

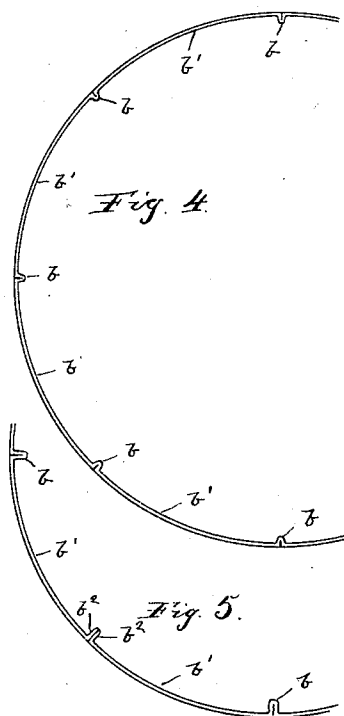
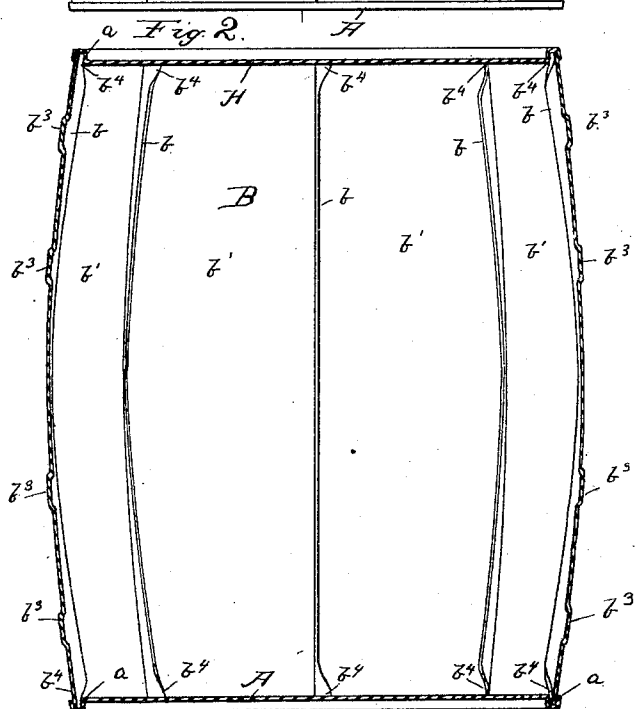
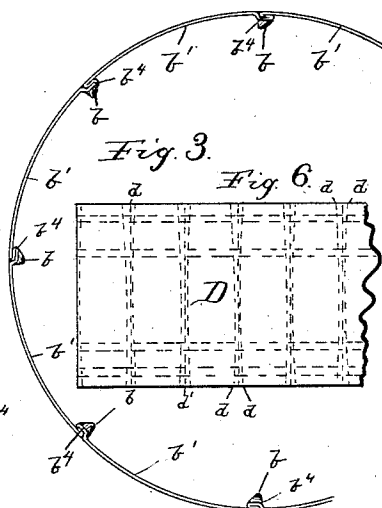
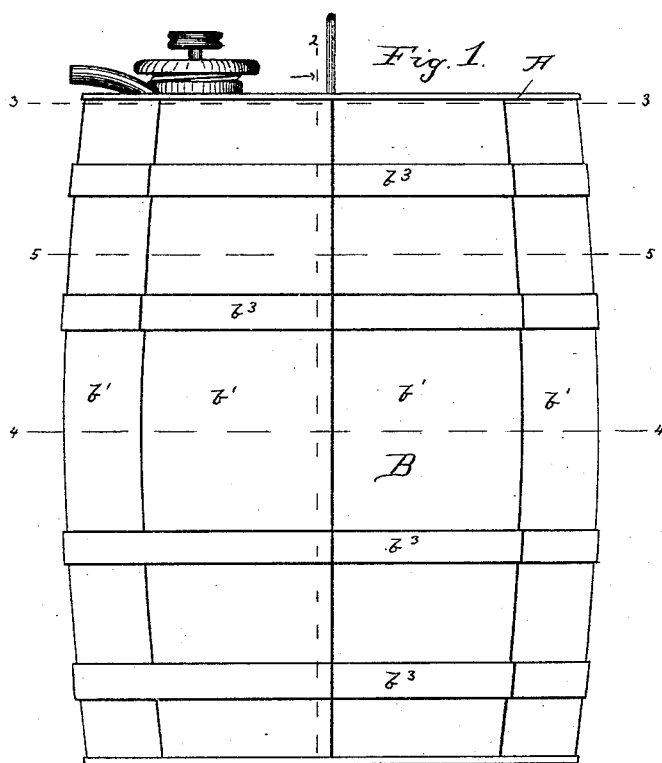
(No Model.)

E. NORTON.

SHEET METAL BARREL.

No. 354,572.

Patented Dec. 21, 1886.



Inventor:

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UNITED STATES PATENT OFFICE.

EDWIN NORTON, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND
OLIVER W. NORTON, OF SAME PLACE.

SHEET-METAL BARREL.

SPECIFICATION forming part of Letters Patent No. 354,572, dated December 21, 1886.

Application filed September 3, 1886. Serial No. 212,572. (No model.)

To all whom it may concern:

Be it known that I, EDWIN NORTON, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sheet-Metal Barrels, of which the following is a specification.

This invention relates to sheet-metal cans or vessels of a barrel form.

The object of the invention is to provide a sheet-metal barrel or can of barrel form of a strong and durable construction, and having all the outward appearance of hoops and staves, the body of which is or may be composed of or made from a single rectangular piece of sheet metal.

To this end my invention consists in a sheet-metal barrel or can of barrel form, having a body provided with longitudinal inward folds increasing on a gradual taper from the middle of the barrel-form body toward each of its ends. The number of these longitudinal tapering folds corresponds to the number of staves it is desired the barrel-body should have or represent. The tapering of the longitudinal or stave folds from each end toward the middle takes up more stock at the ends than at the middle, and gradually diminishes the diameter of the body toward each end, thus giving it a true barrel shape. The longitudinal folds or ribs serve to strengthen the body, and also at the same time to give the body the outward appearance of separate staves. The hoops are formed by a series of cross-beads formed in the sheet metal. The longitudinal ribs or folds are bent down or folded flat at the extreme ends of the body, so as not to obstruct the insertion of the head of the can or barrel in the ends of the body. The sheet-metal barrels may be made of any desired size or capacity—as, for example, from one gallon to the full size of an ordinary barrel. It is, however, specially designed for tin vessels of from two to five or ten gallons capacity.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a section on line 2 2 of Fig. 1. Figs. 3, 4, and 5 are partial cross-sections on line 3 3, 4 4, 5 5 of Fig. 1; and

Fig. 6 is a plan view of the rectangular sheet from which the barrel-body is made, showing the lines upon which the tapering folds are formed.

In said drawings, A A represent the heads of the barrel, and B its body. The body B is of a true barrel form, curving gradually from the middle toward each end. The body B, which is preferably made of a single rectangular sheet, is furnished with longitudinal folds or ribs *b*, tapering gradually from each end toward the middle. These folds, at the middle or bilge of the barrel, may be quite shallow or narrow, just enough to mark the division between the staves *b'*. At the ends of the barrel the folds are made deep enough to take up the surplus stock due to the diminished diameter of the barrel at the ends. By increasing or diminishing the depth of the folds at the ends the body may be given any desired degree of curvature from the middle toward its ends. At the side seam of the body the meeting edges of the sheet are furnished with flanges *b'' b''*, which abut together, and, being soldered, constitute one of the longitudinal strengthening-ribs, the same as the tapering inward folds formed in the sheet itself. The body is also furnished with hoops *b³*, consisting of raised beads formed in the stock, which give the barrel the exterior appearance of hoops. The ribs *b* are folded down flat at each end, as indicated at *b'*, and thus form a smooth seat for the offset *a* of the head A to fit upon.

In making the body the rectangular sheet D may be first marked or partially folded or pressed inward along the tapering longitudinal lines *d d*, which form the boundaries of the inward folds or ribs *b*, the hoop-beads *b³* being formed at the same time, and then the gore-shaped portions bounded by the lines *d d* are doubled or folded on their median lines *d'*, thus forming the folds or ribs *b*, and at the same time curving and forming the sheet into the barrel shape. After this is done the side seam is soldered or seamed, and then the ribs or folds *b* are turned down at the ends of the barrel and the heads inserted. The barrel may, however, be made by any suitable method or process, and I do not confine myself to any particular method or means for making my

improved barrel. The staves b' , which are bounded by the ribs or folds b , it will be observed, have the same tapering and curved shape as the staves of an ordinary wooden barrel, and the lines d , which mark the margins of the ribs or folds, are slightly curved, as indicated in Fig. 6. The hoop-beads b^3 serve to strengthen the body, as well as to give the appearance of hoops to the barrel. The longitudinal ribs or folds b serve to stiffen and strengthen the sheet-metal body independent of the barrel form given to the body by such folds when they are made gore-shaped, and the invention is not limited to ribs or folds of a tapering or gore shape. By providing cylindrical sheet-metal bodies with longitudinal inwardly-projecting folds or ribs (in which case they will be parallel and not tapering) a very strong and durable vessel may be produced. It is preferable, however, to make the folds tapering and give the body a barrel form, as it is thereby rendered much stronger. It is also preferable that the longitudinal ribs or folds should extend at right angles to the end of the body; but their direction may be varied.

The method or process above indicated for making the improved sheet-metal body is not herein claimed, the same being the subject of another application filed of even date herewith.

I claim—

1. A sheet-metal barrel-form vessel having a series of longitudinal tapering folds or ribs

projecting radially inward, and the walls of said folds being squeezed tight together, substantially as specified.

2. A sheet-metal vessel having a series of longitudinal strengthening folds or ribs projecting radially inward, and the walls of said folds being squeezed tight together, substantially as specified.

3. A sheet-metal barrel-form vessel having a series of longitudinal tapering folds or ribs and transverse hoop-beads projecting radially inward, and the walls of said folds being squeezed tight together, substantially as specified.

4. The sheet-metal barrel having heads A and body B, furnished with folds or ribs tapering from each end toward the middle of the barrel, and staves b' between said folds or ribs, said ribs being folded flat at each end, substantially as specified.

5. The sheet-metal body B, made from a single rectangular sheet of metal, having tapering ribs b and flanges b^2 at its meeting edges, soldered together, substantially as specified.

6. The sheet-metal barrel-form body having a series of longitudinal inward folds or ribs tapering on curved lines from each end toward the middle or bilge, substantially as specified.

EDWIN NORTON.

Witnesses:

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