

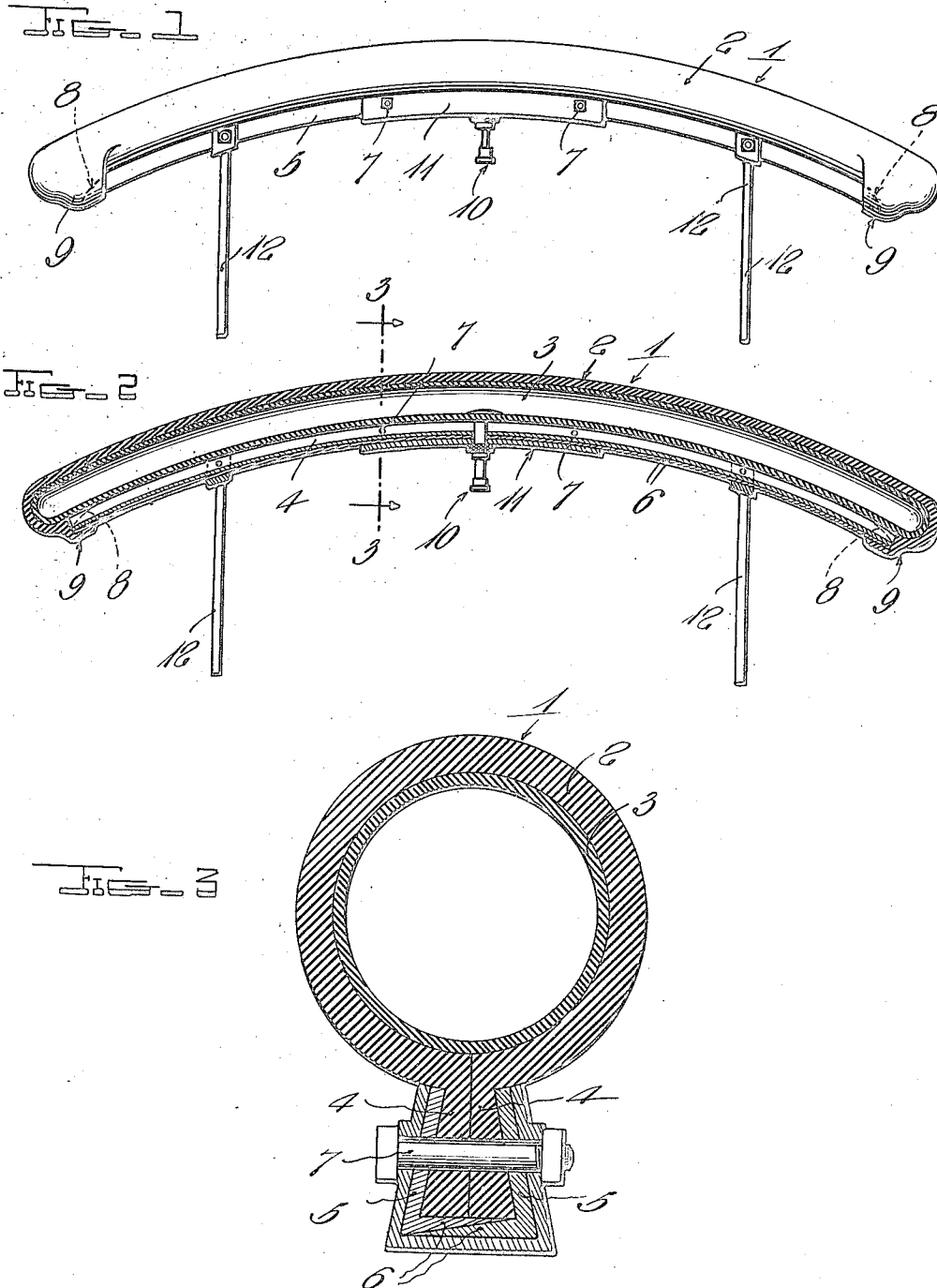
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C. D. KUNKEL

BUMPER FOR AUTOMOBILES

Filed May 29, 1922



INVENTOR.

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UNITED STATES PATENT OFFICE.

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BUMPER FOR AUTOMOBILES.

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To all whom it may concern:

Be it known that I, COOPER D. KUNKEL, a citizen of the United States, residing at Pulaski, in the county of Pulaski and State of Virginia, have invented certain new and useful Improvements in Bumpers for Automobiles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements on devices sometimes known as fenders, but now commonly referred to as bumpers.

The principal object of the invention is to generally improve upon devices of this class by producing one of comparative simplicity and durability which is practical, effective in operation, strong and durable and inexpensive to manufacture.

More specifically, it is another object of the invention to provide an improved bumper embodying a pneumatic cushion provided with a rib which is received between the flanges of a supporting rim, together with novel means for assisting in connecting these parts together.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a top plan view of a bumper constructed in accordance with this invention.

Figure 2 is a horizontal section with parts in elevation.

Figure 3 is an enlarged transverse section taken on the line 3—3 of Fig. 2.

In the drawings, the numeral 1 represents a pneumatic cushion which embodies a rubber casing 2 in which an air tube 3 is placed. The casing is split to permit insertion and removal of the tube and it is equipped at its abutting edges with lateral extensions or beads 4 which when brought together provide a rib. These beads 4 as shown, are gradually increased in thickness towards their free edges and they are intended to be clamped between the flanges 5 of a supporting rim. Although this rim could be of some other construction, it is preferably composed of duplicate sections comprising the aforesaid flanges, each of which is pro-

vided with a lateral and inwardly directed portion 6. As seen more clearly in the cross sectional view, these portions 6 are beveled toward their free edges and are arranged in overlapping relation. As also shown here, the portions 6 are disposed at an acute angle with respect to the flanges and when they are arranged in such overlapping relation, the free edges of the flanges are caused to diverge and to effectively and tightly bind against the inclined faces of the aforesaid beads. It may be conveniently stated here that these beads and the flanges are formed with alined openings to permit passage of the clamping bolts 7. It may be further stated that the sections of the rim at their outer ends are decreased in size or beveled as indicated at 8 and these beveled ends are received in pockets 9 integral with the opposite ends of the aforesaid casing. It is obvious that with this arrangement, the cushion and rim are effectively secured together and held against relative longitudinal shifting. As is understood, the inner tube 3 will be equipped with the usual inflation valve 10 and the overlapping portions 6 of the rim will be slotted or formed with openings to accommodate this valve. Furthermore, while it is not essential, a substantially U-shaped reinforcing clip 11 will be provided in practice and will be placed on the intermediate portion of the rim to secure rigidity at this point and to decidedly strengthen the device at a point which is more likely to be subjected to pressure and strain in the event that the machine on which the bumper is placed has a collision with another. In practice, any suitable type of brackets 12 or attaching fixtures will be employed for mounting the bumper on the automobile chassis.

It is to be stated here that it is desirable, but not essential, to design both the pneumatic cushion and its supporting and clamping rim so that it is curved to an extent to render the bumper more or less artistic and to position the ends closer to the front wheels and to space the center away from the radiator to give more room for cranking.

The several advantages and features derived from a bumper of the construction set forth are doubtless obvious, as is the manner of assembling the parts and manner of mounting the device upon the automobile. In view of this, a more lengthy and

detailed description is thought unnecessary.

Since probably the best results may be obtained with the construction and arrangement herein shown and described, this is taken as the preferred embodiment of the invention. However, I wish it to be understood that minor changes coming within the scope of the invention as claimed may be resorted to if desired.

10 I claim:

1. An automobile bumper comprising an elongated cushion equipped at its opposite ends with pockets and also formed with a rib, and a rim composed of sections between which said rib is clamped, the ends of said sections being received in said pockets.

2. In an automobile bumper, a cushion equipped with a rib having its outer faces inclined, and a rim having flanges engaging said inclined faces of the rib, said rim

being also equipped with inwardly directed beveled portions arranged in overlapping relation, said portions being disposed at acute angles to the flanges to permit the latter to engage the inclined faces of the rib.

3. An automobile bumper comprising a pneumatic cushion including an inflated air tube and a casing provided at its ends with pockets, said casing being also equipped along one side with a longitudinal rib, a rim composed of sections clamped against said rib, the outer ends of said rim sections being received in said pockets, and a reinforcing member on the intermediate portion of said rim.

In testimony whereof I have hereunto set my hand.

COOPER DAVE KUNKEL.