Aug. 22, 1933. H. C. FISHER ET AL 1,923,716

PAPER KEG

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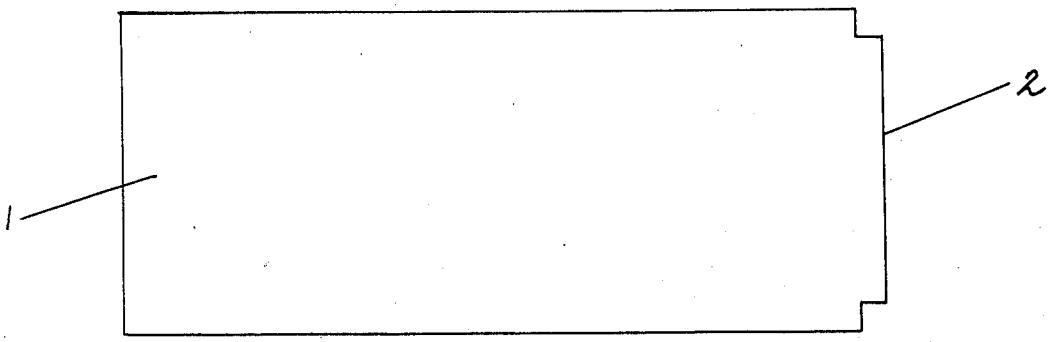



Fig. 1.

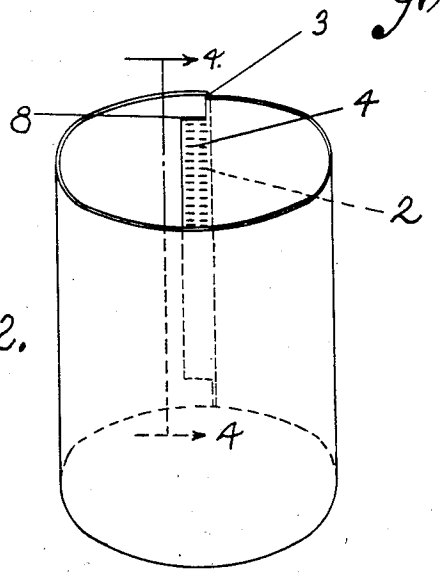



Fig. 2.

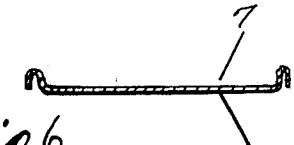



Fig 6.

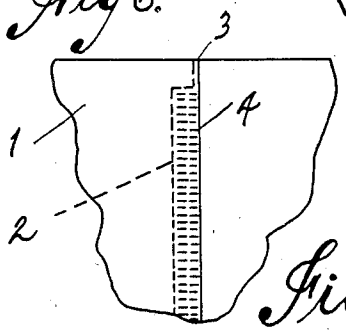



Fig. 3.

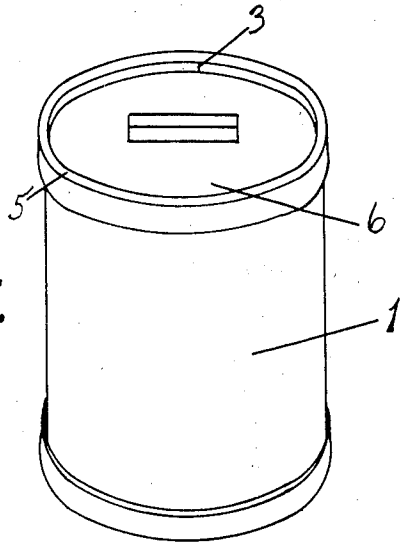



Fig. 5.

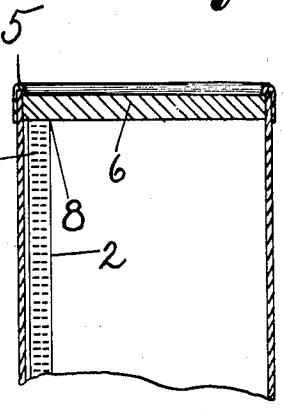



Fig. 4.

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# UNITED STATES PATENT OFFICE

1,923,716

## PAPER KEG

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Application September 23, 1930
Serial No. 483,931

7 Claims. (Cl. 229—5.5)

Our invention relates to kegs, preferably round kegs formed of a sheet of suitable board material formed to shape, lapped and stitched.

It is the object of our invention to provide such a keg in which heads may be inserted, and in which there is provision made for avoiding sifting of the contents of the keg.

The result of attempting to seat a head such as a circle of wood into a keg formed, for example, of a piece of waterproof paper board, made into a cylinder, and lap of one piece over the other secured as by stitching, is that the engagement of the lapped portion with the head will force the cylinder out of round, thus leaving a space through which the contents of the keg, if it be of such nature, may sift.

It is expensive to line the keg, or to provide some method of packing the engagement of the head within the cylinder, and to provide for a clearance channel in the head for the rib.

It is our object to avoid sifting without any expensive expedients, and our present invention is directed to the following described mode of construction of a paper keg. Reference will be made to one simple structure that is illustrated in the drawing for accomplishing this object; but it will be understood that the principal involved is not limited in its application to this single form.

In the drawing:—

Figure 1 illustrates a blank of material from which a cylindrical keg can be made.

Figure 2 illustrates the blank formed into a cylinder and stitched.

Figure 3 is a detail of the lapped and butt joint provided at the ends of the keg.

Figure 4 is a section of a completed keg.

Figure 5 is a perspective of a completed keg.

Figure 6 is a cross section of a metal head which may be used as a cover.

The blank 1 may be formed of a waterproof paper board or the like, which is cut in at the ends so as to form a flap 2, the ends of which flap are spaced inwardly from the edges of the blank by a distance preferably just a little narrower than a metal chime.

The blank is formed into a cylinder with the flap 2 lying inside of the cylinder and constituting the lap of the one end of the blank over the other. The portions of the blank at 3 lying beyond the flap, over-lap each other just a fraction, say $\frac{1}{32}$ or so of an inch, so that the insertion of the head will cause sufficient expansion to cause the two portions to butt against each other so that the flap in the headed keg constitutes the entire over-lap.

The cylinder being formed, the flap is stitched down as by spaced metal stitches 4, which are used in the shipping case industry.

A metal chime for each end of the cylinder, such as a single fold of metal 5, with one edge rolled to a thick tube-like shape, is forced over each end, and, as can be observed, the tube-like edge of the chime rests tightly against the end of the keg. The chime being a circle, it will maintain the end of the cylinder to which it is applied in a circle, since the piece of board has no lapped joint within the chime.

The heads 6 of the keg, of which there will be two, we have shown merely as a piece of wood, cut into a circle, and taking a driving fit within the chime. A dished circle of heavy water-proof board, a circle of laminated paper, preferably water proof, or a metal piece would also serve. Instead of using a chime such as described in connection with a separate head, an extremely strong construction is obtained by using a dished metal head 7, the edges of which are folded back to form a double wall chime as shown in Figure 6. In applying this combined chime and head it suffices to slip it over the end of the keg and to fasten it into place by cleats passing through both sides of the chime and the wall of the keg.

When the heads are driven into the ends of the cylinder to complete the keg, the inner face of the head will engage the projecting end 8 of the flap over-lap that lies inside of the keg, thus finding a seat. This limits the inward movement of the head, and it will not be forced into a position which forces the cylinder out of round due to the lap. The head is tight all the way around against the end of the cylinder held by the chime, and the only place where any sifting could occur would be at that portion of the butt joint of the end of the cylinder where the inner flap commences. This very small space is practically sealed by the tight butting of the cylinder edges because of the chime and forced-in head, and furthermore the head of the keg, in its seat against the shoulder formed by the lap, prevents sifting at this point.

Instead of using chimes of the shapes described, a single fold of metal covering both inner and outer edges of the keg ends can be used. Instead of the keg being circular, it could be oval, rectangular, or any other desired shape. Instead of being made of but one piece with the cut back internal lap, it could be made of several pieces, each one having a similar cut back flap serving as a lap for engagement over the next adjacent piece.

A type of water proof paper board particular-

ly well suited for the construction of kegs of the kind herein described comprises outer liners of strong kraft paper, and filler or fillers comprising sheets of paper having clear fibers on their outside and rich in asphalt in their fillers, and the several plies being combined by the use of an adhesive asphalt.

It is not believed to be necessary to illustrate these particular applications of our invention.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent, is:—

1. A keg formed of paper board made into a lapped body portion, in which a lap extends lengthwise of the keg, said lapped portion lying within the keg, and being cut away at the ends of the keg so that the edges of the body portion abut each other at the ends.

2. A keg formed of paper board made into a lapped body portion, in which a lap extends lengthwise of the keg, said lapped portion lying within the keg, and being cut away at the ends of the keg so that the edges of the body portion abut each other at the ends when the blank is expanded and the keg is completed, but slightly overlap each other in the unexpanded formed blank, and means for expanding the blank in the completed keg.

3. A keg formed of paper board made into a lapped body portion, in which a lap extends lengthwise of the keg, said lapped portion lying within the keg, and being cut away at the ends of the keg so that the edges of the body portion abut each other at the ends, and metal chimes arranged to confine the abutting portions of the body only.

4. A keg formed of paper board made into a lapped body portion, in which a lap extends lengthwise of the keg, said lapped portion lying within the keg, and being cut away at the ends of the keg so that the edges of the body portion abut each other at the ends, metal chimes arranged to confine the abutting portions of the body only, and a head fitting snugly within the body and abutting against the lapped portion as a shoulder.

5. A keg formed of a single sheet of paper board bent into a body open at the ends, with a lap of one edge over the other lying within the keg and extending lengthwise thereof, said lap being cut away at the ends of the body to leave abutted ends, and a head for each end of the keg abutting the shoulder formed by the lap, and means for stiffening and confining the abutted end portions of the keg.

6. In a keg, a shell made of a sheet having overlapping ends attached together and having a notch in the corner of at least one end, supporting means fitting in said shell at said end expanding said shell in a transverse plane within said notch, the overlap of the ends, the transverse width of the notch, and the transverse dimensions of the supporting means being so proportioned relatively to those of the shell that the longitudinal edge of the notch closely abuts a part of the opposite end of the sheet.

7. In a keg, a shell made of a sheet having overlapping ends attached together and having a notch in the corner of at least one end, supporting means fitting in said shell at said end expanding said shell in a transverse plane within said notch, the overlap of the ends and the transverse width of the notch being so proportioned relatively to each other that the longitudinal edge of the notch slightly laps an opposite end part of the shell before said supporting means fits in said shell as aforesaid, the transverse dimensions of the supporting means being so proportioned relatively to those of the shell that the shell is expanded in said transverse plane, and the longitudinal edge of the notch and a part of the opposite end of the sheet are forced into close abutting relation.

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