No. 779,930. PATENTED JAN. 10, 1905.

C. R. S. J. HALLÉ.

WHEEL FOR VEHICLES.

APPLICATION FILED AUG. 8, 1904.

2 SHEETS—SHEET 1.

Fig. 1.

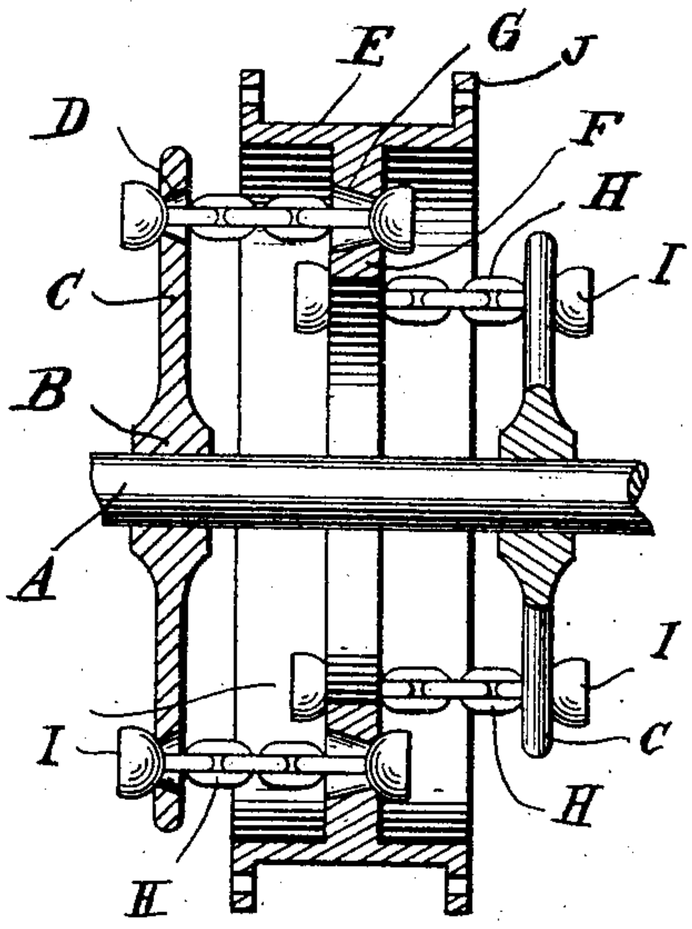


Fig. 2.

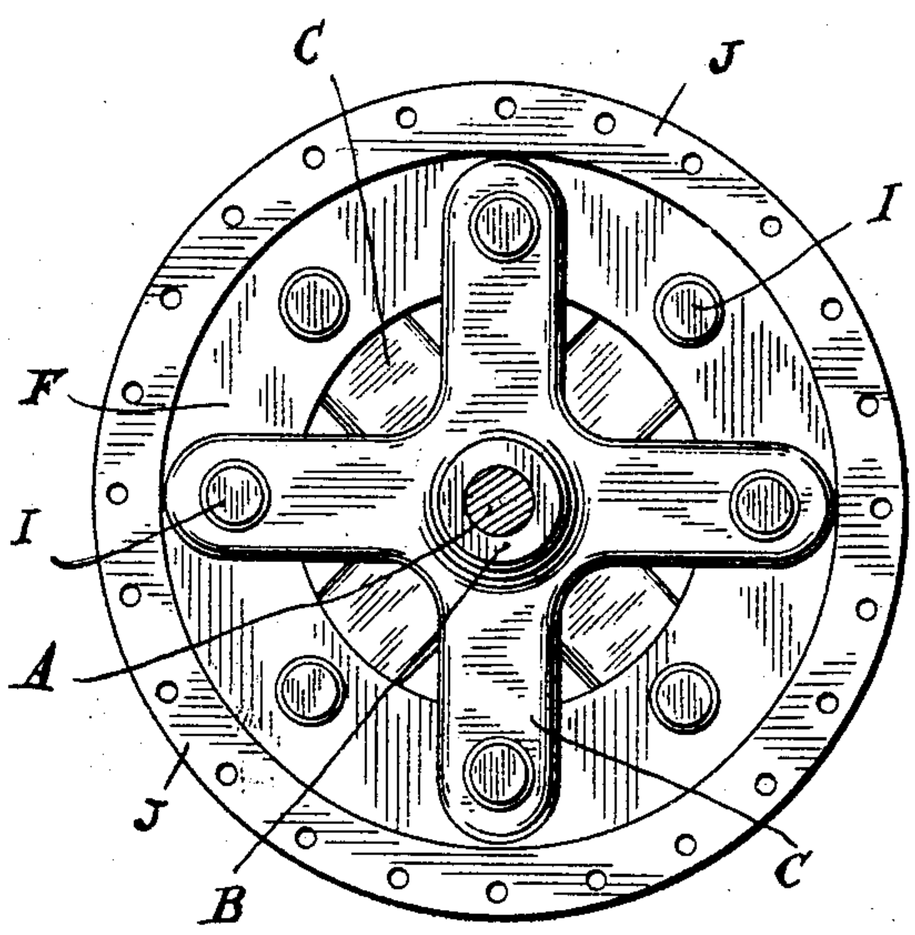
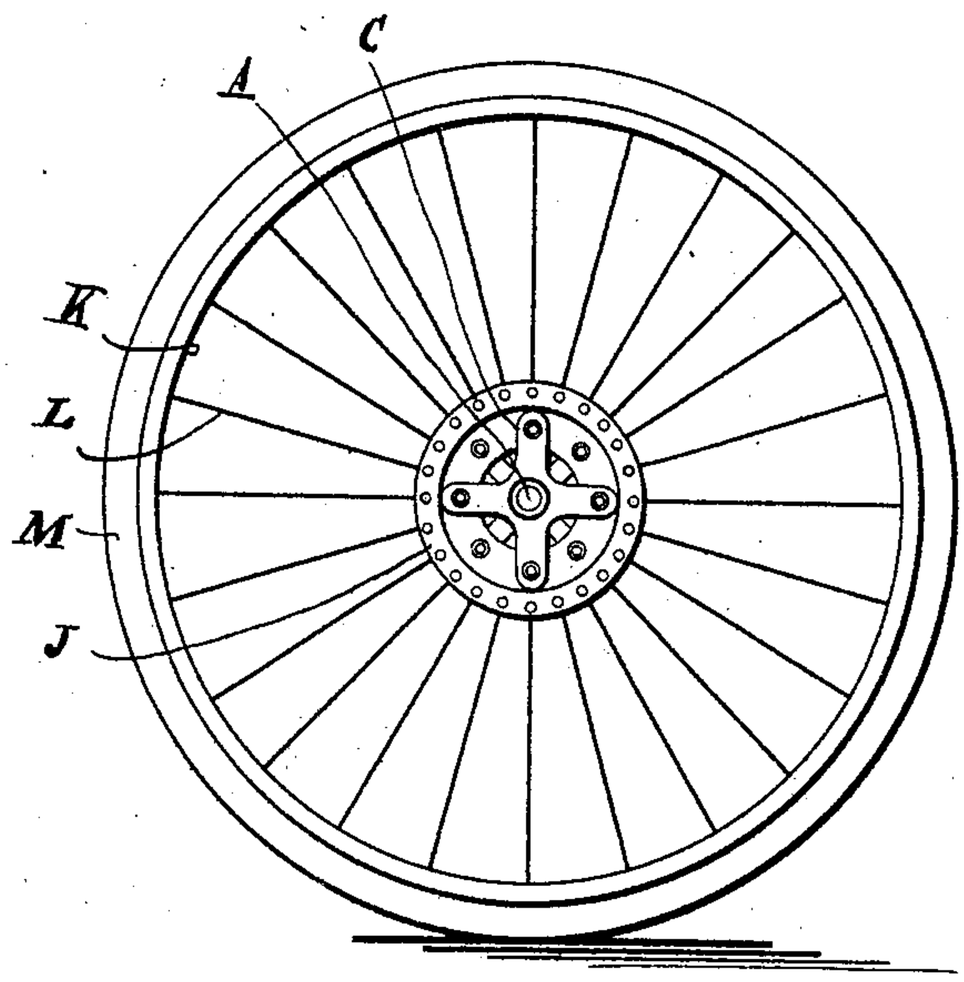


Fig. 3.



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Attorney.

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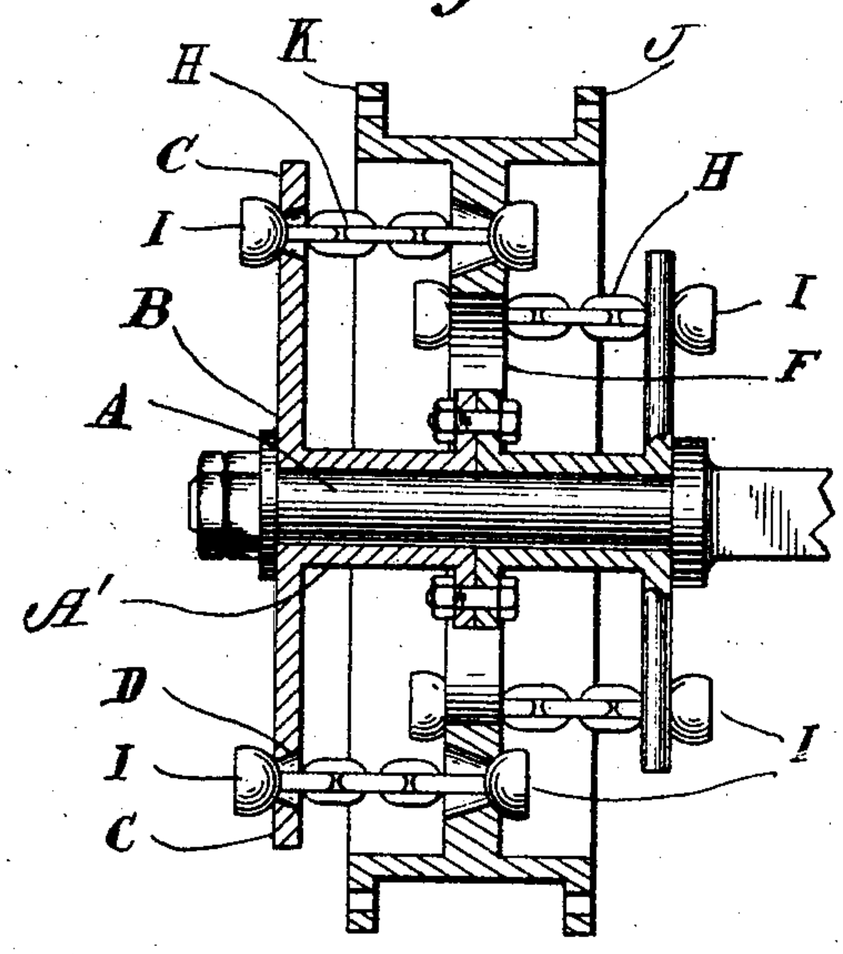
2 SHEETS—SHEET 2.

Fig. 4.



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No. 779,930. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

CLIFFORD ROBERT STEPHEN JOHN HALLÉ, OF LONDON, ENGLAND.

WHEEL FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 779,930, dated January 10, 1905.

Application filed August 8, 1904. Serial No. 219,987.

To all whom it may concern:

Be it known that I, CLIFFORD ROBERT STEPHEN JOHN HALLÉ, a subject of the King of Great Britain, residing at 204 Cromwell road, South Kensington, London, England, have invented certain new and useful Improvements in Wheels for Vehicles, of which the following is a specification.

The object of my invention is to provide a cheap and durable wheel for any kind of vehicle which will in itself have spring against shocks and jars.

The great difficulty in spring-wheels hitherto constructed has been to guard against side play in wheels which are partly constructed of springs. In such wheels the usual course has been to place the springs either between the outer and the inner rim of the wheel or around the hub, but always acting in the direction of the plane of the wheel, and in such cases where side play is guarded against this is done by sliding supports, which supports have a tendency to jam when pressure is put on one side of the wheel, and consequently annul the utility of the springs.

My invention entirely does away with the possibility of any side play, while leaving the wheel proper free to spring on the axle, the action of the springs being at right angles to the plane of the wheel, the object being to provide a serviceable spring hub or wheel and to do away with side play and also with the necessity of driving through springs and further relying for my resilience entirely on springs that have a tension in a lateral direction to the plane of the wheel and not in the plane of the wheel, as is usual.

My invention will be clearly understood from the following description, aided by the accompanying drawings.

Figure 1 is a sectional view of a hub constructed according to my invention and in which the axle revolves. Fig. 2 is a side elevation of same, and Fig. 3 a side elevation of a complete wheel. Fig. 4 is a sectional view of a hub in which the axle is a fixture.

According to this invention the axle A or the tube A′ has fitted to it at a distance apart two disks or rings B, having projecting spring-arms C, each having a conical hole D near their outer ends. Between these arms C, I arrange the hub E, which is formed with a projecting inner flange F, having conical holes G therein, and such hub is connected to the spring-arms C by chains H, or it may be rods or wires which pass through the holes D and G and are secured thereto by cup-shaped heads I, forming universal joints, so that in the normal condition the hub is held suspended between the spring-arms C, the flange F having an opening, so as to allow of movement of the axle A within the hub E due to the load.

The hub E is provided with flanges J, to which and the felly K the spokes L are secured to form the complete wheel, the felly or rim K carrying a rubber tire M, as shown; but the hub may be otherwise constructed to suit the make of wheel desired; but in all cases the inner flange F is provided.

In action the weight of the vehicle depresses the axle A, and in consequence the chain H assumes a position anglewise to the plane of the axle and by reason of their being taut with the spring-arms when in the normal position will draw the spring-arms C toward each other, these arms acting as the resilient body between the hub and the axle, and by reason of each chain being taut and acted upon at the same time irrespective of the position or movement of the wheel the hub, and consequently the wheel, will only have an up-and-down movement, and any tendency to side play is obviated.

What I claim, and desire to secure by Letters Patent, is—

1. A spring-wheel involving a pair of spring-arms adapted to be carried by an axle, a hub situate between the spring-arms, a flange projecting from the inner portion of the hub and having a space between it and the axle, means for connecting the flange with the spring-arms, and spokes connecting the hub with the felly, substantially as set forth.

2. A spring-wheel composed of a tube revoluble on a fixed axle, spring-arms projecting from said tube, a hub situate between the spring-arms, a flange projecting from the inner portion of the hub and having a space be-

tween it and the tube, means for connecting the flange with the spring-arms, and spokes connecting the hub with the felly substantially as set forth.

3. A spring hub or wheel embodying a tube revoluble on a fixed axle, spring-arms projecting from said tube, a hub arranged between the spring-arms, a flange projecting from the inner portion of the hub and forming a space between it and the tube, and chains for connecting the flange with the spring-arms.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CLIFFORD ROBERT STEPHEN JOHN HALLÉ.

Witnesses:
PERCY E. MATTOCKS,
WM. O. BROWN.