

F. A. PRAHL.
 KNOCKDOWN BILGE BARREL.
 APPLICATION FILED JUNE 16, 1909.

961,160.

Patented June 14, 1910.

Fig. 1.

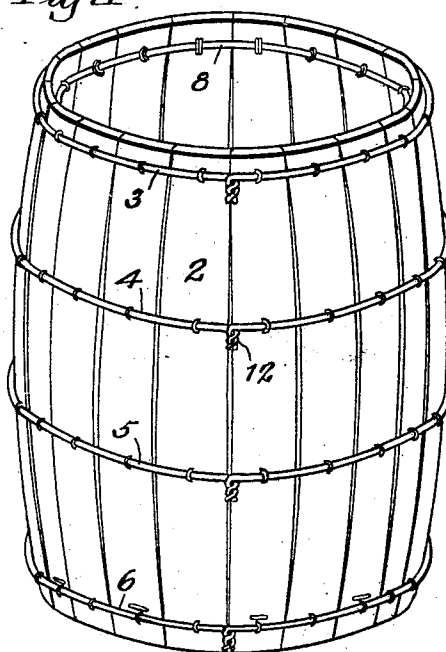


Fig. 2.

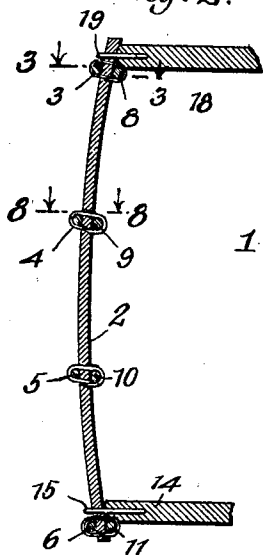


Fig. 3.



Fig. 4.

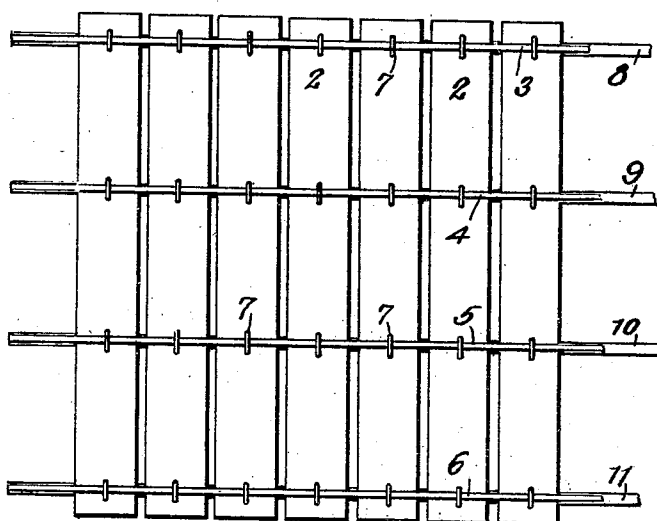


Fig. 5.

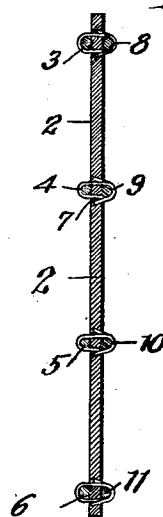


Fig. 6.

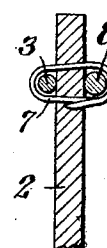


Fig. 7.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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KNOCKDOWN BILGE-BARREL.

961,160.

Specification of Letters Patent. Patented June 14, 1910.

Application filed June 16, 1909. Serial No. 502,562.

To all whom it may concern:

Be it known that I, FREDERICK A. PRAHL, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Knock-down Bilge-Barrels, of which the following is a specification.

This invention relates to knock-down bilge barrels. It seeks to secure an increased economy and convenience in production with a greater strength and durability in the structure.

The features of the invention are herein after set forth and shown in the accompanying drawings forming a part of this specification.

In the drawings, which show a preferred embodiment of the invention, and in which like reference numerals designate corresponding parts in the several figures, Figure 1 is a perspective view of a barrel; Fig. 2 is a sectional elevation through the barrel body showing the position of the heads; Fig. 3 is a sectional plan view through the barrel body at the meeting edges of the fabric and on line 3—3 of Fig. 2; Fig. 4 is a plan view showing the fabric of which the barrel body is made; Fig. 5 is a vertical section through the body fabric as shown in Fig. 5; Fig. 6 is an enlarged sectional detail showing the upper end of Fig. 5; Fig. 7 is a view similar to Fig. 3 but taken on the line 8—8 of Fig. 2.

Referring now to the specific features of the invention as shown in the drawings, 1 is the body of the barrel in tubular form. It is made up from the body fabric, shown in Fig. 5, which consists of a number of flat flexible staves 2 having the outside wires 3, 4, 5 and 6 extending across all the staves on one side and secured to the staves by staples 7, and the inside wires 8, 9, 10 and 11 extending across all the staves on the opposite side and secured to the staves by the same staples, the inside and outside wires preferably registering with each other, as shown. Of course the wires need not always be in register and in either case it is not always essential that they be held by the same staples. The faces of the staves may have any contour desired and may have their edges abutting or spaced apart as desired. In the present instance the staves are spaced apart in the fabric, so as to form a ventilated barrel, and have their abutting edges straight.

The intermediate wires 4, 5, 9 and 10 are made fast to the staves by their staples, but the top and bottom or end wires are loosely held by their staples, as shown in Fig. 6, so that the ends of the staves may have a lateral movement on these wires when the barrel is set up. When the fabric is bent into tubular form the edges of the body fabric are held together by any suitable means, but preferably the oppositely projecting wire ends are employed as the fastening means, as shown. In this case the oppositely projecting wire ends of all the outside wires are twisted together as at 12. The inside intermediate wires 9 and 10 preferably have their ends hooked together as at 13, in Fig. 7. In setting up the barrel and forming the bilge the ends of the staves at the top and bottom of the barrel are forced radially inward after the intermediate wires have had their ends fastened together, as described.

When the ends of the barrel body are being thus constricted, the surplus in the end wires works through the staples, these wires having been left loose in their staples as heretofore described, and then the outer wire ends are fastened together and the inner wire ends may be secured together or left overlapping, as shown in Fig. 3. In constricting the ends of the barrel the intermediate wires 4, 5, 9 and 10 act as a fulcrum on which the staves bend, and may be called fulcrum wires. The end wires 3 and 6 may be called constricting wires because they have the purpose and function of keeping the ends of the staves bent inward and the ends of the tubular barrel body contracted and so maintain the bilge in the barrel.

The lower head 14 is preferably supported on the inner side of the wire 11 and may be held in place by the staples 15. The upper head 18 preferably rests against the wire 8 and is held in place by staples 19. The number of intermediate or fulcrum wires may be varied to suit conditions.

By having the inside wires extend across all the staves on the inside, and the outside wires extend across all the staves on the outside and stapling them to the staves, a much stronger and more reliable structure is provided than where wires are interwoven with the staves, and the fabric can be more economically produced.

It is preferred to have the inside wires of larger gage than the outside wires as shown

in the drawings. It will, of course, be understood that flat, flexible metal bands are the equivalent of the wires, and the term "wires" is herein used in this sense.

5 In constricting the ends of the tubular body to form the bilge, the outside end wires may be drawn through their staples acting like drawstrings to draw inward the ends of the staves, or the ends may be constricted
10 in any other convenient way.

Among the advantages of the inner end wires 8 and 11, are that they provide secure and reliable means for supporting the heads in place against inwardly directed pressure, that they facilitate the formation of the
15 body fabric into tubular form in setting up the barrel, and that they add strength and rigidity to the ends of the barrel, the upper wire 8 being especially serviceable in this
20 respect when the barrel is filled and shipped with a cover of burlap or other textile fabric instead of a head.

What is claimed and what is desired to be secured by Letters Patent is:—

25 1. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the
30 staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires
35 being free to move through their staples to take up slack.

2. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse
40 fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same
45 side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack, said wires having their ends projecting beyond the ends of the fabric for
50 interconnection.

3. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of
55 the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves
60 and stapled thereto, said constricting wires being free to move through their staples to take up slack, said wires having their ends projecting beyond the ends of the fabric for interconnection, and said fulcrum wires being
65 fast in their staples.

4. A flexible fabric for a ventilated knock-down bilge barrel comprising a series of flat, flexible, separated, straight edge staves having a plurality of transverse fulcrum
70 wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side
75 and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack.

5. A flexible fabric for a ventilated knock-down bilge barrel comprising a series of flat,
80 flexible, separated, straight edge staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having
85 transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move their staples to take up
90 slack, said wires having their ends projecting beyond the ends of the fabric for interconnection.

6. A flexible fabric for a ventilated knock-down bilge barrel comprising a series of
95 flat, flexible, separated, straight edge staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and hav-
100 ing transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to
105 take up slack, said wires having their ends projecting beyond the ends of the fabric for interconnection, and said fulcrum wires being fast in their staples.

7. A knock-down bilge barrel comprising
110 a flexible body fabric consisting of a series of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and
115 stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move
120 through their staples to take up slack, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric, and an end wire ex-
125 tending across all the staves on the inside and stapled thereto, and a head resting against said wire.

8. A knock-down bilge barrel comprising
130 a flexible body fabric consisting of a series

of flat, flexible staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric, and end wires extending across all the staves on the inside and stapled thereto, and heads resting against said wires, oppositely projecting wire ends being secured together to hold the barrel body in shape.

9. A ventilated knock-down bilge barrel comprising a flexible body fabric consisting of a series of flat, flexible, separated straight edge staves having a plurality of transverse fulcrum wires located on opposite sides of the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric, and an end wire extending across all the staves on the inside and stapled thereto, and a head resting against said wire.

10. A ventilated knock-down bilge barrel comprising a flexible body fabric consisting of a series of flat, flexible, separated straight edge staves having a plurality of transverse fulcrum wires located on opposite sides of

the staves and each extending across all the staves on the same side and stapled thereto, and having transverse constricting wires each extending across all the staves on the same side and located near the ends of the staves and stapled thereto, said constricting wires being free to move through their staples to take up slack, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric, and end wires extending across all the staves on the inside and stapled thereto, and heads resting against said wires, oppositely projecting wire ends being secured together to hold the barrel body in shape.

11. A flexible fabric for a knock-down bilge barrel comprising a series of flat, flexible staves having a plurality of transverse fulcrum wires 4, 5, 9 and 10 located on opposite sides of the staves and each extending across all the staves on the same side and fastened thereto, and having transverse constricting wires 3 and 6 each extending across all the staves on the same side and located near the ends of the staves and fastened thereto, said constricting wires being free to move through their fastenings to take up slack, and said fulcrum wires being fast in their fastenings, and end wires 8 and 11 extending across all the staves on one side and fastened thereto, said wires 8 and 11 being located on the opposite side of the staves from the wires 3 and 6, substantially as and for the purpose set forth.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

FREDERICK A. PRAHL.

Witnesses:

IDA G. GILMORE,
BEATRICE MIRVIS.