

June 5, 1923.

1,458,006

F. J. RUNSER

PROCESS OF MAKING PLUGS

Filed July 29, 1922

FIG. 1.

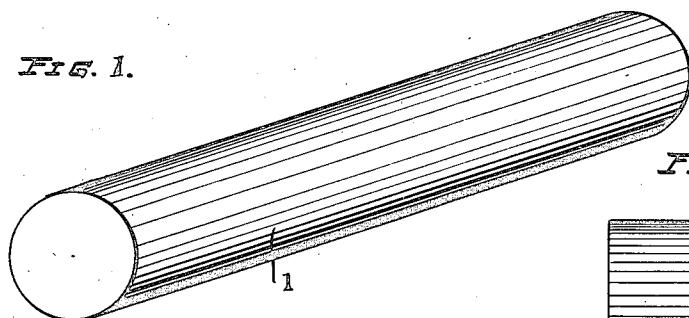


FIG. 2.

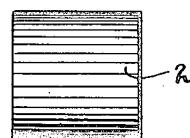


FIG. 4.

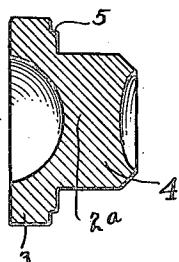


FIG. 3.

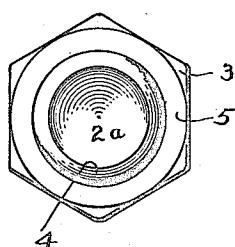


FIG. 6.

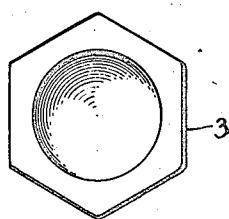


FIG. 5.

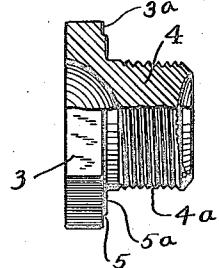
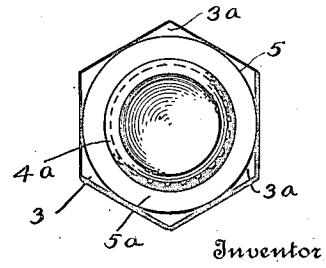


FIG. 7.



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By

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Patented June 5, 1923.

1,458,006

UNITED STATES PATENT OFFICE.

FREDRICK J. RUNSER, OF CLEVELAND, OHIO, ASSIGNOR TO THE BYRNE MANUFACTURING COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF OHIO.

PROCESS OF MAKING PLUGS.

Application filed July 29, 1922. Serial No. 576,394.

To all whom it may concern:

Be it known that I, FREDRICK J. RUNSER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Processes of Making Plugs, of which the following is a specification.

This invention relates to a plug for barrels and the process of making the same.

One object of the invention is to provide an improved process of making plugs for barrel openings, whereby the plugs may be rapidly made and with less strain upon the forming tools.

Other objects of the invention will be apparent to those skilled in the art to which my invention relates from the following description taken in connection with the accompanying drawings, wherein I have illustrated the steps of my process.

Referring to the drawings, Fig. 1 is an elevation of a rod or bar of metal from which my improved plugs are formed.

Fig. 2 is a perspective view of one of the sections cut from the rod or bar shown in Fig. 1.

Fig. 3 is a bottom view of the blank shown in Fig. 4.

Fig. 4 is a sectional view of the blank shown in Fig. 3.

Fig. 5 is a side view of the plug partly in section,

Fig. 6 is a top view of the plug, and

Fig. 7 is a bottom view of the plug.

In carrying out my process, I first cut a rod or bar of metal 1 into sections of a predetermined size, such as shown at 2 in Fig. 2. The rod or bar 1 may be of any desired length, but is preferably round in cross section, thus conforming generally to the shape of the plug to be formed. The length of each section is such as to provide sufficient metal for the plug without waste of the metal, except that metal which is cut away in machining the plug to its final shape. Any desired form of cutting tool or tools may be used to cut the rod or bar 1 into sections.

Next, I forge the section 2 into a blank 2^a having a head 3, a shank 4, and an annular shoulder 5 on the under side of the head 3. As shown, the head 3 is provided with flat sides, to adapt it for engagement by a suitable tool when it is applied to or removed

from an opening in a barrel. This step of my process may be carried out by a press or drop-forging apparatus and to facilitate such operation the section 2 may be heated in any well known manner.

Finally, I finish the blank 2^a into final shape or form as shown in Fig. 5.

In carrying out this step of my process I provide the shank 4 with screw threads 4^a by means of a suitable die and cut away the shoulder 5 to provide a gasket seat 5^a around the shank 4 and spaced from the faces 3^a resulting from the angles formed by the flat sides of the head 3. The cutting away of the shoulder 5 to form the seat 5^a is preferably effected by means of a lathe. In carrying out such operation one advantage of my improved process is apparent. In prior processes of making plugs of the type disclosed herein, so far as I am aware, the plugs were formed without the provision of an annular shoulder on the underside of the head, so that when the blank was put into a lathe and machined down to final form, the tool would engage varying amounts of metal formed by the faces 3^a of the head and cause a chattering of the tool and if the lathe was not stopped, damage would result.

In my improved process I provide a shoulder 5 upon the blank 2^a in forging the section 2, which shoulder permits the blank to be placed in a lathe and rapidly cut by a suitable cutting tool without undue strain thereon.

In this form of construction, the shoulder 5 insures sufficient metal for the tool to act upon and to provide a gasket seat on the under side of the head 3 and spaced therefrom without coming into contact with the faces 3^a as the blank rotates. By providing a gasket seat that is spaced from the head 3, the outer circumferential portions of the gasket may be bent or flexed laterally due to the tightening of the plug in its opening without danger of such portions being disposed against the sides of the head 3, and being rotated thereby with resulting damage to the gasket.

To those skilled in the art to which my invention relates, many widely differing embodiments and applications of the invention will suggest themselves without departing from the spirit and scope thereof. My disclosures herein are purely illustrative and are not intended to be in any sense limiting.

What I claim is:

The herein described process of forming barrel plugs or like articles which consists in cutting a bar of metal into sections, then 5 in forging each section into a blank having a shank and a head with an annular shoulder on the under side of the head, and

finally in finishing each blank and cutting away a portion of the shoulder to form a gasket seat around but spaced from the under face of the head. 10

In testimony whereof, I have hereunto subscribed my name.

FREDRICK J. RUNSER.