(No Model.)

J. J. HALSTEAD.

WHEEL.

No. 422,404. Patented Mar. 4, 1890.

Fig. 1.

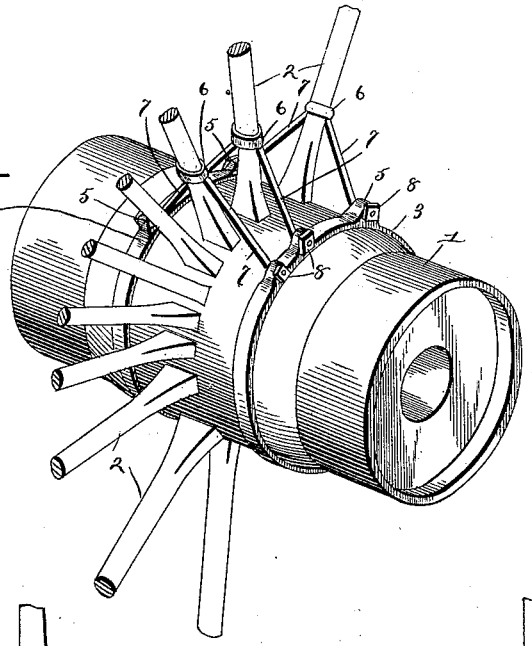


Fig. 2.

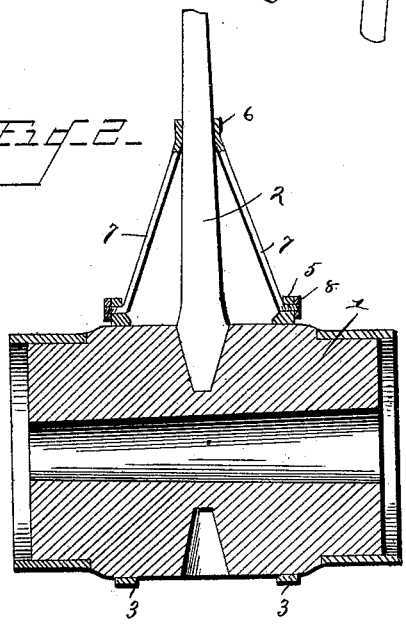
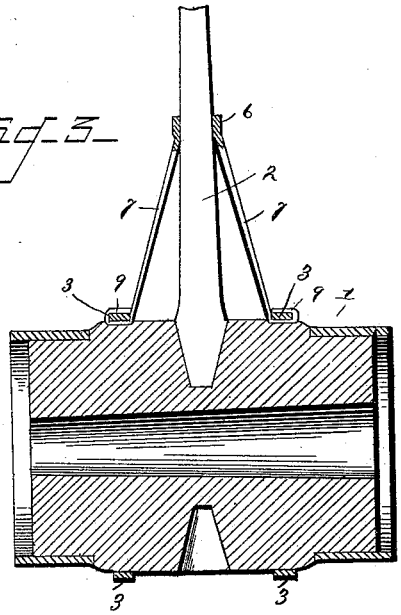


Fig. 3.



Witnesses:
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By his Attorneys
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UNITED STATES PATENT OFFICE.

JOHN JAMES HALSTEAD, OF KESLER'S CROSS LANES, WEST VIRGINIA.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 422,404, dated March 4, 1890.

Application filed October 31, 1889. Serial No. 328,748. (No model.)

To all whom it may concern:

Be it known that I, JOHN JAMES HALSTEAD, a citizen of the United States, residing at Kesler's Cross Lanes, in the county of Nicholas and State of West Virginia, have invented a new and useful Brace or Socket for Spokes of Wheels, of which the following is a specification.

This invention has relation to a brace or socket for spokes of wheels; and among the objects in view are to provide a cheap and simple brace supported from the hub of the wheel and radiating therefrom and rigidly connected with each of the spokes near their inner ends, whereby they are prevented from loosening in their sockets and the life of the wheel consequently lengthened.

With these general objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a portion of wheel provided with a spoke-brace constructed in accordance with my invention. Fig. 2 is a transverse section; Fig. 3, a similar view of a modification.

Like numerals of reference indicate like parts in all the figures of the drawings.

1 represents the hub of a wheel, from which radiate the spokes 2, the inner ends of which may be seated in the hub in any usual manner. Upon the hub at each side of the spokes there is mounted a metallic band 3, which throughout its circumference and at intervals agreeing with the spokes is provided with an outwardly-projecting perforated lug 5.

6 represents a collar or band of a size and configuration to snugly fit the lower end of a spoke, and upon each of the spokes of the wheel there is mounted such a band or collar, and from the opposite ends of the bands or collars there depend inclined arms or rods 7, the terminals of which are threaded and bent laterally in opposite directions, so that each may be passed through one of the perforated lugs of the hub-encircling bands, and over the ends of the rods there are threaded nuts 8.

In Fig. 3 I have illustrated a modification of my invention, and the same consists in omitting the perforated lugs from the hub-encircling bands and in simply bending the terminals of the brace-rods around said bands, as at 9, the rods being reduced or flattened near their ends for this purpose.

It is well known that the beginning of all wear is at the hub-socket of the spokes, and that the spokes, becoming loose at this point, soon wear loose at the rim. The object, therefore, of my invention, and which I accomplish in the manner above stated, is to rigidly maintain the spokes in relation to their hub and against any independent movement whatever.

Having thus described my invention, what I claim is—

1. The combination, with a hub and its radiating spokes, of a series of independent bands each mounted upon and encircling the hub, and a series of brace-rods each of which connects a spoke-encircling band with the hub-band, substantially as specified.

2. In a wheel, the combination, with opposite hub-embracing bands and a series of spoke-embracing bands, the latter provided with opposite depending brace-rods connected with the hub-embracing bands, substantially as specified.

3. In a wheel, the combination, with opposite hub-embracing bands, of a series of spoke-embracing bands, the latter provided with opposite depending brace-rods removably connected at their outer ends with the hub-embracing bands, substantially as specified.

4. In a wheel, the combination, with opposite hub-embracing bands provided at intervals with perforated lugs agreeing with the spokes of the wheel, of a series of spoke-embracing bands fitting the spokes near their inner ends and provided with opposite depending brace-rods the ends of which are bent and projected through the perforated lugs and nuts threaded on the ends of the rods, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JOHN JAMES HALSTEAD.

Witnesses:

JACOB W. ODELL,

G. L. ODELL.