G. J. SCHMID.

BARREL HEAD FASTENER.

APPLICATION FILED FEB. 11, 1909.

991,548. Patented May 9, 1911.

Fig. 1

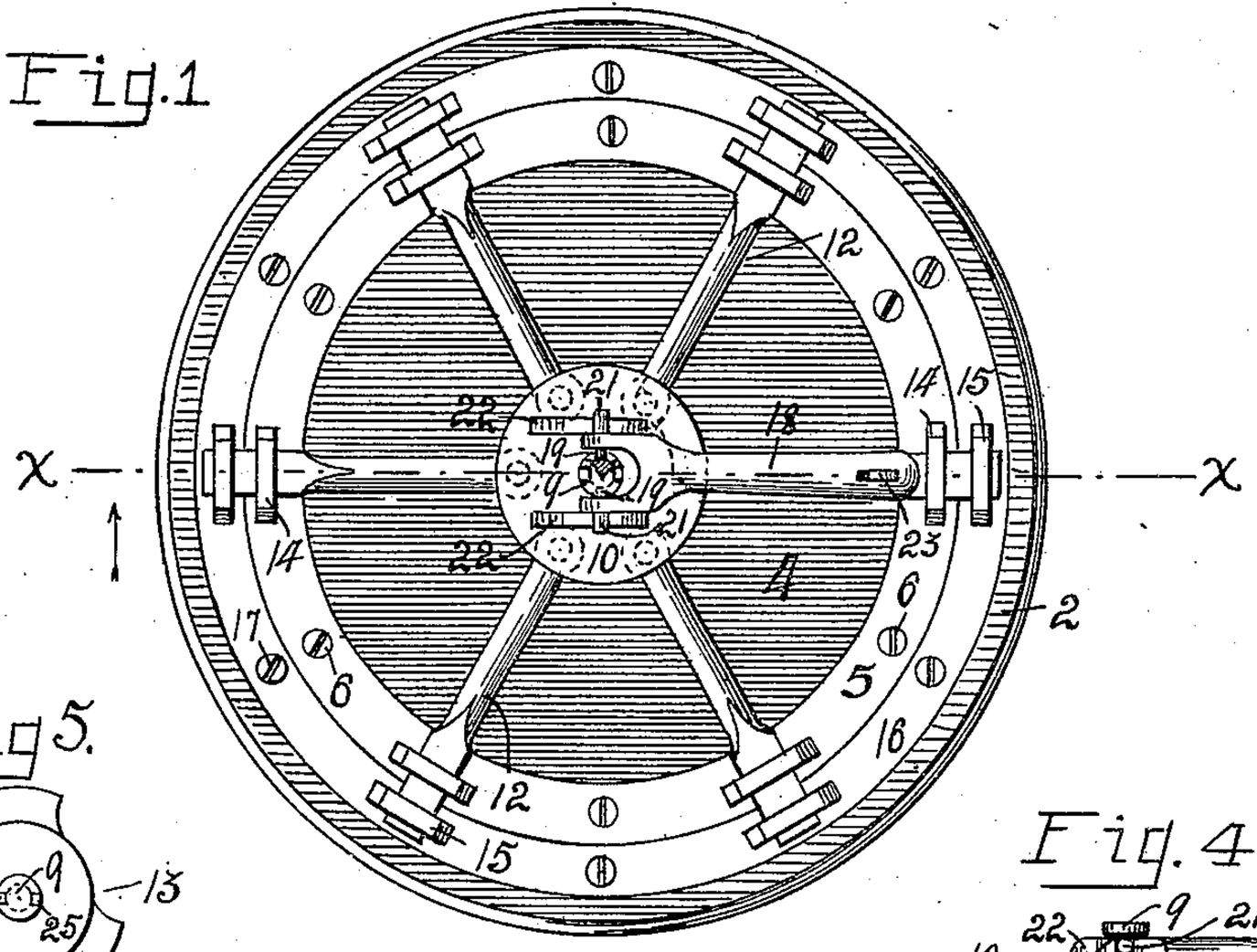


Fig. 5.

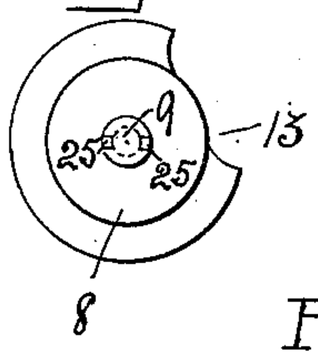


Fig. 4.

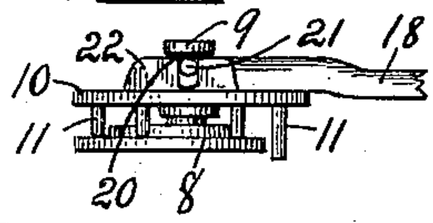


Fig. 2.

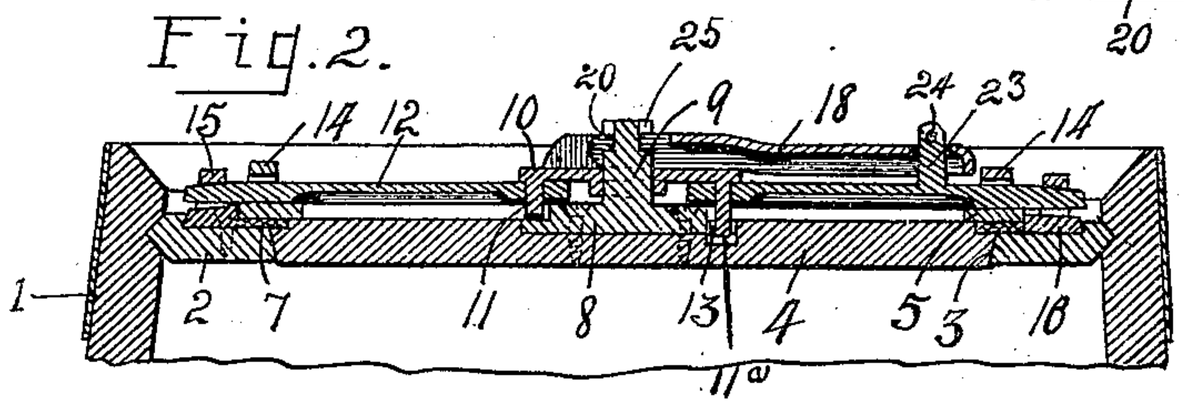
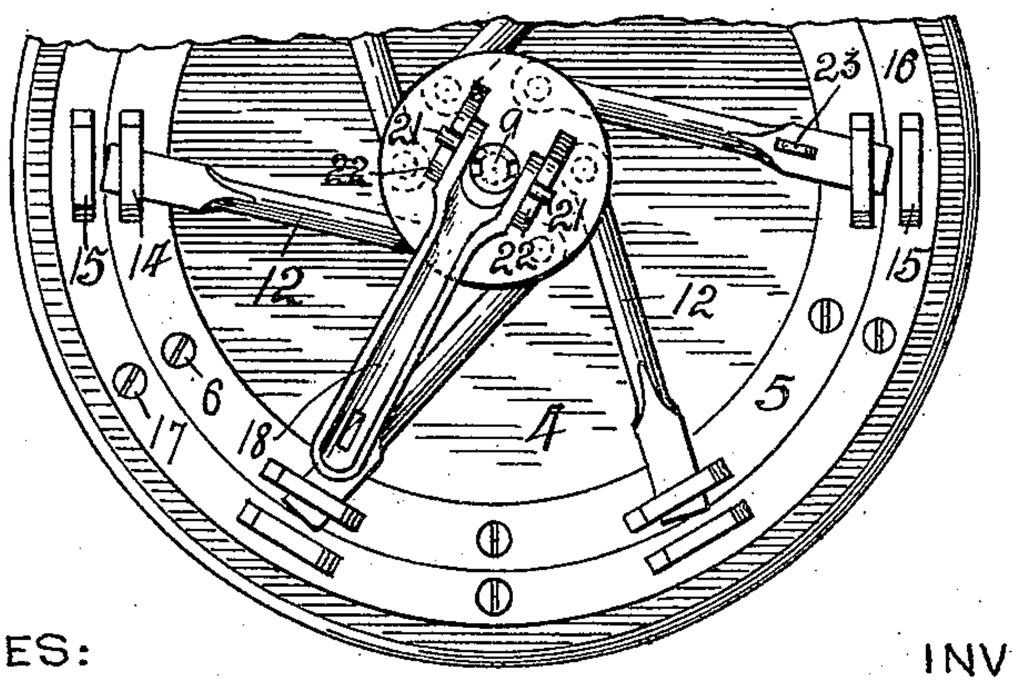


Fig. 3.



WITNESSES:

D. C. Walter

Hazel B. Hett

INVENTOR.

George J. Schmid,

By Owen & Owen,

His attys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

GEORGE J. SCHMID, OF TOLEDO, OHIO, ASSIGNOR TO THE PATENT HEADING COMPANY, OF TOLEDO, OHIO, A CORPORATION OF OHIO.

BARREL-HEAD FASTENER.

991,548. Specification of Letters Patent. Patented May 9, 1911.

Application filed February 11, 1909. Serial No. 477,320.

To all whom it may concern:

Be it known that I, GEORGE J. SCHMID, a citizen of the United States, and a resident of Toledo, in the county of Lucas and State of Ohio, have invented a certain new and useful Barrel-Head Fastener; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to receptacles, such as barrels, kegs or other closed vessels, and particularly to a head for such receptacles having an opening therein and a removable closure for the opening.

The object of my invention is the provision, in a receptacle of this class having a head opening and a closure member for such opening, of improved, simple and highly efficient means for securing the closure member to its seat in said opening, which means is capable of being easily moved to quickly release the closure member to permit its removal from the opening or to securely lock it in position therein whereby to materially increase its practicability and commercial value.

A further object of my invention is the provision, in combination with a head and closure member of the class described which have nonmetallic interior surfaces, of securing means for the closure member which has its parts so associated with the head and closure that no portion thereof is exposed to the interior of the receptacle, thus providing a receptacle which is especially adapted for the packing of meats or the like during the curing process and for shipping, and which is also intended for the packing of pickles or other articles, the liquor of which might be injuriously affected by contact with metal, and one which may be repeatedly used for the same and other purposes.

While the invention may be adapted to different forms and conditions by changes in the structure and minor details without departing from the spirit or essential features thereof, a preferred embodiment is shown in the accompanying drawing, in which,—

Figure 1 is a plan view of a barrel head embodying the features of my invention, with the closure locked to its seat in the head opening. Fig. 2 is a cross-section, as along the line *x x* in Fig. 1, of a head secured in the end of a barrel. Fig. 3 is a plan of the head and its closure member with the securing means thrown to released position. Fig. 4 is a side elevation of the central locking parts of the closure, and Fig. 5 is a plan of the base-plate and stub-shaft of such parts.

Referring to the drawings, 1 designates a barrel, the head 2 of which is provided with a centrally disposed opening 3, which may be of any desired shape or size, but is preferably round and made quite large in size relative to the head to enable large articles such as hams or the like to be freely passed therethrough. A closure member 4 fits within the opening 3 and is of wood or other nonmetallic material. This member has a ring 5 secured to its other side by screws 6 or the like, and partially projected beyond the edge thereof to form a marginal flange therearound, which is adapted to seat on the head 2 at the edge of its opening. The ring 5 is faced with a gasket 7, which is shown as being secured between said ring and the edge of the closure member, the latter being grooved or gained at its edge for such purpose, and as projecting beyond the edge of said member to enable it to coact with the ring 5 and marginal edge of the opening 3 to hermetically seal the joint between said parts when the closure is secured in position. By disposing the inner edge of the gasket between the parts 4 and 5 leakage is prevented between such parts as well as between the part 5 and inner marginal portion of the head 2.

Secured centrally to the outer side of the closure member 4, by screws or otherwise, is a plate 8 from which rises a stub shaft 9. A disk or rotary member 10 is loosely mounted on the shaft 9 and has a plurality of concentrically arranged studs 11 projecting inwardly therefrom near its edge, each of which studs has the inner end of an arm or bolt member 12 loosely mounted thereon to permit the disk 10 and said arms to have

relative pivotal movements. The disk 10 has its rotary movements relative to the closure 4 limited by extending one of the studs 11 to adapt it to work in a segmental marginal incut or slot 11′ in the plate 8, as shown at 13. The outer ends of the arms 12 are mounted for free reciprocatory movements in guides or loops 14, provided on the outer face of the ring 5 in radial register with said arms, and when such arms stand in radial position relative to the rotary member 10 their outer ends project beyond the outer edge of the ring 5 and work into or through loops or eyes 15 provided on the outer surface of a ring 16. This ring is secured to the head 2 in contiguous position to the outer edge of the closure ring 5 and is preferably countersunk in the head and secured thereto by screws 17 or in any other suitable manner. The outer ends of the arms 12 are preferably tapered on their outer surfaces to adapt them when forced into loops 15 to cause a tight seating of the closure in the opening. The countersinking of the ring 16 in the head serves both to prevent a dishing of the head and a radial compression of the head into oval form when forced within the barrel chime, and to further insure the head against dishing and warping the ring 16 has its outer edge beveled, as shown in Fig. 2, to adapt it to cut into and firmly engage the outer wall of the countersink when a compressing force is applied to the head due to a tightening of the barrel chime therearound.

The rotary movements of the disk 10 to effect movements of the arms 12 to release or engage the loops 15 of the ring 16 are controlled by a cam-lever 18, which has one end forked to adapt it to straddle the outer end portion of the stub-shaft 9, and has the furcations thereof provided with inwardly projecting trunnions 19, 19, which have bearings in a groove 20 provided circumferentially in the shaft 9 near its outer end, and with the outwardly projecting pivot-lugs 21, 21, which work in registering slots provided in the outer ends of bosses 22, 22 rising from the disk 10. When the lever 18 is thrown in the direction in which its cam surface works against the disk 10, as shown in Figs. 1 and 2, such disk is forced down to effect a firm gripping of the inner ends of the arms 12 between it and the plate 8. The lowering of the inner ends of the arms in this manner also tends to press the closure more tightly to its seat in the head opening as the arms act as levers with the loops or eyes 15 of the ring 16 as their fulcrums. To withdraw the arms 12 from engagement with the loops 15 to permit a removal of the closure it is only necessary to swing the lever 18 to the opposite sides of the stub-shaft 9 to that which it assumes when in locked position as this releases the cam pressure of the lever on the disk 10, and then to swing the lever with the stub shaft 9 so as to effect a rotary movement of the disk 10 and a consequent withdrawal of the outer ends of the arms 12 from the loops 15, as shown in Fig. 3. The lever 18 when in locked position is adapted to lie longitudinally of one of the arms 12, and has a slot in its outer end through which a lug 23 on such arm projects. This lug is provided with an eye 24 to which a pad-lock or sealing wire may be attached to prevent a releasing movement of the lever.

In assembling, the trunnions 19 of the lever are placed in engagement with the groove 20 in the shaft 9 by entering the same through grooves 25, 25 in opposite sides of the end portion of such shaft. When the parts are secured to the closure the prolonged lug 11 working in the incut or slot 11′ in the plate 8 prevents the disk 10 and lever from turning sufficiently relative to the shaft 9 to place the trunnions in register with the grooves 25.

It is apparent that I have provided a simple and efficient means for securing a closure in its opening and also that the lever 18 not only serves as a locking means for the arms 12 but also as a means for rotating the disk 10 to effect either a shooting or a withdrawal of the arms or bolt members 12 relative to the loops or eyes 15 on the ring 16.

I wish it to be understood that my invention is not limited to any specific construction or arrangement of the parts, except in so far as such limitations are specified in the claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

1. In a receptacle, a head having an opening therein and marginal sockets, a closure for said opening, a stub-shaft secured to and projecting axially outward from said closure and having a circumferential groove and oppositely disposed grooves extending from said circumferential groove longitudinally of the shaft to the outer end thereof, a member rotatably carried by said shaft, arms pivotally projecting from said member and capable of being moved by rotary movements of the member to have their outer ends engage or release said sockets, said member having slotted standards on opposite sides of said shaft, and a cam lever having its inner end forked and straddling the shaft and provided with inwardly projecting trunnions which work in the circumferential groove in the shaft and projecting pivot-lugs which work in the slots in said standards, whereby to effect a turning of said member when the lever is swung with the shaft as its axis and to effect a locking of said arms and a depression of said member against a subjacent portion of the closure

when the lever is swung in one direction with said trunnions as its axis, said lever being capable of removal from engagement with said shaft by withdrawing its trunnions from the circumferential groove through the longitudinally extending grooves when placed in register with the latter.

2. In a receptacle, a head having an opening therein and marginal sockets, a closure for said opening, a stub-shaft projecting axially from the closure and having a circumferential groove and longitudinal grooves leading thereto, a member rotatably carried by said shaft and having bosses rising on opposite sides of the shaft, said bosses having their outer ends slotted, radiant arms attached to said member and actuated by a rotation thereof to engage or release said sockets, a cam lever having an end forked to straddle the shaft and provided with lugs projecting inwardly into the circumferential shaft groove and lugs projecting outwardly into the recesses in said bosses for free vertical movements therein, said lever being adapted, when turned, to effect radial movements of the arms and when oscillated with said lugs as its fulcrum to release or clamp said member against movement.

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

GEORGE J. SCHMID.

Witnesses:
C. W. OWEN,
HAZEL B. HIETT.

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