A. J. HODGE & H. B. RUGGLES.

HEAD FOR BARRELS AND THE LIKE.

APPLICATION FILED APR. 26, 1915.

1,276,363.

Patented Aug. 20, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

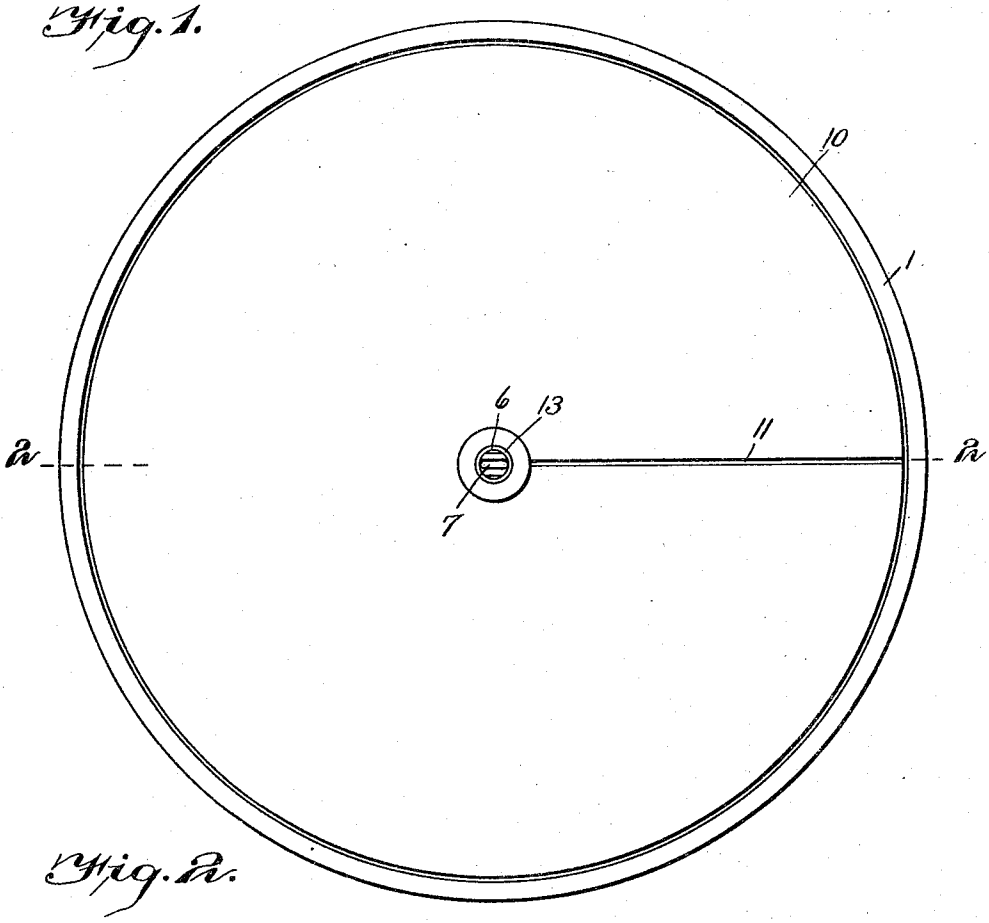
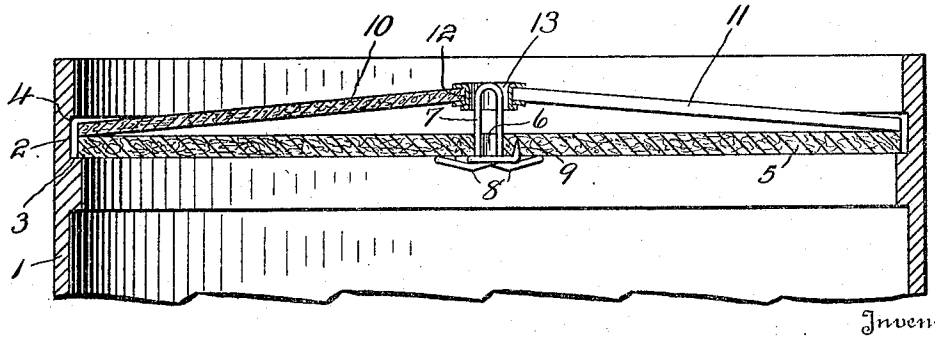


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

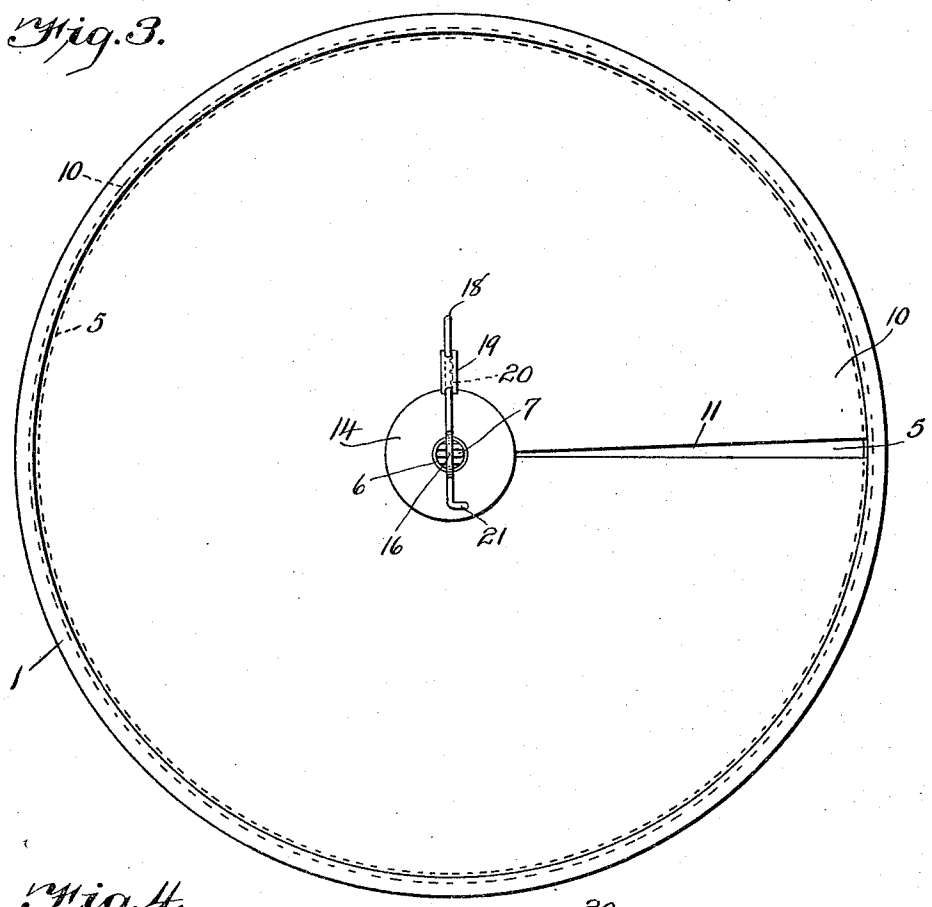
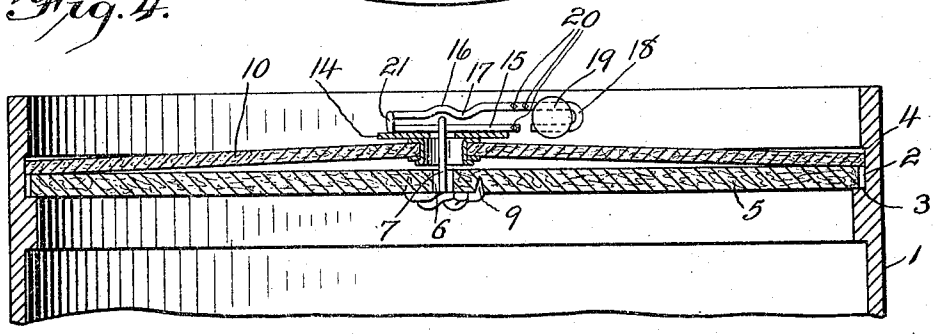


Fig. 4.



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UNITED STATES PATENT OFFICE.

ARTHUR J. HODGE AND HENRY B. RUGGLES, OF PASADENA, CALIFORNIA, ASSIGNORS TO THE AMERICAN PRODUCTS COMPANY, OF ST. LOUIS, MISSOURI.

HEAD FOR BARRELS AND THE LIKE.

1,276,363. Specification of Letters Patent. Patented Aug. 20, 1918.

Application filed April 26, 1915. Serial No. 24,077.

To all whom it may concern:

Be it known that we, ARTHUR J. HODGE and HENRY B. RUGGLES, citizens of the United States of America, residing at Pasadena, in the county of Los Angeles and State of California, have invented certain new and useful Improvements in Heads for Barrels and the like, of which the following is a specification.

This invention has relation to certain new and useful improvements in heads for barrels, kegs and the like and has for its primary object, the provision of an improved form of expanding head which will be composed of a small number of parts and may be readily employed for closing the ends of barrels, kegs and the like.

The invention has for another object, the provision of a head of the foregoing character including a flat solid disk and a concavo-convex radially slit disk the center of which is adapted to be pressed toward the center of the first mentioned disk for spreading the outer circular edge of the outer disk into binding engagement with the wall of the croze of a barrel or other receptacle and sealing the head in position to prevent withdrawal or movement of the same.

The present invention has for a still further object, the provision of a head of the foregoing character in which will be included a novel form of fastening member carried by the flat solid inner disk and projecting through the outer disk to receive a special form of seal to secure the outer disk in its flattened or operative position and thereby prevent movement or withdrawal of the head without previous destruction of the seal.

With these and other objects in view, the invention consists in the novel construction, combination and arrangement of parts as will be hereinafter more in detail described and the asserted novelty specifically pointed out in the claims.

In the accompanying drawings which clearly and fully illustrate the invention:—

Figure 1 represents a plan view of a barrel or other circular receptacle with the improved form of head loosely positioned therein;

Fig. 2 is a vertical transverse section on the plane of line 2—2 of Fig. 1;

Fig. 3 is a view similar to Fig. 1, showing the head secured in position and sealed; and

Fig. 4 is a transverse vertical section on a plane at right angles to the plane of Fig. 1.

Referring more particularly to the drawings in which similar reference characters designate corresponding parts throughout the several views, 1 designates a barrel or other receptacle of cylindrical form, of which we have shown only the upper portion and which is provided with a croze 2 adjacent its end and preferably produced by slightly decreasing the interior diameter of the receptacle above and below the point at which the croze 2 is located, thereby providing the lower shoulder 3 and upper shoulder 4 of said croze 2 with the lower shoulder 3 projecting slightly farther toward the center of the receptacle than the upper shoulder 4 so that the disks 5 and 10 may be readily placed in position to rest upon said lower shoulder 3, as will be readily understood by referring to Figs. 2 and 4 of the drawings.

The first mentioned or inner disk 5 of the head is preferably flat and solid and may be composed of compressed pulp or fiber or any other suitable material. The disk 5 is provided with a central opening 6 through which projects the upwardly extended staple 7 which has the lower ends of its legs extended and then bent back and wrapped around one another, as shown at 8, to prevent spreading of the legs of said staple 7. The ends of the legs are then again extended and terminate in the upwardly directed prongs 9 which are driven into the bottom of the inner disk 5 to secure the staple 7 in proper position. This form of staple employed in this case is preferably the same as the form employed in the co-pending application Serial Number 21,432, but it will be understood that any suitable form of staple may be employed in the present case.

The second or outer disk 10 is also preferably formed of compressed pulp or fiber but may be composed of any suitable material and is of concavo-convex form and provided with a radially directed slit 11 extending from its outer or circular edge to the central opening 12 of said disk 10, within which opening 12 is positioned the reinforcing and staple receiving eyelet 13, through which the staple 7 extends when the outer

disk 10 is placed upon the inner solid flat disk 5.

When the outer disk 10 is in normal position with its central portion spaced some distance above the center of the inner solid flat disk 5, the circular disks 5 and 10 are of substantially the same diameter and equally spaced from the vertical wall of the croze 2. As soon as the central portion of the outer disk 10 is pressed downwardly toward the solid flat inner disk 5, however, the opposite edges or walls of the slit 11, which are normally close together and practically parallel, begin to separate, especially at the outer end of said slit 11 and the outer circular edge of the disk 10 moves outwardly beyond the outer circular edge of the solid flat inner disk 5 and toward the vertical wall of the croze 2. When the center of the outer disk 10 is pressed to within only a short distance of the center of the inner flat solid disk 5, the outer circular edge of said outer disk 10 is in binding engagement with the vertical wall of the croze 2 and the upper end of the staple 7 projects for a short distance above the center of said outer disk 10.

A suitable spacing washer 14 is then placed over the end of the staple 7 and the straight leg 15 of the wire seal threaded through the end of the staple 7, as clearly shown in Fig. 4. The wire seal is preferably of substantially ellipitical form, the same as in the previously referred to copending application Serial Number 21,432.

While this form of seal is preferred, it will be understood that any suitable form of seal may be employed. When using this form of seal, however, the straight leg 15 is moved through the staple 7 until the end of the staple 7 is opposite the outwardly offset portion 16 of the long irregular leg of the seal and inwardly of the inwardly offset stop portion 17 of said long irregular leg. The outer end of the long irregular leg of the seal is bent back upon itself, as shown at 18 and the seal proper 19, formed of lead or some other suitable soft material, is slidably mounted upon the same and after the seal is in position, the seal proper 19 is moved inwardly until it is threaded upon the free end of the straight leg 15 to draw closer together the straight and irregular legs and thereby prevent the seal from being moved any considerable distance in either direction upon the staple 7. After the seal proper 19 has been moved to its innermost position it is ready to be squeezed or compressed by a pair of pliers or any other suitable tool to cause the teeth 20, formed on the free end of the straight leg 15 and an opposite portion of the irregular leg, to bite into said seal proper 19 and prevent the same from being returned to its outermost or original position, thereby making it impossible to remove the seal and withdraw the head. It will therefore be seen that after the seal proper 19 has once been moved to its innermost or operative position and squeezed or compressed, the seal must be destroyed before the head can be removed or withdrawn from the receptacle. This will make it impossible for unauthorized parties to tamper with the head after it has been secured in position and sealed, without leaving evidence of their act.

The inner end of the straight leg 15 and the irregular leg of the seal are connected and bent at about a right angle to form the hook 21 which may be inserted in the eyelet 13 for the purpose of removing the outer disk 10 after destruction of the seal by the proper parties.

The use of this hook 21 will be especially desirable, as it is practically impossible to insert the fingers in the slit 11 or between the circular outer edge of the disk 10 and the inner wall of the receptacle to remove said disk 10 and it will also be a very difficult matter to insert a finger in the eyelet 13 a sufficient distance to take hold of and remove the disk 10, especially while the staple 7 extends upwardly into said eyelet 13 and said disk 10 is in normal position upon the inner solid flat disk 5, as shown in Fig. 2 of the drawings. It will be understood that if desired, the hook 21 may be engaged in the staple 7 for the purpose of withdrawing the inner solid flat disk 5 and, if preferred, both the disk 10 and the disk 5 may be removed at one time in this manner, without the necessity of first removing the outer disk 10.

While the preferred embodiment of the invention has been shown and illustrated, it will be understood that minor changes in the details of construction and combination and arrangements of parts may be made within the scope of the appended claims without departing from the spirit of the invention or sacrificing any of the advantages of the same.

What is claimed is:—

1. A closure head comprising a flat supporting disk, a concavo-convex locking disk engaged against the first mentioned disk and adapted to have its outer edge expanded beyond the outer edge of the first mentioned disk to fasten it in place, and means for locking the second mentioned disk in expanded position.

2. A barrel head closing device comprising a flat disk supported in the end of the barrel, an expansible disk supported on said flat disk and normally spaced therefrom at the center, said expansible disk having means whereby, the same may be pressed downwardly at the center for expanding the outer edges for locking said disk in po-

sition, and means insertible through and for locking said disks in locking position.

3. The combination with a receptacle having a croze formed therein; of a double disk fiber head, the outer edge of one of the disks of said head being in binding engagement with the wall of said croze when said disk is forced to operative position against the remaining disk of said head, a staple member fixed in the fiber of said remaining disk and projecting through the first mentioned disk when said first mentioned disk is in operative position, and sealing means engaged through and locked upon said staple to prevent return of said first mentioned disk to inoperative position and thereby permit movement and withdrawal of said double disk head.

In testimony whereof we affix our signatures in presence of two witnesses.

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HENRY B. RUGGLES.

Witnesses:
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EDITH C. SOLQUIST.

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