

E. B. STIMPSON.
TIRE PROTECTIVE RIVET.
APPLICATION FILED JAN. 28, 1908.

925,052.

Patented June 15, 1909.

Fig. 1

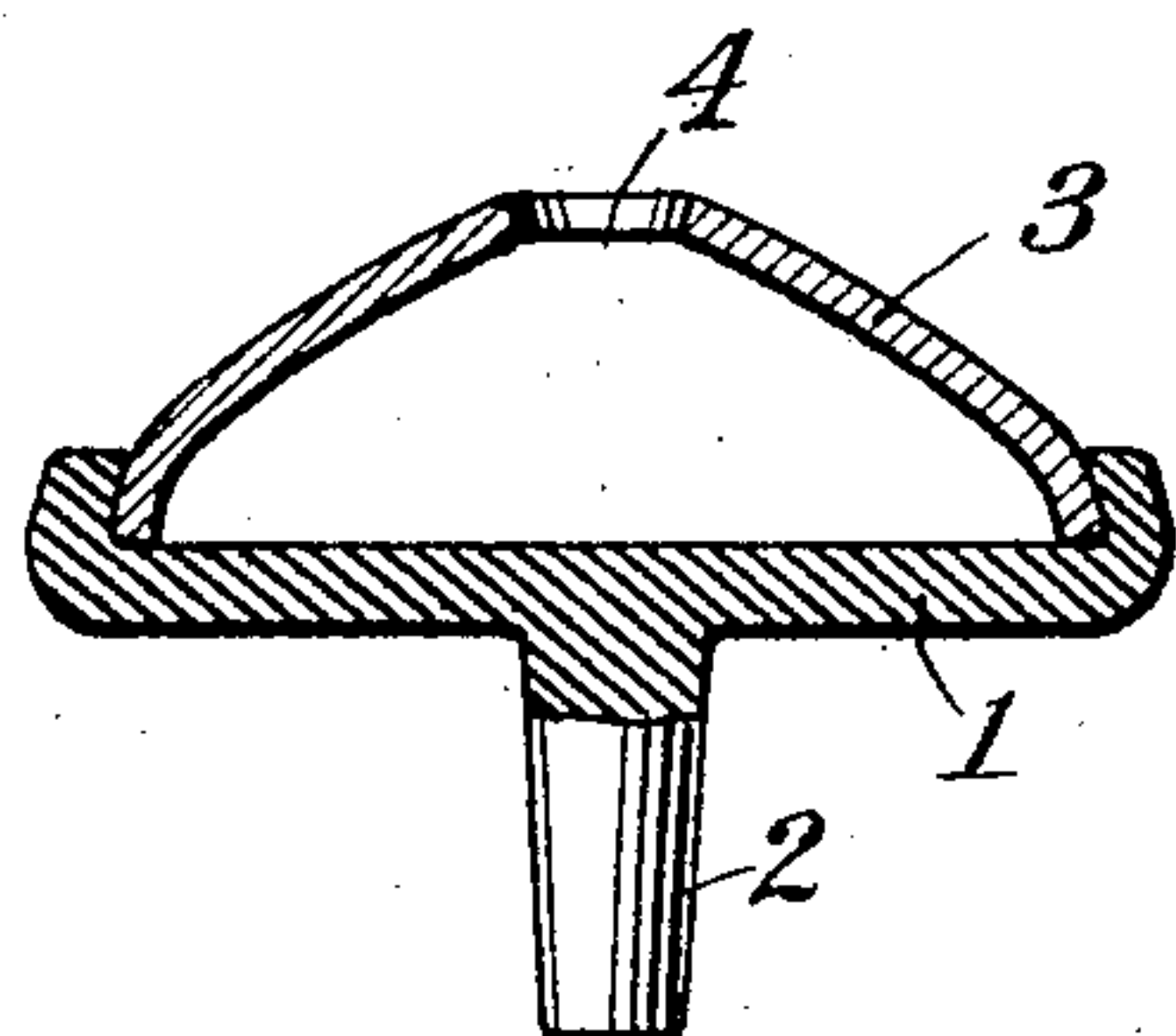


Fig. 2

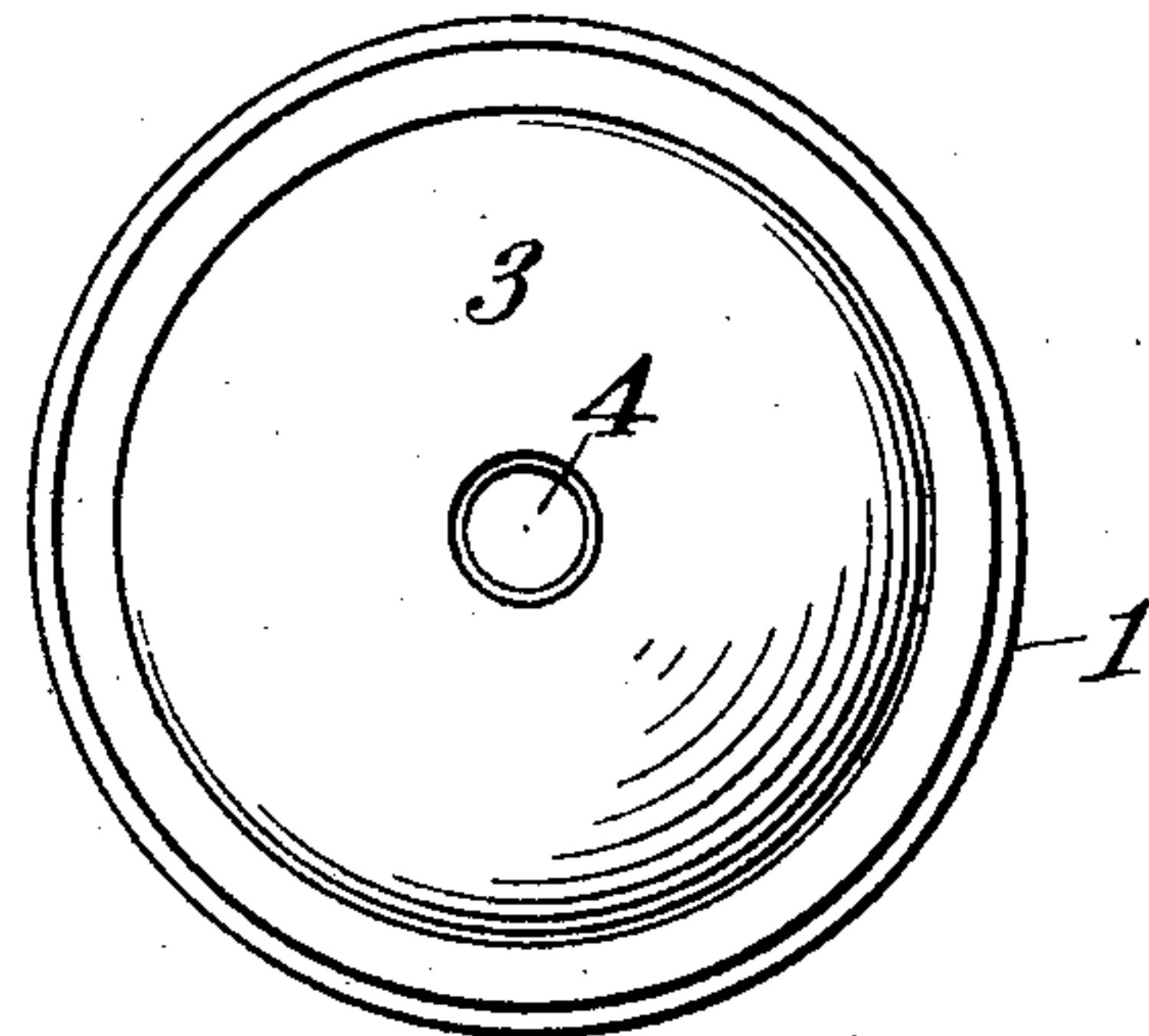


Fig. 3



Fig. 4

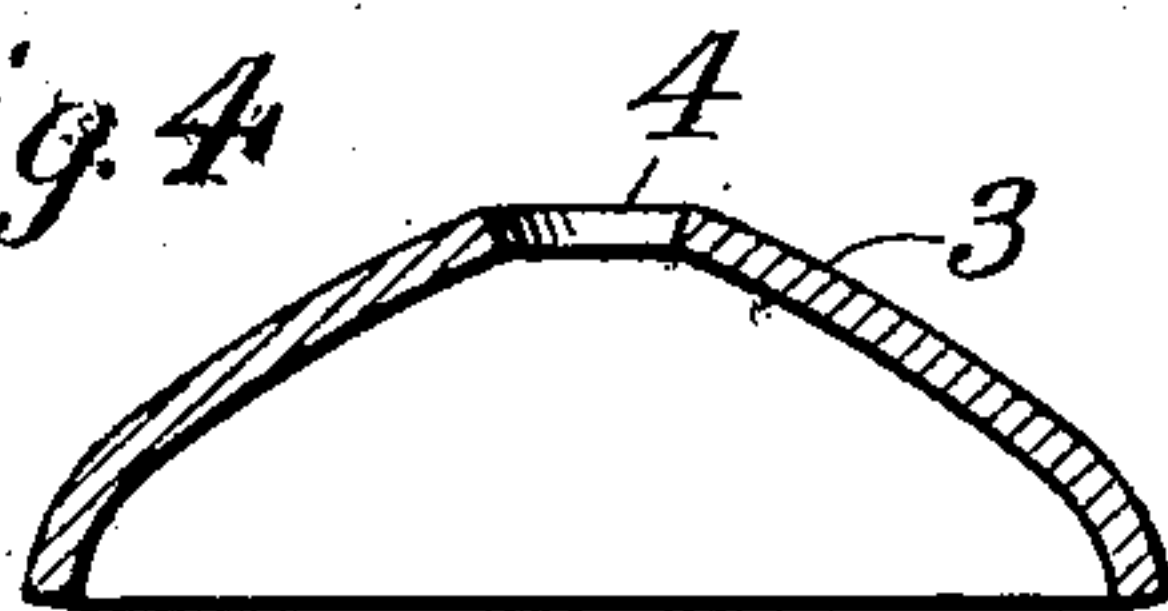


Fig. 5

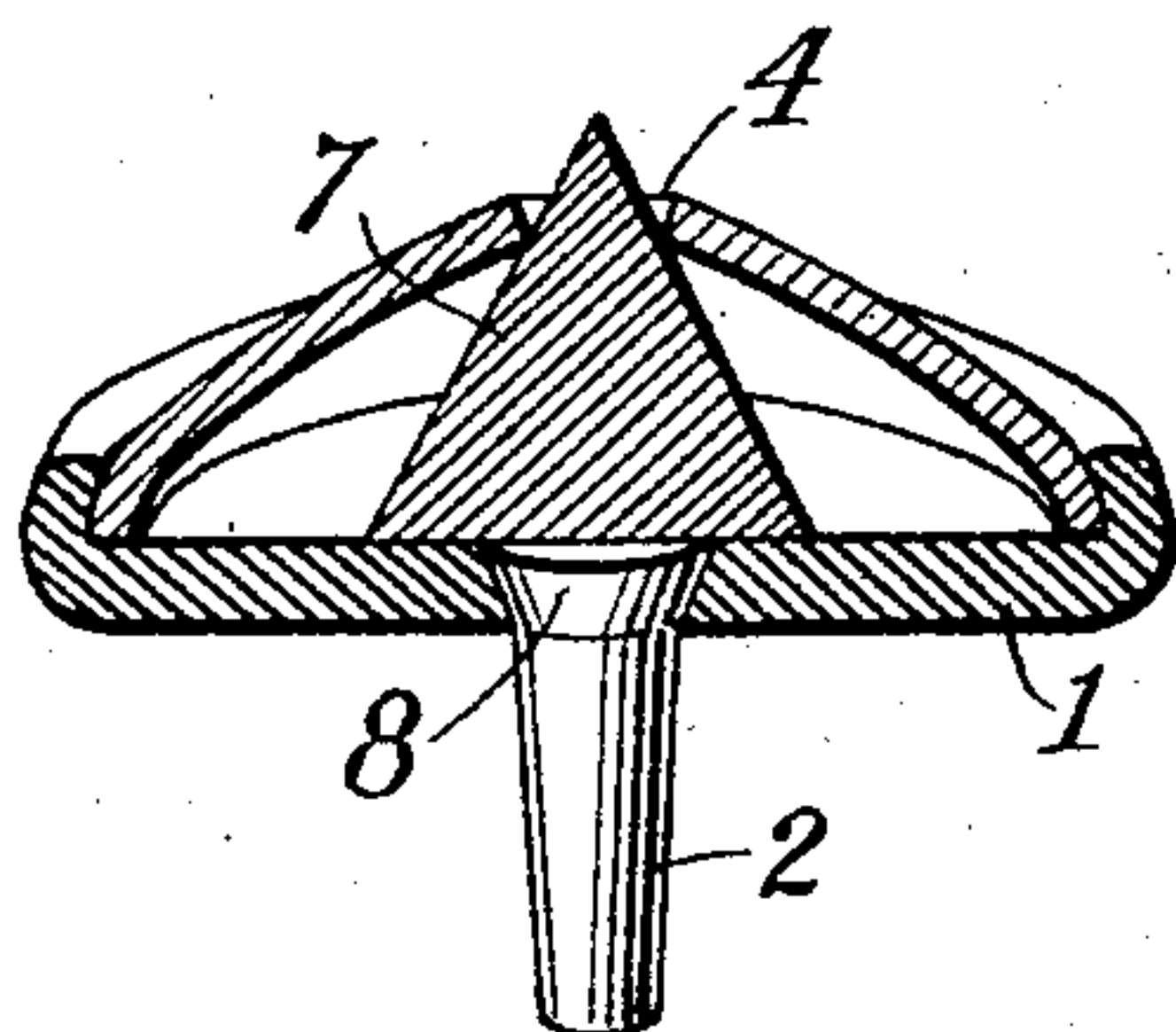
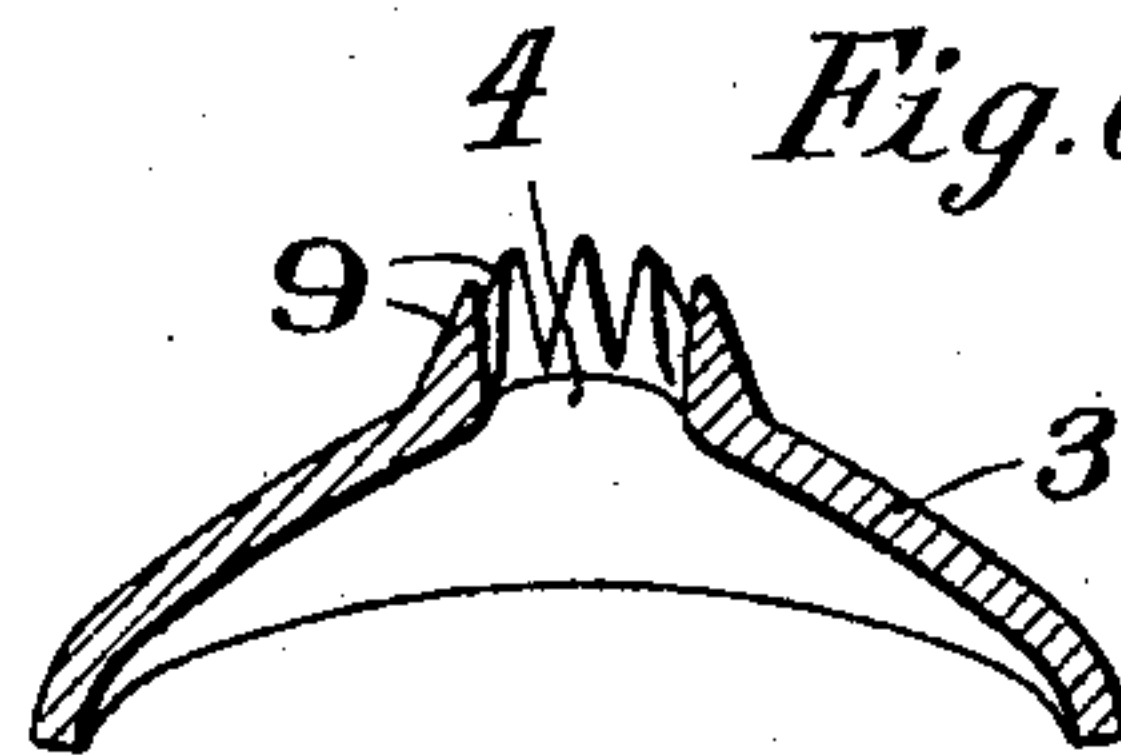


Fig. 6



Witnesses:
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UNITED STATES PATENT OFFICE.

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TIRE-PROTECTIVE RIVET.

No. 925,052.

Specification of Letters Patent.

Patented June 15, 1909.

Application filed January 28, 1908. Serial No. 412,971.

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 object of the rivet of my present invention is to provide in advantageous form a rivet adapted to protect automobile tires and the like from wear and at the same time prevent slipping and skidding.

In the drawings which show some of the forms which my rivet may take, Figure 1 is a vertical mid-section partly in elevation of a rivet within my invention; Fig. 2 is a top plan view of the rivet of Fig. 1; Figs. 3 and 4 show a blank in two stages in a preferred method of forming one member of the rivet; Fig. 5 is a perspective view of a modified form of rivet as same would appear if cut in two parts by a vertical mid-section, portions being shown in elevation; and Fig. 6 is a perspective view of a modification of one member of the rivet as same would appear cut in two parts by a vertical mid-section.

Describing now my invention with particular reference to the forms of rivets shown in the drawings and reserving it to the claims to point out the novel features, the rivet of Fig. 1 is seen to comprise a cup or base member 1, a shank 2, and a concavo-convex member 3. In this particular form the shank is integral with the base member. Also it will be noted that the concavo-convex member is located in the cup with its convexity outward and that it is secured in such position by the infolding of the cup against its outside. The result of the construction is a rivet having a head and a shank wherein the head is hollow. The top of the head has an opening 4 through it, thereby providing especially effective road-biting edges to prevent slipping and skidding. This opening is through the concavo-convex member; and said member will ordinarily be of hardened steel.

The concavo-convex member and the opening therethrough may be formed in a number of ways, but the preferred method is to start with a washer-like disk 5 such as in Fig. 3. This is then given a dome-like form as in Fig. 4. This method is preferred over starting with a dome and thereafter boring a vertical walled opening through its top, since

the latter does not present road biting edges so effectively in gripping the road as the preferred method, whereby referring to Fig. 4 it will be noted that the edges of the opening through the concavo-convex member are presented at an angle to the road and having the double advantage, first, of being more effective initially than the same opening with vertical walls and secondly, of wearing off more suitably as the rivet is used.

While the method as described in connection with Figs. 3 and 4 of forming the concavo-convex member and its opening is preferred as giving superior results, nevertheless it is not to be considered as necessarily essential to the practice of the invention.

The rivet shown in Fig. 5 differs from that already described in having first, a non-integral shank 2, and second, in having an additional member 7 interposed between the shank and the concavo-convex member. Thus it will be noted that the cup or base member 1 of Fig. 5 has an opening through its bottom and that the shank member projects from said opening and is headed at 8 to be too large to pass completely through it; that a member 7 which may take a variety of forms is located in the cup before the latter is inturned against the concavo-convex member; and that the particular form shown of this member 7 is a solid pyramid or cone of a size adapted to have its base bear against the headed portion 8 of the shank-member while its point projects through the opening in the concavo-convex member, between which member and the headed portion of the shank said member 7 is confined.

The result of the construction is that the shank-member is supported from within to hold its shank in projecting position from the hollow rivet-head, whereby the free-end of the shank can be conveniently riveted.

The projecting point of the member 7 engages the road through the opening in the concavo-convex member. After the point has worn off and the opening itself has worn to a larger diameter, the member 7 will not drop out, at least not until the opening shall have become worn very large, but will move loosely about in the hollow of the rivet head and present various points and edges of itself through the opening in the concavo-convex member which, cooperating with the edges of said opening, will assist in preventing slipping and skidding.

In Fig. 6 a modification of the concavo-convex member is shown in which in forming the opening therethrough, instead of completely punching out the material, it is slitted to form points 9 which are bent outwardly to form road-contacting projections at the periphery of the opening. This form of concavo-convex member is especially effective under icy conditions, and may be used as a substitute for the concavo-convex member either in Fig. 1, or in Fig. 4.

The expression "box-like" used in some of the claims is intended to bring out the idea that the head of the rivet, so specified, is substantially inclosed like a box or a receptacle, but this expression is not to be taken as implying anything as to the precise shape of the rivet head. For example, it is not to be implied that the head is rectangular, or otherwise. As a matter of fact, the rivet head in the preferred form shown has considerable resemblance to a flattened hollow ball.

Having thus described my invention, what I claim is:

1. A protective-rivet comprising a shank and a hollow box-like head, the head having a rigid base and a concavo-convex upper portion springing from the base with its convexity upward and having an opening through its top, the rim of which contacts with the road, and the shank projecting from the bottom of said hollow box-like head and having no contact with the concavo-convex portion of the head.

2. A protective rivet comprising a hollow box-like head, the top of said head having an opening through it; a shank projecting from the bottom of the hollow box-like head; and a member arranged to contact with the road through the aforesaid opening in the top of the head.

3. A protective-rivet comprising a hollow head having an opening through its bottom; a shank projecting from said opening, having a headed portion too large to pass through it; and a member located in the hollow head and extending between the top of said member and the headed portion of the shank.

4. A protective-rivet comprising a hollow head consisting of a base and a concavo-convex member secured with its convexity outward upon the base, said base and concavo-convex member each having an opening therethrough; a shank projecting from the opening through the base and having a headed portion too large to pass there-through; and a member in the hollow head extending between the concavo-convex member and the headed portion of the shank and having a projection extending through the opening in the concavo-convex member.

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

EDWIN BALL STIMPSON.

Witnesses:

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