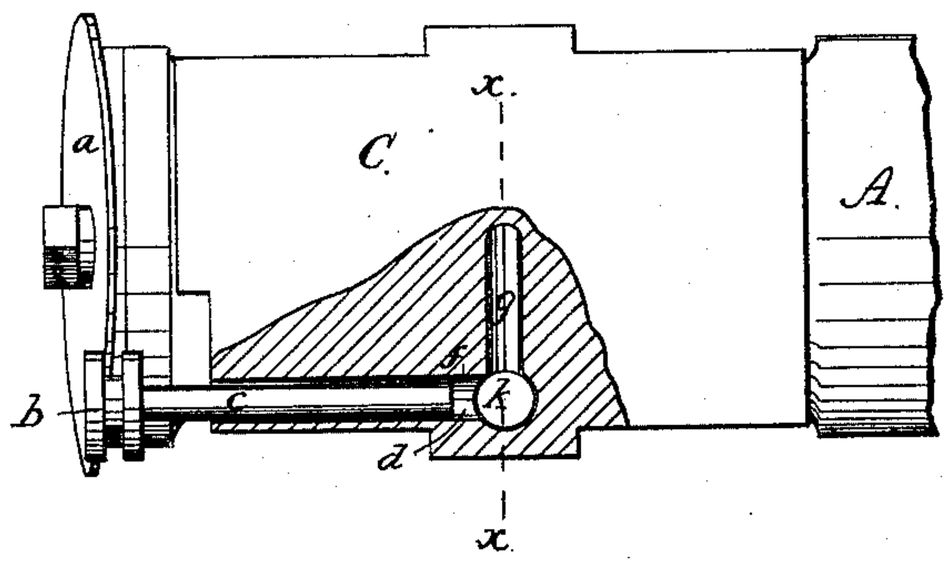
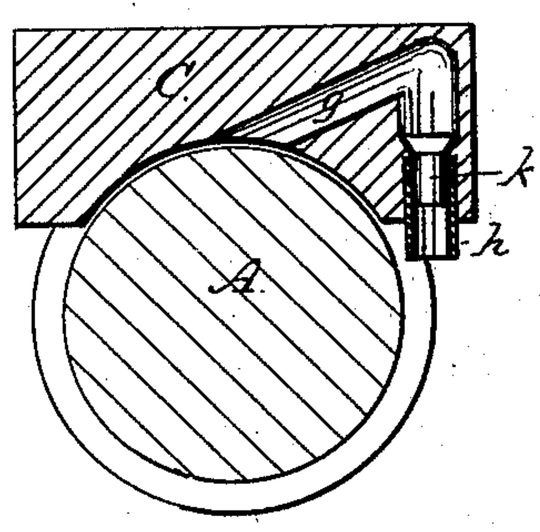


FIG. 3.



WITNESSES.

George Tuck

Albert H. Brown.

INVENTOR.

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UNITED STATES PATENT OFFICE.

JOSIAH C. TUCK, OF OAKLAND, CALIFORNIA.

IMPROVEMENT IN CAR-AXLE BOXES.

Specification forming part of Letters Patent No. **156,070**, dated October 20, 1874; application filed August 26, 1874.

To all whom it may concern:

Be it known that I, JOSIAH C. TUCK, of Oakland, in the county of Alameda and State of California, have invented an Improved Oiler for Car or other Axles, of which the following is a specification:

This improved oiler is more especially designed for car-axles, but it is applicable to oiling other axles, as will be obvious from the description thereof. This improved oiler consists, in substance, of a cam edge, which is attached to and revolves with the axle; a piston or plunger, which is arranged to travel within a suitable chamber or cylinder, and is connected with said cam, so that the revolution thereof will move the piston forward and backward within its chamber; and a tube connecting the plunger-cylinder with an oil-reservoir below the axle-box. The plunger-cylinder opens to the bearing to be oiled, and the oil-connecting tube has a check-valve arranged for the oil to pass to the plunger-cylinder, and to hold it from flowing back to the oil-reservoir through the said oil-connecting tube, all as hereinafter fully described.

In the accompanying plate of drawings my improved oiler is illustrated.

Figure 1 is a central vertical section of a railroad-axle box, with my improved oiler in partial elevation and section; Fig. 2, a plan view; and Fig. 3, a cross-section in plane of line *x x*, Fig. 2.

In the drawings my improved oiler is shown in connection with a car-axle, and A is the axle, B the shell or case, into which the axle passes, and C the block or plate making the bearing at the upper side of the axle, all as ordinarily in car-axle boxes and oilers. *a*, a cam edge, attached to outer end D of car-axle, and revolving with the axle; *b*, a grooved collar, which receives the edge *a*. This collar is attached to a plunger or piston-rod, *c*, which is arranged within a chamber or cylinder, *d*, formed in and along the bearing-block C, which rests on the car-axle. This plunger-chamber *d*, at its inner end *f*, connects by the branch passage *g* in the block with the bearing-face of the block on the car-axle, and by a tube, *h*, is connected with the chamber E of the shell or case B, which is below the car-axle, this chamber E being the receptacle for the oil. In the tube *h*, and near its junction with the plunger-cylinder *d*, is a check-valve, *k*, located, to allow the flow of oil to the plunger-cylinder *d*, and to prevent its flow back through the tube *h* to the oil-reservoir E.

The revolution of the axle-cam *a* moves the plunger *c* forward and backward in its chamber *d*, and thus "pumps" up the oil from the oil-reservoir E into the chamber *d*, from which it flows to the bearing-surface between the block C and the car-axle A, securing thereby the oiling of the same.

Obviously by changing the cam *a* for a cam of a greater or less throw, the supply of oil to the bearing will be correspondingly increased or decreased; and, furthermore, the greater the speed of revolution of the axle, the more the oil will be fed to the bearing therefor.

What I claim as my invention is—

The combination of the cam *a* of axle A, oil-reservoir E, plunger *c*, chamber *d* of bearing-block C, tube *h*, and check-valve K, all to operate substantially as and for the purpose specified.

J. C. TUCK.

Witnesses:
ALBERT W. BROWN,
GEORGE TUCK.