Aug. 20, 1968 C. G. HOCKETT 3,397,866

FENCE CONSTRUCTION

Filed Feb. 8. 1966 3 Sheets-Sheet 1

FIG-11

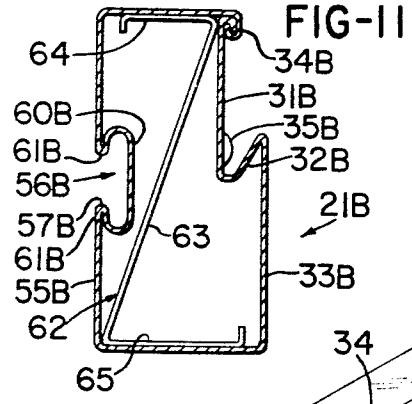


FIG-1

FIG-10

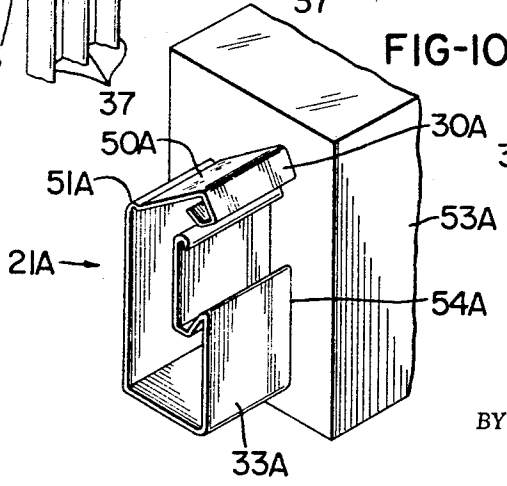
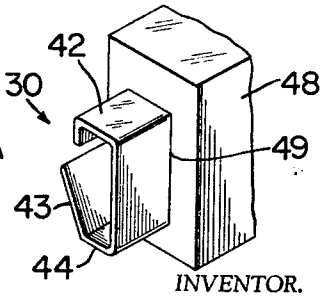


FIG-9



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FENCE CONSTRUCTION

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FIG-2

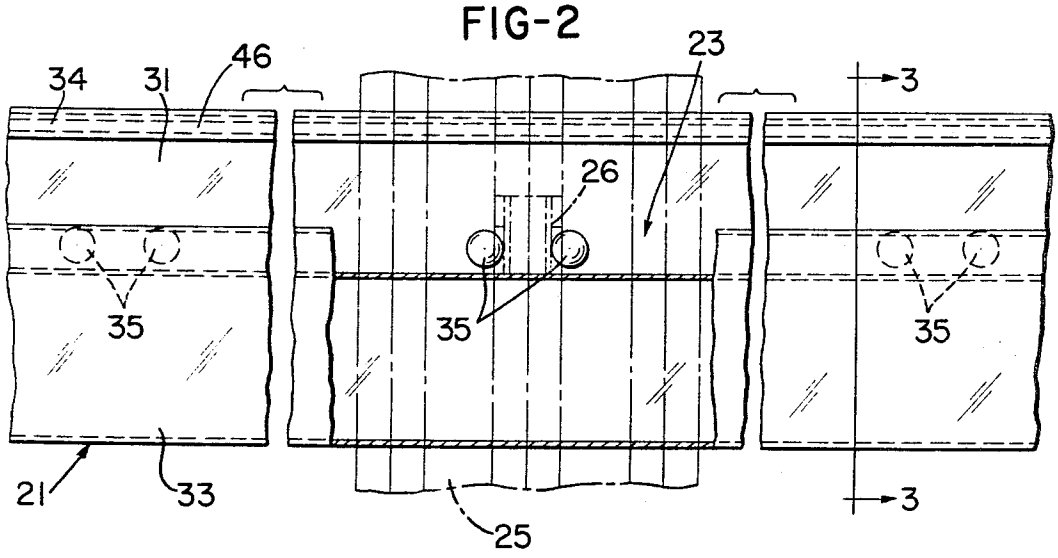


FIG-3

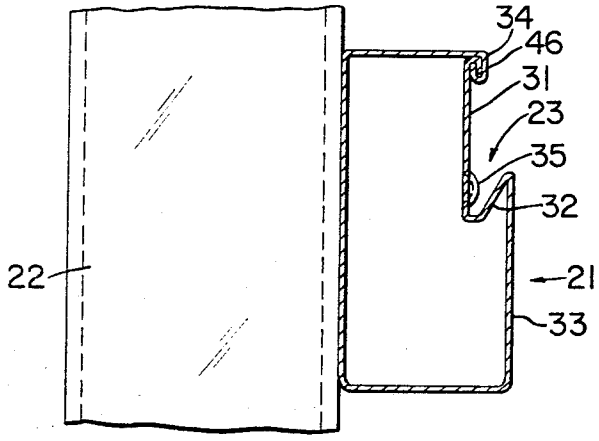


FIG-5

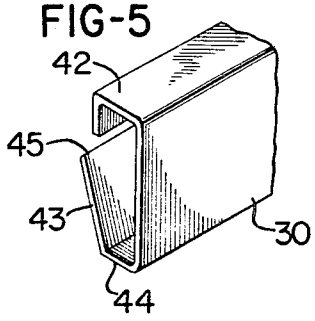


FIG-6

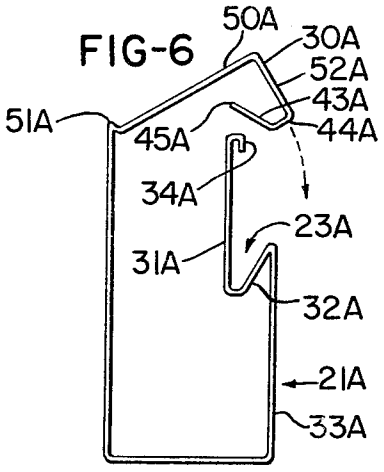
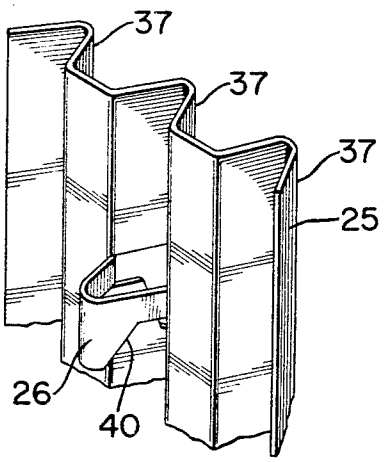


FIG-7



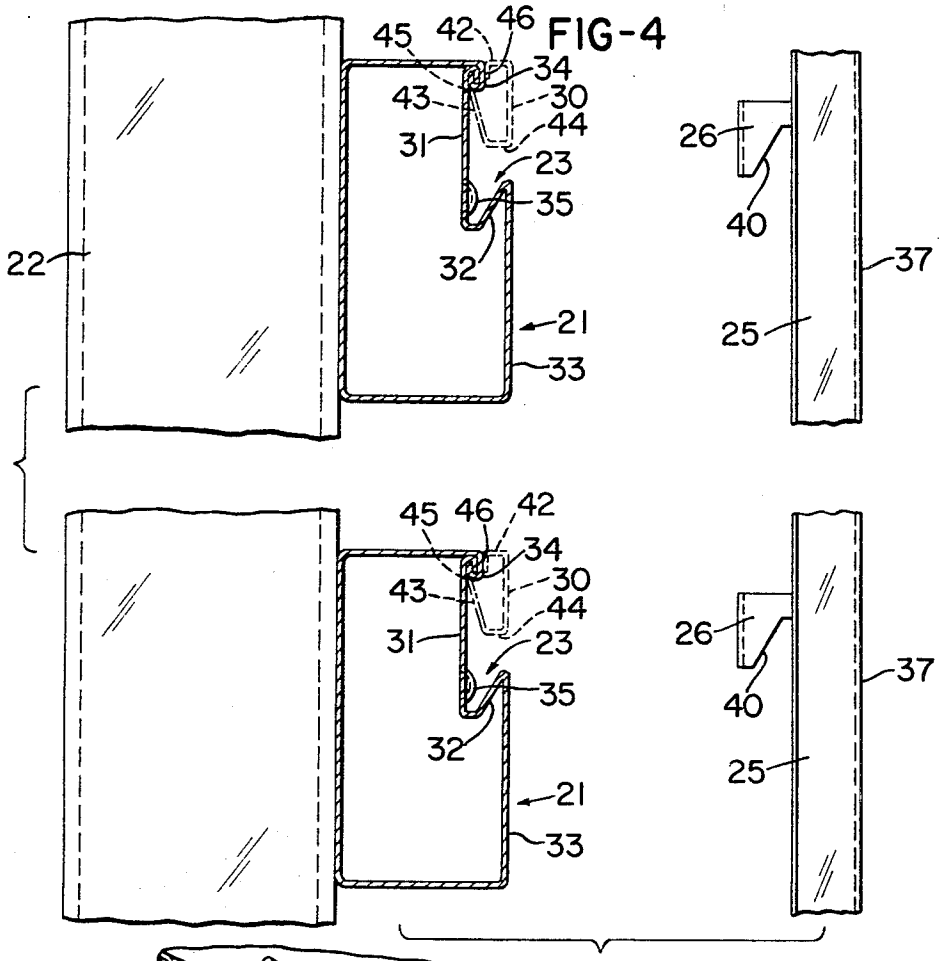
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Aug. 20, 1968 C. G. HOCKETT 3,397,866

FENCE CONSTRUCTION

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FIG-4



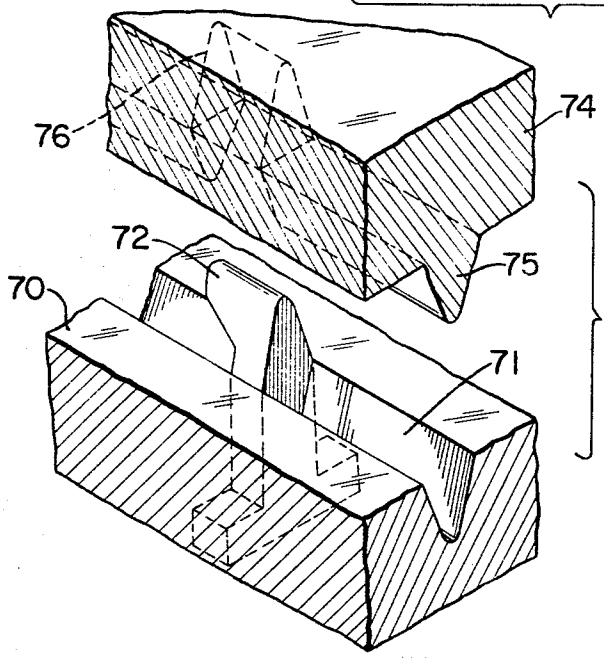


FIG-8

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United States Patent Office 3,397,866 Patented Aug. 20, 1968

3,397,866

FENCE CONSTRUCTION

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Filed Feb. 8, 1966, Ser. No. 525,917
12 Claims. (Cl. 256—22)

ABSTRACT OF THE DISCLOSURE

This disclosure relates to an improved fence construction in which a plurality of rails each having an elongated groove extending therealong are fastened in position to associated supports with each groove opening upwardly and a plurality of pickets having downwardly opening hooks are suspended along the horizontal rails with each hook being received in an associated groove in each rail. A plurality of projection means are provided in each rail and each cooperates with an associated picket to provide a desired spacing for the pickets along each rail whereupon the pickets are then locked in position along the rails using unique lock means.

This invention pertains to fences and more particularly to an improved fence construction and to an improved method for making a fence construction.

Currently available picket fence constructions designed for assembly at the using site are generally expensive to produce. Such current fences also require tedious effort to interconnect cooperating parts, usually comparatively large in number, in order to achieve such assembly thereby further increasing costs.

Accordingly, it is a feature of this invention to provide an improved fence construction employing a minimum number of component parts and which is inexpensive to produce and easy to assembly rapidly at the using site.

Another feature of this invention is to provide an improved fence construction adapted to be used over surfaces and terrains of all types and having different slopes.

Another feature of this invention is to provide an improved fence construction comprised of elongated substantially horizontal rail means having upwardly opening groove means therein and a plurality of picket means each having downwardly opening hook means as an integral part thereof adapted to be received in associated groove means to suspend each picket means along associated rail means after which such rail means is fixed to associated post means, and further including means for locking the picket means in position.

Another feature of this invention is to provide an improved fence construction which enables fastening picket means along cooperating rail means without requiring fastening holes in such rail and picket means.

Another feature of this invention is to provide an improved fence construction having great versatility wherein such fence construction is readily assembled at the using site without any modification of components except simple cutting of the horizontal rail means to the desired length.

Another feature of this invention is to provide an improved fence construction having means integral with substantially horizontal rail means thereof for spacing and holding picket means along such rail means in a predetermined manner without requiring use of measuring devices or separate holding devices.

Another feature of this invention is to provide an improved fence construction having lock means for locking a plurality of picket means to associated substantially horizontal rail means in which such lock means locks such

plurality of picket means to the rail means simultaneously without requiring individual attention to each picket means.

Another feature of this invention is to provide an improved fence construction in which lock means is provided as an integral part of rail means comprising such construction.

Another feature of this invention is to provide an improved fence construction using lock means which not only provides locking action but also yielding urges against adjoining structural members of such construction eliminating any looseness therebetween or any tendency for such members to rattle.

Another feature of this invention is to provide an improved method for making a fence construction economically and rapidly yet providing a construction of high strength.

Another feature of this invention is to provide an improved method for making a fence construction using a minimum number of assembly steps and in which rail means is fixed in substantially horizontal relation above surface means, a plurality of picket means are then suspended therefrom without disturbing such rail means, and such plurality of picket means are then locked in position along the rail means simultaneously in one operation.

Another feature of this invention is to provide an improved method for making a fence construction by providing elongated rail means having upwardly opening groove means therein and a plurality of picket means each having downwardly opening hook means therein, each of the hook means being inserted in associated groove means by a simple hooking motion to thereby suspend an associated picket means on the rail means.

Another feature of this invention is to provide an improved method for making a fence construction in which a plurality of picket means are suspended and held along rail means defining such fence construction by providing unique protuberances in such rail means for locating and spacing such picket means along such rail means.

Another feature of this invention is to provide an improved method for making a fence construction by providing elongated rail means having hinged lock means as an integral part thereof, such that after suspending a plurality of picket means from the elongated rail means the locking thereof is accomplished simply by lowering the integral lock means to simultaneously lock the plurality of picket means in position.

By way of summary, therefore, it will be seen from the above features and the disclosure to be presented hereinafter that this invention is for an improved fence construction comprising elongated rail means having groove means extending therealong and with such rail means being fastened substantially horizontally with such groove means opening upwardly. A plurality of picket means each having downwardly opening hook means are suspended along the horizontal rail means with each hook means being received in an associated groove means and each picket means is spaced along the rail means by an associated projection means provided on the rail means. Lock means is provided normally independently of the picket means and is urged thereagainst, after first fastening the rail means on associated supports therefor, to lock the picket means in position.

Therefore, it is an object of this invention to provide an improved fence construction and an improved method for making a fence construction having one or more of the novel features of this invention as set forth above or hereinafter shown or described.

Other objects, uses, and advantages of this invention are apparent from a reading of this description, which proceeds with reference to the accompanying drawings forming a part thereof and wherein.

FIGURE 1 is a perspective view of an exemplary fence construction with parts broken away showing a pair of substantially horizontal rail means having generally V-shaped groove means extending therealong and a plurality of associated picket means having downwardly opening hook means adapted to be received within such groove means, with some of the picket means suspended from such rail means and locked in position thereon and others shown generally opposite their associated positions on the rail means.

FIGURE 2 is an enlarged front view of a fragmentary portion of the elongated rail means of FIGURE 1 particularly showing cooperating pairs of projection means therein used to locate and hold associated picket means therealong and also showing by dotted lines the position of picket means within a pair of projection means.

FIGURE 3 is a sectional view on the line 3—3 of FIGURE 2 showing the generally V-shaped groove means and projecting ledge means provided in the front face of the horizontal rail means.

FIGURE 4 is a side view with parts broken away of picket means arranged opposite a cooperating pair of rail means, showing a pair of downwardly hooking hook means in the picket means, and showing by dotted lines the position taken by separate lock means to lock the picket means in position against the rail means once the picket means has been installed thereon.

FIGURE 5 is a fragmentary perspective view of lock means used to lock simultaneously the plurality of picket means to associated elongated rail means.

FIGURE 6 is a sectional view showing another embodiment of rail means in which the lock means is provided as an integral part thereof.

FIGURE 7 is a perspective view of a fragmentary portion of an exemplary picket means used to make the fence construction of this invention.

FIGURE 8 is a perspective view with parts cut away showing cooperating punch and die means used to make picket means of this invention wherein such punch and die means include means for making reinforcing rib means and downwardly opening hook means in one operation.

FIGURE 9 is a perspective view with parts broken away showing the lock means of FIGURE 5 being made by extruding through the illustrated die means.

FIGURE 10 is a perspective view with parts broken away showing the rail means of FIGURE 6 and die means used in making such rail means by extruding therethrough.

FIGURE 11 is a sectional view illustrating still another embodiment of rail means used to form the exemplary fence construction of this invention in which such rail means has rearwardly projecting channel means for receiving attaching means therein and enabling fastening of such rail means to associated post means, and further illustrating generally Z-shaped means inserted within such rail means enabling a pair of the rail means illustrated in this figure or previous figures of this disclosure to be arranged end to end and fastened together without requiring separate fastening means.

While the various features of this invention are hereinafter illustrated and described as being particularly adaptable for providing an improved fence construction and an improved method for making a fence construction such as, for example, an ornamental fence employing metal members or the like, it is to be understood that the various features of this invention can be utilized singly or in any combination thereof to provide other constructions for other uses and using other materials.

Therefore, this invention is not to be limited to only the embodiments illustrated in the drawings because the drawings are merely utilized to illustrate examples of the wide variety of uses of this invention.

The improved fence construction and the improved method for making a fence construction of this invention

enable the provision of a fence construction rapidly and economically at the using site without requiring numerous additional separate fastening means to fasten the various individual fence components together. The exemplary fence construction comprises elongated substantially horizontal rail means provided with groove means extending therealong which opens upwardly. The fence construction further comprises a plurality of picket means each having downwardly extending supporting hook means adapted to be received within the groove means. With the rail means fastened in a substantially horizontal manner it is a simple matter to merely hook such picket means along the rail means with a simple hooking motion. The rail means of this invention provide the desired predetermined spacing therealong without requiring measuring, drilling, or special fastening means. Such spacing is provided by a plurality of cooperating pairs of projection means or protuberances extending from the front face of the rail means. The protuberances of each cooperating pair extend on opposite sides of an associated picket means to locate and hold such picket means along its associated rail means. The picket means are of high structural strength and each preferably has rib means extending therealong. The downwardly opening hook means is preferably formed by taking a portion of such rib means and forcing it beyond the rearward face of the picket means to provide the necessary structure defining such hook means. Lock means is provided for simultaneously locking the plurality of picket means in position on associated rail means in one operation once such picket means have been hooked in predetermined spaced relation along the rail means.

The improved method for making a fence construction of this invention enables the fixing of substantially horizontal rail means, then installing picket means in predetermined spaced relation along the rail means using unique spacing means provided in such rail means and without disturbing the horizontal fixed position of such rail means, and then without requiring individual separate locking means for each of the picket means simultaneously locking all of such picket means to the associated rail means in one operation.

In the exemplary embodiment of this invention illustrated in FIGURE 1 a perspective view of a fence construction or fence indicated generally by the numeral **20** is shown. Fence **20** comprises elongated rail means shown as a plurality of elongated rails each designated by the numeral **21** and fastened in this example to suitable means such as a plurality of post means or posts **22**. Each rail **21** is fastened to associated post means in substantially horizontal relation.

Each rail **21** has elongated groove means shown as a generally V-shaped groove **23** therein extending along the front face thereof and opening upwardly.

Picket means shown as a plurality of vertical pales or pickets each designated by the numeral **25** are provided. Each picket **25** in this example has a pair of downwardly opening supporting hook means or supporting hooks **26** preferably formed as an integral part thereof. Each hook **26** is adapted to be received in a cooperating groove **23** of an associated rail **21** and thus suspend an associated picket **25** along the horizontal rails **21**. A pair of rails **21** are fixed to posts **22** substantially horizontally and in spaced apart relation corresponding to the spacing of hooks **26** on each picket **25**. The top rail is preferably fastened to posts **22** first and a picket **25** with its spaced apart hooks **26** used as a gauge to establish the correct position of the bottom rail prior to fastening thereof. Each picket **25** is then hooked to its associated rails **21** by a simple downwardly hooking motion.

Lock means such as a plurality of separate elongated lock strips each designated by the numeral **30** are provided. Each strip **30** cooperates with an associated rail **21** and corresponds generally in length thereto to lock pickets **25** in position. After the plurality of pickets **25**

are suspended from rail 21 a lock strip 30 is inserted in locking position between an associated rail 21 and associated pickets 25.

As shown particularly in FIGURES 2 and 3, each rail 21 has front face means or a front face defined by first vertical surface means or vertical surface 31 with transverse surface means or a transverse surface 32 extending upwardly at an angle from the terminal lower edge of surface 31 and for a fractional part of the vertical height of surface 31. The front face of rail 21 also includes second surface means or a second surface 33 extending vertically downwardly from the terminal upper edge of transverse surface 32. Transverse surface 32 and surface 31 in each rail 21 define the previously mentioned V-shaped groove 23 extending along such rail.

Each rail 21 has projecting ledge means such as a projecting ledge 34 extending outwardly from the front face thereof. Projecting ledge 34 cooperates with an associated lock means or strip 30 to lock each of the pickets 25 to associated rail means as will be described subsequently.

Each rail 21 has projection means comprising cooperating pairs of generally convex protuberances or projections 35 extending from the front face thereof. The protuberances 35 are formed as an integral part of the vertical surface 31 immediately behind the upper extremity of transverse surface 32. Each protuberance 35 in each cooperating pair extends on opposite sides of an associated picket 25 to thereby hold such associated picket 25 therebetween and maintain the position of such picket within confined limits along rail 21. In this example of the invention a protuberance 35 projects on each side of each downwardly extending hook 26.

Each pair of protuberances is preferably formed by indentations made in the rear side of surface 31 causing protuberances 35 to project from the front face thereof. Protuberances 35 are spaced along each rail 21 in a predetermined manner such that each picket 25 is installed between a cooperating pair of protuberances during the erection of fence 20 at the predetermined interval without requiring any measurement or separate fastening of each picket in position except during the locking thereof. The locking of all pickets 25 to their associated rail means is accomplished simultaneously in one operation as will be described later.

A fragmentary portion of an exemplary picket means or picket 25 of this invention is illustrated in perspective view in FIGURE 7. Each picket 25 comprises a plurality of three integral rib means each designated by the numeral 37 and each projecting from one face thereof, illustrated in this example as the front face. Each integral rib means 37 has an inverted generally V-shaped configuration and center rib 37 in this example is extended at two locations in the opposite direction from the rear face of picket 25 to define a pair of rearwardly extending inverted V-shaped projections forming hook means 26. Each hook 26 has an inside contour illustrated at 40 corresponding to surface 32 which engages such surface once each picket 25 is suspended from associated rail means 21.

In this example of the invention a pair of hook means 26 is shown for each picket 25 which corresponds to the two rails 21 used to make the fence construction illustrated in FIGURE 1. Each picket 25 could be provided with a single rearwardly extending hook 26 cooperating with a short fence 20 having only one rail 21 while in very high fences it may be desirable to provide more than two of such downwardly opening hooks 26 corresponding to a larger number of rails 21. Further, the configuration of the top of each picket 25 may be made flat, rounded, or any other configuration, as desired. In addition, the pickets 25 could have standard lengths, for example, of 29, 35, 31 or 47 inches for installed fence height of 30, 36, 42 and 48 inches respectively; thus providing a one inch clearance above ground level, whereby the need for cutting of pickets at the using site is completely eliminated.

As shown particularly in FIGURE 4, with each picket 25 installed with each of its hooks 26 in an associated groove 23, it will be seen that the vertical rear surface of each picket 25 immediately below each hook 26 engages surface 33 of an associated rail 21 and thereby helps align the picket vertically. This vertical alignment is maintained once lock strip 30 is inserted in position.

The lock means illustrated in the exemplary embodiment of FIGURES 4 and 5 comprises a separate elongated lock means or lock strip 30. Each lock strip 30 extends along an associated substantially horizontal rail 21 and is made in sections corresponding in length to each rail section 21. Each lock strip 30 operates to lock a plurality of pickets 25 in position simultaneously once they have been suspended from horizontal rail means 21.

Each separate lock strip 30 is preferably of roughly rectangular outline as shown in FIGURE 5. Each lock strip 30 has a transverse arm 42 which extends across the normal distance between each picket 25 and associated rail 21 and yieldable leg means illustrated as a yieldable leg 43 extending upwardly at an angle from the lower end portion 44 of strip 30. Leg 43 has a terminal upper end illustrated at 45 which extends outwardly beyond transverse arm 42.

It will be seen from FIGURES 1 and 4 that upon suspending a plurality of pickets 25 from their asociated rails 21, lock strip 30 is inserted between rail 21 and pickets 25 such that transverse arm 42 of each strip 30 is arranged generally normally, i.e., in a perpendicular manner, between pickets 25 and substantially horizontal rail 21 in a position immediately above each downwardly extending or opening hook 26. This insertion of lock strip 30 immediately above an associated hook 26 of each picket 25 compresses leg 43 inwardly enabling arm 42 to be brought in position against the front face 46 of ledge 34 while leg 43 extends below ledge 34 and engages such ledge to simultaneously lock all of the pickets 25 in position while yieldingly exerting a force acting between each of the pickets 25 and associated rail 21 to prevent relative movement between such pickets and rail. Thus, it is seen that each lock strip 30 provides the dual function of locking and yieldingly holding associated rails and pickets to prevent any relative movement and rattling tendencies.

Lock strip 30 may be made in any suitable manner as by roll forming, pressing or the like. It is preferably made by extruding. FIGURE 9 illustrates a die 48 used to extrude strip 30 therethrough. Die 48 has suitable opening means 49 therein corresponding to the cross-sectional outline of strip 30.

FIGURE 6 illustrates another exemplary embodiment of rail means in which the lock means is provided as an integral part thereof. The rail means or rail of FIGURE 6 is generally identical to rail 21 previously described except for the lock means, thus will be designated by the same numeral followed in this latter embodiment by the letter designation A. The various surfaces of such rail 21A which are identical to the previously described surfaces will also be given the same numeral followed by the letter A and not described again. The additional special features providing the integral lock means, designated 30A, will now be described and given new numbers also followed by the letter A. Rail 21A has a hinged top 50A formed as an integral part thereof. Top 50A is preferably formed integrally with the rear wall of the rail 21A and bends or hinges about an integral hinge 51A provided at the terminal top of such rear wall.

The lock means 30A in rail 21A includes a surface 52A which is arranged generally perpendicular to surface 50A and which lies adjoining the rear vertical surface of an associated picket 25 once lock means 30A is lowered into locking position. Lock means 30A has a yieldable leg 43A extending upwardly at an angle from the lower end portion 44A thereof. Leg 43A has a terminal upper end 45A

which snaps in position under projecting ledge 34A in rail 21A to lock the associated pickets 25 in position once they are suspended from a fence construction utilizing horizontal rails 21A.

Thus, it is seen that upon suspending a plurality of pickets 25 from rails 21A the hinged vertical top 50A of each rail 21A is moved downwardly about its hinge 51A so that leg 43A is yieldingly compressed past projecting leg 34A and once the top surface 50A reaches a generally horizontal position, leg 43A snaps inwardly toward the rail 21A and catches under the projecting ledge 34A to thereby simultaneously lock all of the pickets 25 in position against associated rail 21A. The resilient action of leg 43A also urges lock means 30A against each of the pickets 25 and holds each picket against movement relative to rail 21A.

Each rail 21A may be suitably formed as by roll forming, pressing or the like. It is preferably formed by extruding through suitable die means or die 53A as shown in FIGURE 10. Die 53A has an opening 54A therein corresponding to the cross-sectional configuration of rail 21A. The extrusion process lends itself to production of elongated rails 21A at minimum cost.

FIGURE 11 is a sectional view of still another embodiment of rail means. The rail means of FIGURE 11 is identical to the rail means of FIGURES 1 and 4 except for special means provided for attaching to vertical post means. All identical parts in this latter embodiment will be designated by the same numeral designation, as previously, followed by the letter designation B in this embodiment and thus will not be described again. The rail means or rail of FIGURE 11 is thus designated 21B and the new features will now be described.

Rail 21B is generally of a box beam construction having a rear wall 55B with elongated channel means provided therein and shown as an elongated channel 56B extending therealong. While channel means 56B may be formed simply by cutting out a long narrow strip from rear wall 55B, it is preferably formed therein as by roll forming or the like providing a relatively narrow entrance shown at 57B and an expanded portion 60B which expands within rail 21B. The expanded portion 60B of channel 56B defines a double thickness in rear wall 55B adjoining the entrance at 57B and indicated at 61B. Thus, it will be appreciated that attaching means such as a T-bolt (not shown) may be inserted with its larger head portion within expanded portion 60B and when drawn tight against double thickness wall 61B provides increased strength for rail 21B as well as a simple and efficient way for attaching rail 21B to associated post means.

FIGURE 11 also illustrates Z-shaped fastening means or Z-shaped fastener 62 inserted within rail 21B. Fastener 62 has a central portion 63 and a pair of outwardly urging terminal ends 64 and 65. The central portion 63 is designed to correspond with the vertical dimension of an associated rail 21 and it will be seen that by the use of fastener 62 a pair of rails 21 may be arranged in endwise relation with fastener 62 inserted therein to thereby fasten the adjoining terminal ends together. This fastening action is of course accomplished without need for additional fastening devices such as nuts and bolts or the like or additional expensive drilling operations. While the Z-shaped fastener 62 is only shown in this example of the invention within rail 21B it will be appreciated that inasmuch as rails 21 and 21A may also be basically of a box beam construction, as shown, the fastener 62 could also be similarly used for similarly fastening such rails together in endwise relation.

FIGURE 8 illustrates in perspective view with parts cut away cooperating punch and die means used to make the pickets 25 of this invention in one operation. It will be seen that the die indicated by the numeral 70 has a generally V-shaped groove 71 therein extending therealong which defines the central outwardly extending rib of a picket 25. The die also includes a projection 72 therein arranged to extend upwardly from a selected location of groove 71. Projection 72 in cooperation with means provided on a cooperating punch defines a rearwardly extending hook means 26 of picket 25. Cooperating punch 74 is also illustrated and has a projection indicated at 75 corresponding to groove 71. A generally V-shaped recess is provided and indicated at 76 which corresponds to the projection 72 in the die 71. Cooperating projection 72 and recess 76 define V-shaped hook 26 as previously mentioned. Thus, an elongated flat strip of metal or the like having a relatively small thickness is placed on die 70 and punch 74 is urged thereagainst to form picket 25 in one pressing operation.

It will be appreciated that only the punch and die portions for forming the center rib are shown as well as only such portions for forming one rearwardly facing hook 26. The punch and die units may of course include means as described above to form a plurality of hook means 26 simultaneously by extending other portions of the central rib rearwardly as well as including means for forming ribs on either side of such central rib to define picket 25 as shown in FIGURE 7.

The method of this invention enables making a fence construction rapidly and economically, without requiring special handling of individual pales or pickets to fasten and lock them in position to associated rail means. In addition the method employed assures that a fence construction of high structural strength is provided. Although the detailed method steps have already been described, a condensed presentation of such method steps will now be made.

Basically the method comprises providing vertical post means or the like and in this example fixing a pair of rails 21 thereto. Each of the rails 21 are fixed during a fixing operation to the vertical post means in substantially horizontal relation and spaced apart from each other and spaced above ground level. Each rail 21 is fixed with groove means 23 provided therein facing upwardly.

A plurality of spaced apart pairs of protuberances, each designated by the numeral 35, are provided in each rail 21 for spacing pickets 25 provided for the fence construction. Each pair cooperates with an associated pair in the adjacent rail means to locate and hold an associated picket 25 in position along the horizontal rails. Each pair of protuberances is arranged along its associated rail 21 in a predetermined manner and spaced apart from adjoining pairs to thereby space pickets 25 along each rail 21 without requiring measurement or any other fastening action during the process of erecting a fence. The protuberances in each pair are spaced apart so as to extend to either side of a suspended picket 25 and hold such picket in position therebetween.

Each of the plurality of pickets 25 provided for the fence construction of this example has a pair of downwardly opening hooks 26 for hooking along rails 21. For added strength each picket is also provided with the V-shaped rib means extending from its front face. Selected portions of the rib means are extended rearwardly in the opposite direction to define the downwardly opening hooks 26 which also have the cross-sectional shape of an inverted V.

The next method step comprises suspending pickets 25 from the rails 21 by using the downwardly opening hooks 26. With the rails fixed in position substantially horizontally the suspending action for each picket 25 is accomplished very simply by a simple hooking motion wherein each hook 26 engages an associated rail 21 while being received within the upwardly opening groove 23 thereof. Each picket is held along the rails in a predetermined spaced apart manner as determined by protuberances 35 as previously described.

Lock means is provided for locking the plurality of pickets to the rails 21. Two types of lock means have been presented in this disclosure of the invention and include lock means or strip 30 which is separate from the

rail means and lock means formed as an integral part thereof. Lock strip **30** is inserted during an inserting step between the plurality of pickets **25** and an associated rail **21** to simultaneously lock the pickets **25** to rails **21** and prevent relative movement therebetween as well as prevent removal of pickets **25**. Lock strip **30** has a yieldable leg **43** which snaps under cooperating projecting ledge **34** in rail **21** to accomplish the locking action.

The elongated rails **21A** having integral lock means, designated **30A**, are preferably formed by extruding through suitable die means. Each rail **21A** has a hinged top construction and lock means **30A** is provided at the swinging end thereof. Each rail **21A** also has a projecting ledge **34A** extruded therein for cooperation with lock means **30A** to provide the locking action. Each lock means **30A** has yieldable leg means extending upwardly at an angle from the lower end portion thereof and such yieldable leg terminates in a terminal upper end. After suspending the plurality of pickets **25** along rails **21A** hinged top **50A** is lowered into a generally horizontal position thereby inserting lock means **30A** between its rail **21A** and pickets **25**. This locking action is accomplished during the inserting step of compressing yieldable leg inwardly until the terminal upper end thereof engages and snaps under associated ledge **34A** thereby simultaneously locking the plurality of pickets **25** in position.

The basic assembly steps are thus very simple in that a pair of rails **21** are fixed substantially horizontally and held in their fixed positions. A plurality of pickets **25** are then suspended from such rails in a predetermined spaced apart manner by a simple hooking motion. The pickets are then all simultaneously locked to their associated rails in one operation through the use of unique lock means provided for such purpose.

Certain members in this disclosure have been described as being preferably formed by extruding. However, it is to be understood that any of the various members may be extruded, rolled, bent into the various shapes, or formed by pressing or the like as desired.

Although the fence construction of this invention has been produced for certain applications using metal components such as metal containing aluminum, it will be appreciated that metal, plastics, wood, or any combination thereof may be used for the various components because the novel and useful features of this invention are independent of the choice of material.

Throughout this description references have been made to front, rear, top, bottom and the like. It will be appreciated that these designations have been given for ease of description and describe the positions of the various components as illustrated in the drawings; therefore, are not to be considered as limiting in any way.

Thus, it is seen that this invention provides an improved fence construction and an improved method for making a fence construction which is of high structural strength, which is economical to manufacture, and which is easily and quickly erected at the using site without requiring numerous components.

While the form of the invention now preferred has been disclosed as required by statute, other forms may be used, all coming within the scope of the claimed subject matter which follows.

What is claimed is:

1. An improved fence construction comprising, picket means having downwardly opening supporting hook means, elongated rail means fastened in position on associated support means therefor, said rail means having groove means extending therealong for receiving said hook means therewithin to thereby enable suspending said picket means on said rail means, and lock means being normally independent of said picket means and locking said picket means in position on said rail means upon being urged thereagainst after fastening said rail means on said associated support means to prevent removal of said picket means.

2. An improved fence construction as set forth in claim **1** in which said elongated rail means has a front face with projecting ledge means extending therefrom and hinged top surface means with said lock means at the swinging end thereof, and said lock means having yieldable leg means extending upwardly at an angle from the lower end portion of said lock means with said leg means terminating in a terminal upper end, such that after suspending said picket means from said rail means said top surface means is moved in a hinged manner initially compressing said leg means against said ledge means until said terminal upper end snaps in position under said ledge means to lock said picket means in position and yieldably hold said picket means against movement relative to said rail means.

3. An improved fence construction as set forth in claim **1** wherein said picket means comprises a plurality of picket means, said rail means has a front face adjoining said plurality of picket means and projecting ledge means extending therealong, and said lock means comprises separate elongated lock means having transverse arm means which extends across the normal distance between said suspended picket means and said rail means and yieldable leg means extending upwardly at an angle from the lower end portion of said lock means, and said leg means having a terminal upper end which extends outwardly beyond said transverse arm means, such that after suspending said plurality of picket means from said rail means said elongated lock means is inserted between said rail means and said picket means with said transverse arm means arranged generally normally therebetween and immediately above said hook means of each of said picket means by compressing said leg means inwardly until said terminal end snaps under said ledge means to simultaneously lock said plurality of picket means in position and yieldably hold each of said picket means against movement relative to said rail means.

4. An improved fence construction as set forth in claim **1** in which said rail means comprises a plurality of spaced apart rail means and said picket means has a plurality of downwardly extending hook means corresponding in number to said plurality of rail means for suspending said picket means from said plurality of rail means.

5. An improved fence construction as set forth in claim **1** in which said picket means comprises integral rib means projecting from one face thereof and having a selected portion of said picket means forming said rib means extending in the opposite direction from said one face to define said downwardly extending hook means.

6. An improved fence construction as set forth in claim **1** in which said elongated rail means has front face means defined by first vertical surface means with transverse surface means extending upwardly at an angle from the terminal lower edge thereof for a fractional part of the vertical height of said first surface means and second surface means extending vertically downward from the terminal upper edge of said transverse surface means, said transverse surface means and said first surface means defining said groove means, and said picket means having a rear surface immediately below said hook means which engages said second surface means to provide improves vertical stability for said picket means.

7. An improved fence construction as set forth in claim **1** in which said rail means comprises a box beam construction having front face means defined by first vertical surface means with transverse surface means extending upwardly at an angle from the terminal lower edge thereof for a fractional part of the vertical height of said first surface means and second surface means extending vertically downward from the terminal upper edge of said transverse surface means, said transverse surface means and said first surface means defining said groove means, said picket means having a rear surface immediately below said hook means which engages said second surface means to provide improved vertical stability for

said picket means, and said rail means having a rear face with elongated channel means therein, said channel means being adapted to receive attaching means therethrough for attaching said rail means to associated post means.

8. An improved fence construction as set forth in claim **1** in which said picket means comprises a plurality of spaced apart picket means and in which said rail means comprises a plurality of spaced apart elongated rail means each having its associated groove means opening upwardly, each of said picket means having a plurality of downwardly extending hook means corresponding in number to said plurality of rail means, each of said hook means being inserted within an associated groove means for suspending each of said picket means from said plurality of rail means, each of said rail means having projection means extending therefrom comprising a plurality of spaced apart cooperating pairs of generally convex protuberances in each of said rail means, with each pair cooperating with a corresponding pair in adjacent rail means and with an associated picket means, and said protuberances in each pair extending to either side of an associated picket means holding said picket means in predetermined spaced apart relation along said rail means.

9. An improved fence construction as set forth in claim **1** in which said rail means has projection means extending therefrom toward associated picket means, said projection means locating and holding said picket means along said rail means.

10. An improved fence construction as set forth in claim **9** in which said projection means comprises a spaced apart cooperating pair of generally convex protuberances

in said rail means extending therefrom toward associated picket means and to either side thereof to thereby hold said associated picket means therebetween.

11. An improved fence construction as set forth in claim **9** in which said picket means comprises a plurality of spaced apart picket means and in which said projection means comprises a plurality of spaced apart cooperating pairs of generally convex protuberances in said rail means with each pair cooperating with an associated picket means, and said protuberances holding said plurality of picket means in predetermined spaced apart relation along said rail means.

12. An improved fence construction as set forth in claim **11** in which said lock means comprises separate elongated lock means generally corresponding in length to said elongated rail means and cooperating between said rail means and said spaced apart picket means to urge each of said picket means within said groove means to prevent said removal.

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