THOMAS F. VAN KEUREN.

Improvement in Lock-Nuts and Axles for Vehicles.

No. 126,762. Patented May 14, 1872.

Fig: 1.

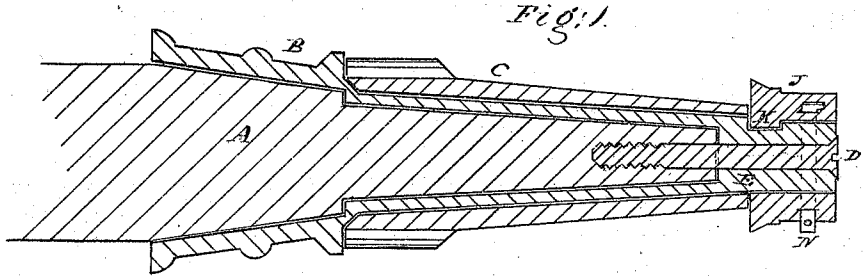


Fig: 2.

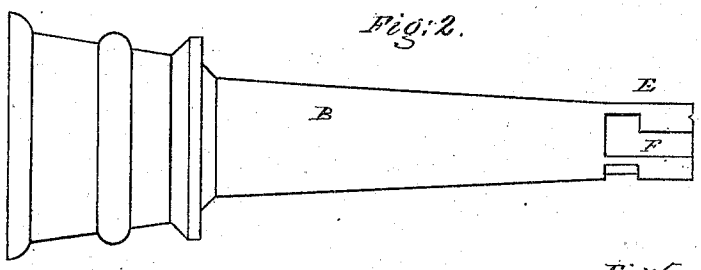


Fig: 5

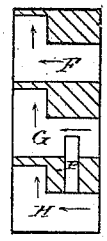


Fig: 6.

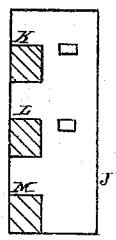


Fig: 3.

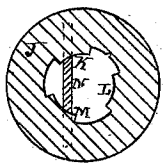
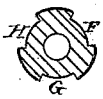


Fig: 4.



Witnesses
Charles L. Barrick
Reuben Rowley

Inventor
Thomas F. Van Keuren

UNITED STATES PATENT OFFICE.

THOMAS F. VAN KEUREN, OF SAUGERTIES, NEW YORK.

IMPROVEMENT IN LOCK-NUTS AND AXLES FOR VEHICLES.

Specification forming part of Letters Patent No. 126,762, dated May 14, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, THOMAS F. VAN KEUREN, of Saugerties, Ulster county, and State of New York, have invented certain new and useful Improvements in Lock-Nuts for securing wheels on the axles of wagons and other vehicles; and I do hereby declare that the following is a full description of the same.

The object of my invention is to combine with a wood axle a cast-iron sleeve and cast-iron lock-nut by means of lugs in place of screw-threads, and a lock-pin passing down through the nut and at the side of the reduced end of the axle, so as to prevent the unlocking of the nut on backing the wagon, or grinding or cutting the pin away, as is the case with common linch-pins for holding wheels on the axle; and the nature of my invention consists in combining a locking-pin with the cast-iron sleeve and cast-iron lock-nut, for the purpose of locking the nut on the axle and preventing its unlocking on backing the wagon.

But to describe my invention more particularly I will refer to the accompanying drawing forming a part of this specification, the same letters of reference, wherever they occur, referring to like parts.

Figure 1 is a longitudinal cut section of the axle, showing the wood axle and lock-nut secured thereon. Fig. 2 is a side view of the cast-iron sleeve. Fig. 3 is a plan view of the inner face of the nut. Fig. 4 is an end view of the tip of the cast-metal sleeve. Figs. 5 and 6 are plan views of the tip and inside of the nut flattened out, for the purpose of showing the grooves and wards and method of locking them together.

Letter A represents the wood axle, upon which is secured a cast-iron sleeve, B, or spindle, upon which the wheel runs; and letter C is an ordinary metal box, to be inserted into the hub of the wheel in the usual way. To secure the sleeve on the wood axle a screw, D, is inserted through the end of the sleeve into the wood to a sufficient depth to unite them firmly together. Of course pins or bolts may be used at the back end of the sleeve to add greater security in holding the sleeve on the wood axle, and at the same time prevent any tendency to slip round thereon in consequence of the shrinkage of the wood within the sleeve. As will be seen by reference to the drawing, the sleeve has a solid tip or end, E, which projects beyond the box C in the like manner as the screw-tip on solid metal axles. In its sides are formed three longitudinal and transverse grooves, F, G, and H, at the time of casting the sleeve.

With cast-iron sleeves screw-threads could not be cast thereon, but would require lathe-work, and consequently add to the cost of the axle. The object of the invention is to make the sleeve entire and complete for use at the time of casting it, and thus greatly lessen its cost.

The nut J is also intended to be made of cast-iron, with the wards K, L, and M cast on its inner surface at the same time of casting the nut. Of course screw-threads could not be cast on the inner surface of the nut; therefore to make the tip and nut with screw-threads would be a great expense.

My improvement obviates all this, and enables any expert foundryman to make the sleeve and nuts at the same cost as ordinary castings, and thus give to the public a cheap and durable mode of securing the wheels on wood axles, which has not heretofore been possible by the ordinary mode of securing them thereon by linch-pins.

For the purpose of preventing the nut from unlocking on backing the wheels, a pin, N, is inserted through the nut and through a channel, P, in the side of the tip. By this means the nut cannot be unlocked, and no strain can come on it, like on the ordinary linch-pin, and thus be an ample security against accidents.

The mode of applying my lock-nut will be understood by reference to Figs. 5 and 6, where the wards of the nut are arranged opposite the grooves in the end of the tip. Thus the wards K, L, and M are entered into the grooves F, G, and H, and pressed down longitudinally in the direction of the arrows till the nut is home. It is then turned to the right, following the direction of the arrows, when they become locked in the transverse groove. The pin N is now

inserted, transversely of the nut, through the holes R and channel P in the side of the tip, when the whole are securely locked together.

Having now described my invention, I will proceed to set forth what I claim and desire to secure by Letters Patent of the United States.

I claim the combination of the pin N with the cast-iron sleeve B and cast-iron nut J, when the said pin is inserted transversely through the nut and channel P in the side of the tip of the sleeve, all constructed substantially as described, and for the purposes set forth.

THOMAS F. VAN KEUREN.

Witnesses:

CHARLES L. BARRITT,

REUBEN ROWLEY.