

A. HORMEL.
PNEUMATIC TIRE.
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984,672.

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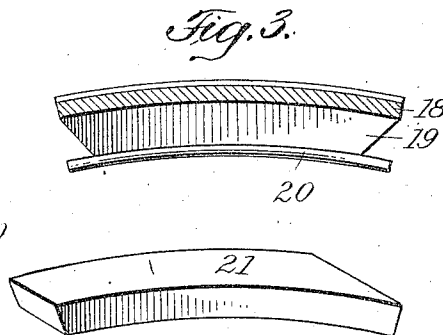
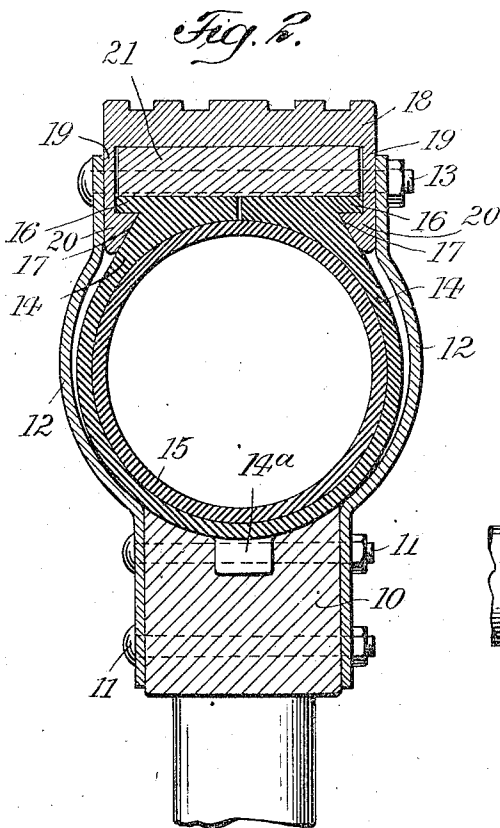
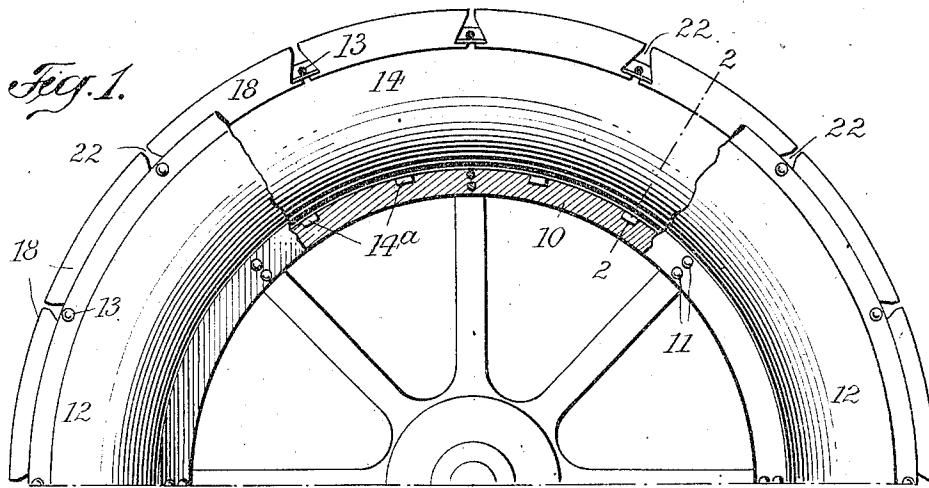
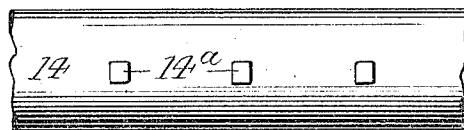


Fig. 4.

Fig. 5.



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UNITED STATES PATENT OFFICE.

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PNEUMATIC TIRE.

984,672.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, AUGUST HORMEL, a citizen of the United States, residing at New York city, county and State of New York, have invented new and useful Improvements in Pneumatic Tires, of which the following is a specification.

This invention relates to a pneumatic tire of novel construction which possesses great durability and transmits the movement of the axle to the shoes in such a manner that the tubes are not unduly strained, so that the life of the latter is materially prolonged.

In the accompanying drawing: Figure 1 is a side view, partly in section, of portion of a wheel provided with my improved tire; Fig. 2 a cross section on line 2—2, Fig. 1; Fig. 3 a detail of the shoe; Fig. 4 a detail of the filler, and Fig. 5 a detail of part of the outer tube.

To the two sides of a wheel rim 10 are bolted at 11 the two semi-tubular sections of an outer shell or casing 12, said sections being connected to each other near the periphery of the wheel by bolts 13. Shell 12 incloses a split outer tube 14, which, in turn, incloses the inflation tube 15. At its inner side tube 14 is provided with integral plugs 14*, which engage corresponding sockets of rim 10 and hold the device against slipping. At its outer side tube 14 is provided with a laterally projecting head 16 that extends beyond the body of the tube to the right and left thereof, so as to here form a pair of continuous annular recesses 17. The spaced independently movable shoes 18 of the tire, which may be grooved as shown, are provided at both sides with flanges 19 that are straddled by shell 12 and are made with integral hooks 20 engaging recesses 17. Between shoes 18 and head 16 are interposed a series of arched wooden or other non-heat-conducting fillers 21, the length of each filler corresponding to that of its shoe. Shoes 18 are so spaced and undercut at their flanges 19 as to form intervening gaps or recesses 22 which widen from the periphery toward the center of the wheel and accommodate bolts 13. Each shoe is distanced from the

adjoining shoes to such an extent as to be movable independently thereof. The relative dimensions of the gaps 22 and bolts 13 are such that while the width of the gaps at the mouth thereof corresponds substantially to the thickness of the bolts, the width of the gaps at their base greatly exceeds the thickness of the bolts. These gaps permit the necessary expansion and contraction of the tread, due to the contact of the wheel with the ground, and also permit those shoes which are not in such contact to play freely in a peripheral direction in unison with tube 14, so that friction is avoided and dirt is not liable to creep in underneath the shoes. Furthermore, those bolts 13 which may be temporarily located at the bottom of the wheel, will, owing to the pressure on tube 14, be forced into the lower contracted ends of recesses 22, so that the propelling power of the axle will be directly transmitted from shell 12 by bolts 13 to the shoes, without the intervention of tube 14. In this way any objectionable longitudinal strain on the tube is prevented and its life is materially prolonged.

I claim:

1. A pneumatic tire comprising an inclosed tube having a head formed and arranged to provide continuous recesses on opposite sides of the tube, a series of shoes having portions which overlap the head and terminate in hooks conforming substantially to the shape of said recesses and fitting therein, and fillers between the tube and shoes and spaced from one another and of a length equal to the length of the shoes.

2. A pneumatic tire comprising a shell, a tube in the shell having a head, a series of spaced shoes embracing the head, a series of spaced fillers between the tube and shoes, the ends of the shoes being undercut, and bolts disposed across the tire between the spaced ends of the shoes and lying within and beneath the undercut walls of the shoes.

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