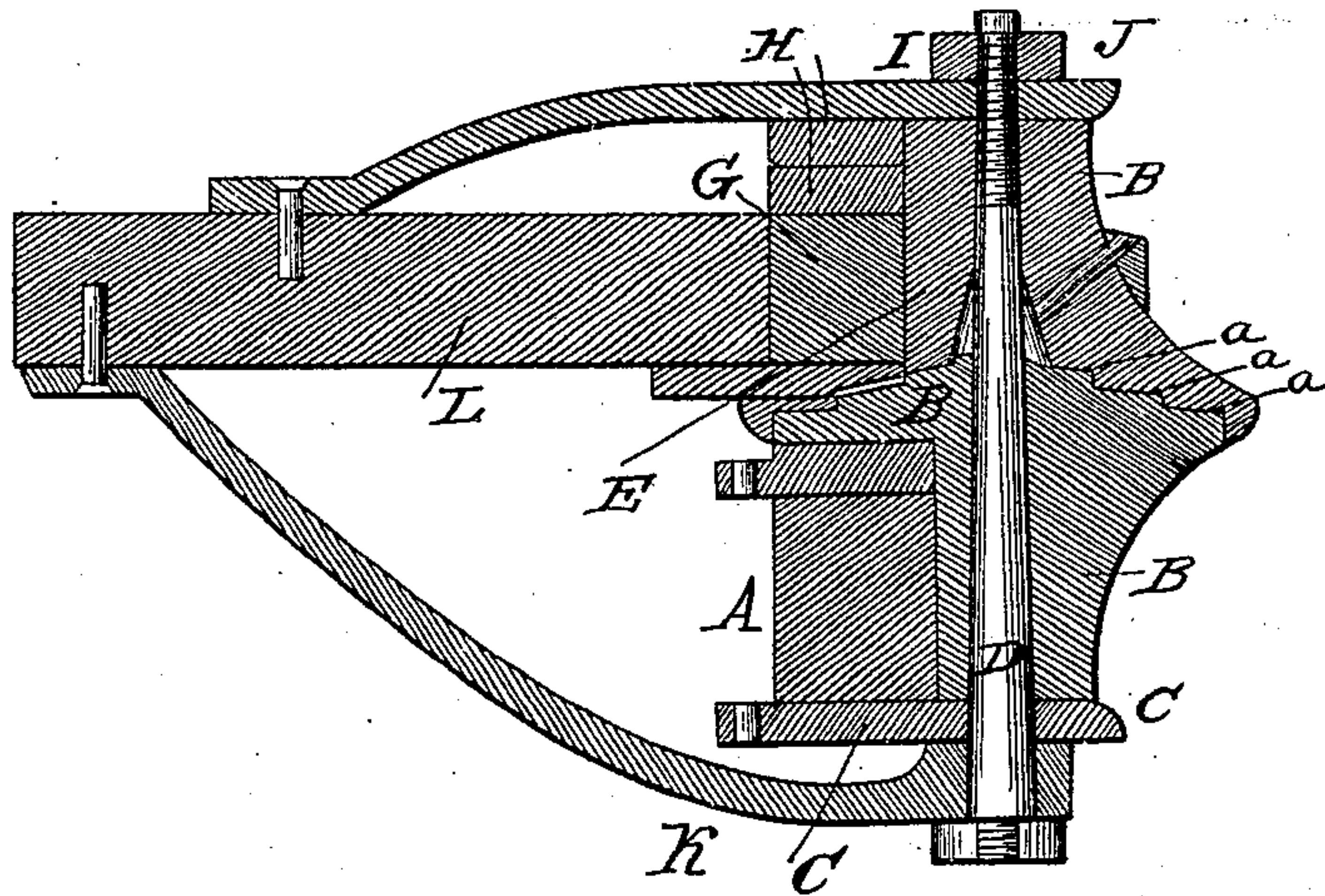


U. BUSHNELL.
Coupling for Vehicles.

No. 96,670.

Patented Nov. 9, 1869.



Witnesses
F. Lehmann
C. L. Evers

Inventor
Upton Bushnell,
per
Alexander Mason

Atty

United States Patent Office.

UPSON BUSHNELL, OF CLEVELAND, OHIO.

Letters Patent No. 96,670, dated November 9, 1869; antedated October 27, 1869.

IMPROVEMENT IN COUPLING FOR VEHICLES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, UPSON BUSHNELL, of Cleveland, in the county of Cuyahoga, and in the State of Ohio, have invented certain new and useful Improvements in Couplings for Vehicles; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the construction and arrangement of a coupling for vehicles, having its centre and king-bolt outside of the axle and head-block, and dispensing with the usual circle, or fifth-wheel.

In order to enable others skilled in the art to which my invention appertains, to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which represent a longitudinal vertical section of my coupling.

A represents the axle, to the front side of which the lower male section B, of the joint, is firmly secured, by bolts and cap-plate.

The cap-plate C is secured by bolts to the bottom of the axle A, and projects forward in the centre far enough to form a cap for the lower end of the lower section B of the joint, and also to receive and support the lower end of the king-bolt D.

The upper or female section, E, of the joint, is secured to the head-block G and springs H H, by bolts and a cap, I, secured by bolts on the top of the springs H H, to support the upper end of joint and king-bolt, the same as the cap C does the bottom.

The inside of the joint is formed with one or more bevel elevations, *a*, so formed as to be bevel-shaped upon both sides, so that as it bears, it always fits and makes the joint self-tightening.

The oil-chambers are formed by an enlargement in the lower part of the upper section E, and grooves in the top part of the lower section.

The chamber in the upper section is accessible by

means of a hole in the upper section, where the packing or oil-retainer and oil can be introduced, to be secured from dirt by a cap or top screw. This makes it self-lubricating.

The upper section E entirely caps over the lower section, making it self-protecting from all dirt.

The king-bolt D is provided with screw-threads upon the upper end, and passes through a screw cut in the upper part of the upper section E, so as to bring the joint to a perfect fit, thereby rendering it noiseless. It is also secured at the top by a check-nut, J, which holds it to its place.

The lower end or king-bolt head rests upon the brace K, from the bottom of the reach L, and passes loosely through the lower section B of the joint. This avoids all friction upon the bolt, and permits the axle to self-adjust itself upon its two points of bearing.

Having thus fully described my invention,

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

1. The bevel-shaped joint B E, constructed as described, so as to give the head-block and axle a bearing upon the joint with its centre and king-bolt outside of said axle and head-block, substantially as herein set forth.

2. The manner of oiling the joint B E, by having an enlargement or chamber in the lower portion of the upper section, and grooves in the top of the lower section, substantially as herein set forth.

3. The combination and arrangement of the axle A, joint B E, cap-plates C I, head-block G, springs H H, screw king-bolt D, nut J, and brace K, all constructed as described, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing, I have hereunto set my hand, this 18th day of September, 1869.

UPSON BUSHNELL.

Witnesses:

FREDK. A. BRAND,
E. D. DILLE.