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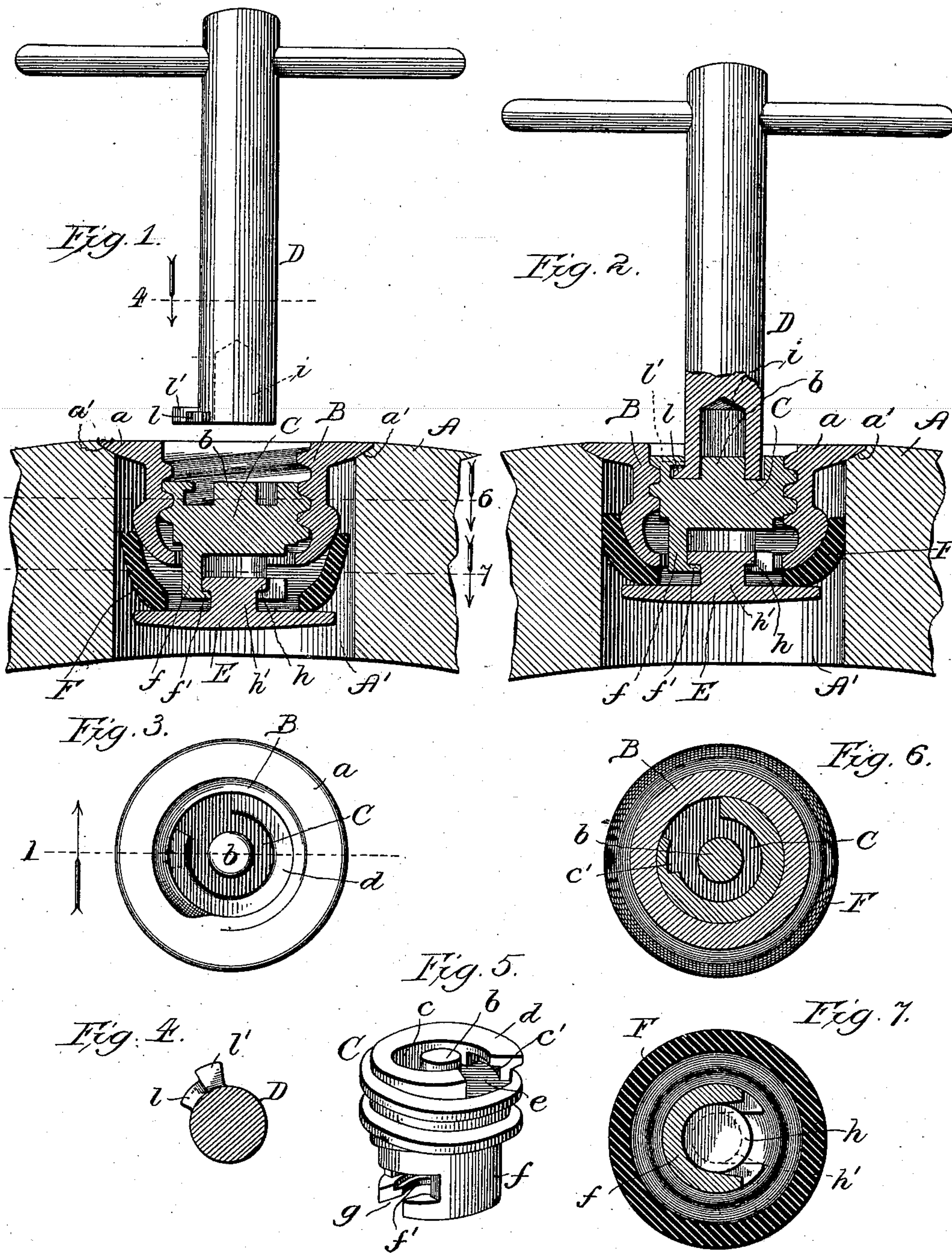
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C. STRASSHEIM.

BUNG.

(Application filed Jan. 8, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

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BUNG.

SPECIFICATION forming part of Letters Patent No. 654,858, dated July 31, 1900.

Application filed January 8, 1900. Serial No. 667. (No model.)

To all whom it may concern:

Be it known that I, CHRISTOPHER STRASSHEIM, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Bungs, of which the following is a specification.

My invention relates to an improvement in the class of bungs for barrels and analogous liquid-holders requiring to be sealed by bunging in which a key-controlled plug is adjustably screwed in a sleeve adapted to be contained in the bung-hole or bushing therein, and carrying externally a packing-ring of rubber or other suitable material compressible for expanding it, to seal the bung-hole, by a follower-plate clamped against the ring by turning the plug in the sleeve.

The primary object of my improvement is to adapt the sealing effect of the packing-ring to be exerted outwardly against the circumferential wall within the bung-hole, thereby enabling the bung device as an entirety to be made shorter—say by one-third—than the thickness of the wall of the holder and affording a more effective seal than is produced by binding the packing-ring about the inner edge of the bung-hole.

My further object is to materially simplify the construction of bungs in the class referred to by way of accordingly reducing the cost of manufacture, enhancing their effectiveness, and facilitating the assemblage and separation of the parts.

Referring to the accompanying drawings, Figure 1 represents, by a vertical section taken at the line 1 on Fig. 3 and viewed in the direction of the arrow, my improved bung in place, with the operating-key above it, and showing the parts in their relaxed condition, in which the bung is adapted to be introduced into and withdrawn from a bung-hole. Fig. 2 is a similar view of the same, showing the key in position and the parts of the bung in their tightened condition, in which they spread the sealing-ring outward against the wall of the bung-hole. Fig. 3 is a plan view of the bung; Fig. 4, a plan section of the key, taken at the line 4 on Fig. 1 and viewed in the direction of the arrow; Fig. 5, a perspective view of the plug; Fig. 6, a section of the bung, taken at the line 6 on Fig. 1 and viewed in the direc-

tion of the arrow; and Fig. 7, a section of the bung, taken at the line 7 on Fig. 1 and viewed in the direction of the arrow.

A denotes the bilge of a barrel or analogous vessel containing a bung-hole A', which may be equipped with a suitable metal or other bushing in which to seat my improved bung, though no bushing is shown, as the bung may be used without it.

B is an internally-threaded metal sleeve, preferably of the cup shape shown, whereby it is provided with a rounded base and having a flange *a* about its outer end, where it seats in a recess *a'* in the corresponding end of the bung-hole.

C is the plug, formed with a solid metal body screw-threaded externally to screw into the sleeve B and provided on its outer end with a central key-stud *b*, about which extends, to form a circular socket *c* for the operating end of the key D, a flange *d*, provided with a radial slot *e*, from one side of which there extends in the inner side of the flange a short arc-shaped recess *c'*, forming an outward extension of the socket *c* under the flange. On the inner end of the plug is formed a tubular extension *f*, provided at its extremity with an inward-extending flange *f'* and having formed in one side a T-shaped slot *g*, the stem or narrower portion of the slot extending through the flange *f'* and the wider portion of the slot extending through the body of the tubular extension.

E is a disk-shaped compression-plate provided with a central neck *h'*, terminating in a head *h*, shown in the preferred form of a disk. The diameter of the neck is such as to admit it through the narrower portion of the slot *g* into the interior of the tubular extension *f*, and the diameter of the head *h* is such as to admit it into the same through the enlarged portion of the slot, and the head is loosely confined by the flange *f'* within the tubular extension, whereby the plug C may be turned in the sleeve B without turning the compression-plate.

F is a rubber sealing-ring which conforms to the shape of the rounded bottom of the sleeve B, against which it is confined by being interposed between it and the plate E.

The key D has a socket (indicated at *i*) extending into its stem from the lower end

thereof, and from the lower extremity of the key-stem there projects laterally a stop-stud l' , adjacent to which is a short segmental lip l , reaching to a plane below that of the top of the stop-flange.

To assemble the parts of my improved construction of bung, the plug C is screwed (by turning it toward the right) into the sleeve B till the tubular extension f projects beyond the inner end of the sleeve. Then the plate E, with the rubber ring F upon it about the neck h' and head h , is applied to the base of the sleeve (against which the wider edge of the ring is thus caused to bear) and the plate is tilted to bring the neck and head outside the plane of the slot g , whereby righting the plate will introduce the neck and head through the T-slot into the interior of the tubular extension f , wherein the head is confined, as aforesaid, by the flange f' .

It is obviously a simple matter to take the bung apart for repairing, cleaning, and other purposes by bending over or downward the edge of the rubber ring to ascertain or providing a mark to indicate the position of the slot g , through which the head and neck on the compression-plate may be forced to separate the plate and ring from the sleeve, whence the plug may then be withdrawn by turning it.

As shown in Fig. 1, the parts of the bung are in the relaxed condition, in which it may be freely inserted into a bung-hole A' preparatory to tightening it in place. This is done with the key D by inserting the end of its stem into the plug-socket c , whereby the stem-socket is brought over the plug-stud b to steady the key, the stop-flange l' and lip l on the stem of which must coincide with and enter the slot e in the plug-flange d to permit the key to enter the plug-socket. By then turning the key toward the left the stop-flange l' engages with the adjacent side of the flange-slot e to turn or unscrew the plug C in the sleeve B', whereby the plate E is drawn toward the inner end of the sleeve to compress against it the ring F, with the effect of expanding the ring toward its outer edge and binding it against the wall of the bung-hole to seal the latter and tighten the bung in position. To relax the bung preparatory to withdrawing it, the key is turned in the opposite direction (toward the right) to bring the flange l' against the adjacent side of the plug-flange slot e and turn the plug to screw it into the sleeve B, thereby to separate the plate E from the ring F, and thus release the pressure against and relax the latter, when the bung may be easily withdrawn from the bung-hole by means of the key, since in the last-described position of the key its lip l is confined in the recess c' under the plug-flange d and affords an abutment on the key to engage with the plug-flange to enable the bung to be withdrawn.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a bung, the combination of an internally-threaded sleeve, an externally-threaded plug adjustably screwing into said sleeve and provided on its inner end with a tubular extension having a slot, a sealing-ring on the sleeve, and a compression-plate having extending from it a neck terminating in a head confined in said tubular extension for removably connecting said plate with said plug to compress the ring between the plate and sleeve by turning the plug, substantially as described.

2. In a bung, the combination of an internally-threaded sleeve, an externally-threaded plug adjustably screwing into said sleeve and having a slotted key-socket in its outer end and provided on its inner end with a tubular extension having a slot, a sealing-ring on the sleeve, and a compression-plate having extending from it a neck terminating in a head confined in said tubular extension for removably connecting said plate with said plug to compress the ring between the plate and sleeve by turning the plug, substantially as described.

3. In a bung, the combination of an internally-threaded sleeve, an externally-threaded plug adjustably screwing into said sleeve and having a slotted key-socket in its outer end and provided on its inner end with a tubular extension flanged at its lower end and containing a T-shaped slot, a sealing-ring on the base of the sleeve, and a compression-plate having extending from it a neck terminating in a head adapted to enter said tubular extension through said slot for connecting said plate with said plug to compress the ring between the plate and sleeve by turning the plug, substantially as described.

4. In a bung, the combination of an internally-threaded sleeve, an externally-threaded plug adjustably screwing into said sleeve and provided on its outer end with a slotted flange forming a key-socket having an extension under the flange forming a recess extending from one side of the flange-slot, a sealing-ring on the base of the sleeve, and a compression-plate connected with said plug to compress the ring between the plate and sleeve by turning the plug, substantially as described.

5. In a bung, the combination of an internally-threaded sleeve having a rounded base, an externally-threaded plug adjustably screwing into said sleeve and provided on its inner end with a tubular extension having a slot, a sealing-ring on and conforming to the shape of the bottom of the sleeve, and a compression-plate having extending from it a neck terminating in a head confined in said tubular extension for connecting said plate with said plug to compress the ring between the plate and sleeve by turning the plug, substantially as described.

6. A bung comprising, in combination, an internally-threaded sleeve, an externally-threaded plug adjustably screwing into said sleeve and having on its outer end a central

key-stud and a flange surrounding said stud
to form a key-socket and provided with a slot
having a recess extending from one of its
sides under the flange, a tubular extension
5 on the inner end of said plug containing a T-
shaped slot and provided with an end flange,
a sealing-ring on the base of the sleeve, and
a compression-plate having extending from
it a neck terminating in a head confined in

said tubular extension for removably con- 16
necting said plate with said plug to compress
the ring between the plate and sleeve by turn-
ing the plug, substantially as described.

CHRISTOPHER STRASSHEIM.

In presence of—
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