

No. 724,895.

PATENTED APR. 7, 1903.

W. H. LASSWELL.
WHEEL.

APPLICATION FILED FEB. 17, 1903.

NO MODEL.

Fig. 1

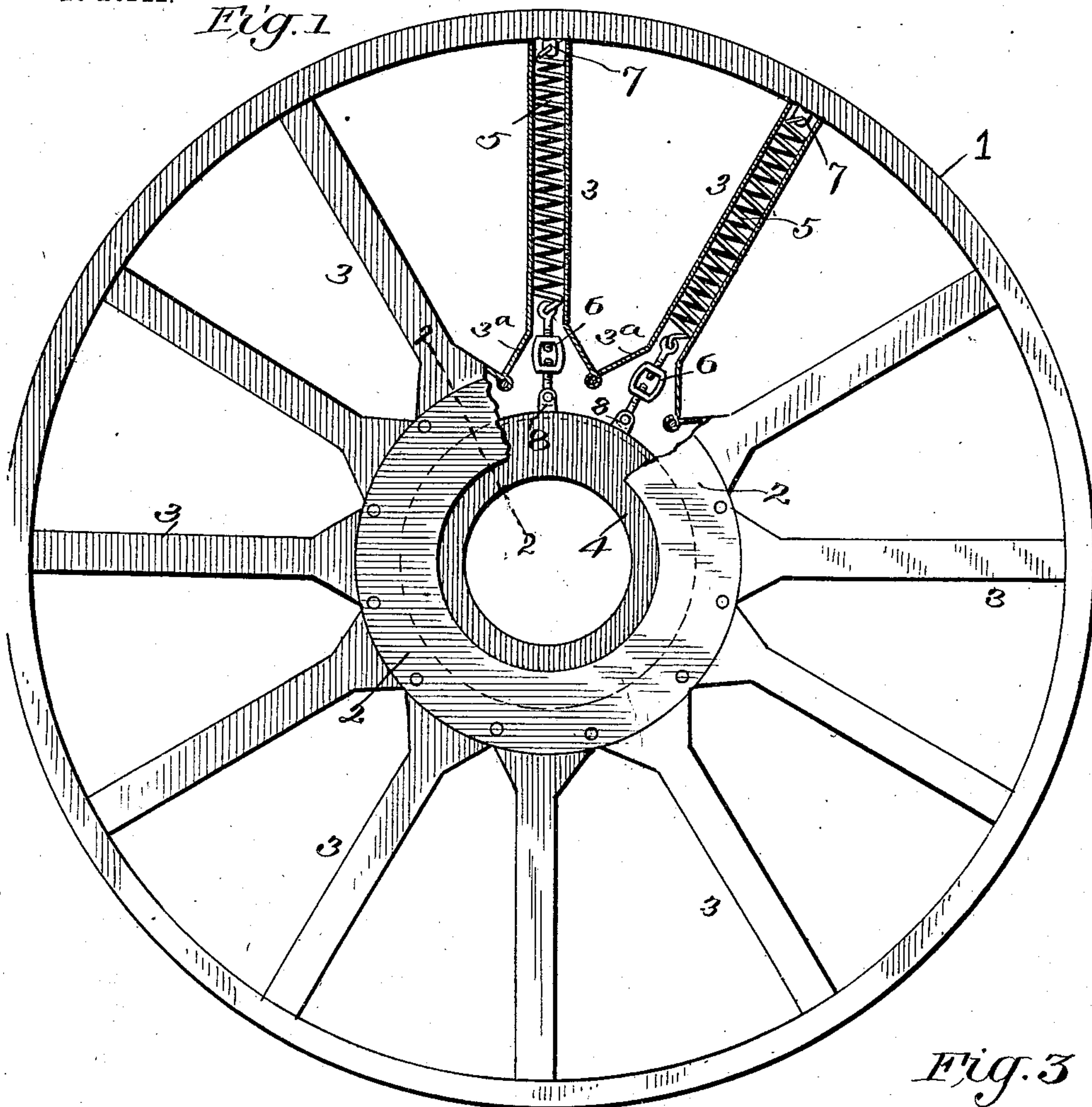


Fig. 2.

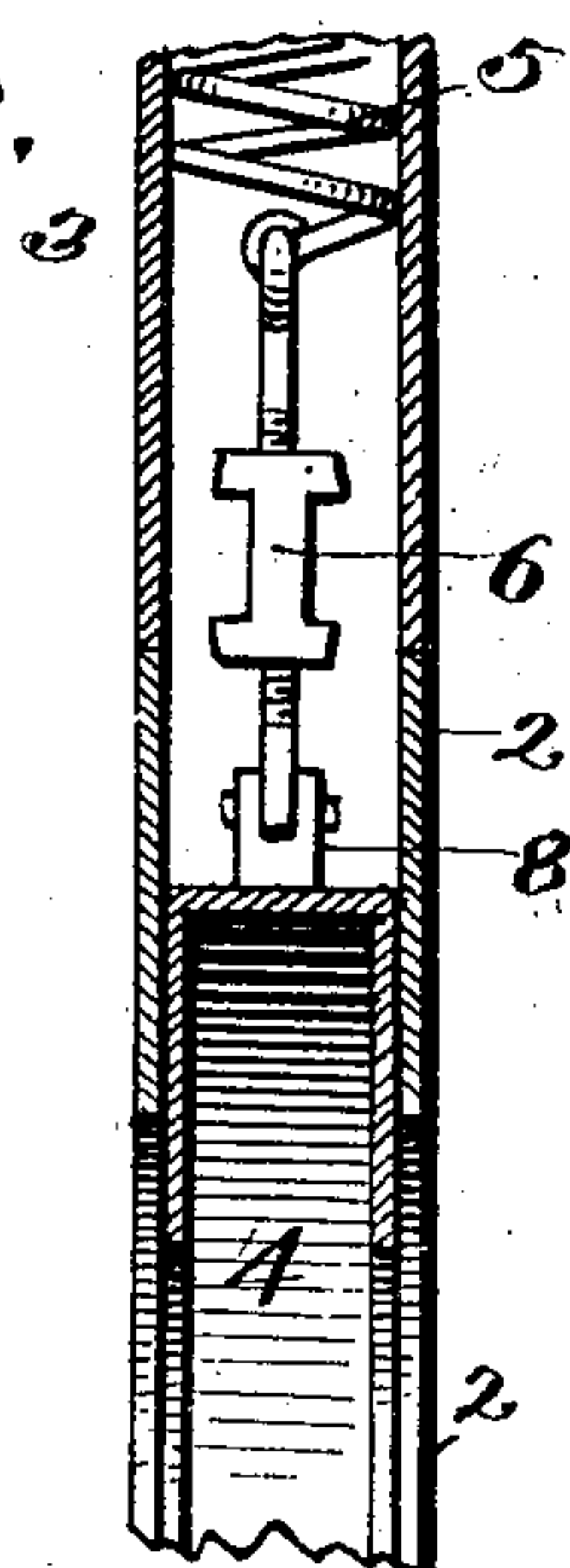
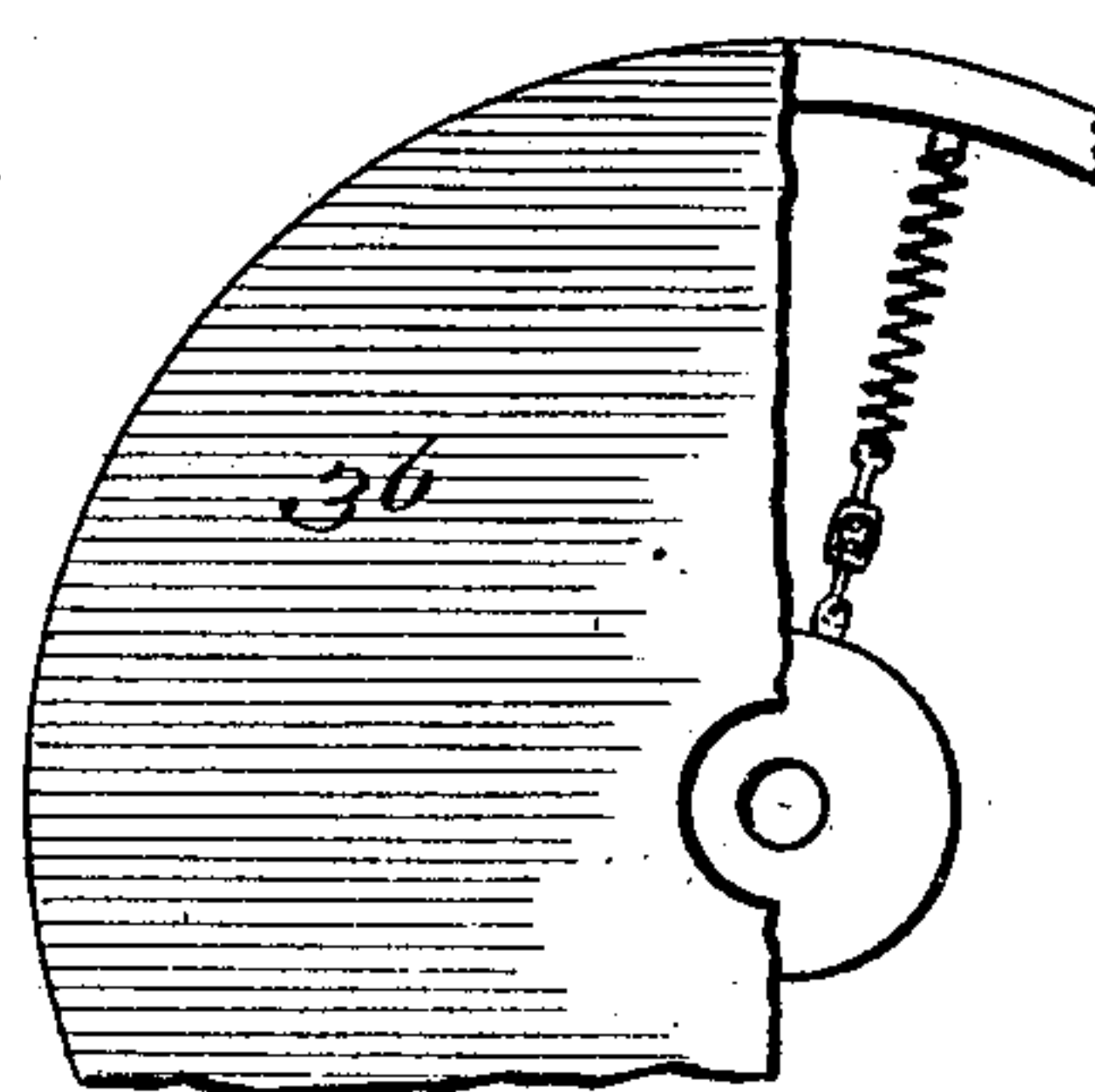


Fig. 3



WITNESSES:

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TO CHARLES ED MAYS AND HUNDLEY WIGGINS, OF SAN ANGELO, TEXAS.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 724,895, dated April 7, 1903.

Application filed February 17, 1903. Serial No. 143,883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. LASSWELL, a citizen of the United States, residing in San Angelo, in the county of Tom Green and State of Texas, have made an Improvement in Vehicle - Wheels, of which the following is a specification.

My invention is an improvement in that class of vehicle-wheels in which the hub is elastically connected with the rim or felly, and thus adapted to move radially with reference to the latter.

In my improved wheel the frame is rigid, it being composed in part of hollow radial spokes which are permanently connected with the central annular portion in which the hub proper is adapted to move radially. The hub is connected with the felly by spiral or coil springs and devices in the form of turnbuckles, the said parts being arranged in the hollow spokes and annulus, and thus duly protected, as hereinafter set forth.

The details of construction, arrangement, and combination of the parts are hereinafter described, and specifically indicated in the claims.

In the accompanying drawings, Figure 1 is mainly a face view of my improved wheel, a portion being broken away to show the interior construction. Fig. 2 is an enlarged detail cross-section on the line 2 2 of Fig. 1. Fig. 3 illustrates a modification.

The wheel has a rigid frame, wherein 1 indicates the rim or felly, which is constructed in the ordinary manner and is rigidly connected with the central annular portion by means of hollow rigid spokes 3, whose inner ends 3^a are enlarged in the direction of the circumference of the wheel. The annulus 2 is practically a box, and within it is partly inclosed the hub 4, which is in practice provided with suitable boxing to receive the journal of an axle. The parts 1 2 3 are in the same plane on each side of the wheel. The spokes, the annulus 2, and the hub 4 will be constructed of thin sheet metal, so as to combine maximum lightness with strength and rigidity. The hub proper, 4, is an annular box, opening on its inner side, adapted to fit neatly, but not too closely, between the parallel sides of the annulus part 2 and has

free radial movement, as indicated in Fig. 1, by the space between its periphery and the ends of the spokes 3. The hub 4 is elastically connected with the rim or felly 1 by means of spiral or coil springs 5 and adjusting devices 6. The springs 5 are arranged in the hollow spokes and suitably attached to lugs 7, secured to the felly 1. The adjusting devices 6 are in the nature of turnbuckles, their ends being connected, respectively, with the springs and with lugs 8, secured to the periphery of the hub proper, 4.

In setting up the wheel the turnbuckles are adjusted to give exactly the right tension to the springs, so that the hub 4 is held normally exactly centrally in or concentric with the hollow annulus 2. This adjustment will ordinarily be such as to hold the several springs under considerable tension. It is apparent that when downward pressure is applied to the hub 4 by the weight of the vehicle and its load imposed on its axle the hub will move downward correspondingly, the springs on the upper side of the wheel elongating and the springs on the lower side of the wheel contracting correspondingly. It is intended that the adjustment of the turnbuckles shall always be such as to hold the springs 5 under such degree of tension that those which are at any given time on the upper side of the wheel will suffice to sustain the hub and prevent it from striking the lower side of the rim of the annulus 2 when the vehicle contains an ordinary load. Should the tension of the springs be, however, overcome, no injury will result.

By reason of the arrangement of the spokes and other portions of the wheel-frame in the same plane the resistance to air in the rotation of the wheel is correspondingly lessened, and by the provision of the rigid hollow spokes 3 the central annulus 2 is held firm in due position and the springs are protected from injury and from the accumulation of mud or dust thereon, while cleaning of the wheel is greatly facilitated. The lateral enlargement 3^a of the base of the spokes provides space for the turnbuckles, as well as materially strengthens the wheel circumferentially.

It is apparent that band-pulleys may be constructed substantially in the same man-

ner as my improved wheel. Fig. 3 illustrates a modification in which spokes are dispensed with, a disk 3^b being applied on each side of the wheel, and thus inclosing the annular space 5 between the felly and hub, in which space the springs are arranged and protected. Both the spokes and disk serve as tension and thrust members, or, in other words, they resist compression on the lower side of the wheel and 10 tension on the other.

What I claim is—

1. The improved wheel comprising a rigid frame formed of the felly, hollow radial spokes, and central annulus, all rigidly connected, a hub adapted for radial movement 15 in the said annulus, coil-springs arranged in the hollow spokes, and turnbuckles connecting their inner ends with the hubs, as shown and described.

2. The improved wheel comprising a felly, 20 radial hollow spokes formed of sheet metal, and a sheet-metal annulus which is arranged centrally, and rigidly connected with the said spokes, and spring devices arranged in the spokes and connecting the hub and felly substantially as shown and described. 25

3. The improved wheel comprising a felly, a hub proper, a surrounding and inclosing annulus therefor, coil-springs connecting the hub and felly, and a rigid part extending be- 30 tween and rigidly connecting the felly and annulus and inclosing and protecting the said springs as shown and described.

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Witnesses:

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