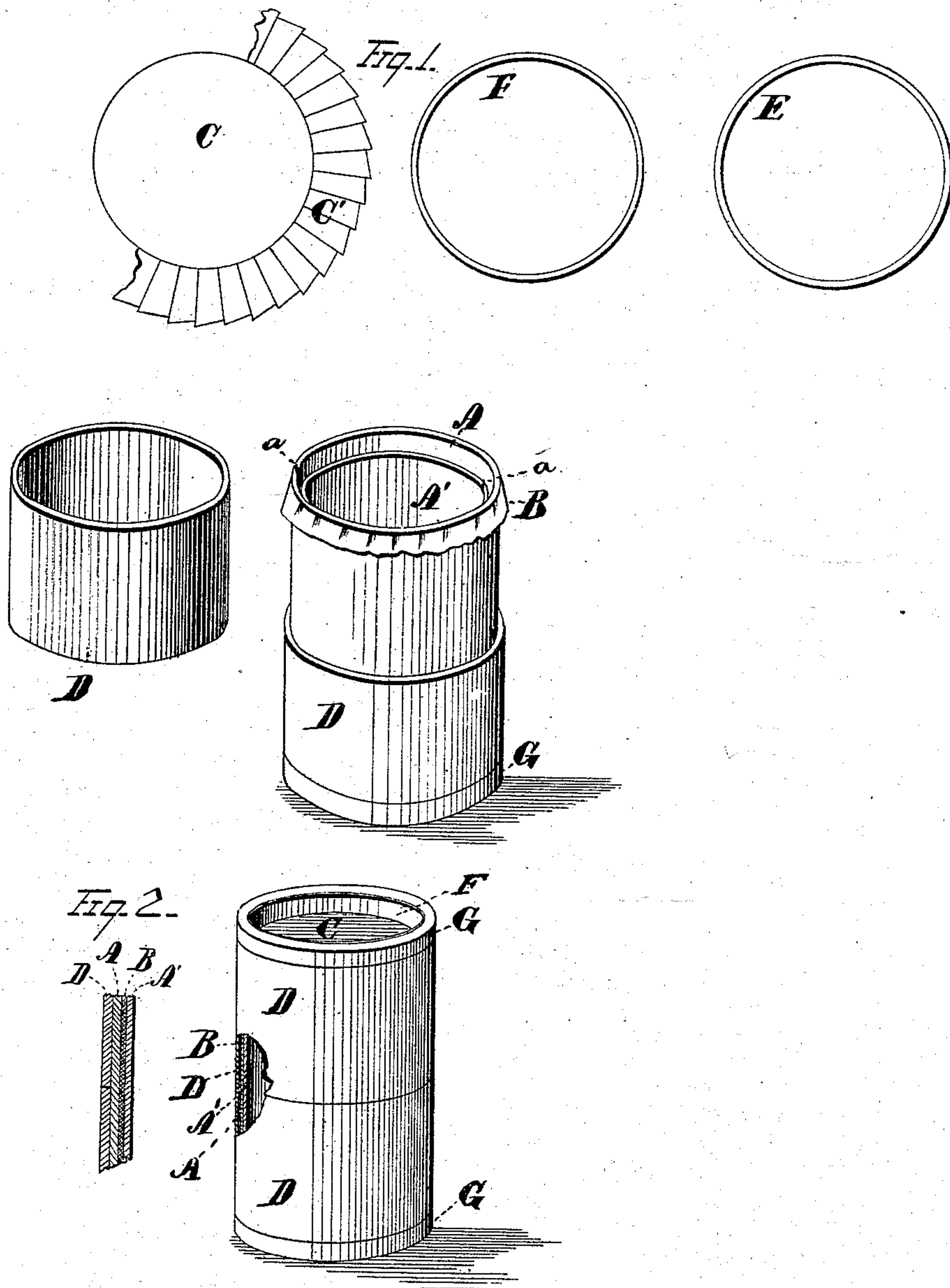


G. A. HOUSTON.  
Paper-Boxes, &c.

No. 152,749.

Patented July 7, 1874.



WITNESSES  
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By

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# UNITED STATES PATENT OFFICE.

GEORGE A. HOUSTON, OF BELOIT, WISCONSIN.

## IMPROVEMENT IN PAPER BOXES, &c.

Specification forming part of Letters Patent No. **152,749**, dated July 7, 1874; application filed May 20, 1874.

*To all whom it may concern:*

Be it known that I, GEORGE A. HOUSTON, of Beloit, in the county of Rock and State of Wisconsin, have invented certain new and useful Improvements in Barrels, Casks, and Packages; 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 pertains to make and use it, reference being had to the accompanying drawings which form part of this specification.

My invention relates to an improvement in paper boxes, barrels, casks, and packages.

In the drawings, Figure 1 represents the several parts of my invention, separated and removed from each other. Fig. 2 represents said parts united, so as to form my device.

My invention consists in the various parts and combinations, as hereinafter specified and claimed, wherein A A' are two sheets of flexible material, capable of being glued or cemented together. These sheets are bent or formed into cylinders, one, A', being sufficiently smaller than the other, A, to closely fit within it, the joints *a* being placed substantially opposite, or at least not in apposition to each other, so that the two sheets A A', when united, shall form a cylinder without a break or joint. Between the cylinders A A' is interposed a thin, tough, flexible fabric, B, which may be of manila paper, cloth, or other suitable fabric. This flexible fabric B is made to continue beyond the rim of the cylinder A, for purposes which will hereinafter appear. The lesser cylinder A' is made shorter than the cylinder A, so that when placed within the cylinder A shoulders are formed, upon which the head C will rest. The head C is formed of a similar fabric or material as the rest of the barrel, and upon its inner face is attached a sheet of tough flexible fabric, C', similar to that of fabric B. This fabric is allowed to project beyond the rim of the head C, so as to form a flexible continuation of the head C, for the purposes which will hereinafter appear. D D are wide hoops or cylinders, each of which is half the length

of the cylinder A, and is made sufficiently larger than the cylinder A to enable it to fit upon said cylinder A. E F are hoops for the retention of the head C.

To construct my device the various parts, as hereinbefore described, are prepared and united as follows: The cylinders A A', with the interposing flexible fabric B, are placed, one within the other, as shown in the drawing, so that the flexible fabric shall project beyond the ends of the cylinder A, and so that the joints of the cylinders A A' shall not come together. These parts are glued or pasted together, and the flexible fabric B is crimped, to permit of its folding over the edges of the cylinder A. The head C, provided with the flexible rim C', is now inserted within the cylinder A, so as to rest upon the shoulder formed by the cylinder A', and the flexible rim C' flattened down upon the outer face of the head. The hoop E is now placed between the two layers of flexible fabric B and C' and the rim or edge of the cylinder. The fabrics B C', after being properly crimped, are bent outward over the hoop E and the ends of the cylinder A, and the smaller hoop F fitted within the cylinder A, and the hoop E and the fabrics B and C' above the head C. The two layers of flexible fabrics B C' are now folded together outwardly over the ends of the cylinder A, and the wide hoop or cylinder D is placed over the cylinder A, so as to retain the ends of the flexible fabrics B C' between the hoop D and the cylinder A. The hoops D D, being each made half the length of the cylinder A, when both are placed upon said cylinder A cover it its entire length. The hoop F need not be placed in position until after the hoop D is fitted, and before being inserted the fabric G, Fig. 2, may be glued or pasted over the rims of the cylinders D D and the flexible fabrics B C', after which the hoop F may be inserted. This is provided when an extra tight or secure package is desired. A coating of varnish or any suitable air-tight or water-tight material may now be painted over the entire package for obvious purposes.



I claim as my invention—

1. The cylinders A A', provided with flexible fabric B, made to project beyond the ends of the cylinders A A', substantially as and for the purpose shown.

2. In combination with the cylinders A A', having a flexible continuation, B, the head C, provided with the flexible rim C', substantially as and for the purpose shown.

3. In combination with the flexible-rimmed head C C', the cylinders A A', provided with flexible ends B, and hoops or cylinders D D, substantially as and for the purpose shown.

4. The combination of the cylinders A A', flexible ends B, flexible-rimmed head C C', hoops or cylinders D D, and hoops E F, constructed substantially as and for the purpose herein described.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of May, 1874.

GEORGE A. HOUSTON.

Witnesses:

J. H. FRENCH,

E. F. KENDALL.