T. E. MURRAY.

VEHICLE WHEEL.

APPLICATION FILED MAY 9, 1916.

1,206,887.

Patented Dec. 5, 1916.

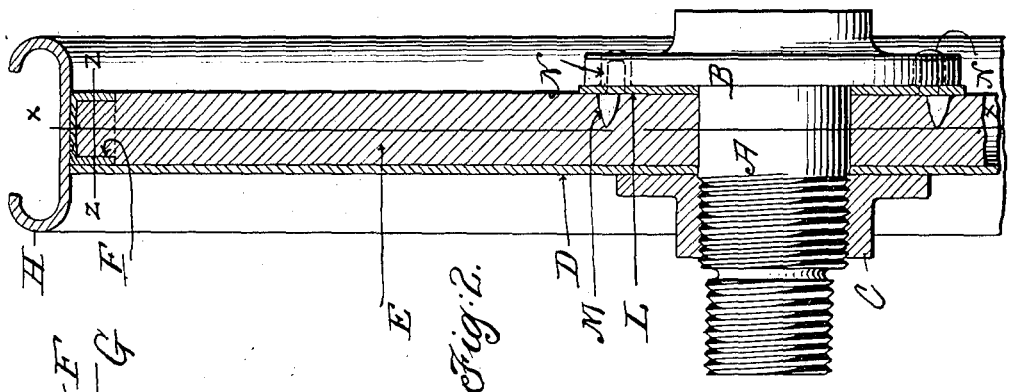

Fig. 2.

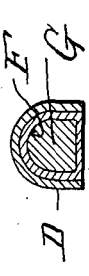

Fig. 3.

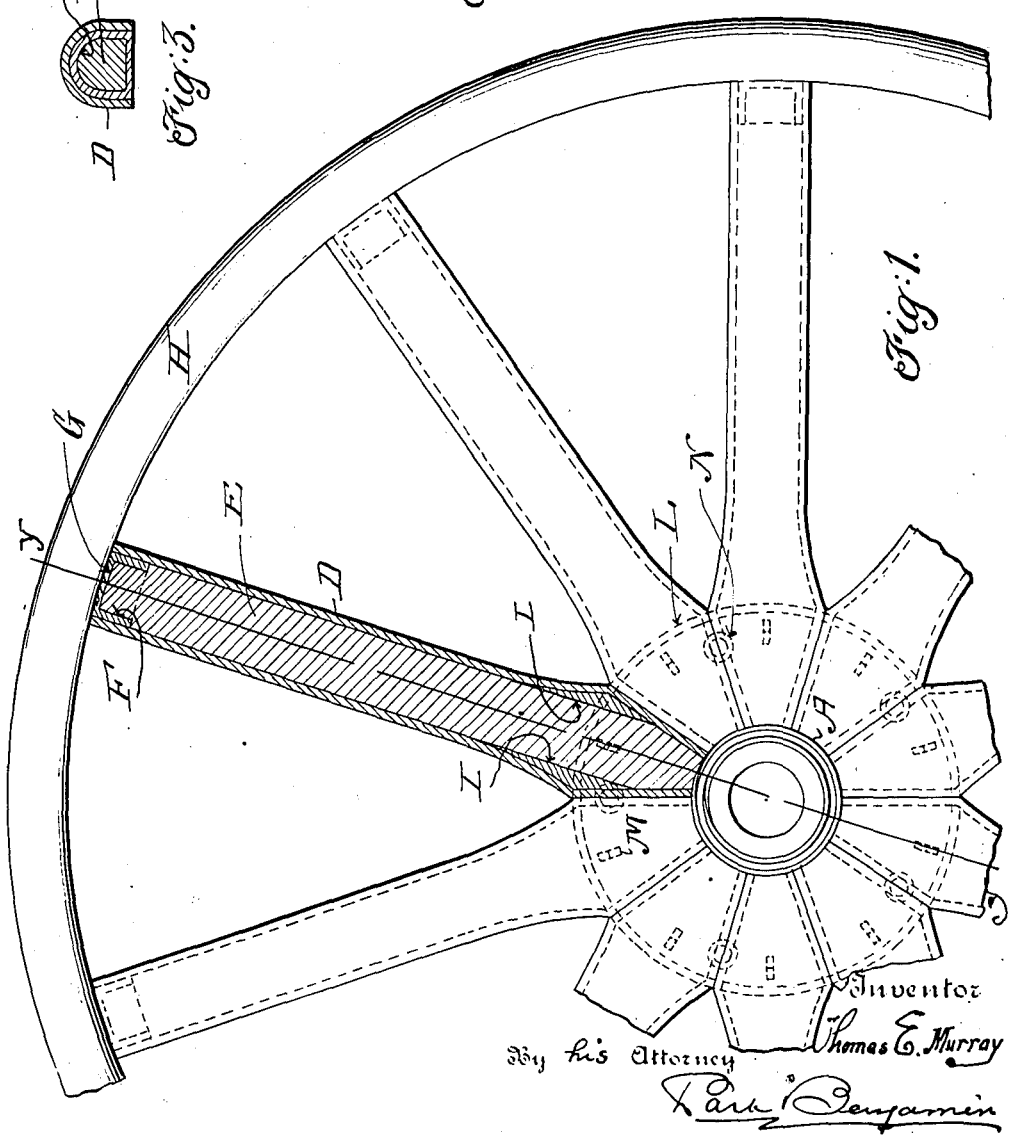

Fig. 1.

Inventor

Thomas E. Murray

By his Attorney

Paul Benjamin

UNITED STATES PATENT OFFICE.

THOMAS E. MURRAY, OF NEW YORK, N. Y.

VEHICLE-WHEEL.

1,206,887. Specification of Letters Patent. Patented Dec. 5, 1916.

Application filed May 9, 1916. Serial No. 96,276.

To all whom it may concern:

Be it known that I, THOMAS E. MURRAY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Vehicle-Wheels, of which the following is a specification.

The invention relates to vehicle wheels of the demountable type, and consists, first, in the construction of the spokes, and second, in the means for preventing rotation of the wheel body on the hub.

In the accompanying drawings—Figure 1 is a front elevation of a portion of my vehicle wheel, showing one of the spokes in section on the line *x*, *x* of Fig. 2. Fig. 2 is a section on the line *y*, *y* of Fig. 1. Fig. 3 is a section on the line *z*, *z* of Fig. 2.

Similar letters of reference indicate like parts.

A is the hub having the usual rear flange B, and threaded to receive the flanged sleeve C, between which sleeve and flange B the wheel body is demountably secured in place on said hub. Each spoke comprises a longitudinally channeled shell D having its inner end of frusto-wedge shape, so that when said shells are assembled a circular nave is formed having a central opening to receive the hub.

In the channel of shell D is seated a wooden bar E which fills said channel, and has its rear face preferably flat and registering with the longitudinal edges of said shell. In the outer end of shell D is welded a ferrule F, into which enters a tenon G on bar E. The bottom of ferrule F and the extremity of shell D are welded to rim H. The inner end of bar E is beveled to fit between the inclined longitudinal sides of the frusto-wedge shaped portion of shell D, as shown in Fig. 1. The angles at said sides are preferably filled with suitably shaped wooden blocks I which fit against bar E. The blocks I are first inserted in the angles of the shell, and the bar E is then driven into said shell between said blocks until the tenon G becomes seated in the ferrule F. The inner extremity of bar E is suitably curved to fit upon the cylindrical hub.

In order to secure the wheel body against rotation on the hub, I provide a loose collar L between the wheel body and the rear hub flange B. On the front side of said collar are pointed studs M which enter the wooden bars E, and on the rear side of said collar are, preferably, struck up projections N which are received in suitable openings in flange B.

The steel shells D may be made of such strength as to take the greater part of the load on the wheel, in which case the wooden bars E may be regarded as fillers or linings, preventing the accumulation of mud in the concavities of said shells and the formation of pockets between said shells and the rear flange B: or, the bars E may be made of wood sufficiently hard and tough to support the greater part of the load, in which case the shells D constitute an armor or covering therefor, located on the front convex sides of said bars, and so protecting them from injury. It will, therefore, be understood that the shell D and the wooden bar E therein may be relatively proportioned to divide the strain between them, as the user may elect.

The studs M may be pointed, as described, so that they may be driven and so firmly engaged in the wooden members of the wheel body.

The approximated inclined sides of the frusto-wedge shaped portions of the shells D are preferably welded together.

I claim:

1. A wooden spoke for vehicle wheels, and a metal armor plate on said spoke; the said plate covering a portion of the surface of said spoke, and the remainder of said spoke surface being exposed.

2. A wooden spoke for vehicle wheels, having one face convex and the other face flat, and metal armor covering said convex face.

3. A spoke for vehicle wheels, comprising a shell of metal, and a filling therein; the said shell having a longitudinal opening exposing said filling.

4. A spoke for vehicle wheels, comprising a shell of metal, and a filling of wood therein; the said shell having a longitudinal opening exposing said filling.

5. A spoke for vehicle wheels, comprising a shell of metal, a filling therein, the said shell having a longitudinal opening exposing said filling, and means for preventing longitudinal displacement of said filling in said shell.

6. A spoke for vehicle wheels, comprising a longitudinally channeled member of

metal, and an inner member of wood seated in said metal member.

7. A spoke for vehicle wheels, comprising a longitudinally channeled outer member of metal, and an inner member of wood seated in said outer member and having its rear face registering with the longitudinal edges of said outer member.

8. A spoke for vehicle wheels, comprising a longitudinally channeled outer member of metal and of frusto-wedge shaped form at one end, a straight inner member of wood seated in the channel of said outer member, and spacing blocks in said frusto-wedge shaped portion interposed between opposite sides of said wooden member and said outer member.

9. A spoke for vehicle wheels, comprising a longitudinally channeled outer member of metal tapered at one end and contracted at its opposite end, and an inner member of wood seated in the channel of said outer member having its extremities fitting in said tapered and contracted ends thereof and its rear face exposed.

10. A spoke for vehicle wheels, comprising a longitudinally channeled shell of metal, a wooden bar seated in said shell and having its rear face exposed, and means for preventing longitudinal displacement of said bar.

11. A vehicle wheel, comprising a hub, a flange on said hub having openings, a wheel body, means for securing said wheel body on said hub, a loose plate on said hub interposed between said hub flange and said wheel body, and studs on opposite sides of said plate; the studs on one side of said plate engaging said wheel body, and the studs on the other side of said plate entering said flange openings.

12. A vehicle wheel, comprising a hub, spokes, each comprising a longitudinally channeled shell of metal, a wooden member seated in said shell, means for securing said spokes on said hub, and means engaging with said wooden spoke members for preventing rotation of said spokes on said hub.

13. A vehicle wheel, comprising a hub, spokes, each comprising a longitudinally channeled shell of metal, a wooden member seated in said shell and having its rear face exposed, means for securing said spokes on said hub, a flange on said hub having openings, a loose plate on said hub interposed between the rear faces of said spokes and said hub flange, and studs on opposite sides of said plate; the studs on one side of said plate entering said wooden spoke members, and the studs on the other side of said plate entering said flange openings.

In testimony whereof I have affixed my signature in presence of two witnesses.

THOMAS E. MURRAY.

Witnesses:
GERTRUDE T. PORTER,
MAY T. MCGARRY.