(No Model.)

G. W. SHOEMAKER.

FRICTION BEARING.

No. 311,925. Patented Feb. 10, 1885.

Fig. 1.

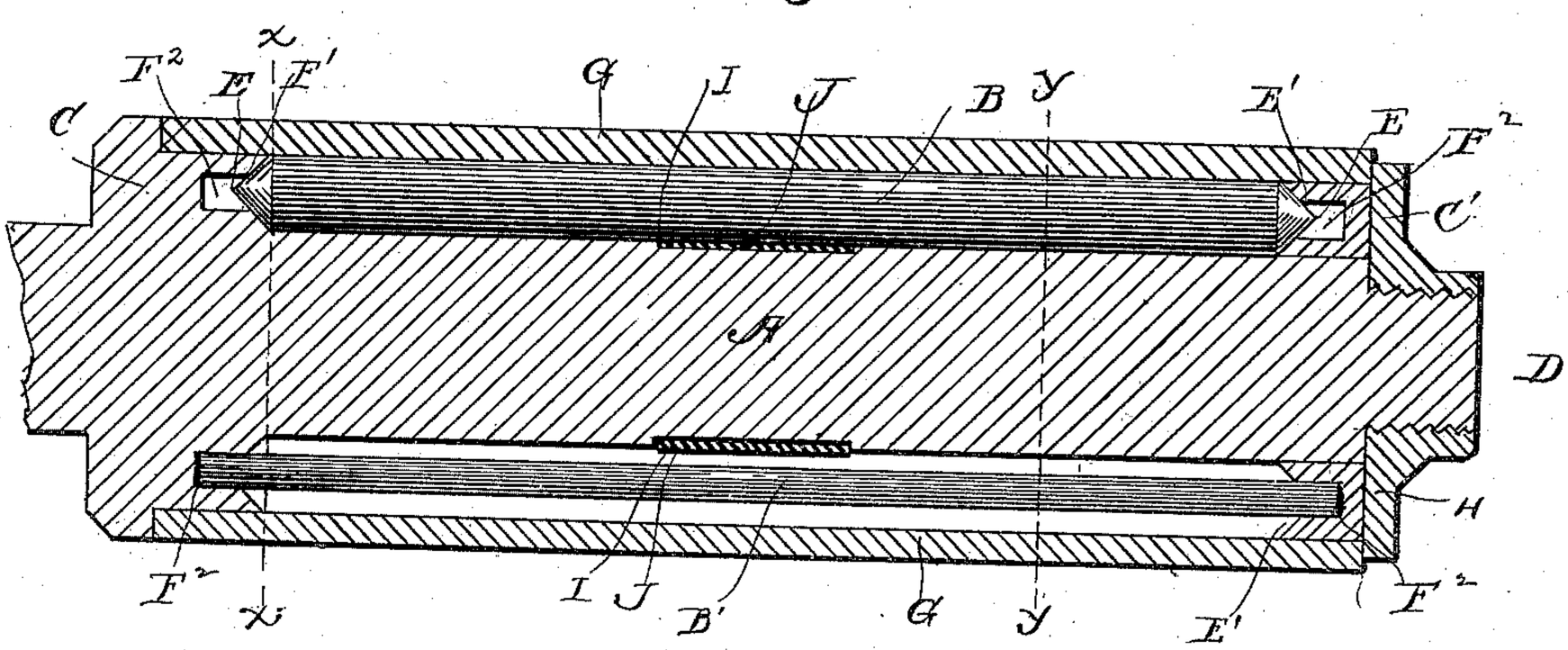


Fig. 2.

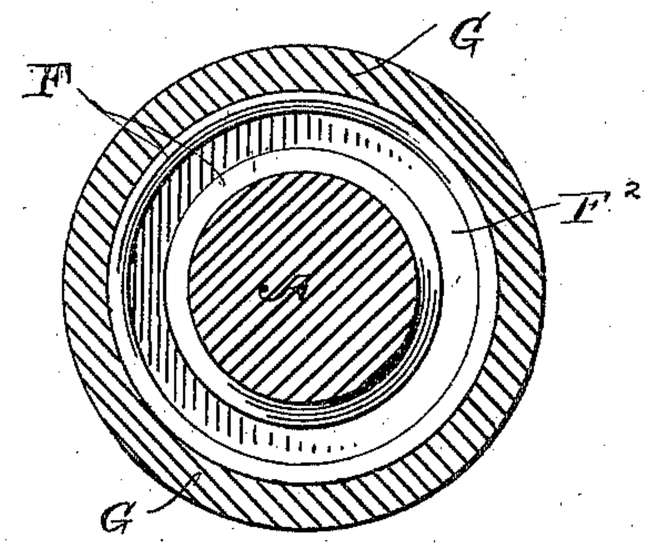
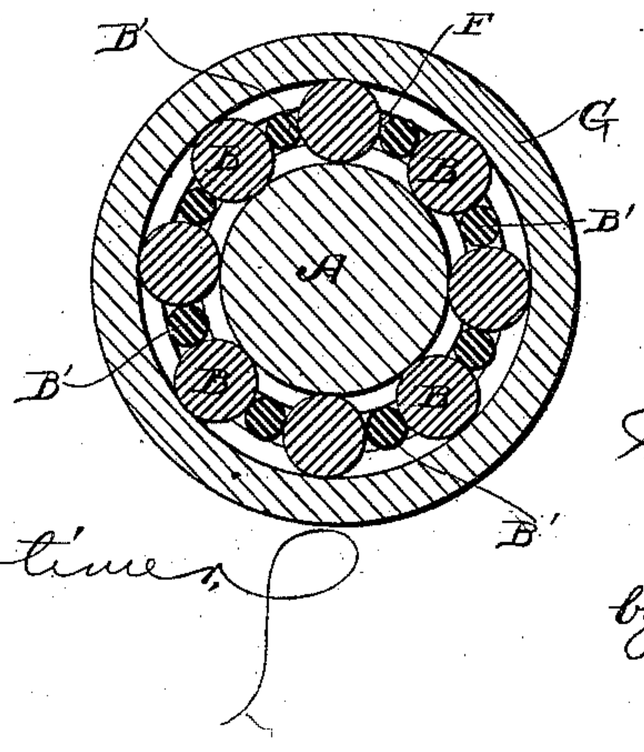


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE WASHINGTON SHOEMAKER, OF DALTON, PENNSYLVANIA.

FRICTION-BEARING.

SPECIFICATION forming part of Letters Patent No. 311,925, dated February 10, 1885.

Application filed August 13, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SHOEMAKER, a citizen of the United States, residing at Dalton, in the county of Lackawanna and State of Pennsylvania, have invented new and useful Improvements in Friction-Bearings, of which the following is a specification, reference being had to the accompanying drawings.

My invention has relation to friction-bearings for journals of axles designed to be used without lubricators; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings, Figure 1 is a vertical longitudinal sectional view of a portion of an axle with my improved friction-bearing applied thereto. Fig. 2 is a vertical transverse section on the line *x x* in Fig. 1, and Fig. 3 is a vertical sectional view on the line *y y* in Fig. 1.

Referring by letter to the accompanying drawings, A designates a straight untapering axle, having collar C made integral therewith or secured thereon, and a collar, C′, near its outer threaded end, D, which is removably secured thereon. The collars C and C′ are grooved in their opposite faces to receive the ends of the alternating rolls B and B′. The ends of the rolls B are tapered to form center points, E, which fit the flaring mouths E′ of the grooves F F′ of the collars C C′. The ends of the rolls B′ are untapered and enter the deeper parts F² of the grooves F F′. The rolls B′ are covered with rubber or other elastic substance, and keep the surfaces of the rolls B from touching each other. The rolls B are case-hardened, as is also the pipe or sleeve G. The sleeve G is slipped over the rolls B B′, and is held in place by a flanged nut, H, which is turned on the threaded end of the axle A. The axle A has a seat, I, turned in it for the reception of an elastic band, J, which springs out against the rolls B to prevent chattering. The grooved collars C C′ hold the rolls together when the sleeve G has been removed.

No oil or other lubricator is required with axles provided with these friction-bearings. They run perfectly dry and radiate the heat as rapidly as it is generated, and are therefore comparatively cool when operated.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

The combination, with the untapered axle having threaded ends and the collars C C′, grooved in their opposing faces, as at E′ F², of the case-hardened rolls B, having tapering ends E, the rolls B, having elastic surfaces and untapered ends, the elastic band J in a seat in the axle, the case-hardened sleeve G, and the flanged nut H, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

GEORGE WASHINGTON SHOEMAKER.

Witnesses:

J. H. CAMPBELL,

HUGO BAUMANN.