

UNITED STATES PATENT OFFICE.

JOSEPH D. KING, OF WELLSVILLE, MISSOURI.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 701,356, dated June 3, 1902.

Application filed April 15, 1902. Serial No. 103,055. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH D. KING, of the city of Wellsville, Montgomery county, State of Missouri, have invented certain new and
5 useful Improvements in Vehicle - Axles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to vehicle-axles; and
10 it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

My object is to construct an improved skein and thimble for vehicle-axles; and my invention
15 consists of the combination with an axle having a straight squared portion inside of the skein, a tapered squared shoulder extending outwardly from said straight portion, a long tapered squared portion extending
20 outwardly from said shoulder, a second tapered squared shoulder extending outwardly from said long portion, and a screw-threaded end of a skein having an interior opening squared to fit said axle and removably mounted
25 upon said axle, a thimble adapted to be mounted upon said skein and having ribs to hold the thimble in the hub against rotation, and a nut screw-seated upon said screw-threaded portion of the axle to hold the skein
30 and thimble in position.

Figure 1 is a central section through the skein and thimble and showing the axle in elevation in position in the skein. Fig. 2 is a cross-section on the line 2 2 of Fig. 1 and
35 looking in the direction indicated by the arrow. Fig. 3 is a cross-section on the line 3 3 of Fig. 1 looking in the direction indicated by the arrow, the axle being removed or omitted.

Referring to the drawings in detail, the axle
40 has the straight squared portion 4 at the inner end of the skein, the tapered squared portion 5, extending from the portion 4 and forming a shoulder, the long tapered squared portion 6, extending from the portion 5
45 through the skein, the tapered squared portion 7, forming a shoulder, and the screw-threaded end 8.

The skein 9 has an opening comprising the squared portion 10 to fit upon the portion 4
50 of the axle, the inclined squared shoulder 11

to fit the shoulder 5 of the axle, a long tapered portion 12 to fit the portion 6 of the axle, and the tapered squared portion 13 to fit the shoulders 7 of the axle, and the skein is removably mounted upon the axle, the
55 flange 14 extends outwardly in transverse alinement with the shoulder 5, and the thimble 15 is removably mounted upon the skein against said flange, said thimble having ribs 16 to hold the thimble against rotation in the
60 hub.

The nut 17, screw-seated upon the end 8 of the axle, holds the skein removably in position upon the axle and holds the thimble removably in position upon the skein.
65

The great difficulty in placing a skein removably upon an axle is to hold the skein tight and keep it from rattling, and this difficulty is thoroughly overcome by my improved construction. The axle is squared in
70 cross-section from one end of the thimble to the other, and the axle has three distinct steps or degrees of taper, so that as the nut is tightened the skein pressing against this tapered portion is thoroughly tightened and
75 rigidly held, as required, to effectually prevent rattling.

I claim—

The combination with an axle having a straight squared portion inside of the skein, 80 a tapered squared shoulder extending outwardly from said straight portion, a long tapered squared portion extending outwardly from said shoulder, a second tapered squared shoulder extending outwardly from said long
85 portion, and a screw-threaded end; of a skein having an interior opening squared to fit said axle, and removably mounted upon said axle; a thimble adapted to be mounted upon said skein and having ribs to hold the thimble in
90 the hub against rotation; and a nut screw-seated upon said screw-threaded portion of the axle to hold the skein and thimble in position, substantially as specified.

In testimony whereof I affix my signature 95 in presence of two witnesses.

JOSEPH D. KING.

Witnesses:

W. D. MERRICK,
F. L. VUILLEMOT.