

(21) Application No 9225460.6

(22) Date of Filing 04.12.1992

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(51) INT CL<sup>5</sup>  
E04H 3/24 , E04G 1/15

(52) UK CL (Edition M )  
E1D DLEKH D2026 D2069 D2107 D2150 D402 D543  
D545  
E1S SS

(56) Documents Cited  
GB 2226060 A GB 2185272 A GB 2103261 A  
GB 1054411 A EP 0147308 A2 US 4813201 A

(58) Field of Search  
UK CL (Edition M ) E1D DF172 DF194 DLEKH DLEKN  
DLEQV DPS , E1S SS  
INT CL<sup>5</sup> E04G , E04H

(54) Platform system e.g.for staging units

(57) A platform system, in particular for staging units, comprises at least one unit each comprising a substantially flat platform having on the underside thereof downwardly extending hollow posts (1), and legs insertable into the said posts, which posts are cast and each include one or more lugs (2) for connection with the side frame (3) of the platform.

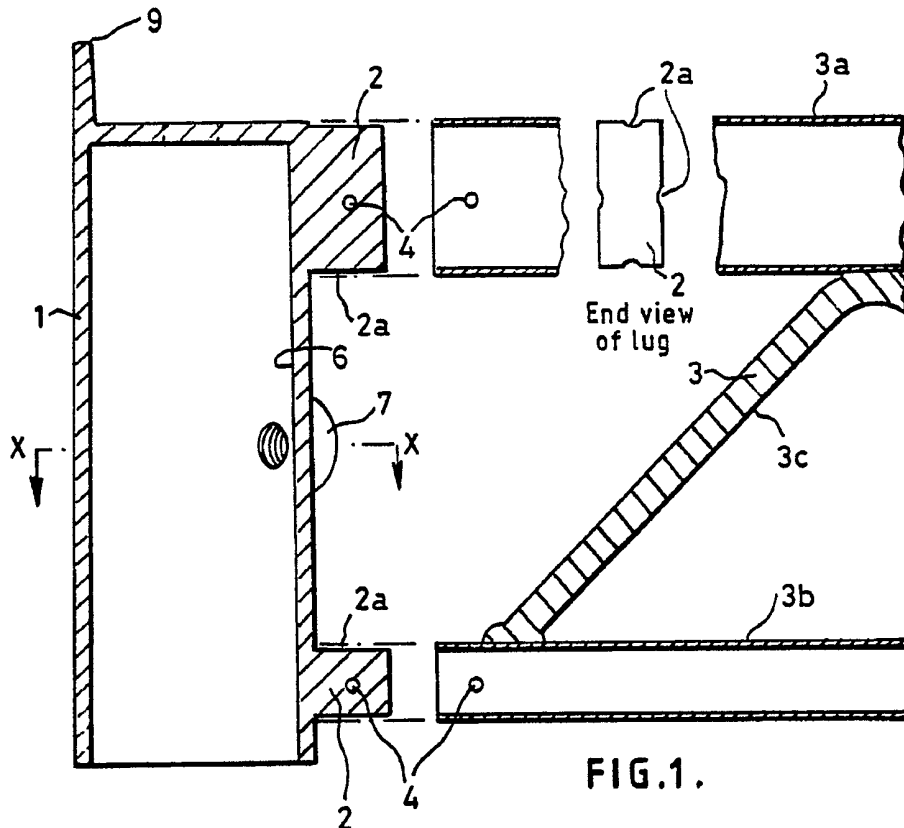
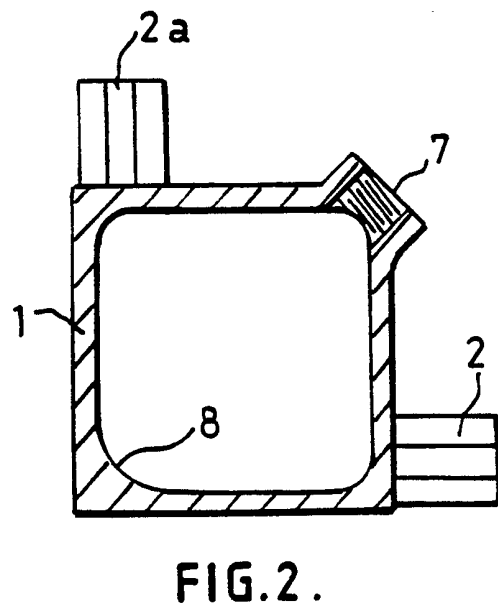
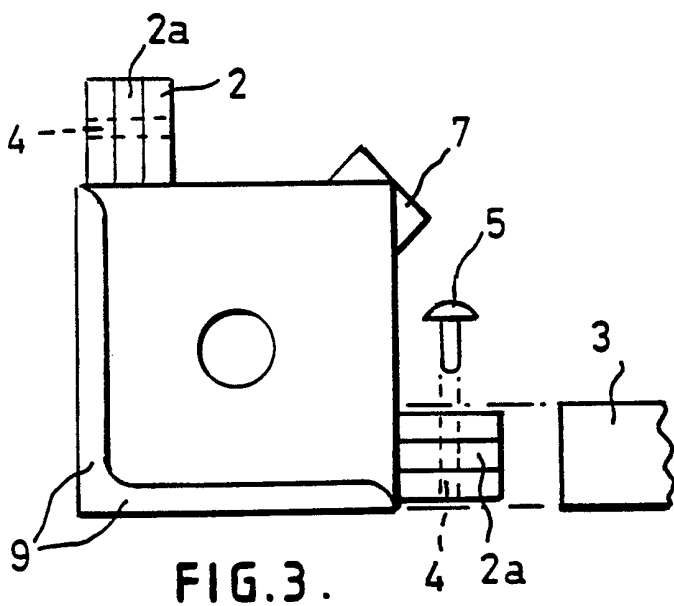
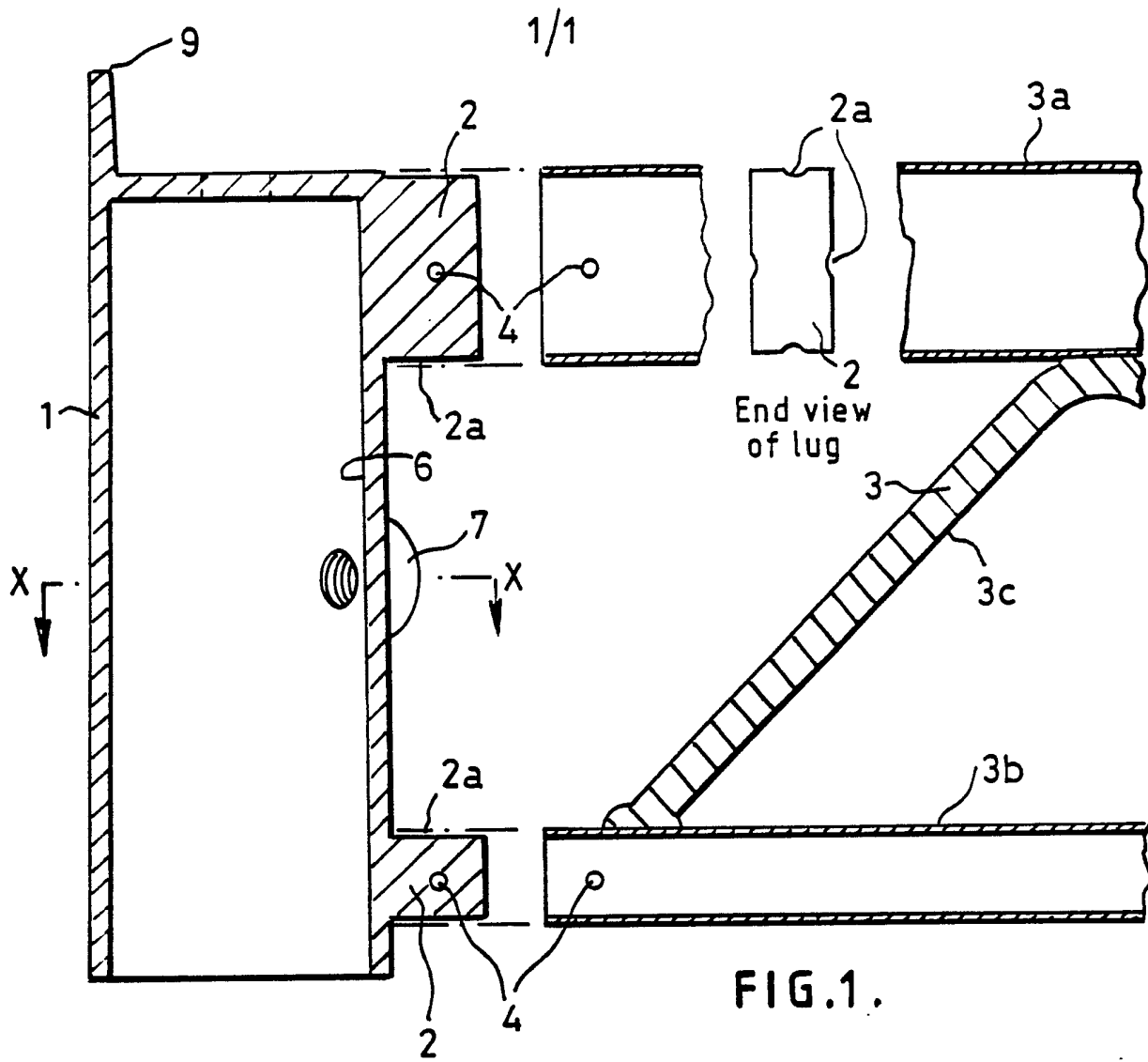


FIG.1.



PLATFORM SYSTEM

This invention relates to a platform system, in particular for staging units. Such units are commonly used in the entertainment industry (theatres, studios, concert halls etc). The platform system of the invention may however find wider application, particularly in the building industry.

The present invention is particularly concerned with a platform system of the general type described in U.S. patent no. 4813201, according to which at least one unit each comprises a substantially flat platform having on the underside thereof downwardly extending hollow posts of square cross-section, and legs of circular cross-section insertable into said posts to provide a platform of variable height and angle of rake.

In the known platform system of this type the side frame elements, which are of conventional truss design, are welded to the corner posts, as a result of which the platform has a high packing volume. Also, in the known system, it is necessary to weld the side frame to the corner posts with considerably accuracy. It would therefore be desirable to provide a platform system wherein the various components thereof could be readily assembled on site, possibly by selection from components of different sizes.

The present invention is therefore concerned with an improvement of the corner post construction and its manner of connection to the main part of the frame of the platform system.

The present invention provides a platform system comprising at least one unit each comprising a substantially flat platform having on the underside thereof downwardly extending hollow posts, and legs insertable into the said posts, which posts are cast and each include one or more lugs designed to be connected with the side frame of the platform.

In the platform system of the invention the components thereof can be readily assembled on site, and a strong connection between the corner posts and the side frame can be obtained with good accuracy.

The lugs which are integrally cast with the corner posts are suitably connectable to the side frame by rivets or the like, the connection between the lugs and the side frame being preferably reinforced by adhesive. However, the corner posts may be welded to the side frame, if desired.

The corner posts will be preferably each provided with an integral nut for cooperating with a screw or bolt for

fixing the supporting legs into the posts. As in the platform system of U.S. patent no. 4813201, the posts are preferably of square cross-section and the legs are of circular cross-section. Tightening the screw or bolt into the nut cast on the corner post drives the leg against the two opposing inner faces of the post. The legs are preferably of scaffold tube inserted into the posts to provide staging of variable height or angle of rake.

The cast corner posts can be provided at their upper ends with flanges to receive and retain the corners of the flat top of the platform. The flat platform top is usually a sheet of wood.

The invention in another aspect provides a cast corner post for use in the platform system of the invention, the post having at least one lug integrally cast therewith for connection to a side frame member of the platform.

The invention will be further described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 is a side sectional view of a corner post and adjacent part of a side frame of a platform system according to the invention;

Figure 2 in a section taken along the line X - X in figure 1; and

Figure 3 is top elevation of the corner post shown in figure 1.

The drawings show a corner post and adjacent side frame of a platform system which is generally of the type described in U.S. patent no. 4813201.

The corner post 1 is cast in a single piece from steel or aluminium and has lugs 2 for connecting the post to a side frame 3 of the platform system. The frame 3 is of truss design and comprises upper and lower tubular parts 3a and 3b connected by an undulating tubular part 3c welded to the parts 3a and 3b.

The lugs and the side frame parts 3a and 3b have holes 4 for receiving rivets 5 or the like for securing them together. The side frame parts 3a and 3b have an inner diameter adapted to fit over the outer diameter of the lugs 2. The lugs are also provided with longitudinal channels 2a for adhesive. The rivets 5 or the like will normally be fitted during curing of the applied adhesive. Adhesive may in use be injected into one of the holes 4, from which it will flow into the channels 2a.

The internal wall 6 of the post 1 is tapered as shown to facilitate removal of the cast post from a mould.

The post 1 is also provided with an integral cast-in nut 7 for receiving a screw or bolt (not shown) for securing a leg (also not shown) within the post. The nut has a thread tapped after casting, as shown in figure 2.

As best shown in figure 2, extra material may be provided at the intended external corner 8 of the post, for additional strength.

The top face of the post is provided with a flange 9 on two sides as shown, to form a corner for receiving and retaining a corner of a flat top of the platform (not shown).

As previously explained, the component parts of the platform system of the invention, in particular the corner posts 1 and the side frame 3, may be securely and readily connected together on site, by virtue of the posts 1 which are pre-cast and provided with the lugs 2.

CLAIMS:

1. A platform system comprising at least one unit each comprising a substantially flat platform having on the underside thereof downwardly extending hollow posts, and legs insertable into the said posts, which posts are cast and each include one or more lugs designed to be connected with the side frame of the platform.
2. A platform system as claimed in claim 1, wherein the lugs integrally cast with the corner posts are connectable to the side frame by rivets or the like.
3. A platform system as claimed in claim 1, wherein the corner posts are welded to the side frame.
4. A platform system as claimed in any of claims 1 to 3, wherein the lugs are provided with longitudinal channels for adhesive for reinforcing the connection between the lugs and the side frame.
5. A platform system as claimed in any of claims 1 to 4, wherein the corner posts are each provided with an integral nut for cooperating with a screw or bolt for fixing the supporting legs into the posts.



6. A platform system as claimed in any of claims 1 to 5, wherein the posts are of square cross-section and the legs are of circular cross-section.

7. A platform system as claimed in any of claims 1 to 6, wherein the cast corner posts are provided at their upper ends with flanges to receive and retain the corners of a flat top of the platform.

8. A platform system substantially as herein described with reference to, and as shown in, the accompanying drawings.

9. A cast corner post for use in the platform system as claimed in any of claims 1 to 8, the post having at least one lug integrally cast therewith for connection to a side frame member of the platform.

**Relevant Technical Fields**

- (i) UK Cl (Ed.M) E1D (DF172, DF194, DLEKH, DLEKN, DLEQV, DPS) E1S (SS)
- (ii) Int Cl (Ed.5) E04G, E04H

Search Examiner  
**D J LOVELL**

Date of completion of Search  
**3 FEBRUARY 1994**

**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii)

Documents considered relevant following a search in respect of Claims :-  
**1-9**

**Categories of documents**

- X:** Document indicating lack of novelty or of inventive step.
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- A:** Document indicating technological background and/or state of the art.
- P:** Document published on or after the declared priority date but before the filing date of the present application.
- E:** Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- &:** Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
Y	GB 2226060 A (UNIFLAIR INTERNATIONAL)	
X, Y	GB 2185272 A (CAVANAGH)	
X, Y	GB 2103261 A (HARVEY)	
X, Y	GB 1054411 (TATE ENGINEERING)	
X	EP 0147308 A2 (SOC FRANCAISE SAMIA)	
Y	US 4813201 (PARSONS)	

**Databases:**The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).