(Model.)

J. F. DIEMER & P. E. GONON.

PAPER BOX.

No. 389,367. Patented Sept. 11, 1888.

Fig: 1.

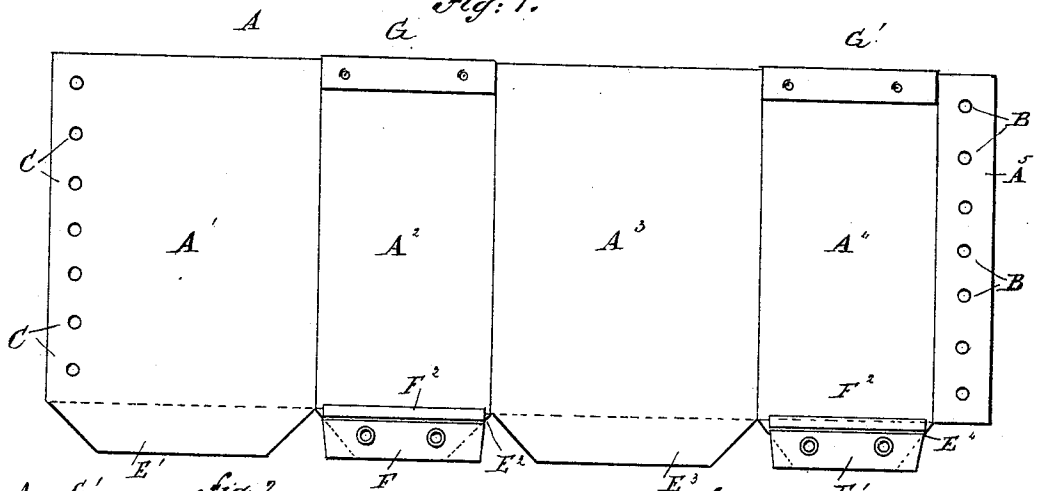


Fig: 2.

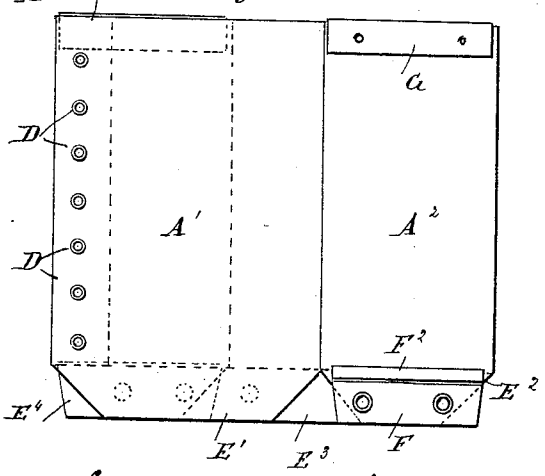


Fig: 3.

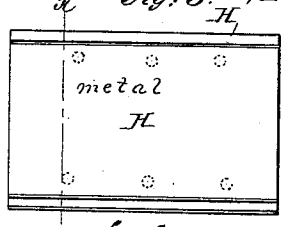
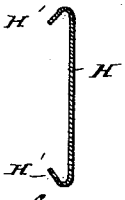


Fig: 4.



x Fig: 5. y

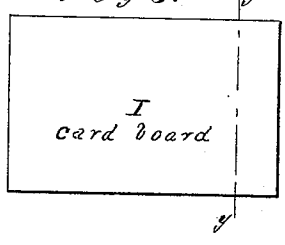


Fig. 6.

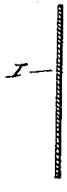
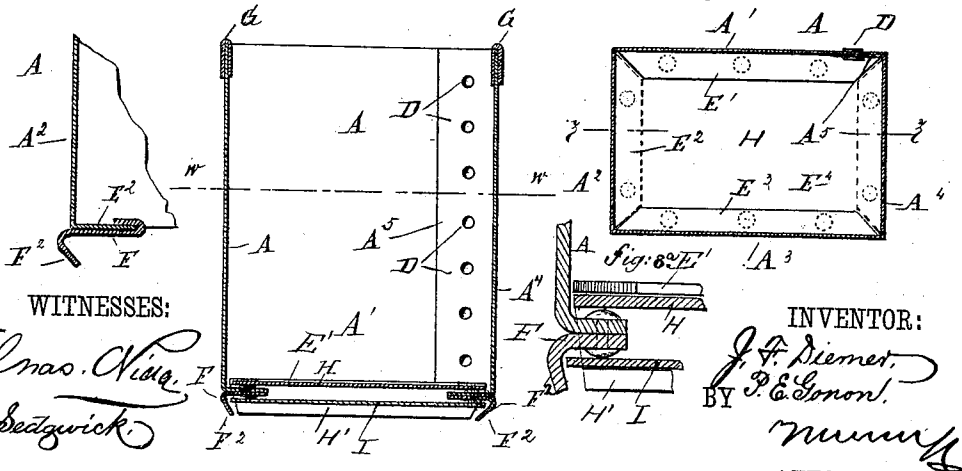


Fig: 7.

Fig: 8.



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UNITED STATES PATENT OFFICE.

JOHN F. DIEMER, OF ELIZABETH, NEW JERSEY, AND PAUL E. GONON, OF NEW YORK, N. Y.

PAPER-BOX.

SPECIFICATION forming part of Letters Patent No. 389,367, dated September 11, 1888.

Application filed January 18, 1888. Serial No. 261,136. (Model.)

To all whom it may concern:

Be it known that we, JOHN F. DIEMER, of Elizabeth, in the county of Union and State of New Jersey, and PAUL E. GONON, of the city, county, and State of New York, have invented certain new and useful Improvements in Paper-Boxes, of which the following is a full, clear, and exact description.

The invention relates to paper-boxes used for filing folded papers, documents, bills, &c., such as described and shown in the patent, No. 354,694, granted to us December, 21, 1886.

The object of the invention is to provide certain new and useful improvements in paper-boxes in which the several parts of the latter can be conveniently shipped in a folded condition and then fitted together whenever desired.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of the paper-box body in an extended position. Fig. 2 is a side elevation of the folded paper-box body. Fig. 3 is a plan view of the metallic bottom plate. Fig. 4 is a sectional end elevation of the same on the line *x x* of Fig. 3. Fig. 5 is a plan view of the locking-plate. Fig. 6 is a sectional end elevation of the same on the line *y y* of Fig. 5. Fig. 7 is a sectional side elevation of the finished box on the line *z z* of Fig. 8. Fig. 8 is a sectional plan view of the same on the line *w w* of Fig. 7, and Fig. 8^a is an enlarged detail sectional view of the bottom portion of the box. Fig. 9 is a sectional side elevation of a modification.

The paper-box body A is formed of a blank (shown in Fig. 1) provided with the sides A′, A^2, A^3, and A^4, of which the latter has a flange, A^5, provided with a row of apertures, B, adapted to register with a corresponding row of apertures, C, formed in the outer end of the side A′. On the lower end of each side A′, A^2, A^3, and A^4 is formed a flange, E′, E^2, E^3, or E^4, of which the flanges E^2 and E^4 are provided with the metallic strips F and F′, respectively, secured to the flanges by rivets, as shown in Figs. 1 and 2, or by bending one end over the outer edge, as shown in Fig. 9, or by other suitable means. Each strip F is provided on its upper edge with an outwardly-extending bend, F^2. On the upper ends of the sides A^2 and A^4 are secured by rivets or dents the metallic strengthening-plates G and G′, which serve to stiffen the sides A^2 and A^4 of the finished box.

When the blank shown in Fig. 1 is set up in a rectangular position, so that the flange A^5 overlaps the outer end of the side A′, then the apertures B and C register with each other, and the flange A^5 is fastened to the side A′ by inserting rivets or eyelets D through the registering apertures B and C, and then the rivets or eyelets are riveted, whereby the sides A′, A^2, A^3, and A^4 are securely fastened together to form the box-body A. The latter can then be folded flat in the position shown in Fig. 2—that is, two adjoining sides are placed or folded on the two other sides.

The metallic bottom plate, H, is fitted to cover the bottom opening of the box-body A when the latter is placed in a rectangular position, as shown in Fig. 8, and the said bottom plate is provided on two opposite sides with the bends H′. (Shown plainly in Figs. 3 and 4.) The locking-plate I is a plain piece of stiff card-board adapted to slide between the bends H′ of the bottom plate, H. In order to fasten the bottom plate, H, to the box-body A, the latter is placed in a rectangular position with the flanges E′ and E^3 turned inward, and then the plate H is placed on the bottom of the said flanges with the bend H′ extending downward, after which the other flanges, E^2 and E^4, are placed on the under side of the bottom plate, H, and the locking-plate I is placed on the bottom of the flanges E^2 and E^4 and the bottom plate, H, between the bends F^2, F^2, H′, and H′, which stand at about an angle of forty-five degrees. The operator now presses the said bends on the plate I either with hammers or other suitable means, whereby the plate I is hemmed in on all four sides by the said bends.

It will be seen that the several parts of the box—that is, the box-body A, the bottom plate, H, and the locking-plate I—can be shipped very conveniently by folding the box-body A,

as shown in Fig. 2, and the receiver of the several parts can conveniently put them together, as above described.

If desired, the flanges E′ and E³ may be provided with apertures (shown in dotted lines in Fig. 2) and the metallic plate may be provided with corresponding apertures. (Shown in dotted lines in Fig. 3.) When the bottom plate is placed on the flanges E′ and E³, as above described, rivets may be inserted through the said apertures and then riveted, so as to firmly secure the plate H to the said flanges E′ and E³.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a paper-box, the combination, with the box-body and two flanges, each formed on one end of each side of the box, of two metallic strips held one on each of said flanges, each strip being provided with a bend, a metallic bottom plate provided on two opposite sides with bends, and a locking-plate held in place by the said bends on the bottom plate and the metallic strips, substantially as shown and described.

2. A paper-box provided on its bottom with a metallic bottom plate provided on two opposite sides with bends, the paper-box body having flanges on two opposite sides carrying metallic strips provided with bends, and a locking-plate held in place by said bends, substantially as shown and described.

3. In a paper-box, the combination, with the box having two flanges, E′ E³, one on the lower end of each side portion, and two flanges, E² E⁴, one each on the lower end of each end portion, said flanges E² E⁴ provided with metallic strips F², having inturned bends, of a metallic bottom plate, H, disposed between the flanges E′ E³ and E² E⁴, said plate provided on two opposite sides with bends, and the locking-plate I, held in place by said bends of the strips F² and the plate H, substantially as shown and described.

JOHN F. DIEMER.
PAUL E. GONON.

Witnesses:
THEO. G. HOSTER,
EDGAR TATE.