C. F. MITZIMBERG.

JACKET FOR RUBBER TIRES.

APPLICATION FILED JAN. 18, 1912.

1,148,981. Patented Aug. 3, 1915.

Fig. 1.

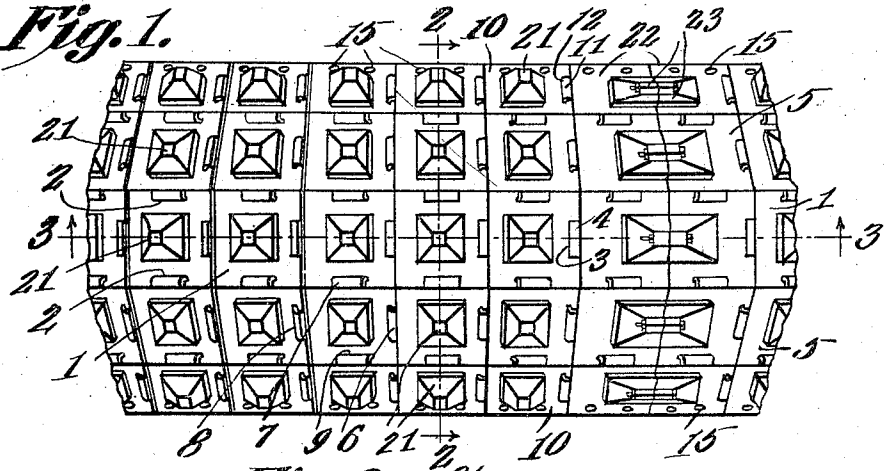


Fig. 2.

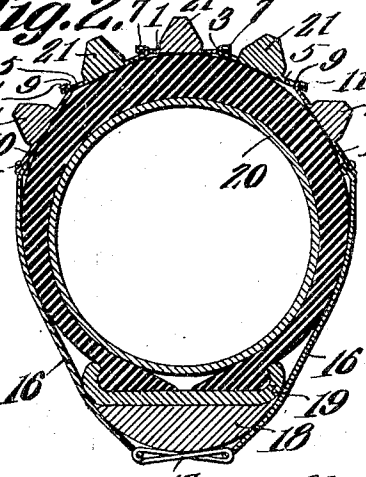


Fig. 4.

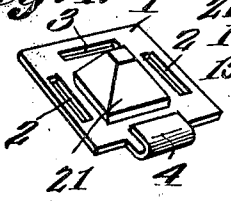


Fig. 5.

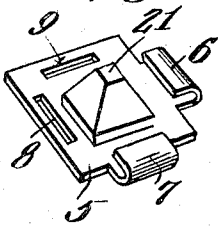


Fig. 3.

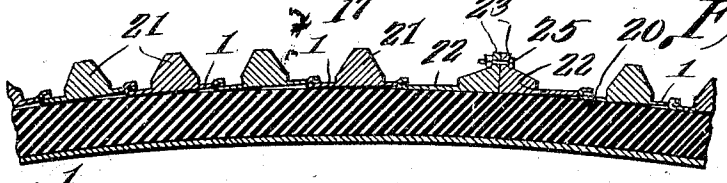
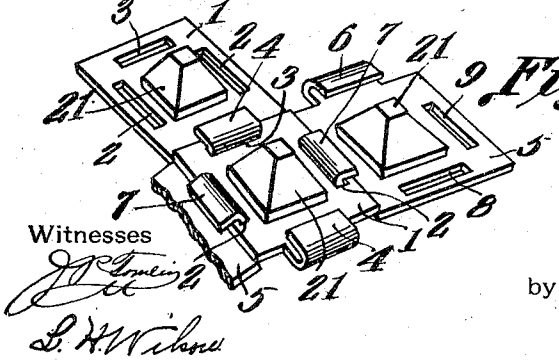


Fig. 6.



Witnesses

J. C. Lowe

L. H. Wilson

C. F. Mitzimberg,
Inventor

by C. A. Snow & Co.
Attorneys

NORRIS PETERS INC., LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES F. MITZIMBERG, OF KIRKSVILLE, MISSOUI

JACKET FOR RUBBER TIRES.

1,148,981. Specification of Letters Patent. Patented Aug. 3, 1915.

Application filed January 18, 1912. Serial No. 671,873.

To all whom it may concern:

Be it known that I, CHARLES F. MITZIMBERG, a citizen of the United States, residing at Kirksville, in the county of Adair and State of Missouri, have invented a new and useful Jacket for Rubber Tires, of which the following is a specification.

The present invention aims to provide a protector of novel form, adapted to be applied to a pneumatic tire, for the purpose of preventing a puncture.

The invention aims to provide novel means for hingedly connecting the plates of the protector, to afford maximum strength, with minimum outlay of material.

A further object of the invention is to provide novel means for connecting the ends of the protector.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings.—Figure 1 shows in top plan, a portion of a protector constructed in accordance with the present invention; Fig. 2 is a transverse section of a tire and rim structure, to which the protector has been applied; Fig. 3 is a perspective of one of the main plates; Fig. 4 is a perspective of one of the supplemental plates; Fig. 5 is a section on the line 3—3 of Fig. 1; and Fig. 6 is an enlarged perspective, showing several of the plates assembled.

In carrying out the invention there is provided a series of main plates 1, located in the median line of the protector. The main plates 1 are provided with parallel primary slots 2, the slots 2 being parallel to the median line of the protector. The plate 1 is equipped with a secondary slot 3, at right angles to the primary slots 2, and at right angles to the median line of the protector. Opposite to the secondary slot 3, each main plate is equipped with a hook 4, parallel to the slot 3, and at right angles to the slots 2. The hook 4 of one main plate 1 is mounted in the secondary slot 3 of the next adjacent main plate 1.

The invention further includes two lines of auxiliary plates 5, which lines of plates 5 are located upon both sides of the line of main plates 1. The auxiliary plate 5 is equipped with rectangularly disposed hooks 6 and 7, there being in the plate 5, a slot 8 parallel to the hook 6, and a slot 9 parallel to the hook 7.

In one line of auxiliary plates 5, the hooks 7 are engaged in one of the primary openings 2 of the main plates 1, the hook 6 of such auxiliary plate being engaged in the slot 8 of the next adjoining auxiliary plate. In the other line of auxiliary plates 5, the hooks 6 are engaged in one of the openings 2 of the main plates 1, the hook 7 of such auxiliary plate being engaged in the opening 9 of the next adjoining auxiliary plate.

The protector is bounded at its lateral edges, by supplemental plates 10, having rectangularly disposed hooks 11, one of which hooks 11 is engaged in one of the slots of the plates 5, the other of which hooks 11 is engaged in a parallel slot 12, formed in the supplemental plate. The supplemental plates 10 may be equipped at their outer extremities with openings 15, with which are connected flexible side strips 16, united by ties 17, to inclose the felly 18, the rim band 19 and the tire 20.

Each of the plates 1, 5 and 10 is equipped with a protecting boss 21, which is preferably frusto-pyramidal. Obviously, the bosses 21 serve as anti-slipping elements.

The terminal plates of the protector are denoted generally by the numeral 22. All of these plates 22 are equipped with frusto-pyramidal bosses 23, the adjacent, abutting faces of which are at right angles to the plane of the protector. Through the bosses 23 are extended bolt and nut structures 25 or the like, adapted to draw the ends of the protector together.

The several plates 1, 5 and 10 are preferably fashioned from steel, and it will be seen that when a tire is covered by the protector herein disclosed, a puncture is impossible. The plates are so connected as to have free, hinged, relative movement, and consequently, the resiliency of the tire will in no wise be impaired.

Owing to the peculiar form of the bosses 23, these bosses are made unusually strong to resist the strain imposed by the bolts 25, and at the same time, the bosses 23 serve as anti-slipping elements.

The protector herein disclosed embodies a plurality of sets of plates, and the

sets terminate in end plates 22. The main plates 1 are connected to each other and to the terminal plates 22 by a hook and eye connection. No such hook and eye connection, however, unites the terminal plates 22 with each other. There is, therefore, no means for preventing relative movement between the respective terminal plates 22 saving the bolts 25 and these bolts, therefore, are subjected to a considerable amount of strain. In order to offset the weakening caused by the fact that the terminal plates 22 are not provided with interengaging hooks, the projections 23 on the terminal plates are made large enough so that they coöperate to form a boss which is approximately twice the size of the boss 21. Further, it is to be noted referring specifically to Fig. 3, that the side slope of the larger bosses on the plates 22 is less abrupt, circumferentially of the tire, than the side slope of the bosses 21. Consequently, as the protector is rotated, in contact with the ground, a less strain is imparted to the mating projections 23 than is imparted to the bosses 21. All of the foregoing features coöperate to strengthen the protector adjacent its joined ends and to offset the weakening arising from the fact that the terminal plates 22 are not hooked together.

Having thus described the invention, what is claimed is:—

A tire protector embodying a plurality of sets of plates, each set comprising main plates and terminal plates, the main and terminal plates of each set being united by a hook and eye connection, the main plates having pyramidal bosses and the terminal plates having abutting projections which coöperate to form a two-part pyramidal boss of greater basic area than the bosses on the main plates, the side slope of the two-part boss being less abrupt, circumferentially of the tire, than the side slope of the bosses on the main plates; and securing devices connecting the abutting projections which cooperate to form the two-part bosses.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES F. MITZIMBERG.

Witnesses:
GEORGE T. BRAGG,
JOHN D. SMOOT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."