

J. R. GREENLEE.
HORSESHOE GALK.
APPLICATION FILED AUG. 3, 1915.

1,155,231.

Patented Sept. 28, 1915.

Fig. 1.

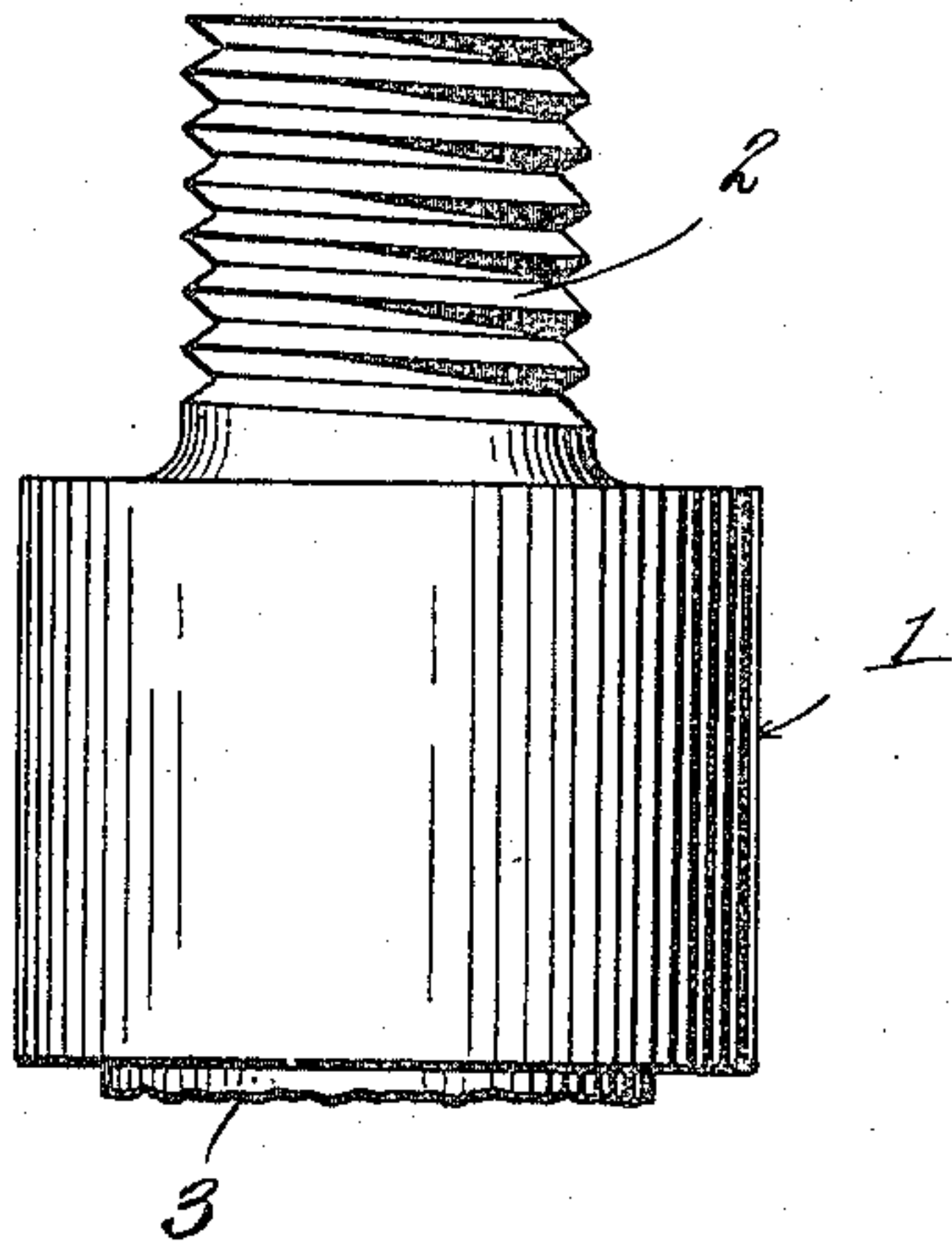


Fig. 2.

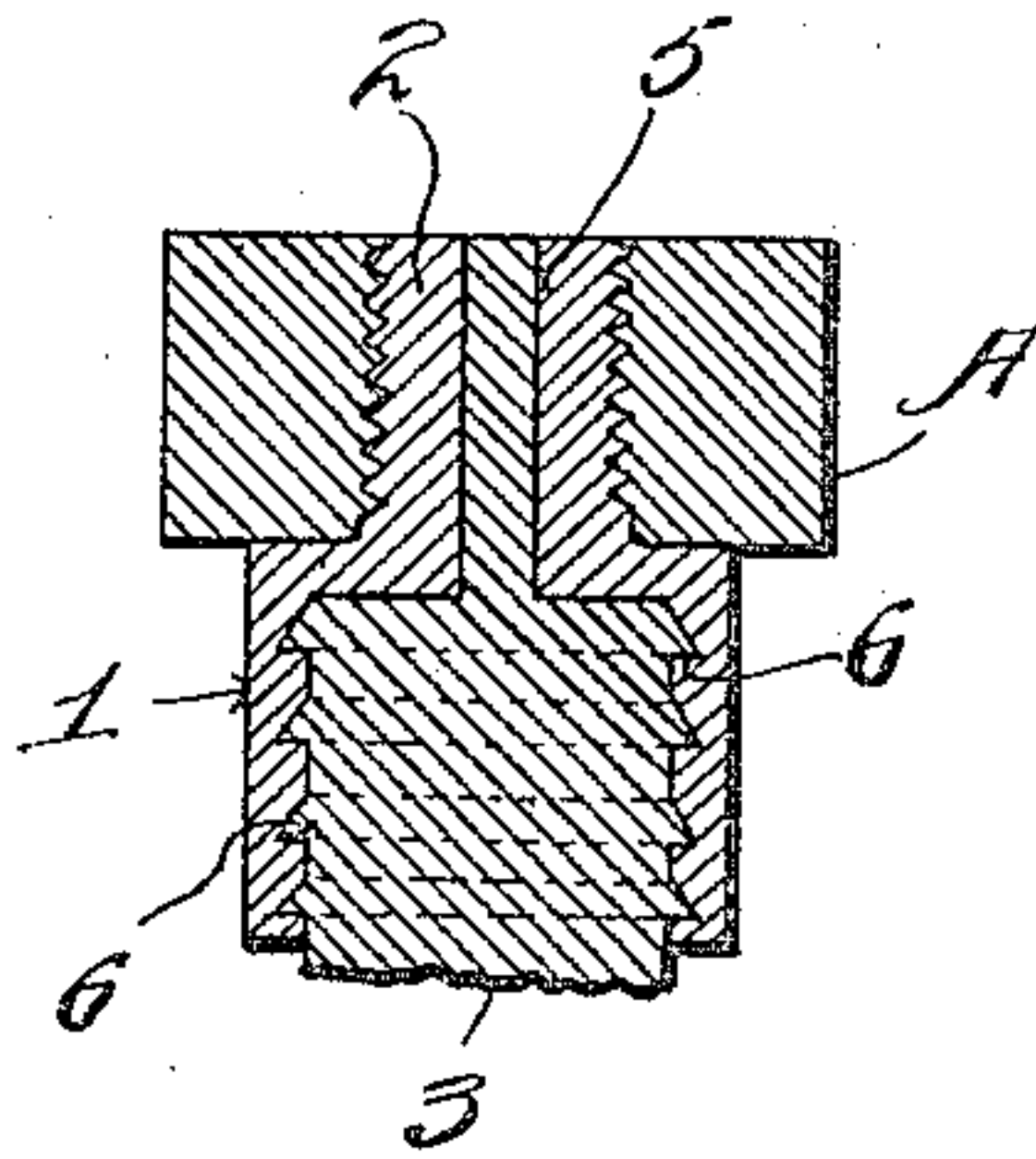
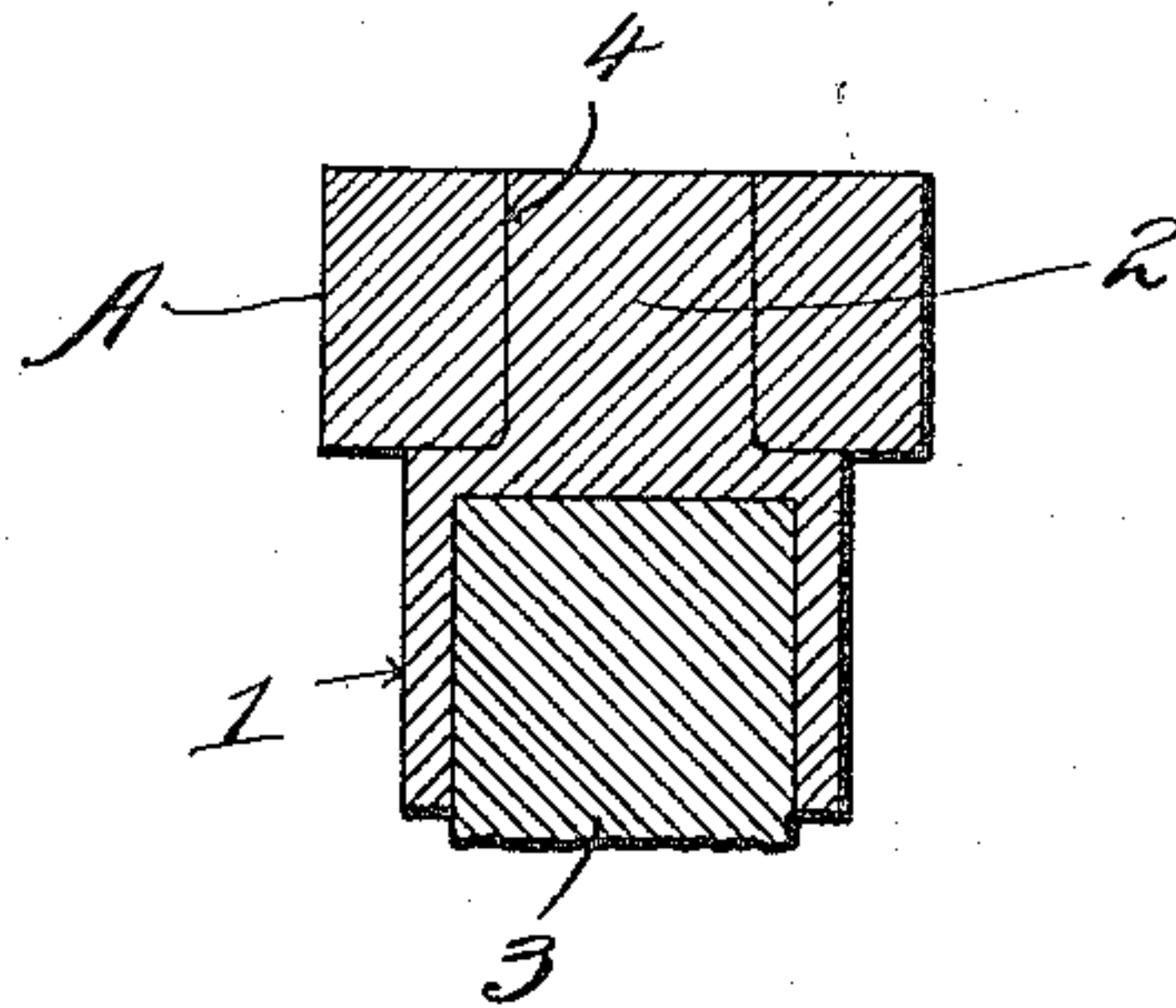


Fig. 3.



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HORSESHOE-CALK.

1,155,231.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES R. GREENLEE, a citizen of the United States, and a resident of the city of Portland, in the county of Multnomah and State of Oregon, have invented certain new and useful Improvements in Horseshoe-Calks, of which the following is a specification.

The invention relates to horseshoe-calks and an object of the invention is to provide in fact self sharpening calks adapted to be either removably or permanently secured to the shoe and adapted through wear and use to maintain a maximum bearing face to obtain an efficient hold upon the surface or roadway.

With the above and other objects in view the invention consists of the novel features of construction, combination and formation of parts as will be hereinafter more fully described and particularly pointed out in the appended claims.

In the accompanying drawing has been illustrated the simple and preferred forms of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but the right is hereby reserved to make any changes, alterations or modifications to which recourse may be had without departing from the spirit of the invention and sacrificing the efficiency of the same.

In the drawings, Figure 1 is a side elevation of a calk embodying the invention. Fig. 2, is a vertical section through another form of the invention and the same being applied to the shoe, and Fig. 3, is a vertical section illustrating another slightly modified form of the invention.

Like and corresponding parts are designated by similar reference characters throughout the several views.

As shown, the shoe A is a simple plate, but may be of any type or character adapted for animal use having secured thereto the calks 1 which may be either the toe or heel calk embodying the invention and of course the number and arrangement of the calks will vary, depending upon the type of the shoe to which they are applied.

The calks as shown in Figs. 1 and 3 of the drawings comprise a cylindrical body portion of iron or other suitable metal, having a reduced shank portion 2 which is adapted to be detachably connected to the shoe. The body portion of the calks are provided each

with an axial aperture or recess therein extending inwardly adjacent the shank 2. These recesses are to be filled with a hard light substance 3 made preferably of aluminum and corundum which will always during its wear present a rough gripping surface which clings to the hard pavement or surface.

The shank portion of the calks as shown in Fig. 1 is provided with screw threads as shown so that the calk may be readily applied to or detached from the shoe, whereas in Fig. 3 the shank portion of the calk may be welded within the opening 4 formed within the shoe.

In Fig. 2, the calk is provided in its shank portion a channel way 5 leading to the cylindrical recess and the inner periphery of the body portion of the calk is provided with plurality circumferential grooves 6. In constructing the calk the same is placed within a mold and the filling 3 while in its molten state is poured into the channel 5 and it finally rests within the cylindrical recess. A portion of the filling settles within the grooves 6 and when the same is cold the grooves prevent the filling 3 from coming loose or displaced during the use of the calk.

The calk is of softer metal than the filling 3 whereby the filling will always during the wear of the calks protrude beyond the outer end of the same, so that the filling will come in contact with the pavement.

The aluminum within the filling 3 being known for its lightness will greatly reduce the weight of the calk and by mixing the corundum with the aluminum a hard gripping agent is added to the filling. The aluminum being a softer metal than the corundum it will readily wear away during the use of the calk and the corundum will always present a roughened surface, whereby each exposed parallelepipedon grain of the corundum will provide a gripping member.

From the foregoing it is obvious that such calks will take the place of the sharp pointed calks now in use, which are prohibited on many streets, as they tear up the asphalt, and that the filling or core of the calk will always present a roughened surface which will prevent slipping upon hard surfaces or injuring the asphalt and eliminate the necessity of perpetually sharpening the calks.

What I claim as new and desire to secure by Letters Patent is:—

1. A shoe calk having a recess therein and

a core for said recess comprising aluminum and corundum.

2. A shoe calk comprising a soft metallic body portion having a recess therein, a filling for the recess of much harder metal than the body portion and the filling comprising a soft metal and a hard mineral consisting of rhombohedral grains.

3. A shoe calk comprising a soft metallic body portion having a recess therein, a filling for said recess, said filling comprising a mixture of two metallic substances, one substance of the filling being of a harder and

lighter metal than that of the body portion of the calk and the other substance of the filling comprising small grains of harder metal than that of the first mentioned metallic substance of the filling substantially as and for the purpose set forth.

In witness whereof, I heretunto subscribe my name to this specification in the presence of two witnesses:

JAMES R. GREENLEE.

Witnesses:

C. R. MELONEY,
A. CRAWFORD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."