

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

961,161.

Patented June 14, 1910.

Fig. 2

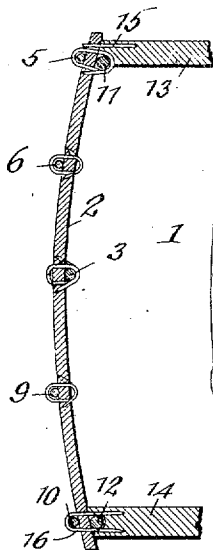


Fig. 1.

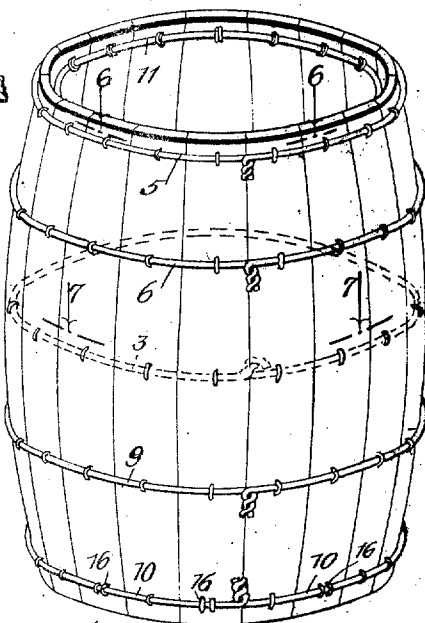


Fig. 5.

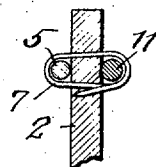


Fig. 6.

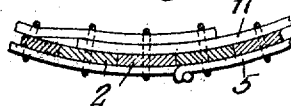


Fig. 7.



Fig. 3

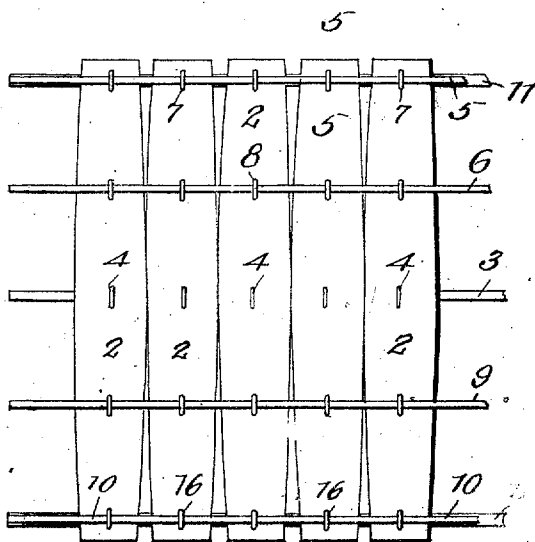
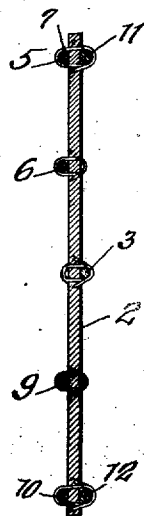


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FREDERICK A. PRAHL, OF NEW YORK, N. Y., ASSIGNOR TO BABCOCK BOX COMPANY,
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KNOCKDOWN BILGE-BARREL.

961,161.

Specification of Letters Patent. Patented June 14, 1910.

Application filed June 18, 1909. Serial No. 502,563.

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 provide an arrangement whereby a substantially tight bilge barrel may be provided at comparatively small cost and which shall have great strength and durability.

The invention consists of the features hereinafter pointed out and specified in the claims.

In the accompanying drawings forming part of this specification, and in which like reference numerals designate corresponding parts,—Figure 1 illustrates in perspective the preferred form of the barrel embodying the invention; Fig. 2 is a vertical section through the barrel body showing the position of the heads; Fig. 3 is a plan view showing part of the fabric of which the barrel body is constructed; Fig. 4 is a vertical section through the fabric shown in Fig. 3; Fig. 5 is an enlarged fragmental view in section on the line 5—5 of Fig. 3 and showing a detail; and Figs. 6 and 7 are enlarged fragmental views in section of the lines 6—6 and 7—7, respectively, of Fig. 1.

Referring now to the particular features of the invention as shown in the drawings, 1 is the body of the bilge barrel consisting of the staves and wires previously formed into the fabric, as shown in Fig. 3. The staves 2 are preferably made of comparatively thin strips of wood. They are flexible and are tapered toward their ends as shown. The staves are placed close together, edge to edge, and extending across all the staves on one side at or near the middle is the fulcrum wire 3 secured to the staves by staples 4. These staples hold the wire 3 in place and thus prevent the staves from shifting from position. Extending across all the staves on the side thereof opposite from the wire 3 are two constricting wires 5 and 6 held in place by the staples 7 and 8. The wires 5 and 6 are located above the wire 3.

9 and 10 are two similar constricting wires located on the same side of the staves as the

wires 5 and 6 but below the wire 3. They are likewise stapled to the staves.

11 and 12 are wires located at top and bottom on the same side of the staves as the wire 3. They extend across all the staves on the same side thereof and preferably register, respectively, with wires 9 and 10 so that they may be held in place by the same staples as these wires, as shown.

The wires 5, 6, 9, 10, 11 and 12 are loosely secured to the staves by the staples so as to have a lateral movement thereon. This is shown with respect to wires 5 and 11 in Fig. 5 where the staples are shown as holding the wires without binding them tightly against the staves. It is preferable that the wires 3, 11 and 12 be somewhat larger in cross section than the outer wires, as indicated in the drawings, and for the purpose of readily securing the meeting edges of the fabric together, when bent into tubular form, the wires have their ends projecting beyond both edges of the fabric, as indicated at the left in Fig. 5.

When the fabric has been completed it is bent into tubular form as shown in Fig. 1, its meeting edges being firmly secured together at the middle by suitable means. For this purpose the overlapping ends of the wire 3 may be hooked or otherwise secured together as shown in Fig. 7. The opposite ends of the staves are then bent inward radially, the wire 3 acting as a fulcrum during this bending operation. In this way the ends of the barrel are constricted and the bilge is formed. The wires 5, 6, 9, 10, 11 and 12 are drawn through their staples to take up the slack and the ends of the wire are secured in place to keep the ends of the barrel constricted. The taking up of the slack in these wires is rendered possible by the manner in which they are loosely secured by their staples which also permits the ends of the barrel to be constricted as described. It is preferred to secure the ends of the constricting wires 5, 6, 9 and 10 together by overlapping and twisting their oppositely projecting ends as shown in Fig. 1. The inner wires 11 and 12 may have their ends passed through staples and left overlapping without being otherwise secured, as shown in Fig. 6.

13 and 14 are the top and bottom heads. The top head 13 rests against the outer side

of the top or end wire 11 and the bottom head 14 rests against the inner side of the bottom or end wire 12, these wires serving to provide reliable supports for the heads as well as to strengthen and stiffen the barrel body and assist in forming it into tubular shape. The head 13 may be secured in place by the staples 15 and the head 14 may be secured in place by similar staples or it may be secured in place by staples 16 which embrace the wires 10 and 12.

It will, of course, be understood that the number of fulcrum and constricting wires may be varied without departing from the invention. It will also be understood that the location of these wires on one side or the other of the staves may be varied without departing from the invention, although it is preferred to have the fulcrum wire or wires on the inner side of the barrel body and the constricting wires on the outer side.

In constricting the ends of the barrel the constricting wires may be drawn through their staples after the manner of a draw-string so that these wires themselves operate to draw in or constrict the ends of the barrel.

In referring to the structure herein shown as a "tight" barrel, it is not intended to imply that the barrel is tight for all purposes or under all conditions. The term is herein employed merely to distinguish the barrel from a ventilated barrel.

Various changes in the details herein set forth may be made without departing from the scope of the invention. For example—instead of wires, flexible metal strips or bands may be used. These are, of course, the equivalent of the wires and the term "wires" is herein used in this sense.

The term "constricting wires" as herein used means wires which not only have the purpose and function of holding the ends of the fabric in tubular form, but also 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.

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

1. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves.

2. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a trans-

verse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, there being a plurality of said constricting wires on each side of the fulcrum wire.

3. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, and transverse end wires extending across all the staves on the same side as the fulcrum wire and loosely stapled to the staves.

4. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, there being a plurality of said constricting wires on each side of the fulcrum wire, and transverse end wires extending across all the staves on the same side as the fulcrum wire and loosely stapled to the staves.

5. A fabric for a tight knock-down bilge barrel comprising a series of closely associated tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and immovably stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire, said constricting wires being stapled loosely to the staves so as to be free to move transversely across the staves, and transverse end wires extending across all the staves on the same side as the fulcrum wire and loosely stapled to the staves, the end wires on opposite sides of the staves being in register with each other at both ends and held in place by the same staples.

6. A tight knock-down bilge barrel comprising a body fabric consisting of a series of closely abutting tapered flexible staves having a transverse fulcrum wire extending

- across all the staves on one side thereof near the middle and stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire and stapled to the staves, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric.
7. A tight knock-down bilge barrel comprising a body fabric consisting of a series of closely abutting tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire and stapled to the staves, oppositely projecting wire ends being secured together to hold the barrel body in shape, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric.
8. A tight knock-down bilge barrel comprising a body fabric consisting of a series of closely abutting tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire and stapled to the staves, a transverse inside wire extending across all the staves near the bottom and stapled thereto, and a bottom head resting against the inner side of said inside wire and stapled to the staves, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric.
9. A tight knock-down bilge barrel comprising a body fabric consisting of a series of closely abutting tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and stapled thereto, and having

transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire and stapled to the staves, a transverse inside wire extending across all the staves near the bottom and stapled thereto, and a bottom head resting against the inner side of said inside wire and stapled to the staves, a transverse inside wire extending across all the staves near the top and stapled thereto, and a top head resting against the outer side of said last mentioned wire and stapled to the staves, said fulcrum and constricting wires acting to maintain the bilge in the barrel, and also to permanently maintain the integrity of the fabric.

10. A tight knock-down bilge barrel comprising a body fabric consisting of a series of closely abutting tapered flexible staves having a transverse fulcrum wire extending across all the staves on one side thereof near the middle and stapled thereto, and having transverse constricting wires extending across all the staves on the opposite side and spaced apart from the fulcrum wire and stapled to the staves, a transverse inside wire extending across all the staves near the bottom and stapled thereto, and a bottom head resting against the inner side of said inside wire and stapled to the staves, a transverse inside wire extending across all the staves near the top and stapled thereto, and a top head resting against the outer side of said last mentioned wire and stapled to the staves, the top and bottom wires on opposite sides of the staves at both ends being in register with each other and held in place by the same staples, and the oppositely projecting wire ends of the fulcrum and constricting wires being secured together to hold the barrel body in shape.

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

FREDERICK A. PRAHL.

Witnesses:

BEATRICE MIRVIS,
IDA G. GILMORE.