(Model.)

W. G. MORRIS.

HUB.

No. 286,471. Patented Oct. 9, 1883.

Fig. 1.

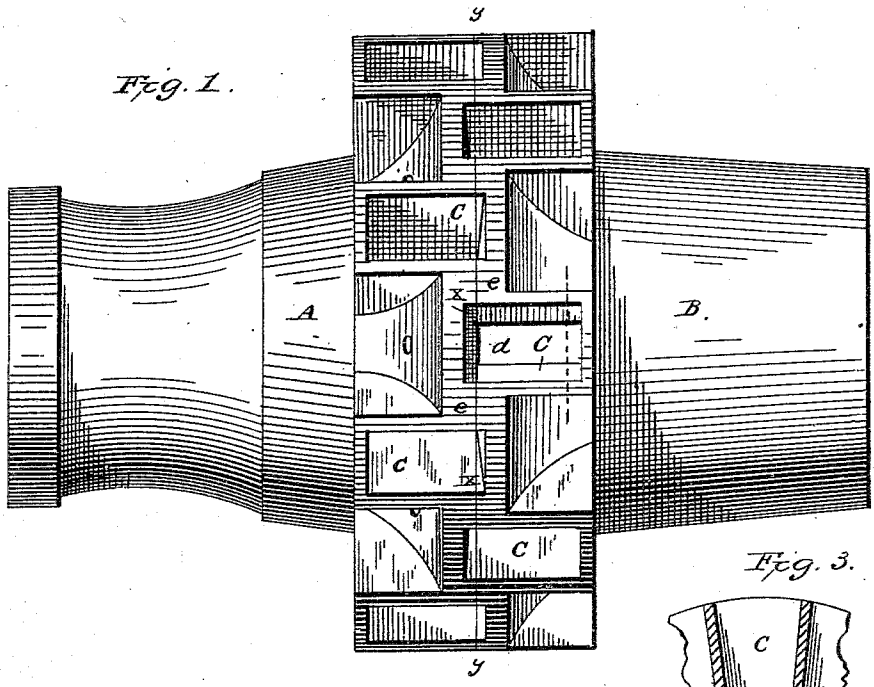


Fig. 3.

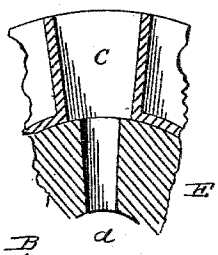
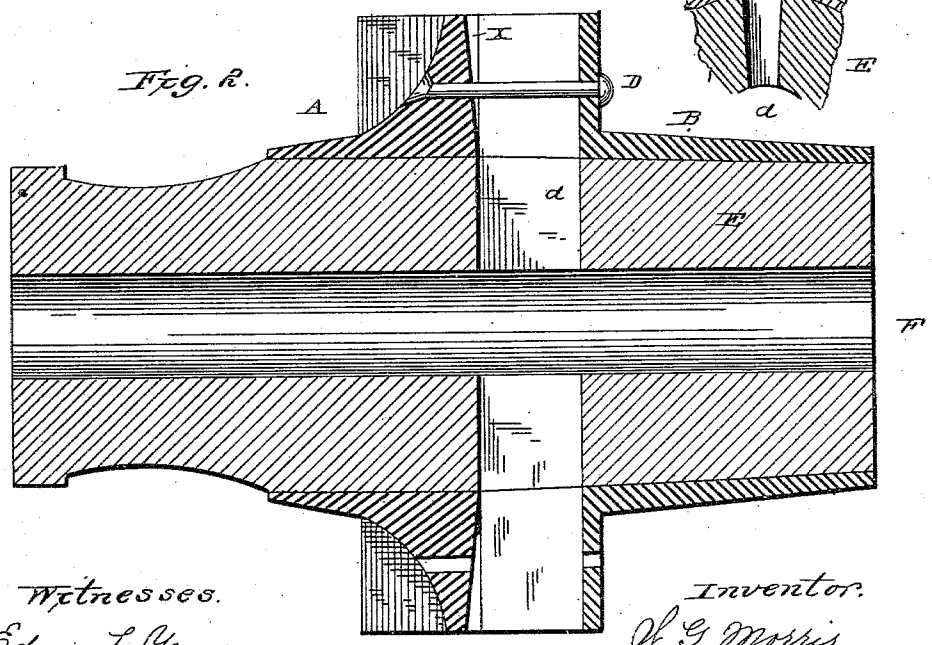


Fig. 2.



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UNITED STATES PATENT OFFICE.

WILLIS G. MORRIS, OF COUNCIL BLUFFS, IOWA.

HUB.

SPECIFICATION forming part of Letters Patent No. 286,471, dated October 9, 1883.

Application filed April 13, 1883. (Model.)

To all whom it may concern:

Be it known that I, WILLIS G. MORRIS, of Council Bluffs, in the county of Pottawattamie, and in the State of Iowa, have invented certain new and useful Improvements in Hubs; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making part of this specification.

My invention relates to certain improvements in hubs for vehicle-wheels; and it has for its object the making of a combined wooden and metallic hub with staggered spoke-sockets, constructed and put together in such manner as to make a durable and inexpensive structure, as will be more particularly hereinafter described.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a plan view; Fig. 2, a longitudinal section, and Fig. 3 a section of one of the spoke-sockets and portion of wood hub.

In the drawings, E represents a wooden hub, constructed as usual, having a longitudinal opening, F, through it for the reception of the box, and having staggered mortises, as seen at *d*, to receive the tenons of the spokes.

A and B represent two metallic bands, which are made, usually, of cast-iron, and which are shrunk upon the exterior of the wooden hub. With and upon the inner portion of these bands are cast a series of sockets, which are intended to receive the inner ends of the spokes. These bands, when fitted together as indicated by the line *y y*, show the spoke-sockets in zigzag or staggered position.

e e represent webs which connect the sockets. The sockets are cast three-sided, the fourth side being formed by the web of the opposite band when the two bands are put together upon the wooden hub. Upon the face of each of the webs is a jog or recess, *x x*. This recess is slightly tapering from top to bottom, and in width corresponds with that of the socket, of which it forms the fourth side. By this arrangement and construction the spoke, when driven in, has a bearing against each of the band-connections, and assists in keeping the bands from any partial rotation in opposite directions.

d represents the mortise in the wooden portion of the hub, for the purpose of receiving the tenon on the inner end of the spoke. The shoulders of the spoke have a firm bearing upon the shoulders left at the mouth of the mortise.

D D represent rivets or small bolts, which pass through alternate sockets and webs and through the spokes placed in said sockets. These rivets or bolts not only serve to hold the spoke in place, but also bind the two bands together and prevent separation of the socket from the web. The casting in this case may be made malleable, and consequently light and comparatively inexpensive.

Small shoulders may be formed on the spokes to rest upon the periphery of the sockets, if desired.

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

1. The within-described combined wooden and metallic hub, the metal parts consisting of two bands which have spoke sockets cast upon them in such manner that when the two are put together they will be in zigzag or staggered position, the web of each band having recesses at *x*, as seen, and the bands and spokes held in position by bolts or rivets, alternating, substantially as and for the purpose specified.

2. In a vehicle-wheel, the combination, with the hub thereof, having a double series of staggered mortises, of the metallic bands, cast, respectively, with a corresponding series of three-sided staggered larger recesses, the web between the recesses of each band forming the fourth side of the adjacent recess, and the difference in size of the mortises and recesses forming abutments for the shoulders of the spokes, substantially as and for the purposes described.

In testimony whereof I affix my signature, in presence of two witnesses, this 24th day of January, 1883.

W. G. MORRIS.

S. H. HANCOCK,
D. H. KILMORE.