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⑤④ **A stage podium.**

⑤⑦ The present invention briefly relates to a stage podium, which is intended to form, together with corresponding stage podia, a stage floor or similar. The stage podium consists of a floor board (1) which is supported by legs that are mountable directly to the board. In the edge surfaces of the board there are countersunk bushings (4), which protrude a small distance from the edge surfaces and which are placed at predetermined positions, so that when several stage podia are being assembled, the bushings (4) will be positioned in pairs opposite of one another. Guide pins (8) can be placed in these pairs of opposite bushings (4). The floor boards (1) of the stage podia are locked together by means of an eccentric lock.

Description

A STAGE PODIUM

The present invention relates to constructable stages, in particular to a stage podium of modular type, which can readily be assembled with corresponding podia forming a stage or a stage floor.

There are many traveling theatre groups that carry their own stage, so that they can perform their theatre pieces basically anywhere. This stage is assembled before each performance and disassembled afterwards to be transported to the next place of performance. Permanent theatres do very often need a complementary stage floor, e.g. to be able to raise part of the ordinary stage floor for a choir or for a special play. There are also other occasions when a temporarily elevated floor is needed, e.g. for orchestras, lecturers and similar.

It is true, that such constructable floor stages have existed since long ago. Usually, they are of a construction, where a board is placed onto a base portion, and such units are held together in a suitable way, e.g. by clamps. However, a floor construction assembled in such a way has many drawbacks involving not only the actual assembly but also the fact that the boards clatter and squeal against each other when being subjected to a load. Noise caused by the actors' feet can also be amplified by the boards, which is annoying to both audience and actors.

Stages and corresponding assembled podia of various kinds, thus, do have several drawbacks. The objective of the present invention aims at eliminating those drawbacks. This objective is obtained by a stage podium of the kind indicated in the claims, wherein further features and advantages of the invention will become apparent.

The invention will now be described in more detail, in conjunction with the accompanying drawings, wherein

FIG. 1 is a perspective exploded view of a connecting means between two adjacent floor boards,

FIG. 2 is a perspective view of an eccentric lock for retaining adjacent floor boards,

FIG. 3 is a perspective view of corner fastening a floor board leg, and

FIG. 4 is a perspective view of fastening a leg to one side of a floor board.

The floor board 1, which is part of the present invention but has only been indicated in the attached drawings consists of two plywood boards with an intermediate board of insulation, e.g. rock or glass wool of a high density. Acting as spacers between the plywood boards there are, on one hand, a wooden frame located at the outer edges of the boards and, on the other hand, a frame work of wood laths, whereby the board of insulation material is divided into different sections. The floor board will become so stable, due to this construction, that there will be no deflection worth mentioning, when undergoing normal strains, and the insulating material will efficiently subdue the sound in the board.

The floor boards 1 are supported by legs 2 directly

fastened thereto. The boards 1 will therefore butt to one another along the sides. In order to keep the boards 1 at the same level where the joints are, connection means are used according to Fig. 1. Holes 3 are made at certain intervals around the edges of the boards 1. In these holes 3 bushings 4 are inserted. These consist of a tubular body 5 having a radial collar 6 at one end thereof. The bushings 4 are inserted and preferably glued in the holes 3, the collar 6 resting against the edge around the holes 3. The hole 7 of the tubular bushing 4 is open outwardly, but presents a bottom in the inner end. To indicate the position between adjacent boards 1 guide pins 8 are inserted in the opposite pairs of bushings 4.

In order to retain adjacent floor boards 8 in an easily constructable way, both as far as assembly and disassembly are concerned, an eccentric lock 10 is used according to Fig 2. The eccentric lock 10 consists of a handle 11, here in the form of a tubular square piece. At one short end of this square piece there is a pin 12 fixed so that one end thereof sticks out a distance from the plane defined by the handle. A pull rod 13, the outer end of which is bent so that it is parallel with the pin 12, is pivotally fixed to the handle 11.

In the floor boards 1 plates 14 are countersunk and fixed, in the shown example, by means of screws 15. In the plates there are holes 16 for receiving the ends of the pin 12 and pull rod 13, respectively. The pull rod 13 is adjusted in such a way that, when two adjacent boards 1 are positioned against each other having guide pins 8 in at least two pairs of opposite bushings 4 and having the bushing collars 6 slightly resting against each other, the pull rod 13 and the pin 12 can have their ends inserted in respective holes 16. When the handle 11 is turned from the position shown with dashed lines in Fig. 2, to the position shown with continuous lines, an over centre locking is actuated by the eccentric lock 10, at the same time as the two boards are biased to abutment against each other.

Referring to Fig. 3 there is shown how a leg 2 is attached to a corner of the floor board. A holder 20 at the same time constituting a corner cover for the board 1 is recessed in the board 1. The holder 20, which preferably is made of steel, has two pieces 21, 22 which are perpendicular to each other and parallel with respective edge of the board 1. A corner piece 23 joins the two pieces 21, 22 on the top side of the board 1 and a corresponding corner piece 24 extends over basically the whole triangular area defined by the pieces 21, 22. The holder 20 is as mentioned above recessed in the board 1, so that it is flush with the board 1 and fixed to said board, e.g. by means of screws 25, as shown. In the corner piece 24 there is made a recessed hole 26 diagonally from the corner and to the base of the corner piece 24. Inside the recessed hole 26 there is a cavity 27 having a larger breadth than the breadth of the recessed hole 26.

The leg 2 is preferably made of a square tube. At its upper edge, which is intended to be removably attached to the bottom side of the board 1, there is, on one hand, a short transverse member 28, which is attached to the tube at a short distance above the tube end, and on the other hand, an arm 29 projecting perpendicularly from the tube and in plane with the tube end. An angular support 30 extends from the leg and towards the free end of the arm 29, where there is provided a knob screw 31 and a not shown guide pin. Both cooperate with holes in a plate 32 which is recessed and fastened into the bottom side of the board 1.

When mounting the leg, this is turned first so that the transverse member 28 can be inserted in the recessed hole 26 and into the cavity 27. Then the leg 2 is turned so that the arm 29 extends diagonally from the corner toward the plate 32. The transverse member 28 will thereby rest against the inside of the corner piece 24 on each side of the recessed hole 26, and the guide pin of the arm 29 will fit into its hole in the plate 32. The transverse member 28 is displaced so that it will bias the leg 2 to lean somewhat outwardly, i.e. it is positioned outside of the centre line of the leg 2. By tightening the knob screw 31 the arm 29 is forced down against the bottom side of the board 1, and the leg 2 is steadily locked to the board 1.

A variant of the leg fastening is shown in Fig. 4, which corresponds to the previous one with the exception that it is carried out along an edge. The holder 35 presents, in this case, two shanks 36, 37 which are recessed and fastened to the edge of the board 1, and a piece 38 extending from the shanks and being recessed and fastened to the bottom side of the board 1. In the piece 38 there is a recess 39 and inside thereof there is a cavity 40. The fastening of the leg is carried out in the same way as in the previously described embodiments.

Thanks to the present invention a stage floor or similar has been provided, which is completely silent. This is due to the actual construction of the board and also to the fact that adjacent boards 1 cannot move relative to each other, to any considerable extent. At the presence of the small movement that exceptionally may occur, the collars 6 of the bushings 4 move against each other without causing any noise.

Another contributing factor to the great silence of the floor is also to be found in the floor boards 1 being part of the carrying construction. Thus, these cannot slide relative to a base portion. In addition, the boards 1 form by being tightened to each other a continuous floor, contrary to earlier constructions where the base portions were tightened and the floor boards were loose.

It is to be realized that by means of stage podia according to the invention, it is easy to construct a stage floor or similar, and that this can be done without tools. Since all the loading means and similar are recessed into being at least flush with the board surfaces, the boards can be packed up against each other without any risk of damages. Additional equipment, such as legs and similar, are of a durable material and can without protective means be put

into boxes or similar.

The objective set forth initially has therefore been achieved by the present invention. Many modifications of the invention are realizable by a person skilled in the art. Such modifications are however intended to stay within the frame of the invention as being defined in the accompanying patent claims.

Claims

1. A constructable stage podium, which by being connectedly added to corresponding stage podia provides a stage floor or similar, and which comprises a floor board (1) and legs (2) supporting the board, **characterized** in that the floor board (1) is equipped with bushings (4) at its edge surfaces, at predetermined positions, which bushings (4) have a portion (6), which protrudes a distance from the edge surface, and that the bushings (4) are devised, when the stage floor or similar is assembled, to be positioned opposite of one another and to contain, at least in some of the opposite pairs of bushings, elongated guide pins (8) between the two bushings (4).

2. A constructable stage podium according to claim 1, **characterized** in that the adjacent floor boards (1) are lockable by means of eccentric locks (10), which cooperate with plates (14) that are provided at predetermined positions on the bottom of the boards.

3. A constructable stage podium according to claim 2, **characterized** in that the eccentric lock (10) comprises an elongated handle (11), on one end of which a pin (12) is provided, cooperating with a plate (14) of a floor board (1), as well as a pull rod (13) rotatably mounted at said end, the outer end of said pull rod cooperates with the plate of an adjacent floor board (1), whereby locking takes place by turning the handle (11) to an over centre position.

4. A constructable stage podium according to any of the preceding claims, **characterized** in that the legs (2) supporting the floor board (1) are removably attachable, directly in the floor board (1).

5. A constructable stage podium according to claim 4, **characterized** in that mounting means (20, 35) are at least provided at the corner of the floor board (1), the legs (2) are equipped with hooking means (28) for connecting with said mounting means (20, 35), and that each leg is equipped with an arm (29) projecting substantially perpendicularly to said leg, the arm being fastenable by screwing to a plate (32) on the bottom of the board (1).

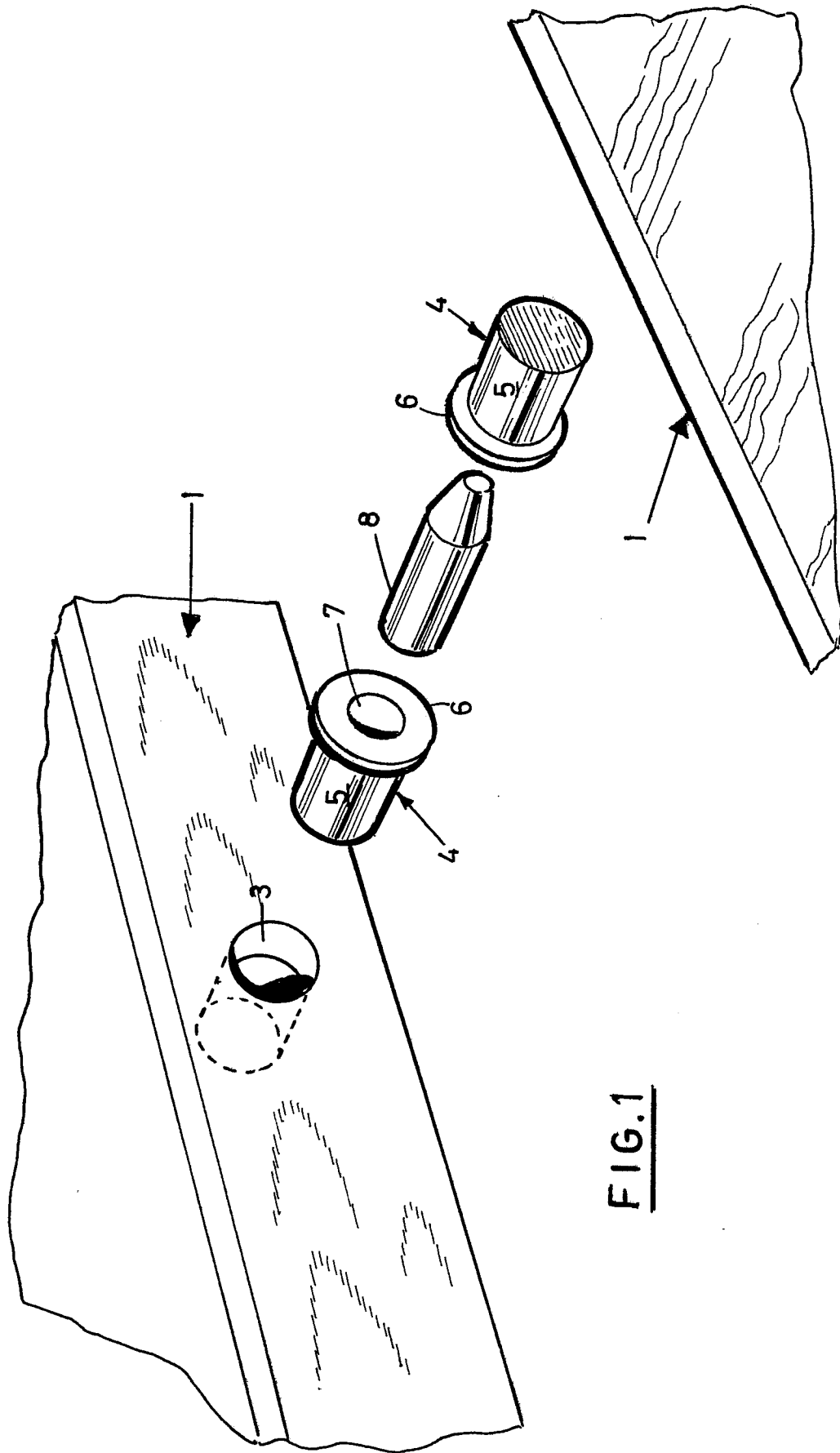
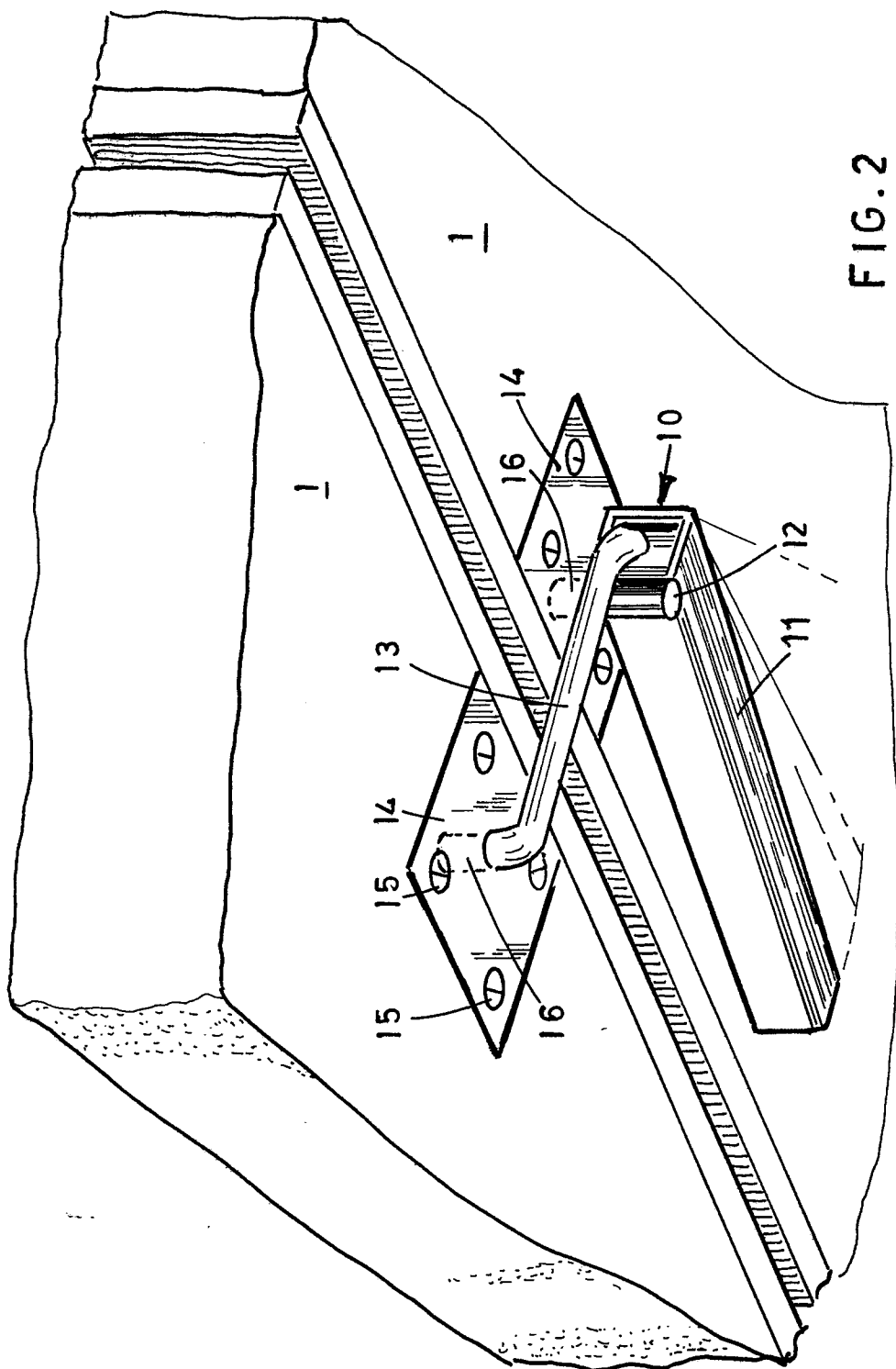
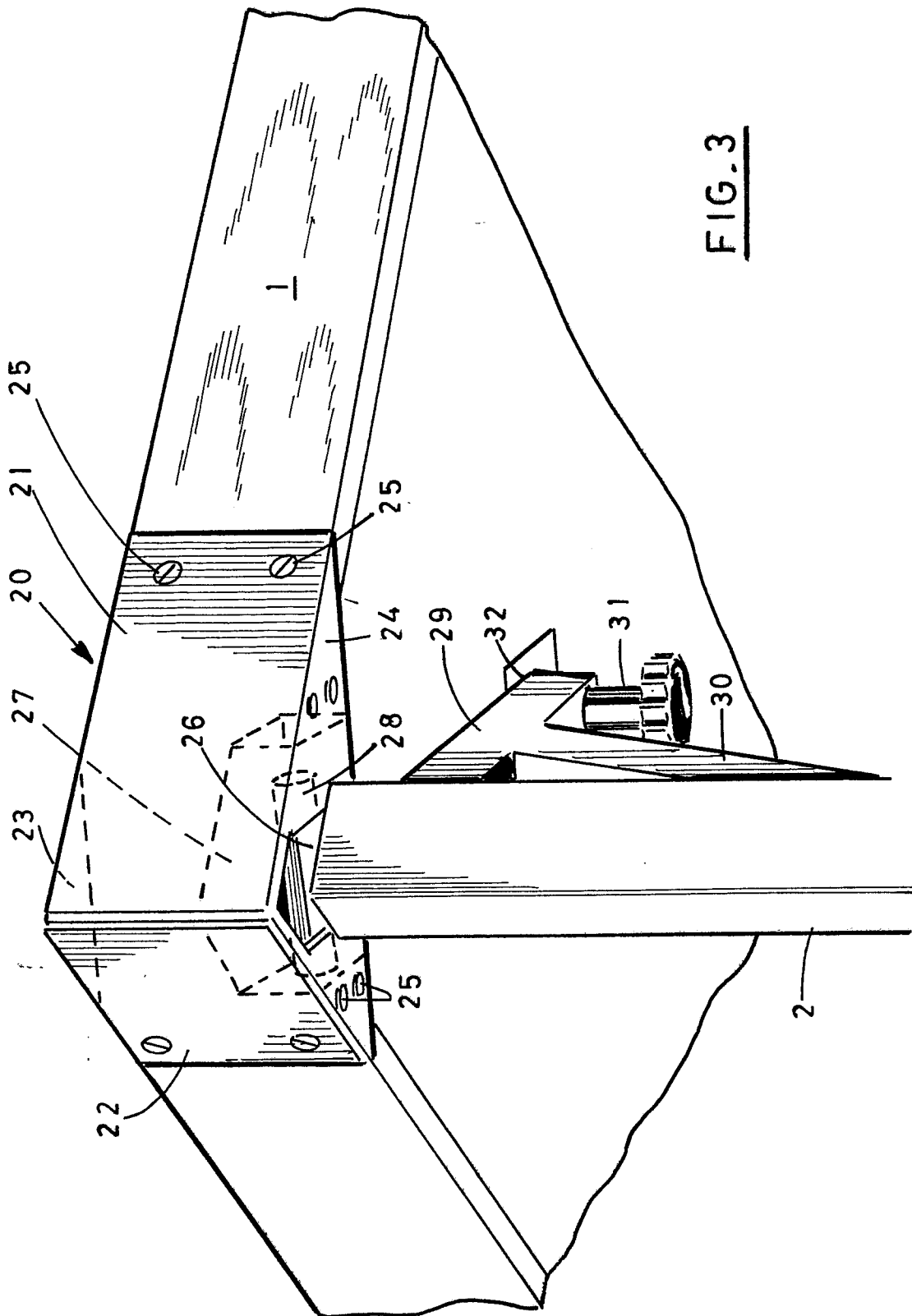
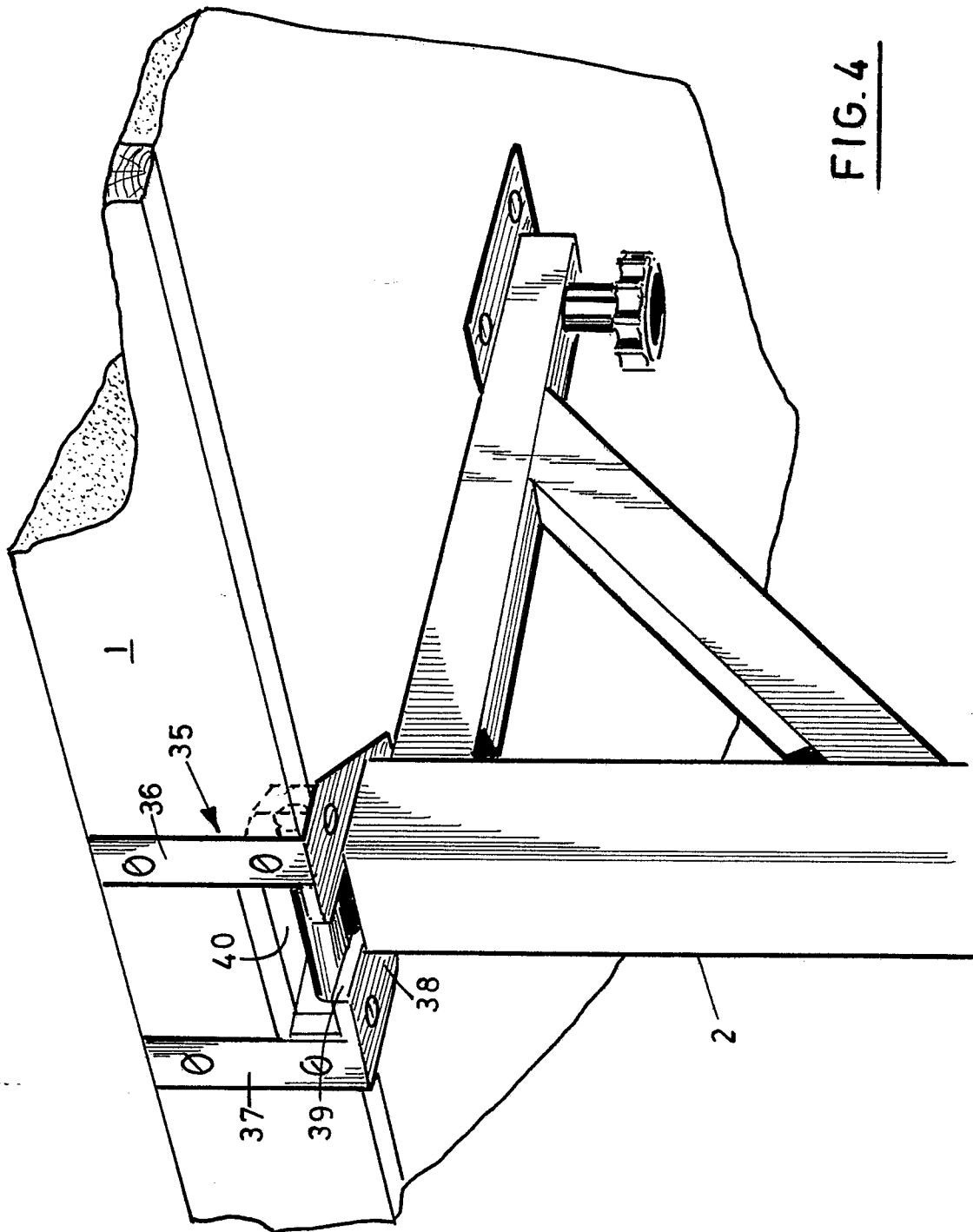


FIG.1

FIG. 2







European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 87 85 0301

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
Y	EP-A-0 160 843 (STAGE RITE CORP.) * Page 5, line 19 - page 7, line 5; page 8, line 22 - page 9, line 2; page 11, line 23 - page 12, line 13; figures 1-4,10-13,18-21,45 *	1,4	E 04 H 3/28
A	---	5	
Y	US-A-4 158 335 (BELCASTRO) * Column 2, line 23 - column 3, line 19; figures 1-4 *	1,4	
A	---		
A	US-A-3 512 324 (REED) * Column 4, lines 1-22; figures 1,6 *	1	
A	---		
A	US-A-3 437 390 (EVANS) * Column 3, line 32 - column 4, line 9; figures 1,4,5 *	2,3	

The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			E 04 H E 04 F E 04 B F 16 B A 47 B
Place of search THE HAGUE		Date of completion of the search 07-01-1988	Examiner PORWOLL H.P.
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	