O. L. PRIME.

COMPOSITE METAL PLUG.

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1,296,695.

Patented Mar. 11, 1919.

Fig. 1.

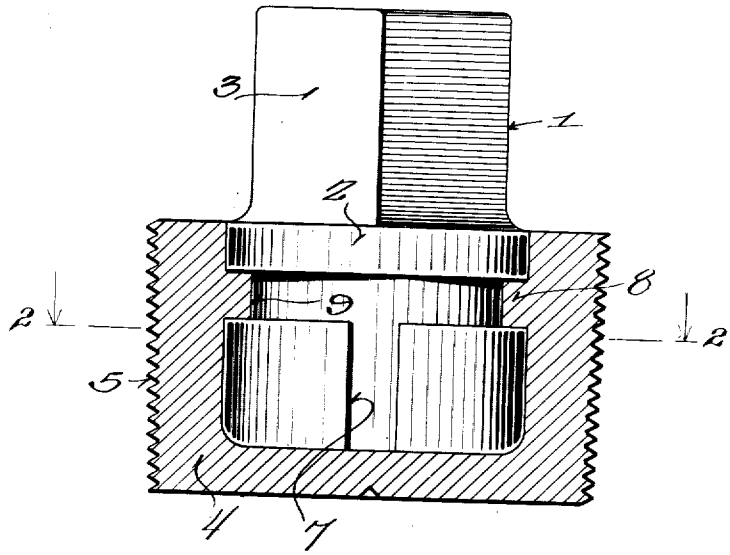
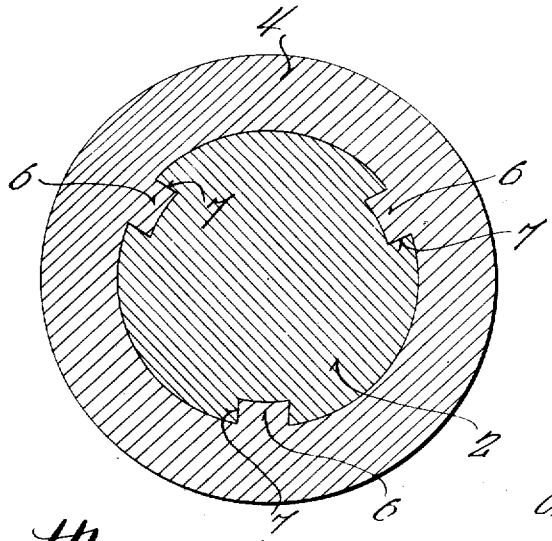


Fig. 2.



WITNESSES:

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COMPOSITE METAL PLUG.

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To all whom it may concern:

Be it known that I, ORTON L. PRIME, a citizen of the United States, and resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Composite Metal Plugs; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates broadly to means for uniting two or more dissimilar metals, and specifically it consists in securing a casing or covering of non-corrosive material to a casting of different metal.

In the present particular form of the invention the same is shown applied to a closure plug for the clean out holes of locomotive boilers. It is advisable to protect such plugs against rusting or corroding; therefore the principal object of the invention is to cover a casting of relatively cheap metal with a metal which will not rust or corrode.

Owing to the great pressure which is generated in a locomotive boiler it is essential that the two metals be connected so as to prevent leakage therebetween. Means for carrying out this forms an additional object of the invention.

With these general objects in view, the invention resides in the novel features of construction, combination and arrangement of parts which will be hereinafter more specifically described and claimed.

In the accompanying drawing:—

Figure 1 represents an elevational view of a closure plug constructed in accordance with my invention, with the shell portion in section.

Fig. 2 is a transverse sectional view on the plane of the line 2—2 of Fig. 1.

Referring now more particularly to the drawing it will be seen that the illustrated form of the invention consists of a casting 1 having a body portion 2 and a head 3, and a shell or casing 4 of non-corrosive and non-rusting material surrounding the body 2. The body of the casting is preferably cylindrical and of any desired length, while the head 3 is polygonal or non-circular for engagement by a wrench of suitable design.

The shell or casing 4 forms a cap for the body 2 and not only covers the outer end thereof, but also extends the full length of its circular side wall. The shell 4 being formed of one piece will absolutely prevent any leakage between the annular wall portion thereof and the body 2.

The wall portion of the shell is externally screw threaded as at 5 to permit the plug to be threaded into a clean out opening of a boiler. Said shell is held against rotation with respect to the body by means of a plurality of diametrically opposed inwardly extending longitudinal ribs 6 which are formed integrally with the inner surface of the wall portion of said shell and are disposed in longitudinally extending grooves 7 in the surface of the body 2. These ribs preferably extend throughout the length of said body 2. Longitudinal movement of the shell and casting is prevented by an inwardly extending annular rib 8 projecting beyond the inner surface of the wall of the shell, preferably midway the ends thereof. This rib is also disposed in an annular groove 9 in the body 2.

This simple positioning of the ribs 7 and 8 eliminates all possibility of one portion of the device moving relative to the other. Furthermore inasmuch as the shell is cast on the member 1 by any suitable machinery, said shell will fit very closely on the body 2. The features of this invention may well be employed on various other objects than the simple closure plug illustrated and in connection with flat objects as well as those which are cylindrical.

I claim:

A composite metal screw plug comprising a body member and a wrench head extending therefrom and a cup-shaped shell of relatively non-corrosive metal cast upon the body of the plug and covering the peripheral face of the body and the end face thereof remote from the wrench head, said shell being provided with screw threads in its periphery whereby upon threaded engagement of the plug in a recess, a continuous expanse of shell material is presented, the shell and body being formed with interlocking rib and recess portions.

In testimony that I claim the foregoing I have hereunto set my hand at Milwaukee, in the county of Milwaukee and State of Wisconsin.

O. L. PRIME.