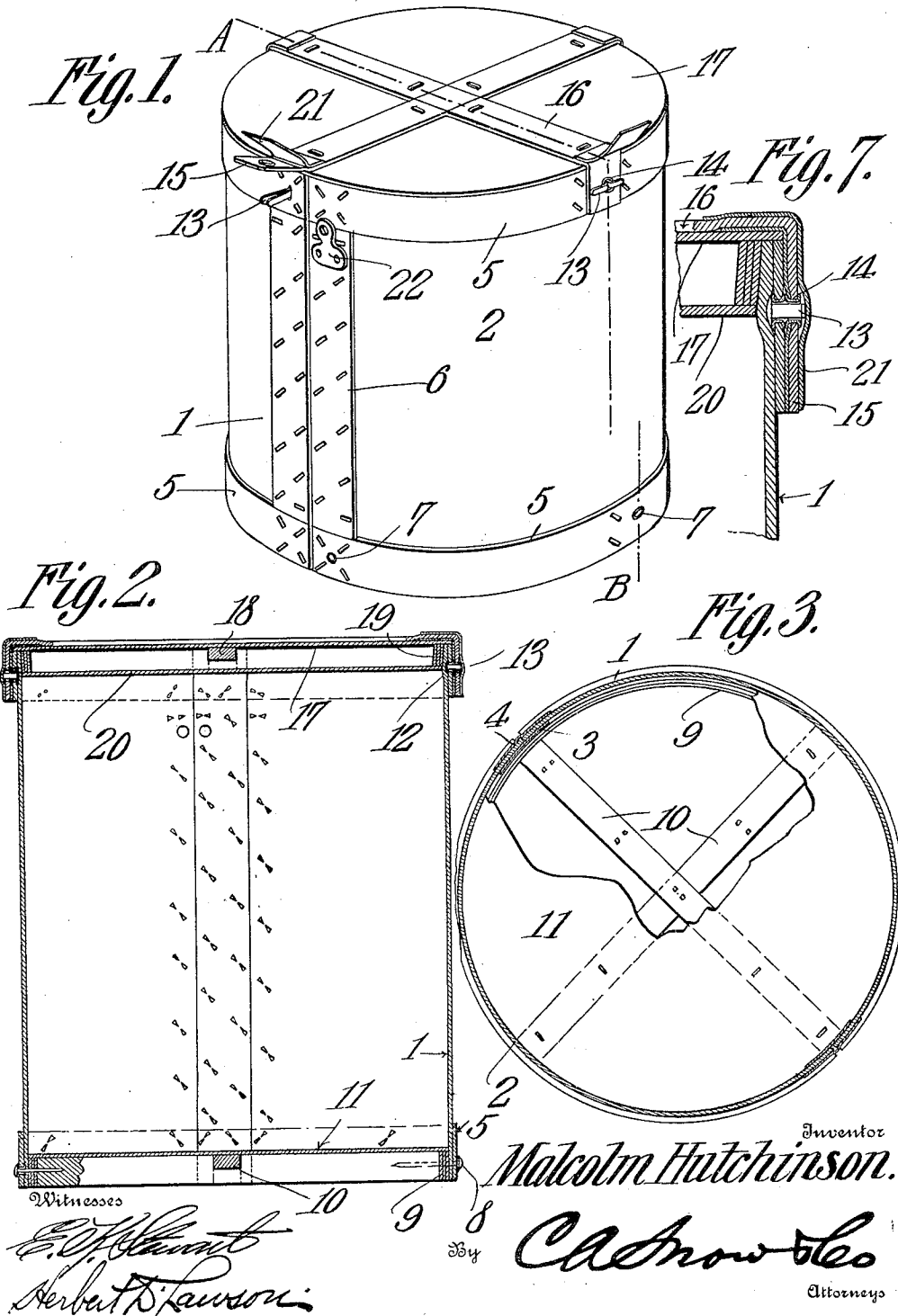


903,381.

Patented Nov. 10, 1908.

2 SHEETS—SHEET 1.



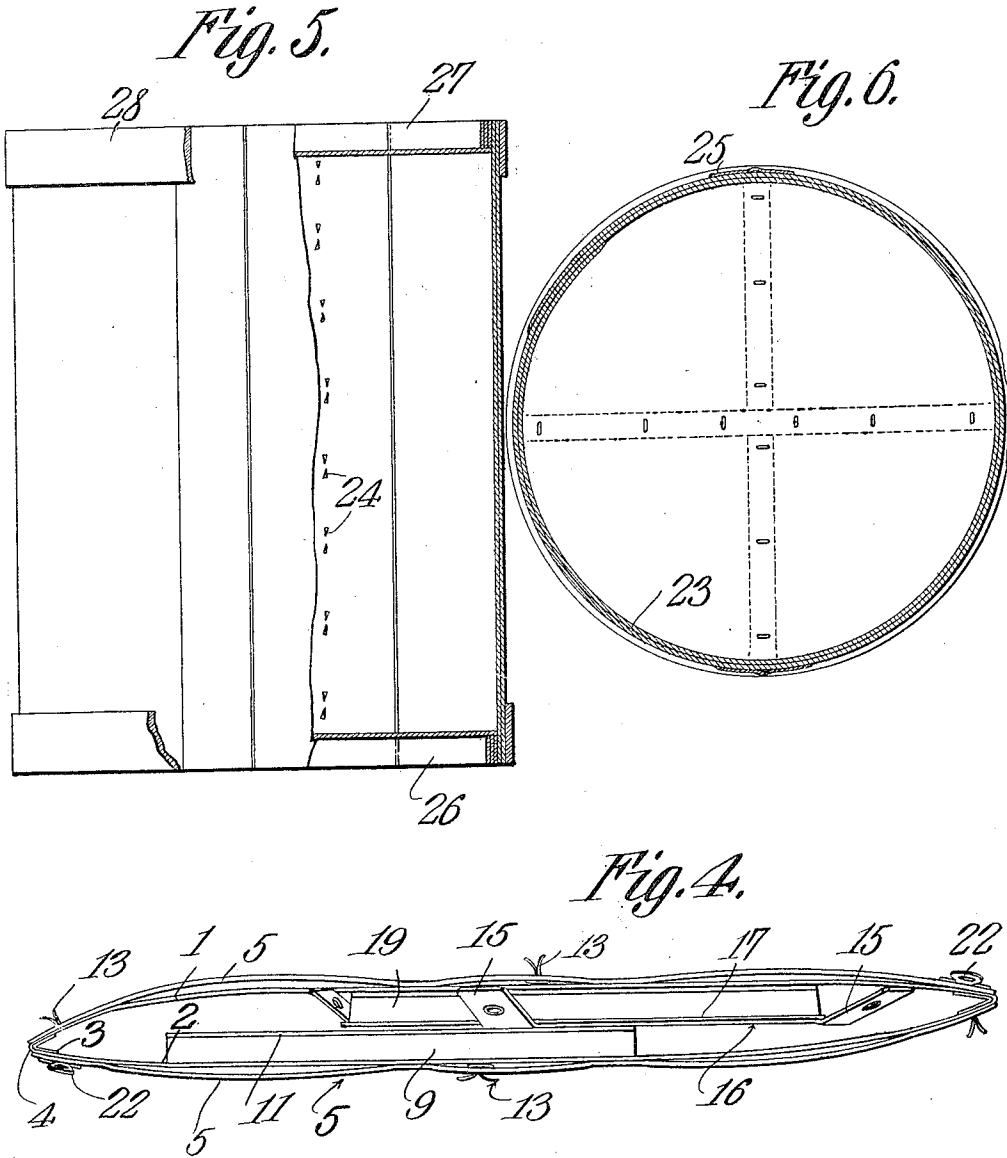
Witnesses
E. J. Hunt
Herbert D. Lawson

Inventor
Malcolm Hutchinson.
By *C. Snow & Co.*
Attorneys

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2 SHEETS—SHEET 2.



Witnesses
E. J. Blount
Herbert D. Lawson

Inventor
Malcolm Hutchinson,
By *C. A. Snow & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

MALCOLM HUTCHINSON, OF MUSKEGON, MICHIGAN.

KNOCKDOWN RECEPTACLE.

No. 903,381.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed May 6, 1908. Serial No. 431,199.

To all whom it may concern:

Be it known that I, MALCOLM HUTCHINSON, a citizen of the United States, residing at Muskegon, in the county of Muskegon and State of Michigan, have invented new and useful Knockdown Receptacles, of which the following is a specification.

This invention relates to knockdown receptacles such as pails, barrels, and the like and its object is to provide a device of this character formed of fiber board or the like and the body of which is capable of being folded into a comparatively flat package, the folds of said body being suitably reinforced so as to prevent leakage and breakage at those points.

Another object is to provide a receptacle of this character having a head of novel form which can be readily placed within the end of the receptacle body and secured in position in a simple and efficient manner.

A further object is to provide a receptacle having a novel form of closure or top head particularly designed for use in connection with knockdown pails, said closure and the receptacle being provided with simple cooperating means for securing the closure in position.

Another object is to provide a knockdown receptacle which can be used a number of times and when not in use can be taken apart and folded into a compact bundle so as to occupy the minimum amount of space.

With these and other objects in view the invention consists of certain novel features of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claims.

In the accompanying drawings is shown the preferred form of the invention.

In said drawings: Figure 1 is a perspective view of a pail embodying the present improvements, the same being set up and closed. Fig. 2 is a section on line A—B, Fig. 1. Fig. 3 is a horizontal section through the pail, a portion of the lower member being broken away to disclose the crossed cleats thereunder. Fig. 4 is an end view of the pail folded and showing the heads positioned within the folded body. Fig. 5 is a view partly in side elevation and partly in section of a knockdown barrel embodying the present improvements. Fig. 6 is a horizontal section therethrough. Fig. 7 is an enlarged section through one of the fasteners shown in Fig. 1.

Referring to the figures by characters of reference, 1 and 2 designate oppositely disposed similar body sections each consisting of a sheet of fiber board or other similar stiff flexible material and the adjoining edges of these sections 1 and 2 are preferably connected by means of inner and outer fabric strips 3 and 4 fastened to the inner and outer faces of the sections by means of a suitable adhesive and constituting hinge connections between the two sections.

Hoop sections 5 extend along the upper and lower edges of each of the body sections 1 and 2 and are fastened thereto at any desired intervals by means of staples or in any other preferred manner, said hoop sections terminating at the adjoining or hinge ends of the sections 1 and 2. Reinforcing strips 6 are secured along the hinge edges of the body sections by means of staples or in any other desired manner and constitute coverings for the adhering portions of the strips 4. These reinforcing strips 6 as well as the sections 5 are preferably formed of the same material as the sections 1 and 2.

Metal eyelets 7 extend through the lower hoop sections 5 of the adjoining portions of the sections 1 and 2 and are disposed preferably at ninety degrees apart and are designed to receive fastening devices such as nails for engaging the bottom head of the pail. This bottom head consists of a circular hoop 9 formed of a desired number of thicknesses of fiber board extending around two crossed wooden cleats 10 arranged at right angles to each other and having their ends fastened to the inner face of the hoop 9 in any preferred manner, there being a disk 11 of fiber board secured upon the cleats 10 by means of staples or other devices.

Arranged between the body sections 1 and 2 and the upper hoop sections 5 are the heads 12 through each of which extends a pair of bendable metal tongues 13 which project through openings in the upper hoop sections 5. These tongues 13 are designed to project through eyelets 14 secured within tabs 15 which are formed by the ends of crossed paper strips 16 arranged at right angles to each other and secured upon the top disk 17 of the closure of the pail. This top disk is also formed of paper or other suitable material and is fastened upon crossed cleats 18 arranged in the same manner as are the cleats 10 and surrounded by a hoop 19 formed of a desired number of layers of fibrous material

or the like. The inner faces of the cleats 18 have a disk 20 secured upon them so that a dead air space is formed between the two disks 17 and 20. As shown in the drawings the hoop 19 is preferably tapered inwardly to a slight extent so as to facilitate the insertion of the closure into the top of the pail.

The eyelets 14 are preferably located at ninety degrees apart and it will be apparent therefore that after the closure has been inserted into the top of the pail the tabs 15 can be swung downward so as to permit the tongues 13 to pass through the eyelets 14. Said tongues can then be bent in opposite directions after the manner of a paper fastener, after which a label 21 or other suitable device may be affixed to each tab so as to conceal the tongues 13 and constitute a seal for the pail. Metal ears 22 are secured to the sections 1 and 2 at diametrically opposite points and are designed to be engaged by the ends of a bail of any preferred construction. This bail has not been shown in the drawings as it constitutes no part of the present invention.

To secure the bottom head within the pail the cleats 10 thereof are positioned so that their ends will extend across the inner ends of the eyelets 7. Nails 8 or other fastening devices are then driven through these eyelets and into the ends of the cleats 10, thus securely fastening the bottom head in place.

When it is desired to collapse the pail the tabs 15 are disconnected from the tongues 13 and the closure lifted out of the pail. The nails 8 are then withdrawn from engagement with the cleats 10 and eyelets 7 after which the bottom head is removed from the body of the pail. The sections 1 and 2 of the body can then be folded upon each other, the fabric strips 3 and 4 constituting hinges therefor and, if desired, the closure and the bottom head can be inserted between the two sections as indicated in Fig. 4. It is to be understood of course that where large quantities of these pails are shipped in bulk it will probably be desirable to make separate packages of the bottom heads, closures, and folded bodies.

In Figs. 5 and 6 a knockdown barrel or keg is disclosed, the body 23 thereof being formed of one or more thicknesses of fiberboard or like material held together by a suitable adhesive, the longitudinal edge portions being additionally fastened by means of clenched staples 24. This body is designed to be folded longitudinally at diametrically opposed points without the use of hinged strips such as indicated at 3 and 4 in Fig. 3, the body being reinforced upon its outer face at the folds by means of longitudinal strips 25 formed of paper or fabric. The heads 26 and 27 are similar in construction to the bottom head of the pail heretofore described and in lieu of providing attached hoop sections, bar-

rel hoops 28 of wood or other suitable material may be made separate from the body and placed therearound at its ends and secured by driving nails into the ends of the cleats in the heads. It is to be understood that if desired this form of body may be substituted for the body shown in Figs. 1, 2 and 3.

Although the pail and barrel are preferably made of fiberboard it is to be understood that they may be made of any other suitable flexible but comparatively stiff material and can, if desired, be waterproofed by applying paraffin to the inner surface of the parts after they have been assembled or by otherwise treating them so as to render them waterproof.

Obviously by constructing a pail or a barrel in the manner herein described large quantities thereof can be shipped and stored in comparatively small spaces and when they are set up they constitute efficient receptacles for the purposes intended. After they have been used they can be again collapsed and if desired returned to the shipper and it will thus be seen that each receptacle can be used a number of times. Importance is attached to the fact that the cleats 10 of the lower surface of the receptacles constitute means for supporting the disks of said bottom heads above the floor or other surface on which the receptacles are mounted, thus forming air spaces therebelow and preventing the contact of moisture with the bottom disks. It will be noted of course that the sections of the hoops can only flex in the direction of their thicknesses and, by reason of the fact that these sections are formed of material which will flex only to a limited extent, they will, when abutting at their ends, efficiently brace the receptacle at the folds. Moreover, these hoop sections serve to further stiffen the body when it is collapsed as shown in Fig. 4.

What is claimed is:

1. A knockdown receptacle comprising a flexible tubular body foldable together along diametrically opposed longitudinal lines, and a head insertible into one end of the body for holding it extended, said head comprising crossed cleats, a hoop secured upon the ends of and surrounding the cleats, and a disk upon the cleats, said body having fastener receiving eyelets disposed to register with the ends of the cleats.

2. A knockdown receptacle comprising a flexible tubular body foldable together along diametrically opposed longitudinal lines, flexible fastening devices outstanding from the body adjacent one end, a head insertible into said end, and flexible tabs carried by the head for engagement by said devices.

3. A knockdown receptacle comprising a flexible tubular body foldable together along diagonally opposed lines, flexible fastening devices outstanding from the body adjacent

one end, a head insertible into said end, crossed strips secured upon the head, and apertured tabs at the ends of said strips for the reception of said securing devices.

5 4. A knockdown receptacle comprising a flexible tubular body foldable together along diagonally opposed lines, flexible fastening devices outstanding from the body adjacent one end, a head insertible into said end,
10 crossed strips secured upon the head, apertured tabs at the ends of said strips for the reception of said securing devices, and a sealing label connected to each tab for concealing said devices.

15 5. In a knockdown receptacle the combination with a flexible tubular body foldable together along diametrically opposed longitudinal lines; of a head insertible into one end of said body and comprising crossed cleats,
20 disks secured upon opposite faces of the cleats, and a head surrounding the cleats and between the disks, said disks forming dead air spaces therebetween.

25 6. In a collapsible receptacle a foldable tubular body comprising oppositely disposed flexible sections, hinge connections between and immovably connected to said sections at their adjoining edges, and hoop sections immovably connected to the body sections at
30 opposite edges thereof.

7. In a knockdown receptacle a flexible tubular body foldable together along diametrically opposed longitudinal lines, reinforcing strips upon said body and adjacent and

parallel with the folds, and flexible hoop sections secured to the body at the ends thereof. 35

8. In a device of the character described a closure comprising crossed cleats, disks secured to opposite faces of the cleats and forming dead air spaces therebetween, a
40 hoop surrounding and secured to the ends of the cleats, and fastening devices secured to and extending beyond one of the disks.

9. A knockdown receptacle comprising a flexible tubular body foldable along diametrically opposed longitudinal lines, fastening devices outstanding from the body adjacent one end, a head insertible into said end, and fastening devices carried by the head for engagement with the first mentioned fastening
50 devices.

10. A knockdown receptacle comprising a body having diametrically opposed longitudinal folds, said body being flexible solely in the direction of its longitudinal axis, solid
55 sectional hoops secured to the body, the sections of each hoop being interposed between the folds and the terminals of said sections cooperating to abut when the receptacle is distended. 60

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

MALCOLM HUTCHINSON.

Witnesses:

HARRY A. RIETDYK,
FRED M. BRENNINGER.