

UNITED STATES PATENT OFFICE

WARREN DAVID WALKER, OF MALONE, NEW YORK.

HUB-ATTACHING DEVICE.

No. 804,353.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed March 27, 1905. Serial No. 252,203.

To all whom it may concern:

Be it known that I, WARREN DAVID WALKER, of Malone, in the county of Franklin and State of New York, have invented certain new and useful Improvements in Hub-Attaching Devices, of which the following is a specification.

My invention relates to hub-attaching devices; and the objects of my invention are to devise certain improvements on the device covered by my United States Patent No. 726,383, granted to me on the 28th of April, 1903, whereby the device may be rendered much more durable in construction and effective in operation; and it consists, essentially, of a skein secured to the spindle, a box inclosing said skein and adapted to rotate thereon, an annular shoulder provided on the spindle, a cap-nut rotatably mounted on said spindle and provided with an annular recess adapted to journal said annular shoulder on the spindle, said nut having a screw-threaded engagement with said axle-box, the various parts of the device being constructed and arranged in detail, as hereinafter more particularly described.

Figure 1 is a side elevation of the right-hand end of an axle and box mounted thereon. Fig. 2 is a central longitudinal sectional view of the same. Fig. 3 is a similar view to Fig. 2, showing the alternative form of cap-nut.

For further description of my invention reference is made to American Patent No. 726,383.

Referring to the drawings, A denotes a metal axle formed with a spindle a of any construction, but preferably tapering, as shown, having a reduced screw-threaded end a' . An annular shoulder a^2 is provided on the said spindle a for a purpose hereinafter to be described.

B is an axle-skein which fits the axle snugly and is retained in position by its threaded portion b engaging a threaded end a' of the axle. A slot b' extends through the end of the skein and through the screw-threaded portion of the spindle, whereby after the skein has been screwed to the desired position a key may be inserted therein and the spindle and skein thus securely locked together. Before the skein is placed in posi-

tion a loose sleeve or cap-nut C and the washer D are slipped on the axle. The cap-nut C is provided with a square end c , adapted to be engaged by a wrench, and a screw-threaded portion c' , which is adapted to be screwed into the threaded portion e of the axle-box E.

An annular recess c^2 is provided in the inside of the said cap-nut, which is adapted to journal the shoulder a^2 , provided on the spindle a . In this manner the cap-nut and box screwed thereon are held much more securely in position, and the weakness hitherto experienced at this point due to the reducing of the diameter of the axle to form a spindle is done away with. The axle-box E is secured in the wooden hub of the wheel by any desired means, but preferably by means of the nut e' , screwed on the upper screw-threaded end e^2 of the box. The box rotates upon the skein B and has its outer end closed and formed on the inside with an oil recess or chamber e^3 .

Referring to Fig. 3, there is here shown a modification of the cap-nut in which the end of the box is exteriorly threaded and the cap-nut is interiorly threaded, which secures a much firmer fastening.

The advantages of my new construction are that the spindle is greatly strengthened by the annular shoulder a^2 , which overcomes, as hereinbefore mentioned, the weakness usually produced on reducing the axle to form a spindle at that point.

What I claim as my invention is—

1. In a hub-attaching device in combination a tapered spindle, an annular shoulder provided on the inner end thereof, a tapered skein secured thereto, a tapered box inclosing said skein and provided with an interiorly-screw-threaded nut, a cap-nut having a screw-threaded engagement with the end of said box, and an annular recess provided in said cap-nut adapted to fit closely to the annular shoulder on the tapered spindle as and for the purpose specified.

2. In a hub-attaching device in combination a tapered spindle, a tapered skein secured thereto, a keyway extending through said skein, and spindle, a key fitting therein, a tapered box inclosing said skein and adapted to rotate thereon, an annular shoulder

provided on said tapered spindle, a cap-nut
having a screw-threaded engagement with
said box, rotatably mounted on said spindle
and provided with an annular recess adapted
5 to fit closely to the shoulder on the spindle as
and for the purpose specified.

Signed at Malone, in the county of Frank-

lin and State of New York, this 20th day of
February, 1905.

WARREN DAVID WALKER.

In presence of—

GEORGE J. MOORE,
HOWARD W. TAYLOR.