

(No Model.)

H. DENNEY.
METHOD OF MAKING PAPER TUBING.

No. 446,663.

Patented Feb. 17, 1891.

Fig. 1.

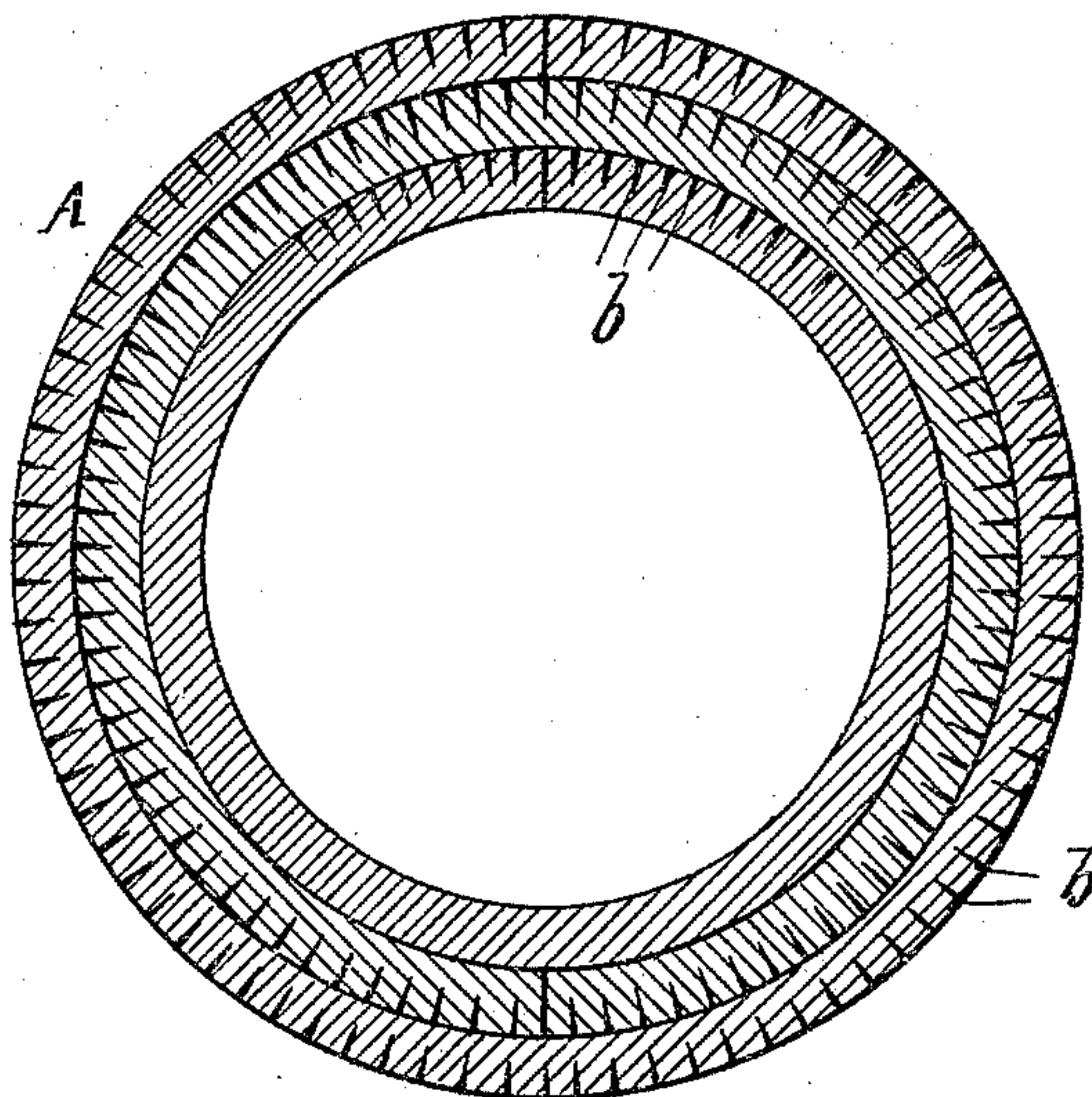
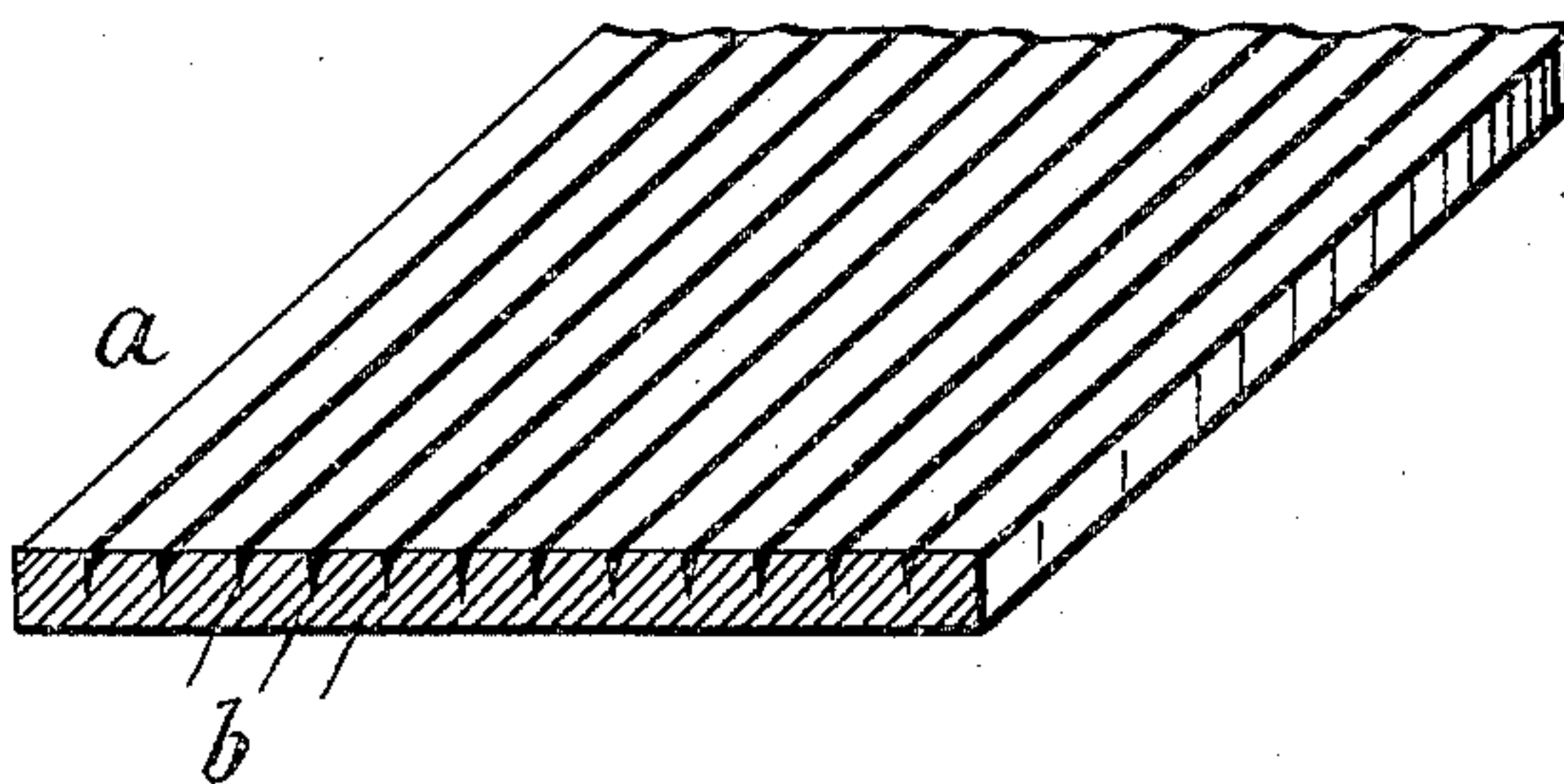


Fig. 2.



WITNESSES:

Henry Huber
Reimherr

INVENTOR

Harmon Denney

BY

Charles F. Rogers

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HARMER DENNEY, OF BROOKLYN, NEW YORK.

METHOD OF MAKING PAPER TUBING.

SPECIFICATION forming part of Letters Patent No. 446,663, dated February 17, 1891.

Application filed May 12, 1890. Serial No. 351,392. (No model.)

To all whom it may concern:

Be it known that I, HARMER DENNEY, of Brooklyn, in the county of Kings and State of New York, a citizen of the United States, have
5 invented certain new and useful Improvements in Methods of Making Paper Tubing, of which the following is a specification.

This invention relates to improvements in making paper tubes having longitudinal
10 seams that break joints from paper strips.

The object of my invention is to provide certain new and useful improvements in making said tubes, whereby the tubes are rendered more secure and rigid and can be manu-
15 factured more readily.

In the accompanying drawings, Figure 1 is a vertical transverse section of my improved paper tubing. Fig. 2 is a perspective and transverse sectional view of one of the paper
20 strips used for making the tubing.

Similar letters of reference indicate corresponding parts.

The tube is composed of a series of concentric tubular paper sections A, formed by bending paper strips transversely to form a tube
25 having a longitudinal seam. Of these tubular sections one is drawn over the other while forming them, and the tube and said sections are pasted or cemented together. The sections are so arranged that their seams break
30 joints—that is, if the seam of one tubular section is at the top the next outer section is so arranged that its seam will not coincide with the seam of the first section, but will be either
35 at one side or the other of the same or at the bottom, so that each section completely covers the longitudinal seam of the preceding section.

In making these tubes I have discovered
40 that the sections are very apt to open at the seams immediately after having been made,

and to keep them closed requires a very long and more or less complicated closing device. In order to obviate this difficulty, I provide the paper strips *a*, from which the sections A
45 are made, with longitudinal cuts *b* in the outer surface. Said cut strips can be folded transversely, and when thus folded and pasted fit very snugly on the preceding layer and in such a manner as not to open at the seam. 50

When the paper is not provided with longitudinal cuts, a great number of tubular layers of slight thickness are required to form a tube, whereas when the paper is provided with longitudinal cuts the tube can be formed
55 of a few layers of comparatively thick paper. The tube thus formed is then treated in some suitable manner to render it fire and water proof.

The strips may be provided with longitudinal cuts the entire width or only adjacent to the edges, as shown in Fig. 1. 60

Having thus described my invention, I claim as new and desire to secure by Letters Patent— 65

The method of making paper tubes, consisting in providing the paper strips used for making the tubes with longitudinal cuts extending the entire length of the strips, bending said strips transversely to form a tubular
70 layer, and applying said layers one upon the other and cementing the layers together to form a tube, substantially as herein shown and described.

In testimony that I claim the foregoing as
75 my invention I have signed my name in presence of two subscribing witnesses.

HARMER DENNEY.

Witnesses:

OSCAR F. GUNZ,
MARTIN PETRY.