

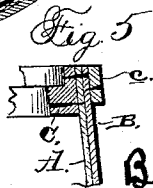
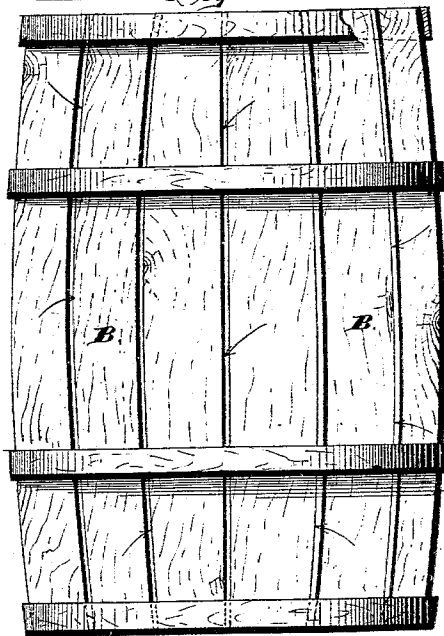
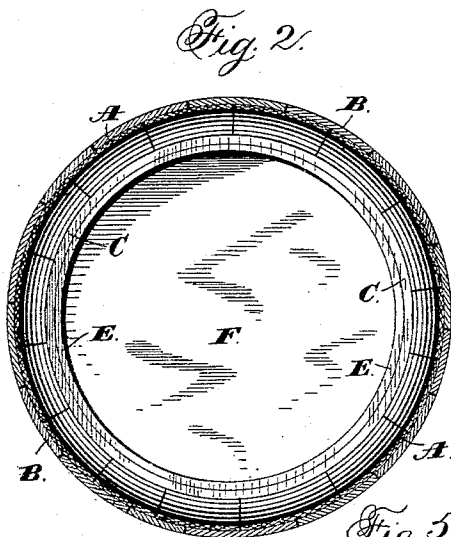
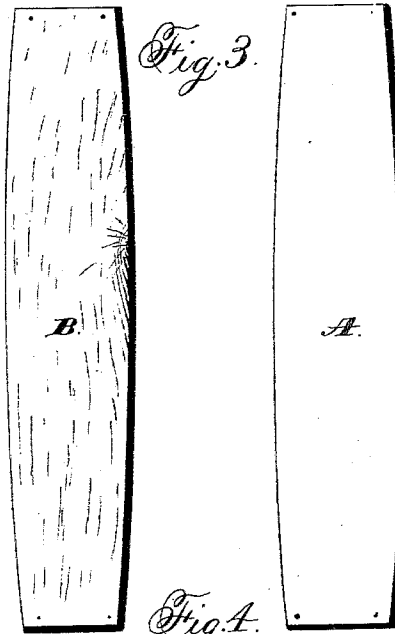
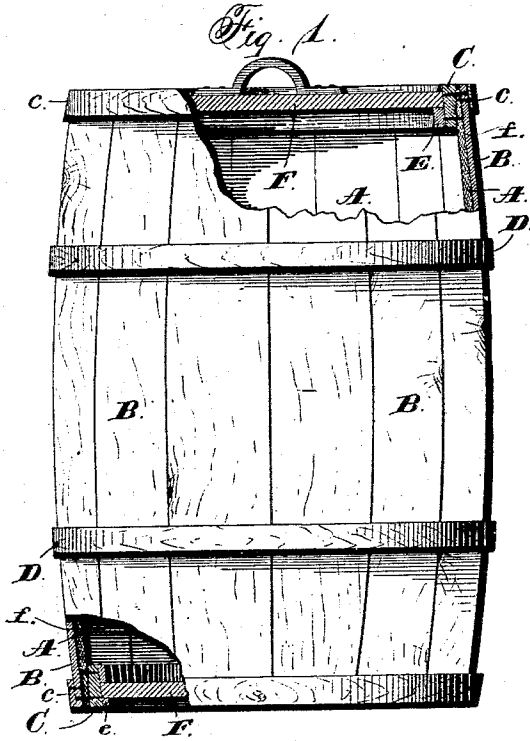
(No Model.)

S. H. RAYMOND.

BARREL.

No. 331,911.

Patented Dec. 8, 1885.



Witnesses:
 Jas. C. Hutchinson
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 Silas H. Raymond
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UNITED STATES PATENT OFFICE.

SILAS H. RAYMOND, OF GRAND RAPIDS, MICHIGAN.

BARREL.

SPECIFICATION forming part of Letters Patent No. 331,911, dated December 8, 1885.

Application filed October 22, 1885. Serial No. 181,161. (No model.)

To all whom it may concern:

Be it known that I, SILAS H. RAYMOND, of Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Barrels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in barrels.

The object is to provide a light, cheap, and durable barrel suitable for house use in storing flour, sugar, &c., and keeping the same free from dampness and insects.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the barrel partially broken away. Fig. 2 is a transverse section, and Fig. 3 represents one of the inside and one of the outside staves. Fig. 4 shows a modification; and Fig. 5 is a modified form of inner hoop, showing the shoulder for holding the head formed integral with the hoop.

A represents one of the inside and B one of the outside staves. The inside stave, A, is formed of thick paper, such as is commonly termed "pasteboard" or "straw-board," and the stave B is preferably formed of wood veneer, but may be formed of paper, if so desired.

C represents the inside end hoops, which are first placed upon the ends of the former in constructing the barrel. The ends of the inside paper staves are then nailed to the hoops C with their edges in close contact. Glue or cement is then applied to the joints, completely filling them. The outside staves, B, are then nailed to the end hoops in such position as to lap joints with the paper staves, their joints being filled or not with glue or cement; and the outside middle hoops, D, are then driven on, drawing the whole snugly together. The outside end hoops, e, are then placed in position and nailed to the staves or through the staves and inside hoop, C.

To form rests for the heads, thin strips of wood, E, are bent around on the inside faces of the inner end hoops at their lower edges, and

secured thereto by nails or other suitable fastening; or the inside hoops might be formed thicker at their lower edges, and shoulders thereby formed on their inner faces, as shown in Fig. 5. One of the heads F is permanently secured in position by a thin strip of wood, e, secured to the inside face of the hoop C outside of the head and in close proximity to the head. The other or top head F may be secured in a removable manner by any of the well-known means; or it may be provided with a handle, and may simply rest in position on the internal shoulder. Instead of forming the inside paper staves separately, they may be formed of a single sheet of thick paper gored at its ends to conform to the curve of the barrel, and the edges where the gores are made may be united by glue or cement. The outer sides of the paper staves may also be completely covered with glue or cement, f, and the outside staves applied thereto in such a manner as to compress the glue or cement before it hardens between the outer and inner sets, thereby forming a solid and compact wall impervious to moisture and secure against the passage of small insects, mice, rats, &c.

The modification represented in Fig. 4 consists in omitting the lining or set of inside staves and nailing the outside staves to the hoop far enough apart to admit air for the purpose of storing fruit and vegetables. The spaces between the staves and the outside and inside end hoops admit of a circulation of air throughout the length of the barrel, and are made at no additional expense, as they are formed during the process of construction.

It is evident that slight changes might be resorted to in the form and arrangement of the several parts without departing from the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A barrel consisting, essentially, of an inner and outer series of bent staves firmly secured together, the outside and inside hoops rigidly secured to the staves, the inner hoops having shoulders thereon forming seats for the heads, and the strip e, secured to the inner hoop outside of the lower head, for permanently securing said lower head in position.
2. A barrel consisting, essentially, of a se-

ries of inside paper staves having their edges
glued or cemented together and a series of out-
side staves overlapping the joints of the inside
series, the ends of the staves being nailed be-
5 tween outside and inside hoops, and thin strips
of wood bent around and secured to the inside
faces of the inside hoops to form stops for the
head, substantially as set forth.

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

SILAS H. RAYMOND.

Witnesses:

CYRUS E. PERKINS,

WILLIAM A. CHAPMAN.