June 7, 1955 W. E. NISPERLY ET AL 2,710,174

TOY FENCE

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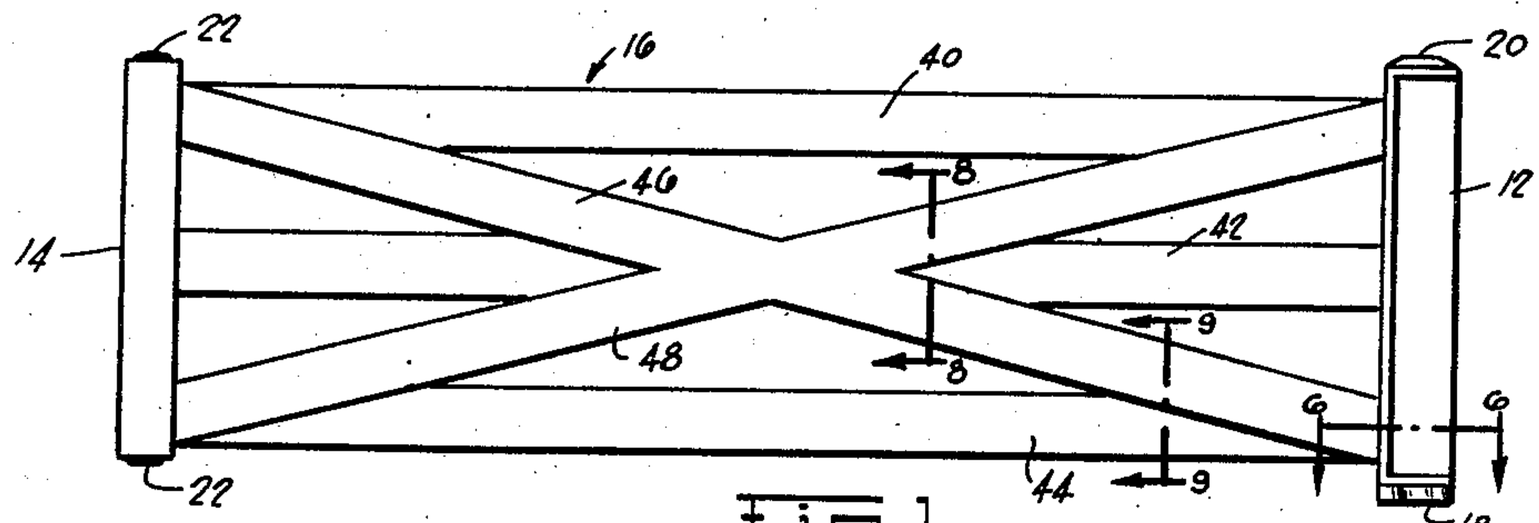

Fig. 1.

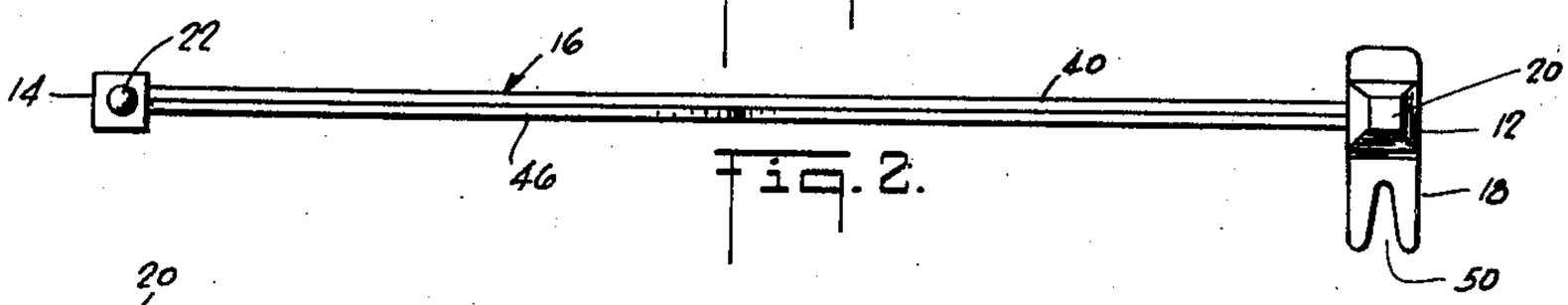

Fig. 2.

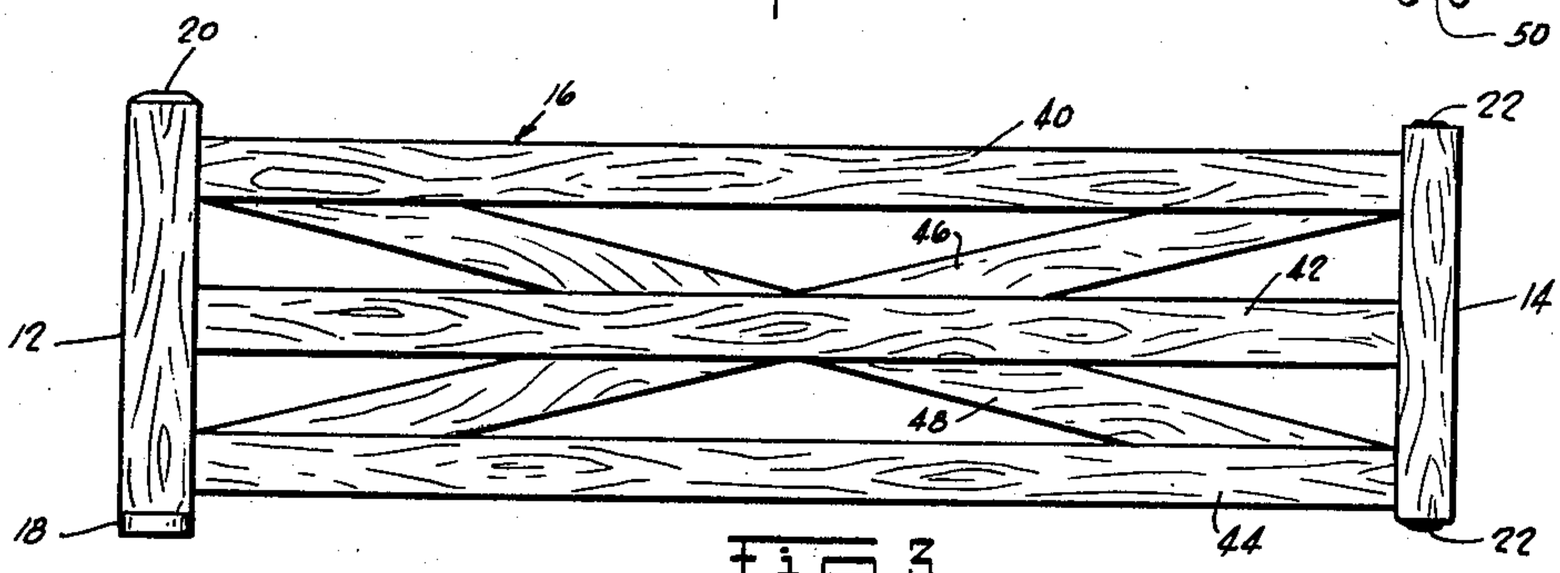

Fig. 3.

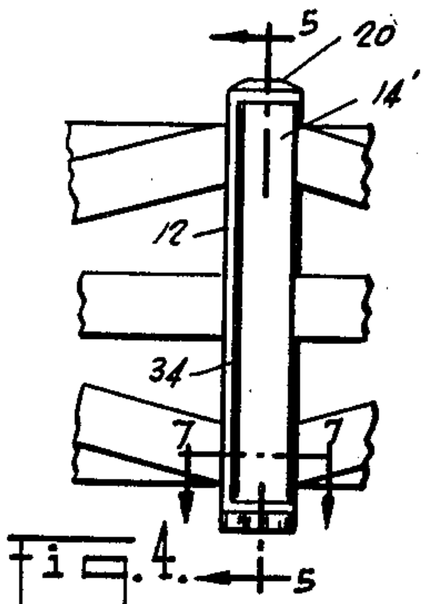

Fig. 4.

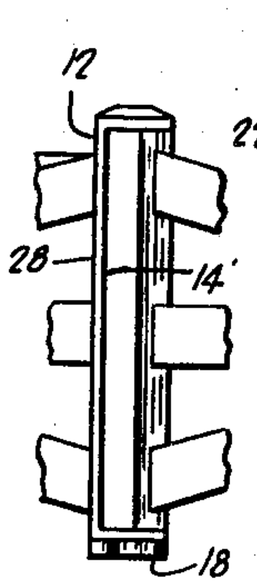

Fig. 10.

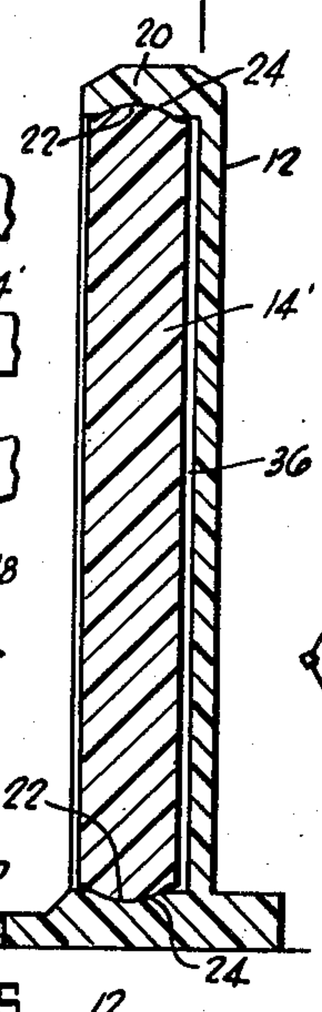

Fig. 5.

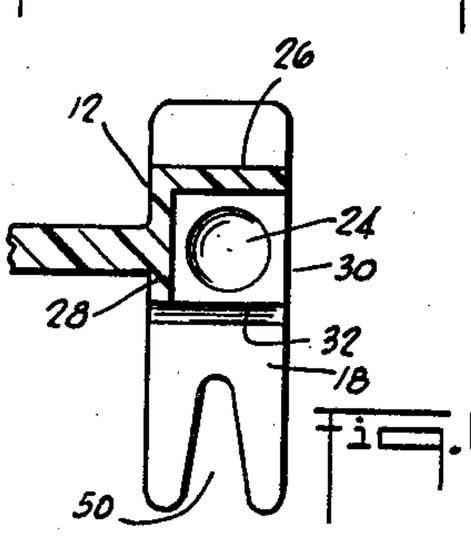

Fig. 6.

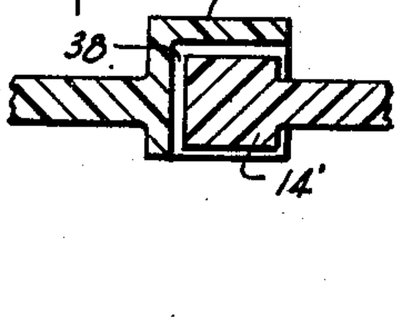

Fig. 7.

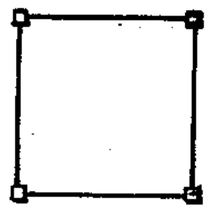

Fig. 12.

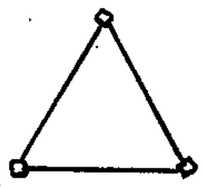

Fig. 11.

Fig. 13

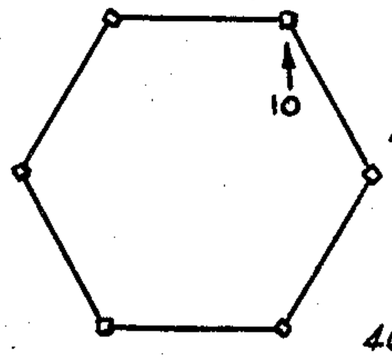

Fig. 14.

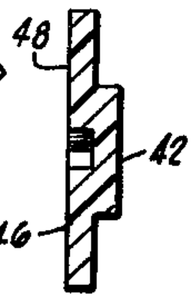

Fig. 8.

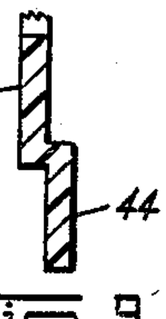

Fig. 9.

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TOY FENCE

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6 Claims. (Cl. 256—24)

This invention relates to toy fences, and more particularly to a sectional toy fence which may be set up in desired length, and desired outline when viewed in plan.

One primary object of the present invention is to generally improve toy fences. More particularly objects are to provide toy fence sections which may be put together end-to-end, or at right angles, or at almost any desired angle, so that the sections may be assembled to form enclosures of great variety in length and shape. Still another object is to provide a toy fence which simulates the use of finished square fence posts. Still another object is to provide fence sections which may be molded integrally and inexpensively out of plastic, and which are relatively sturdy and easy to assemble or disassemble, so that even a very small child will have no difficulty in using the toy fence.

To accomplish the foregoing general objects, and other more specific objects which will hereinafter appear, our invention resides in the toy fence elements, and their relation one to another, as are hereinafter more particularly described in the following specification. The specification is accompanied by a drawing, in which:

Fig. 1 is a rear elevation of a fence section embodying features of our invention;

Fig. 2 is a plan view thereof;

Fig. 3 is a front elevation of the same;

Fig. 4 is a fragmentary rear elevation showing the joined ends of two adjacent sections;

Fig. 5 is a vertical section taken in the plane of line 5—5 of Fig. 4, but drawn to enlarged scale;

Fig. 6 is a horizontal section taken in the plane of the line 6—6 of Fig. 1, but drawn to enlarged scale;

Fig. 7 is a horizontal section taken in the plane of the line 7—7 of Fig. 4;

Fig. 8 is a section taken in the plane of the line 8—8 of Fig. 1;

Fig. 9 is a section taken in the plane of the line 9—9 of Fig. 1;

Fig. 10 is a view similar to Fig. 4 but showing joined fence sections disposed at an obtuse angle;

Fig. 11 is a schematic plan view showing fence sections arranged in triangular outline;

Fig. 12 is a schematic plan view showing fence sections arranged in square outline;

Fig. 13 is a schematic plan view showing fence sections arranged in rectangular outline; and

Fig. 14 is a schematic plan view showing fence sections arranged in hexagonal outline.

Referring to the drawing, the toy fence section comprises an upright outer post **12** at one end, an upright inner post **14** at the other end, and rails or fence structure generally designated **16** extending therebetween. The outer post **12** is hollow and open for about half its periphery, as is most clearly seen in Fig. 6. It is dimensioned sufficiently larger in horizontal cross-section than the inner post **14** to receive the inner post of an adjacent section nesting within the outer post. This is best seen in Figs. 4, 5, and 7, in which the inner post **14'** is

shown nested within and complementing the outer post **12**.

The outer post **12** has a base **18** at its lower end and a top **20** at its upper end, and the inner post **14** is of such length, and its upper and lower ends are so shaped, as to be received between the base **18** and the top **20** with a snap fit. Differently expressed, the inner and outer posts have mating projections and recesses at the top and bottom so dimensioned that the inner post may be pushed into the outer post with a snap fit, and thereafter is held in nested relation, unless intentionally separated by pulling the sections apart. In the particular case here shown the inner post **14** has projections **22** at the top and bottom, and the outer post **12** has mating recesses **24**. The bottom recess is clearly shown in Fig. 6, and both top and bottom recesses are shown in Fig. 5.

Considering the structure in greater detail, the inner post **14** is preferably square in cross-section, as will be seen in Figs. 2 and 7. The outer post **12** is also square in cross-section, but is hollow, and with two of the four sides omitted. More specifically, in Fig. 6 it will be seen that the outer post **12** has a front face wall **26** and an inner wall **28**, but the outer end wall which would be located at **30**, and the inner face wall which would be located at **32**, are both omitted. Moreover, the cross-section of the outer post **12** is large enough to receive the inner post **14'** of an adjacent section nesting therewithin, as is best shown in Figs. 5 and 7. The sections may be snapped together either end-to-end or at right angles, and the inner post may be used to complement or fill the hollow of the outer post. For these two positions alone the posts might be dimensioned with no significant clearance therebetween, that is, post **14** could entirely fill post **12**.

However, we prefer to provide clearance between the inner post and the outer post, this clearance being indicated at **34** in Fig. 4, at **36** in Fig. 5, and at **38** in Fig. 7. The clearance is made sufficient to permit the sections to be disposed in angular relation. To further this purpose the projections **22** and the recesses **24** at the top and bottom of the posts are preferably made circular in horizontal section, so that they may act as pivots when disposing the joined sections in angular relation.

Some of the resulting possibilities in fence arrangement are suggested by the triangle shown in Fig. 11, the square shown in Fig. 12, the rectangle shown in Fig. 13, and the hexagon shown in Fig. 14. It will be understood that eight sections may be arranged in octagonal shape. It will also be understood that in each of the figures shown a single section may be replaced by two, three, or more sections disposed end-to-end, thus providing an enlarged enclosure. Also more intricate irregular shapes may be provided.

The relation of the parts when disposed at an obtuse angle is shown in Fig. 10. The sections are being looked at in the direction of the arrow **10** in Fig. 14, although the angle is somewhat greater than in Fig. 10. It will be observed that the corner of the inner post **14'** just reaches the side wall **28** of the outer post **12**, or, in other words, that the clearance shown at **34** in Fig. 4 is taken up when the post **14'** is turned at an angle, instead of the fence sections being either in alignment or at right angles.

The fence sections might be built up of parts, but we prefer to form each complete fence section out of a single body of integrally molded plastic. In the particular case here shown the fence structure, generally designated **16**, and located between the posts comprises three horizontal board-like rails **40**, **42** and **44** supplemented by two crossed or diagonal board-like rails **46** and **48**. The horizontal boards **40**, **42** and **44** are disposed in one vertical plane, while the diagonal boards **46** and **48** are

disposed in a vertical plane directly behind the boards 40, 42 and 44. This will be clear from inspection of Figs. 1, 2 and 3, and also from examination of Fig. 8 showing the board 42 in relation to the boards 46 and 48, and Fig. 9 showing the relation of the board 44 to the board 46.

The front faces of all of the boards, as well as the posts, may, if desired, be slightly scored with vermicular lines to simulate the graining of wood, and this is indicated in Fig. 3, but it will be understood that the specific fence shown is not intended to simulate a rustic or log fence, but rather a smooth fence in which the posts are finished square posts, and the rails are finished flat boards. It will also be understood that the projections 22 and the mating recesses 24 are all formed as a part of the molding operation.

The base 18 is preferably notched, as indicated at 50 in Figs. 2 and 6, the said notch serving to receive a thumbtack or nail in the event that it be desired to permanently secure the fence to a base board. However, in most cases the fence is simply taken down and boxed when not in use, and set up when it is to be used, and one of the important advantages of the present fence structure is that the sections are sturdy enough to withstand normal handling and even abuse, but at the same time the sections may be so readily put together or taken apart that there is no necessity for rough handling or abuse. The fence assembly and disassembly may be done rapidly and expeditiously each time the complete toy is to be played with, it being understood that the fence usually forms a part of a more elaborate toy such as a farm set, factory set, dollhouse set, or the like.

The illustrated fence sections make up an ordinary continuous fence. In practice the toy fence may include a special section having a simulated gate. Such a special section may take varied forms, and may be made as ornamental as desired, but the ends have inner and outer posts like those here described, and the gate section is assembled with the other sections in the manner already described. The invention, therefore, centers more particularly about the method of fitting together of the sections, and the construction of the mating end posts of the sections.

It is believed that the construction and method of use of our improved toy fence, as well as the advantages thereof, will be apparent from the foregoing detailed description. It will also be apparent that while we have shown and described the invention in a preferred form, changes may be made in the structure disclosed without departing from the scope of the invention, as sought to be defined in the following claims.

We claim:

1. A toy fence section comprising an upright outer post at one end, an upright inner post at the other end, rails or fence structure extending therebetween, said posts both being thicker and more massive in appearance than the rails or fence structure, said inner post being square in cross-section and said outer post being hollow and square in cross-section but with at least one of the four sides omitted, and being dimensioned sufficiently larger in cross-section than the inner post to receive the inner post of another such fence section nesting within the outer post so that together they appear to make up one post, said outer post having a base at its lower end and a top at its upper end, and said inner post being of such length and its ends so shaped as to be detachably received between the base and the top of the outer post of another such fence section with a snap fit.

2. A molded plastic integral toy fence section comprising an upright outer post at one end, an upright inner post at the other end, rails or fence structure extending therebetween, said posts both being thicker and more massive in appearance than the rails or fence structure, said inner post being square in cross-section and said outer post being hollow and square in cross-section but with two of the four sides omitted, and being dimensioned sufficiently larger in cross-section than the inner post to receive the inner post of another such fence section nesting within the outer post so that together they appear to make up one post, said outer post having a base at its lower end and a top at its upper end, said inner post being short enough to be received between said base and said top of another such fence section, and said posts having mating projections and recesses at the top and bottom so dimensioned that the inner post may be pushed into the receptive outer post with a snap fit and thereafter detachably held in nested relation by said snap fit.

3. A toy fence section comprising an upright outer post at one end, an upright inner post at the other end, rails or fence structure extending therebetween, said posts both being thicker and more massive in appearance than the rails or fence structure, said inner post being square in cross-section, said outer post being hollow and square in cross-section but with the outer end side and the adjacent inner face side omitted, and being dimensioned sufficiently larger in cross-section than the inner post to receive the inner post of another such fence section nesting within the outer post so that together they appear to make up one post, said outer post having a base at its lower end and a top at its upper end, said inner post being short enough to be received between the base and the top of the outer post of another such fence section, said posts having mating projections and recesses at the top and bottom so dimensioned that the inner post may be pushed into the receptive outer post with a snap fit and thereafter detachably held in nested relation by said snap fit.

4. A molded plastic integral toy fence section comprising an upright outer post at one end, an upright inner post at the other end, rails or fence structure extending therebetween, said posts both being thicker and more massive in appearance than the rails or fence structure, said inner post being square in cross-section, said outer post being hollow and square in cross-section but with the outer end side and the adjacent inner face side omitted, and being dimensioned sufficiently larger in cross-section than the inner post to receive the inner post of another such fence section nesting within the outer post so that together they appear to make up one post, said outer post having a base at its lower end and a top at its upper end, said inner post being short enough to be received between the base and the top of the outer post of another such fence section, said posts having mating projections and recesses at the top and bottom so dimensioned that the inner post may be pushed into the receptive outer post with a snap fit and thereafter detachably held in nested relation by said snap fit, there being sufficient clearance between the inner post and the receptive outer post to permit the sections to be disposed in desired angular relation, and said projections and recesses at the top and bottom being circular in horizontal section to act as pivots when disposing joined sections in angular relation.

5. A molded plastic integral toy fence section comprising an upright outer post at one end, an upright inner post at the other end, rails or fence structure extending therebetween, said posts both being thicker and more massive in appearance than the rails or fence structure, said outer post being hollow and open for about half its periphery and being dimensioned sufficiently larger in horizontal cross-section than the inner post to receive the inner post of another such fence section nesting within the outer post so that together they appear to make up one post, said outer post having a base at its lower end and a top at its upper end, said inner post being short enough to be received between the base and the top of the outer post of another such fence section, and said inner and outer posts having mating projections and recesses at the top and bottom so dimensioned that the inner post may be pushed into the receptive outer post

with a snap fit and thereafter detachably held in nested relation by said snap fit.

6. A molded plastic integral toy fence section comprising an upright outer post at one end, an upright inner post at the other end, rails or fence structure extending therebetween, said posts both being thicker and more massive in appearance than the rails or fence structure, said outer post being hollow and open for about half its periphery and being dimensioned sufficiently larger in horizontal cross-section than the inner post to receive the inner post of another such fence section nesting within the outer post so that together they appear to make up one post, said outer post having a base at its lower end and a top at its upper end, said inner post being short enough to be received between the base and the top of the outer post of another such fence section, said posts having mating projections and recesses at the top and bottom so dimensioned that the inner post may be pushed into the

receptive outer post with a snap fit and thereafter detachably held in nested relation by said snap fit, there being sufficient clearance between the inner post and the receptive outer post to permit the sections to be disposed in desired angular relation, and said projections and recesses at the top and bottom being circular in horizontal section to act as pivots when disposing joined sections in angular relation.

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