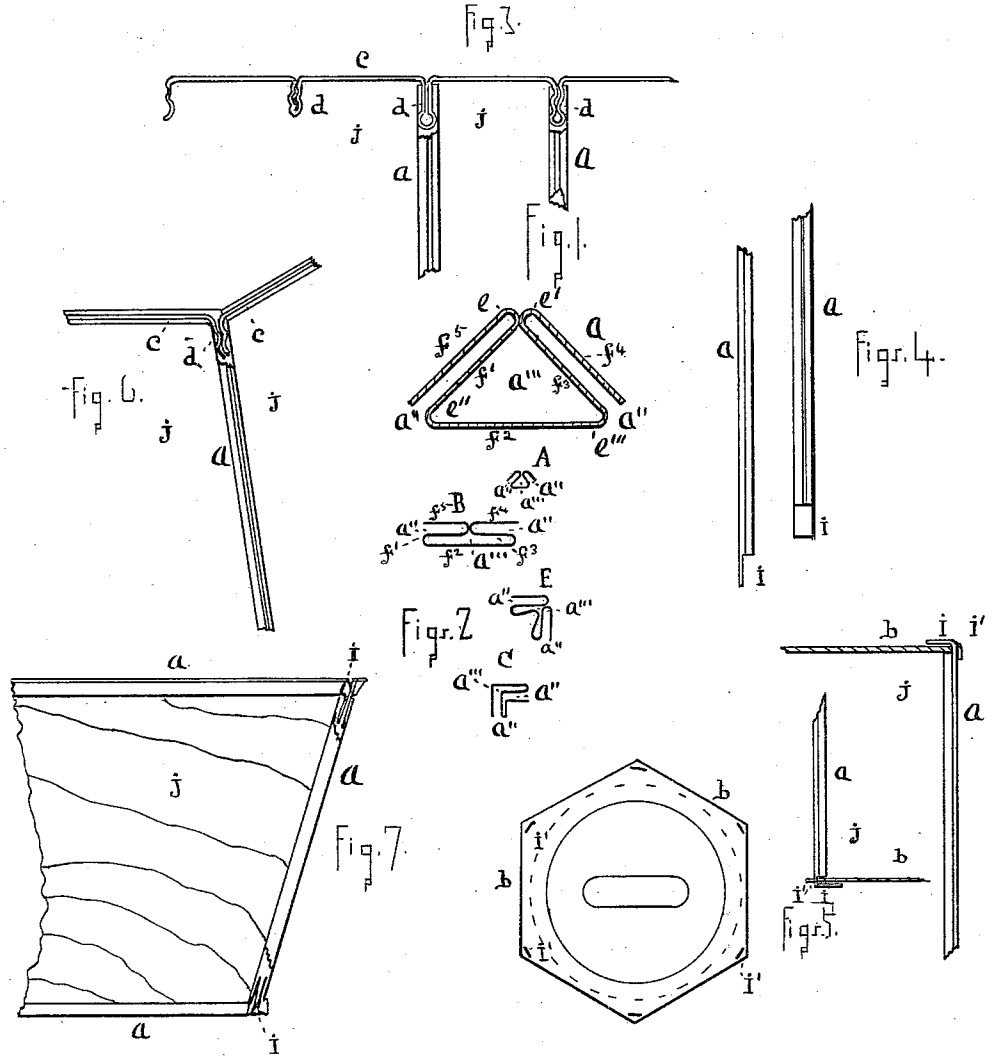
(Model.)

G. TOWNSEND, 2d.

METALLIC JOINING FOR BOXES, MICA LAMP CHIMNEYS, &c.

No. 259,606. Patented June 13, 1882.



R. F. Parker
Amos Smith.

Witnesses.

Gilbert Townsend
By S. G. Parker Atty.

Inventor.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

GILBERT TOWNSEND, 2D, OF LODI, NEW YORK.

METALLIC JOINING FOR BOXES, MICA LAMP-CHIMNEYS, &c.

SPECIFICATION forming part of Letters Patent No. 259,606, dated June 13, 1882.

Application filed March 1, 1881. (Model.)

To all whom it may concern:

Be it known that I, GILBERT TOWNSEND, 2d, a citizen of the United States, residing in the town of Lodi, Seneca county, New York, with post-office of Townsendville, have invented an Improved Framing-Rib or Corner-Piece for the Construction of Various Articles, of which the following is a specification, reference being had to the accompanying drawings.

My object is to construct various small articles without laborious arts by the adjoining together the parts composing them by a framing-rib; and my invention relates to the metallic rib which I use in making such articles as mica lamp-chimneys, fruit-boxes, lanterns, paper boxes, butter-trays, retail oyster-pails, or similar articles made of panels or parts of paper, cut sheet wood, or like materials, that need firm joining-pieces; and the nature of my invention will be apparent as I describe it.

Figure 1 is a very much enlarged cross-section of one of my ribs or framing-pieces. Figs. 2 are sections of various forms of corner-pieces or ribs of the actual sizes used, or nearer their actual size. Fig. 3 is a view of the top wire band for such articles; and Figs. 4 are side views of the rib; and Figs. 5 show the tenon and mortise and riveting-band of the rib-tenon for both the base and top of such articles. Fig. 6 is the top of an article having a larger top than base, with the upper part of the upright rib *a* cut away to show the loop *d* of the wire *c* inserted in the space *a'''* of the rib. Fig. 7 is a view of the right-hand end corner of one side of a butter or berry box made of thin sheets of wood held together by ribs *a a a*—the sides and bottom made of the thin panels of wood in the spaces *a''* of the ribs *a*, and having the tenon extensions of the various ribs *a* inserted at the top and bottom into the spaces *a'''* of the upright ribs, as shown, parts of the upright rib *a* being cut away to show their insertion.

In the figures, *a a* are the framing-ribs or corner-pieces for connecting together the articles spoken of. In their use the mica, glass, wood, or paper panels or parts *j* are placed in the panel-spaces *a'' a''*, and the bottoms of the ribs are made fast to the base-plate *b* by a tenon, *i*, which is formed by cutting away all the rib except one side and inserting the tenon in a slot or mortise, *i'*, Fig. 5, where it is bent or riveted, as shown, thus securing the rib to the base or bottom of the article. The same tenon or extension *i* and mortise or aperture *i'* and securing or clinching are adapted to the top of various articles when it is desirable to use it there; or the top of the various articles are held together by a wire band, *c*, with folded bendings *d*, as seen in Fig. 3. These folds go into the cavities of the ribs, as will be soon explained, and which band may be concealed in an ornamental top border. Each corner of the article thus made is composed of a single piece of sheet metal—as, for example, tin-plate—bent or folded on itself in a manner soon to be described, thereby forming flanged lips, channels, or panel-spaces *a''*, in which the edges of the panels are inserted and firmly held.

The manner of folding the strips of sheet metal is seen by the forms I prefer in Figs. 2. Many others might be shown. By A is shown the section of natural size, which is represented enlarged in Fig. 1. To produce it we will suppose we have a strip of thin tin-plate about five-eighths of an inch wide and any convenient length, and that the bending is commenced at its edges. Then each edge is bent over on itself, as shown, making two lips or channels about an eighth of an inch deep, in which the panel-edges are placed, which are the spaces *a''*. Then there are made on each side of the longitudinal middle line two angular bendings, also shown, making the base of a triangle, about an eighth of an inch wide, and these bendings are continued until the apex of the triangle by its two sides touch, and a middle space, *a'''*, is produced, the space in which the folds *d* of the wire *c* are inserted. Thus by the four angles shown and the five or six plain surfaces between the curves, folds, or angles, or extending from the said angles is made the rib or framing-piece shown and described. The said curves, folds, or angles are marked *e e' e'' e'''* and the plain surfaces *f f' f² f³ f⁴ f⁵*, and in some forms *f⁶*, by which the rib *a* is made, which has, as has been said, the spaces *a''*, for panels, and the space *a'''*, for stiffening the rib, as well as the insertion of the joining folds or tenons. Thicker and wider strips of sheet metal are used for coarser pieces or ribs of coarser articles. It need hardly be said that the loops *d* of the wire *c* are made at the distance apart of the upper ends of the ribs. The loops have enlarged lower ends, with or with-

out zigzag folds, as shown, the object of which is to hold the folds by friction in the ends of the ribs banded by the wire. Of course the same wire band can, if necessary, be used at the base of the article made.

In Figs. 2 are seen other forms of the folded strip of sheet metal, the forms marked B D E being desirable; and their construction is evident from what has been said of the form A, whether made by hand or machinery It is also evident that the rib *a* can be used by one of its spaces *a''* for bands or binding at the top or bottom of an article, the tenons *i* being placed in the spaces *a'''*. The form B is for parallel panels, and those of A C D E for panels at right angles to each other; and on the same principle joining of acute or obtuse angles is made. By these forms various articles such as are coming into general use are easily made with accuracy and success. The ribs, if rolled or flattened, make obtuse angles, and if compressed make acute angles, for the panels held by them; and vertical obliquity either inward or outward of the panel makes no difference with the use of the ribs, bands, or tenons, except slight adjustments at the ends, tenons, or folds.

The further uses and advantages of my invention are apparent.

I claim—

The ribs *a*, holding together the sides of the panels of boxes and other like articles, in combination with binding-plates *b*, which hold the ends of the ribs, said ends being inserted through and folded on said plates, as set forth.

GILBERT TOWNSEND, 2D.

Witnesses:

S. J. PARKER,

WM. J. TOTTEN.