G. A. HALL.

Vehicle Tire-Tightener.

No. 204,563. Patented June 4, 1878.

Fig. 1.

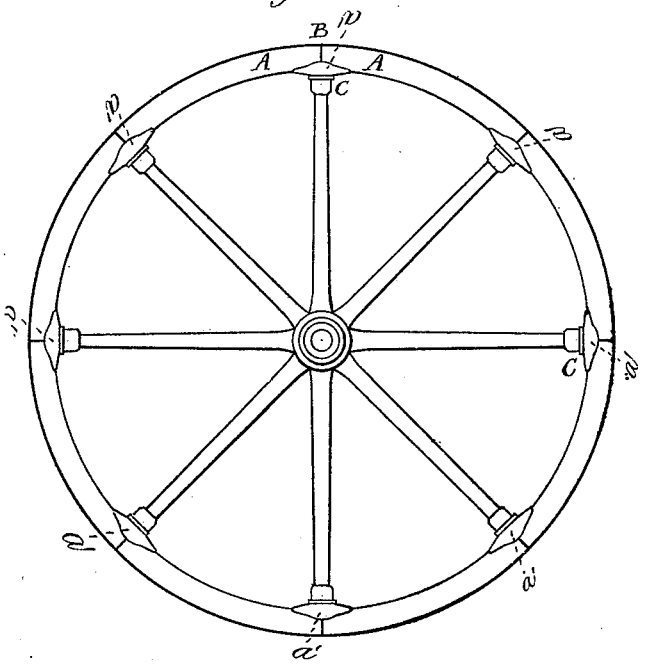
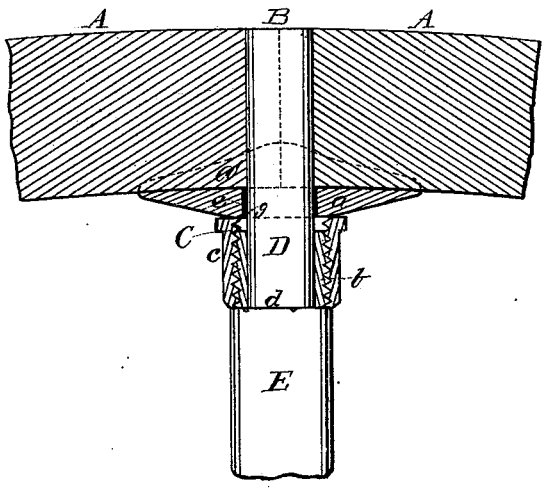


Fig. 2.



WITNESSES

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GEORGE A. HALL, OF WATERFORD, MAINE.

IMPROVEMENT IN VEHICLE-TIRE TIGHTENERS.

Specification forming part of Letters Patent No. **204,563**, dated June 4, 1878; application filed April 27, 1878.

To all whom it may concern:

Be it known that I, GEORGE A. HALL, of Waterford, in the county of Oxford and State of Maine, have invented a new and valuable Improvement in Rim-Supporters and Tire-Tighteners; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of an elevation of the wheel, showing the tightener applied. Fig. 2 is a sectional view.

This invention has relation to that class of tire-tighteners which are permanently attached to the wheel; and it consists, mainly, in the construction and novel arrangement of the tenon-sleeve, externally threaded from end to end and flush with the spoke at the shoulder of the tenon, upon which it is driven and rigidly secured, the felly-socket perforated for the passage of the tenon and having the side flanges to prevent turning, and the tightening-nut working on the screw-sleeve against the base of the felly-socket, as hereinafter fully shown and described.

In the accompanying drawings, the letter A designates the felly-sections, at the joints B of which the tightener is usually arranged. C designates the tightener, whereof the external appearance is similar to that of a metallic spoke and felly joint connection. This tightener consists of three parts—the felly holder or socket *a*, having projecting side flanges or lips *a'* for assisting in preventing lateral displacement of the fellies, the screw-sleeve *b*, and the tightening-nut *c*—made separate from each other and arranged as follows: The screw-sleeve *b* is driven tightly upon the tenon D of the spoke E and against its shoulder *d*, so that the connection between the screw-sleeve and shoulder will be rigid, further fastening being used to secure this result, if necessary.

The exterior contour of the screw-sleeve is designed usually to be flush with that of the spoke E next to the tenon, and upon the screw-sleeve is placed the tightening-nut *c*, which is designed to work upon the screw-sleeve, and in its usual position may cover the joint between said sleeve and the spoke-shoulder.

The felly-socket or holding-plate *a* is preferably made in the usual form or concave to receive the ends of the felly-sections at their joint, and is provided with a central opening, *e*, for the passage of the tenon. The base of the socket *a* around the margin of the opening *e* is preferably finished flat, as indicated at *g*, as it is against this portion of the socket that the tightening-nut *c* works when it is turned upon the sleeve *b* to move outward in the direction of the felly-joint.

I am well aware that it is not new to arrange a tightening-nut upon a spoke-tenon to work in connection with a threaded felly-support; also, that it is not new to employ a reduced screw-sleeve having an additional shoulder to that of the spoke-tenon, as this necessarily weakens the tenon because of the small size to which it is reduced after forming two shoulders thereon.

I am also aware that a tightening-nut has been used in connection with a felly-socket, and a metallic screw-threaded extension of the spoke connected therewith by a coupling; and I do not therefore claim such invention.

What I claim, and desire to secure by Letters Patent, is—

In a tire-tightener, the tenon-sleeve *b*, externally threaded from end to end and flush with the spoke at the shoulder of the tenon, upon which it is driven and rigidly secured, the felly-socket *a*, perforated for the passage of the tenon and having the side flanges *a'* to prevent turning, and the tightening-nut *c*, working on the screw-sleeve against the base of the felly-socket, all constructed and arranged as herein shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

GEORGE A. HALL.

Witnesses:
J. R. HALL,
E. G. BRACKETT.