

(No Model.)

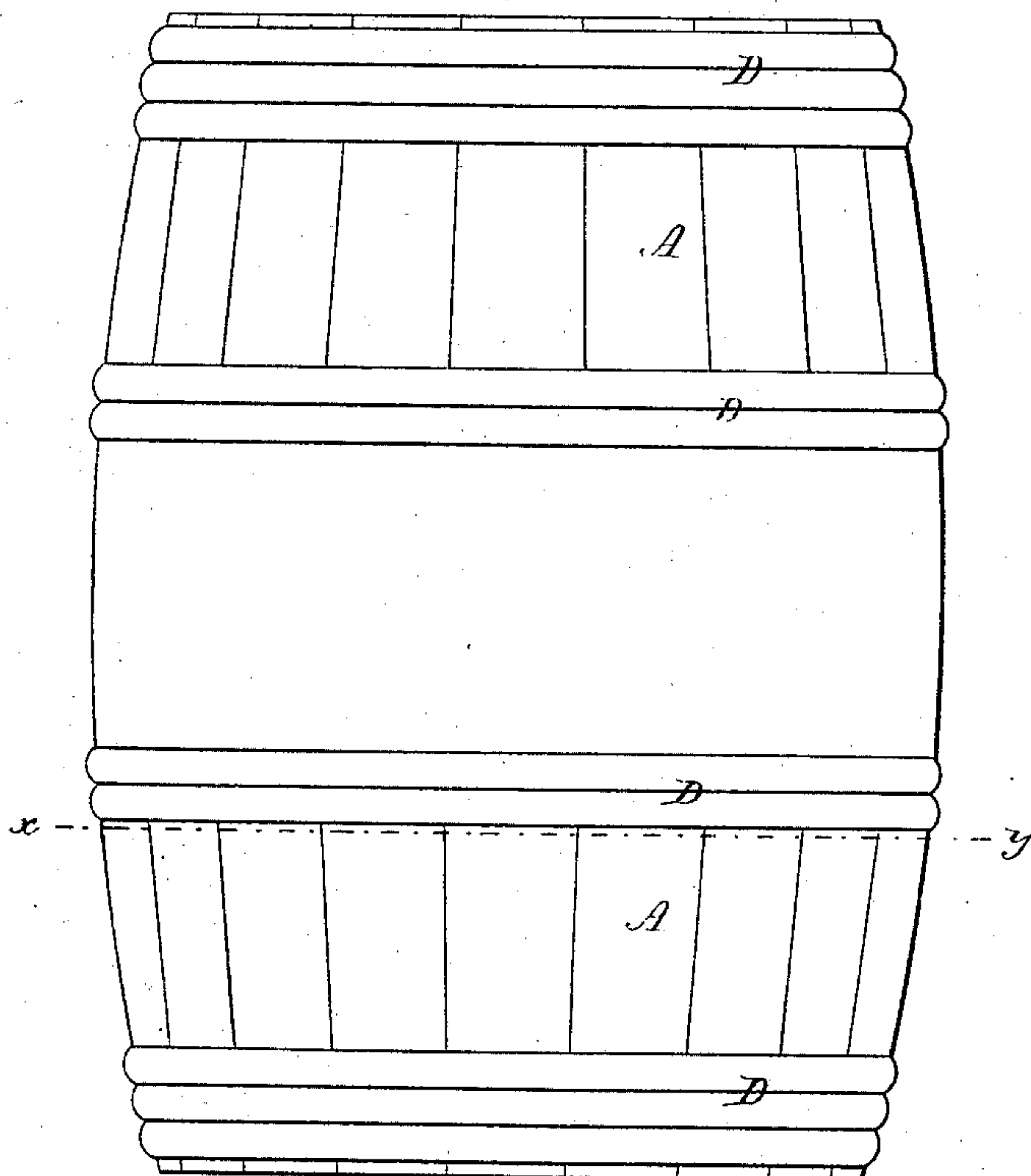
J. H. ELWARD.

BARREL.

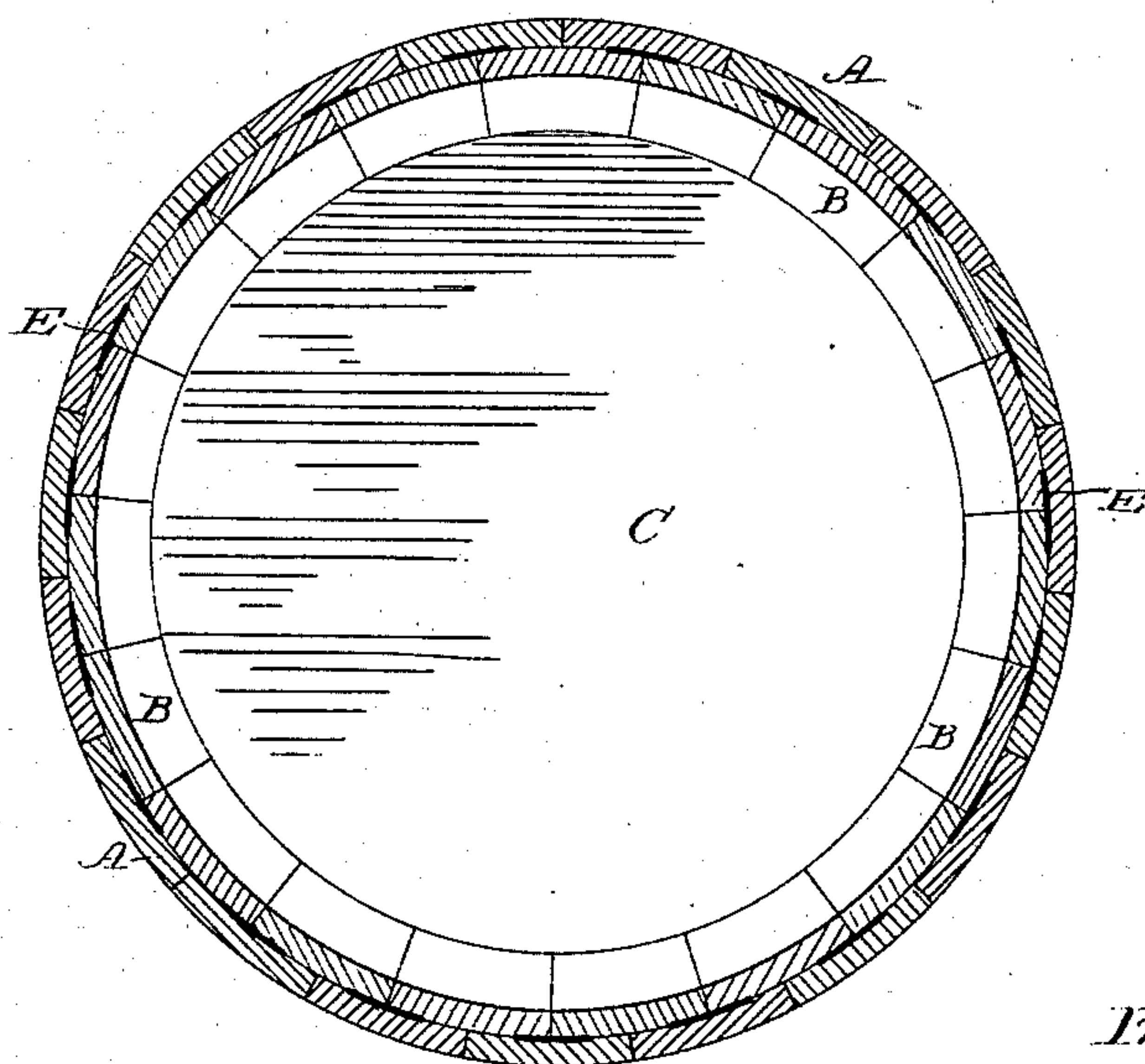
No. 268,362.

Patented Nov. 28, 1882.

*Fig. 1*



*Fig. 2*



*Witnesses:*

*N. N. Low*

*J. S. Barker*

*Inventor:*

*John H. Elward*  
*by Doubleday & Bliss*  
*attys*

# UNITED STATES PATENT OFFICE.

JOHN H. ELWARD, OF STILLWATER, MINNESOTA.

## BARREL.

SPECIFICATION forming part of Letters Patent No. 268,362, dated November 28, 1882.

Application filed June 17, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. ELWARD, a citizen of the United States, residing at Stillwater, in the county of Washington and State of Minnesota, 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is an elevation of a barrel containing my invention. Fig. 2 is a sectional view taken on line *x y*, looking downward.

The invention relates to barrels which are composed of two sets of staves, one arranged inside of the other, the staves of the respective sets being arranged to mutually break joints; and it consists in attaching a thin strip of flexible material to the inner staves along the joints, the strips being independent of each other and being secured to the staves on lines immediately adjacent to the joints.

In the drawings, A A are the outer staves, B B the inner staves, C the lower head, and D the hoops, these parts being of any usual construction or of any preferred one that may be adapted for use. For most of the purposes for which my improved vessel is intended the staves may be made of the lighter and inferior materials, as will be hereinafter more fully set forth.

E E represent the strips of thin material, secured along the joints of the inner staves, as plainly shown in Fig. 2. I prefer to employ strips of paper, and for this purpose I use such paper as may best meet the requirements of the case, and do not wish to be limited to any special kind. The paper may be secured properly to the staves along the sides of the joints either by glue or other adhesive material. The strips should be wide enough to make a perfect covering for the joints between the staves, but at the same time should not be so wide as to cause any wrinkling or creasing.

I do not wish to be limited to the use of paper, as other thin material may be employed.

I am aware that it is not novel to construct a vessel by placing one barrel or set of staves

inside another and arranging a paper vessel between them, and I do not claim broadly a paper lining interposed between two wooden vessels; but I am not aware of any previous use of a barrel or vessel constructed after the manner that mine is, or having its various parts related as are the parts in the vessel herein shown.

Heretofore it has been customary to either form an entirely separate paper vessel and insert it inside of a wooden one or wrap sheets of paper around the outside of an inner wooden vessel and surround both with an outer wooden part, the sheets being applied transversely of the barrel—that is to say, transversely to the longer diameter—or apply several superposed sheets of paper between the two sets of staves after each sheet had been gored—that is to say, had triangular sections removed from the upper and lower edges.

The object of my invention is to provide an easily and cheaply constructed barrel which, however, shall be sufficiently tight for the transportation of flour, lime, and other pulverized materials, it being desirable to have the barrels as thin and light as possible. The staves of both sets can be made of the thinner, lighter, and inferior kinds of wood. In fact, I employ wood which is considered practically worthless by the coopers for their ordinary barrels. The requisite strength is obtained from the duplicating of the staves, and the necessary closeness at each joint is effected by means of a single paper strip, the joints of each set of staves being broken by the staves of the other set.

The gored sheets of paper heretofore used, as above described, have necessitated a comparatively expensive operation in constructing and applying them, and such sheets have been employed only to my knowledge where it was desired to entirely surround the whole vessel with a continuous lining of paper, the vessel thus constructed being intended for the transportation of liquids. If gored sheets were to be applied in such manner as to simply cover the joints, the staves of the barrel must be of uniform width, or else each sheet must be gored to correspond to its barrel to insure that the gores shall cover the joints. In my case there is no necessity of a special adaptation, as the



independent strips are applicable regardless of the width of the staves. It is well known that barrels for the purpose above alluded to are made of staves of various widths, each barrel varying from the others, and in such cases the gored sheets are not applicable, unless it is intended to entirely surround the barrel with the lining material, and this I do not desire to do.

I do not claim as my invention a barrel having an inner and an outer set of staves arranged to break joints, as I am aware that this is old; but those experienced in the use of barrels constructed in this way know that when the staves are made of thin material it is practically impossible to carry finely-pulverized material in the barrels; and the object of my invention is to

provide a simple means of making barrels of this character available for these purposes.

What I claim is—

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The herein-described barrel, having, in combination with the inner set of staves and the outer set arranged to break joints, the narrow strips of thin flexible material secured independently of each other along and over the respective joints of the inner set of staves parallel therewith and on line directly adjacent to said joints, substantially as set forth.

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In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. ELWARD.

Witnesses:

AUG. F. SANFTENBERG,

H. J. CHAMBERS.