

Chappell & Pettit.

Bung.

N^o 75367

Patented Mar. 10, 1868.

Fig. 1.

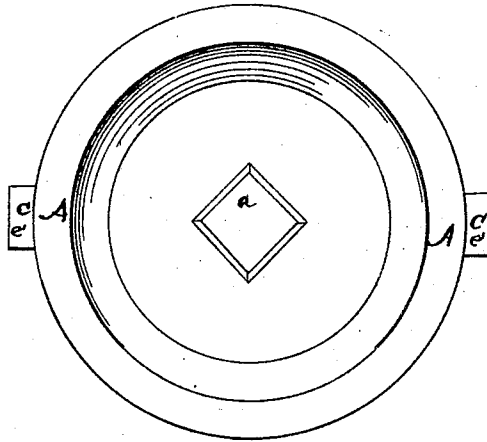
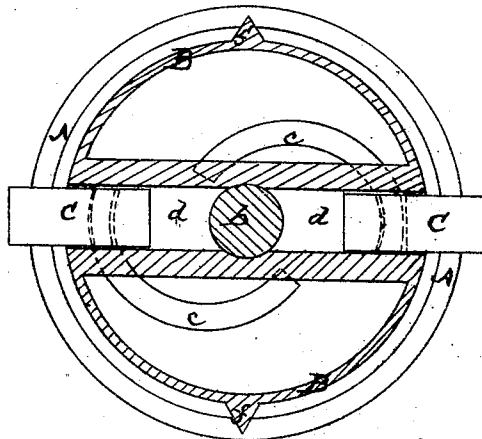


Fig. 2.

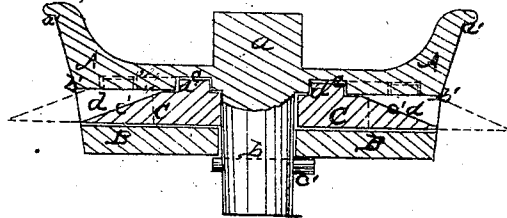


Witness

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Fig. 3.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN BUNGS.

Specification forming part of Letters Patent No. 75,367, dated March 10, 1898.

To all whom it may concern:

Be it known that we, N. L. CHAPPELL, of the city, county, and State of New York, and C. H. PETTIT, of Jersey City, in the county of Hudson, and State of New Jersey, have invented certain new and useful Improvements in Bungs for Barrels; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a plan view of a bung constructed according to our invention. Fig. 2 is an inverted horizontal section of the same, taken in the line xx of Fig. 3. Fig. 3 is a central vertical transverse section taken in the line zz of Figs. 1 and 2.

Similar letters of reference indicate corresponding parts in all the figures.

The common wooden bung is not only liable to split the stave in which the bung-hole of the barrel is formed when driven into the said hole, and to be itself split and rendered useless, but is also open to objection from its liability to be forced out of the bung-hole by the pressure of gases generated by the fermentation of liquids contained in the barrel, and from the impossibility, in many cases, of removing it without great inconvenience and without injury to the barrel itself. The metallic bungs heretofore in use have also proved exceedingly objectionable in practice, not alone from their great cost, as compared with wooden bungs, but from the time and trouble incurred in fitting them to the bung-holes, the necessity of employing some packing material in connection with them, and from the employment in most of them of a screw, which rapidly corrodes and renders the bung useless.

To obtain a metallic bung which may be made at a cost but little exceeding the wooden bung, and one in which the defects of the metallic bungs just mentioned will be avoided, is the object of this invention; and to this end it consists in a bung constructed in two parts and furnished with sliding dogs, operated by eccentric grooves formed in one of the said parts, and provided with inclined planes or faces in such manner that the bung being placed in the bung-hole, and the upper part thereof turned around with a wrench, or by other suitable means, the aforesaid dogs will

be moved outward, so that their inclined planes or faces, acting upon the under side of the stave in which the bung-hole is formed, will force the aforesaid upper part of the bung tightly into the said hole.

The invention further consists in sharp spurs or projections formed laterally upon the lower half or part of the bung, whereby such portion is held stationary when the bung is first placed in the bung-hole, in order to enable the dogs to be operated by the turning of the upper portion of the bung, as just mentioned.

To enable others to understand the nature and construction of our invention, we will proceed to describe it with reference to the drawings.

The main and upper portion of the bung is shown at A, and is of circular form, with its sides or circumference made tapering, as indicated at a' b' . The top or upper side of this portion A is recessed or made concave, and has formed centrally within it a rectangular knob or projection, a , which is designed to enable the portion A to be turned around by means of a wrench or equivalent appliance, as hereinafter fully set forth. Projecting down from the center of the under side of the aforesaid portion is a cylindrical stem, b , and formed in the said under side of such portion are two curved grooves, c , which are eccentric to the stem b , or, in other words, to the center of the portion A.

The lower part of the bung is represented at B, and is furnished with a central hole, through which the stem b of the portion A is passed, the lower part, B, being securely attached to such portion A by a pin, c' , passed transversely through the end of the stem b . Formed transversely in or upon the upper side of the part B are ways or guides a , in each of which is placed a sliding dog, C, each of said dogs being furnished with a projection, d' , which projects up into the adjacent eccentric groove c in such manner that when the upper portion, A, is turned around in one direction or the other upon the axis, or, in other words, upon the stem b , the said eccentric grooves will cause the dogs C to slide in or out, as the case may be. The outermost end of each of the dogs C is made sloping at its upper side, so as to form an inclined plane or face, e' , as shown more plainly in Fig. 3. Formed upon the sides or lateral edges of the

part B, at opposite points thereof, are two angular spurs or projections, *f*, the ends of which are made moderately sharp, as shown in Fig. 2.

In using the bung, it is thrust into the bung-hole of the barrel until the bottoms of the guides or ways *d* of the part B are brought below the inner surface of the stave in which the bung-hole is formed, the projections *f* indenting themselves into the opposite sides of the bung-hole, and thus preventing the part B from being turned around. This being done, the upper portion, A, is turned, by means of a wrench applied to the knob *a*, in such direction that the eccentric grooves *c*, acting upon the projections *d*, will cause the dogs C to slide outward, whereupon the inclined planes or faces *e* of the said dogs being pressed against the under side of the stave, or, in other words, against the lower edges of the bung-hole, the bung is gradually forced downward into the bung-hole, so that the inclined sides *a' b'* of the upper portion, A, being tightly fitted therein, effectually close the same. When it is desired to remove the bung from the barrel, the portion B is turned around in the contrary direction, which, causing the dogs C to be drawn inward by the action of the grooves *c*, enables the bung to be freely and easily withdrawn.

Inasmuch as the several parts of the bung may be made of cast-iron and fitted together with a very slight expenditure of time and labor, it follows that it may be manufactured at an extremely moderate cost, at the same time that, from the simplicity of its construction, it is not liable to be materially injured by rust or corrosion, and, inasmuch as the sides of the portion A are made tapering, as hereinbefore explained, the bung may be fitted, when required, to bung-holes varying somewhat in size.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The sliding dogs C, formed with inclined planes or faces *e*, and operated by the eccentric grooves *c*, in combination with the two parts or portions A B, substantially as and for the purpose herein set forth.

2. The spurs or projections *f*, formed upon the lower part, B, of the bung, substantially as and for the purpose specified.

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Witnesses:

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