

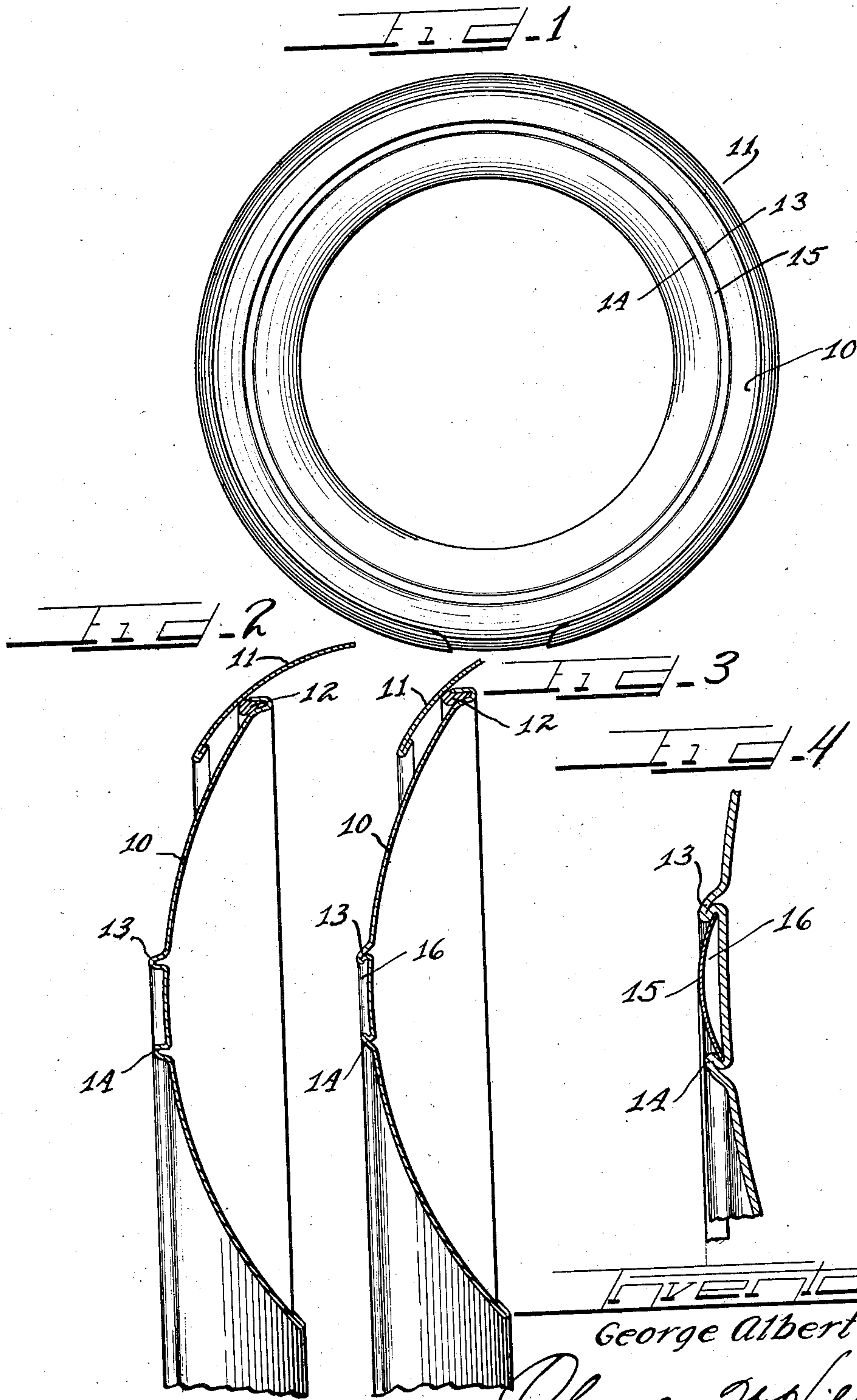
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BEADED TIRE COVER CONSTRUCTION

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BEADED TIRE COVER CONSTRUCTION

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10 Claims. (Cl. 150—54)

This invention relates to metallic tire covers and more particularly to a beading therefor and the method of applying the same to the cover.

5 An object of the invention is to provide a simplified form of beading for a tire cover which permits of the economical manufacture of the cover and which not only enhances the appearance of the cover but also serves to strengthen and reinforce the cover.

10 Another object of the invention is to provide a beading for a cover of such formation as will permit of the introduction of a decorative strip in the beaded portion of the cover after the cover has been fabricated whereby a strip of any de-
15 sired finish or color may be secured to the cover, which strip may be in accord with the taste of the party applying the same to the cover or may be in accord with the appointments of the car or vehicle to which the cover is to be applied.

20 Still another object of the invention relates to a novel method of forming the bead construction on the cover whereby a mounting for a decorative strip is rolled, spun or otherwise formed in the cover at the same time the cover is fabricated
25 so that after the cover has been completed a decorative strip may be inserted in this formation and retained therein without the necessity of using any fastening or securing means for holding the strip in place.

30 In accordance with the general features of this invention there is provided a cover member which has formed in it as an integral part thereof a plurality of spaced converging slanting ring-like extensions which define an annular pocket into
35 which a decorative strip is adapted to be forced or snapped and retained in the pocket by these extensions.

40 Another feature of the invention relates to the method of forming this bead construction in the cover, which method consists in rolling, spinning or otherwise providing the extensions in the cover at the same time that the cover is formed whereby after the cover has been fabricated a decorative
45 strip may be inserted in this bead formation between the extensions so as to be retained in position on the cover without the necessity of employing any means for fastening or securing the strip in place other than the extensions themselves.

50 Other objects and advantages of this invention will more fully appear from the following detailed description, taken in connection with the accompanying drawing which illustrates a single embodiment thereof, and in which

55 Figure 1 is a side view of a cover with a bead

formation embodying the features of this invention;

Figure 2 is an enlarged fragmentary cross sectional view through a cover such as that shown in Figure 1 in the course of manufacture;

Figure 3 is a view similar to Figure 2 but showing the extensions on the cover as being bent towards each other into their final form to define a pocket for receiving a decorative strip; and

Figure 4 is an enlarged sectional view of the finished bead construction showing the manner in which a decorative strip is retained in place by the slanting and converging extensions on the cover.

The cover shown in the drawing is of the two-part type such as that disclosed in applicant's Patent No. 1,807,697 which issued June 2, 1931, and more particularly embodies a ring-like side plate 10 and a split rim or tread covering portion 11 cooperable with the plate to hold the same in place. That is to say, the split rim is contractible upon the tire to not only retain itself on the tire but to also retain the plate in position on the tire as disclosed in my aforesaid patent. It is of course understood that the bead formation of my present invention is not limited to this specific form of cover, but may be used with other types of tire covers with equal advantage.

While it is to be appreciated that either the outer peripheral part or the side wall part or both of the cover may be provided with the beading of my present invention, I have in order to simplify the illustration and description of this invention illustrated the beading as being only applied to the side plate portion of the cover.

The side plate 10 is of ring-like construction and may be fabricated from any suitable stiff material such for example as metallic sheet. This part is rolled, spun or otherwise formed into a ring having a curved convex cross-section, and is provided at its outermost margin with a cushioning strip 12 for engagement with the cover rim 11 as disclosed in my aforesaid patent.

In the forming of this ring-like plate, it is provided with a plurality of spaced circular rib-like lateral extensions 13 and 14 disposed on the outer side of the plate. These extensions, as well as the plate, may of course be formed in any suitable manner, but I find that I can most readily fabricate this structure by a rolling process.

Each of these two rib-like extensions 13 and 14 is formed integral with the plate proper and consists of portions of the plate material bent outwardly from the cover proper and back on itself toward the cover proper. The rib-like beads thus

formed define a pocket between them for receiving a decorative strip 15 to be hereinafter described in connection with Figure 4.

After the rib-like beads 13 and 14 have thus been formed, they are then bent inwardly toward each other as shown in Figure 3 so as to each assume a slanting position and whereby the ribs converge. In other words the ribs are caused to assume a reentrant position whereby a strip retaining pocket 16 is provided between the ribs.

Thereafter a strip of suitable material such for example as stainless steel which has a width slightly greater than that of the pocket 16 may be snapped into the pocket 16 as shown in Figure 4 with its marginal portions in engagement with the reentrant ribs 13 and 14, thus enabling these ribs to retain the strip in place in the pocket. It will of course be appreciated that the flexing of this strip into the pocket 16 causes it to become bowed whereby its marginal edges are at all times urged by the natural resiliency of the material into tight contact with the inner surfaces of the reentrant ribs 13 and 14 thus augmenting the frictional engagement of the strip with the walls of the pocket 16.

This decorative strip may be applied at the time of the fabrication of the cover to the cover part, or it may be applied to the cover at any later desired time. Furthermore, this strip may be of a finish and color other than that of the cover part with which it is associated, and it may for example be of a finish and color which will blend with the appointments of the vehicle to which the spare tire cover is to be applied. This is an advantageous feature since a cover of my invention may be shipped to a car manufacturer where a decorative strip such as the strip 15 may be applied to the cover in accordance with the taste and requirements of the manufacturer. Then, too, this decorative strip may be finished at the automobile manufacturer's plant so as to have the same finish as a part of the vehicle to which the spare tire cover is to be applied.

Now it will be apparent from the foregoing description that the bead construction of my invention essentially comprises reentrant-like ribs defining reentrant openings in the pocket 16 into which the marginal edges of a flexible strip are adapted to be flexed for the purpose of enabling the strip to be retained in place by the reentrant ribs without the necessity of any additional fastening means. Furthermore, this bead construction is advantageous in the cover inasmuch as it enhances the cross-sectional rigidity of the cover part with which the bead construction is associated and thus aids in resisting distortion of the cover part.

It is of course to be understood that although I have illustrated and described in detail the preferred embodiment of the invention, the invention is not to be thus limited but only insofar as defined by the scope and spirit of the appended claims.

I claim as my invention:

1. A spare tire cover construction comprising an arcuate member of substantially form-retaining sheet material shaped to conform longitudinally and transversely to a part of a spare tire so as to cover and protect the same, said member having its tire facing surface substantially uninterrupted and being formed with spaced substantially arcuate ribs extending away from the tire, each rib consisting of a folded portion of said member, said ribs cooperating with the intermediate portion of the member to afford

a longitudinally arcuate and transversely substantially dovetail-shaped pocket, and a relatively resilient arcuate substantially form-retaining strip formed to be compressed transversely so as to be substantially snapped into said pocket and grip the ribs when allowed to expand, said strip being of such width that, when disposed in said pocket, it is transversely bowed and projects beyond said ribs to thereby protect the outer surface of the member from impact or engagement with the ground or other support and thereby protect said surface from injury.

2. A spare tire cover construction comprising a member shaped to conform to a part of a tire and folded upon itself to provide spaced substantially parallel walls converging outwardly away from the tire and cooperating with the intermediate part of the member to afford a substantially dovetail-shaped pocket, and a strip of relatively resilient substantially form-retaining material of normally greater width than the mouth of said pocket so that said strip is compressed transversely to pass into said mouth and then allowed to expand into tight engagement with said walls, said walls thereby overhanging and retaining said strip and obviating any necessity for further retaining means.

3. A spare tire cover construction comprising a member shaped to conform to a part of a tire and folded upon itself to provide spaced substantially parallel substantially endless walls converging outwardly away from the tire and cooperating with the intermediate part of the member to afford a substantially dovetail-shaped pocket, and a strip of relatively resilient substantially form-retaining material of normally greater width than the mouth of said pocket so that said strip is compressed transversely to pass into said mouth and then allowed to expand into tight engagement with said walls, said walls thereby overhanging and retaining said strip and obviating any necessity for further retaining means.

4. A spare tire cover construction comprising a member shaped to conform to a part of a tire and folded upon itself so as to provide a substantially continuous tire engaging surface and to provide spaced substantially parallel walls converging outwardly away from the tire and cooperating with the intermediate part of the member to afford a substantially dovetail-shaped pocket, and a strip of relatively resilient substantially form-retaining material of normally greater width than the mouth of said pocket so that said strip is compressed transversely to pass into said mouth and then allowed to expand into tight engagement with said walls, said walls thereby overhanging and retaining said strip and obviating any necessity for further retaining means.

5. In a beaded tire cover structure, an arcuate cover member having a circumferential extent substantially in excess of 180° and shaped to conform circumferentially and transversely to a major circumferential portion of a surface of a spare tire, said member being provided with substantially coaxial spaced ribs integrally united thereto and inclined outwardly toward each other to provide with said member an arcuate enlarged socket substantially commensurate with said member, said member being substantially imperforate at said ribs, whereby said socket is adapted to receive a relatively resilient form-retaining bead strip adapted to be transversely

compressed when in said socket so as to grip the ribs and be retained thereby.

5 6. A spare tire cover comprising an arcuate plate-like member having a circumferential extent substantially in excess of 180° and shaped to conform circumferentially and transversely to a major circumferential portion of a surface of a spare tire, said member being formed with substantially coaxial spaced ribs inclined toward each other and providing with said member an arcuate enlarged socket substantially commensurate with said member, and a relatively resilient form-retaining strip of substantially the same curvature as said socket and disposed therein, said 10 strip being transversely compressed when in said socket so as to grip the ribs and be retained thereby, said strip projecting outwardly beyond said ribs so as to constitute a bumper to protect said member from impacts and from scratching by the ground or other support when the cover is 20 mounted on or off the tire.

7. A beaded tire cover construction comprising a member shaped to conform to a part of a tire and having spaced substantially parallel substantially endless walls converging outwardly away from the tire and cooperating with the intermediate part of the member to afford a substantially dovetail-shaped pocket, and a strip of relatively resilient substantially form-retaining material of normally greater width than the 25 mouth of said pocket so that said strip is compressed transversely to pass into said mouth and then allowed to expand into tight engagement with said walls, said walls thereby overhanging and retaining said strip and obviating any necessity for further retaining means. 30

8. In a beaded tire cover structure, an arcuate cover member formed to cover a longitudinally arcuate part of the tire and provided with an arcuate exterior wall substantially coaxial with 35 the member and inclined toward the axis of the

member and defining with the adjacent part of the member an inwardly opening arcuate groove for receiving a bead strip, said member being substantially imperforate at said wall, and a radially resilient bead strip sprung in said groove 5 and having its radially outer edge engaging with said wall under pressure so as not to rattle therein and so as to be retained and protected thereby.

9. In a beaded tire cover structure, an arcuate cover member formed to cover a longitudinally 10 arcuate part of the tire and provided with an arcuate exterior wall substantially coaxial with the member and inclined toward the axis of the member and defining with the adjacent part of the member an inwardly opening arcuate groove 15 for receiving a bead strip, said member being substantially imperforate at said wall, and a radially resilient bead strip sprung in said groove and having its radially outer edge engaging with said wall under pressure so as not to rattle there- 20 in and so as to be retained and protected thereby, said strip projecting laterally outwardly beyond said wall to serve as a buffer to protect said wall from injury.

10. In a beaded tire cover structure, an arcuate 25 cover member formed to cover a longitudinally arcuate part of the tire and provided with an arcuate exterior wall substantially coaxial with the member and defining with the adjacent part of said member a radially opening arcuate 30 groove for receiving a bead strip, said member being substantially imperforate at said wall, and a radially resilient bead strip having a margin thereof sprung into said groove into engagement with said wall, said wall being exposed in front 35 of said margin so as to protect as well as retain said margin, said strip projecting forwardly and radially beyond said wall so as to serve as a buffer in protecting said wall from injury.

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