

No. 652,099.

Patented June 19, 1900.

H. H. GERHARDT.

VEHICLE TIRE.

(Application filed Dec. 23, 1898.)

(No Model.)

Fig. 1.

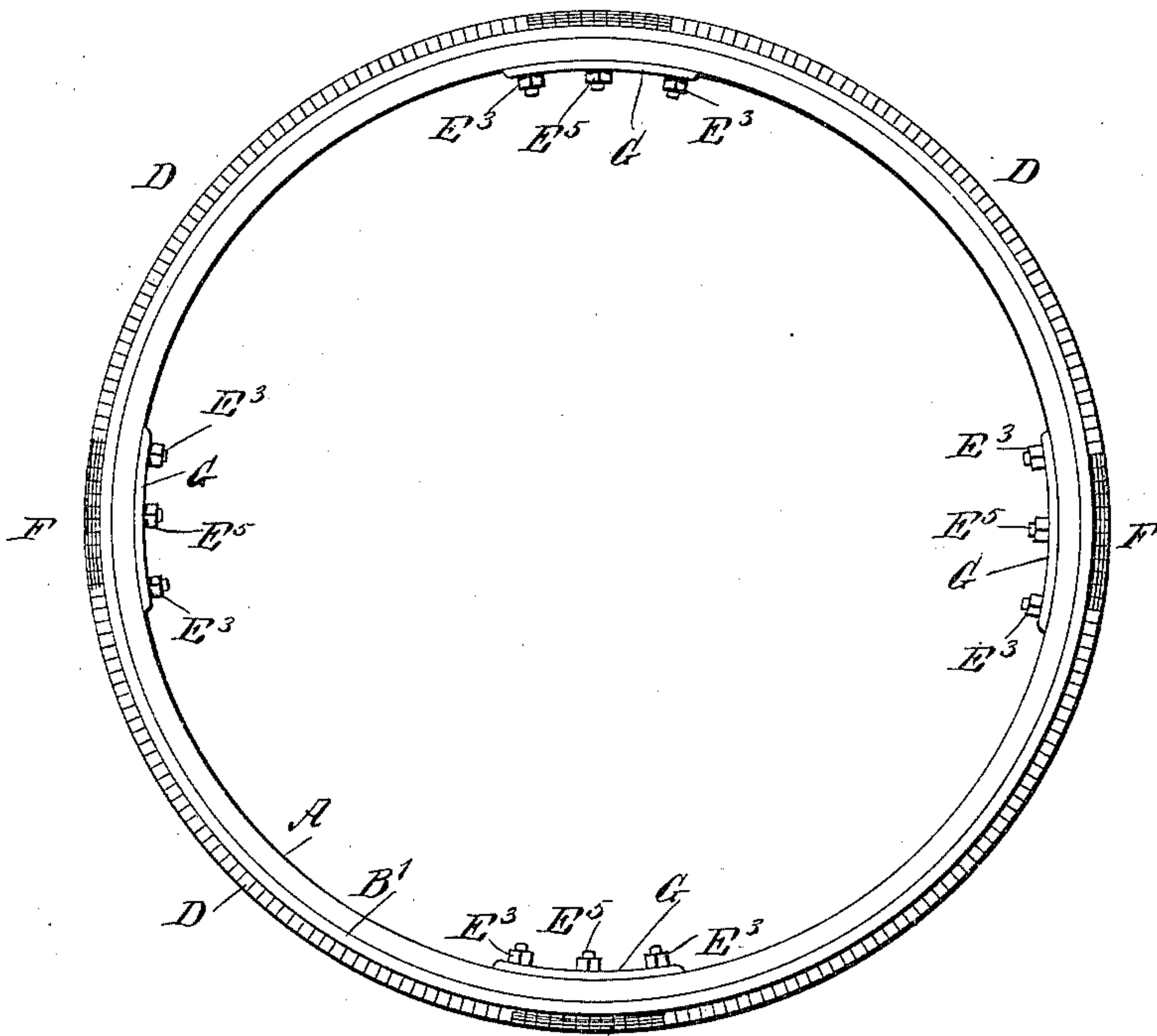


Fig. 2.

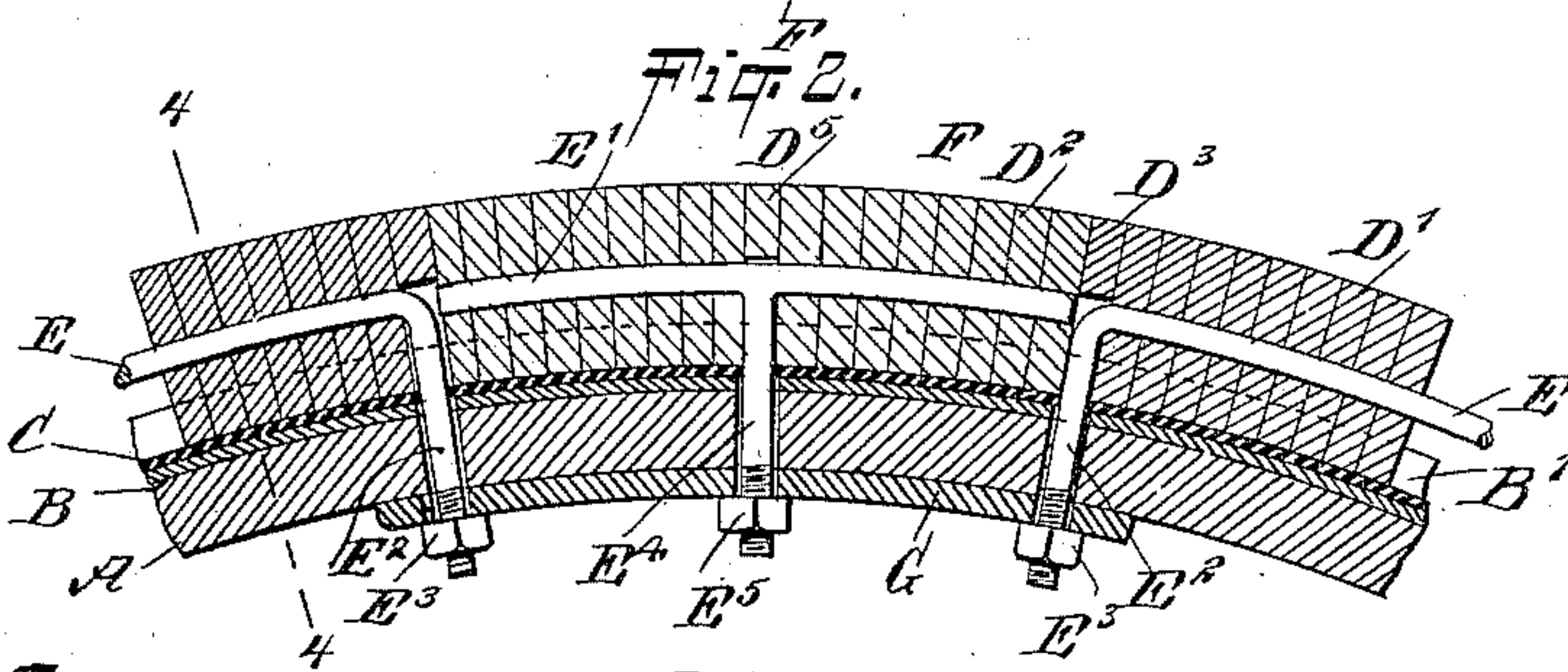
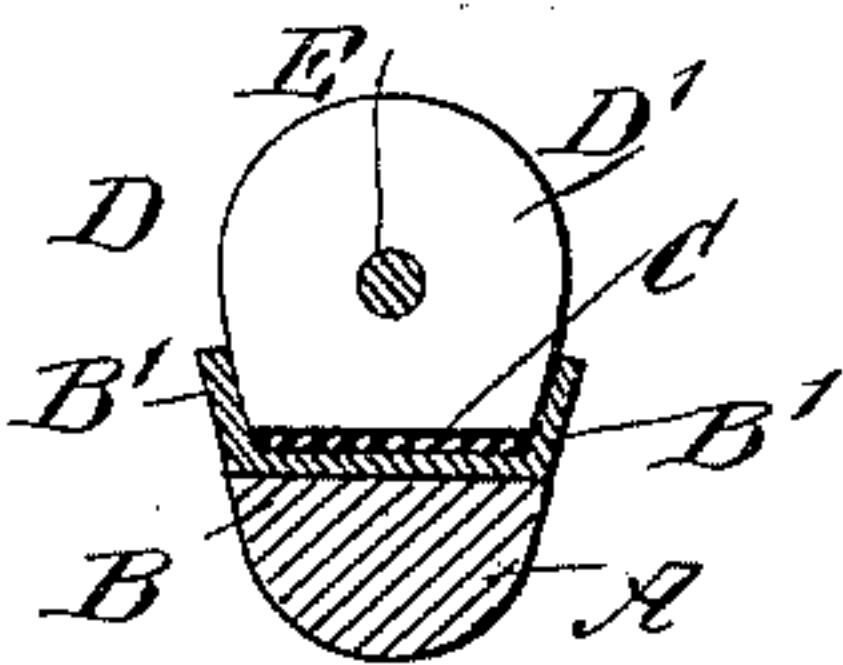


Fig. 4.



WITNESSES:

William P. Gaebel.
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Fig. 3.

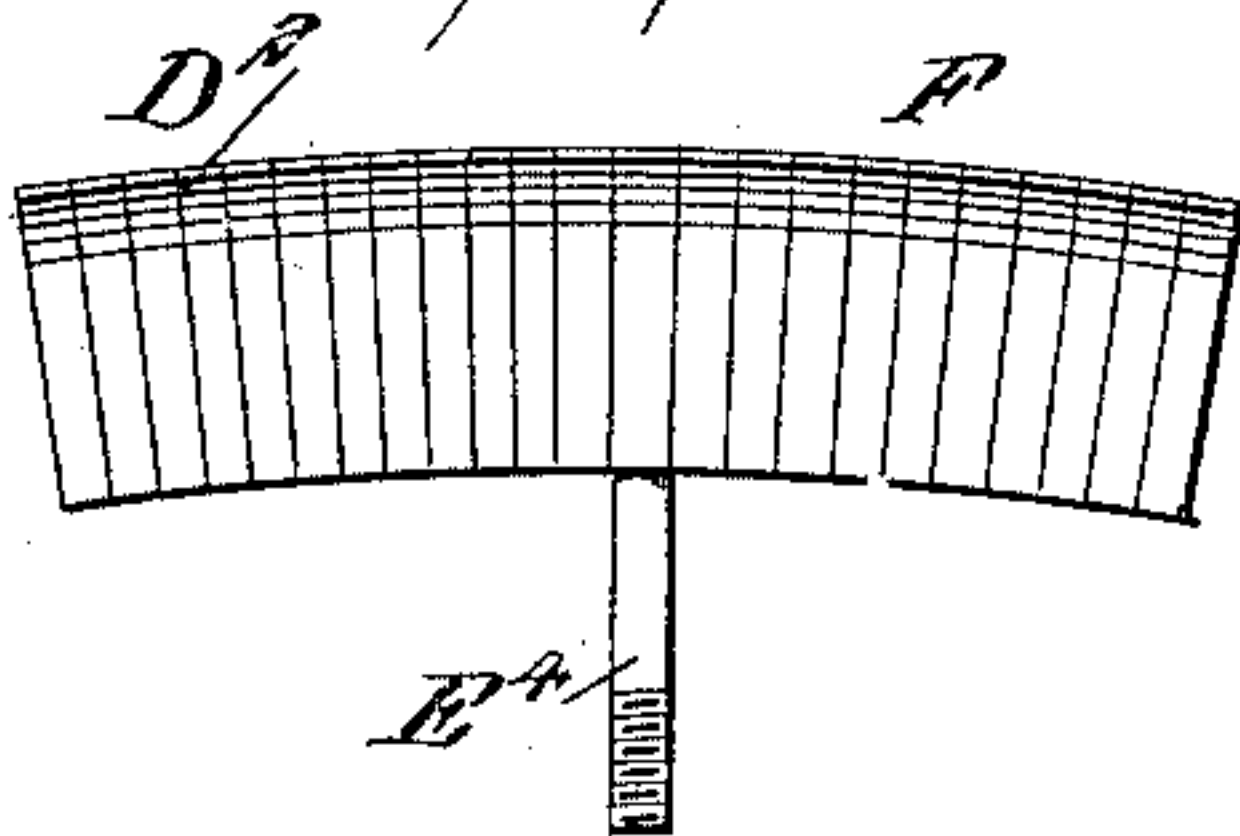
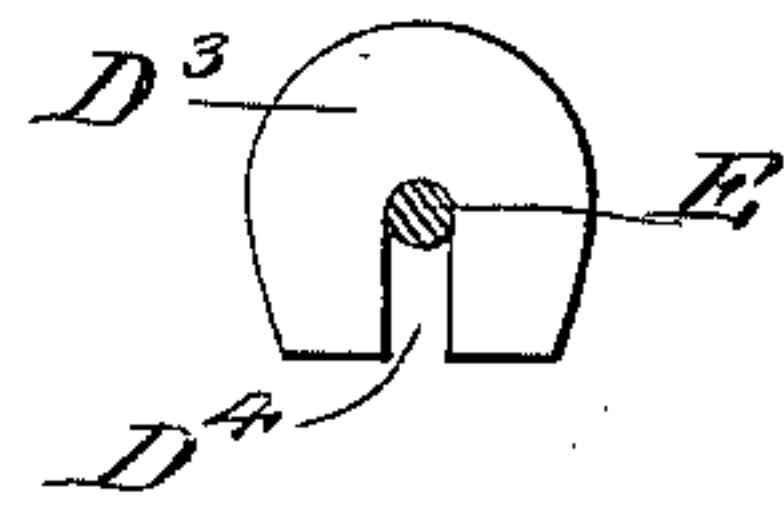


Fig. 5.



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UNITED STATES PATENT OFFICE.

HENRY HOBBS GERHARDT, OF NASHVILLE, TENNESSEE, ASSIGNOR OF ONE-HALF TO BARBARA B. DUNNAVANT, OF SAME PLACE.

VEHICLE-TIRE.

SPECIFICATION forming part of Letters Patent No. 652,099, dated June 19, 1900.

Application filed December 23, 1898. Serial No. 700,148. (No model.)

To all whom it may concern:

Be it known that I, HENRY HOBBS GERHARDT, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and Improved Vehicle-Tire, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved vehicle-tire which is simple and durable in construction, is noiseless, is not liable to get out of order, and is arranged to last a long time.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement as applied to a felly. Fig. 2 is an enlarged sectional side elevation of part of the improvement. Fig. 3 is a side elevation of one of the filling-sections. Fig. 4 is a transverse section of the improvement on the line 4 4 in Fig. 2, and Fig. 5 is a face view of one of the leather pieces with the wire in section.

A felly A, made of wood or other suitable material, supports on its periphery a ring B, having outwardly-extending flanges B', as is plainly indicated in Fig. 4, said ring receiving and supporting a rubber cushion C, on which is seated a tire D, made in sections, preferably four in number, with filling-pieces or keys between the sections, as hereinafter more fully described in detail. Each section consists of leather pieces or disks D', strung on segmental wires E, as is plainly indicated in Figs. 2 and 4, and each filling-piece or key F consists of similar leather pieces or disks D², strung on a segmental wire E'. Each wire E of a section has its ends bent inwardly to form screw-rods E², extending through registering apertures in the cushion C, the ring B, and felly A and also through a tie-plate G, fitted on the inside of the felly A. Nuts E³ screw on the outer ends of screw-rods E² to hold the tire-section in place on the cushion C and in the ring B, the nuts also

fastening the tie-plate G in position on the felly A.

In order to accommodate the screw-rods in the end-pieces D³, said pieces are provided with slots or recesses D⁴, (see Figs. 2 and 5,) leading to the bottom edge of the pieces. The wire E' for each filling-piece is likewise made segmental and formed with an angular screw-rod E⁴, passing through registering apertures in the cushion C, the felly A, the tie-plate G, and a nut B⁵, screwing on the end of said screw-rod to securely hold the filling-piece in position between adjacent sections of the tire. The leather piece D⁵ at the middle of the filling-piece and in alinement with the rod E⁴ is provided with a recess or slot the same as the section D³ to accommodate and straddle the said screw-rod E⁴.

The pieces or disks D' D² D³ D⁵ are formed with straight bottoms and with curved sides and tops, said straight bottoms resting on the cushion C, as is plainly indicated in Figs. 2 and 4, the outer round portions of the pieces forming a continuous tread for the tire.

Now it will be seen that by the arrangement described sufficient elasticity is obtained by the tire resting on the cushion C, and a very durable tire is produced by forming it of pieces of leather secured together by nails or a suitable binding substance, such as thin glue, in which the pieces are dipped previously to stringing them on the wires E and E', as above explained.

It is evident from the foregoing that the tire can be readily drawn tight in case the felly A should shrink by screwing up the nuts E³ and E⁵, and it is further evident that side-wise displacement of the tire is prevented by fitting said tire into the flanged ring B. (See Fig. 4.)

From the nature of the material employed in the construction of the tire and its manner of support on the elastic bed C the tire is rendered noiseless in service, which is a feature of great advantage.

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

1. The combination with a rim, of a sectional tire disposed around said rim, each section consisting of a series of disks secured to

the rim, one or more of said sections consisting of a smaller number of disks than the others and serving as a key or keys to fill the space between the ends of the longer sections, 5 and means for independently securing the short section or sections to the rim, substantially as described.

2. The combination with a rim, of a sectional tire disposed around the rim, each section consisting of a series of disks secured to 10 the rim, one or more of said sections consisting of a smaller number of disks than the others and serving as a key or keys to fill the space between the ends of the longer sections, 15 the short sections being each secured by a rod having lateral arms, substantially as described.

3. The combination with a felly, of a tire comprising a series of segmental sections each 20 consisting of a series of pieces of material strung on wire, the wires at the ends of each section being bent inwardly and formed into screw-rods, filling-pieces located between the sections and each consisting of a series of 25 pieces of material, and a wire passing through the same, an angular screw-rod being formed at or near the middle of the wire, and tie-plates fitted on the inside of the felly in line with the filling-pieces and the ends of the sections, the said screw-rods passing through the 30 felly and engaging the tie-plates, substantially as described.

4. The combination with a felly, of a flanged ring carried by the felly, a cushion in said ring, a tire resting on the cushion and 35 comprising sections consisting of pieces of leather, segmental wires on which the pieces are strung, said wires being fastened to the felly, filling-pieces between the sections and also comprising pieces of leather, and seg- 40 mental wires for the filling-pieces each formed with an angular screw-rod extending from the segmental wire at or near the middle thereof and fastened to the felly, substantially as shown and described. 45

5. The combination with a rim, of a sectional tire around the rim, each section consisting of a series of disks, some of said sections being long and the others short to form keys between the ends of the long sections, a 50 rod or wire passing through the disks of each long section, the ends of the said rods or wires being passed through the rim and provided with fastening means, a rod or wire passing through the rim and into each short section 55 of disks and provided with lateral arms extending transversely through the disks of said short section, and fastening means secured to the inner end of said rod or wire, substantially as described.

HENRY HOBBS GERHARDT.

Witnesses:

PATRICK MANN ESTES,
ALBERT COREY ESTES.