E. J. TACKNEY.

EXPANSIBLE BUNG PLUG.

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1,109,262. Patented Sept. 1, 1914.

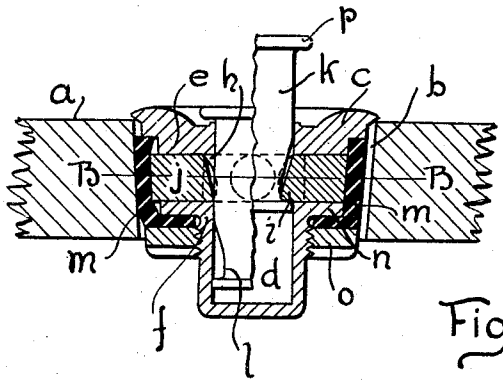


Fig. 1

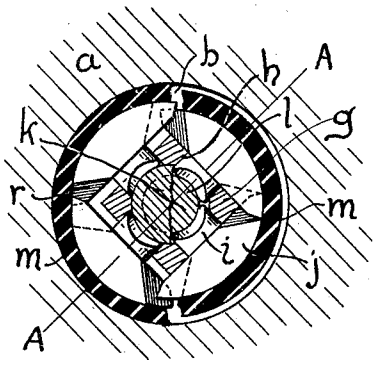


Fig. 2

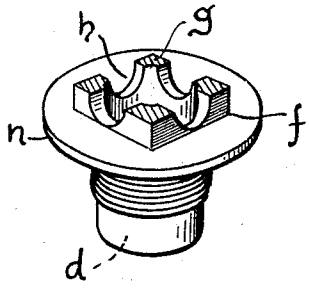


Fig. 3

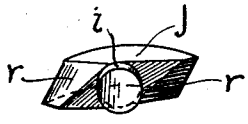


Fig. 4

WITNESSES

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EXPANSIBLE BUNG-PLUG.

1,109,262. Specification of Letters Patent. Patented Sept. 1, 1914.

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To all whom it may concern:

Be it known that I, EDWARD J. TACKNEY, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Expansible Bung-Plugs, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to expansible bung-plugs, and has for its object a metal bung-plug which is capable of lateral expansion by driving a wedging pin into the plug.

In the drawings Figure 1 is a section of the bung-plug halved to show one part in one position and the other part in another position. Fig. 2 is a section on the line B—B of Fig. 1. The line A—A on this figure shows the section line upon which Fig. 1 is taken. Fig. 3 is a perspective of the lower portion of the structure shown in Fig. 1. Fig. 4 is a perspective of one of the expanders or segments.

A portion of the side of the barrel is indicated by *a*. *b* designates the bunghole. The plug comprises a body portion *c* which has a central recess *d* which is cylindrical. The body portion is really divided into two annular members, the outside member *e* and the inside member *f*. The inside annular portion is shown in perspective in Fig. 3. These two body portions are connected by posts *g* which are integral portions of each member. These posts are in reality a reduced portion of the body which is squared, and they are pierced on each side by circular holes *h*. Into each of these holes protrudes the neck *i* of an expander or segment *j*. One of these segments is shown in Fig. 4. Each of these segments is substantially one-quarter of a circle. The end of each neck portion has a protruding rounded-off surface giving it somewhat of a ball-like appearance. A wedging pin *k* can be reciprocated within given limits in the recess *d* of the body member. The right portion in Fig. 1 shows the position of the parts before the wedging pin has been driven in. It will be noted that one end of the pin is of reduced diameter as at *l*. This allows the rounded-off neck ends of the expanders to lie against the wedging pin so as to reduce the outer periphery of the plug. In this condition the plug is not expanded, but may be easily withdrawn from the bunghole.

In the position of the wedging pin *k*, shown in the left half of Fig. 1, the expander members have been forced outward by driving the wedging pin into the plug. The rubber gasket *m* which fits over the segments is thereby forced into close contact with the bunghole walls and securely packs the bunghole and the bung-plug to prevent seepage. It also holds the bung-plug securely in the bunghole. This rubber gasket not only fits around the expanders but also on the inner side of the flange *n*, which holds the expanders. The casing portion which forms the central recess *d* is screw threaded on its exterior, and upon this runs a jam-nut *o* which holds the gasket *m* in place. The top of the wedging pin *k* has a rim *p* under which a tool may be inserted to pry the wedging pin out when it is desired to remove the bung-plug.

The rounded-off neck ends of the expanders avoid a great deal of friction, while the use of segmental expanders secures a positive action for the rubber gasket throughout practically all points of the circle. Practically every point is subjected to an expanding force. The sides of the expanders are beveled off as at *r*, so that the divisions in the circle of expanders are oblique rather than perpendicular.

What I claim is:

1. A bung-plug, having in combination a body comprising an inner and an outer portion connected by posts and having a central recess or socket, a plurality of segmental pieces having neck portions protruding between said posts, and a wedging pin adapted to be driven into said recess or socket to expand the segmental pieces, substantially as described.

2. A bung-plug, having in combination a body member provided with a central recess or socket and comprising an outer portion and an inner portion connected by posts, a plurality of segments having neck portions adapted to protrude between the posts, the said segments adapted to move radially between the outer and inner portion of the body, a rubber gasket adapted to fit over the outside of the segments, and a wedging pin adapted to be driven into the

central recess or socket to expand the segments against the gasket, substantially as described.

3. A bung-plug, having in combination a body provided with a central recess or socket, a plurality of segments adapted to move radially with respect to said body, said segments provided with beveled sides so that the divisions between the segments are oblique, and a wedging pin adapted to be driven into the central recess or socket to expand the segments, substantially as described.

In testimony whereof, I sign this specification in the presence of two witnesses.

EDWARD J. TACKNEY.

Witnesses:
STUART C. BARNES,
AMELIA C. KOEHN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."