J. N. CLOUSE.

BARREL HEAD FASTENER.

APPLICATION FILED JUNE 18, 1908.

956,759.

Patented May 3, 1910.

Fig. 1.

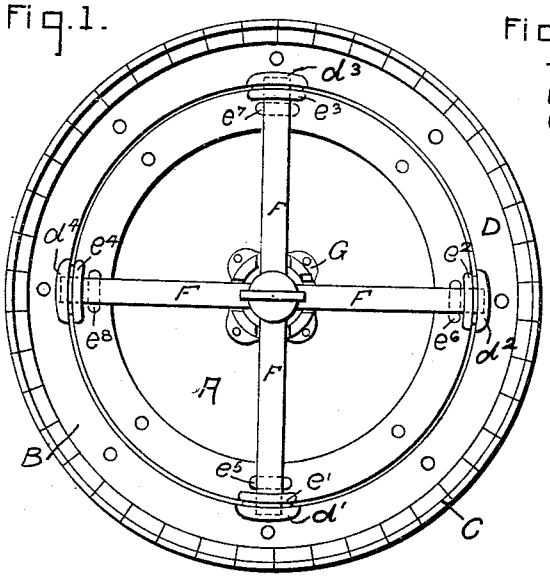


Fig. 2.

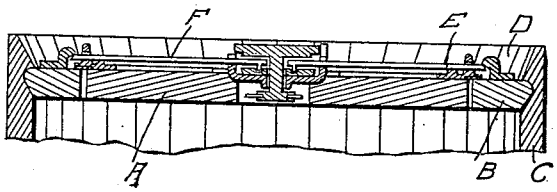


Fig. 3.

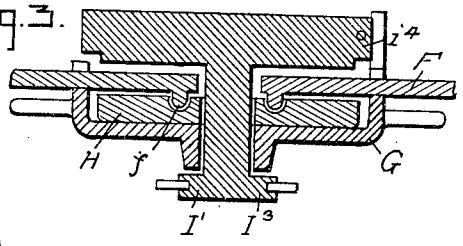


Fig. 4.

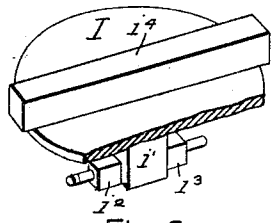


Fig. 5.

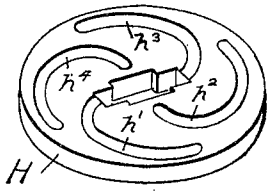


Fig. 6.

Fig. 7.

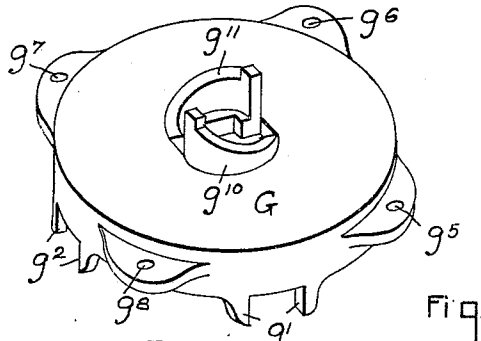
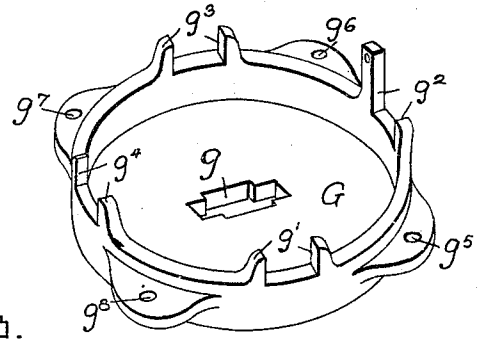
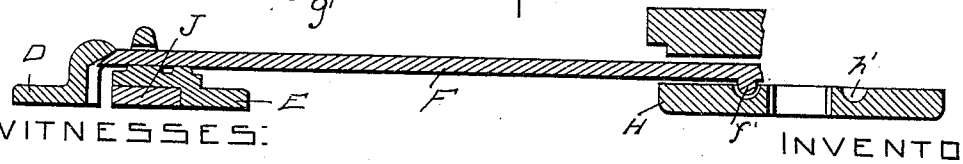


Fig. 8.





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BARREL-HEAD FASTENER.

956,759. Specification of Letters Patent. Patented May 3, 1910.

Application filed June 18, 1908. Serial No. 439,233.

To all whom it may concern:

Be it known that I, JOSEPH N. CLOUSE, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Barrel-Head Fasteners; and I do 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 letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in barrel head fasteners such as are used for packing and curing pork and other meats, pickles, kraut, etc., and the objects of my invention are to produce a removable head to a barrel so that it can be taken out when desired and the contents of the barrel examined and the head again replaced and the barrel remain sound and substantially closed again. Also to save the destruction of barrels by the custom of taking out the head by taking off a couple of the hoops and then trying to head it up again after the brine and salt gets in between the staves in the open joints in which case the barrel can not be again headed up tight so that it will not leak.

I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the head of a barrel with my invention attached thereto. Fig. 2 is a cross section view through the center of the head and the parts of my invention thereto attached. Fig. 3 is an enlarged vertical section of the central working parts of my invention. Fig. 4 is a perspective enlarged detail view of the locking button with a portion cut out of the disk to show the arm below. Fig. 5 is an enlarged detail face view of the eccentric plate with its curved grooves or tracks. Fig. 6 is an enlarged detail perspective top view of the central base plate to which the other central parts are attached. Fig. 7 is a bottom side detail perspective view of the central base plate showing the incline tracks. Fig. 8 is an enlarged detail sectional view of the eccentric plate with an arm in position and its position in the inner and the outer rims or rings.

In all of which views like letters refer to like parts.

Referring to the drawings, I will describe the various parts of my invention and their working relation to each other.

In the drawings, A represents the removable part of the barrel head, B represents the outer ring portion of the head that remains permanently in contact with the staves C. To this outer ring B of the head is securely attached a rim plate D, which is provided with four under cut pockets d^1, d^2, d^3, d^4, into which the ends of the four arms F, F, F, F, are forced like bolts in the locking process.

E is an inner plate rim which is securely attached to the removable part of the head A, this plate rim E being provided with four loops e^1, e^2, e^3, e^4, in which the ends of the arms F, F, F, F, are retained loosely. Also on this inner rim E is placed a series of four or more raised portions e^5, e^6, e^7, e^8, which form fulcrums under the four arms F, F, F, F, over which the arms F get a prying force in the locking process. In the center of the removable head portion A, a shallow recess or cavity is bored out into which the under side projection of the center base plate G is fitted and the said plate is securely screwed to the removable head portion A. This center plate G is provided with four pairs of lugs g^1, g^2, g^3, g^4, which form seatings into which the inner ends of the four arms F, F, F, F, rest loosely. It is also provided with four ears g^5, g^6, g^7, g^8, on its periphery and a sealing post; the under side of the said plate G is provided with two reverse sections of incline track g^{10} and g^{11}, shown in Fig. 7, and the center opening in the plate G is for the arm i^1 of the locking button I to pass through.

In Fig. 5 H is the eccentric plate with four curved eccentric grooves or tracks h^1, h^2, h^3, h^4, in which the pins f^1 on each of the four arms F, F, F, F, move and force the said arms outward from the center. The opening g in the center of the plate H is for the arm i^1 of the locking button I to pass through. The locking button I is shown in detail in Fig. 4, and it consists of a disk having a wrench bar i^4 on its top side with a hole for a sealing wire in one end thereof, a squared arm i^1 which extends downwardly and terminates in two right-angled lugs or branches i^2 and i^3, the arms i^1, fitting into

the squared opening g in the center of plate G, turns said plate as the locking piston is turned, and simultaneously the lugs i^2 and i^3 ride upwardly on the inclined surfaces g^{10} and g^{11} and consequently draw down the inner ends of the arms F, at the same time that the latter are forced outwardly by reason of the cam action exerted thereon by the curved eccentric grooves h^1, h^2, h^3, h^4. The pins in the ends of the branches i^2 and i^3 are to prevent the locking button I from coming out after the compact of parts are put together in working order.

J is a packing ring of cork secured under the rim plate E on the removable part of the head A and overlaps onto the outer ring of the head B and when the ends of the arms are forced out into the pockets d^1, d^2, d^3 and d^4 in the outer rim plate D and the inner ends of the arms are forced down by the locking button the arms forming a leverage over the fulcrum raised portions on the inner plate rim E. The cork ring packing J is compressed firmly over the joint between the two sections of the barrel head and makes an air tight and water tight packing. In order to force the locking button up against the stop and onto the stop landings so that it will not work back it is necessary to use a wrench on the wrench bar i^4 and then to prevent anyone from opening the barrels the wire of a seal is passed through the two holes where the wrench bar and the sealing part come against each other and its two ends are sealed together in the usual way.

Now all of the parts of my invention having been described in detail and their functions and working relations shown, the operation of heading up a barrel is plain and easy by inserting the removable part of the head in the opening inside of the permanent ring of the barrel head so that the four arms F, F, F, F, register with the four undercut pockets d^1, d^2, d^3, d^4 in the rim plate D, then by turning the locking button around against its stops until the sealing holes come together the arms are forced into the undercut pockets and the locking button draws down the inner ends of the arms firmly and the cork packing ring is compressed into an air tight joint.

I am aware that there are removable barrel head inventions and I therefore do not claim broadly a removable barrel head but what I do claim and desire to secure by Letters Patent is—

1. A barrel head comprising in combination with an annular rim located within the upper end of the barrel, a head adapted to fit within said rim, an annular plate having a series of pockets formed adjacent its inner periphery located on said rim, a base plate secured centrally to said head, upwardly projecting ears formed in pairs around the periphery of said base plate, concentric cam surfaces projected downwardly from said base plate, a circular disk having a series of cam grooves which intersect at the center of said disk which is disposed concentrically of said base plate and said disk lying within said upwardly projecting ears, a plurality of arms operatively connected to said cam grooves and projecting through said pairs of ears and being adapted to be projected beyond the said head into said pockets, and a pin for operating said disk and having right angular projections for acting upon said cam surfaces to lock said head.

2. A barrel head comprising in combination with an annular rim located within the upper end of the barrel, a head adapted to fit within said rim, an annular plate having a series of pockets formed adjacent its inner periphery located on said rim, a base plate secured centrally to said head, upwardly projecting ears formed in pairs around the periphery of said base plate, concentric cam surfaces projected downwardly from said base plate, a circular disk having a series of cam grooves which intersect at the center of said disk which is disposed concentrically of said base plate said disk lying within said upwardly projecting ears, a plurality of arms operatively connected to said cam grooves and projecting through said pairs of ears and being adapted to be projected beyond the said head into said pockets, a pin projected through said disk and through said base plate being adapted to turn said disk to operate said bars, and means carried by said pin to operate on said cam surfaces to draw said bars and base plate together.

In testimony whereof, I affix my signature, in presence of two witnesses.

JOSEPH N. CLOUSE.

Witnesses:
A. SCHREIBER,
ADELE S. PICKEL.