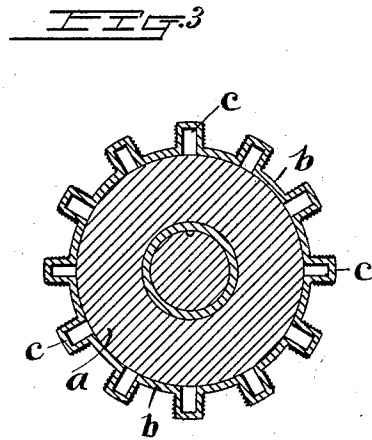
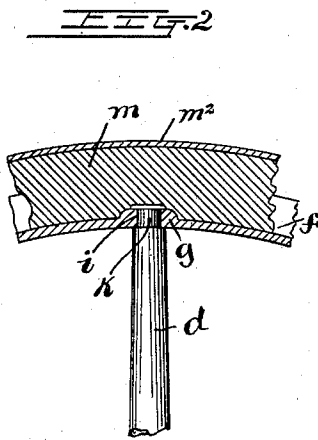
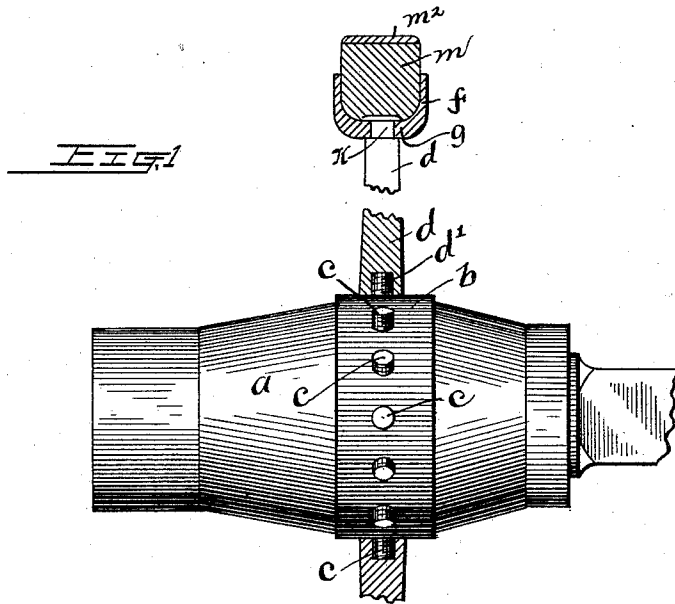


(No Model.)

B. BARLER.
VEHICLE WHEEL.

No. 463,133.

Patented Nov. 17, 1891.



Witnesses
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VEHICLE-WHEEL.

SPECIFICATION forming part of Letters Patent No. 463,133, dated November 17, 1891.

Application filed February 25, 1891. Serial No. 382,690. (No model.)

To all whom it may concern:

Be it known that I, BARNABAS BARLER, a citizen of the United States, residing at Delaware, in the county of Delaware and State of Ohio, have invented a certain new and useful Improvement in Vehicle-Wheels, of which the following is a specification.

My invention relates to the improvement of vehicle-wheels; and the objects of my invention are to provide a vehicle-wheel of superior construction, to provide improved means for connecting the spokes with the hub, to provide an improved connection of the spokes and felly, and to produce a strong, durable, and simple form of vehicle-wheel which shall be neat in appearance and inexpensive. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a hub, showing portions of two spokes connected therewith, the latter being partly in section, and showing a transverse section of the felly at the point of connection therewith of a spoke. Fig. 2 is a detail sectional view at right angles with that shown in Fig. 1, showing the connection of one of the spokes and the felly; and Fig. 3 is a central transverse section of the hub.

Similar letters refer to similar parts throughout the several views.

a represents the hub of my improved wheel, the general form of which may be that of the ordinary vehicle-wheel hub. The periphery of the central portion of the hub, or that portion wherein are usually formed the spoke-sockets, is surrounded by a metallic band *b*, said band being driven thereon or otherwise firmly attached thereto. This band *b* has formed at regular intervals thereon outwardly-projecting screw-threaded studs *c*, which may be arranged in circular rows, as shown, or otherwise arranged. As shown in the drawings, the inner side of each of these studs is hollowed or recessed from the inner side of the band for the sake of lightness and durability.

d represents the spokes, which are formed of any suitable metallic substance and have their inner ends provided with internally-screw-threaded sockets *d'*, which are adapted

to receive the threaded studs *c* and by this means secure said spokes firmly to the band *b*.

f represents a circular felly-rim, which may be formed of one or more sections, and which, as shown, is U-shaped in cross-section. This rim has formed with the lower side thereof, at the points of connection with the spokes, inwardly and upwardly projecting lugs or bosses *g*, through each of which and the bottom of the rim *f* is formed a spoke-receiving hole *i*.

The channeled-shaped rib, formed as above described, is rigidly connected with the ends of the spokes by inserting the tenons *k*, formed with said spokes, through the rim-openings *i* and riveting the heads of said spoke-tenons by hammering or otherwise against the upper sides of the lugs *g*.

m represents the body of the felly, which being formed of wood, has its lower half inclosed by the metallic felly-rim *f* and has formed in its inner side depressions *m'*, which receive, as shown, the bottom lugs *g* of the rim *f*. The upper portion of the felly-body *m*, which projects above the rim *f*, is provided with the usual tire *m'*.

From the construction shown and described it will be seen that my improved means of connecting the spokes and hub will result in a rigid connection of these parts without the necessity of forming the spoke-sockets in the hub, and thus weakening the latter. It will also be seen that this method of connecting the spokes and hub, when taken in connection with the means of connecting the felly-rim and spoke, will result in obviating any tendency of said spokes toward working loose or rattling. It will also be observed that by the means described no opportunity exists for the withdrawal of the spoke from the wheel-rim, and that, said spoke and rim being formed of metal, said parts will be exceedingly durable and be enabled to withstand long use. It will be observed that by the construction shown a portion of the wooden felly is exposed to view, resulting in the formation of a pleasing combination of metal and wood in said felly.

It will be observed that my improved wheel may be formed in a neat, simple, and inexpensive manner, and that the method of its construction and the character of the mate-

rial employed will result in the formation of an exceedingly durable and reliable form of wheel.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a vehicle-wheel, the combination, with the hub, a metallic band *b*, surrounding and rigidly connecting with said hub, and screw-threaded studs *c*, formed with and projecting from said band, of metallic spokes *d*, having sockets *d'* in their inner end portions adapted to receive, as described, the studs *c*, substantially as and for the purpose specified.

2. In a vehicle-wheel, the combination, with the hub, a metallic band surrounding and rigidly connecting said hub, and studs *c*, formed with and projecting from said band, the inner sides of said studs being recessed or hollowed, as described, of spokes *d*, the inner ends of which are provided with screw-thread-

ed sockets adapted to receive, as described, the studs *c*, substantially as specified.

3. In a vehicle-wheel, the combination, with the hub, a metallic band *b*, surrounding said hub, screw-threaded studs *c*, projecting from said band, and spokes *d*, radiating from said hub-band, said spokes having screw-threaded inner end sockets adapted to receive, as described, the screw-threads *c*, of the metallic felly-rim *f*, having internally-pierced bosses or lugs *g*, through which pass and upon which are riveted the outer ends of the spokes, and a wooden felly *m*, having its lower half embraced by said channel-shaped rim and having sockets *m'* formed therein to receive, as described, the lugs *g*, substantially as and for the purpose specified.

BARNABAS BARLER.

In presence of—

JAMES R. LYTTE,
L. A. CRUIKSHANK.