A. D. CHASE.

COMBINED PAPER AND METAL BOXES.

No. 184,504. Patented Nov. 21, 1876.

Fig. 1.

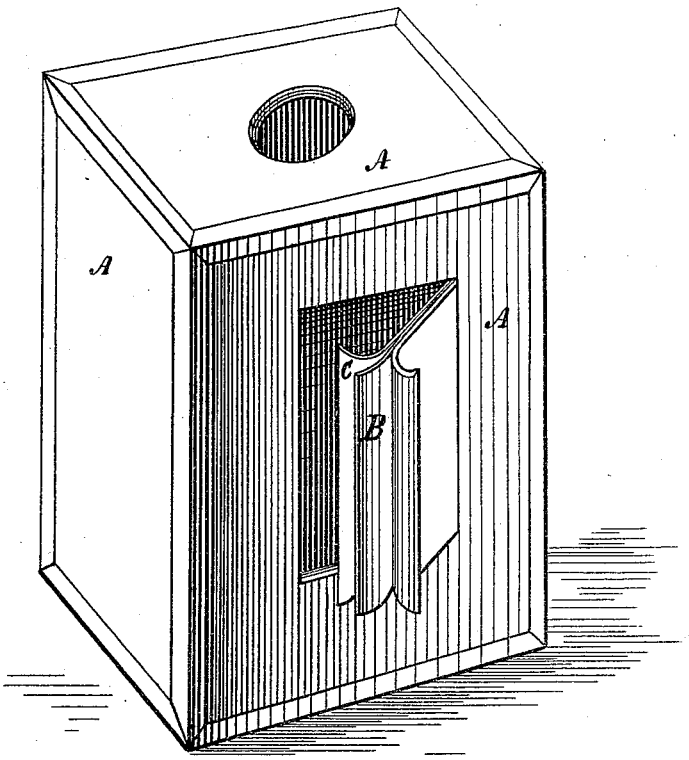
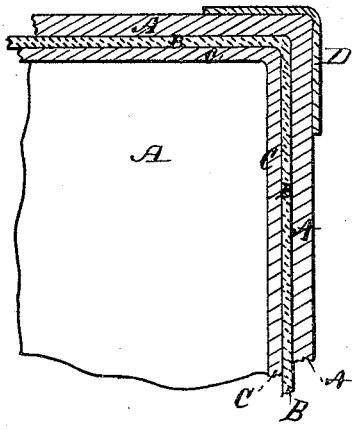


Fig. 2.



Witnesses:
Henry Eichling.
B. C. Clark.

Inventor:
Albert D. Chase.
By L. L. Leich
his attorney.

UNITED STATES PATENT OFFICE.

ALBERT D. CHASE, OF SEA CLIFF, NEW YORK.

IMPROVEMENT IN COMBINED PAPER AND METAL BOXES.

Specification forming part of Letters Patent No. **184,504**, dated November 21, 1876; application filed October 31, 1876.

To all whom it may concern:

Be it known that I, ALBERT D. CHASE, of Sea Cliff, Long Island, State of New York, have invented an Improvement in Combined Paper and Metal Boxes for holding jelly and analogous substances, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof, in which—

Figure 1 is a perspective view of a paper box containing my improvement, a portion of the wall of one side of the box being cut open, and the layers of paper and metal of the several portions being separated to show the structure. Fig. 2 is a cross-section, enlarged, of the combined metal and paper of which the box is made.

My invention relates to a new manufacture, the same being a box for holding jelly and analogous substances, the peculiar novelty in said box being that it is formed of a fabric composed of a sheet of metal and paper, as hereinafter particularly described, whereby there is produced a box, in which, while the box may be conveniently hermetically sealed, the contents are prevented from contact with metal, and is therefore specially adapted to hold jelly and analogous substances containing acid or other substances which act chemically on metals.

In fabricating my improved box, I take a sheet of card-board or thick paper, and cover one face of it with glue, a thin coating, and upon this I lay a thin sheet of tin-foil or metal; then coat the surface of the foil with glue, and spread upon it a thin sheet of paper, (tissue-paper will answer the purpose,) press the whole together, and allow the glue to harden, so that the several sheets adhere together. Of this material I form my box, in any desired manner adapted to the special uses to which it is to be applied.

The drawing, Figure 1, represents a box made of a single sheet, cut and folded so as to form closed corners, which are covered with tin-foil or metal to make them fluid-tight, the box having only a small opening in the top for the introduction of jelly or other similar substances, which may be closed by a disk of the same material of which the box is made, glued on.

In each figure A represents the outside wall of the box, consisting of comparatively thick paper-board; B, the metal foil, and C the inner facing of thin paper.

I have discovered that while the acid of jelly is liable to attack the tin-foil, unless protected by paper, even the thinnest paper interposed between the jelly and the tin, and glued to the tin, will afford complete protection to the latter, and prevent all action of the acid upon it.

I have mentioned only tin-foil as the metal to be used between the layers of paper in my improved box; but I do not limit myself to the use of tin, although I prefer that to any other metal. Still, if preferred, lead or any other suitable metal capable of being made into thin sheets or foil may be employed; and in place of paper for the external wall A of the box wood cut into thin sheets may be used. Paper, however, is preferable.

The box here described possesses several important advantages over both paper boxes or those made of paper alone and those made of metal alone, among which may be named the following: It will hold securely fluid as well as solid substances, which a box made wholly of paper will not, of course, do. The contents are prevented from contact with metal, which, when such contents are acidulous, or contain anything which will chemically act upon the metal, is important, as it is well known that many substances which it is the common practice to put up in metal cans or boxes are injured by contact with the metal of which the can or box is composed.

I have described what I regard as the best method of fabricating my new can or box, and I deem it advisable to employ metal foil so thin that it may be readily cut with a knife, as then the can or box may be removed from the contents, such as jelly, by severing the walls at the corners or elsewhere, and leaving the contents standing entire, and in the form they have assumed in the can; but I do not intend to limit myself to the precise method described. If desired, the metal may not be

made to adhere to the outer wall of paper or other material used, the essential thing being to unite the inner paper covering to the metal, so as to prevent contact between the said metal and the contents of the can.

If it is not desired to be able to remove the can from its contents by cutting the can open, as before described, the metal may be made thick enough to dispense with the external card-board, or said external cover may be a wrapping of comparatively thin paper.

What I claim as my invention, and desire to secure by Letters Patent, is—

A box, as a new manufacture, made of a material composed of a thin sheet of metal inclosed between two sheets of paper, the whole made to adhere together by a suitable adhesive substance, as and for the purpose described.

Witness my hand this 12th day of November, 1875.

ALBERT D. CHASE.

Witnesses:
B. S. CLARK,
FRED. E. BOND.