Dec. 25, 1923. 1,478,918

W. RUPP

TAP DEVICE FOR WOODEN BARRELS

Filed Jan. 11, 1922

Fig. 1.

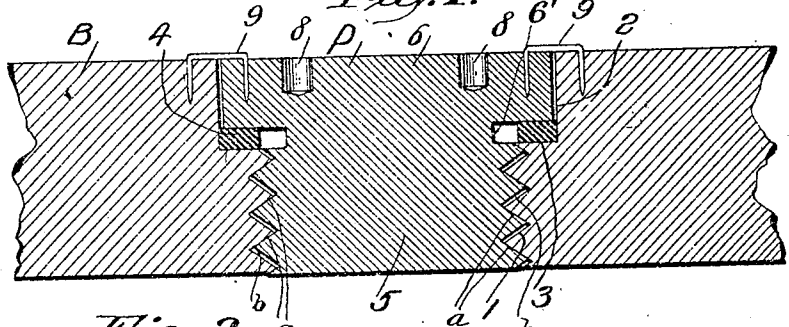


Fig. 2.

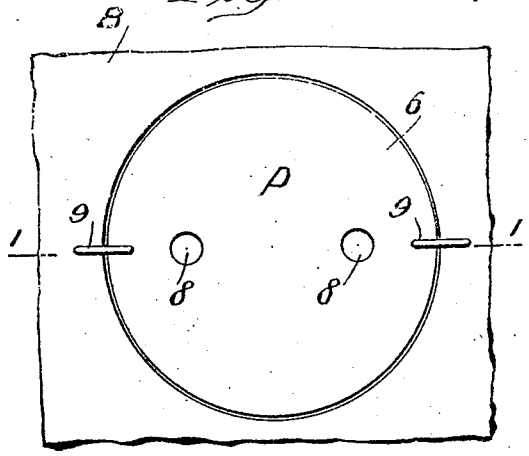


Fig. 5.

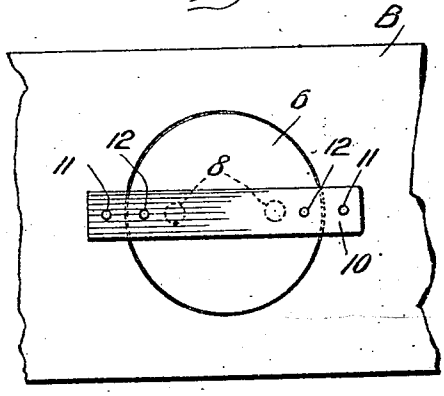


Fig. 3.

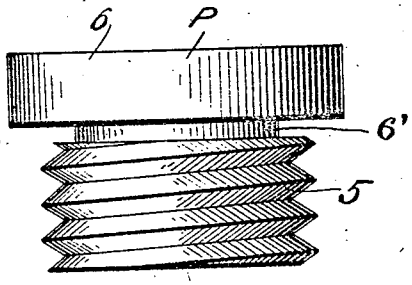


Fig. 6.

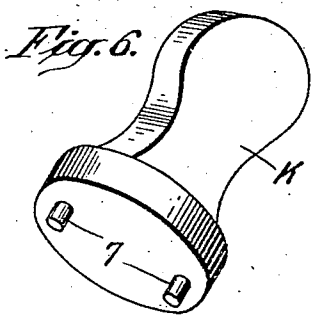
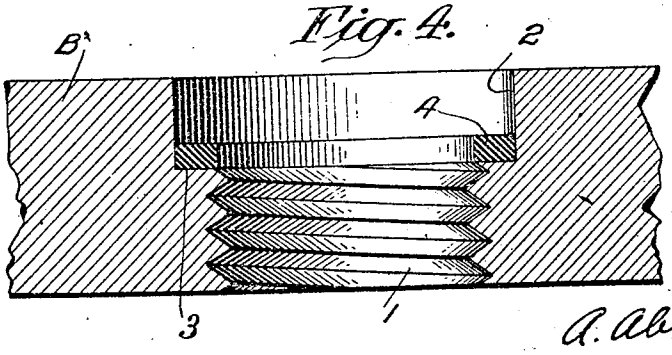


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM RUPP, OF NEWARK, NEW JERSEY.

TAP DEVICE FOR WOODEN BARRELS.

Application filed January 11, 1922. Serial No. 528,387.

To all whom it may concern:

Be it known that I, WILLIAM RUPP, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Tap Devices for Wooden Barrels, of which the following is a specification.

My invention relates to tap devices for wooden barrels and its object is to provide a device which permits ready and easy access to the contents of the barrel, which is easily put back in place, and which is so simple that it hardly adds to the cost of the barrel. For this purpose I provide the barrel with a screw-threaded hole at a suitable point, which may be in the head or in a stave. This hole is formed with a shoulder at the outer end for receiving a gasket of suitable material. Into the screw-threaded hole fits a non-metallic screw plug (preferably of wood) having a flange arranged to engage the gasket when the plug is screwed tight. The head of the plug is provided with suitable means to permit turning of the plug into and out of closing position. The plug is locked against rotation (as during shipment of the barrel) by readily removable fastening means.

My new tap device is particularly applicable in wooden barrels containing bakers' materials,—such as malt syrup, molasses, condensed milk, glucose, vegetable cooking oils, etc. Heretofore these barrels have been just ordinary wooden barrels with the usual opening at the top closed by a bung, but without any provision for tapping. In order to get to the contents of the barrel, the baker would either have to remove the head altogether, or bore a hole in the head. Both of these operations are objectionable. The removal of the head of the barrel would expose the contents, which would thus be liable to become unsanitary. Boring a hole in the barrel would cause cuttings or shavings of the wood to drop into the contents and this extraneous matter was liable to become mixed with the dough. Furthermore, in both instances the baker had no means of keeping the barrel closed tight when the same was not in use.

The foregoing and other objections and difficulties are entirely overcome by the use of my new tap device. The wooden plug is easily unscrewed and as easily put back. Except for a key, which in the trade is furnished with each barrel, the baker requires no special tools for removing or replacing the plug. The boring of a screw-threaded hole in the head or stave of the barrel adds nothing to its cost of manufacture, while the wooden plugs may be made in quantity at a very slight cost.

In the accompanying drawings,

Figure 1 shows a preferred form of my new tap device in cross-section;

Fig. 2 is a plan view of Fig. 1;

Fig. 3 is a detached view of the wooden plug shown in Fig. 1;

Fig. 4 is a view similar to Fig. 1 with the plug removed;

Fig. 5 is a plan view similar to Fig. 2 on a smaller scale, showing different means for holding the plug against rotation; and

Fig. 6 is a perspective view of a suitable key for turning the plug.

The part B may be considered as representing the head or a stave of a wooden barrel. For convenience, I will therefore refer to the part B as a wooden barrel. The barrel B is provided with a hole consisting of a screw-threaded portion 1 and an enlarged cylindrical portion 2 having a shoulder 3 adapted to receive a gasket or washer 4 of suitable material, such as leather, fiber or the like. Into the screw-threaded hole fits a plug, indicated as a whole by P. I prefer to make the plug of wood, but other suitable non-metallic materials may be used,—such as compressed paper, fiber, hard rubber, and the like. This plug comprises a screw-threaded body portion 5, a head 6, and a neck 6′ of smaller diameter than the body portion 5. When the plug is screwed in tight, the underside of the head 6 engages the washer 4 and thus produces a tight joint through which no leakage can take place. It is preferable that the screw-threads 1 of the hole and the screw-threads 5 of the plug be made heavy and easy to fit, so that only a few turns are required to screw the plug into or out of the hole. As shown in Fig. 1, when the plug is in tight, the screw-threads 1 and 5 engage at the surfaces marked *a* and are out of holding contact at the points *b*. So that, with the construction shown, merely giving the tight plug a fraction of a turn to the left, loosens the plug and makes its withdrawal very easy, even should the screw-threads be covered with the contents of the barrel. When the plug is screwed home, it forms a leak-proof joint and the head of the

plug lies substantially flush with the head or stave of the barrel.

The co-operating screw-threads of the hole and the plug are of such loose fit as to allow for expansion and contraction of the wood, so that the plug is always easily removed and replaced.

To facilitate the turning of the plug, I provide a suitable key K, as shown in Fig. 6, having a pair of prongs or fingers 7 arranged to enter corresponding holes or sockets or recesses 8 in the head 6 of the plug. Instead of holes sockets or recesses 8, other forms of gripping surfaces may be used, as for instance, a key-slot.

The plug P is locked against accidental rotation, as when the barrel is in shipment, by suitable fastening devices, such as staples 9, as shown in Figs. 1 and 2. Or, I may secure a metal strip 10 across the plug, preferably in position to cover and conceal the openings 8, as shown in Fig. 5. The strip 10 is secured to the stave or head of the barrel by removable fastening members 11, such as tacks, screws, etc., and similar members 12 pass through the strip into the head of the plug. By placing the metal strip 10 so as to conceal the openings or sockets 8, the barrel will be to a practical extent protected against unauthorized or mischievous opening.

It will be seen from the foregoing that I have provided an exceedingly simple and inexpensive device, formed as part of the barrel itself, for readily effecting an opening to permit access to the contents of the barrel and for keeping the barrel closed when not in use. My invention has nothing to do with metal bungs which have heretofore been suggested and which have not been found suitable for the purpose which my new tap device so well fulfills. Barrels with metallic bungs must be provided with metal bushings or thimbles into which the bungs fit, and these parts add so much to the cost of the barrel as to make their use absolutely prohibitive in barrels which are not returned for refilling. It is a well known fact that wooden barrels containing bakers' materials are used but once. When a barrel is empty, it is not sent back to be refilled, but the user sells it as a second-hand barrel. When the second-hand barrel dealer gets these empty barrels, he must put in a new head before he can sell them again. So it is essential that the tap device in the original barrel be as inexpensive as possible. This indispensable feature is one of the advantages inherent in my invention.

What I claim is:

1. A wooden barrel having a screw threaded hole formed through the wood itself, said hole terminating at its outer end in an enlarged annular recess providing an annular shoulder, a gasket on said shoulder, said gasket having flat inner and outer faces, a screw bung of hard non-metallic material seated in said hole, said bung including a screw shank or plug, and an enlarged cylindrical head, said head adapted to fit in said recess with its outer face flush with the outer face of the barrel and its inner face engaging the flat faced gasket, the cooperating threads of the hole and the plug being of loose fit whereby to allow for expansion and contraction and to permit easy removal and replacing of the bung, means for locking the bung to the barrel against retrograde movement of the bung, and gripping surfaces formed in the top of said head, in combination with a key adapted to engage said gripping surfaces for turning the bung.

2. A wooden barrel having a screw-threaded hole formed in the wood itself, said hole terminating at its outer end in an enlarged recess provided with a shoulder, a gasket on said shoulder, a screw plug of hard non-metallic material seated in said hole, said plug having an enlarged head adapted to fit in said recess and engage said gasket, sockets in the head of said plug adapted to accommodate a key to permit turning thereof, and a fastening plate extending over said head and covering and concealing the aforesaid sockets, said plate secured adjacent its opposite ends to the barrel, and to the head of the plug.

WILLIAM RUPP.