Sept. 23, 1924.

C. F. RICHARDS

1,509,528

CAP NUT

Filed Aug. 12, 1922

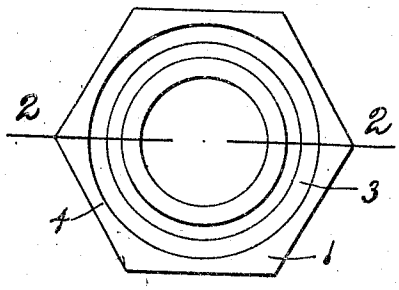


Fig. 1.

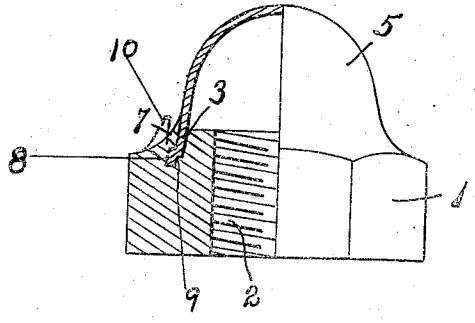


Fig. 2.

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Patented Sept. 23, 1924.

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UNITED STATES PATENT OFFICE.

CHARLES F. RICHARDS, OF DETROIT, MICHIGAN, ASSIGNOR OF ONE-HALF TO FRANK G. VAN DYKE, OF DETROIT, MICHIGAN.

CAP NUT.

Application filed August 12, 1922. Serial No. 581,340.

To all whom it may concern:

Be it known that I, CHARLES F. RICHARDS, a citizen of the United States, and residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Cap Nut, of which the following is a specification.

This invention relates to the construction of cap-nuts which are designed to fit over or enclose the outer ends of bolts and studs, and its object is to produce a nut of this character which shall be pleasing in appearance and which can be produced at low cost.

This invention consists in a nut-body and a cup-shaped cap secured thereto, the nut-body being formed with a groove in one end to receive the edge of the cap and the outer wall of the groove being forced inward onto the end of the cap to secure it in position. It further consists in a cap of this character having a flaring end terminating in a circumferential rib at its edge onto which the outer wall of the groove in the nut-body is pressed to secure the cap in position. It also consists of the details of construction illustrated in the accompanying drawing and particularly set forth in the following claim.

In the accompanying drawing Fig. 1 is a plan of a nut-body formed to receive a cup shaped cap. Fig. 2 is a section on the line 2—2 of Fig. 1.

Cap-nuts, or acorn-nuts as they are also called, are usually formed from hexagon stock by drilling and tapping the stock and then rounding the closed ends while cutting the nuts from the stock. This is wasteful of material and the threads are usually deeper at the open end of the nut than at the bottom of the hole. In the present case, the nut-bodies 1 are drilled and then tapped by running the tap entirely through the nut in the usual manner which results in threads 2 of even depth throughout the length of the nut. One end of the nut is formed with a circular groove 3 before or after the nut is tapped to receive the cap 5, the bottom of the groove being formed with a step 9. The outer wall 10 of the groove before it is rolled down is shown in dotted lines in Fig. 2.

The cap 5 is punched and pressed from sheet metal and may be formed with a rib 8 at its edge to fit the step 9 of the nut, before the edge of the cap is inserted in the groove 3. The wall 10 is then rolled or pressed down onto the rib 8 to lock the cap in position. By forcing down the wall 10 the edge of the cap is caused to conform to the inner wall of the groove and to the step 9 in the bottom of the groove, and even if not originally formed with a rib 8, this rib will be formed on the edge of the cap.

The radial outer face of the rib 8 on the cap and the radial shoulder formed on the wall 10 when forced to conform to this deformation of the cap, constitute an interlock between the nut and cap which cannot be broken without destroying either the cap or the wall 10. If the edge of the cap were thicker than the metal of the cap at the end of the nut, and if the end of the cap merely constituted a circular wedge, this interlock would be of much less strength.

It will be noticed that the rib on the edge of the cap is produced by merely bending and contracting the sheet metal and is therefore a feasible operation either before or after the cap is in the groove in the nut.

I claim:—

A cap-nut comprising a body and a cup-shaped cap, the cap having a rib at its edge, the nut being formed with a circular groove in one end to receive the end of the cap, the outer wall of said groove being bent inward to lie against said ribbed end, the outer surfaces of the cap and of said wall being substantially continuous the rib on the cap having a substantially radial outer surface and said outer wall having a substantially radial shoulder contacting with the rib.

CHARLES F. RICHARDS.