No. 753,265. PATENTED MAR. 1, 1904.

J. B. HOWARD.

WHEEL GUARD.

APPLICATION FILED JUNE 26, 1903.

NO MODEL.

FIG. 5.

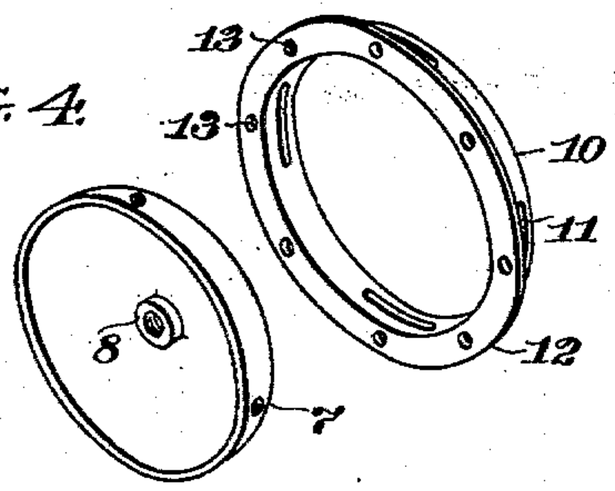


FIG. 4.

FIG. 1.

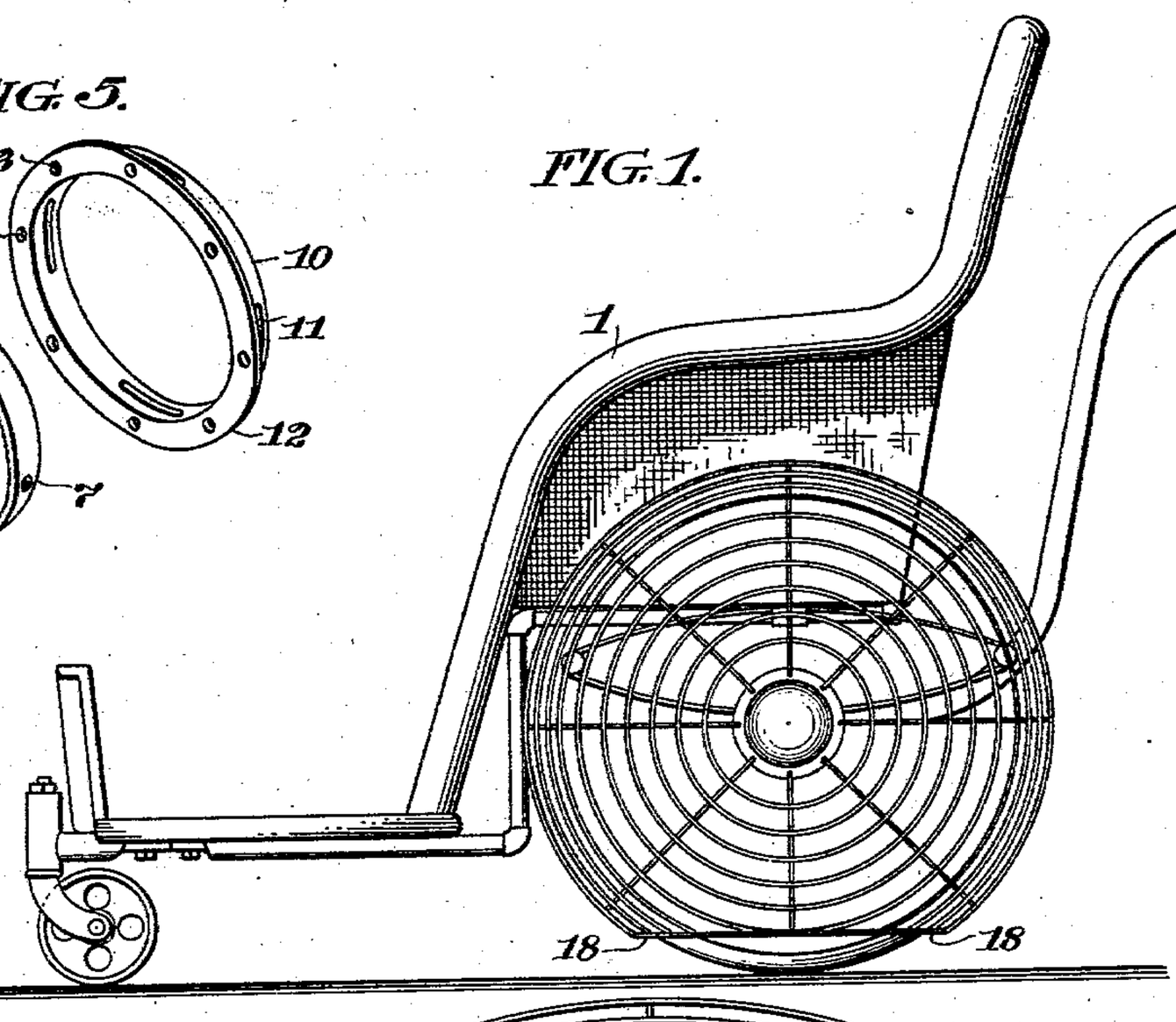
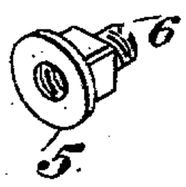


FIG. 6.



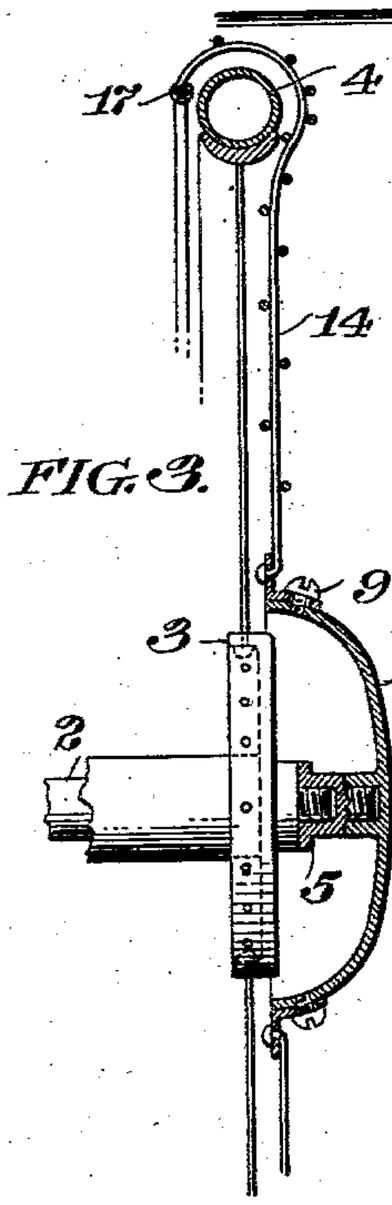


FIG. 3.

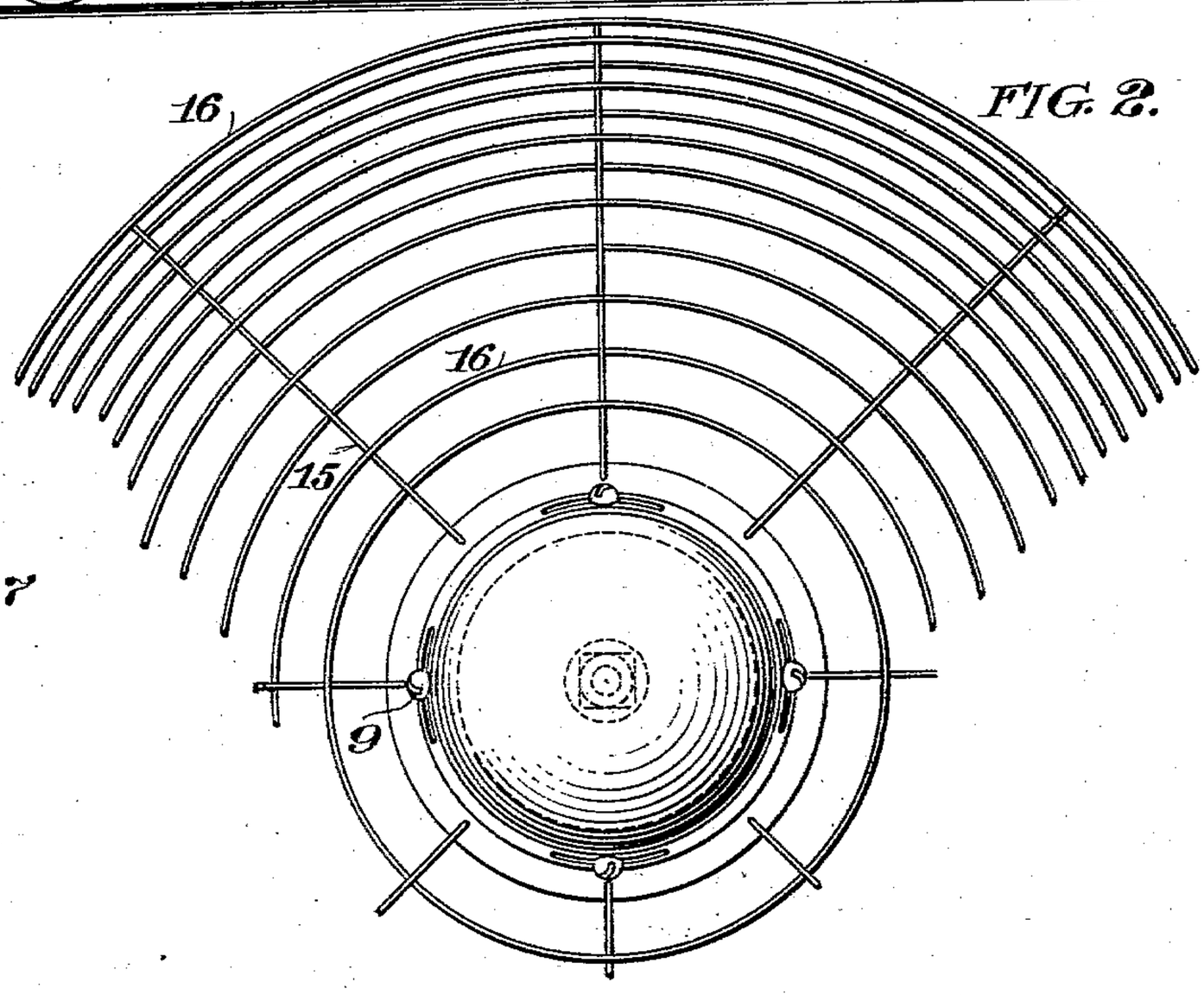


FIG. 2.

WITNESSES:

Henry Drury

Edw. W. Vaill Jr.

INVENTOR

James B. Howard.

BY

Howard Lewis.

ATTORNEY.

No. 753,265. Patented March 1, 1904.

UNITED STATES PATENT OFFICE.

JAMES B. HOWARD, OF ATLANTIC CITY, NEW JERSEY.

WHEEL-GUARD.

SPECIFICATION forming part of Letters Patent No. 753,265, dated March 1, 1904.

Application filed June 26, 1903. Serial No. 163,177. (No model.)

To all whom it may concern:

Be it known that I, JAMES B. HOWARD, a citizen of the United States, and a resident of Atlantic City, State of New Jersey, have invented certain new and useful Improvements in Wheel-Guards, of which the following is a full, clear, and complete disclosure.

The object of my invention is to provide a guard for wheels of rolling chairs and similar vehicles whereby contact with the wheel is prevented both as concerns persons who may occupy the chair and those who may be in proximity to the chair while the same is being propelled along walks, corridors, roads, and other thoroughfares.

Heretofore it has been difficult to provide rolling chairs with wheel-guards without extending the body of the chair over the exterior of the wheels because of the small space between the body or arm of the chair and the wheel-rim to accommodate supports from the axle. One object of my invention therefore is to provide a reliable and efficient guard which may be attached to the exterior of the running-gear without disturbing the wheels or body of the chair.

Broadly, my invention consists in providing an attachment for the end of the axle or stationary part of the hub of the wheel, which attachment supports and carries a guard which substantially completely incloses the wheel, so as to prevent contact of garments with any portion of the wheel or hub.

For a full, clear, and exact description of my invention reference may be had to the following specification, and to the accompanying drawings, forming a part thereof, in which—

Figure 1 is a side elevation of a rolling chair having my improved guard applied thereto; Fig. 2, an enlarged view showing the guard in elevation and somewhat enlarged from that shown in Fig. 1, unnecessary parts thereof being broken away; Fig. 3, a vertical sectional view of the wheel and its guard; Fig. 4, a perspective view of the part of the guard which is attached to the end of the axle; Fig. 5, a view of a ring to allow the axial adjustment of the guard, and Fig. 6 a view of the nut for holding the wheel upon the axle-journal and to which the guard is attached.

In the drawings, the numeral 1 indicates a rolling chair or similar vehicle which is supported by the main axle 2, upon which are mounted the usual wheels 3, having rubber or other tires 4. The wheel 3 is held in position upon the axle by nut 5, which is similar in form to those ordinarily used, except that it has a projection 6, which is screw-threaded and adapted to receive the central support 7. This central support 7 comprises a shallow bell-shaped metallic shell having a central interior projection 8, within which is a screw-threaded socket for engaging the projection 6 on the hub-nut 5. Attached to the shell 7 by screw 9 is a ring 10, which has slots 11 therein for the purpose of allowing circumferential adjustment of said ring upon said shell. The ring 10 also has a flange 12, which is provided with holes or openings 13 for receiving the ends of the main portion of the guard 14. This main portion of the guard is composed of radial rods or wires 15, which at their outer ends curve about and inwardly in relation to the tire of the wheel, terminating at a point slightly within its periphery. Circular strands of wire 16 connect these radial wires 15, before mentioned, and are interlaced alternately above and below said wires 15. These wires may be secured together in any well-known manner, such as soldering or galvanizing. The wire 17, which connects the outer radial ends of the wires 15, is somewhat larger than the wires 16, and thereby stiffens and makes more rigid the whole outer portion of the guard.

The lower portion of the guard adjacent the ground or floor is finished on substantially a chord of the outer circumference, so as to prevent said guards from contacting with the floor or ground and being injured thereby. If said straight or lower portion of the guard does not come exactly parallel with the ground or floor when first placed in position, the same may be adjusted to assume the requisite angle in relation to the chair and its axle by loosening the screws 9, which thereby allows the ring 10 to be revolved to exactly the right point. The screws 9 are then tightened, and the whole guard is then held firmly and accurately in position.

It is evident that various changes may be made in the form, structure, and material of my device without departing from the spirit of my invention. For instance, the open-work portion of the guard may be composed of wicker-work, ratan, or other similar material, and the form thereof may be changed to suit individual tastes as concerns ornamentation.

Among the advantages of the wheel-guard above set forth is the fact that the wheel may be removed by simply unscrewing the guard, so that the hub-nut will be exposed, after which said nut and wheel may be easily removed. If deemed desirable, of course the nut may be dispensed with and the central shell 7 may be attached directly to the end of the axle, thereby serving the function of both the nut and the support for the open-work of the guard.

By the construction set forth persons' garments are not only protected, so that they will not come in contact with the wheel, but also the end of the axle and hub are inclosed, so as to prevent injury and so as to keep out dust, sand, &c.

Having thus described my invention, what I claim to be new, and desire to protect by Letters Patent of the United States, is—

1. A wheel-guard for vehicles comprising a central supporting portion attached rigidly to the end of one wheel-axle, and a substantially circular guard carried thereby so as to inclose substantially the whole wheel, said guard being supported at no other points aside from said central supporting portion.

2. A wheel-guard for vehicles comprising a central supporting portion, means for attaching said portion to the end of one wheel-axle and a secondary adjustable portion extending therefrom so as to inclose substantially the entire wheel and tire.

3. A wheel-guard for vehicles comprising a central supporting portion, means for attaching said portion to the end of one wheel-axle and a secondary adjustable open-work portion extending therefrom so as to inclose substantially the entire wheel and tire.

4. A wheel-guard for vehicles comprising a central supporting portion adapted to be retained rigidly in relation to the end of the wheel-axle, a ring adjustably secured to said central portion and a secondary portion secured to the said ring and extending outwardly therefrom so as to inclose substantially the entire wheel and tire.

5. A wheel-guard for vehicles, comprising a central supporting-shell adapted to be retained rigidly in relation to the end of the wheel-axle, a ring adjustably secured to said shell and an outwardly-extending portion secured to said ring and curved so as to inclose substantially the entire wheel and tire.

6. A wheel-guard for vehicles, comprising a central shallow bell-shaped shell adapted to be retained rigidly in relation to the end of the wheel-axle, a flanged ring adjustably secured to said shell and an outwardly-extending portion secured to said ring so as to inclose substantially the entire wheel and tire.

7. A wheel-guard for vehicles, comprising a central supporting-shell having a socket therein for retaining said shell rigidly in relation to the end of the wheel-axle, a ring adjustably secured to said shell and an outwardly-extending portion secured to said ring so as to inclose substantially the entire wheel and tire.

8. A wheel-guard for vehicles, comprising a nut adapted to engage the end of the wheel-axle, said nut having a projection extending therefrom, a central supporting portion adapted to be retained rigidly upon said projection and a secondary portion of the guard secured to said central portion and extending outwardly therefrom so as to inclose substantially the entire wheel and tire.

9. A wheel-guard for vehicles, comprising a nut adapted to engage the end of the wheel-axle and having a screw-threaded projection, a central supporting portion having a socket adapted to engage said projection and a secondary portion adjustably secured to said central portion and extending outwardly therefrom so as to inclose substantially the entire wheel and tire.

10. A wheel-guard for vehicles, comprising means for retaining the wheel upon the end of one axle, a central supporting portion adapted to engage said retaining means and a secondary substantially circular portion secured to said central portion and extending outwardly therefrom so as to inclose substantially the entire wheel and tire.

11. A wheel-guard for vehicles, comprising a central bell-shaped shell adapted to be retained rigidly in relation to the end of the wheel-axle, a flanged ring adjustably secured to the said shell and an open-work portion secured to said ring and extending outwardly so as to inclose substantially the entire wheel and tire.

12. A wheel-guard for vehicles, comprising a central bell-shaped shell adapted to be retained rigidly in relation to the end of the wheel-axle, a flanged ring adjustably secured to the said shell and an open-work portion comprising circular and radially-extending wires secured to said ring and adapted to inclose substantially the entire wheel and tire.

13. In a wheeled chair, the combination with the body of the chair and the running-gear, of a central supporting portion adapted to be rigidly attached to the end of one wheel-axle, and a substantially circular guard carried thereby so as to inclose substantially the whole wheel, said guard being unsupported at any point between the body of the chair and the wheel.

14. In a wheeled chair, the combination with the body of the chair and the running-gear,

of a central supporting portion adapted to be attached to the end of one wheel-axle, and a secondary adjustable portion extending therefrom so as to inclose substantially the entire wheel and tire.

15. In a wheeled chair, the combination with the body of the chair and the running-gear, of a central supporting portion adapted to be attached rigidly to the end of one wheel-axle, a ring adjustably secured to said central portion and a secondary portion secured to said ring and extending outwardly therefrom so as to inclose substantially the entire wheel and tire.

In witness whereof I have hereunto set my hand this 19th day of June, A. D. 1903.

JAMES B. HOWARD.

Witnesses:

HORACE PETTIT,

LEWIS H. VAN DUSEN.