J. MacGREGOR.

BARREL CONSTRUCTION.

APPLICATION FILED JAN. 31, 1910.

1,009,326. Patented Nov. 21, 1911.

Fig. 1.

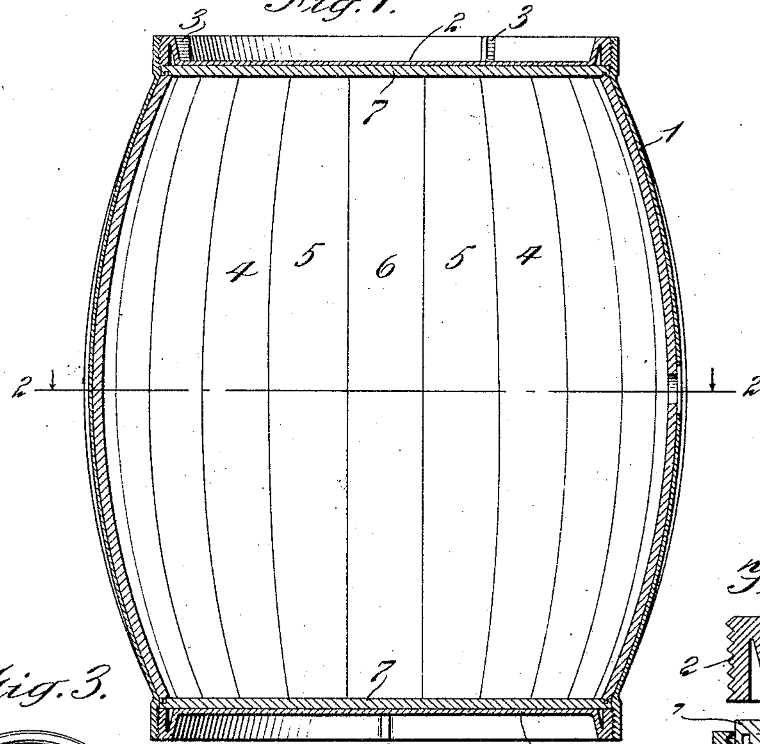


Fig. 4.

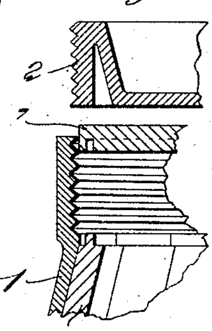


Fig. 3.

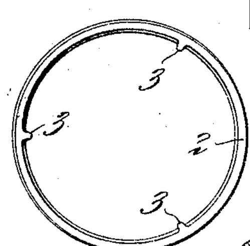
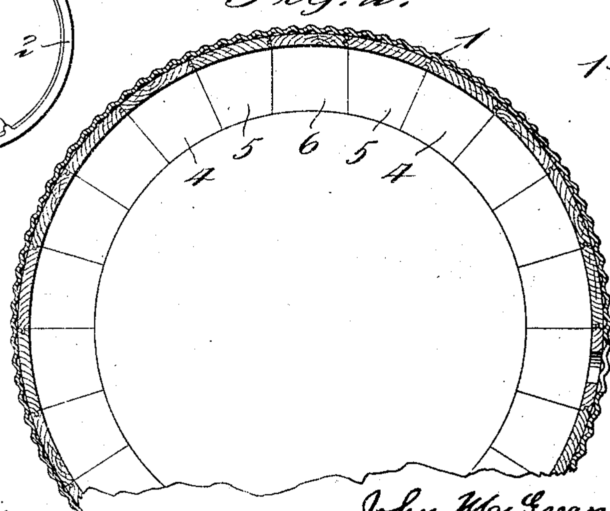


Fig. 2.



Witnesses:

John MacGregor, Inventor

By his Attorney Lewis J. Doolittle

UNITED STATES PATENT OFFICE.

JOHN MACGREGOR, OF NEW YORK, N. Y.

BARREL CONSTRUCTION.

1,009,326. Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed January 31, 1910. Serial No. 541,044.

To all whom it may concern:

Be it known that I, JOHN MACGREGOR, a citizen of the United States, and resident of the city of New York, borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Barrel Construction, of which the following is a specification.

This invention relates to barrel construction, the object being to provide a barrel which shall be lighter than the ordinary barrel and which shall be durable and capable of withstanding rough usage.

In carrying out the invention an outer shell of metal is provided, the inside of which is lined with wooden staves and heads of peculiar construction, which will be described more fully hereinafter.

In the drawings accompanying this specification, a preferred embodiment of the invention is shown.

The like parts in the several views are given the same reference numerals.

Figure 1 is a sectional elevation of a barrel embodying the invention. Fig. 2 is a sectional view on the line 2—2 of Fig. 1, looking in the direction of the arrows. Fig. 3 is a small plan view of the barrel head. Fig. 4 is an enlarged detailed view of a portion of the barrel, showing the method of placing the head in position.

An outer metallic shell, preferably of galvanized iron, is shown at 1. This shell is preferably corrugated in order to provide greater rigidity and permits the use of lighter material. It has been found that sheet iron one-fourth of an inch thick will provide the necessary strength for an ordinary beer barrel. The ends of the metal shell 1 are threaded and into these threaded portions a head, also of sheet metal, is screwed. These heads are preferably hollowed out or flanged in the manner shown and may be provided with a number of projections, such as 3, to provide for turning and screwing the same into position.

A number of wooden staves 4 are placed in position in the interior of the shell 1. These staves 4 are wider in the center and tapered toward the ends, similar to the ordinary barrel stave, in order to provide for the bulging central portion of the barrel. Two of the staves, however, such as 5, are formed with one straight edge and one stave, such as 6, is formed with two parallel straight edges. The object of this construction is to permit all of the staves with the exception of stave 6 to be placed in position and then the stave 6, which is of such a width as to permit it being driven into place, is inserted and locks all of the staves in place.

The staves are preferably formed with tongues on each end which, when the same are in position in the interior of the shell 1, enter an annular groove in the wooden head 7, when the same is placed in position thereupon. The metal heads 2 are then screwed into position against the wooden heads 7, thus locking the whole together. The method of placing the wooden head 7 and the metal head 2 in position is clearly shown in Fig. 4 and a complete barrel with all the parts assembled is shown in Fig. 1. A bung-hole may be provided in one of the staves and an opening, preferably somewhat larger than the bung-hole, provided in the metal shell 1. The adjoining edges of the several staves are also preferably constructed with a tongue and groove which interfit and these joints, as well as the joints between the ends of the staves and the wooden heads, may be coated with pitch before the same are assembled, which insures an absolutely tight construction and prevents any leakage.

As the wooden portions of the barrel are protected against injury in use and handling, it has been found that a thickness of three-eighths of an inch is sufficient for the ordinary beer barrel.

An ordinary beer barrel constructed entirely of wood weighs approximately eighty pounds, while a barrel constructed as herein described will be from eighteen to twenty pounds lighter and will be more durable and of a longer life.

As the metal shell protects the wooden portions of the barrel from injury, and also does away with the hoops, a considerable saving in the expense of repairs is effected and the cost of construction is at least no greater and probably less than the ordinary construction.

It is not to be understood that the invention is limited to the exact details of construction herein shown and described as it will be obvious that the same admits of many

changes, which may be desirable or necessary in the different forms of barrels or casks for various uses.

What I claim is:

1. A barrel comprising in its construction a plurality of wooden staves each having a tongue on either end thereof, a metal shell within which said staves are positioned, wooden heads each provided with an annular groove arranged to receive the tongued ends of said staves, and metal heads arranged to hold said wooden heads in position.

2. A barrel comprising in its construction a plurality of wooden staves tapering in width toward each end, two staves having one straight edge and one curved edge, one stave having parallel straight edges, a metal shell within which said staves are positioned, wooden heads, and metal heads arranged to hold said wooden heads in position.

3. A barrel comprising in its construction a plurality of wooden staves each provided with a tongue at each end and also with a tongue and groove on opposite sides thereof, wooden heads each provided with an annular groove adapted to receive the tongues on the ends of said staves, a metal shell within which said staves are positioned, and metal heads screw-threaded in the ends of said shell and adapted to hold said wooden heads in position.

4. A barrel comprising in its construction a plurality of wooden staves each provided with a tongue at each end and also with a tongue and groove on opposite sides thereof, wooden heads each provided with an annular groove adapted to receive the tongues on the ends of said staves, a metal shell within which said staves are positioned, and metal heads screwed into the ends of said shell, said metal heads having dropped central portions and depending annular flanges adapted to bear against said wooden heads to force the staves into said annular groove.

Signed at New York, in the county and State of New York, this 24th day of January, 1910.

JOHN MacGREGOR.

Witnesses:
B. W. COULDOCK,
G. EWALD MENZEL.