

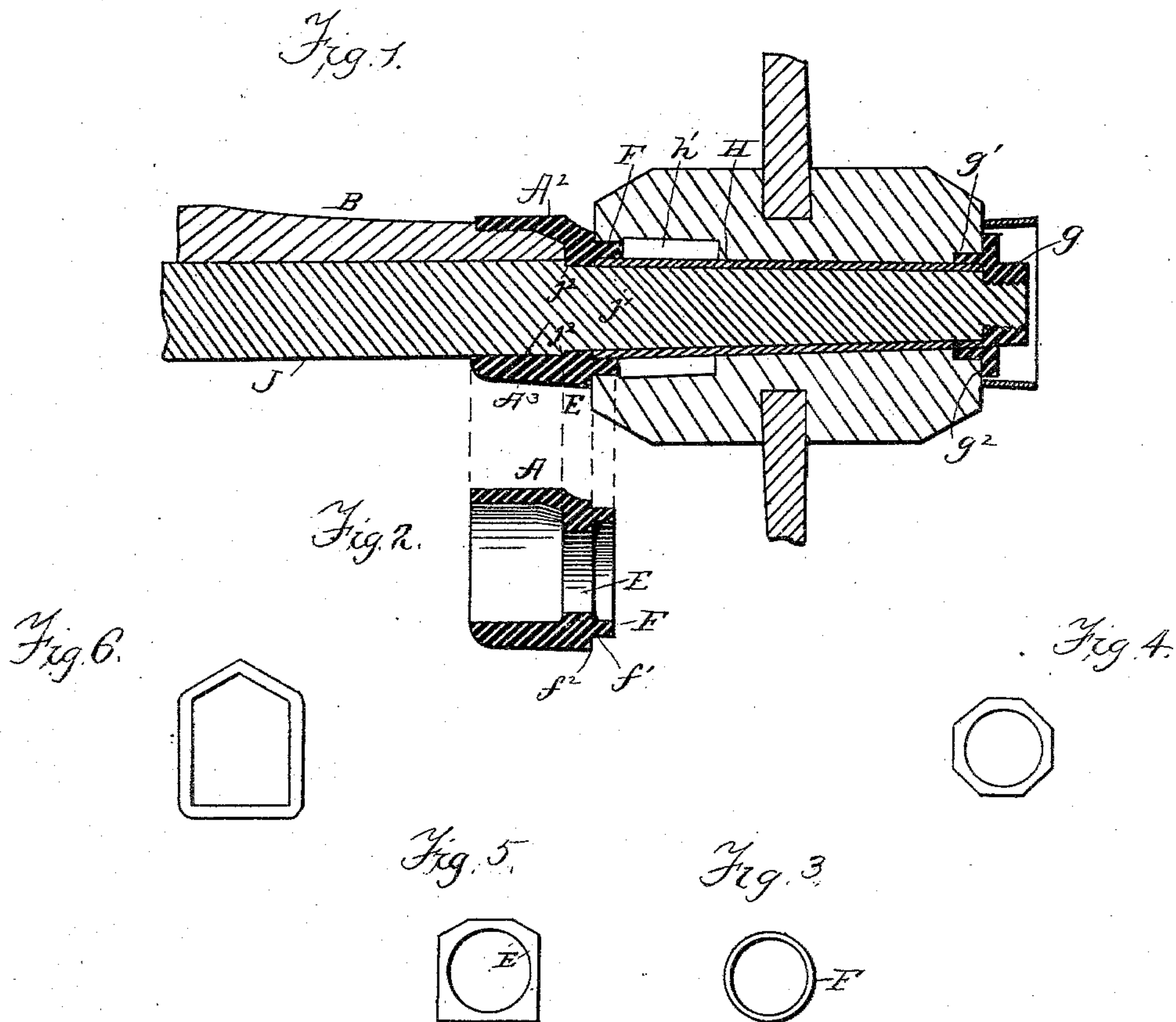
(No Model.)

J. F. WILLIAMS & A. C. TAYLOR.

VEHICLE AXLE.

No. 301,419.

Patented July 1, 1884.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN FRANKLIN WILLIAMS AND AMBROSE CEWELL TAYLOR, OF MALVERN,
ARKANSAS.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 301,419, dated July 1, 1884.

Application filed April 13, 1882. (No model.)

To all whom it may concern:

Be it known that we, JNO. F. WILLIAMS and A. C. TAYLOR, of the town of Malvern, county of Hot Spring, State of Arkansas, have invented a new and useful Improvement in Iron Axle-Trees for Wagons, Carriages, &c., of which the following is a specification.

The improvement referred to as relating to iron axle-trees for carriages, &c., consists in the novel construction and arrangement of its parts.

Figure 1 is a longitudinal sectional view of the axle and of our sand-proof shoulder-box thereon; also of the spindle of the axle, and of our nut G, and of the wood bolster B and spindle-box H. Fig. 2 is a longitudinal sectional view of our sand-proof shoulder-box in detail. Figs. 3, 4, 5, and 6 are cross-sections of the same.

The sand-proof shoulder-box A is so constructed as to form a box fitting on the square A³ of the iron axle J at the shoulder of spindle j'. This sand-proof shoulder-box has formed on its inside a solid collar, E, corresponding with and fitting the spindle j' at its shoulder j². Its shoulder j³ fits and rests against this shoulder j², and collar E is a bearing for the upper end of the spindle-box H to rest against.

Our sand-proof shoulder-box A has a flange, F, which might also be called a "collar," larger than collar E, projecting forward or outward over the upper end of spindle-box H about one or one and a half inch, down to its flanges h', and neatly fitting the spindle-box H. This flange or collar F is depressed at point f'—that is to say, it is not so large in circumference as the body of the box A—thus forming a shoulder, f², against which the end of the hub of the wheel works. Thus two shoulders are formed, for the end of spindle-box H passes under flange F and works against collar E, and the end of the hub of the wheel passes over flange F and works against shoulder f², thus forming a perfect housing for spindle j', preventing any sand or mud from getting in through the joints at shoulder j² to the said spindle. Our said box A has also another flange or collar, A², extending back over the square part of the axle J, and over the end

of wood bolster B, and neatly fits and firmly clasps the same, and prevents the bolster B from moving in its place or working loose, and also prevents sand from getting in between the ends of the said bolster and axle, our box thus enabling us to dispense with the usual bolts or bands to hold the ends of the bolster B down to the axle J.

Our sand-proof shoulder-box is put in position simply by sliding it on the axle over the spindle end, and is driven tight on the axle at the point above shown, and is held in place by the hub and spindle-box H; or it may be secured by a small bolt and nut passing through flange A² and the axle J.

G represents a nut, with a flange, g', on its inner side, working over the small end of spindle-box H, and against the inner shoulder of the hub of the wheel, while the small or outer end of the hub rests against the face g² of the nut G, thus forming two other shoulders.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A sand-proof shoulder-box, A, having square flange or collar A², extending back over the end of bolster B and square part A³ of axle J, and clasping them together, collar E, its rear shoulder or face, j³, resting against shoulder j², and closely fitting spindle j', its front shoulder or face serving as a bearing for the large end of spindle-box H, flange F, extending over the end of and closely fitting spindle-box H, depression f', and shoulder f², all substantially as shown and described, and for the purposes set forth.

2. The combination of box A, as above described, with spindle-box H, working on spindle j', its upper end against collar E and under flange F, with nut G, working on the threaded end of spindle j', and over and against the smaller end of spindle-box H, all substantially as shown and described, and for the purposes set forth.

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Witnesses:
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