

(No Model.)

2 Sheets—Sheet 1.

J. V. BERG.
BARREL LINING.

No. 601,803.

Patented Apr. 5, 1898.

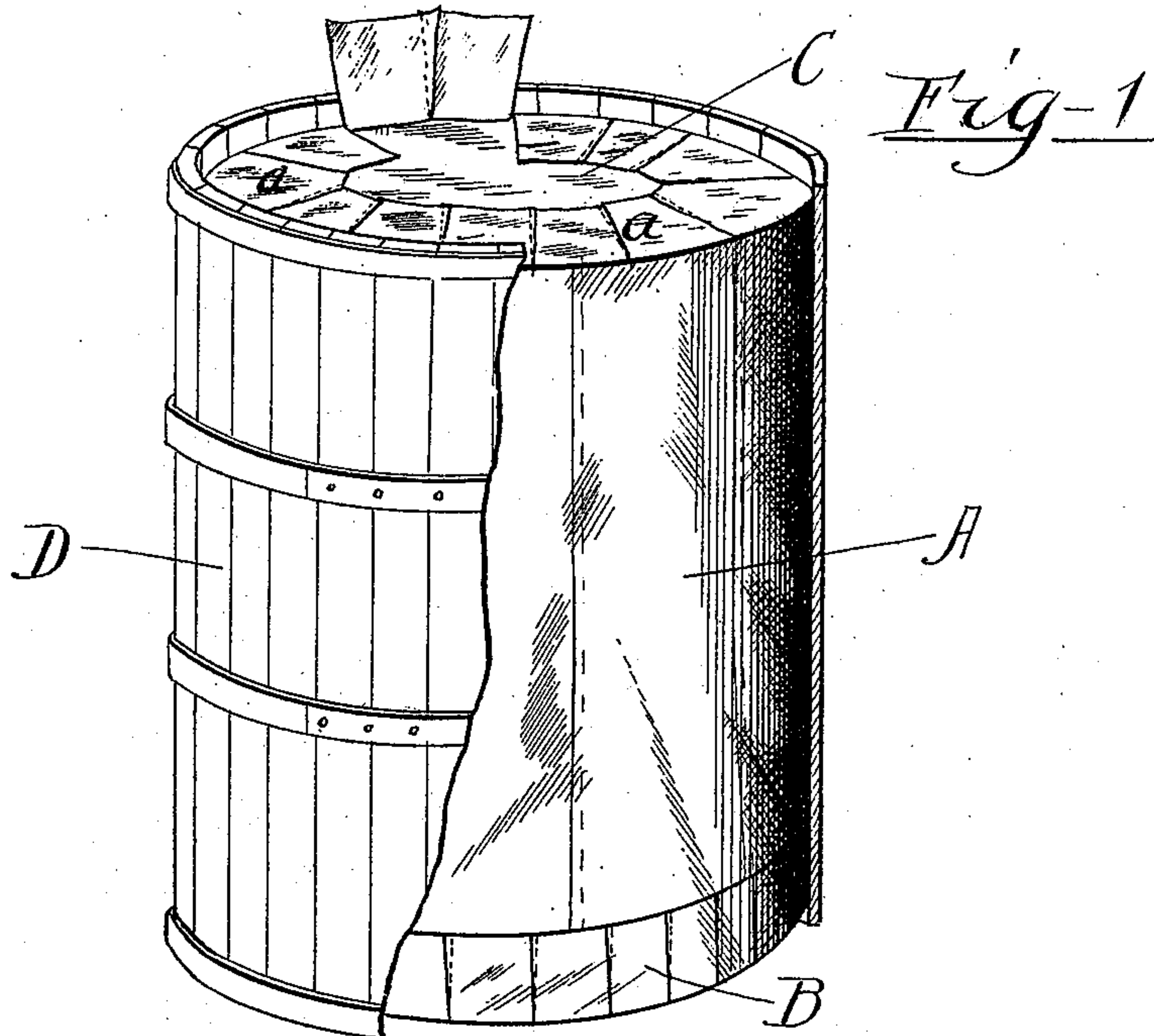


Fig-1

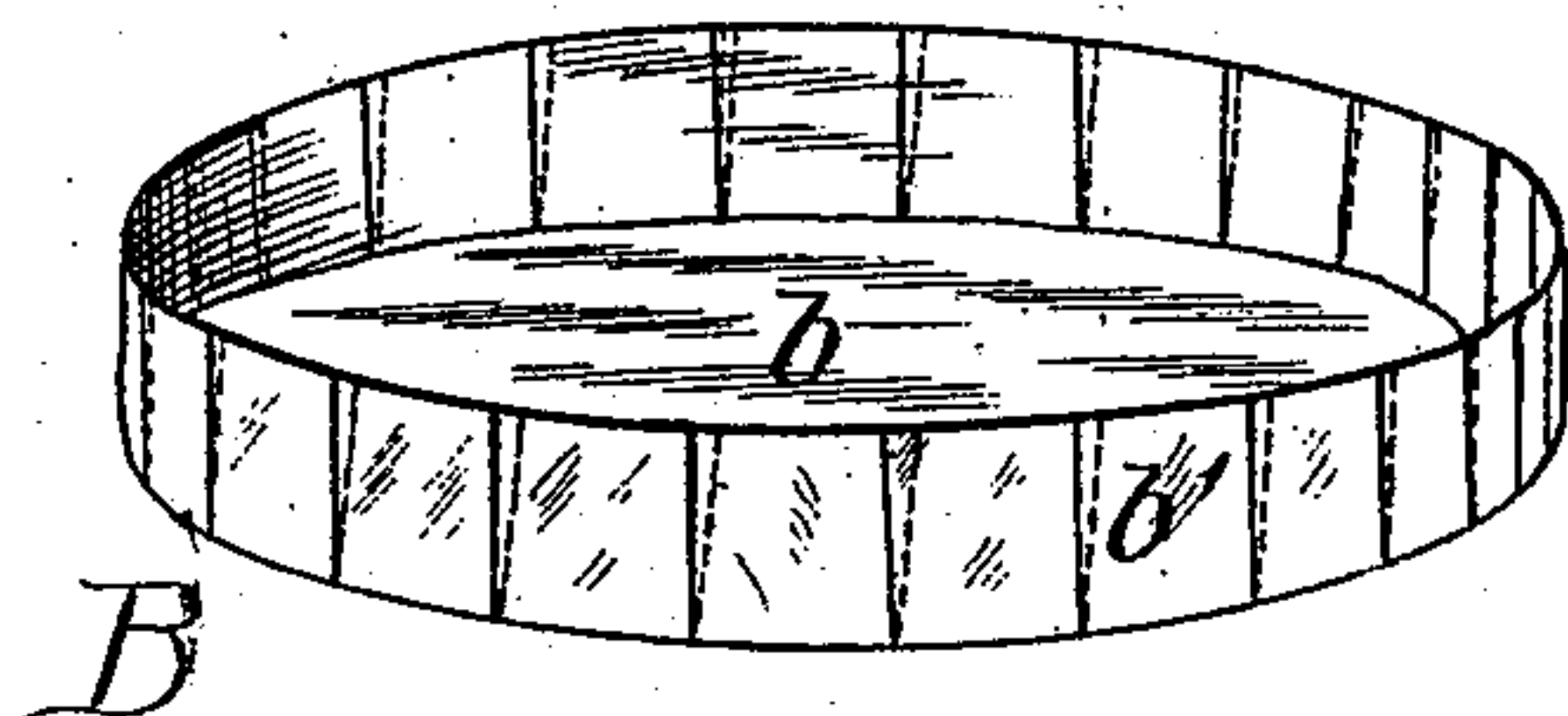


Fig-2

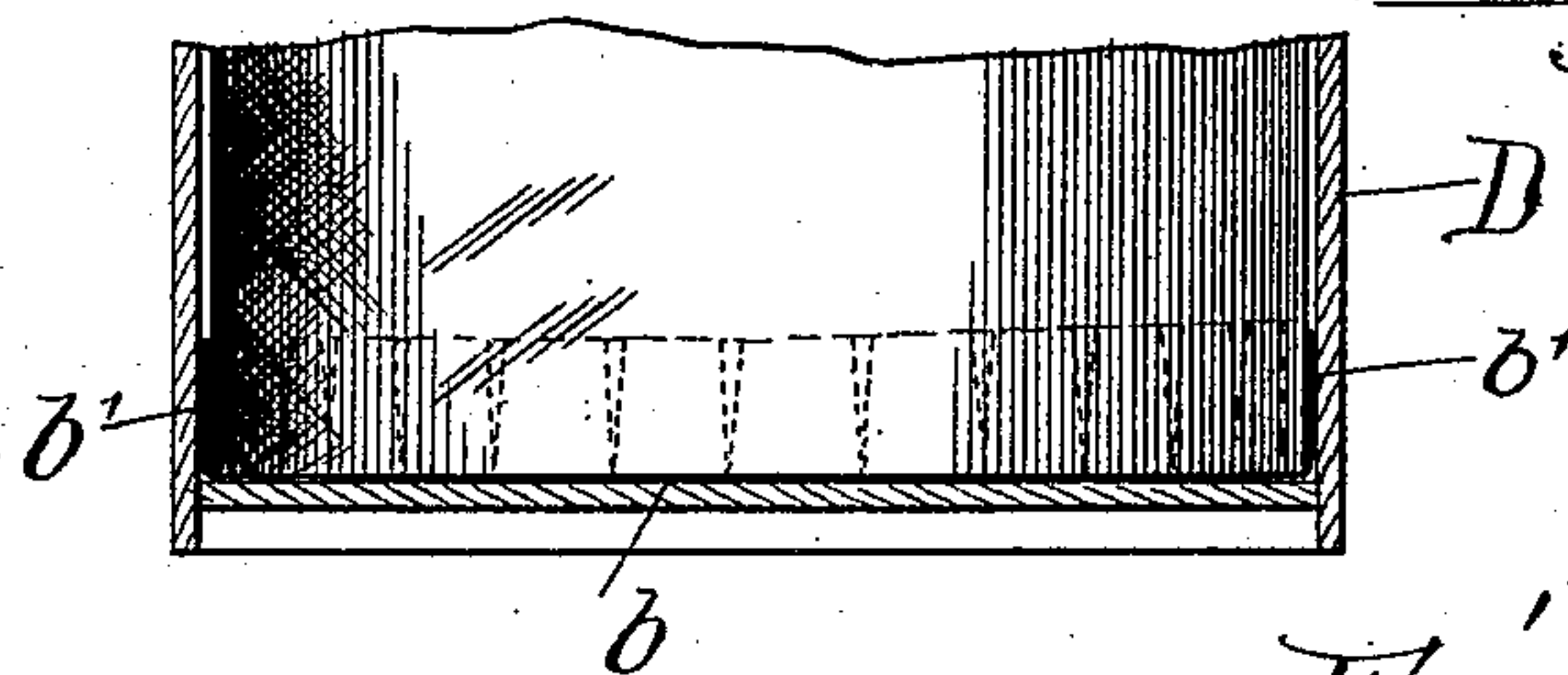


Fig-3



Witnesses
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Inventor
John Vincent Berg.
by Pooler Brown
his Attys

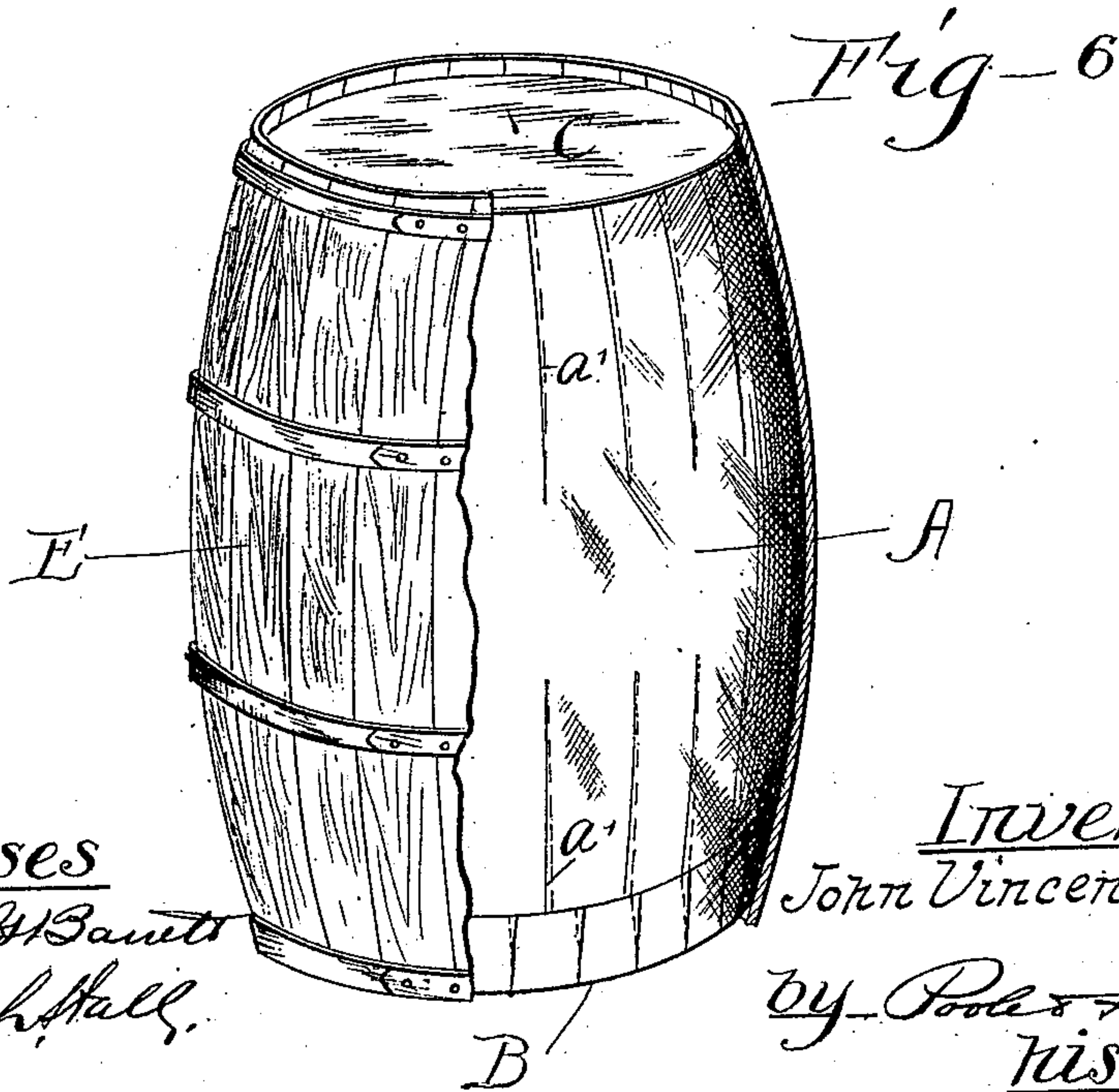
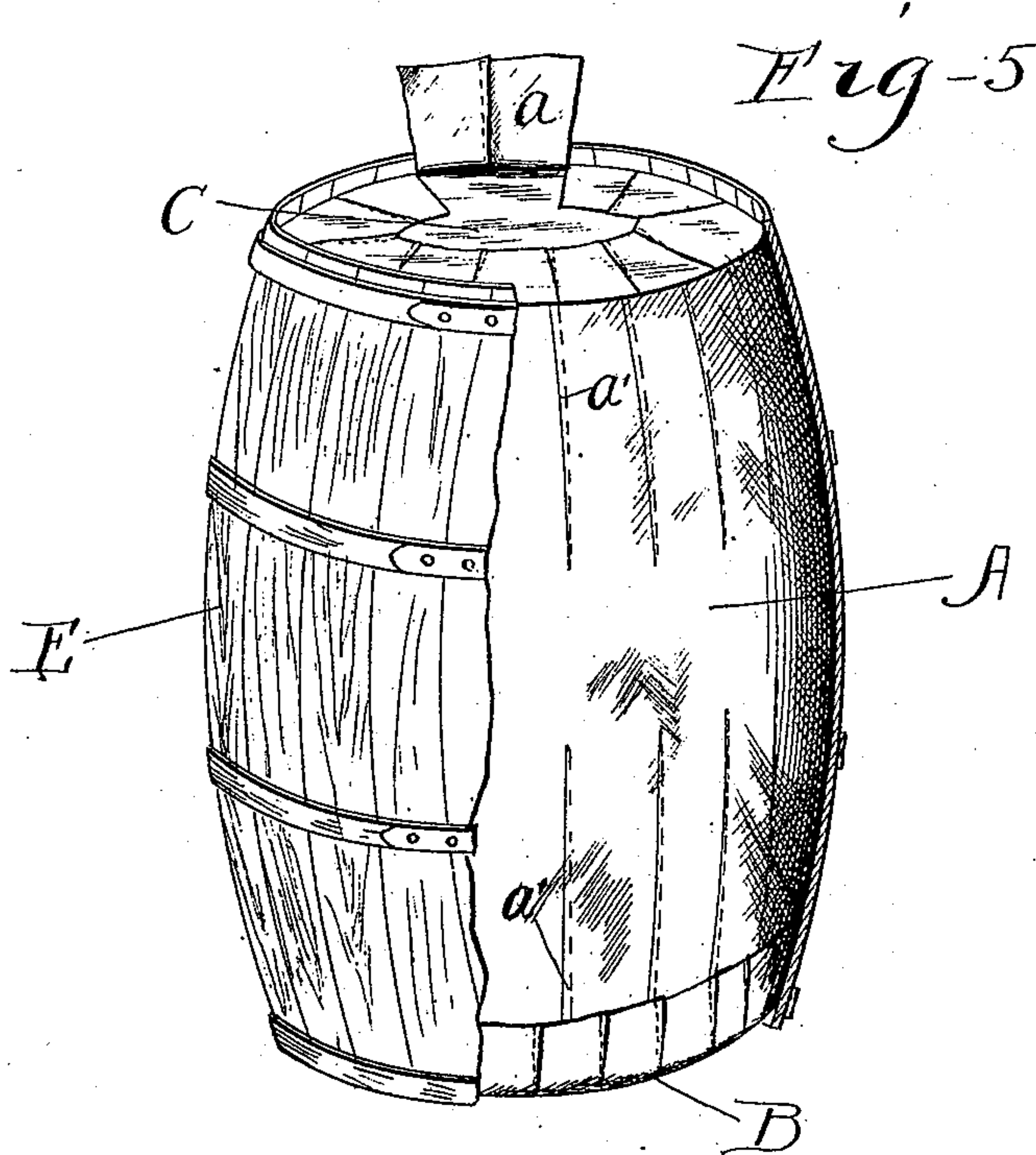
(No Model.)

2 Sheets—Sheet 2.

J. V. BERG.
BARREL LINING.

No. 601,803.

Patented Apr. 5, 1898.



Witnesses
Harold G. Bantz
William H. Hall.

Inventor
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by Pool & Brown
his Attys.

UNITED STATES PATENT OFFICE.

JOHN VINCENT BERG, OF CHICAGO, ILLINOIS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO TAYLOR E. BROWN, OF SAME PLACE.

BARREL-LINING.

SPECIFICATION forming part of Letters Patent No. 601,803, dated April 5, 1898.

Application filed June 12, 1897. Serial No. 640,465. (No model.)

To all whom it may concern:

Be it known that I, JOHN VINCENT BERG, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Barrel-Linings; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in removable linings for barrels, casks, and like receptacles, and is designed more especially for use with such receptacles adapted to contain merchandise which it is desirable to keep out of contact with the inner surface of the receptacle, or in cases where, by reason of the character of the receptacle or the goods, a lining is needed to prevent leakage through the interstices thereof.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a barrel provided with my improved lining, a portion of the sides of the barrel being broken away to more clearly show the arrangement of the lining. Fig. 2 is a detail section of the lower end of the barrel shown in Fig. 1. Fig. 3 is a perspective view of the lower wall of the lining. Fig. 4 is a perspective view of the upper wall of the lining. Fig. 5 is a perspective view of a bulged barrel provided with my improved lining and also broken away to show more clearly the arrangement of said lining. Fig. 6 is a modification of the construction shown in Fig. 5.

A lining made in accordance with my invention is composed of three parts—namely, a tubular body portion A, a circular flanged bottom wall B, and a circular top wall C.

The barrel D (shown in Fig. 1) is of cylindrical form or of that class in which the staves forming the same are made straight throughout their entire length. The body portion A of the lining of said barrel or cask, or that which covers the inner surface of the side walls thereof, is of tubular construction and of uniform diameter throughout its length. The bottom wall B of the lining is shown in Fig. 3 and consists of a circular disk or sheet

of paper *b*, provided with an upwardly-extending marginal flange *b'*. Said bottom wall B is made of a single circular sheet of flexible material of greater diameter than the interior diameter of the barrel or cask in which it is to be used. The margin of the sheet is cut or slitted inwardly to a line describing the interior diameter of the barrel or cask, and the slitted edge is folded upwardly at right angles to the plane of the sheet to form the flange *b'*. There being no material cut away from the margin of the sheet, the several upwardly-extending flaps forming the flange *b'* will overlies or lap upon each other and thus form joints designed and adapted to prevent leakage therethrough of the contents of the barrel. In other words, said flaps are so arranged that when they are turned upwardly at right angles to the sheet *b* they overlap each other at their side margins to form a continuous flange, which fits between the lower end of the body portion of the lining and the inner surface. Said bottom or lower end wall of the lining is made of such size as to fit closely within the bottom of the barrel or cask when the flange *b'* is in the position shown in Fig. 3, so that said flange lies closely upon the lower side walls of the barrel. After the lower wall of the lining has been placed in the barrel, as described, the tubular portion A thereof is next inserted into the barrel and expanded therein with the lower margin thereof resting on said bottom wall and inside the flange *b'* thereof, as most clearly seen in Fig. 2 of the drawings. With this arrangement a close or tight joint is provided between the side and lower walls of the lining, which will prevent the leakage therethrough of the contents of the barrel and will also prevent contact of said contents with the inner surface of the barrel. The upper wall of the lining consists of a plain circular sheet of paper which is adapted to rest upon the upper end of the tubular portion A or within said tubular portion and upon the contents of the barrel.

As an additional improvement I have shown in Fig. 1 the tubular portion of the lining A as provided at its upper end with a plurality of flaps *a*, which are turned inwardly and lie upon the top wall or cover C. Said flaps are

formed by making the tubular lining A somewhat longer than the barrel, slitting the upper edges thereof to a point slightly below the top line of the barrel and turning the flaps
 5 formed thereby inwardly. As in the construction of the bottom wall B, the flaps will overlap each other at their sides and constitute, in effect, a continuous inwardly-extending flange when they are turned inwardly
 10 upon the upper wall C, which forms, with said upper wall, a tight joint to retain the contents of the barrel.

In Fig. 5 I have shown a lining made and arranged as just described, with the exception that in this case it is adapted to be used
 15 with a bulged barrel E or one in which the staves forming the same are bent outwardly between their ends. In this construction the barrel or cask is of less diameter at each end
 20 thereof than at the middle portion, and the lining is therefore specially formed to fit closely upon the inner walls thereof when it is inserted into the barrel and positioned in contact with said walls. As a preferred
 25 means of accomplishing this result the outer ends of the lining are provided with V-shaped folds or crimps a' , which are of the greatest width at their outer ends and taper gradually toward the intermediate or middle portion
 30 of the lining. The blank will preferably be formed upon a suitable crimping or folding machine before the lining is made up and ready for insertion into the barrel. Said blank will be of sufficient width to form a cylinder
 35 equal in diameter to the longest diameter of the barrel, and the crimping or folding will take up so much of the material as to reduce the diameter of the outer ends of the lining to that of the barrel and thus fit
 40 closely within the barrel when inserted therein. The upper and lower end walls C and B, respectively, are constructed and arranged as in the previously-described figures.

In Fig. 6 is shown a construction similar to
 45 that shown in Fig. 5, with the exception that the upper end flaps a of the tubular lining A are omitted. Said construction may be used where the contents of the barrel are of a non-granular character, and the object of the cover
 50 is merely to prevent contact of said contents with the inner surface of the barrel.

The lining herein shown and described will usually be made of paper, but may be made of any other suitable flexible material. If it
 55 be desired to protect from moisture the contents of the barrel, said lining may be made of paraffin-coated or other specially-treated paper or like moisture-proof material. If the contents of the barrel be such as to absorb
 60 the odors of surrounding bodies, the lining will be made of non-odorous material. The quality of the lining will therefore depend upon the use to which it is to be put. Likewise, the crimps or folds may not always be
 65 V-shaped, but may be of regular width or depth, varying according to the character of the machine upon which the crimps or folds

are made, the character of the material out of which the lining is formed, and the shape of the barrel.

I claim as my invention—

1. A removable lining for barrels made of three separate pieces of thin, flexible material comprising a tubular body portion consisting of a continuous strip which extends from the
 75 top to the bottom of said barrel and overlaps at its meeting edges, a lower end wall provided with an upturned marginal flange which extends outside of and embraces the lower
 80 end of the body portion, a sheet or disk engaging the upper end of the body portion to form the top wall of the lining; said tubular body portion being slitted at its upper margin to form a plurality of flaps which are bent
 85 inwardly to overlie said top wall and which, when they are so bent inwardly, overlap each other at their side margins to form in effect a continuous inwardly-extending flange above said wall.

2. A removable lining for barrels or the
 90 like made of three separate pieces of thin flexible material comprising a tubular body portion which consists of a continuous strip extending from the top to the bottom of the barrel and overlapping at its meeting edges,
 95 a lower end wall comprising a circular sheet or disk of flexible material slitted in its margin and turned upwardly to form a plurality of marginal flaps which meet each other and overlap to constitute a continuous flange
 100 which extends outside of and embraces the tubular end of the body portion and a circular sheet or disk engaging the upper end of said tubular body portion to form the top wall
 105 thereof said tubular body portion being provided with a plurality of integral flaps upon its upper edge which are turned inwardly to overlie said top wall.

3. A removable lining for bulged barrels made of three separate pieces of thin, flexible
 110 material comprising a tubular body portion made from a continuous strip equal in length to the greatest interior circumference of the barrel, said body portion being crimped or folded at its opposite ends to fit within the
 115 end portions of the barrel, a lower end wall provided with an upturned, marginal flange which latter is adapted to extend outside of and embrace the lower end of said body portion and a sheet or disk adapted to engage
 120 the upper end of said body portion to form the top wall of the lining.

4. A removable lining for bulged barrels made of three separate pieces of thin flexible
 125 material comprising a tubular body portion made from a continuous sheet which is equal in length to the greatest interior circumference of the barrel and which is crimped or otherwise shaped at its opposite ends to fit within the end portions of the barrel, a lower
 130 end wall provided with a slitted upturned marginal flange adapted to extend outside of and embrace the lower end of said body portion, a circular sheet or disk adapted to en-

gage the upper end of said body portion to
form the top wall of the lining and a plurality
of integral flaps on the upper end of the said
body portion which are turned inwardly to
5 overlap said top wall and being arranged to
overlie each other at their side edges.

In testimony that I claim the foregoing as

my invention I affix my signature, in presence
of two witnesses, this 10th day of June, A. D.
1897.

JOHN VINCENT BERG.

Witnesses:

TAYLOR E. BROWN,
JOSEPH R. BARROLL.