E. B. STIMPSON.

TIRE PROTECTIVE RIVET.

APPLICATION FILED JAN. 24, 1908.

940,085. Patented Nov. 16, 1909.

Fig. 1

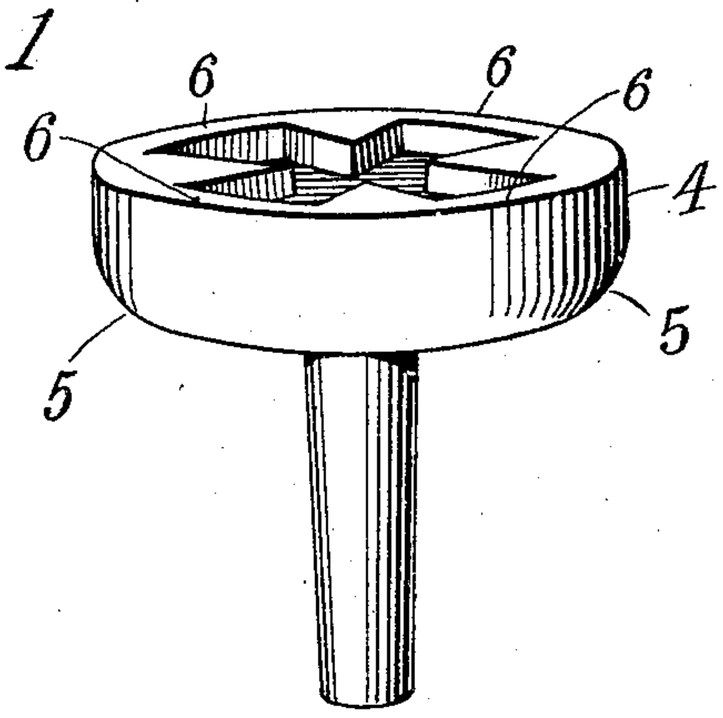


Fig. 2

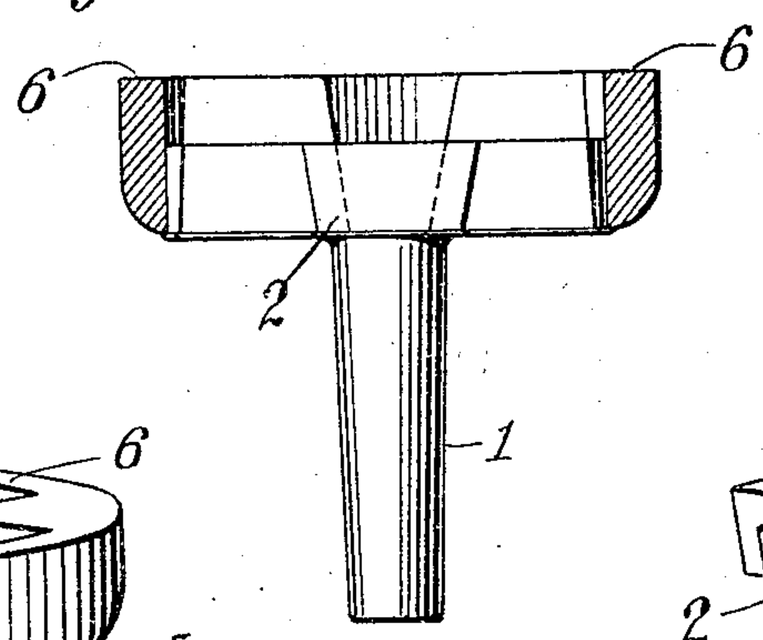


Fig. 4

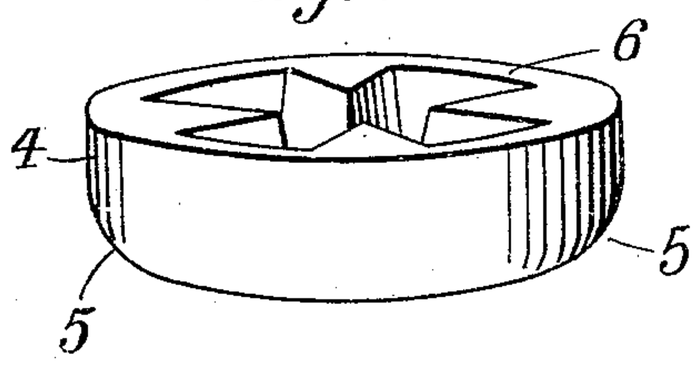


Fig. 5

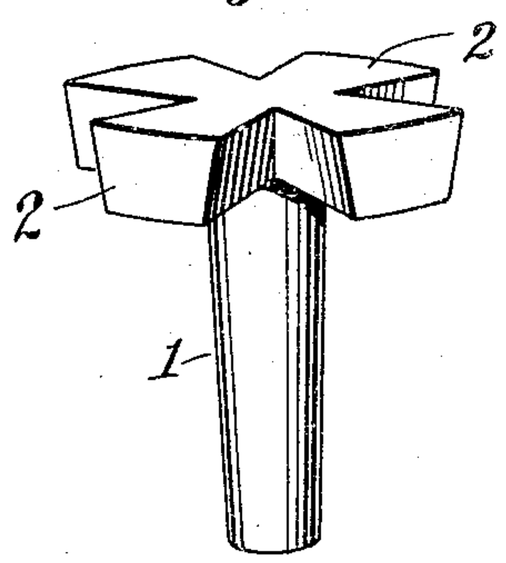
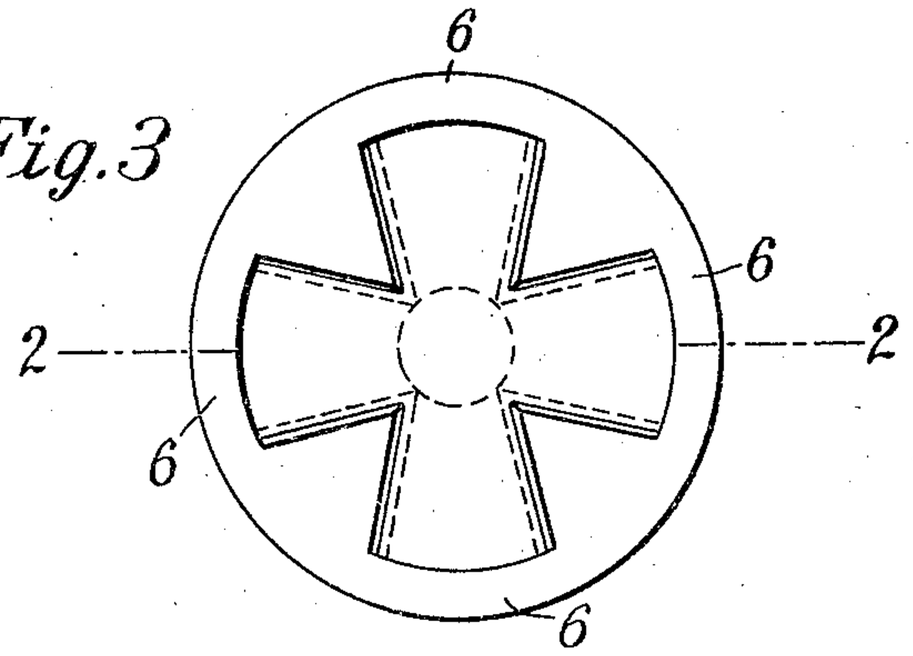


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

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TIRE-PROTECTIVE RIVET.

940,085. Specification of Letters Patent. Patented Nov. 16, 1909.

Application filed January 24, 1908. Serial No. 412,384.

To all whom it may concern:

Be it known that I, EDWIN BALL STIMPSON, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Tire-Protective Rivets, of which the following is a specification.

The important object of the rivet of my present invention is its use in connection with tires of automobiles and so forth to protect the same against wear and to prevent slipping and skidding. Its advantages of construction and utility will appear from an inspection of the drawings, also from the following description.

In the drawings which show one of the forms which my rivet herein may take, Figure 1 is a perspective view; Fig. 2 is a vertical cross-section partly in elevation; Fig. 3 is a top plan view looking at the head of the rivet from above and is related to Fig. 2 in that Fig. 2 is a vertical mid-section on line 2—2 in Fig. 3; and Figs. 4 and 5 are perspective views of the members that make up the rivet of Fig. 1.

Describing now the rivet of my present invention with special reference to the form thereof shown in the drawings, the rivet of Fig. 1 comprises the shank-member of Fig. 5 dropped from above into the road-contacting head-member of Fig. 4.

The shank-member comprises a shank 1 having for its upper or head portion radiating arms 2. These arms are shown with their sides 3 tapering inward toward the bottom. The road-contacting head-member is designated 4 and is shown rounded at 5 to contact with the tire fabric without cutting through it. Punched or otherwise removed from it is a portion which in outline corresponds with the shape of the shank-head in Fig. 5. Thus this opening through the head-member in the particular device shown has the outline of a Maltese-cross and the opening extends completely through the head from top to bottom. The sides of each arm of the opening taper toward each other from the top to the bottom to correspond and coact with the corresponding tapers of the sides of the arms 2 of the shank-head.

When the shank-member or rather its head has been assembled into the head-member, the latter, being preferably of greater height has the top edges of its opening clear of the top of the shank-head and consequently presents all of its edges free and clear to bite into the road to the best advantage. Moreover it will be noted that the rivet in its preferred form has the head-member circular in outline whereby cup edges are formed between the ends of the arms of the opening and the periphery of the head. Preferably the head-member will be of hardened steel whereas the shank-member will be soft.

To prevent the head and shank-members from separating before the rivet is applied to the fabric or tire, the shank-member after it has been dropped into place within the opening in the head-member is swaged underneath to spread the soft metal of its arms slightly over upon the bottom of the head-member. For this purpose the members are so designed that when the shank member has been dropped into the cavity of the head-member the bottom of its arms will project a very slight distance below the bottom of the head-member.

Among the advantages of the rivet are the ease with which it is made and assembled, and also its especially effective road-biting edges. Thus looking at Figs. 1 and 3, it will be seen that the biting edges are first, disposed with advantage to prevent both slipping and skidding and secondly, have maximum length, consistent with a given size of rivet head. Thus in the first place, the radiating arms of the opening approach the periphery of the rivet head to leave cup edges or walls 6 which are particularly effective in gripping the road; and secondly, these walls 6 being connected by inwardly extending portions, the total length of road-gripping edges is considerably increased as compared with an ordinary cup rivet of the same size.

Having thus described my invention, what I claim is:

1. A protective-rivet, comprising a shank-member and a head-member, the shank-member having a head comprising radiating arms, and the head-member having an opening adapted in shape to receive the radiating arms of the shank-member, said opening having the ends of its arms separated from the periphery of the head-member by a wall.

2. A protective-rivet, comprising a shank-member and a head-member, the shank-member having a head comprising radiating arms, and the head-member having an open-

ing adapted in shape to receive the radiating arms of the shank-member, said opening having the ends of its arms separated from the periphery of the head-member by a wall, the sides of the shank-arms tapering inwardly toward the bottom and the corresponding side walls of the opening through the head-member co-acting therewith.

3. A protective-rivet, comprising a shank-member and a head-member, the shank-member having a head comprising radiating arms, the sides of the arms tapering inwardly toward the bottom and the head-member having an opening through it from top to bottom corresponding in shape to and adapted to receive the head of the shank-member, the bottom edges of the arms of the shank-member projecting and being swaged under the head-member.

4. A protective-rivet, comprising a head and shank, the head having its road-contacting face recessed with an opening having radiating arms, the ends of said arms being separated from the adjacent periphery of the head by a wall.

In witness whereof, I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

EDWIN BALL STIMPSON.

Witnesses:
Jos. F. O'Brien,
F. W. Springmeyer.