Dec. 26, 1922.

1,439,890.

J. C. HERON ET AL.

FIBER KEG OR BARREL.

FILED JULY 23, 1921.

FIG. 1.

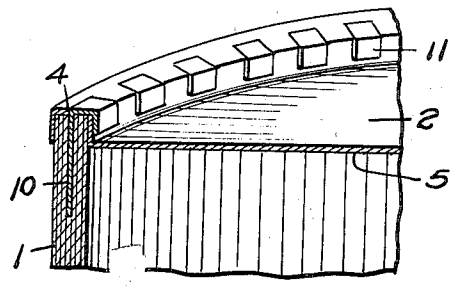


FIG. 3.

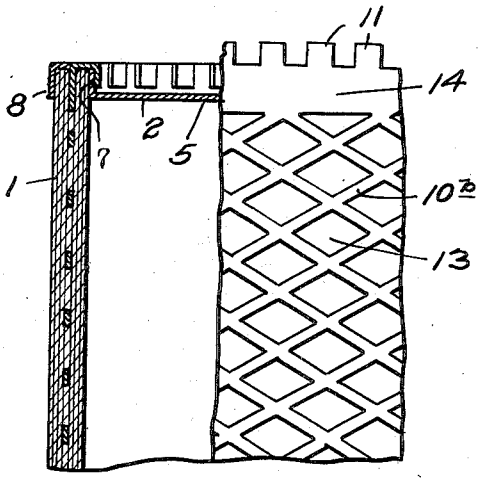


FIG. 2.

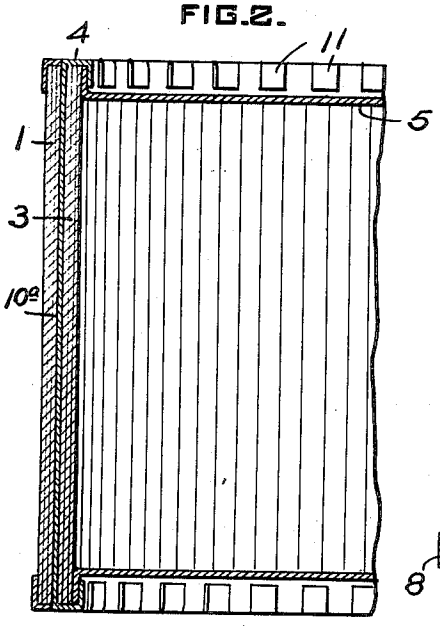
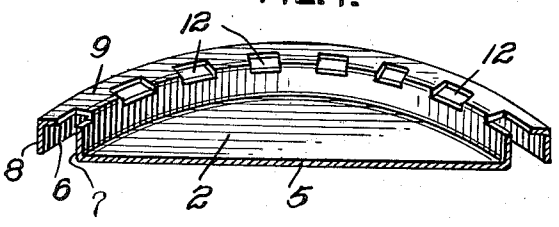


FIG. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES C. HERON, OF BRENTWOOD, FRANK H. BRAGDON, OF OAKMONT, AND WILLIAM J. CLARK, OF PITTSBURGH, PENNSYLVANIA.

FIBER KEG OR BARREL.

Application filed July 23, 1921. Serial No. 487,095.

To all whom it may concern:

Be it known that we, JAMES C. HERON, FRANK H. BRAGDON, and WILLIAM J. CLARK, citizens of the United States, and residents of Brentwood, Oakmont, and Pittsburgh, respectively, in the county of Allegheny, State of Pennsylvania, have invented a new and useful Improvement in Fiber Kegs or Barrels, of which the following is a specification.

This invention relates to fiber receptacles such as boxes, barrels, kegs and particularly to such receptacles provided with metal ends or heads.

The object of the invention is to provide an improved receptacle in which the end caps or heads accurately fit the body so as to be firmly secured thereto and are not influenced by moisture, thus eliminating the disadvantages caused by expansion and contraction incident to the use of wooden heads.

It is also an object of the invention to provide a receptacle which is simple in construction, cheap to manufacture, which can be readily assembled and which will withstand rough handling without danger of being accidentally opened.

It is a special object of the invention to provide the end cap or head so as to entirely cover and protect the ends of the receptacle and in the case of kegs to embrace the chimes thereof so as to not only obviate the mutilation of such chimes but to present an unobstructed, smooth outer edge or corner upon which the keg may be rolled, rolling being the method usually employed in handling kegs and barrels as is well known.

It is also a special object to provide a device having the advantages above referred to in which the securing means for the head will not only serve to effectively bind the head in place, but will cooperate with the head to present a perfectly smooth surface upon which the same may rest and in which the securing means will be thoroughly protected against bending out of contact with the head in case the receptacle is slid over its supporting surface.

These and other objects of the invention will more readily appear from the following description taken in conjunction with the appended claims.

Like reference characters are used to denote corresponding parts throughout the several views of the drawings in which Fig. 1 is a perspective view in longitudinal section illustrating a receptacle embodying the invention; Fig. 2 is a longitudinal section of another form of receptacle; Fig. 3 is a side view partly in section showing another modified form of receptacle; and Fig. 4 is a detailed perspective view of the end cap or head.

The invention may be applied to any form of receptacle or package such as rectangular or other shaped cartons or boxes for holding small articles, or to larger containers, such as kegs or barrels, for holding grapes, nails, sugar, salt, or other heavy substances. The drawing illustrates the invention as applied to a barrel or keg comprising the body 1 and end caps or heads 2 secured thereto, the body 1 being formed of paper, paper-board, or other fibrous material and preferably of a plurality of plies 3 which are wound upon each other over a suitable mandrel or drum, and secured to each other by a suitable adhesive, such as glue, sodium silicate, or the like, the barrel body forming a tube or cylinder having straight edges or ends 4.

The end caps or heads 2 are preferably formed of thin sheet metal, cut and pressed to shape in a suitable machine. As shown, the end caps or heads are cup-shaped having a central depressed portion 5 provided with the peripheral U-shaped ridge 6 which fits snugly over the end edges 4 of the body 1, said ridge comprising an inner wall 7, an outer wall 8 and a connecting bottom portion 9. The distance between the walls 7 and 8 corresponds to the thickness of the body 1 so that the ends when forced into place, as shown in Figs. 1 to 3, firmly embrace said body.

The end cap or head 2 is secured in place by a sheet metal member 10 which may be made of pliable material which is not liable to break when bent. Said member is firmly embedded in the body 1 or wound between the plies 3 during the formation of the drum and forms a reinforcing means for the barrel chimes as well as serving to secure the heads in position. The securing and reinforcing member is provided with a series of spaced tongues 11 extending therefrom which are adapted to project through the openings 12 in the head and to be bent inwardly into contact with the head, the extremities of the tongues lying adjacent to the side walls 7

and housed within the central depression of the head. The width of the tongues 11 corresponds to the width of openings 12 so as to completely fill said openings, thus securing in effect a solid head and one which is moisture-proof. The openings 12 are formed by cutting away a portion of the bottom 9 as well as a portion of the inner side wall 7, the depth of the cut away portion in the side wall being exactly equal to the thickness of the securing member and tongues 11, so that when the ends are attached the tongues will lie flush with the exterior of the bottom 9 and will be thoroughly protected from displacement, due to sliding the containers on their supporting surfaces, and will not be liable to be bent out of shape during rough handling. Furthermore this construction gives a smooth supporting edge which is unobstructed, facilitating handling and reducing the dangers of mutilating the surfaces upon which the receptacles rest. It will be observed that the edge or corner formed at the juncture of the bottom portion 9 and outer wall 8 is unbroken and is perfectly smooth so as to present a surface upon which kegs or barrels can be readily rolled. In practice this is found of great importance as it facilitates handling, and with the construction shown may be utilized for this purpose without danger of loosening the heads since there are no projecting portions of any kind exposed to be bent out of its proper securing portion.

The securing member 10 may be a comparatively narrow strip inserted in the end portion of the body 1, one of said members being used at each end of the barrel, as illustrated in Fig. 1. However, if desired, a continuous sheet 10^a extending from end to end of the barrel may be interposed in the body 1, the end edges of said sheet being notched to form tongues which are bent down over the head as before described. Such an arrangement is shown in Fig. 2, and as will be readily understood, materially reinforces the barrel and prevents its collapse either inwardly or outwardly, so that the package is considerably stronger.

The securing member may also be formed of a suitable sheet of expanded metal as shown at 10^b, Fig. 3. This sheet is slitted and expanded intermediate its edges to form the open meshes 13, but the slits stop short of the side edges of the sheet, so as to leave two continuous selvage edges 14 which are slit transversely of the sheet and longitudinally of the barrel to form the tongues 11, said tongues being bent inwardly over the end cap or head.

All forms of the package are simple and can be readily assembled by any one without special tools or implements. Usually one of the end caps or heads is fully assembled in the barrel at the factory by bending the tongues 11 inwardly over the end cap or head. The other end cap is then pushed into place and one or two of the tongues 11 are bent inwardly over the same to temporarily hold it in place for shipping. Said end cap or head is then removed by the user by merely bending outwardly the temporary securing tongues 11. The package is then filled and the second end cap or head again inserted into place and permanently secured by bending over all of the tongues, as described. The package is capable of being used more than once, as to open the same it is only necessary to bend outwardly the securing tongues 11 thereby permitting the end cap or head to be readily removed from the package and permitting it to be again inserted by bending down the securing tongues. The package is simple and entirely does away with the use of nails, or other special devices for fastening the end cap or head in place.

We claim:

1. A receptacle comprising a fiber body, a sheet metal securing member embedded in said body and provided with a series of tongues extending therefrom, a metal head embracing the entire end of the body provided with a depressed central portion and a series of apertures through which the said tongues project, the said apertures surrounding the depressed central portion and being partly formed therein so that the tongues when bent inwardly towards the depressed portion will lie flush with the adjacent supporting surface of the head.

2. A receptacle comprising a fiber body, a sheet metal securing member embedded in said body and provided with a series of tongues, a metal head provided with a peripheral channel for embracing the end of said body, apertures in the bottom and side wall of the channel for receiving the tongues, the tongues being bent into contact with the head and the portion thereof within that part of the aperture formed in the bottom wall of the channel being flush with said bottom wall.

3. A receptacle comprising a fiber body, a sheet metal securing member embedded in said body and provided with a series of tongues, a metal head provided with a peripheral channel for embracing the end of said body, the outer edge of the bottom wall and outer side wall of the channel being unbroken so as to present a solid smooth edge, apertures in the bottom and side wall of the channel for receiving the tongues, the tongues being bent into contact with the head and the portion thereof within that part of the aperture formed in the bottom wall of the channel being flush with said bottom wall.

4. A receptacle comprising a fiber body, a sheet metal securing member embedded in

said body, and provided with a series of tongues, a metal head provided with a central depressed portion, a U-shaped ridge embracing the end of said body, the outer edge of said ridge being unbroken and the inner edge thereof having a series of apertures for receiving the tongues, the tongues projecting into the depressed central portion being bent into contact with the head and lying flush with the supporting surface of said ridge.

5. A head for a container comprising a central portion, a U-shaped ridge surrounding said central portion and provided with a series of spaced openings, said openings being formed by cutting away a portion of the bottom wall and a portion of the side wall of said ridge.

In testimony whereof we have hereunto set our hands.

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WILLIAM J. CLARK.