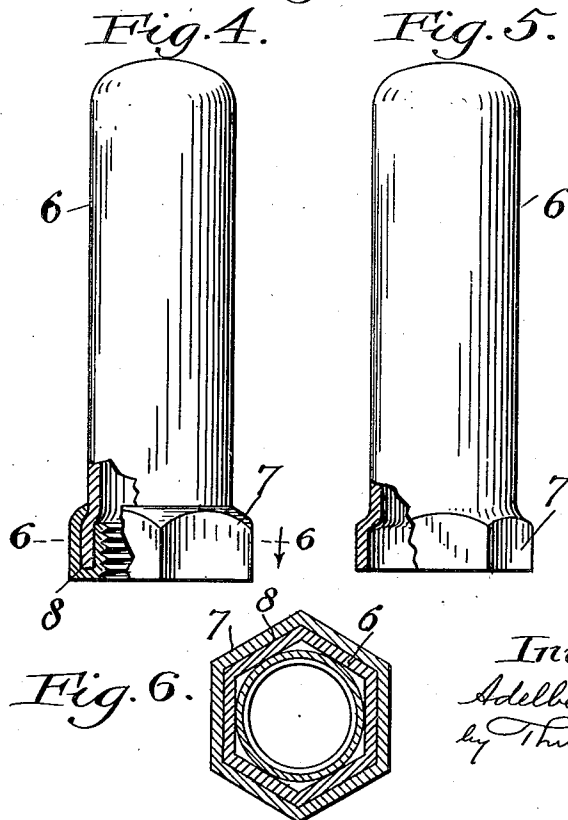
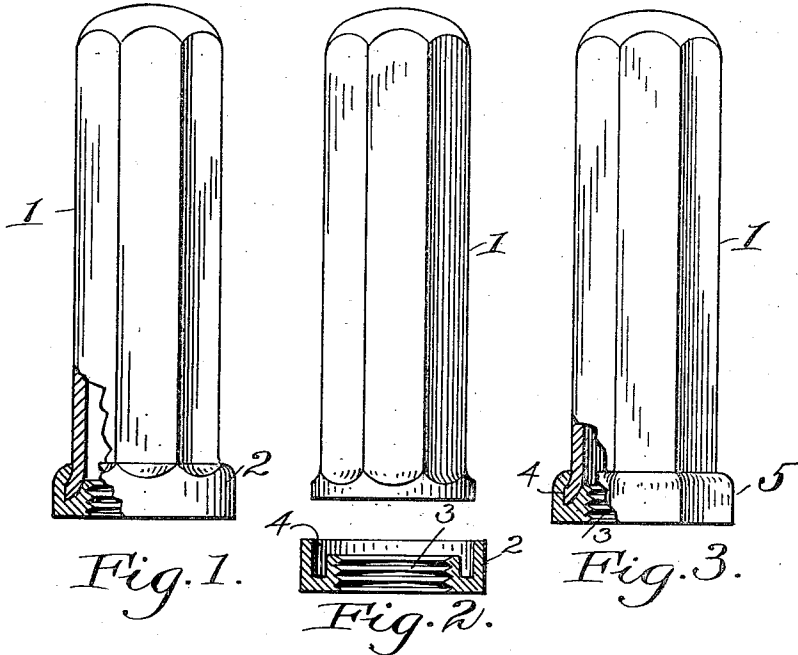


A. E. BRONSON.  
DUST CAP.

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1,262,743.

Patented Apr. 16, 1918.



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# UNITED STATES PATENT OFFICE.

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## DUST-CAP.

1,262,743.

Specification of Letters Patent.

Patented Apr. 16, 1918.

Application filed September 16, 1915. Serial No. 50,938.

*To all whom it may concern:*

Be it known that I, ADELBERT E. BRONSON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Dust-Caps, of which the following is a full, clear, and exact description.

This invention relates to dust caps for use in connection with the inflation valves of pneumatic tires.

It has been customary to make dust caps for the purpose mentioned out of brass, this being done because of the non-rusting and non-corroding properties of brass. Due to certain causes the price of brass is such that it makes the cost of manufacturing these dust caps exceedingly high, and much higher than their cost is warranted by the use to which they are put.

It is, however, desirable to employ brass in that portion of the dust cap which is threaded onto the valve or the nut which holds the valve in place, so as to preclude the possibility of the cap rusting to the part to which it is attached and so making its removal difficult.

The object of this invention, therefore, is to provide a dust cap made in a plurality of parts and of different metals. Preferably the portion which is to contact with the valve stem is of brass, while the other portion of the cap is in the present instance made of steel.

It will, of course, be realized that articles of this kind must be made exceedingly cheap, and, of course, are preferably made of metal because of the fact that metal is more durable. Because of the requisite low cost of manufacture, these dust caps are usually made by a drawing process, and in the present instance I still form the cap by drawing the parts thereof.

Reference should be had to the accompanying drawings forming a part of this specification, in which Figure 1 is an elevation with portions in section of a finished dust cap; Fig. 2 is an elevation with portions in section of the component parts of the dust cap; Fig. 3 is an elevation with portions in section of a modified form of the cap; Fig. 4 is an elevation with portions in section of a different form of cap; Fig. 5 is an elevation, with portions in section, of a part of the cap shown in Fig. 4; Fig. 6 is a section on the line 6—6 of Fig. 4.

The dust cap comprises two parts,—1 and 2. The upper part I call the shell or body, and the lower part the head. The body 1 is formed from sheet metal by drawing the same through suitable dies and may be given any desired cross-section shape, as round, square, hexagonal, octagonal, etc. The body 1 is preferably formed of steel which is sherardized and then nickel-plated, or given any other suitable finish, as may be desired.

The lower portion of the body 1 is formed to cooperate with the head 2. This head is formed as shown in the lower portion of Fig. 2,—that is to say, there is a threaded opening 3 extending through the central portion of the head, and surrounding the threaded portion there is a groove 4 adapted to receive the lower end of the shell or body. The outer wall of the groove 4 extends above the inner wall of the groove, as is clearly shown in the drawing. The head 2 may be given any desired form, as for instance it may be round, square, hexagonal or octagonal, and when so formed is, of course, used with a body or shell of corresponding form, except that it is, of course, possible to use a round head with a body that is not round and to use a head having sides with a body which is round. In Fig. 1 the shell or body is shown as hexagonal, while the head or base is round. In forming such a dust cap the body 1 is drawn to its hexagonal shape; the head 2 has its inner groove formed circular; and the lower part of the body 1 is trimmed so as to be circular and fit within the groove 4. The lower portion of the body 1 in this instance is formed to have a slight outward flare, as indicated in the lower portion of Fig. 1. This outward flare is adapted to receive the upper portion of the outer wall of the head 2, while the shell and head are brought together. That is to say, the metal which forms the upper portion of the outer wall of the head is folded or crimped around the flaring portion at the lower end of the shell so that the shell and head become a unitary body, and there is formed a dust cap, the head portion of which is of brass or other non-rusting and non-corroding material, while the shell or body portion is formed of steel sherardized to protect it against rusting, but which if it does slightly rust does not affect the ease of manipulation of the cap because the portion which engages

with the stem is of a non-corroding material.

If it be desired, the head may assume a hexagonal shape, as indicated at 5 in Fig. 3. In this event the body 1 is formed the same as that previously described, and the head 2 is also formed the same as previously described, except that the outer portion is formed to have a hexagonal or octagonal or other similar shape, as desired, and the outer wall of the inner groove is also given the same shape at the outside of the head. The outer upper wall of the head is crimped around the lower portion of the shell in exactly the same manner as has heretofore been described.

It will be obvious, although not shown, that a round shell may be used with such a head as shown in the lower portion of Fig. 2, in which event the lower end of the shell would be flared outwardly the same as has heretofore been described.

In Figs. 4, 5 and 6 I have represented the dust cap as formed of a round shell with a hexagonal or sided base or head. When such a cap is to be formed the shell is formed as indicated at 6 of Fig. 5, in which it will be seen that the lower portion is given a hexagonal shape and the diameter is slightly greater than the diameter of the other portion of the shell. The head 7 is formed with an outer hexagonal or sided appearance, and the groove 8 formed in the head 7 is also given a hexagonal shape, that is to say the outer wall of the groove 8 is so formed and is adapted to receive the lower end of such a shell as indicated at 6. When the parts, as shown in Fig. 4, are assembled, the metal forming the upper portion of the outer wall of the head 7 is crimped around the lower portion of the shell 6, thus holding the head 7 and the shell 6 together as a unitary structure.

It will be obvious that when a round head is used with the hexagonal shell that the folding of the metal of the head around the bottom of the shell will cause the metal of the head to be folded around the corners of the shell and so prevent relative movement of the shell and head. Of course, in the case as shown in Figs. 4, 5 and 6, where

the shell is formed with a lower hexagonal nut there would be no tendency for the parts to turn relative to each other.

If it be desirable, both head and shell may be formed from the same material, as shown in any of the forms herein shown, the advantage being in this instance, it permits a comparatively small head to be used,—smaller than at present used on dust caps.

Having thus described my invention, what I claim is:—

1. A dust-cap having an elongated hollow body formed of sheet metal, said body being provided with a skirt portion surrounding an open end thereof, a head formed of metal, said head having an inner cylindrical screw-threaded wall portion, an end wall portion and an outer wall portion, the said wall portions being integral and all of substantially uniform thickness, the space between the outer wall and the cylindrical wall forming a groove which extends almost the entire length of the threaded wall portion, the said skirt portion of the body occupying the aforesaid space and the upper portion of the outer wall of the head being folded against said body.

2. A dust-cap comprising a hollow sheet metal-body, one end of which is closed, the other end being open, which open end is surrounded by a depending skirt, the skirt portion being formed with a plurality of walls which extend angularly with respect to each other, a head member having an inner cylindrical portion the interior of which is screw-threaded, and having an outer wall which wall is formed with angular sides complementary to the sides formed upon the skirt of the shell, said inner cylindrical portion and the outer wall being of substantially uniform thickness, the space between the outer wall and the inner cylindrical portion forming a groove which extends substantially throughout the length of the threaded portion, said groove being adapted to receive the skirt of the shell, and the upper portion of the wall of the head being folded against the body of the shell.

In testimony whereof I hereunto affix my signature.

ADELBERT E. BRONSON.