

FENCING STRUCTURE

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The invention relates to a fencing structure of the kind comprising a number (at least two) of posts which in use stand uprightly from a site, a pair of rails which extend between and are supported upon each pair of the posts thereby to provide a structure upon which in-fill panels, palings or the like are supported.

5 There is an obvious economic advantage in roll-forming steel in continuous lengths of the same cross-section and using sections thereof for both posts and rails. In addition to having a minimum of different components it is advantageous to have both posts and rails of identical appearance.

10 The invention provides a fencing framework construction which, in addition to requiring few different components, is also amenable to simple erection without need for more than "handy-man" skill, and without need for onsite work beyond the kind that can be carried out with simple tools such as a hammer and a screw-driver.

15 The fencing framework unit may be used in any required number to constitute a fence of required length and is suitable for marketing in compact dismantled condition with or without in-fill panel material of conventional kind for incorporation in the framework upon or during assembly thereof.

20 According to the present invention there is provided a fencing framework unit comprising:-

25 two post members each of channel cross-section, wherein the free edges of the channel flanges extend into inwardly directed sub-flanges defining between them a space able to accept a marginal edge portion of an in-fill panel,

two rail members of the same cross-sectional form as said post members, and

30 means to hold said post and rail members in rectangular array with their said spaces directed inwardly of that array,

said means comprising, at each corner of said array, an elbow whereof one limb is able to enter one of the members meeting at that corner and is furnished with fastener devices to fix it relative to that member, and whereof the other limb is able to enter the other one of said meeting members as an interference fit thereby to load that other limb frictionally against withdrawal from that other member.

An embodiment of the invention will now be described, by way of an example, with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of a section of a fencing frame member being either a post or a rail;

Figure 2 is a perspective view of an elbow;

Figure 3 is a vertical cross-section of a pair of fencing sections stepped for constructing a fence on an inclined or sloping site;

Figure 4 is a sectional view taken along the line 4-4 of Figure 3;

Figure 5 is a plan of a corner post;

Figure 6 is a plan of an end post; and

Figure 7 is a side elevation of a fence in course of erection.

Referring to the drawings, an example of a fence is shown, in Figure 7, consisting of four framework units 8 one of which is complete and the remaining three at various stages of assembly. Each of these units 8 has two channel-section post members 9 wherein the free edge of the channel flanges 10 extend into inwardly directed sub-flanges 11, which between them define a space able to accept a marginal edge portion of an in-fill panel such as those indicated at 12 in Figures 3 and 7. This in-fill panel 12 may be formed of any sheet material commonly used for that purpose or as cladding material or the like; for example, sheet steel of sinusoidal or other corrugated profile. Alternatively, the in-fill panels 12 may be of plastics material, aluminium and so on.

Each framework unit 8 also includes two rail members 13 of the same cross-sectional shape as the post members 9 preferably being portions cut from the same stock; and, which in further preference is produced by conventional roll forming of sheet metal strip.

The members 13 and 9 in each framework unit 8 are furnished with means to hold them in rectangular array with the spaces between their sub-flanges 11 all directed inwardly of that array.

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The means to hold the members 9, 13 in array consist of four elbows, one at each corner of the array 8, of the form shown in Figure 2. These elbows are preferably formed of sheet metal and each has one limb 14 able to enter a post 9 and be secured therein by way of a fastener device such as a self-tapping screw as indicated at 15. The other limb 16 is able to enter one of the members, such as 13, as an interference fit so that when the whole fence is assembled with the posts 9 standing rigidly upright, the frictional resistance to separation of limbs 16 from the rail member 13 is sufficient to ensure retention, each to the other, of the rail member and the elbow concerned.

Each of the limbs 16, is designed to be an interference fit with the rail member 13 to receive it, and its leading edge is preferably furnished with lead-in ears 17; these being outwardly bent corner portions as shown in Figure 2 which substantially and freely over-span the sub-flanges 11A as indicated in Figure 4.

Figure 5 merely indicates the arrangement of posts 9 to be adopted when a fence is required to extend around a 90° corner.

Figure 6 merely illustrates an additional reinforcement post 9A which may be applied to the end of a framework unit where a fence is required to come to an end.

To construct a fence the posts 9 are positioned firmly upright in the ground in conventional manner. Figure 3 shows an adjoining pair of framework units, in which the neighbouring two posts 9 are secured together by screws 15 with an elbow inserted through the opening between the outer edges 11 at the end of the posts 9 as shown in Figures 3 and 4. The bottom rail 13 is slid over the horizontal limb of the inserted elbow.

Once the framework of the posts 9 and bottom rails 13 has been erected for the length of the fence, as indicated at the right hand end of Figure 7, the in-fill panels 12 and top rails 13 can be added. An elbow is inserted in the top of each upright post 9 in a mirror image position to the bottom elbow and is fastened by a screw 15 to the post 9. The edge margins of the in-fill panel sheets 12 are inserted into the bottom rail 13 one at a time. A top rail 13 is held above the sheets, tilted and slid over the elbow limb, locking the top rail 13 in place at one end. The fourth elbow is placed in the other end of the rail and lowered over the sheets 12 until the elbow is lodged and fastened into the top of the post 9. Naturally, where the top

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rails 13 extending from a post 9 are at the same level, the one screw will serve to hold an elbow in each post 9. A cap may be used to close the open end of the top of each upright post 9.



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CLAIMS

1. A fencing framework unit comprising:-

two post members each of channel cross-section, wherein the free edges of the channel flanges extend into inwardly directed sub-flanges defining between them a space able to accept a marginal edge portion of an in-fill panel,

two rail members of the same cross-sectional form as said post members, and

means to hold said post and rail members in rectangular array with their said spaces directed inwardly of that array,

said means comprising, at each corner of said array, an elbow whereof one limb is able to enter one of the members meeting at that corner and is furnished with fastener devices to fix it relative to that member, and whereof the other limb is able to enter the other one of said meeting members as an interference fit thereby to load that other limb frictionally against withdrawal from that other member.

2. A unit as claimed in claim 1, in which said members are roll-formed sections and said elbows are formed out of sheet steel.

3. A unit as claimed in claim 2, in which the elbow limb frictionally engaged with one of said rails has its leading end furnished with lead-in ears able freely to overspan the sub-flanges of the member into which that limb is inserted.

4. A kit of components for assemblage into a unit according to any one of the preceding claims, comprising:-

two post members each of channel cross-section wherein the free edges of the channel flanges extend into inwardly directed sub-flanges defining between them a space able to accept a marginal edge portion of an in-fill panel,

two rail members of the same cross-sectional form as said post members, and

fastening means useable to hold said post and rail members in rectangular array,



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said fastening means comprising four elbows each having one limb able to enter and be secured within a post member, and a second limb able to enter one of said rail members as an interference fit relative thereto.

- 5 5. A fencing arrangement substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.
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