No. 682,202. Patented Sept. 10, 1901.

C. J. KINTNER.

BUNG FOR BARRELS, KEGS, OR CASKS.

(Application filed Aug. 3, 1900.)

(No Model.)

Fig. 1.

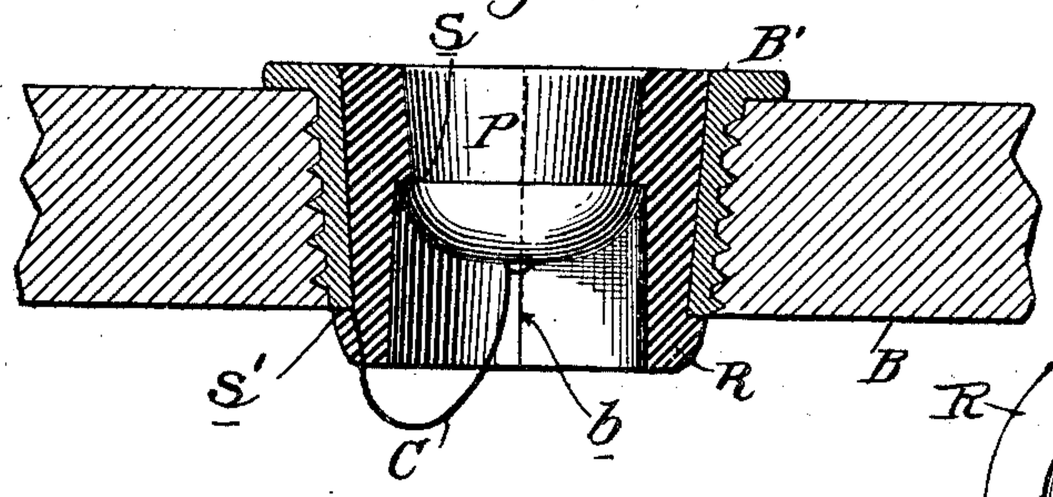


Fig. 3.

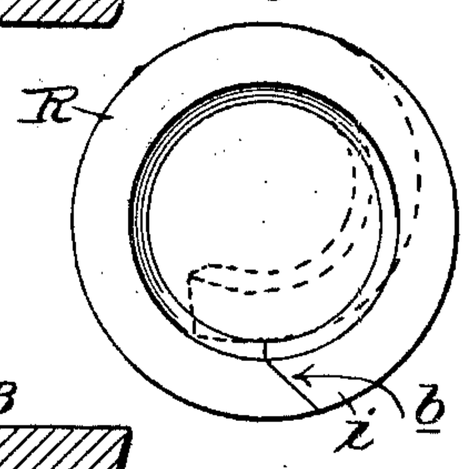
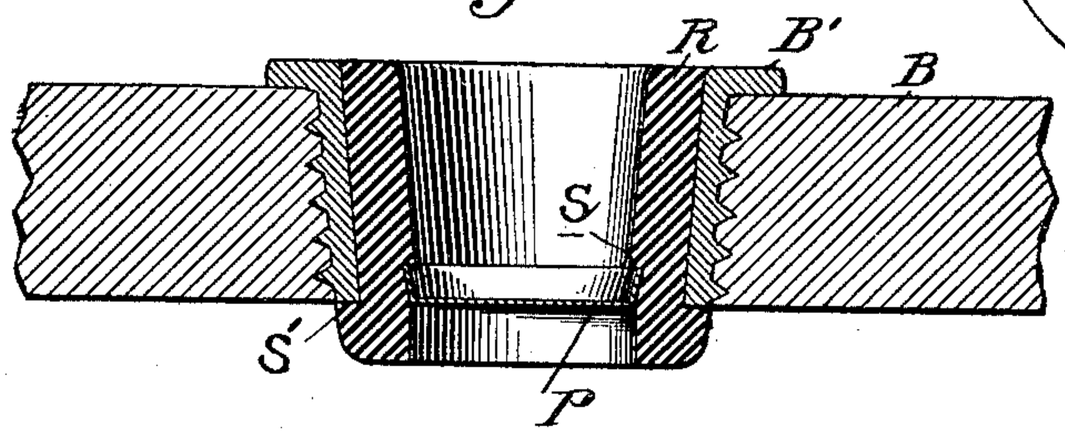


Fig. 2.



Witnesses
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CHARLES J. KINTNER, OF NEW YORK, N. Y.

BUNG FOR BARRELS, KEGS, OR CASKS.

SPECIFICATION forming part of Letters Patent No. 682,202, dated September 10, 1901.

Application filed August 3, 1900. Serial No. 25,786. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. KINTNER, a citizen of the United States, residing at New York, borough of Manhattan, county of New York, and State of New York, have made a new and useful Invention in Bungs for Barrels, Kegs, or Casks, of which the following is a specification.

My invention will be fully understood by referring to the accompanying drawings, in which—

Figure 1 is a sectional view taken through the head of a barrel, a metal bung-bushing, and my improved bung, the detachable part thereof being shown in elevation. Fig. 2 is a similar view of a modified form showing the detachable part. Fig. 3 is a plan view of the slitted rubber bung-ring shown in Fig. 1, the dotted lines illustrating the manner of removing said ring out of the bushing from the exterior of the barrel or keg.

Referring now to the drawings in detail, B represents the head of a barrel, and B′ a well-known screw-threaded metal bung-bushing secured therein, said bushing being cone-shaped interiorly, as shown.

R represents a flexible or yielding non-absorbent bung-ring, made preferably of rubber and cone-shaped exteriorly, so as to fit snugly within the inner face of the interiorly-cone-shaped bung-bushing B′ when driven home, *s′* being a retaining rim or extension below or within the inner end of the bung-bushing for securing it against ejection under the influence of the liquid and gases contained in the barrel or keg. This bung-ring has preferably an exterior diameter greater than the interior diameter of the bung-bushing B′, so as to fit snugly therein when forced into position, and the retaining rim or extension S′ is normally of greater diameter than the interior diameter at the inner end of the bushing B′ for the purpose of locking the ring securely in position, so that it cannot be withdrawn from without. This bung-ring may be slitted in the direction of its axis on one side, as shown at *b*, Fig. 1, said slit being preferably cut at an angle to the diameter of the bung-ring, as shown in plan view in Fig. 3. The function of this slit is for the purpose of enabling one to remove the ring from without the barrel, as will be described later on.

P is a detachable part cone-shaped, as shown, to fit the upper inner cone-shaped surface of the ring R and provided with a rim or head *s*, adapted to fit behind a ledge near the upper end of the lower inner cone-shaped surface of the bung-ring R.

C is a cord secured to the lower end of the ring R and also to the detachable part P, its function being to prevent the detachable part from being wholly disconnected from the bung-ring in order that it may be withdrawn with said ring.

The operation is as follows: The detachable part P is put in place by opening the bung-ring. The two parts are then driven firmly home until the rim or extension *s′* passes beneath the inner edge of the bung-bushing B′, so as to lock the parts together. The detachable part P is injected into the barrel by the spigot in the usual way, after which the bung-ring is removed by inserting a pointed tool between one of the ends of the slitted ring and the bung-bushing B′, as at *i*, Fig. 3, and the ring caused to assume the position shown in dotted lines, when it, together with the detachable part P, which is held by the cord C, may be withdrawn from without the barrel, after which the bung may be used over again in like manner as many times as desired.

In Fig. 2 I have shown a modified form, in which the bung-ring R is not slitted and is cone-shaped interiorly to a point near the lower or internal end of the ring, the detachable part P being in the nature of a cone-shaped spun or struck-up metal cup, the upper edge *s* of which when in position takes behind a shoulder, as did the corresponding part *s* in Fig. 1. This detachable part P in this instance is preferably put in position after the bung-ring R is driven home by forcing it downward by a tool to the desired point. In operation it is injected by the spigot in the usual way and washed out through the vent bung-hole during the washing of the barrel. The bung-ring R may be removed by forcing it inward and washing or rolling it out through the vent-bung when it is desired so to do.

It is obvious that the plug form of the detachable part P (illustrated in Fig. 1) might be substituted for the metal cup form (illus-

trated in Fig. 2) and that said part may be of any preferred non-absorbent material and of such proportions as may suggest themselves, so long as the rim or ledge S is so located with relation to the ring R that when in position it is locked against ejection by the gases and liquid contained in the barrel or keg. The essential feature of my invention lies in the utilization of a cone-shaped bung-ring provided with an interior extension or rim, in combination with a detachable part having a similar ledge *s* and adapted to be locked within the inner surface of the ring in such manner that the gases and liquid within the barrel tend to firmly hold and lock the parts together by outward pressure.

I am aware that it has heretofore been proposed to use a ribbed or corrugated elastic bung-ring and a detachable part in the nature of a plug, as disclosed in United States Patent No. 220,773, of October 21, 1879. I am also aware that a cone-shaped bung-ring made of elastic material, such as wood, has heretofore been used in connection with an especial form of bung-bushing having an enlargement or groove at its lower inner end for receiving the outwardly-pressed lower end of the bung-ring when the detachable part is forced therein, as disclosed in United States Patent to Reynolds *et al.*, No. 235,653, of December 21, 1880; also, that a bung has heretofore been devised with a rubber bung-ring seated in an especial form of bung-bushing provided with internally-projecting ledges adapted to hold the bung-ring in place, said bung-ring having in turn an internal ledge near its upper or outer end adapted to hold a detachable part or plug in place when inserted therein, as disclosed in United States Patent to Bokel, No. 548,625, of October 29, 1895, and I make no claim hereinafter broad enough to include such structures, my invention being particularly designed for use in connection with the well-known form of cone-shaped metal bung-bushings very generally in public use, such as is indicated by the letter B′ in Figs. 1 and 2 of the drawings, my improvement being of such a nature that the lower end of the bung-ring extends always a definite distance within or below the inner end of the bung-bushing, so as to act as a shoulder or seat adapted to prevent the ejection of the bung by the liquid and gases contained in the barrel, and all of my claims hereinafter made distinctly embody this feature.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. An exteriorly-cone-shaped bung-ring designed for use with a correspondingly interiorly-cone-shaped bung-bushing, said ring being provided with a rim or extension at its inner end normally of greater diameter than the interior diameter of the bung-bushing and adapted, when in position in the bushing and below the lower end thereof, to hold or secure it from being withdrawn, substantially as described.

2. An exteriorly-cone-shaped bung-ring designed for use with a correspondingly interiorly-cone-shaped bung-bushing, said ring being provided with a rim or extension at its inner end normally of greater diameter than the interior diameter of the bung-bushing and adapted, when in position in the bushing and below the lower end thereof, to hold or secure it from being withdrawn; in combination with a detachable part having a head or rim adapted, when in position within the ring, to lock it against ejection, substantially as described.

3. An exteriorly-cone-shaped bung-ring designed for use with a correspondingly interiorly-cone-shaped bung-bushing, said ring being slitted on one side in the direction of its axis and provided with a rim or extension at its inner end adapted, when in position in the bushing and below the lower end thereof, to hold or secure it from being withdrawn, substantially as described.

4. An exteriorly-cone-shaped bung-ring designed for use with a correspondingly interiorly-cone-shaped bung-bushing, said ring being slitted on one side in the direction of its axis and provided with a rim or extension at its inner end adapted, when in position in the bushing and below the lower end thereof, to hold or secure it from being withdrawn; in combination with a detachable part having a head or rim adapted, when in position within the ring, to lock it against ejection; together with a cord for preventing the detachable part from becoming separated from the ring when said part is injected into the barrel, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES J. KINTNER.

Witnesses:

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