April 3, 1956 H. A. BERLINER 2,740,613

FENCE FORMED OF SHEET MATERIAL

Filed Dec. 9, 1954

Fig. 1.

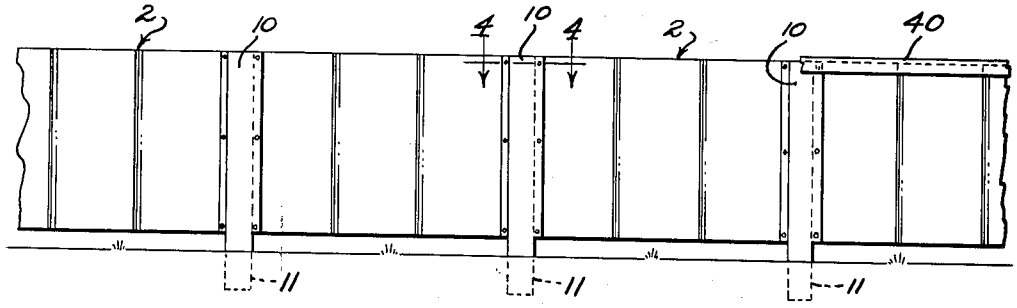


Fig. 2.

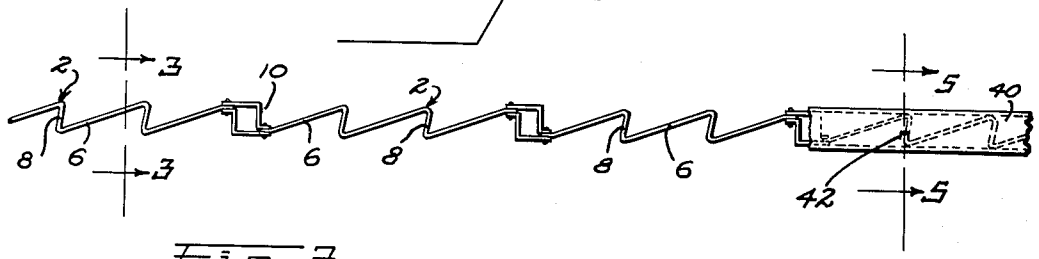


Fig. 3.

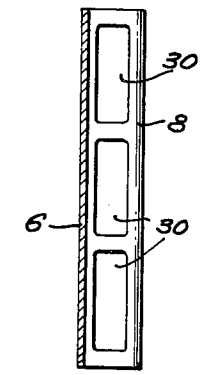


Fig. 4.

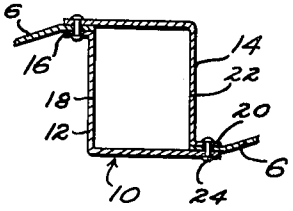
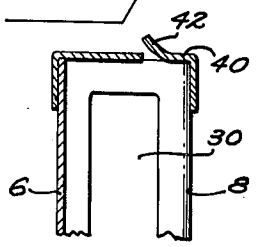


Fig. 5.



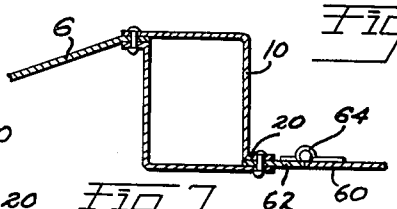
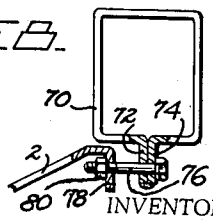


Fig. 7.

Fig. 8.



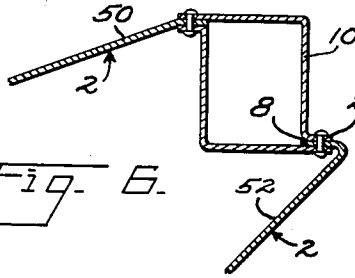


Fig. 6.

INVENTOR
HENRY A. BERLINER

BY Scrivener & Parker

ATTORNEYS

United States Patent Office 2,740,613 Patented Apr. 3, 1956

2,740,613

FENCE FORMED OF SHEET MATERIAL

Henry A. Berliner, Washington, D. C.

Application December 9, 1954, Serial No. 474,107

4 Claims. (Cl. 256—21)

This invention relates broadly to fences and, more particularly, to fences constructed of sheet material.

The principal object of the present invention has been to provide a fence constructed of a plurality of generally similar sections of sheet material which may be easily and cheaply erected and which will be strong, durable, attractive and inexpensive.

Another object of the invention has been to provide such a fence which, when installed in place, will effectively preserve the privacy of a yard, garden, or other enclosure from the view of passersby but which will also be vented to allow passage of air through the fence.

A further object has been to provide a fence of the described character and construction which will include means for supporting it.

The invention is described in detail in the following specification and is illustrated in the accompanying drawing in which:

Fig. 1 is a side elevation of a fence according to the present invention showing assembled panels and supporting posts;

Fig. 2 is a top plan view of the fence of Fig. 1;

Fig. 3 is an enlarged detailed view taken on the line 3—3 of Fig. 2 and showing the manner in which the fence of the present invention is vented to allow the passage of air therethrough;

Fig. 4 is an enlarged detail view taken substantially on the line 4—4 of Fig. 1 showing the manner in which the fence panels are assembled to the supporting posts;

Fig. 5 is an enlarged detail view taken substantially on the line 5—5 of Fig. 2 showing the assembly of an upper rail with the fence;

Fig. 6 is a sectional view of a post and sections of a fence, showing how fence corners are formed in accordance with the invention;

Fig. 7 is a sectional view showing the interposition of a gate in the fence; and

Fig. 8 is a sectional view showing a modified form of connection of a post to a fence section.

The fence provided by this invention comprises a plurality of sections 2 which are connected together in end to end relation to provide a continuous fence. Each of these sections is of generally flat configuration, may be of any desired length and width or height, and may be formed by molding or deforming suitable materials. In its preferred form each section is formed of aluminum or magnesium sheet of relatively small thickness, but may, if desired, be formed of ferrous or non-ferrous or plastic or other sheet material. If formed of a material which is subject to corrosion, a suitable anti-corrosion protective material may be applied to the basic sheet material. Each section comprises a number of integrally connected panels which extend from edge to edge of the section, by which it is meant that they extend from top to bottom of the section when the fence is erected. These sections are alternately of greater and less width, the wider panels being shown at 6 and the narrower panels at 8.

The wider panels 6 are disposed at a small acute angle to the general plane of the section and when the fence is erected these panels will extend generally in the direction of the length of the fence. The narrower panels 8 are disposed at a larger acute angle to the adjacent wider panels and therefore are substantially, but less than, normal to the general plane of the fence. Each section therefore, when erected as part of a fence, has a somewhat zig-zag shape in horizontal cross-section.

The fence sections are connected together at their ends by parts which provide a post 10 which may be sunk into the ground at its lower end as shown at 11. In the preferred form of the invention disclosed in the drawings, and particularly in Fig. 4, each post is formed of two metal parts 12, 14 of right-angular cross-section which are assembled in face-to-face relation to provide a hollow post of rectangular cross-section. Part 12 has a flange extending at right angles from the end of one wall 18 and part 14 has a similar flange 20 extending from its one wall 22. Each of these flanges is disposed in face-to-face relation to the unflanged wall of the other part and an end of a fence section is disposed therebetween and is connected to both parts by any suitable means 24 such as rivets, screws, welding or otherwise. As shown in Figs. 2 and 4 the posts are preferably of the same thickness as the fence.

In a preferred form of the invention, each of the narrower panels 8 is provided with a plurality of openings 30 which, when the fence is erected, permit the passage of air through the fence. Because of the fact that the openings 30 are formed in the narrower panels which are substantially, but less than, normal to the general plane of the fence when erected, the openings 30 are effectively screened so that an observer approaching the fence will be unable to see through the openings and beyond the fence, and when moving in one direction parallel to the fence he will have only a very restricted view through the openings and, when moving in the opposite direction to that last described, he will be unable to see through the fence at all.

In order to increase the rigidity of the fence and give it a more finished appearance, an elongated channel shaped cap member 40 may be placed over the top of the assembled fence in engagement with the upper edge and sides thereof and may be secured in place by any suitable means. The upper surface of the cap member 40 may be roughened, as by punching up parts thereof as shown at 42, in order to discourage persons from climbing over the fence. If desired, a similar cap member may be placed over and attached to the lower edge of the fence. A similar covering and strengthening member may be attached to the lower edge of the fence if desired.

As illustrated in Fig. 1, the fence sections 2 may be supported by the posts 10 in spaced relationship with respect to the ground, which may sometimes be desirable, particularly in order to permit drainage under the fence. However, it is contemplated that the lower edges of the sections may engage the ground if this is desired.

In Fig. 6 of the drawings there is illustrated the attachment of two fence sections 2 to a post in angular relation to each other to form a corner. It will be seen that the one section 50 is attached to the post 10 in the manner illustrated in Fig. 4 and described hereinbefore, while the other section 52 may be attached to the post by inserting and fastening one of the narrower panels 8, or a part of one of such panels, between a flange 20 of a part of the post and the adjacent unflanged wall of the other part of the post, and will extend from the post and from the fence section 50 in any desired angular relationship, thus forming a fence corner with the section 50.

In Fig. 7 of the drawings there is illustrated the attachment of a gate **60** to a post **10**, this being accomplished by inserting and fastening a flat piece of sheet material **62**, carrying hinges **64**, between a flange **20** of a part of the post and the adjacent unflanged wall of the other part of the post, after which the gate may be attached to and swung on the hinges **64**.

In a modified form of the invention, which is illustrated in Fig. 8, the post **70** is a hollow structure formed by bending sheet metal to bring the free longitudinal edge parts **72**, **74** of the sheet together, these parts being turned outwardly from the adjacent wall of the post and are welded in face-to-face relation. The post **70** is connected to a fence section **2** by means of an elongated bolt **76** which is passed through the edge parts **72**, **74** and through a flange **78** formed on an end of the section **2** and which is secured by a nut **80**. It will be seen that the fence section **2** may be drawn up to each of the posts between which it is connected, by turning the nut **80** on the bolt.

It will be apparent that the fence provided by the present invention may be readily manufactured with a minimum of operations and may be easily assembled in place by any unskilled person and will be durable and inexpensive. This fence will permit a yard, garden, or other enclosure to be effectively screened from the view of strangers and passersby and at the same time will permit the passage of air and breezes through and below it.

While I have described and illustrated but one embodiment of my invention, it will be apparent to those skilled in the art that other embodiments as well as modifications of that disclosed, may be made and practised without departing in any way from the spirit or scope of the invention, for the limits of which reference must be made to the appended claims.

What is claimed is:

1. A fence comprising a plurality of sections formed of sheet metal connected together at their adjacent ends to provide an elongated vertical structure, each section comprising a plurality of integrally connected alternately wider and narrower vertically disposed panel sections arranged in zig-zag form along the length of the fence, said wider panels extending generally in the direction of the length of the fence and the narrower panels extending generally in a direction normal to the length of the fence and having a plurality of spaced openings in said narrower panel sections which are vertically positioned with respect to each other when the fence is erected.

2. A fence comprising a plurality of sections formed of sheet metal connected together at their adjacent ends to provide an elongated vertical structure, each section comprising a plurality of integrally connected alternately wider and narrower vertically disposed panel sections arranged in zig-zag form along the length of the fence, said wider panels extending generally in the direction of the length of the fence and being disposed at a small acute angle to the general plane of the fence and the narrower panels extending generally in a direction normal to the length of the fence and being disposed at a larger acute angle to the adjacent wider panels, and having a plurality of spaced openings in said narrower panel sections which are vertically positioned with respect to each other when the fence is erected.

3. A fence according to claim 2 comprising, in addition, an inverted channel-shaped member resting upon and enclosing at least one of the upper and lower edges of the fence, parts of the upper surface of the channel-shaped member being deformed to provide jagged projections.

4. A fence comprising a plurality of sections formed of sheet material and each comprising a plurality of integrally connected panels arranged in zig-zag form along the length of the fence, and a structure between the ends of adjacent sections and connected thereto and being longer than the width of the panels, said structure comprising two elongated wall parts of right angular cross-section which are assembled in face-to-face relation, each of said parts being provided with a flange extending at right angles from one end of one of said wall parts, said flanges being disposed in face-to-face relation to the unflanged wall of said wall parts to thereby form a hollow, rectangular post with the ends of adjacent fence sections disposed between each adjacent flanged and unflanged end wall.

References Cited in the file of this patent

UNITED STATES PATENTS

185,593	Topliff	Dec. 19, 1876
1,160,728	Liggett	Nov. 16, 1915
1,664,463	Muryn	Apr. 3, 1928

FOREIGN PATENTS

3,075	Great Britain	1870