J. L. THOMSON.

Barrels.

No. 147,710. Patented Feb. 17, 1874.

Fig. 1.

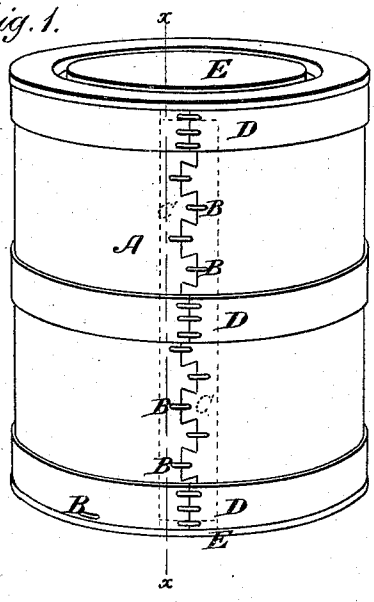


Fig. 2.

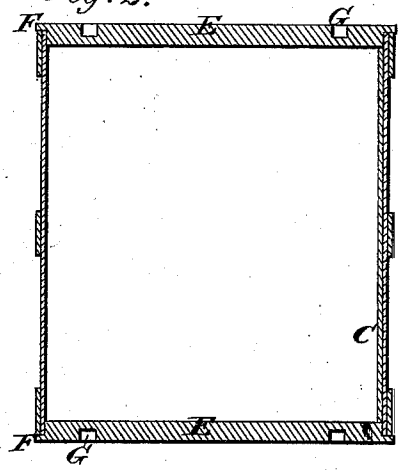


Fig. 3.

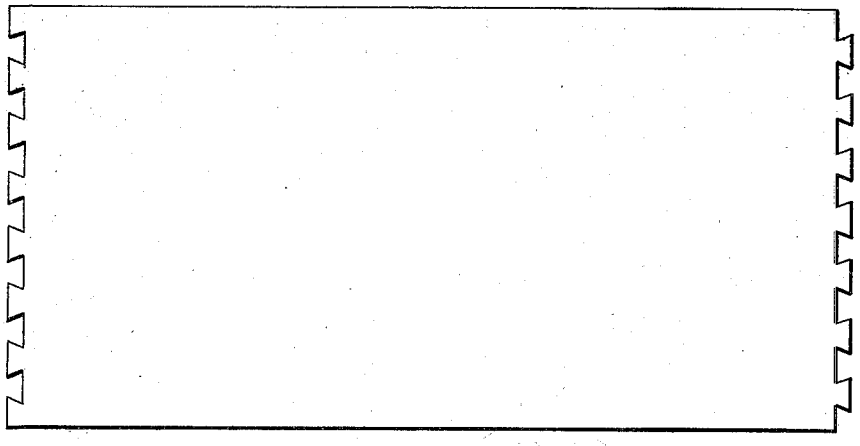
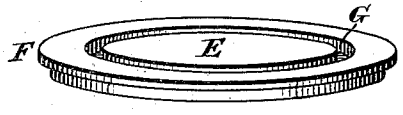


Fig. 4.



WITNESSES

C. F. Brown.
Melville Church.

By

INVENTOR

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UNITED STATES PATENT OFFICE.

JUDSON L. THOMSON, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO FRANCIS N. DAVIS, OF BELOIT, WISCONSIN.

IMPROVEMENT IN BARRELS.

Specification forming part of Letters Patent No. 147,716, dated February 17, 1874; application filed November 19, 1873.

To all whom it may concern:

Be it known that I, JUDSON L. THOMSON, of Syracuse, in the county of Onondaga and State of New York, have invented a new Improvement in Barrels; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings forming part of this specification, in which—

Figure 1 is a perspective view of a barrel constructed in accordance with my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a plan view of a sheet of paper-board cut in the proper shape for forming the body of the barrel, and Fig. 4 is a perspective view of one of the barrel-heads.

Similar letters of reference indicate corresponding parts in the several figures of the drawings.

My invention has for its object to provide for general use a barrel or cask which shall be cheaper in construction, possess greater strength, and occupy less room, than an ordinary wooden barrel of the same capacity, and which shall, at the same time, be water-proof, and nearly air-tight when headed up. To this end the invention consists, first, in constructing the body of the barrel from one sheet of compacted paper-board in the form of a cylinder of uniform diameter, and in providing it with hoops and heads, as I will presently set forth. It consists, secondly, in constructing the heads in such a manner as to afford the necessary hold for handling the barrel, and to protect the body when the barrel is rolled upon the ground. It consists, lastly, in the method of securing the ends of the paper-board together in constructing the body of the barrel, as I will hereinafter describe.

The material from which the body of the barrel is formed consists of one or more layers or sheets of paper or paper-board compacted together by the application of pressure, and rendered water-proof, as described in my application for Letters Patent filed contemporaneously herewith.

In constructing the barrel I first take a sheet of this board cut to the proper size, with dovetailed ends, as shown in Fig. 3, and bend it up to form the cylindrical body A, with the dovetails fitting into each other, and secured in place by the staples or double-pointed nails B. These staples are driven through the dovetailed ends from the outside of the barrel, and are clinched upon the inner surface of a paper or board strip, C, placed upon the inside of the barrel to cover and protect the dovetailed joint. Instead of joining the ends of the board by a dovetailed joint, they may be made with straight or inclined edges overlapping each other, and secured together by the staples. In this case the inside strip C may be omitted or applied, as preferred. D D are the hoops, made of the compressed board, and joined together at the ends by staples. They are arranged at or near both ends of the barrel and at the center, as many being employed as may be desirable or necessary. Their edges should be beveled off to prevent them from being abraded or torn in handling. They may also be covered with canvas or other stout cloth before being applied to the barrel, or, instead of paper-board, wooden hoops may be used. I prefer, however, to use the board hoops as being the most economical. E E are the heads, in this instance made of wood, to fit into the ends of the barrel, and with a flange, F, resting against the edges thereof to form a tight joint, and prevent such heads from being forced too far within the barrel. The flanges also project beyond the body of the barrel somewhat, and form bearing-edges, upon which the barrel may be rolled without the body coming in contact with the ground or floor. By this construction the body and hoops are protected against accident when the barrel is rolled along. The heads are also formed with a concentric groove, G, in their outer faces, by which the barrel may be grasped in handling, and which also afford the necessary hold for chine-hooks when the barrels are hoisted and lowered by rope tackle. The heads are secured in place by nails or staples B, driven into their edges through the ends of the barrel and its end hoops, as shown. Instead of constructing the heads of wood, they may be made of thick paper-board pressed into the requisite shape, or formed from paper-pulp pressed and molded. The wooden heads, however, I regard as the cheapest, and, perhaps, the best. The paper

boards are generally water-proofed while being condensed in the process of manufacture; but the barrels themselves may be also painted or varnished upon the inside and outside, to increase their capability for resisting the action of water, and to produce a neat and ornamental finish.

For certain kinds of barrels the boards are embossed by indentations, in any suitable figures or designs, while being manufactured, and in some instances they are painted with ornamental colors after being compressed, and before they are formed into barrels.

Barrels and casks constructed in accordance with my invention, and in the cylindrical form above described, occupy much less room for storage and transportation than ordinary barrels or casks of the same capacity. For example, one hundred and twenty-five or thirty flour-barrels constructed as I propose can be transported in a freight-car which would hold but one hundred wooden flour-barrels of the same capacity. A large amount is, therefore, saved in transporting or storing the filled barrels. Instead of constructing the barrels at one place, and then transporting them to another to be filled, the bodies, hoops, and heads are cut in the proper dimension at the manufactory, and shipped in bundles or packages to the mill or place where they are to be used, and there set up and finished, the setting up and finishing of a barrel being accomplished in about three minutes. Thousands of barrels may thus be kept in store without occupying much space, and only set up when required for use. A still greater saving is, therefore, effected in storage room.

The whole cost of a finished flour-barrel made in the best manner is from forty to fifty per cent. less than the cost of a wooden flour-barrel of the same capacity. It is also stronger and more durable than the latter, and affords far better protection to the flour, because it is water-proof, and excludes the air to a great degree.

As a modification of my invention, I propose to make the body of the barrel seamless, by forming it while the paper is in the pulp, but this would only be used for finer and nicer work.

I also propose to construct a fruit-package in the general form above described, and to provide the necessary ventilation I make suitable openings or perforations in the body, giving them an ornamental configuration or design.

Having thus described my invention, what I claim is—

1. A barrel or cask having its body formed of a single sheet of compressed paper-board, bent into cylindrical form, and provided with wooden heads and compressed paper hoops, substantially as described, for the purpose specified.

2. The head of the barrel constructed with an edge flange, F, projecting beyond the body of the barrel, and provided with a concentric groove in its outer face to afford the necessary hold in applying or removing the head, and in handling the barrel, substantially as described.

3. A barrel or cask having its body formed of a single sheet of compressed paper-board, bent into cylindrical form, and secured together at its edges by a dovetailed joint and double-pointed nails, substantially as described.

4. The interior stiffening-piece C, combined with the body of the barrel, to protect and cover the dovetailed joint, substantially as described.

JUDSON L. THOMSON.

Witnesses:
F. N. DAVIS,
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1,500 words.