J. H. RAND, Jr.

LEAF STRUCTURE FOR INDEX DEVICES.

APPLICATION FILED SEPT. 15, 1915.

1,355,062. Patented Oct. 5, 1920.

Fig. 1.

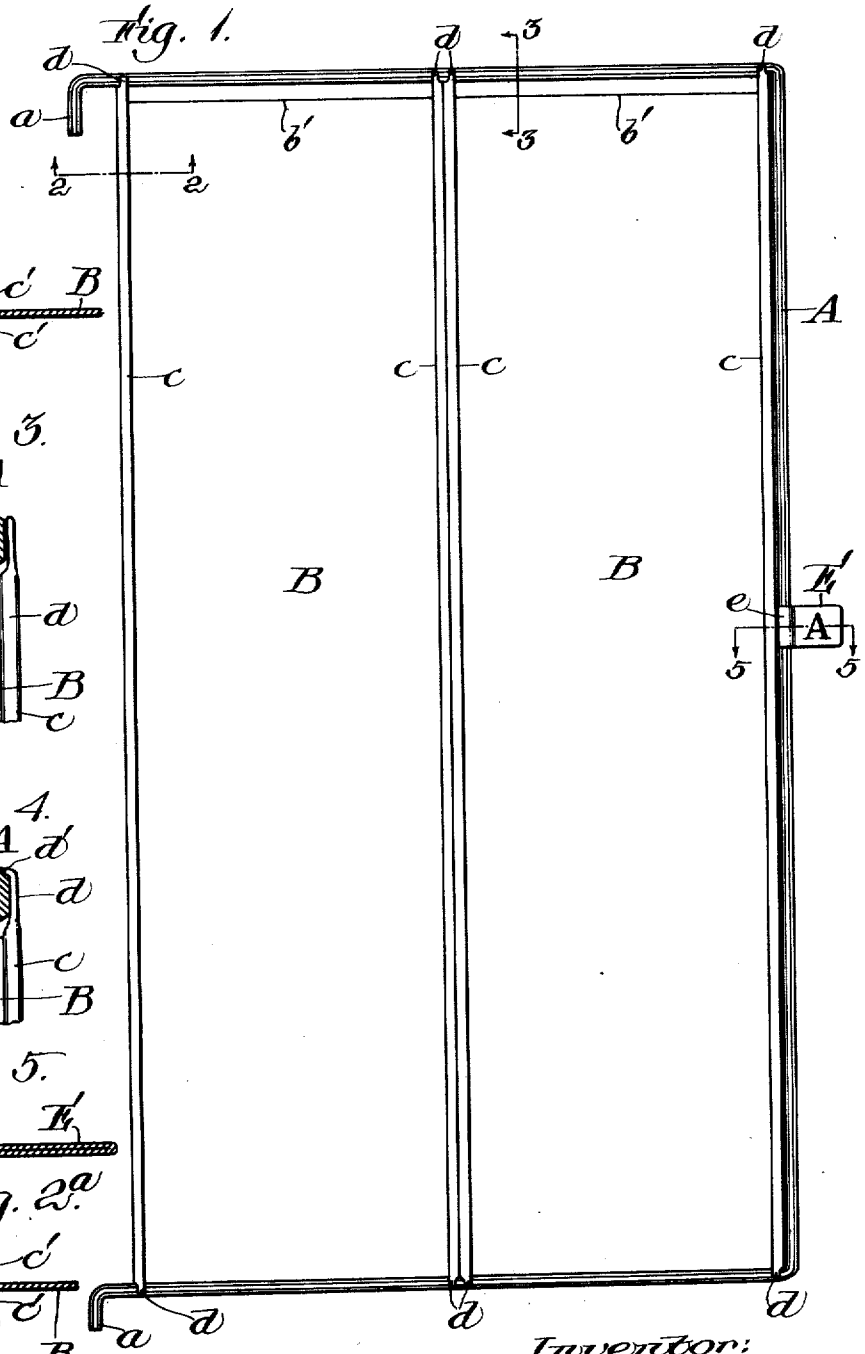


Fig. 2.

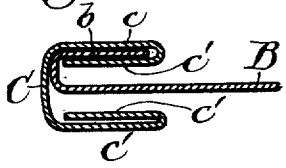


Fig. 3.

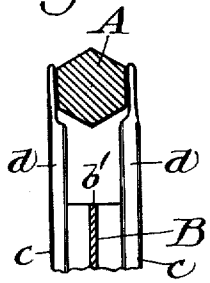


Fig. 4.

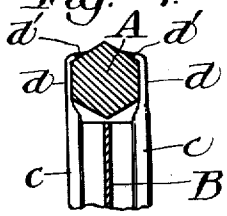


Fig. 5.

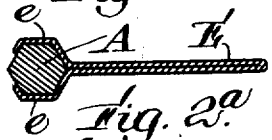
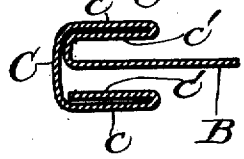


Fig. 2a.



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UNITED STATES PATENT OFFICE.

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LEAF STRUCTURE FOR INDEX DEVICES.

1,355,062. Specification of Letters Patent. Patented Oct. 5, 1920.

Application filed September 15, 1915. Serial No. 50,890.

To all whom it may concern:

Be it known that I, JAMES H. RAND, Jr., a citizen of the United States, and resident of North Tonawanda, in the county of Niagara and State of New York, have invented new and useful Improvements in Leaf Structures for Index Devices, of which the following is a specification.

This invention relates to a novel leaf structure for index or display devices of the kind known as visible indexes, wherein a series of stiff leaves for carrying indexed data or other matter are hinged to a support. Such devices are used mainly for displaying a set of index cards or strips, and although capable of use for other purposes, such as displaying samples, advertising matter, etc., a leaf structure adapted for index cards or strips will be shown for the purpose of illustration.

In the accompanying drawings in which certain embodiments of the invention are exemplified,—

Figure 1 is an elevation of a leaf structure containing the invention;

Fig. 2 is an enlarged section on line 2—2 of Fig. 1;

Fig. 2ª is a similar sectional view showing a modification;

Fig. 3 is an enlarged section on line 3—3 of Fig. 1;

Fig. 4 is a similar sectional view showing a modification; and

Fig. 5 is an enlarged section on line 5—5 of Fig. 1.

The leaf structure comprises an outer frame A, consisting of a single, continuous rod of metal, bent into the form of a U to embrace three sides, namely, the top, bottom and outer margins of a rectangular leaf. Said single piece outer frame also has at its free ends a pair of hinge members *a*, *a*, preferably in the form of hooks or pivot pins, made integral with the frame, to engage sockets in the support or standard (not shown) to which the leaf is hinged.

One or more panels B, are supported by the outer frame and extend between the legs of the U. Each panel B may be of sheet metal, and may be permanently or detachably mounted in the outer frame. Each panel is also preferably double faced so as to receive indexed matter on both sides. For this purpose two marginal guide channels are provided at each vertical edge of the panel, one on each side, for holding index cards or strips. In the preferred form said channels are formed by a single piece C of sheet metal, bent U-shaped in cross section, and extending around the edge of the panel body, each flange of the pair of flanges *c* thus formed being folded into the channel as shown at *c'*, furnishing a smooth and finished edge. In the form shown in Fig. 2 the channel strip C is made in a separate piece from the panel, and is secured thereto by means of one bent margin *c'* which engages and embraces the inwardly bent flange *b* on the edge of the panel. In the form shown in Fig. 2ª the double channel C is integral with the panel, and is bent into substantially the same U-shaped form as in Fig. 2, with the margins of the flanges *c* folded into the channels. One of the folds *c'*, however, is a continuous and integral part of the material of the panel, instead of being separate and secured to a flange of the panel as in Fig. 2.

The flanges *c* of each opposed pair are extended beyond the edge of the panel body, and form pairs of fingers *d*, which project beyond the top and bottom edges of the panel. These fingers embrace the outer frame A, at top and bottom, and support the panel in the frame. To have the panel removable from the frame, the fingers *d* may be left to engage the legs of the frame loosely without other securement. The top edge *b'* of the panel body (Figs. 1 and 3) will then preferably be spaced from the top leg of frame A sufficiently to allow the panel to be raised in the frame until the fingers *d* at the bottom are clear of the bottom leg of the frame, whereupon the fingers *d* at the top may be withdrawn. Or, without the clearance afforded by reducing the length of the panel to the line *b'*, the panels could be detached by springing the top and bottom legs of the frame A apart until the fingers *d* are released.

When the panels are to be permanently mounted in the frame, the fingers *d* will preferably be clinched over the frame, as shown at *d'*, Fig. 4, and will also be welded or soldered to the frame.

In leaf structures heretofore used, so far as I am aware, there has been no marginal frame at the vertical free edge of the leaf other than the guide flanges themselves; and index tabs secured directly to the guide flanges of the panels, when used as handles to manipulate the leaves, tend to distort the

panels and their flanges. With my improved leaf structure an index tab E may be secured directly to the outer frame A, by which it is supported wholly independently of the panel and its flanges, whereby the frame and not the panel or its flanges will receive the strains due to handling the tab. The tab E is formed of a single piece of sheet metal folded over upon itself to form a two ply body portion for displaying the index letter or other character, while the free ends of the folded piece are bent first outward and then inward, as best shown in Fig. 5, to form a pair of bowed arms *e*, *e*, which embrace the outer frame A and support the tab on the frame A independently of the panel. Said arms *e* may be soldered or welded to the frame, or they may be merely sprung around the frame member and clamped thereon by reason of the resilience of the material of the tab, thus supporting the tab frictionally on the frame, and admitting of vertical adjustment of the tab on the leaf.

I claim:

1. A leaf structure for hinged-leaf index devices, comprising a sheet panel provided along the outer free edge of the leaf with a flange forming a channel for retaining index members on the panel, and a bar extending along said outer edge and opposite ends of the panel and forming a strengthening frame in which the panel is secured, said frame having parts adjacent the hinge-edge of the leaf adapting the frame to be pivotally supported for hinging the leaf, and an indicator tab which is attached directly to said frame bar at the outer edge of the leaf and is free from said panel, whereby said frame receives the strain incident to the manipulation of the leaf by the tab and the manipulation of the tab will not distort the panel or said channel flange.

2. A leaf structure of the character described comprising an outer frame, and a panel having a pair of inwardly facing guide flanges at each side of the panel, said guide flanges extending beyond the edge of the panel body and forming fingers to engage the outer frame.

3. A leaf structure of the character described comprising an outer frame, and a panel having a pair of inwardly facing guide flanges at each side of the panel, said guide flanges extending beyond the edge of the panel body and forming fingers to engage the outer frame, said panel being removable from the frame by withdrawing said fingers and said frame from engagement.

4. A leaf structure of the character described comprising an outer frame, and a panel located within said frame and having projecting parts at opposite edges which straddle said outer frame for retaining the panel in place therein, said panel terminating short of said outer frame at one edge and said projecting parts at one edge of the panel being longer than those at the opposite edge of the panel to enable the removal of the panel.

5. A leaf structure of the character described, comprising an outer frame consisting of a piece of metal bent into U-shape to embrace three sides of the leaf, and a panel located between the legs of said outer frame and having projecting parts at opposite edges which embrace said outer frame for retaining the panel in place therein, said panel terminating short of said outer frame at one edge and said projecting parts at one edge of the panel being longer than those at the opposite edge of the panel to enable the removal of the panel.

Signed by me at North Tonawanda, New York, this eleventh day of September, 1915.

JAMES H. RAND, JR.

Witnesses:

FRED'K ROBERTSON, JR.,

LAWRENCE H. GEER.