United States Patent

Blease

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[54] **PLASTIC FENCE**

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[51] **Int. Cl.** **E04h 17/16**

[58] **Field of Search** 256/19, 59, 21, 22, 65–70

[56] **References Cited**

UNITED STATES PATENTS

133,853	12/1872	Hall	256/59
348,383	8/1886	Cummings	256/59 X
861,924	7/1907	Weatherly	256/59
666,947	1/1901	Ward	256/65
1,070,165	8/1913	Newlin	256/65 UX
2,628,823	2/1953	Rhome et al	256/19 X
2,833,522	5/1958	Michaels	256/65
2,919,113	12/1959	Cofield	256/65

FOREIGN PATENTS OR APPLICATIONS

430,155	8/1967	Switzerland	256/65
489,579	1/1953	Canada	256/22
734,057	7/1955	Great Britain	256/65
1,684,883	11/1969	Germany	256/19

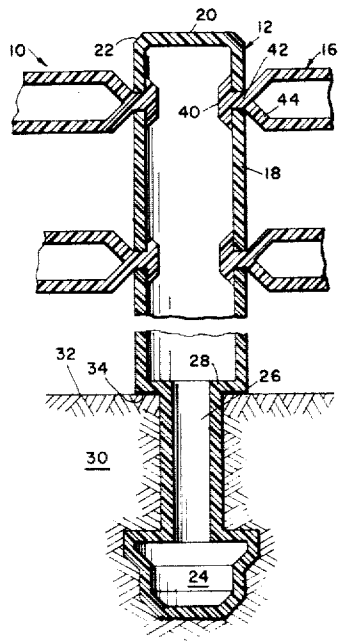
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[57] **ABSTRACT**

An all plastic fence composed of hollow posts and rails externally textured to simulate wood. The posts are formed with anchor formations at the bottom and vertically spaced holes for reception of snap lock formations at the ends of the rails.

10 Claims, 5 Drawing Figures



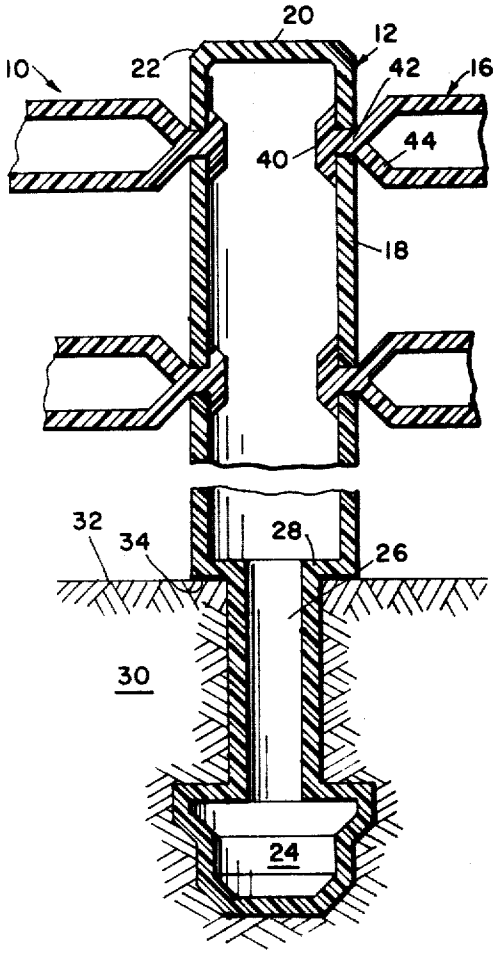


Fig. 1

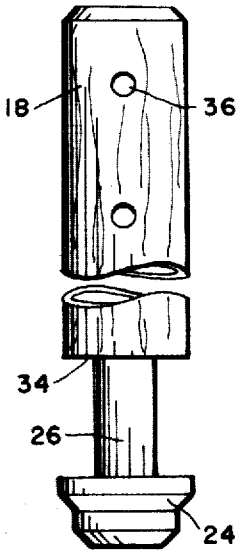


Fig. 3

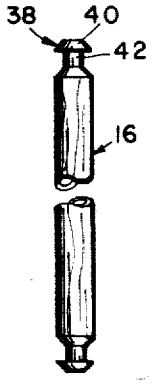


Fig. 4

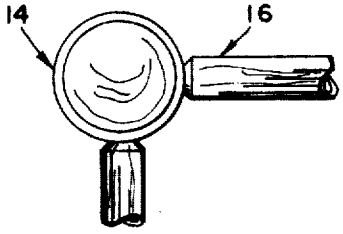


Fig. 5

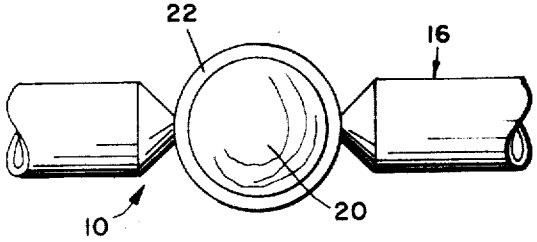


Fig. 2

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PLASTIC FENCE

BRIEF SUMMARY OF THE INVENTION

This invention relates to the construction and assembly of fences and more particularly to fences made of plastic material.

The posts and rails that make up a fence are generally made of wood or metal. Wood fences require constant attention because of rot and termites. Some form of preservative treatment is accordingly required. Metal fences, on the other hand, are subject to rust or other forms of chemical deterioration and must therefore be surface treated with paint or other coatings. The assembly and installation of fences is furthermore difficult or costly.

It is therefore an important object of the present invention to provide an easily assembled fence that is rot proof, rust proof, termite proof, color fast and requires no paint, surface treatment or preservative.

In accordance with the present invention, a fence is assembled from hollow posts and rails made from a molded plastic material. The posts are provided with below surface anchor foot portions and vertical series of above surface openings angularly spaced from each other. The openings in the posts receive locking formations at the ends of the rails. The external surfaces of the posts and rails may be textured to simulate wood or provide any desired decorative effect. Further, the plastic material may be any desired color.

BRIEF DESCRIPTION OF THE VIEW OF THE DRAWINGS

FIG. **1** is a vertical section through a portion of an assembled and installed fence constructed in accordance with the present invention.

FIG. **2** is a top plan view of the fence portion shown in FIG. **1**.

FIG. **3** is a side elevational view of a typical fence post made in accordance with the present invention.

FIG. **4** is a side elevational view of a typical fence rail.

FIG. **5** is a top plan view of a portion of a fence constructed in accordance with the present invention showing a corner post.

PARTICULAR DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail, FIGS. **1** and **2** illustrate a portion of an assembled fence generally referred to by reference numeral **10**. The fence consists of posts including interior posts **12** as shown in FIGS. **1** and **2** and corner posts **14** as shown in FIG. **5**. Except for the placement of holes therein, the posts **12** and **14** are identical in construction. Also, the fence rails **16** are all alike except possibly for variations in length.

Both the posts and the rails are made of a linear polyethylene or other suitable plastic material using a blow molding process. Except for the end portions, the posts and rails are hollow or tubular so as to utilize a minimum amount of material thereby reducing the weight and cost of the fence consistent with the desired degree of rigidity. Further, by making the posts hollow, simple but effective snap-in connections may be readily established between the posts and the rails without reliance on any fasteners because of the elastic flexibility of the post walls.

Each of the posts includes an above surface tubular portion **18** closed at the upper end by an end wall **20**. A circular beveled edge **22** interconnects the end wall with the tubular portion. The tubular portion and the end wall may be externally textured as aforementioned. A hollow, anchor foot formation **24** is connected by a shank **26** to the closed bottom **28** of the tubular portion. Thus, the shank **26** and anchor **24** may be embedded in the soil **30** below ground level **32** as shown in FIG. **1**, with the shoulder **34** between the bottom **28** and the shank abutting the ground.

Each of the posts is provided with two vertical series of openings **36** as more clearly seen in FIG. **3**. The number of holes in each series may vary depending on the height of the posts and the desired vertical spacing between the rails connected to the posts by snap-in formations **38** received through the openings **36**. The two series of openings are spaced 180° apart for interior posts **12** as shown in FIG. **2** or angularly spaced apart by less than 180°for corner posts **14** as shown in FIG. **5**.

The openings **36** are smaller in diameter than the maximum diameter of the converging heads **40** associated with each of the snap-in locking or connector formations **38**. Thus, the post is elastically deformed adjacent the opening **36** as the connector formation **38** is forced in and becomes locked about the neck **42** connecting the head **40** to the axially converging end walls **44** of the hollow rail at each end, as more clearly seen in FIG. **1**. The diameter of the neck **42** is substantially equal to the undeformed diameter of the opening **36**.

It will be apparent, that the fence **10** may be readily assembled from standard sized posts **12** or **14** and rails **16** with minimum effort and without use of tools or fasteners. Further, the resulting fence will not only be pleasing to the eye because of the variety of colors and decorative surfaces that may be molded into the plastic material, but will also require less attention because of its rot, termite and oxidation resistant attributes.

Having thus described a preferred form of my invention, what I claim is:

1. In a fence having a plurality of posts interconnected by rails, each of said posts and rails being made of an integral flexibly elastic material including an elongated tubular portion closed by axial end wall portions, and an axially converging formation connected to at least one of the end wall portions, said rails having an enlargement on said at least one of the end wall portions each of the posts having vertically spaced deformable openings through which the enlargements on the rails are lockingly received within the tubular portion.

2. The combination of claim **1**, wherein the converging formation associated with each of the posts is a ground anchor connected by a hollow shank to a lower one of the end wall portions.

3. The combination of claim **2** wherein the converging formations associated with the rails are solid locking heads connected to both axial end wall portions of each of the rails by necks substantially equal in diameter to said openings in the posts.

4. The combination of claim **3**, wherein the end wall portions of the rails converge axially toward the locking heads.

5. The combination of claim **4**, wherein said elastic material is a moldable plastic.

6. The combination of claim 5, wherein the tubular portions of the posts and rails are externally textured.

7. The combination of claim 1, wherein the converging formations associated with the rails are solid locking heads connected to both axial end wall portions of each of the rails by necks substantially equal in diameter to said openings in the posts.

8. The combination of claim 7, wherein the end wall

portions of the rails converge axially toward the locking heads.

9. The combination of claim 1, wherein said elastic material is a moldable plastic.

10. The combination of claim 1, wherein the tubular portions of the posts and rails are externally textured.

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