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VULCANIZING MOLDS FOR VEHICLE
TIRES MADE OF RUBBER
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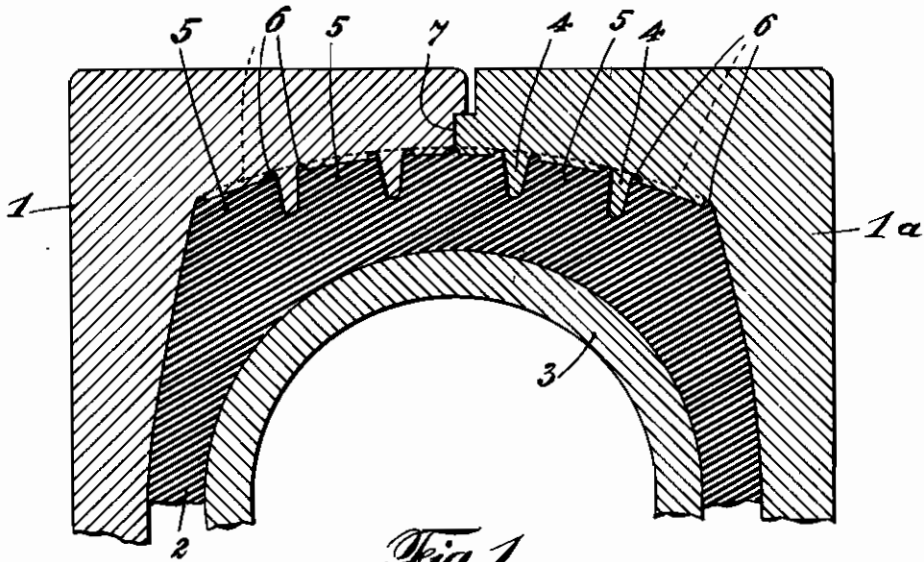


Fig. 1.

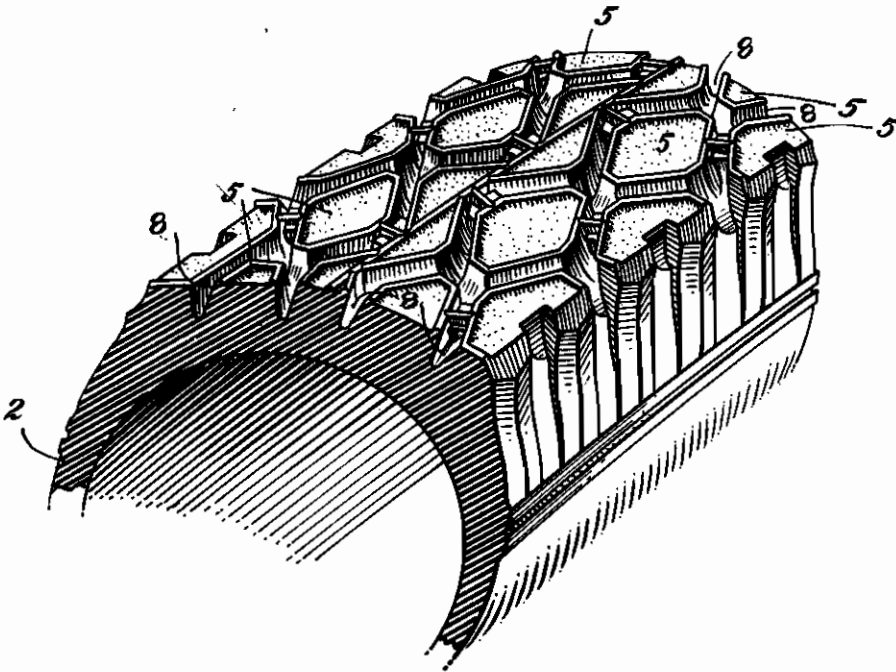


Fig. 2.

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VULCANIZING MOLDS FOR VEHICLE TIRES MADE OF RUBBER

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This invention relates to vulcanizing molds for vehicle tires made of rubber.

The object of the invention is the special formation of a vulcanizing mold for vehicle tires made of rubber which are provided on their tread with block-shaped sections.

In the manufacture of vehicle tires, the treads thereof are formed by a smooth prismatic rubber strip which is laid upon the tire foundation that is formed to a large extent of spun material. The smooth tire is then inserted in the vulcanizing mold. In order that the tread pattern, which is applied in raised fashion in the form of a grid on the inside of the vulcanizing mold shall impress itself into the tire, the latter is pressed against the walls of the mold by means of an inserted heated tubing that is subjected to excess pressure. The rubber composition, which becomes soft during the heating process, penetrates into the individual recesses of the mold. One of the objections is that sometimes the formation of the recesses is prevented or hindered by air, caught in the recesses and that does not escape. The tire then shows an incompletely formed tread pattern, so that it cannot be sold and in consequence the product of the vulcanization is a loss.

The invention consists in the provision of angles in the mold recesses corresponding to the block sections and providing cut groove shaped edge depressions which are in connection with one another and with the section joint of the mold.

The invention will be more fully described hereinafter, embodiments thereof will be shown in the drawings and the invention will be finally pointed out in the claims.

In the accompanying drawings:

Figure 1 is a cross-section through the improved vulcanization mold having the tire inserted therein; and

Figure 2 is a perspective view of a vehicle tire manufactured in the mold shown in Figure 1.

Similar characters of reference indicate similar parts throughout the drawings.

Referring to the drawings—

The metal vulcanizing mold consists of two mold halves 1 and 1a which are substantially symmetrical. Into these mold halves the vehicle tire 2 is inserted and is pressed against their walls by means of a heating tubing 3 during the process of vulcanization. On the inside of the mold halves 1 and 1a, the bars 4 which serve for the shaping of the recesses 8 that extend between the individual sectional blocks 5 in the finished tire, are applied in raised fashion. Next to these bars 4, there are cut in everywhere over the exterior surface of the tire, narrow groove shaped depressions 8 which extend round the sectional blocks and are in connection both with one another and with the section joint 7 of the mold. It is these distributed grooves working like a continuous channel in communication with the section joint 7 that permit the free passage of air. By this freedom of action, there is no choking in the pattern itself and the objections to the old and known molds are avoided. These subsidiary channels make it possible, until the very last, for the air that is shut in the mold depressions to escape through the mold section joint 7.

In consequence of the fact that the groove shaped depressions are contrived at the edge of the mold recesses, and because they have only a very small cross-section, they can be filled up only at the last, when the rubber composition has already become very soft. Consequently it is now no longer possible for air to be held fast by irregular entrance of the rubber composition into the mold recesses, with the result that the rubber tires produced in a mold in accordance with the invention, always have a tread pattern that is fully marked in all its details.

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