

(No Model.)

A. BRAB.  
PAPER BARREL.

No. 388,113.

Patented Aug. 21, 1888.

Fig. 1

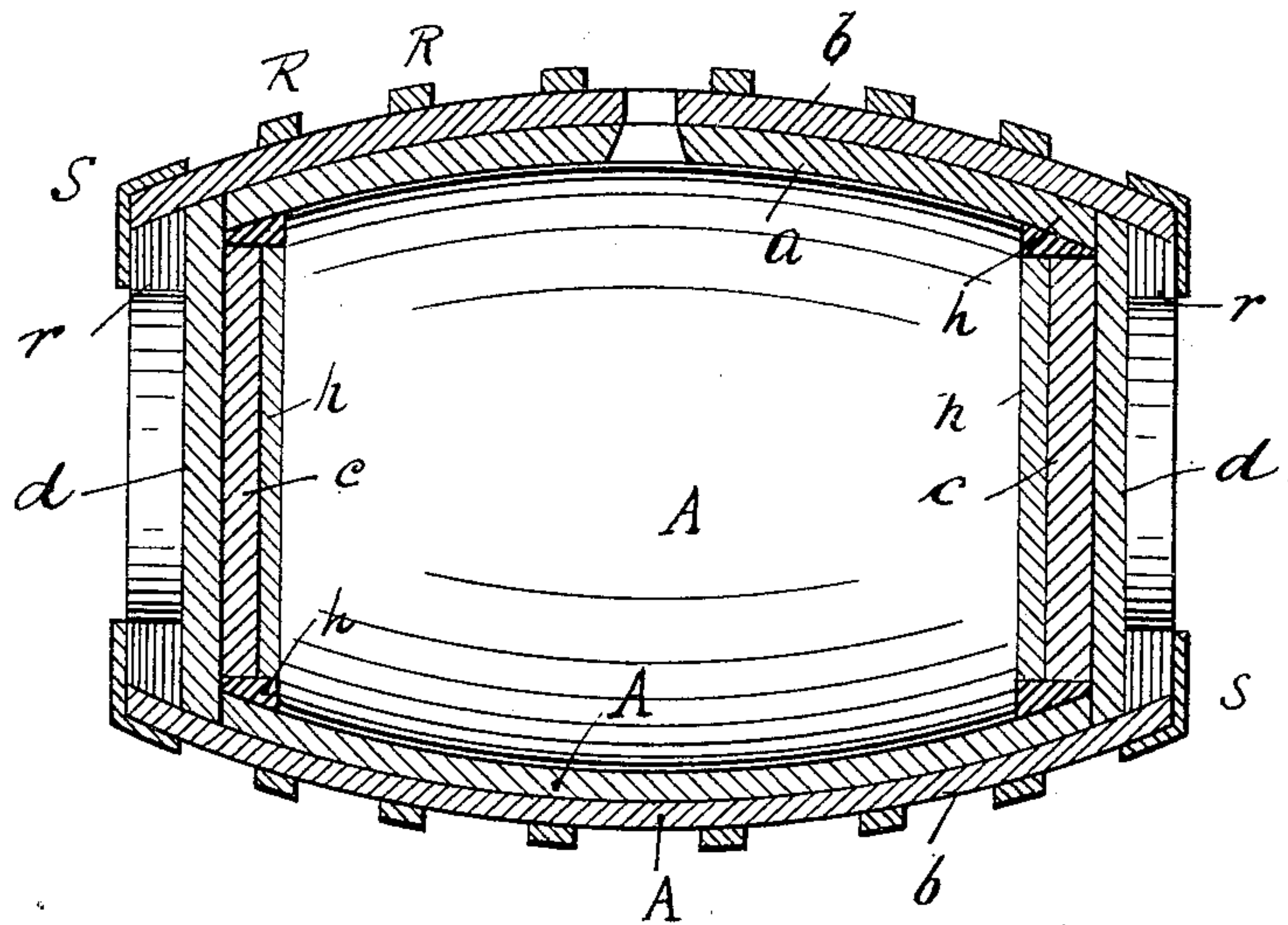
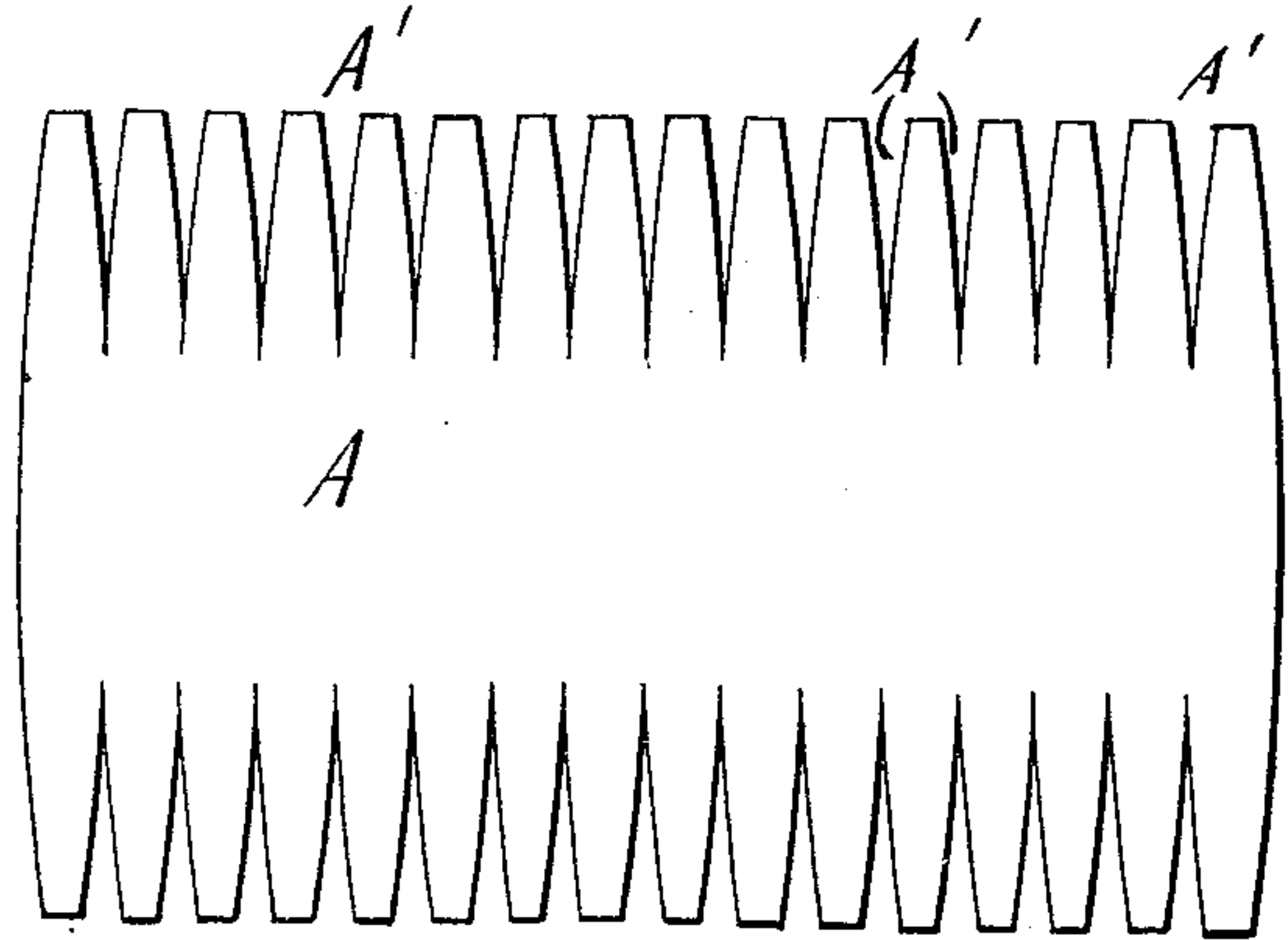


Fig. 2.



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# UNITED STATES PATENT OFFICE.

AUGUST BRAB, OF COLOGNE, PRUSSIA, ASSIGNOR TO KOHNER & CO., OF  
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## PAPER BARREL.

SPECIFICATION forming part of Letters Patent No. 388,113, dated August 21, 1888.

Application filed February 25, 1888. Serial No. 265,339. (No model.) Patented in Germany November 22, 1887, No. 43,888; in France December 24, 1887, No. 187,808; in England January 17, 1888, No. 745; in Belgium January 31, 1888, No. 80,219, and in Austria-Hungary March 29, 1888, No. 8,524 and No. 1,790.

*To all whom it may concern:*

Be it known that I, AUGUST BRAB, a subject of the King of Prussia and Emperor of Germany, residing at the city of Cologne, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in Manufacturing Paper Barrels, (for which I have obtained Letters Patent in the following countries: Germany, dated November 22, 1887, No. 43,888; Belgium, January 31, 1888, No. 80,219; England, January 17, 1888, No. 745; France, December 24, 1887, No. 187,808, and Austria-Hungary March 29, 1888, No. 8,524 and No. 1,790,) of which the following is a specification.

This invention relates to new and useful improvements in paper barrels; and the object of my invention is to provide a new and improved paper barrel which is strong, durable, and absolutely liquid-proof, and which can be used for storing or transporting all kinds of liquids.

The invention consists in a paper barrel composed of paper end rings, heads placed against said end rings, and a paper shell secured to said end rings.

The invention also consists in the construction and combination of parts and details, as will be fully described and set forth hereinafter, and then pointed out in the claims.

In the accompanying drawings, Figure 1 is a longitudinal vertical sectional view of my improved paper barrel. Fig. 2 is a face view of one of the paper blanks or sheets from which the barrel is made.

Similar letters of reference indicate like parts.

The walls of the barrel are composed of a series of paper blanks, A, provided in their longitudinal edges with a series of triangular or tapered notches or gores, A', so that said blanks have the appearance of a number of united barrel-staves placed side by side. The first blank A is placed upon a suitable collapsible core, and at its ends is secured to the beveled outer surface of rings *h* by means of cement or other suitable adhesive substance. A number of the blanks A are then secured

upon the first above-mentioned blank by means of the adhesive material, the ends of said blanks extending to the outer edges of the rings *h*. The sheets or blanks A are placed in such a manner that their joints are not over each other, but alternately the solid portion of one blank covers the gores of the adjacent blanks. The several layers on the core are then pressed together by suitable means, and thus form a rigid shell, *a*. The core is then collapsed and removed, as the shell *a* formed has sufficient strength and thickness to serve as core for the following layers.

The heads of the barrel consist each of two strong paper disks, *c* and *d*, which are secured to each other by means of cement or other suitable adhesive material, of which the disks *c* fit precisely within the rings *h*. The diameter of the outer disks, *d*, is such that their rims are flush with the outer surface of the shell *a*. Then more paper blanks or sheets are secured on the shell *a* in the manner previously described, said additional blanks forming the thickness *b* of the barrel and extending some distance beyond the outer disk, *d*, of the heads. Strong paper rings *r* are placed in the ends of the paper shell thus formed against the outer disk, *d*, of the heads, and are cemented or secured by other adhesive material to said heads, and the projecting part of the shell *b* and the ends of the shell are turned off flush with the outer faces of said rings *r*. Before the heads are inserted the bung-hole is cut in the shell *a*. Strong iron hoops or bands are then applied on the barrel and the ends or heads secured by means of screw-clamps, and the barrel is then filled with linseed-oil under pressure, and the barrel impregnated with oil from the interior toward the exterior. The remaining oil is then drawn off. The impregnated barrel is then baked at a temperature of 120° to 140° Reaumur. The temporary hoops or bands are removed, and then the permanent bands or hoops D are applied, and the heads may be secured by means of angle-irons *s*.

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



1. A paper barrel composed of end rings, paper heads within and on said end rings, and a paper shell formed of a series of sheets pasted upon each other, said sheets being provided  
5 with tapered notches in opposite edges, substantially as herein shown and described.

2. A paper barrel composed of end rings, heads on and within said end rings, and a paper shell composed of a series of sheets of  
10 paper pasted upon each other, said sheets having tapered notches in opposite edges, part of the shell thus formed projecting beyond the heads, and additional rings placed against the outer edges of the heads and the inner surface  
15 of those parts of the shell projecting beyond the heads, substantially as herein shown and described.

3. A paper barrel composed of the end rings,

*h*, the disks *c* within said rings *h*, an inner paper shell, *a*, extending to the outer edges of  
20 said rings *h*, the disks *d*, secured on the disks *c* and extending to the outer circumference of the shell *a* at the ends, the outer paper shell, *b*, extending beyond the outer disks, *d*, and additional rings, *r*, placed against the outer disks, *d*,  
25 and within that part of the outer shell, *b*, projecting beyond the disks *d*, substantially as herein shown and described.

In testimony whereof I have signed my name to this specification in the presence of two  
30 scribing witnesses.

AUGUST BRAB.

Witnesses:

GUSTAVE ALBERT OELRICHS,  
WM. D. WARNER.