L. GARDNER & J. B. BUTTERFIELD.

Barrel.

No. 211,146. Patented Jan. 7, 1879.

Fig. 1.

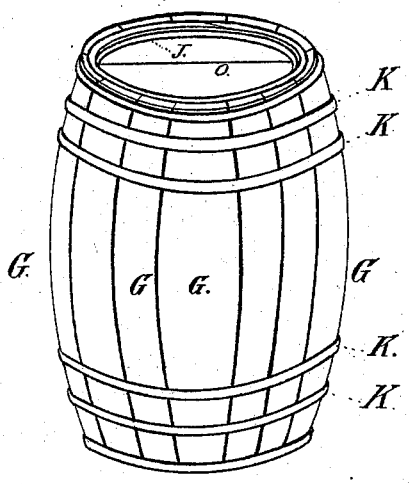


Fig 2.

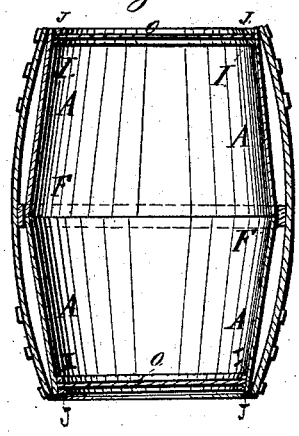


Fig. 3.

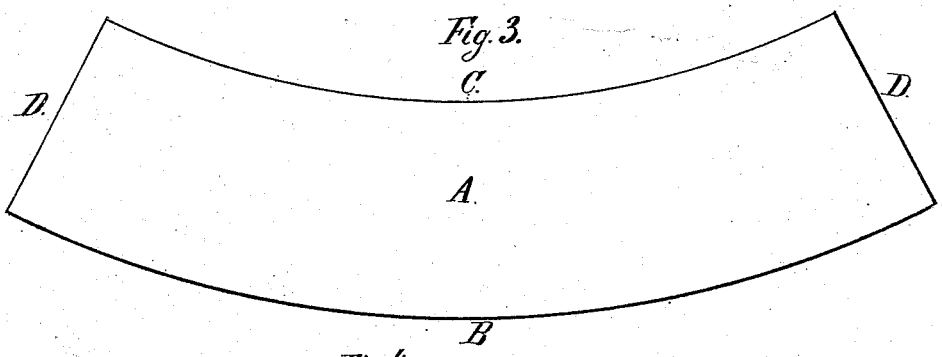
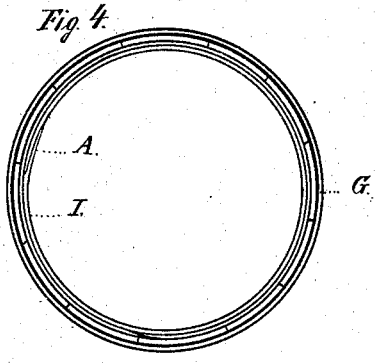


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

LEMUEL GARDNER AND JOSEPH B. BUTTERFIELD, OF MILWAUKEE, WIS.

IMPROVEMENT IN BARRELS.

Specification forming part of Letters Patent No. **211,146**, dated January 7, 1879; application filed September 14, 1878.

To all whom it may concern:

Be it known that we, LEMUEL GARDNER and JOSEPH B. BUTTERFIELD, both of the city of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Barrels; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of our improved barrel. Fig. 2 is a longitudinal central section of the same. Fig. 3 is a top view of one of the veneer sections, forming a part of the inner lining of the barrel, and Fig. 4 is a top view of our improved barrel.

Our invention relates to improvements in a certain barrel invented by James Tomlinson, and for which said James Tomlinson has secured Letters Patent of the United States bearing date September 19, 1876.

The said patented barrel is constructed in a cylindrical shape, without a bilge, having a uniform diameter from one end to the other, by uniting two or more veneers, the grains of which run at right angles to each other, all of which is fully set forth and described in the specification and drawings which accompany said Letters Patent.

The object of our invention is to provide a barrel constructed from veneers, the grains of which run at right angles to each other, having a bilge at its center, in shape similar to that of the common barrel, it being found from a practical experiment that the bilged barrel is much easier handled, less liable to be broken when turned over, is stronger and superior in every respect, all of which is further explained by reference to the accompanying drawings, in which—

A represents the inside veneers or lining of the barrel, which is first cut similar in shape to that shown in Fig. 3, which represents a flat sheet of the lining before it is bent to form the barrel, having concave edge C and convex edge B.

The veneers A are bent around a former until the ends D overlap each other, when they are thus secured with nails, each forming the hollow frustum of a cone.

When two sheets, A, are thus formed, their convex edges B are secured together to form the inside lining of the barrel, when they are surrounded at their point of contact by a hoop, F, which is nailed to both sections of the lining A, thus forming a strong and tight joint.

The peculiar shape of the lining A, (shown in Fig. 2,) when thus constructed, gives to the barrel the peculiar bilged shape described. The hoop F also increases the diameter of the center of the barrel.

When the lining is thus formed, as herein described, it is surrounded with veneers G, cut lengthwise of the grain, similar in shape to the ordinary barrel-stave.

The veneers G are thus secured by nails and hoops in a similar manner to that shown and described in said Letters Patent.

The lining A extends to the ends of the outside pieces G, and thus strengthen the chine of the barrel.

The heads O of the barrel rest upon the hoops I, which hoops are nailed to the walls of the barrel, when another hoop, J, is nailed above the head, and secures it in the barrel.

K represents the hoops of the barrel, which, owing to the bilged shape, may be replaced when broken. A greater or less number may be used, however, according to the required strength of the barrel.

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

1. The combination, with a stave barrel, of the veneer lining A A, made of two frusta of hollow cones, united at their longer bases and attached to the staves at their chimes, substantially as described, and for the purpose set forth.

2. The bilged barrel with its staves in contact herein described, constructed of veneers,

and consisting of the veneer lining made of two frusta of hollow cones, A A, each formed of a blank having a concave edge, C, and a convex edge, B, the longer edges of the two conical frusta being placed in contact, and the frusta united together by the outside hoop, F, nailed to both frusta, the inside lining thus formed being surrounded by veneer staves G, nailed to the lining at its ends, and provided with hoops K I J and heads O O, substantially as described, and for the purpose set forth.

In testimony that we claim the foregoing as our own we affix our signatures in presence of two witnesses.

LEMUEL GARDNER.
JOSEPH B. BUTTERFIELD.

Witnesses to Lemuel Gardner:
C. S. PLAYFORD,
S. L. MYERS.

Witnesses to Joseph B. Butterfield:
JAS. B. ERWIN,
ISAAC CHRISTIAANSEN.