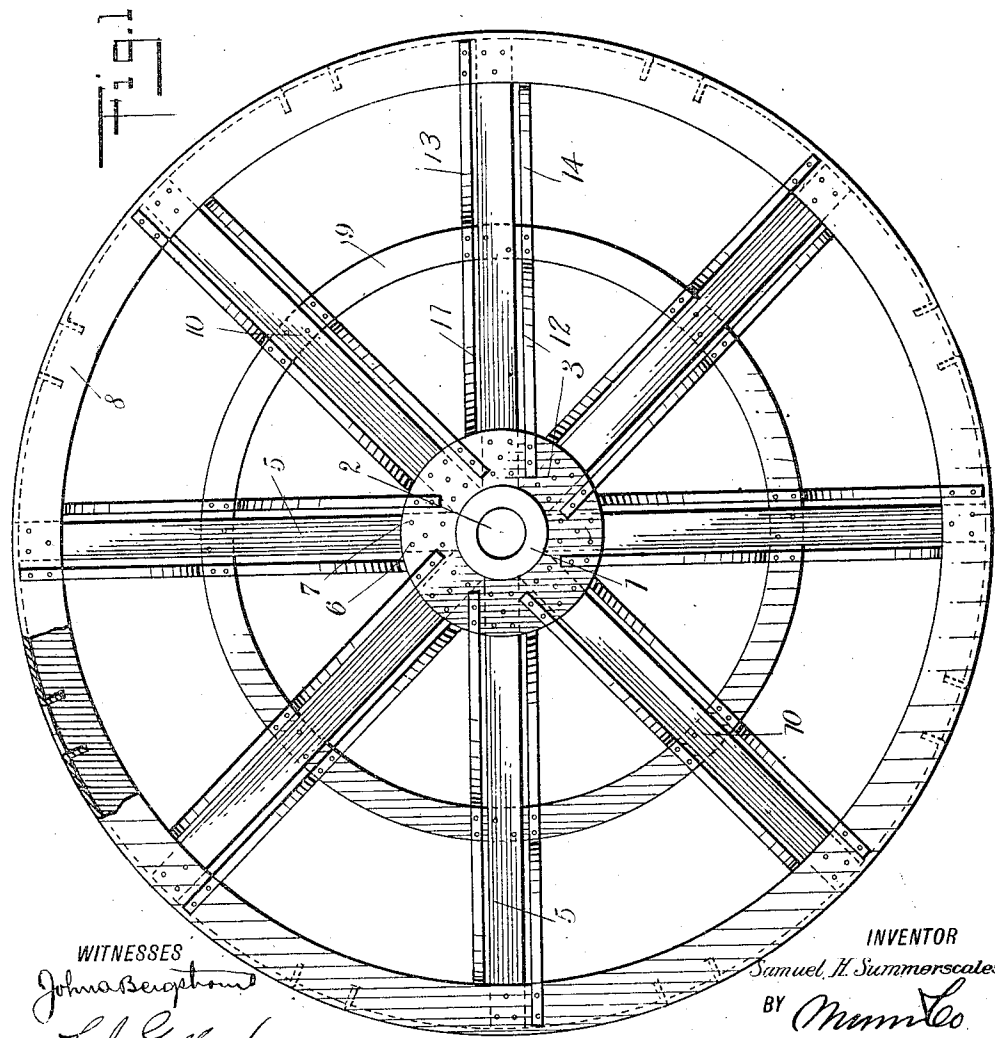
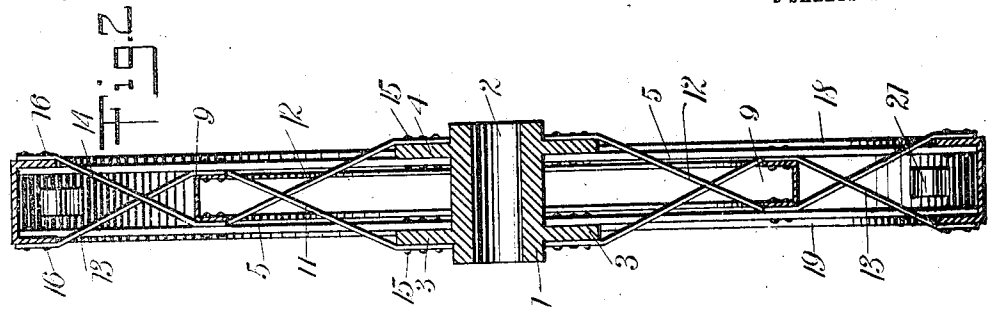


S. H. SUMMERSCALES.
 METALLIC WHEEL.
 APPLICATION FILED JULY 8, 1911.

Patented Oct. 22, 1912.
 2 SHEETS—SHEET 1.

1,042,290.



WITNESSES
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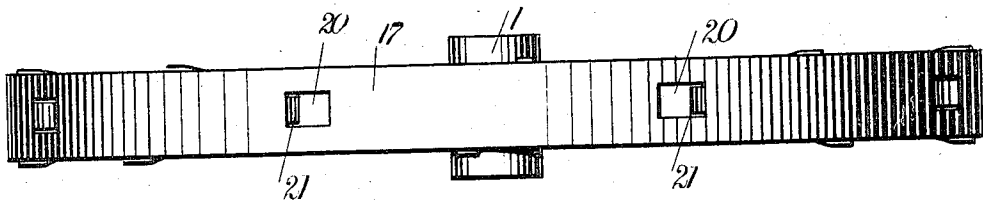


Fig. 3

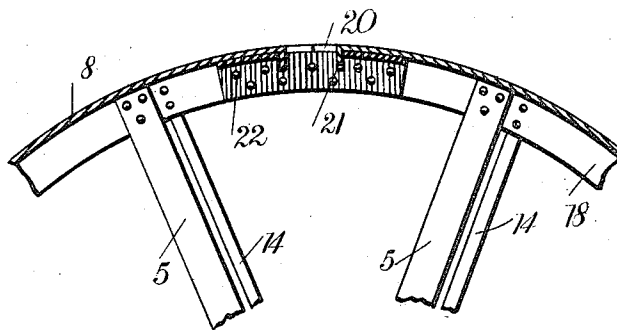


Fig. 4

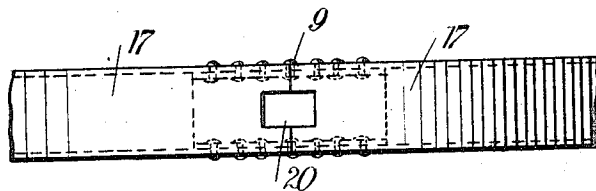


Fig. 5

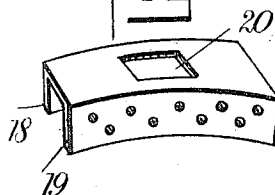


Fig. 6

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UNITED STATES PATENT OFFICE.

SAMUEL HENRY SUMMERSCALES, OF WINNIPEG, MANITOBA, CANADA.

METALLIC WHEEL.

1,042,290.

Specification of Letters Patent.

Patented Oct. 22, 1912.

Application filed July 8, 1911. Serial No. 637,492.

To all whom it may concern:

Be it known that I, SAMUEL HENRY SUMMERSCALES, a subject of the King of Great Britain, and a resident of Winnipeg, in the Province of Manitoba and Dominion of Canada, have invented a new and Improved Metallic Wheel, of which the following is a full, clear, and exact description.

My invention relates generally to wheels, and more particularly involves a metallic wheel which is preferably made of iron or steel, and which is adapted for general use but more particularly as a traction wheel.

The object of my invention is to provide a metallic wheel of few parts and simple construction, which will be efficient in its operation and which will effectively perform the duties for which it was made.

The invention consists primarily of a metallic wheel having flat spokes attached to the sides of a channeled hub, and also attached to the sides of a channeled tire. Between the two sets of spokes reinforcing means of suitable construction is provided, in order to set forth a wheel of great strength, which calls for a small amount of material.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a side view of the wheel; Fig. 2 is a vertical sectional view thereof; Fig. 3 is a top plan view; Fig. 4 is a partial sectional view showing the construction adjacent the ends of the sections of the rim; Fig. 5 is a plan view of Fig. 3, and Fig. 6 is a perspective view of one of the sections of the rim.

The wheel embodies a hub 1, having a central opening 2 for engagement with a suitable axle, the hub 1 at opposite sides thereof being provided with flanges 3 and 4. A plurality of spokes 5 are equally spaced about the flanges and are secured thereto at 6, 7 by any suitable means, such as rivets, it being noted from Fig. 2 that the spokes extend from each one of the flanges. A rim 8 is secured to the outer end of each of the spokes 5, bolts and nuts or rivets being preferably used for such purpose.

In order to strengthen the wheel I employ suitable means, preferably of the following construction: Between the opposite

series of spokes, and along an intermediate line between the hub and the rim, is a circular flanged member 9, secured as at 10 to each of the spokes. In order to strengthen the parts against lateral movement I provide a series of cross braces 11, 12 between the hub and the flanged member 9, and another series of cross braces at 13, 14 between this flanged member 9 and the rim 8. If desired, the members 12 and 14, and 11 and 13, may be of a single piece suitably bent, or they may be made up of two pieces. In either event the ends of the braces 11 and 12 are secured to the flanges 3, 4 adjacent the hub 1, by any means, such as rivets 15. The outer ends of the braces 13, 14 are secured to the sides of the rim 8, preferably by means of rivets 16. The intermediate portions of these braces, if they are made of a single piece, or the adjacent ends of each of the pieces, if made of more than one, are secured to the outside of the flanged member 9 in any suitable way.

The rim 8 is of flanged construction, having a flat tire portion 17 and sides 18 and 19. The tire is provided with a plurality of openings 20 at suitable points around its periphery, the material 21 removed from these openings being bent inwardly, in order to extend toward the hub, as shown particularly in Fig. 3. By making the tire of such construction its tractive effort is increased, since slipping is avoided, the material of the road or pavement over which the wheel is passing engaging in these openings 20, and thereby providing, as it were, a fulcrum about which the wheel can turn. As shown in Fig. 4, the meeting ends of adjacent sections of the tire may be each provided with a recess, so that when the sections are secured together by any means, such as straps 22 and the rivets 9, the recesses will register with each other, thereby providing an opening similar to those previously described.

From the above description, it will be noted that I have set forth the construction of a metallic wheel, enabled to withstand great loads, which consists of few parts, the relation, however, being such that the wheel is strengthened in all directions and able to withstand heavy loads. It will be obvious, however, that various changes may be made in the size and shape of the different elements entering into the construction, in order

to adapt it for different purposes and to vehicles of different sizes, thereby enabling it to sustain loads of different amounts.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A metallic wheel comprising a hub having flanges thereon, a rim having flanges thereon, a plurality of spokes in engagement with the flanges on the hub and the flanges on the rim, an intermediate member in engagement with all of the spokes, for strengthening the wheel, together with a plurality of cross braces extending between the hub and the intermediate member, and between the intermediate member and the rim, for strengthening purposes.

2. A metallic wheel made up of a hub having flanges thereon adjacent opposite ends thereof, a rim having flanges at opposite sides thereof, a plurality of spokes in engagement with the flanges on the hub and the flanges on the rim, an intermediate member between the hub and the rim and in engagement with all the spokes, for

strengthening the same, together with a series of cross braces between the flanges on the hub and the said intermediate member, and another series of cross braces between the said intermediate member and the flanges on the rim, together with means for securing the cross braces in position, thereby providing a wheel of great strength.

3. A metallic wheel comprising a hub, a rim, a plurality of spokes in engagement with the hub and the rim, an intermediate member in engagement with all of the spokes, together with a plurality of cross braces extending between the hub and the intermediate member, and other cross braces extending between the intermediate member and the rim.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL HENRY SUMMERSCALES.

Witnesses:

JAMES PETERSON,

WM. C. PETERSON.