(No Model.)

C. C. CHAMBERLAIN.

BILL FILE.

No. 383,859. Patented June 5, 1888.

Fig. 1.

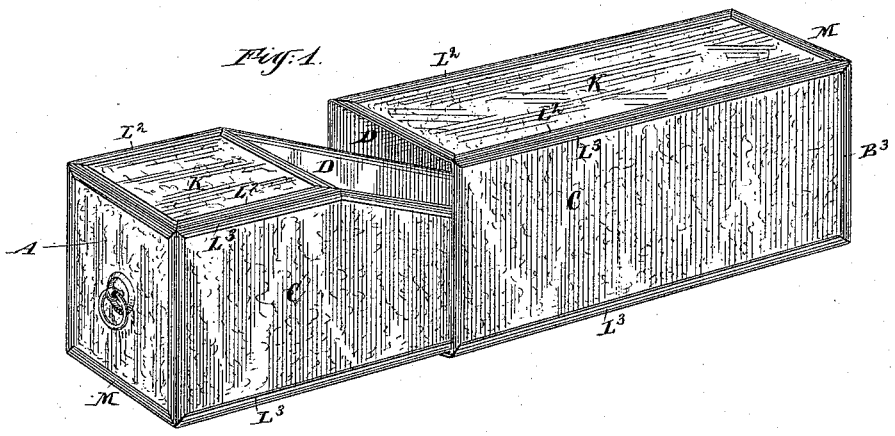


Fig. 2.

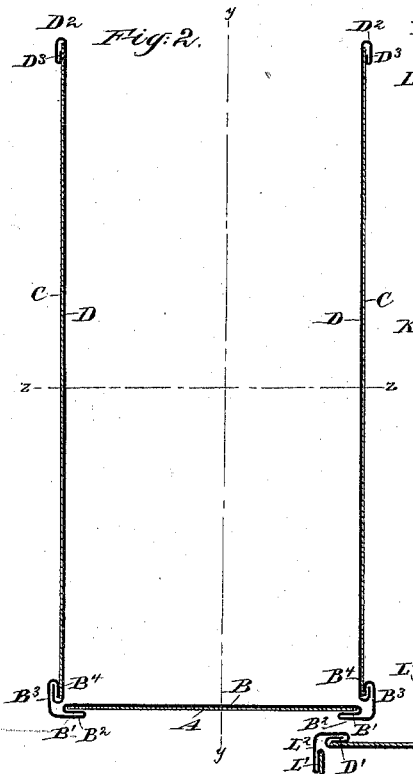


Fig. 3.

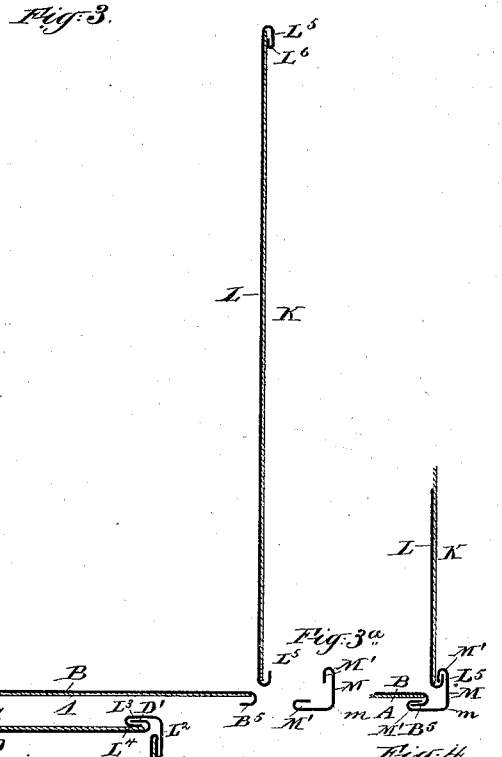
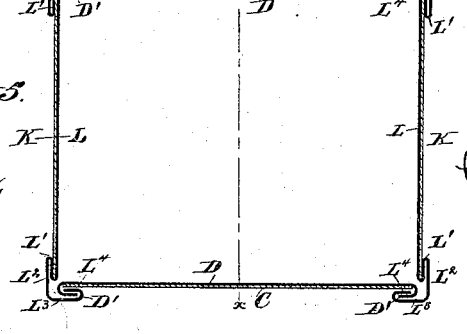


Fig. 3a.

Fig. 4.

Fig. 5.



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Thomas Dyer Stetson

UNITED STATES PATENT OFFICE.

CHARLES C. CHAMBERLAIN, OF PASSAIC, NEW JERSEY.

BILL-FILE.

SPECIFICATION forming part of Letters Patent No. 383,859, dated June 5, 1888.

Application filed April 15, 1887. Serial No. 234,910. (No model.)

To all whom it may concern:

Be it known that I, CHARLES C. CHAMBERLAIN, of Passaic, in the county of Passaic and State of New Jersey, have invented a certain new and useful Improvement in the Construction of Bill-Files, of which the following is a specification.

Bill-files composed of two rectangular cases, each with an open end, one case enough smaller to be received within the other on applying their open ends together, have been long known. Mine is of the same general type.

The improvement allows the employment of a separate surfacing material with a strong metallic body and an elegant finish over the whole box.

I have in Letters Patent issued to me, dated March 20, 1877, No. 188,588, set forth a construction in which the main portion of each case is enameled board, manila-board, or analogous tough and stiff fibrous material, with the closed ends re-enforced with metal. The present construction goes much further. Each entire case is re-enforced or lined with metal at all points. I form the ends and sides in separate panels, the metal part for each extending over the whole inner surface and being peculiarly bent along two edges, so as to lap on both sides of the edge of the panel. The lap in one direction holds the edge of a corresponding rectangular piece of enameled board or other suitable surfacing material, preferably rich leather, while the lap in the other direction contributes to effect a strong engagement with the adjacent part.

The following is a description of what I consider the best means of carrying out the invention.

The accompanying drawings form a part of this specification.

Figure 1 is a perspective view showing the two cases partially separated. Fig. 2 is a vertical section on the line *x x* in Fig. 5. Fig. 3 is a vertical section on the line *y y* in Fig. 2. Fig. 3ª is a corresponding section of a portion detached. Fig. 4 is a section of a portion corresponding to Fig. 3, but with the locking-strip engaged. Fig. 5 is a horizontal section on the line *z z* in Fig. 2.

Similar letters of reference indicate corresponding parts in all the figures where they occur.

I will describe the exterior casing, it being premised that the inner casing is the same, except that the latter is smaller, and is preferably cut away to allow more ready access to the contents when it is drawn out.

A is a rectangular piece of fine leather of a size to constitute the main surfacing material of the end.

B is a sheet of metal corresponding to A, but larger. Along two opposite edges, extending nearly to the corners, are considerable extensions, peculiarly folded. These edges are counterparts of each other, and a description of one will suffice for both.

B′ is a fold parallel to B extending inward an eighth of an inch, more or less.

B^2 is a fold in the reverse direction extending outward past the edge.

B^3 is a fold or bend at right angles with B^2, and B^4 is a fold of the final edge. It extends parallel to the fold B^3. The remaining two edges of B are less elaborate. Each extends nearly out to the corners, and is simply folded upon itself, as indicated by B^5. The leather or other fibrous sheet A lies parallel and in contact with the metal B, with two of its edges engaged under the folds B′ and the remaining two edges engaged under the folds B^5.

The four additional sides of the structure are formed separately. Two opposite sides are alike.

I will first describe one of the broadest sides, assuming, for convenience, that the end A B is laid flat on the work-bench and the four sides are applied in upright positions. C is a rectangular piece of fine leather. D is a corresponding but larger piece of sheet metal. This metal D is simply folded upon itself once along each edge, the corners being cut away. The simple folds D′ at the sides retain the leather C and also engage with the narrower sides, to be hereinafter described. (See Fig. 5.) The fold D^2 at one end holds the adjacent edge of the leather C and also engages with the end piece, B. (See Fig. 2.) The fold D^2 at the opposite end (the free or open end) performs the single function of retaining the leather. Its raw edge, folded under as indicated by D^3, forms a smooth finish, and corresponds in appearance to the folded edge at the other end presented by the parts B^3 B^4, which are of similar metal and produce a symmetrical effect.

I will now describe the narrower sides. The

leather therefor is marked K, and is rectangular, of a size just corresponding to the surface to be covered. The metal portion is marked L, with additional marks—as L′ L^2—for the folded edges. There is an excess of width, which excess is folded in the same manner as the peculiarly-folded edges of the end metal, B B′, &c. Referring to Fig. 5, a portion, L′, is folded upon L, leaving only a space for the edge of the leather K. Next, a portion, L^2, extends outward, then a portion, L^3, at right angles with the latter, and, lastly, a good breadth of edge, L^4, is folded inward parallel to L^3.

Nearly across each short edge or end of the metal L is a fold, L^5. The leather K is applied flat against L, with its ends engaged under the folds L^5. On the outer end—the open end of the case—there is a further fold, L^6, formed by turning the sharp edge of the metal under the fold L^5. On the other end of the narrow side it is important to effect a junction with the end metal, B. The adjacent edge of the end metal has been formed by simply folding upward and inward the metal B^5. (See Figs. 3 and 4.) I now apply a narrow strip of metal, peculiarly folded, which engages with the fold B^5 of the end metal, B, and with the fold L^5 of the side metal, L. This strip is composed of a body, M, bent at right angles along the line *m*, and of a broad edge, M′, folded inward along the edge of each part. This strip is thrust or forced endwise to effect the junction, engaging one fold, M′, with the part B^5 of the bottom, and the opposite fold, M′, with the part L^5 of the side. When this is forced into place, all the edges of the structure are strongly and completely locked.

The corners of all the metal parts are cut away, so that the folds do not lap upon each other there, and are mitered, as shown.

In applying the parts together one of the folds D^2 of each part D is brought into the right position, and the entire part D and its attachments thrust or moved edgewise, so as to engage the fold D^2 between the parts B^3 and B^4 of the end B. After the two sides D, each with its facing C, have been thus brought into position and strongly locked to the end piece, B, they are temporarily held in that position while the two remaining sides are applied. The metal sides L with their peculiarly-folded edges and facing material K are applied by thrusting endwise relatively to the sides already in position, and, finally, the strips M M′ being thrust across at the proper angles the whole is securely locked.

I propose to flatten all the folds after the parts are in place by treatment in a press or by lightly hammering.

Modifications may be made in the details without departing from the principle or sacrificing the advantages of the invention. The proportions of the structure may be varied within wide limits. The parts C D (here shown and described as wider than K L) may be of the same width or narrower, care being taken that the end A B corresponds thereto. I prefer charcoal-tinned iron for the metal portion and a rich leather for the fibrous surfacing material; but both may be varied.

I can employ any suitable cement to confine the leather or other facing material, A C K, to the metal portions B D L, additional to the hold attained by the folded edges of the metal; but my experiments indicate that such will not be necessary or desirable.

I do not, in this application, claim the combination of my peculiar end piece with metallic side pieces and two separate surfacing fibrous materials, such being made the subject of an application for a separate patent, the serial number of which is 234,632.

I claim as my invention—

1. The sheet metal, B, having the double fold B′ B^2, extending along two edges, and a double fold, B^3 B^4, extending along the other two edges, in combination with an exterior surfacing material, C, adapted to serve in a bill-file or analogous structure, substantially as herein specified.

2. A bill-file composed of separate parts, the body of each part being sheet metal having the edges folded, in combination with narrow folded locking strips engaging with said folds on the principal parts, substantially as and for the purposes herein specified.

3. In a rectangular sheet-metal box, the end piece, B, having the double fold B′ B^2 B^3 B^4 along two opposite sides and the single fold B^5 along the other two opposite sides, in combination with the two side pieces, D, each having a single fold engaging said double fold upon the end piece, the top and bottom pieces L, each having a single fold adjacent to the single fold B^5 upon the end piece, and the locking-strips M, bent at right angles and provided along each edge with folds M′, adapted to connect the single folds of the end piece with the folds upon the top and bottom pieces, substantially as specified.

4. In a rectangular sheet-metal box, the combination, with the several sides and the end thereof, each having its edges folded, so as to lock with the adjacent pieces, of exterior surfacing-plates applied to each of said pieces, said plates being each smaller than their registering-piece by the width of the edge folds thereof, and each being retained in place beneath the folds of its registering-piece, certain of said folds being continued and extended around the edges of and at right angles to their pieces, forming a double fold engaging the fold upon the adjacent piece, substantially as specified.

In testimony whereof I have hereunto set my hand, at New York city, New York, this 30th day of March, 1887, in the presence of two subscribing witnesses.

CHAS. C. CHAMBERLAIN.

Witnesses:
CHARLES R. SEARLE,
M. F. BOYLE.