

(No Model.)

E. MICHELIN.

PNEUMATIC WHEEL TIRE AND FELLY FOR SAME.

No. 547,175.

Patented Oct. 1, 1895.

Fig. 1

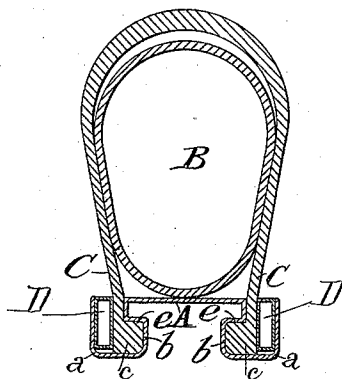
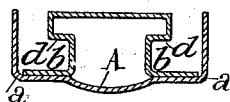


Fig. 2



Witnesses:-
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UNITED STATES PATENT OFFICE.

EDOUARD MICHELIN, OF CLERMONT-FERRAND, FRANCE, ASSIGNOR TO
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PNEUMATIC WHEEL-TIRE AND FELLY FOR SAME.

SPECIFICATION forming part of Letters Patent No. 547,175, dated October 1, 1895.

Application filed February 3, 1893. Serial No. 460,856. (No model.) Patented in France September 11, 1891, No. 216,052, and in Belgium February 13, 1892, No. 98,349.

To all whom it may concern:

Be it known that I, EDOUARD MICHELIN, a citizen of the Republic of France, and a resident of Clermont-Ferrand, in the said Republic of France, have invented a new and useful Improvement in Pneumatic Wheel-Tires and in Fellys Employed with Such Tires, (for which I have obtained French Patent No. 216,052, dated September 11, 1891, and Belgian Patent No. 98,349, dated February 13, 1892,) of which the following is a specification.

My invention relates to pneumatic tires comprising an air-chamber and an external protecting bandage or envelope which is affixed to the metallic felly of the wheel, and the object of the improvement is especially to permit the rapid removal of the bandage or envelope for the repair of the air-chamber when the latter becomes pierced or deteriorated.

The invention consists, essentially, in the construction of the two margins of the protecting bandage or envelope with internal flanges, of which the upper or outer parts form horizontal or nearly-horizontal shoulders, in the construction of the metallic felly with two channels or gutters, which present corresponding shoulders on their interior walls, or, in other words, which have in their inner walls cavities for the reception of the flanges of the bandages or envelopes, and in placing in each channel or gutter of the felly, outside of the bandage or envelope, a metal band or ring which maintains the respective flange of the latter in the said cavity provided for its reception in such manner that when the bands or rings are put in place in the two channels or gutters of the felly the margins of the bandage or envelope will be keyed in their position and there retained by the shoulders provided in the channels or gutters of the felly.

Figure 1 in the accompanying drawings represents a transverse section of a felly and a tire affixed thereto according to my invention, the felly being represented as constructed of one piece. Fig. 2 represents a transverse section of a felly which is constructed of two pieces, but which, so far as my invention is considered, is the same as that shown in Fig. 1.

A is the metallic felly, provided at each side with a channel or gutter *a*, presenting an annular cavity *b* in its interior wall.

B is the tube constituting the pneumatic chamber of the tire, and C the protecting bandage or envelope which covers and incloses the said tube. This bandage or envelope C, which may be of india-rubber and reinforced by cloth, is furnished on its two margins with internal flanges *c c*, which are received within the cavities *b* in the inner walls of the channels or gutters *a*.

D D are the metallic bands or rings by means of which, after the insertion of the flanges *c c* of the bandage or envelope C into the cavities *b b* of the channels or gutters *a*, the spaces between the exterior envelope and the exterior walls of the channel or gutter are filled up. The bands or rings D may be of metal or any other suitable material, and may be hollow, as represented in Fig. 1, and be made of one or more pieces. They may be secured in place in any convenient manner, either by attaching them to the felly or by connecting their ends together. When they are thus secured, they retain the flanges *c c* of the envelope in the cavities *b b* of the inner walls of the channels or gutters, with the horizontal shoulders *e* of the said flanges against the corresponding shoulders *d* in the channels or gutters of the felly. It is desirable that the rings or bands D should be of considerable height or depth, in order that they shall not be displaced laterally by the action of the oblique pressures exercised upon them when the tire is in operation.

In order to take out the tire or air-chamber B, it is only necessary to remove one of the bands or rings D, which is very easy because of their flexibility, and to throw over the envelope to the other side. It is not necessary that the channels or gutters *a a* should be continuous all around the felly. They may be only at intervals.

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

The combination of a felly having at its sides channels or gutters in the interior walls of which are annular cavities, an air tube or chamber placed around said felly, an external

protecting envelope or bandage provided on
the interiors of its margins with flanges to be
received in said cavities, and fastening bands
or rings inserted in said channels or gutters
5 between the exterior of the said envelope or
bandage and the exterior walls of the said
channels or gutters, substantially as herein
described.

In witness whereof I have hereunto set my
hand in the presence of two subscribing wit- 10
nesses.

EDOUARD MICHELIN.

Witnesses:
ROBT. M. HOOPER,
CHARLES ASSI.