United States Patent

Larson

[15] **3,656,786**

[45] **Apr. 18, 1972**

[54] PANEL FASTENER CLIP

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[73] Assignee: **Chas. O. Larson Co.**, Sterling, Ill.

[22] Filed: **June 10, 1970**

[21] Appl. No.: **45,049**

[52] **U.S. Cl.** **287/189.35**

[51] **Int. Cl.** **F16b 2/20**

[58] **Field of Search** ..... 287/189.35, 20.92 R, 20.92 C, 287/20.92 D, 20.92 W

[56] **References Cited**

UNITED STATES PATENTS

3,398,982	8/1968	Venzie	287/189.35
2,867,302	1/1959	Miller	287/189.35
2,817,131	12/1957	Seegers	287/189.35 X

FOREIGN PATENTS OR APPLICATIONS

279,697	1/1964	Australia	287/189.35

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[57] **ABSTRACT**

The present invention relates generally to spring type fastener clips, and more particularly to improvements in fastener clips of the type adapted to accommodate the margins of panels. The embodiment disclosed herein includes a sheet metal stamping presenting an elongate relatively narrow base section and laterally yieldable converging panel engaging wing members extending from opposite longitudinal margins of said base section. The opposite extremities of the outer marginal edges of said wing members diminish in distance from the base section to facilitate initial reception of a panel margin, and integral struck-out panel attachment prongs extend from the base section in a direction opposite to the wing members.

7 Claims, 8 Drawing Figures

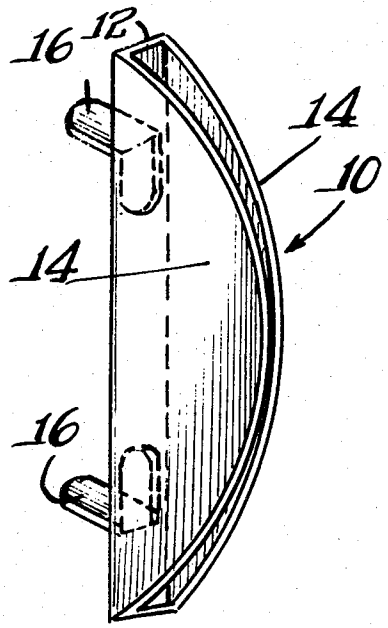


Fig. 1.

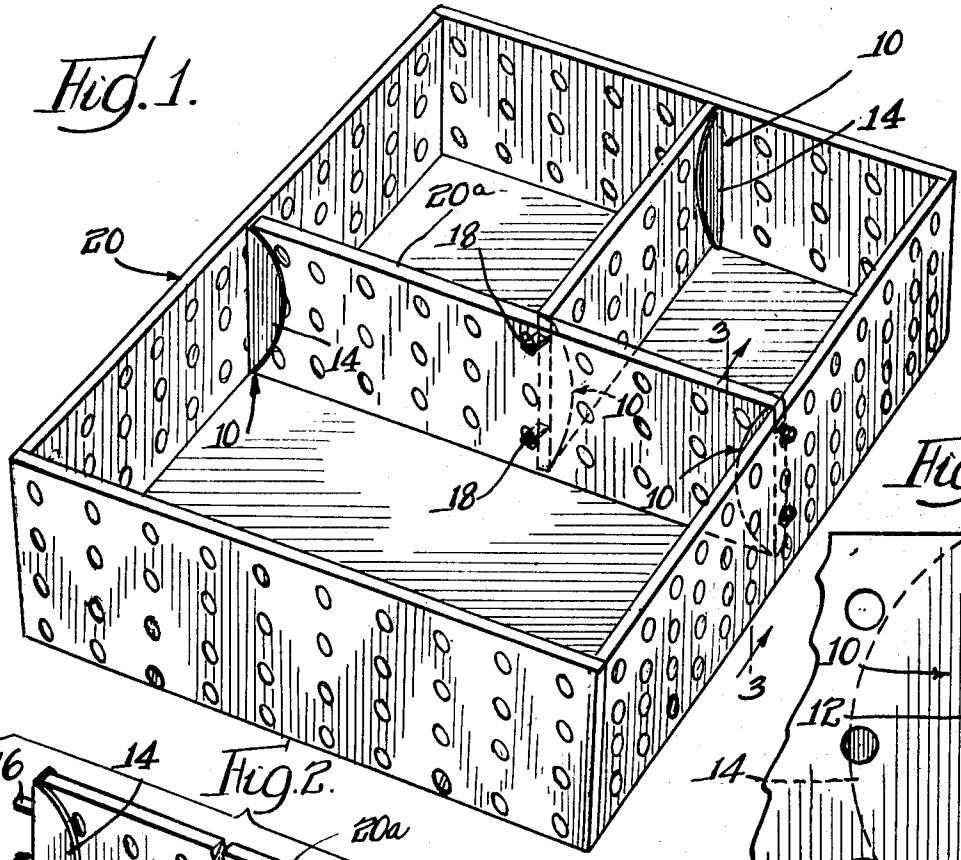


Fig. 3.

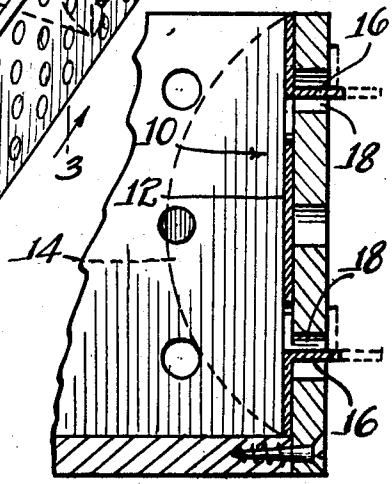


Fig. 2.

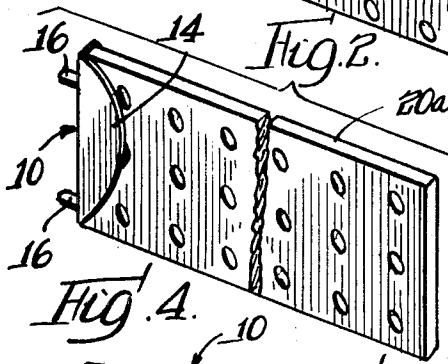


Fig. 4.

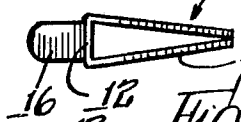


Fig. 6.

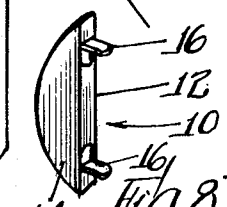


Fig. 8.

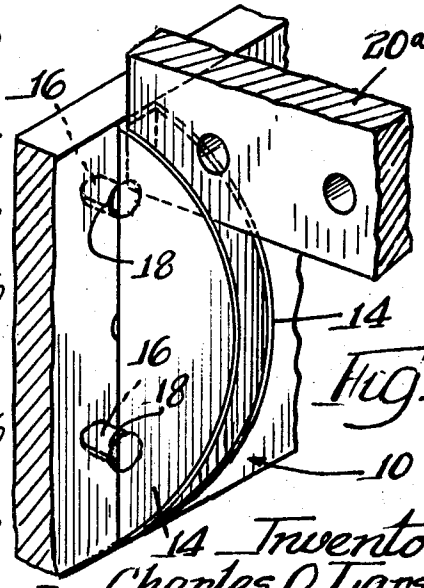
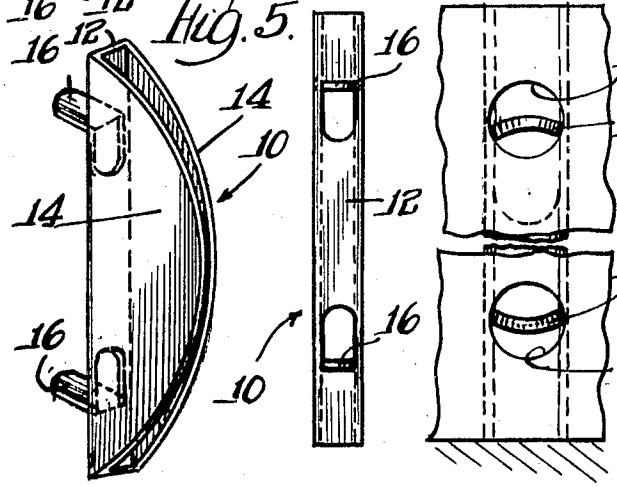


Fig. 7.

Fig. 5.



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PANEL FASTENER CLIP

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a novel and very practical spring type clip adapted to support panel members in a vertical position. Panels in the form of perforated sheets commonly referred to as pegboard sheets, are often employed to provide partitions in display cases and the like. The present invention contemplates a spring clip of improved and simple construction which particularly lends itself for use with such perforated panel stock.

More specifically, the present invention contemplates a fastener clip of the type referred to above which may be produced in the form of a sheet metal stamping of minimum size which may be initially associated with a panel margin without the potential hazard of structurally impairing or defacing the panel margin during such association. To this end the present invention contemplates a U-shape type spring panel clip having oppositely disposed openings uniquely shaped to facilitate initial association of a panel margin with the clip.

It is a further object of the present invention to provide a spring fastener clip as set forth above having a novel arrangement of panel attachment means particularly applicable to perforated or pegboard stock.

The present invention also contemplates a spring clip fastener for panel margins which may not only require a minimum amount of sheet metal stock, but which also may be produced by the practice of conventional stamping and forming methods, thus reducing the cost of manufacture to a minimum.

BRIEF DESCRIPTION OF THE DRAWING

The foregoing and other objects and advantages will be more apparent from the following detailed description when considered in connection with the accompanying drawing wherein:

FIG. 1 is a perspective view of a display case equipped with panel engaging spring clips of the type contemplated by the present invention;

FIG. 2 is a perspective view showing one of the partitions detached from the display case of FIG. 1, more clearly to illustrate the manner in which the spring clips may be associated with the panel margins;

FIG. 3 is an enlarged fragmentary sectional view taken substantially along the line 3—3 of FIG. 1;

FIG. 4 is a top end view of the clip detached from the panel member;

FIG. 5 is a perspective view of the detached clip;

FIG. 6 is an elevation of the clip as seen from the left of FIG. 5;

FIG. 7 is a fragmentary perspective view disclosing the manner in which a panel margin may be initially associated with the U-shaped spring clip; and,

FIG. 8 is a fragmentary end view seen from the right of FIG. 3, disclosing the slightly arcuately formed prongs or tongs interlocked with the perforated panel.

Referring now to the drawing more in detail wherein like numerals have been employed to designate similar parts throughout the various figures, it will be seen that one embodiment of a panel accommodating spring clip is designated generally by the numeral **10**. The spring clip **10** is in the form of a sheet metal stamping including an elongate relatively narrow base section **12**. A pair of converging wing members **14** extend from opposite longitudinal margins of the base section **12**. Vertically spaced panel attachment members or prongs **16** are struck from the base section **12**, in a direction opposite to the wing members **14**. The spacing of the prongs or tongues **16** is such that they will register with complementary, similarly spaced apertures or perforations **18** of a partitioned display case designated generally by the numeral **20**. A panel section of the display device **20** is designated in FIGS. **1** and **2**, by the numeral **20***a*.

Perforated board of the type illustrated herein is readily available, and the spacing of the apertures in the board material standardized. The spring clip of the present invention has a very practical application to board material of this type. The prongs or tongues **16** are spaced so as to accommodate a pair of board apertures as clearly shown in the drawing. Attention is directed to the fact that it is preferable to form the prongs **16** so that they are generally arcuate in cross section as is clearly illustrated in FIG. **8**. The prongs **16** thus provide pairs of work-engaging edges facing each other which are adapted to impinge the edges of the panel defining the complementary apertures **18**. The embodiment of the prongs shown by solid lines in the drawing, as for example in FIG. **3**, have an approximate length, corresponding with the thickness of the wall or partition of the display case **20**. In instances where necessary, these prongs may be longer and bent laterally against the outer surface of the wall as shown by the dotted lines in FIG. **3**.

In the preferred embodiment of the clip the distance between the inner surfaces of the wing members **14** in the vicinity of the base **12**, is substantially equal to, or slightly larger than, the thickness of the workpiece or panel **20***a*. Thus as illustrated in FIG. **3**, the initial association of the corner of the panel **20***a*, is greatly facilitated by having the converging wing members **14** formed with arcuate or curved outer edges. Thus the outer edges of the wings **14**, from a point intermediate the opposite extremities thereof, progressively diminishes in distance from the base **12**, as said edges approach the complementary extremity of the base. In this manner the presence of the sharp corners is eliminated, and the potential danger of marring or impairing the surface of the workpiece, or panel, is reduced to a minimum. The arcuate contour of the outer edges of the converging wing members **14** serves to guide the panel into association with the clip and thus greatly facilitate the ease with which such assembly may be accomplished. As the wings **14** are forced apart, they ultimately impinge the entire inner surfaces of the wings.

From the foregoing it will be apparent that the present invention contemplates a spring clip device of extremely simple, yet practical form. The curved contour of the wing edges not only facilitate initial association of a panel with a clip as previously described, but also make it possible to produce the clip from a minimum amount of metal stock without sacrificing gripping effectiveness. In many instances the prongs may be used without folding the projecting portions thereof over the panel stock because of the firm impingement of the arcuately disposed prongs with the apertured panel stock.

I claim:

1. A fastener clip for attachment to a panel margin including an elongate relatively narrow base section, normally converging laterally yieldable panel-engaging wing members extending from opposite longitudinal margins of said base section, the outer edges of said wing members from a location intermediate the extremities thereof diminishing in distance from said base section to an area immediately adjacent the opposite extremities of said base section to facilitate initial reception of a panel margin between said wing members in the vicinity of said base section, and integral spaced panel attachment means extending from the base section in a direction opposite to said wing members.

2. A fastener clip for attachment to a panel margin as set forth in claim 1, wherein the outer edges of the wing members progressively diminish in distance from a central intermediate location of said base to opposite points in the vicinity of said base extremities.

3. A fastener clip for attachment to a panel margin as set forth in claim 2, wherein the outer edges diminishing in distance from the base define a curve, the opposite extremities of which terminate adjacent the base extremities.

4. A fastener clip for attachment to a panel margin as set forth in claim 1, wherein the integral attachment means comprise prongs struck from the fastener base.

5. A fastener clip for attachment to a panel margin as set forth in claim 4, wherein said struck-out prongs are generally arcuate in transverse cross section.

6. A fastener clip for attachment to a panel margin as set forth in claim 4, wherein the struck-out prongs present pairs of work engaging faces facing toward each other.

7. A one-piece sheet metal fastener clip for attachment to a panel margin including an elongate relatively narrow base section, normally converging laterally yieldable panel engaging wing members extending from opposite longitudinal margins of said base section, said wing members comprising flat sheet metal sections, the outer edges of which define a curve extending from a point adjacent one extremity of said base to a point adjacent the opposite extremity to said base section whereby to facilitate initial reception of a panel margin between said wing members in the vicinity of said base section, and integral spaced panel attachment means in the form of members struck from the base section and extending therefrom in a direction opposite to said wing members.

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