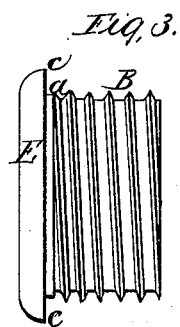
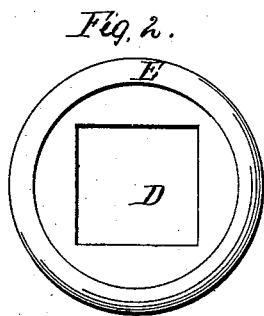
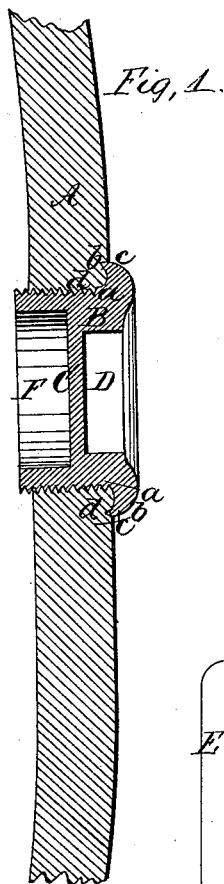


O. R. Burnham.

Bung.

No 51,422.

Patented Dec. 12, 1865.



Witnesses,

M. M. Livingston
O. W. P. Smith

Inventor,

O. R. Burnham

UNITED STATES PATENT OFFICE

O. R. BURNHAM, OF NEW YORK, N. Y.

IMPROVEMENT IN BUNGS.

Specification forming part of Letters Patent No. 51,422, dated December 12, 1865.

To all whom it may concern:

Be it known that I, O. R. BURNHAM, of No. 112 Franklin street, in the city, county, and State of New York, have invented a new and useful Improvement in Bungs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional view of a bung made according to my invention, showing also how it is applied and used. Fig. 2 is a plan view thereof, and Fig. 3 is an outside view.

Similar letters of reference indicate like parts.

This invention has for its object the production of a bung for barrels and other vessels, which will not be attended with leakage around its joints, and which may be applied to and removed from the bung-hole with facility.

A represents a portion of a stave of a barrel, and E a bung fixed in a bung-hole made therein. It has a screw-thread formed around its body, which takes it into a screw-thread formed in the sides of the bung-hole. The screw-thread is not carried quite up to the flange E of the bung, but stops short a sufficient distance to leave a shoulder, *a*, next to said flange. The flange E is curved, as seen in its cross-section in Fig. 1, forming nearly a semicircle from the upper part of the shoulder *a* to the edge *c* of the flange, so that said edge is parallel with the sides or body of the bung.

D is a square socket made in the top of the bung to receive a socket-wrench, by which it is fixed in and withdrawn from a barrel or other vessel. The sides of the bung are sustained by means of a diaphragm, C, which forms also the bottom of the socket. This diaphragm may be of greater or less thickness, according to the pressure to be sustained by it from within and from the sides of the bung; but a space, F, is to be left in the bung beneath it, as seen in Fig. 1, by which construction I save much metal and produce an article of strength sufficient for any exigency.

In preparing a barrel to receive the bung, I either tap a screw-thread therein or form a thread in the bung-hole by means of the thread in the bung, and also form a circular groove, *b*, around the bung-hole to receive the edge *c* of the flange E of the bung, sinking the groove

deep enough to get a level seat for the edge of the flange. I also leave a smooth face, *d*, to the edge of the bung-hole, to form thereby a joint with the shoulder *a* of the bung. When the bung is screwed to its place in the bung-hole, the flange E will be drawn down upon the edge of the hole, and its edge *c* will articulate with the circular groove *b*.

It is obvious that, from the construction above described, three joints are made by the bung, each separate and independent of the others—to wit, the joint formed by the screw-threads, that formed by the shoulder *a* with the straight inner edge *d* of the bung-hole, and that formed by the edge *c* of the flange with the circular groove *b*. Those persons who are familiar with the difficulties attending the making of tight joints at the bung-holes of barrels, will appreciate the value of this construction.

Attempts have been heretofore made to make bungs with screw-threads; but I believe that none have given perfect satisfaction, because the joints were not made tight.

The importance of a perfectly secure joint at the bung, which shall not only be strong and enduring, but which shall also be tight enough to prevent leakage, is well understood by those acquainted with the art. Especially is this desirable in the case of barrels which are to contain petroleum and other volatile liquids of a subtle, penetrating character.

I do not claim uniting a bung to a bung-hole of a barrel by means of a screw-thread joint; but

What I claim as my invention, and for which I desire Letters Patent, is—

1. The curved flange E, with its edge *b*, constructed substantially as and for the purpose above set forth.

2. The combination, in a bung, of the three separate and independent joints, formed respectively by the screw-threads on its body, the shoulder *a* under its flange E, and the circular edge *b* of the said flange, substantially as and for the purpose above described.

3. Reducing the weight of metal required for a bung by constructing said bung with a cavity, F, substantially as described.

O. R. BURNHAM.

Witnesses:

M. M. LIVINGSTON,
C. L. TOPLIFF.