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54 **Staging.**

57 The staging comprises spaced support assemblies 1, 2. Each support assembly comprises a rearwardly inclined truss member 3, 4 supported by a respective pair of legs 5, 6 arranged in an inverted-V configuration. Each truss carries a series of support brackets 14 to which decking members 15 are connected for pivotal movement in vertical and horizontal planes enabling the support assemblies to adopt different attitudes. The feet of the legs 5, 6 and the lower ends of the trusses swivellably stand on ground plates 13. Coarse levelling is achieved by adjusting the length of the legs 5, 6 or by spacer cups placed under the rear feet. Extension sections 3a, 4a are provided for connection to the upper ends of the trusses to support further decking members.

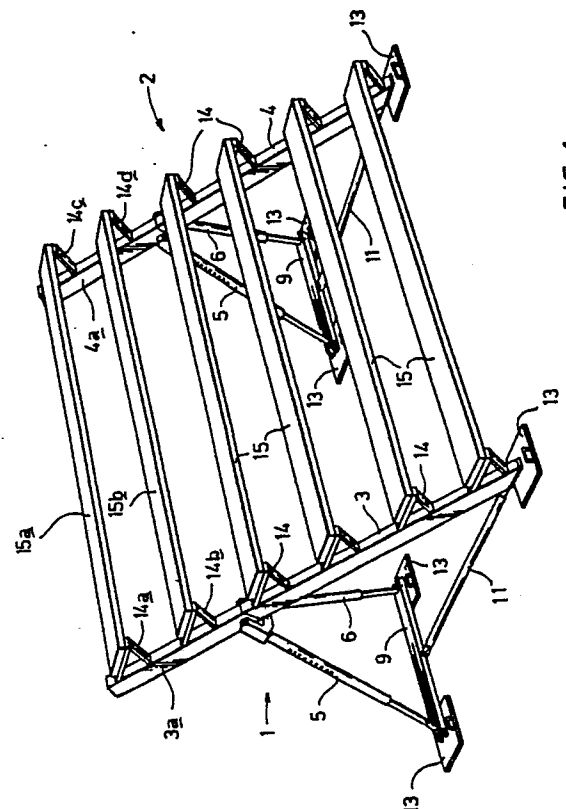


FIG.1

STAGING

This invention is concerned with staging of the kind comprising a plurality of decking members arranged in a stepped configuration for supporting a group of people such as in group photography or a standing or seated audience.

United States Patent No. 1 839 679 discloses a staging structure for use in audience seating in which the decking members are supported by spaced rearwardly inclined trusses. Each truss is in turn supported by spaced pairs of props or legs arranged in an inverted-V configuration. The lower ends of the legs are joined by common bracing bars running parallel to the decking members, and a single tie bar lying below each truss connects the bracing bars to the bottom of the respective truss. This earlier staging is therefore a relatively rigid form of construction and consequently great care must be taken to ensure that each of the feet is individually levelled.

According to the present invention the decking members are supported by spaced tripod assemblies to which they are connected by flexible joints. The tripod assemblies are thus free to stand at different inclinations without reducing the overall stability of the structure.

The invention will now be exemplified in the following description to be read in conjunction with the accompanying drawings in which:

Figure 1 is a perspective view of a four deck staging section with a two deck extension section added,

Figures 2 and 3 are side and rear views respectively of one of the support assemblies of the staging,

Figure 4 is a true perspective view of another support assembly of staging according to the invention,

Figure 5 is a detailed side view of the lower end of the truss of that support assembly,

Figures 6 and 7 are end and side views of the lower end of one of the truss support legs,

Figure 8 is side view of the connection between the support legs and the truss,

Figure 9 is section A-A of Fig. 8,

Figure 10 is a vertical section through a set of spacer cups for use in levelling the support assembly,

Figure 11 is a plan view of photographic staging constructed with several support assemblies,

Figures 12a-e are skeletal perspective views showing various stages in the erection of a support assembly,

Figure 13 is a detailed sectional view of the connection between a support assembly and two decking members,

Figure 14 is a cut-away plan view of that connection,

Figure 15 is a longitudinal section through a further form of connection between two adjacent decking members and their associated support bracket,

Figure 16 is a plan view of part of that connection,

Figures 17, 18 and 19 show details of the connection between an end truss and a decking member, in longitudinal, horizontal and transverse section respectively, and

Figure 20 is a section through a decking member for use in the staging.

The four deck staging section shown in Fig. 1 comprises two spaced support assemblies 1, 2. Each assembly includes a box section truss 3, 4 which is rearwardly inclined at an angle of about 45 degrees to horizontal and is supported by two forwardly inclined rear legs 5, 6 arranged in an inverted-V configuration, forming a tripod structure. Each pair of rear legs are joined at their lower ends by a brace 9, and a tie rod 11 connects the lower end of the respective truss 3 or 4 to the mid-region of the respective brace 9. The lower ends of the trusses 3, 4 and rear legs 5, 6 are all seated on ground plates 13 to increase their bearing area and prevent them from sinking into soft ground. The front upper faces of the trusses 3, 4 carry a series of spaced V-shaped brackets 14 for supporting four substantially horizontal decking members 15 which bridge the support assemblies 1, 2.

As shown in Figs 2 and 3, each of the rear legs 5, 6 comprises an upper tubular section 17 within which is slidably inserted a lower section 18. The upper section contains a series of holes 19 enabling a locking pin 20 to be inserted through any one of the holes and through a corresponding hole (not shown) in the lower section to determine the length of the leg. The legs can thus be independently adjusted either side of a nominal position in which the truss is inclined at the desired 45 degree angle with the staging on level ground. Fig. 3 shows the legs at their minimum length and Fig. 2 shows them in an extended position. At their lower ends the legs are pivoted to the brace 9 by a releasable connection 21. The tie rod 11 is similarly releasably pivoted to the brace 9, but is non-releasably pivoted at 22 to the lower end of the respective truss 3 or 4 such that the rod can be stowed beneath the truss held by a clip 23.

Towards their upper ends each pair of rear

legs are secured to a pair of L-shaped members 25 which are pivoted together at 24 (Fig. 3) to form a U-shaped head. The inner faces of the L-members are provided with opposed upwardly open sockets 26. A pin 27 which is received in a hole 28 in the respective truss can therefore be dropped into the opposed sockets and retained therein by catches 29 which are swivellably mounted on the upper faces of the jaws 25 by bolts 30.

The trusses 3, 4 and legs 5 and 6 all have part-spherical feet 80 (Fig. 2) which in use are swivelably seated in a socket formed by a hole 81 in the corresponding ground plate 13. Thus, on uneven ground the ground plates can be inclined at different attitudes but the feet will still firmly seat within the sockets 81. The plates 13 are provided with upstanding wire loop handles 82 at one edge by which the plates can be slid under the feet 80.

An extension section converts the four deck section into a six deck section. The trusses 3, 4 are provided with axial spigots 85 (see Fig. 2) to receive box-section truss extension pieces 3a, 4a. These extension pieces have open lower ends forming sockets 86 to receive the spigots 85. The lower ends of the extension pieces are notched at 89 to receive the pins 27. The upper front faces of the truss extension pieces 3a, 4a each carry two further V-brackets 14a, 14b and 14c, 14d respectively, (Fig. 1) for supporting two further decking members 15a, 15b.

Longer extension pieces could be used for carrying more than two additional decking members, and these extension pieces could be supported by a similar but longer pair of legs provided with a respective brace. This brace may be connected to brace 9 by a further tie bar joining the centres of the two braces.

The decking members are connected to brackets 14 in a step configuration. As will be described below, each decking member is flexibly connected to the respective truss or extension piece for pivotal movement in both vertical and horizontal planes. This ensures that the staging will stand firmly on the ground even if the two support assemblies are inclined at slightly different attitudes.

The staging may be assembled by opening each pair of rear legs flat on the ground and connecting the braces 9. Each truss is then laid on the ground with its top portion between the feet of the respective legs, and the tie rods 11 are connected to the braces 9. The top end of each truss is then lifted, the rear legs are raised to an upright position, and the pin 27 is dropped into the sockets 26. The tripod arrangement of each truss and its associated support legs ensures that the support assembly will always stand firmly even on very uneven ground. If required the rear legs can be adjusted in length to bring the respective truss to

the required inclination, the pivotal connections 21 between the legs 5, 6 and the braces 9 and the pivotal connection 24 at the upper ends of the legs enabling this adjustment to take place. It will be noted that the holes 19 only permit relatively coarse adjustment but this is of no real consequence because of the flexible coupling between the decking members and the trusses described below. In fact adjustment of the legs may only be essential on extremely uneven ground. The decking members are then connected to the trusses as described below.

If the two row extension illustrated in Figs 1 and 2 is to be added the additional truss extension pieces 3a, 4a are dropped onto the spigots 85 either by climbing up the existing decking or simply from standing on the ground. The additional decking members can then be carried up the decking members of the lower section for attachment.

The staging can be dismantled by a reverse procedure.

The tie rods 11 could be replaced by flexible elements such as chains.

The truss assembly of Figs 4 to 9 has a higher stability than that just described, particularly when the number of rows is increased to around eleven. Referring to Fig. 4, the truss 151 is of rectangular box section and comprises a lower section 152, and an upper section 153. The upper surfaces of the truss sections carry a series of longitudinally spaced V-shaped brackets 155 for supporting decking members, the lower section carrying five brackets and the upper section six brackets. The lower truss section 152 is rearwardly inclined and is supported at its upper end by a forwardly inclined first pair of legs 156, 157 arranged in an inverted-V configuration. The bottom ends of the legs are bridged by a bracing bar 158 to accurately determine their spacing. From each end of the bracing bar a respective tie bar 159, 160 extends forwardly to join the lower end of the truss. Towards their forward ends a cross bar 161 is welded to both tie bars 159, 160. An apertured plate 162 extends rearwardly from the centre of the cross bar, the purpose of which will be explained below. The lower ends of legs 156, 157 and of the truss 151 are each supported on respective ground plates 163.

The upper truss section 153 is supported part way along its length by a second forwardly inclined pair of legs 165, 166 which are again arranged in an inverted-V configuration. The lower ends of these legs are connected with the lower ends of the first pair of legs in a manner to be described, and they are bridged by a bracing bar 167. These rear legs 165, 166 are also bridged part way along their length by a further bracing bar 168.

The coupling between tie bars 159, 160 and

the truss section 152 is shown in detail in Fig. 5. The tie bars are of square box section and are welded to a common head 169 which contains a transverse downwardly open, forwardly inclined slot 170. A pair of rearwardly extending spaced parallel plates 171 are welded to the rear of the truss, and these are bridged by a horizontal pin 172. When the staging is in its assembled state as shown, the head 169 is received between the plates with the pin located in slot 170. Because of the rearward inclination of the truss and the forward inclination of the slot the head is held captive between the plates. The tie bars can only be uncoupled from the truss by pivoting the truss about the pin 172 in a vertical plane towards a vertical position and lifting the head 169 with a slight forward movement.

The lower end of the truss is welded to a substantially horizontal bottom plate 174, from which an upright cylindrical foot 175 having a part-spherical lower end 176 projects downwardly to swivelably rest in a well 177 in the respective ground plate 163.

Figs 6 and 7 show how the opposite end of tie bar 160 is coupled to the legs 157 and 166. Bracing bar 158 and leg 157 are both of square box section and are both welded to a common block 178. An upright cylindrical foot 179 again having a part-spherical lower end 180 extends downwardly from the block, and a pin 181 having a head 182 extends substantially horizontally from the block in the opposite direction to the bracing bar 158. The tie bar 160 terminates in an eye ring 183 which is held captive on the pin 181 along with a washer 184 which is located between the eye and the block. There is a similar pin and eye arrangement at the opposite end of the bracing bar 158, both pins being axially aligned so that relative pivotal movement can take place between the tie bars 159, 160 and the legs 156, 157 about the axis of pins.

The second pair of legs 165, 166 are also of square box section and each terminates in a downwardly directed fork 185. Each arm of the fork carries at its lower end an outwardly projecting peg 185', 185'', and the head 182 has a pair of opposed vertical flats 182', 182''. With the rear legs 165, 166 in a substantially vertical position the forks 188 can thus be dropped over the pins 181 between the eyes 183 and pin heads 182, with the flats 182' and 182'' passing between the pegs 185' and 185''. The rear legs can then be pivoted about the axis of pins 181 into a forwardly inclined operative position so that the forks 185 are held captive on the pins 181 by the pegs 185', 185''.

Figs 8 and 9 show how the first pair of legs 156, 157 are coupled to the lower truss section 152. The upper ends of the legs are welded to a

common fork head 186 which comprises a base portion 187 which is joined to the legs, from which two generally parallel spaced arms 188, 189 project away from the legs. Adjacent to their roots the arms are bridged by a small diameter pin 190, and towards their free ends the arms contain aligned holes 191 to receive a fixing pin 192. The upper end of the lower truss section forms an open socket 193 and the opposite side walls of this socket again contain aligned holes 194 (Fig. 9) to receive the fixing pin. Thus, with the socket 193 received between the arms of the fork 186 the fixing pin 192 can be inserted through holes 191 and 194 to connect the fork to the truss.

The lower face of the truss is provided with a stop 196 located a short distance below the socket 193. This is used during erection of the staging, as will be described below. The second pair of legs 165, 166 are connected to upper truss section 153 by a similar pin and fork head arrangement to that just described. Instead of the stop 196 being below the fork head however, a similar stop is provided just above the head. The legs 165, 166 are provided with inwardly directed opposed stop members 201, 202 (Fig. 4) a short distance below the bracing bar 168. These are again used in assembly as described below.

Referring to Fig. 8, the lower end of the upper truss section 153 carries an axial spigot 198. This is a close sliding fit within the socket 193, and includes a transverse slot 199 extending axially from the outer end of the spigot to receive the pin 192. Thus, the spigot can be slid into the socket with the pin 192 in place. For safety purposes a catch arrangement (not shown) may be provided to hold the two truss sections together once they are engaged so that they can only be pulled apart by manually releasing the catch.

Fig. 10 shows a set of spacer cups for use in levelling the truss assembly should it be required to erect the staging on uneven ground, e.g. a sports field. The left half of the drawing shows the cups as castings whereas the right half shows turned cups. The drawing shows a set of four circular cups A to D which are seated upon each other, the width of the cups generally reducing in diameter from the bottom cup D to the top cup A. The upper face of each cup contains a central well 205 which, apart from cup A, is similar in size to the well formed in ground plates 163, one of which is represented in the drawing as E. Well 205' of cup A is slightly smaller in diameter than those of the other cups, the reason for which will be explained shortly. Each well generally comprises an upright cylindrical side wall 206 which leads into a concave part-spherical bottom wall 207, the radius of curvature of which matches the underside of feet 175 and 179. The upper faces of the two lowermost

cups C and D include annular recesses 208, 209 respectively, to receive and laterally locate depending cylindrical spigots 210 211 respectively, provided on the undersurface of cups B and C respectively. Ground plate E has an upstanding collar 212 surrounding its well 177, and the lowermost cup D has a recess 213 in its underside to fit over and laterally locate the cup on the ground plate. The underside of cup A has a central spigot 214 which fits into and provides lateral location in any of the wells 205 of the other four cups or in well 177 of the groundplate.

It will be noted that in cups A and B the respective lift X , X' between the upper surface of the cup and the upper surface of the cup immediately below it is half that of cups C and D, (Y , Y' respectively). The overall lift between the well 205 of the upper cup and the well 177 of ground plate E can be varied by using different combinations of cups. A total of six different lift combinations can be provided using the cups, namely $E+A$, $E+D$, $E+D+A$, $E+D+C$, $E+D+C+B$ and $E+D+C+B+A$. Normally two sets of cups will be provided for use with the rear groundplates. On level ground the combination $E+D$ gives the required truss inclination (say 44 degrees) but on uneven ground the truss can be restored to this inclination by changing the cup combination under one or both rear legs as required.

The use of cups of reducing diameter provides stability against sideways loads even where a large lift is required. Furthermore, the configuration of the cups ensures that no cup of greater or the same diameter can be located on top of another. In particular it will be noted that since the well 205' of cup A is smaller than that of the other cups another cup A cannot be located on this cup since its spigot 214 will not fit within the well.

Other lifts can be achieved by using greater numbers of cups and/or different individual lifts. The cast cups could be of any cross section, e.g. square instead of circular.

Fig. 11 shows how staging for group photography can be constructed from six support assemblies of Figs 4 to 9, although the assemblies of Figs 1 to 3 could also be used. Each adjacent pair of trusses 151a-f are connected together by a number of decking members 215 each joining the corresponding brackets 155 of the two trusses. The decking members are coupled to the brackets for articulation in vertical and horizontal planes as described below. Thus, when upwards of three trusses are used the staging can be curved into an arc as shown. The decking members of the central staging section 216 are the same length as those of the two adjacent sections 217, 218 but the trusses 151b and 151e are brought forward relative to trusses 151c and 151d so that the four inner

trusses remain substantially parallel. Although the rear decking members of the outer sections 219, 220 are the same length as those of the other sections, the remaining decking members decrease in length from back to front so that the end trusses 151a and f are radially aligned with the camera. In addition, the support assemblies for the end trusses are asymmetric so that the outermost support legs are vertical and do not project beyond the end trusses where they would be in camera shot. Narrower ground plates 163' may also be used with the outer trusses, as shown. Apart from this the end truss assemblies are as described above.

Figs 12a-e show the sequence in which the support assemblies of Figs 4 to 9 can be erected. First, the tie bars 159, 160 with legs 156, 157 attached are laid on the ground in the required position. As shown, the legs are held in a common plane with the tie bars during storage and transport by means of pin 192 which is inserted through the fork head 186 and apertured plate 162. The lower truss section 152 is then coupled with head 169 of the tie bars by dropping the head onto the pin 172 with the truss section in a near-vertical or forwardly inclined position, and then pivoting the truss section 152 in a vertical plane towards its normal rearwardly inclined position. The pin 192 is then withdrawn so that the legs can be lifted. If required, the pin 190 of the fork head can be temporarily rested on stop 196 at this stage, as shown in Fig. 12b. The legs are then lifted so that the fork head slides along the truss section 152 until the pin apertures 191 of the head are in register with apertures 194 of the socket portion 193, whereupon the pin 192 is inserted therethrough. Some of the decking members can now be added to ensure the correct spacing of the trusses. In addition, gauge bars can be temporarily fitted between adjacent trusses at say the first and fifth row levels to assist in obtaining the correct truss spacing. If five row staging is required all the decks can be added to complete the assembly of the staging.

If eleven row staging is required the rear legs 165, 166 are added by dropping the forks 185 onto pins 181 as described. The stops 201 and 202 can now rest on the first legs 156, 157 as shown in Fig. 12c so that the fork head 186 of the rear legs is raised slightly above that of the front legs. The fork head of the rear legs is then connected to the upper truss section 153 by the respective pin 192 (Fig. 12d). The upper stop 196 allows the truss to be temporarily rested on the pin 190 of the upper fork head using this stop before the fixing pin is inserted. The lower end of section 153 is then grasped and pushed upwards to enable the spigot 198 to be slid into the socket 193 of the bottom truss section (Fig. 12e). Finally the remaining decking members can be added.

Any coarse levelling of the truss assemblies that may be required can be carried out at any stage before the decks are added. The staging is dismantled in the opposite sequence to which it is erected.

Guard rails can be provided running along the rear of the staging parallel to the decking members. The rails may be supported by upright balusters secured to the trusses at any convenient level. Guard rails could also be provided along the ends of the staging, particularly at the ends of the higher decking members.

The upper truss sections 153 may be in two or more sections. Smaller five or seven row staging could be constructed using this same principle, the only difference being that the inclination of the single pair of supporting legs would be closer to that of the rear legs 165, 166.

One way in which the decking members can be connected to the trusses will now be described in detail with reference to Figs 13 and 14. A horizontal upper limb 31 of each support bracket 14 or 155 carries an upstanding headed pin 32 about half way along its length. The left hand decking member 15" has a projecting tongue 35 at one end containing a longitudinally extending slot 36 to receive the pin 32. The upper surface of the limb 31 has a convex curvature in transverse section to accommodate angular movement of decking member 15" in a vertical plane relative to the support bracket. The other decking member 15' has a further tongue 226 which projects from the mid-thickness of its end wall 227 to overlap with tongue 35. The upper surface of this tongue is flat but the undersurface 228 is convexly curved longitudinally of the deck to permit independent vertical pivotal movement of both decking members. The decking members can also pivot independently about the pin 32 in the horizontal plane. The tongue 226 contains a longitudinal slot 229 which is open at the free end of the tongue to receive pin 32, but it is too narrow for the head of the pin to pass through. A catch plate 230 is mounted on the upper surface of the tongue 226 and this will now be described in detail.

The plate 230 contains two spaced slots 231 disposed transversely of the deck through which a respective headed bolt 232 is inserted into the tongue 226 to secure the plate in place but at the same time permit sliding movement of the plate transversely of the deck. The plate is urged to the left by a compression spring 234 located in a transverse slot 235 in tongue 226, bearing against the right hand end of the slot and against an abutment 236 rigid with plate 230. The plate has a cutout 237 which lies above slot 229 and comprises a nose 238 which locates behind the pin. However, the outer edge 240 of the nose is in-

clined so that as the pin 32 enters the slot the plate is urged to the right. The plate then returns under the action of spring 234 to prevent the pin 32 from leaving the slot 229. Each standard deck has a tongue 35 at one end and a tongue 226 at the other. To disconnect the deck from the support bracket the plate 230 is slid to the right, the ends of the plate being upturned at 241 for gripping, so that the pin 32 leaves the slot 229. The opposite end of the deck is lifted off its respective pin 32.

Instead of being carried by a sliding catch plate the nose 238 could be carried by a stamping pivoted about a substantially vertical axis. The stamping could be spring biased to bring the nose into the position shown and the stamping connected to a cable running under the deck for pivoting the stamping to a position in which the pin 32 is not impeded by the nose 238.

The coupling arrangement of Figs 15 and 16 is more simplified and has been developed specifically for use with smaller staging. Here, the horizontal upper limb of the decking support bracket is shown as a round tube 31' which carries pin 32. Decking member 15' again has a projecting tongue 35 at one end containing an aperture 36 to receive the pin 32. The other decking member 15' has a hollow tongue 245 which projects from the upper edge of the deck to overlap with tongue 35. An elongate spacer 246 of curved section is located on the pin 32 between the overlapping tongues 35 and 245 to aid the independent vertical pivotal movement of both decking members. The decking members can also pivot independently about the pin 32 in the horizontal plane. The lower wall of tongue 245 contains a keyhole shaped slot 247 comprising a first portion 247a through which the head of the pin 32 can pass, and a narrower portion 247b into which the stem of the pin can pass but not the head. This second portion extends towards the free end of the tongue 245. Thus, after dropping the decking member onto the pin the decking member is locked thereto by sliding the decking member to the right so that the stem of the pin enters the narrower portion of the aperture 247b. Alternatively the entire truss assembly can be pulled slightly to the left as shown. In the case of curved staging the movement of the support assemblies towards the curved position will automatically cause the pin to enter the narrower portion of the aperture. The decking members are removed by the reverse process.

In addition to being of shorter length, the decking members of the central staging section shown in Fig. 11 also differ from the standard members in that they each have a lower tongue 35 at both ends.

Figs 17 to 19 show how the end decking members can be connected to the outermost sup-

port assemblies 101, 104. The support brackets are again provided with headed pins 32 but the lower portion of the end decking member 15 is stepped at its end to form an upper tongue 110. This terminates in a transverse box member 111 which contains a hole 112 in its lower face to receive the pin 32. Thus, the decking member is again capable of articulation in a vertical and a horizontal plane. As shown in Figs 18 and 19, a knob 113 is secured to a spindle 114 which extends in a freely rotatable manner through the box member 111 adjacent to the hole 112. The underside of the spindle has a flat to which is secured a catch plate 115 by screws 116. When the decking member is lowered onto the pin 32 the head of the pin lifts the plate and freely enters the hole 112, a slot 117 in the lower wall of box member 111 ensuring that the plate 115 clears that wall. The plate thereafter returns under its own weight to a horizontal position in which it partially overlies the hole 112 and prevents the head of the pin from leaving the hole. When it is required to dismantle the staging the plate is rotated by the knob 113 to the position shown in broken outline in Fig. 16 and the pin is thus free to leave the hole 112.

The decking members may be lightweight metal extrusions. Fig. 20 shows how a decking member can be formed of two identical extruded lengths 250, 251. Each extrusion comprises a rectangular box portion 252, the two wider faces of which are extended to one side forming a pair of parallel arms 253, 254. The outer edge of one arm 253 is stepped inwardly at 255 forming a flange portion 256. This flange overlaps with the edge 257 of the other arm and abuts a rib 258 provided on its inner surface. The pairs of overlapping edge portions 256, 257 are fastened together by rivets 259.

All the major structural components of the staging are of aluminium alloy to reduce its weight to a minimum.

Claims

1. Staging comprising a pair of mutually spaced support assemblies (1, 2), each support assembly comprising a truss (3, 4; 151) and a pair of legs (5, 6; 156, 157) arranged in an inverted-V configuration to support the truss with a rearward inclination, and a plurality of decking members (15; 215) bridging the trusses in a stepped configuration,

characterised in that the decking members (15; 215) are connected to each truss (3, 4; 151) by a flexible joint whereby the support assemblies are able to adopt mutually different attitudes.

2. Staging according to Claim 1, in which each decking member is supported by a support bracket secured to the respective truss and a headed pin (32) is upstanding from the support bracket for reception in an aperture (229, 36; 247; 112) of the respective decking member.

3. Staging according to Claim 2, in which the said aperture (229) is an open ended slot which is too narrow for the head of the pin (32) to pass through and the decking member includes a catch member (230) having a retaining portion (238) which is locatable behind the pin to hold the pin captive in the slot and which is movable into a released position in which the pin is free to leave the slot unimpeded by the catch member.

4. Staging according to Claim 3, including bias means (234) for resiliently biasing the catch member (230) into the captive position and the retaining portion (238) of the catch member includes an inclined outer edge (240) which is engaged by the pin (32) as it enters the slot such that the catch member is automatically urged towards the released position by the pin against the action of the bias means allowing the pin to enter the slot.

5. Staging according to Claim 2, in which the aperture (247) of the decking member includes communicating first and second pin-receiving portions (247a and 247b respectively), the arrangement being such that the head of the pin (32) can pass through the first portion but not the second portion.

6. Staging according to Claim 2, in which the decking member includes a catch member (115) which is locatable beneath the head of the pin (32) when the pin is inserted into the aperture (112) thereby preventing the pin from leaving the aperture, and means (113, 114) for moving the catch member out of engagement with the head of the pin.

7. Staging according to any preceding claim, in which each decking member is supported by a substantially horizontal limb (31) of a support bracket (14; 155) secured to the respective truss and the upper surface of the said horizontal limb is outwardly curved in a direction transverse to the associated truss.

8. Staging according to any preceding claim, including a further support assembly comprising a truss (151c) and a pair of legs arranged in an inverted-V configuration to support the truss with a rearward inclination, and a plurality of additional decking members (216) bridging the truss of the further support assembly with a common truss (151d) of the first pair of trusses (151d, 151e), an end of each additional decking member being connected with an end of one of the first decking members (215) and those adjacent ends being supported by the common truss (151d), the addi-

tional decking members also being connected to both of their supporting trusses (151c, 151d) by flexible joints.

9. Staging according to any preceding claim, in which the legs (5, 6; 156, 157) of the support assemblies and the front ends of the trusses (3, 4; 151) stand on respective swivellable ground plates (13; 163).

10. Staging according to any preceding claim, in which the upper ends of each pair of legs (5, 6) are pivotally coupled together (24), at least one leg of each pair of legs is of adjustable length, and the lower ends of each pair of legs are pivotally coupled (21) to a respective bracing bar (9), each bracing bar being connected by tie means (11) to the lower end of the respective truss.

11. Staging according to any of Claims 1 to 9, in which the legs (156, 157) of each support assembly are rigidly connected together (186) at their upper ends, are of fixed length, and are bridged by brace means (158), the lower ends of the legs each being pivotally coupled (181) to a respective tie rod (159, 160) that connects that leg to the lower end of the respective truss.

12. Staging according to Claim 11, in which the front ends of each pair of tie bars are rigidly connected together (169) and are releasably connected to the respective truss.

13. Staging according to Claim 11 or 12, including a further pair of legs (165, 166) arranged in an inverted-V configuration for supporting an upper portion of the truss, the legs being rigidly connected together (186) at their upper ends and bridged by further brace means (167, 168), and the lower ends of the further legs being releasably connected with the lower ends of the first pair of legs (156, 157).

14. Staging according to any preceding claim, in which the upper ends of each pair of legs are connected to a U-shaped head (25; 186) which is coupled to the respective truss by a pin (27; 192) inserted through the truss.

15. Staging according to any preceding claim, in which each decking member is formed of a pair of hollow metal extrusions (250, 251) connected by a longitudinal joint.

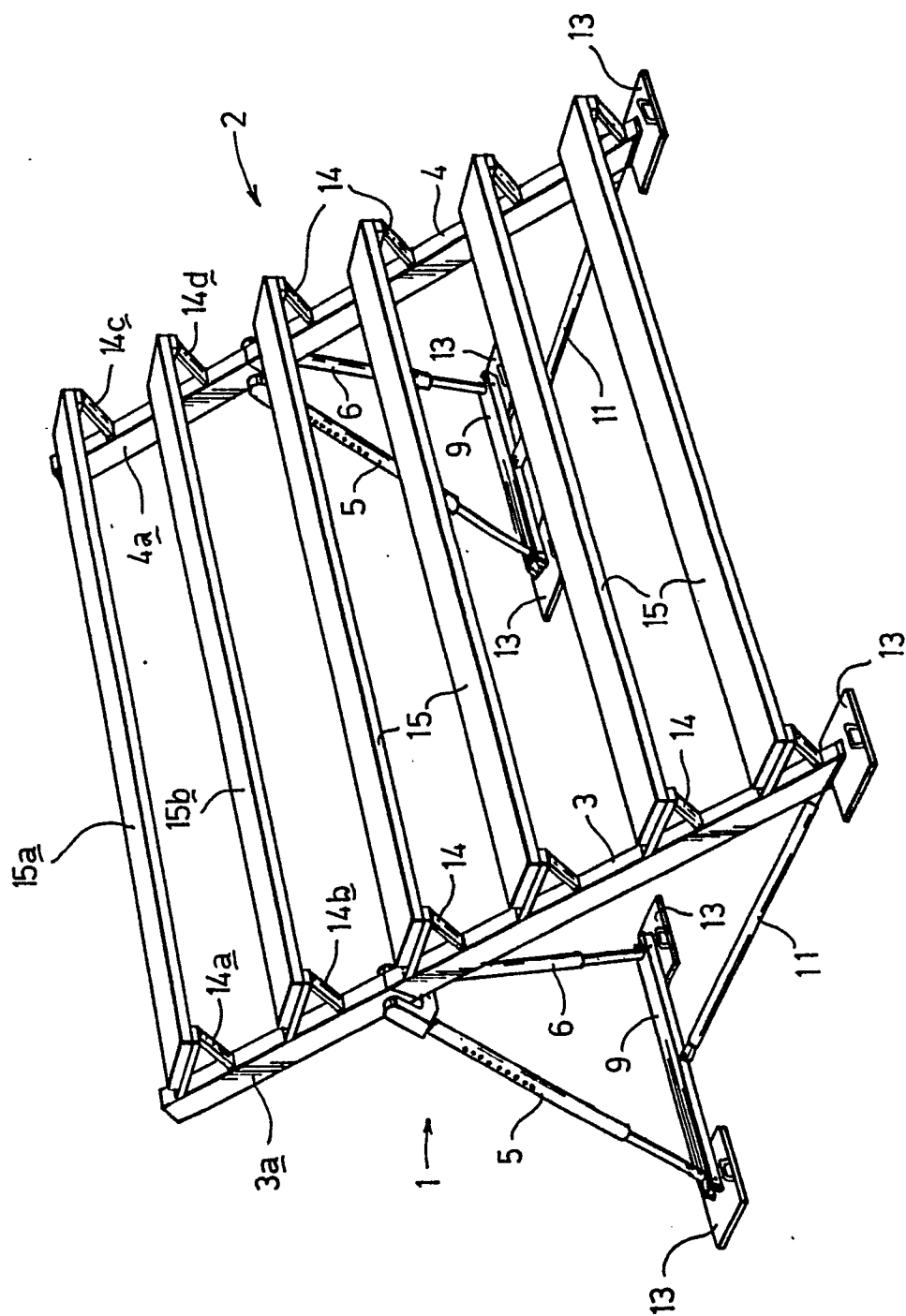
16. Staging according to any preceding claim, in which each truss (3, 4) comprises a plurality of interconnectable sections (3, 3a; 4, 4a; 152, 153).

17. Staging according to Claim 16, in which one of the truss sections carries an axial spigot (85; 198) which is received in an aligned socket (193) provided at the end of the other interconnectable truss section.

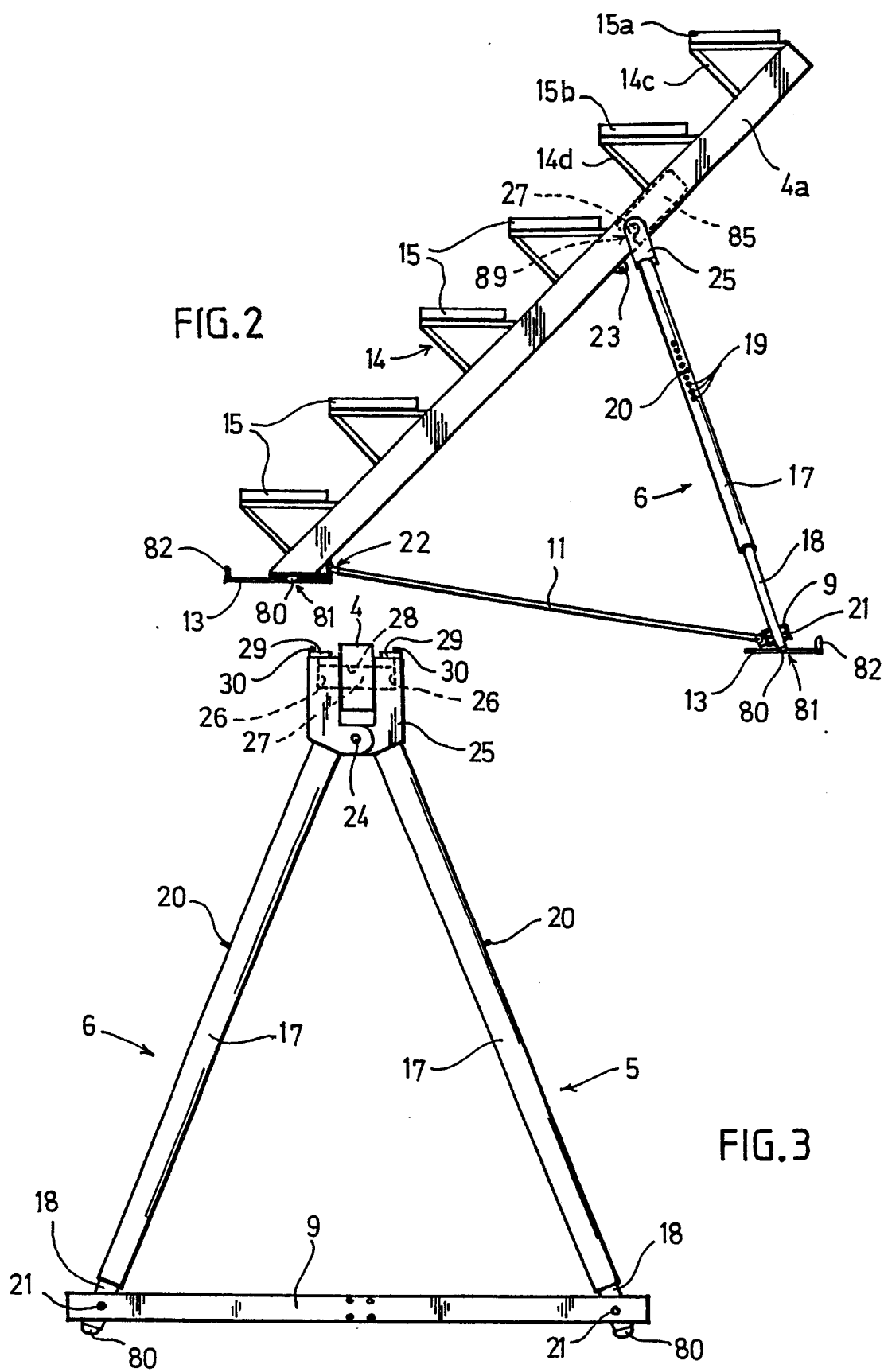
18. A plurality of stackable spacer elements (A, B, C, D) for use in levelling staging according to Claim 13, 14 or 15, each stacked element other than the lowermost being of smaller width than the

one immediately below it, the upper surface of each element being provided with location means (205) for engagement with and lateral location of a foot of the staging, and the opposed upper and lower faces of each adjacent pair of spacer elements being adapted for relative lateral location of the two elements.

19. Stackable spacer elements according to Claim 18, in which the said location means comprises a well (205) for reception of the foot of the staging.



15.1



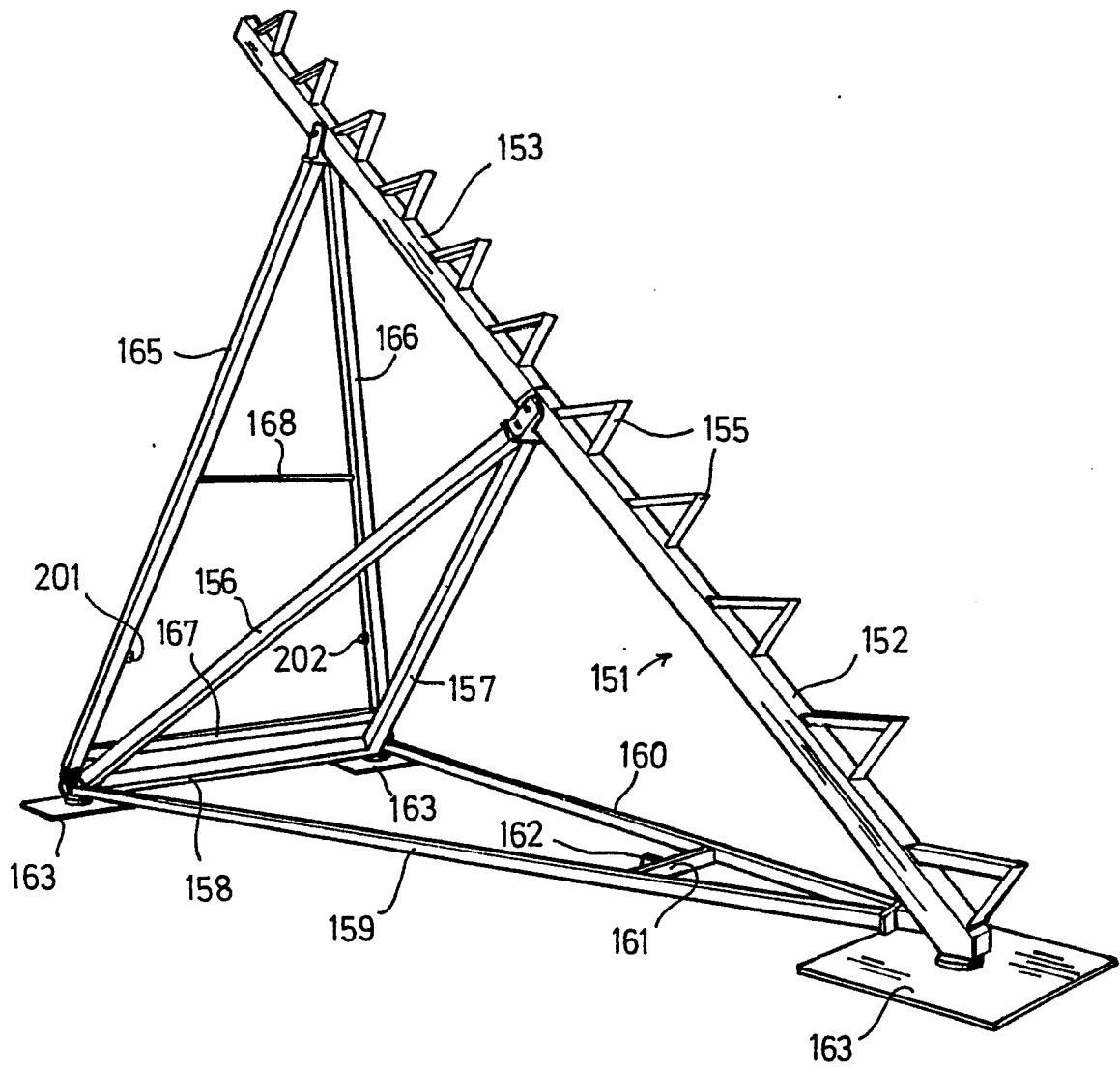


FIG. 4

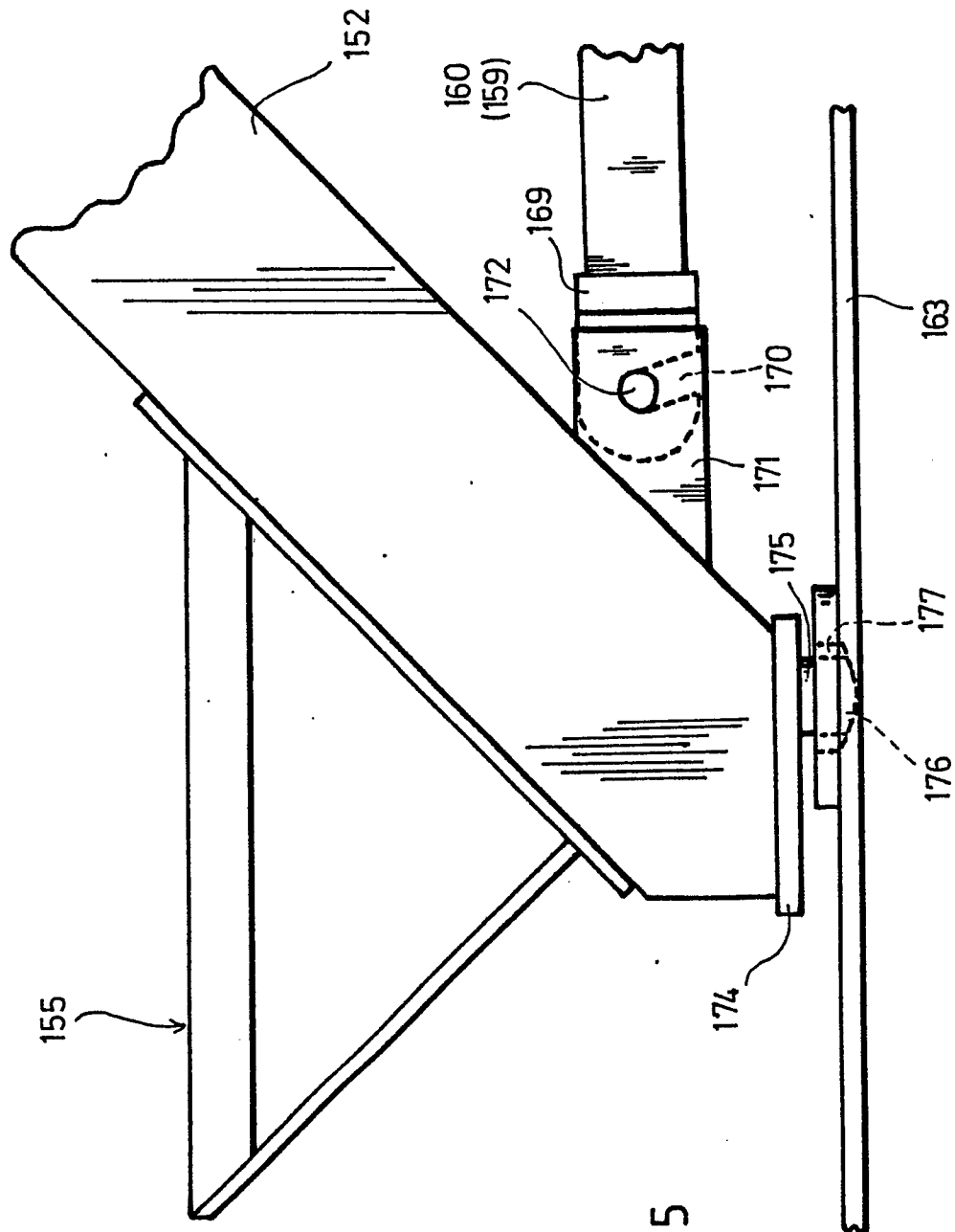
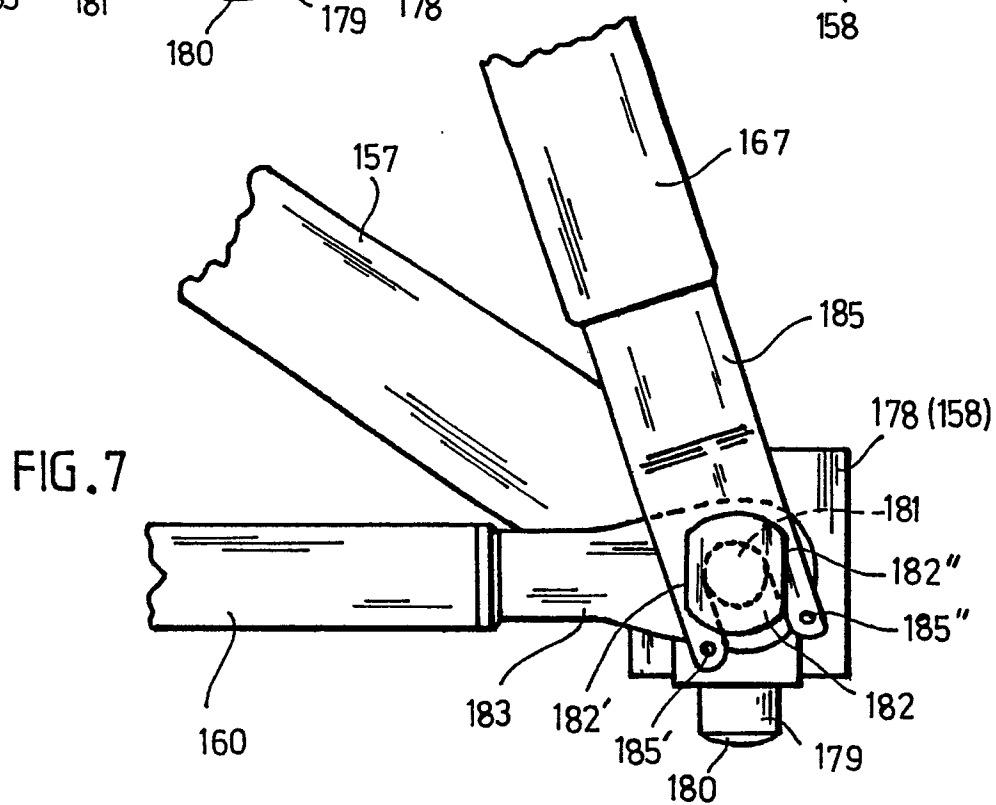
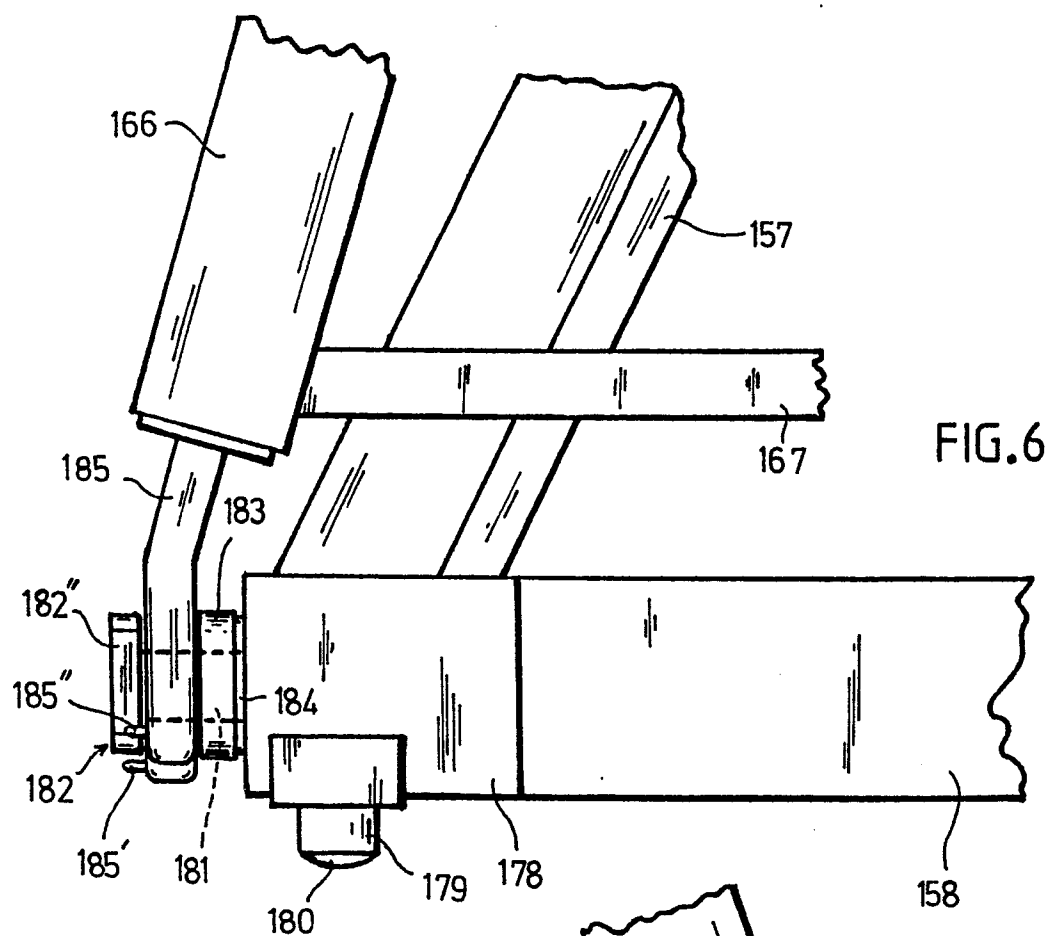


FIG. 5



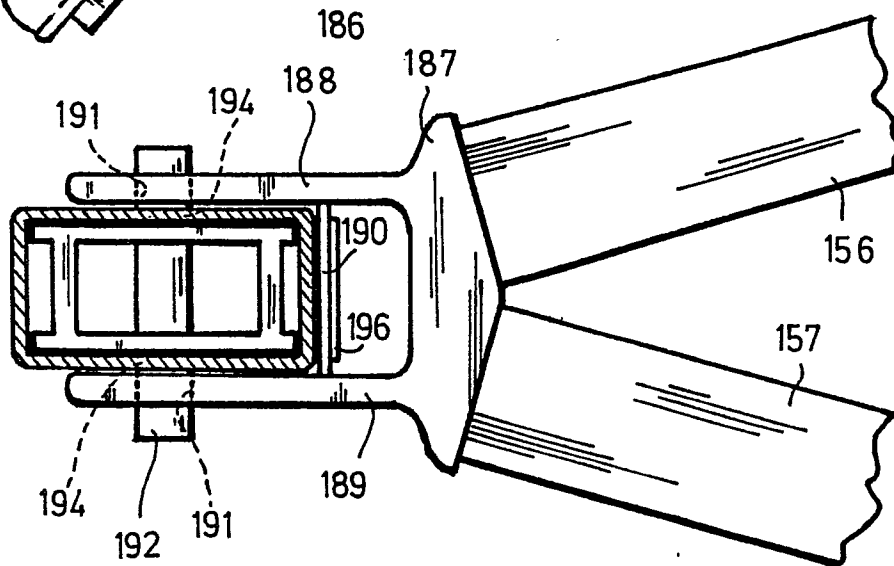
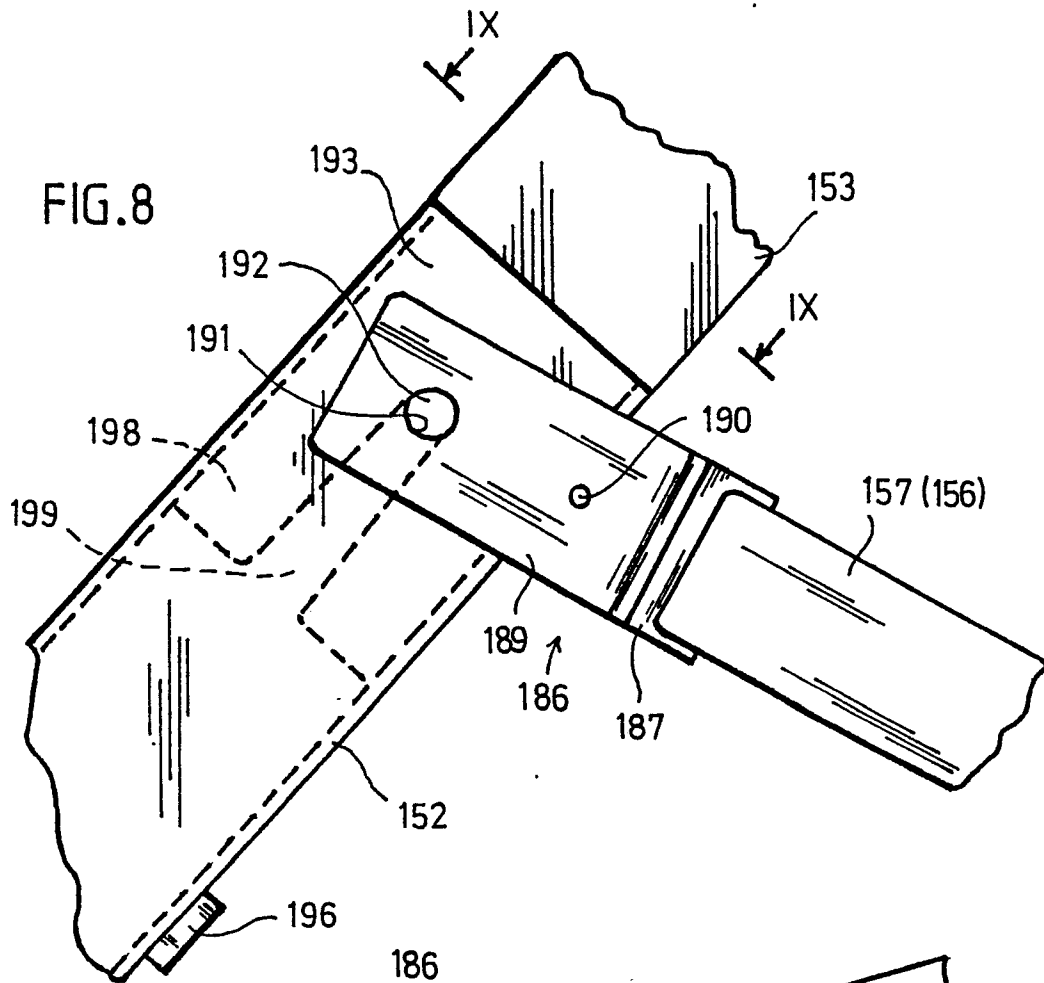


FIG. 9

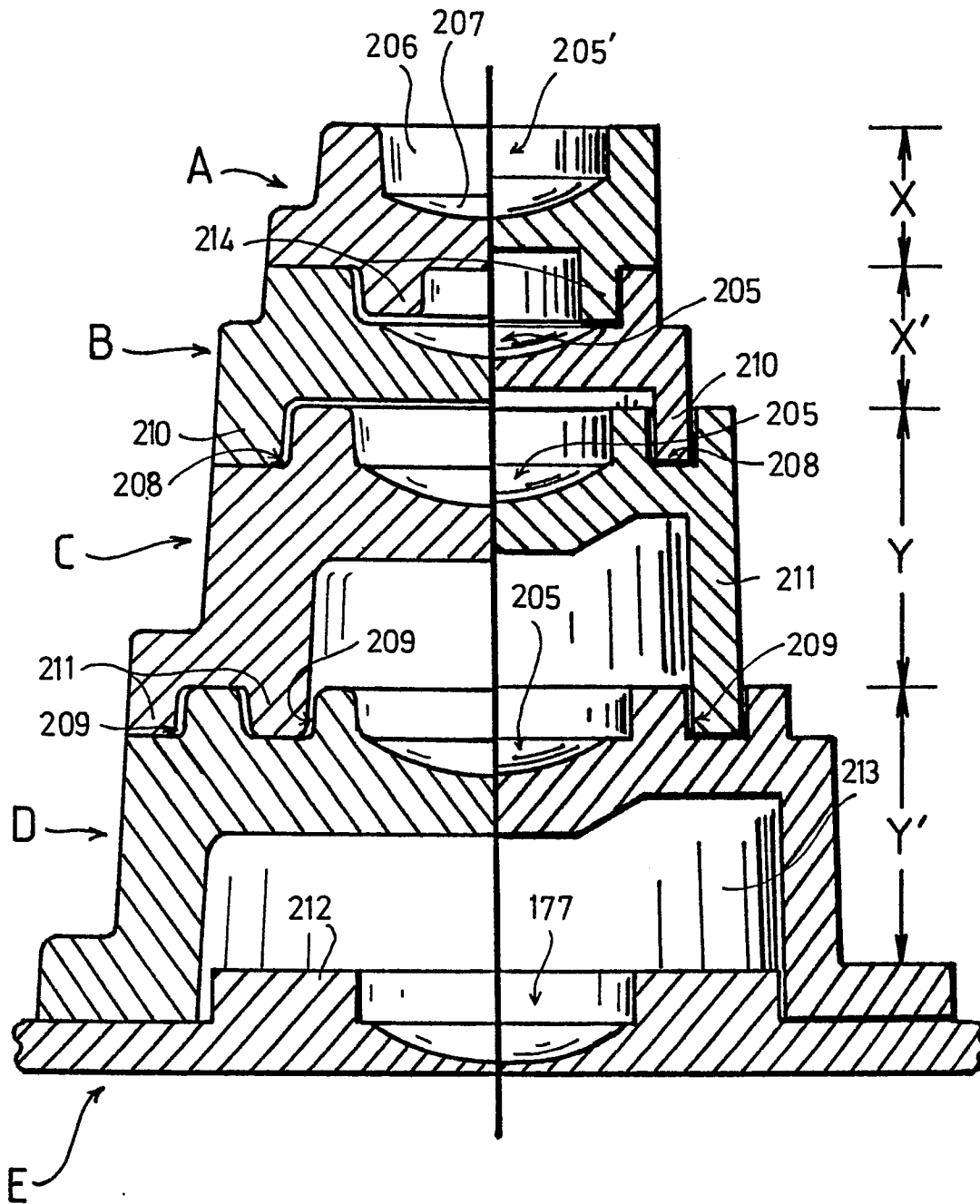


FIG. 10

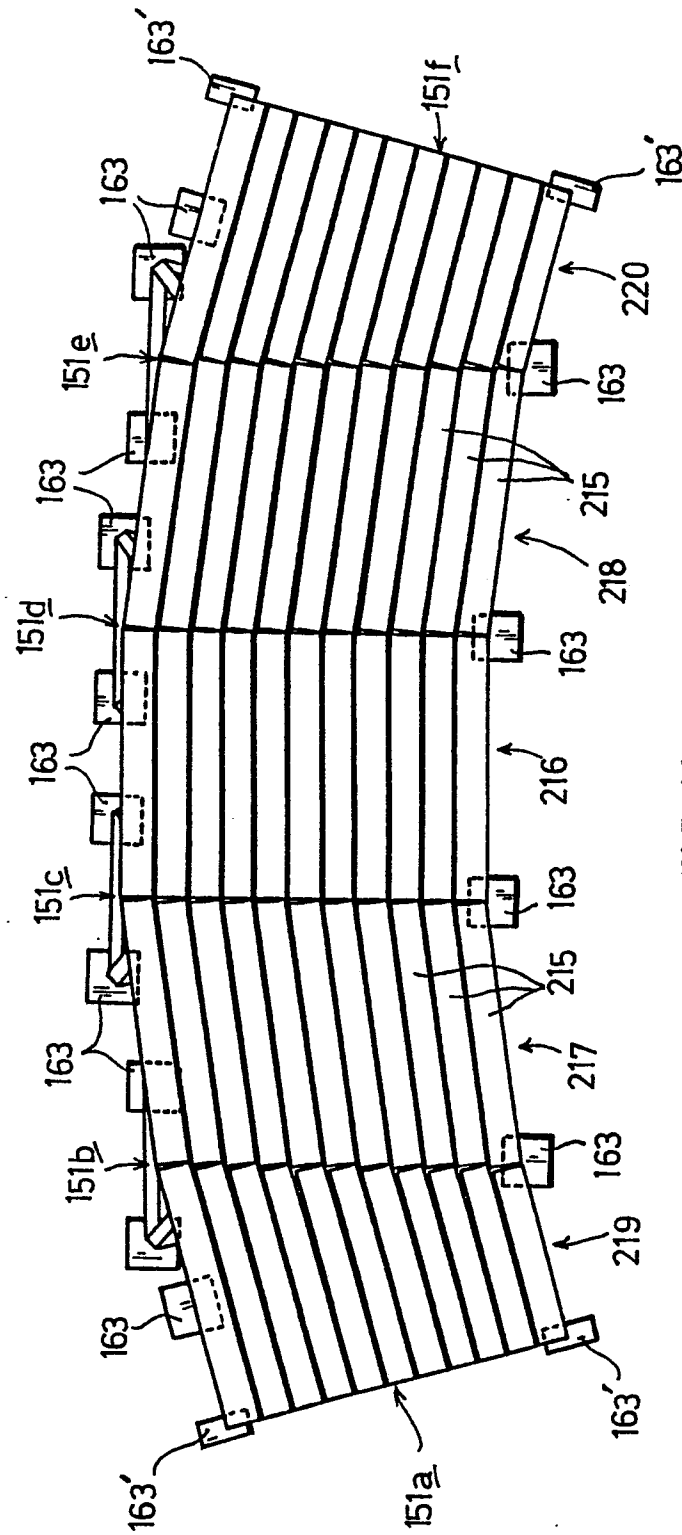


FIG. 11

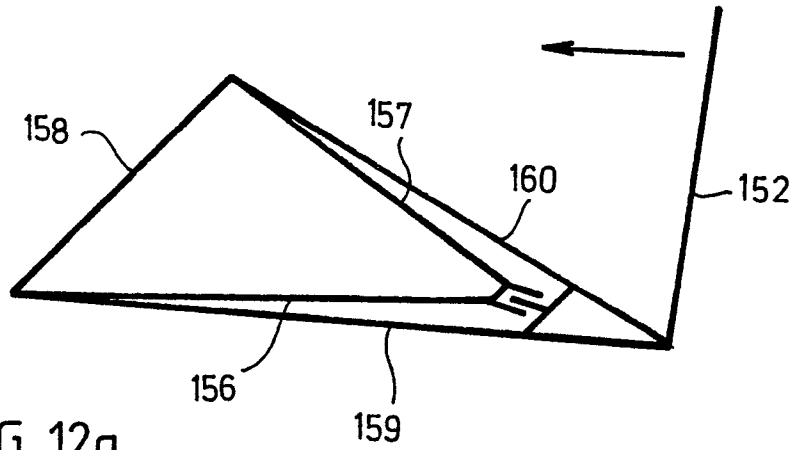


FIG. 12a

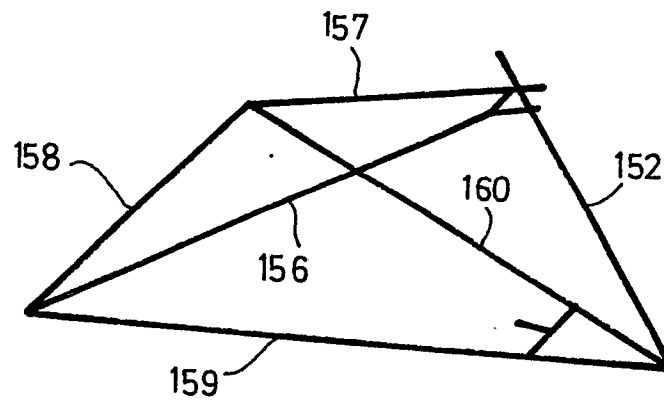


FIG. 12b

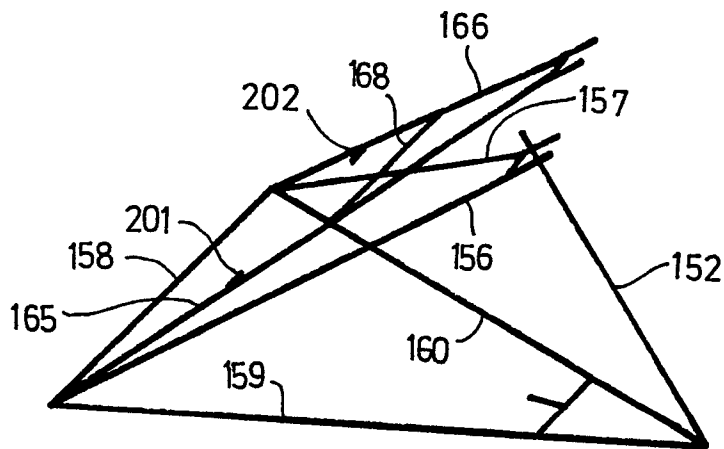


FIG. 12c

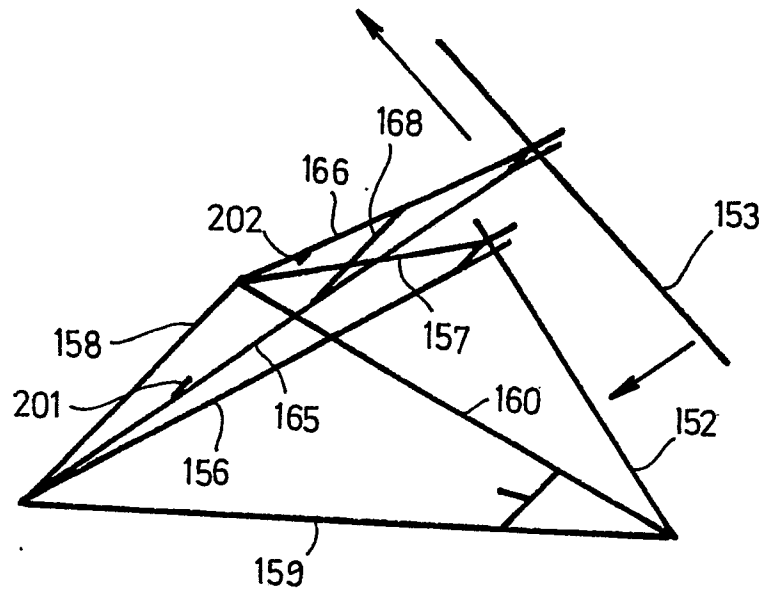


FIG. 12d

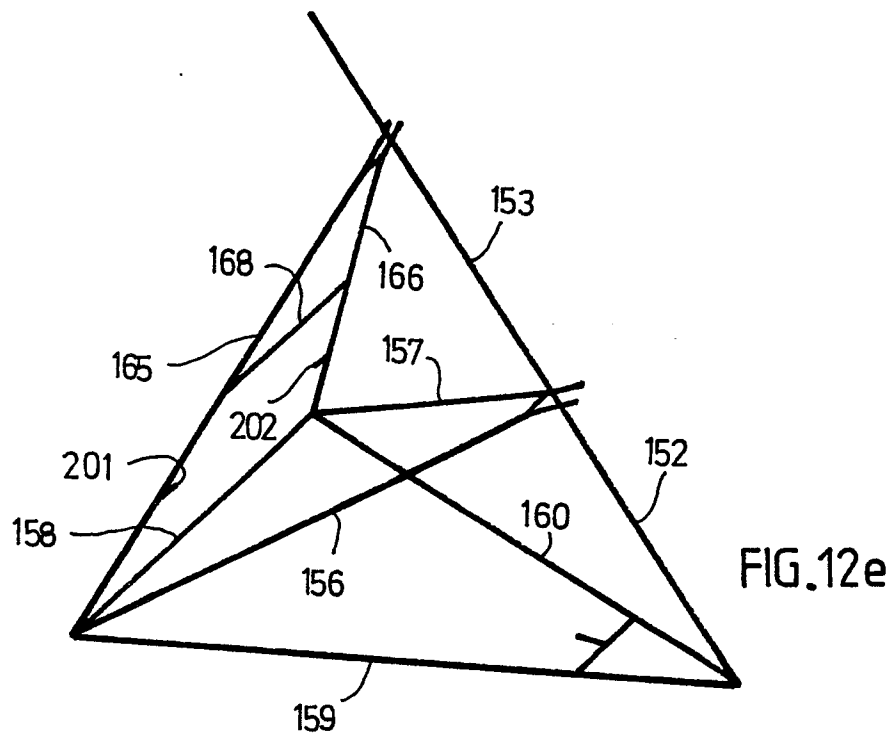
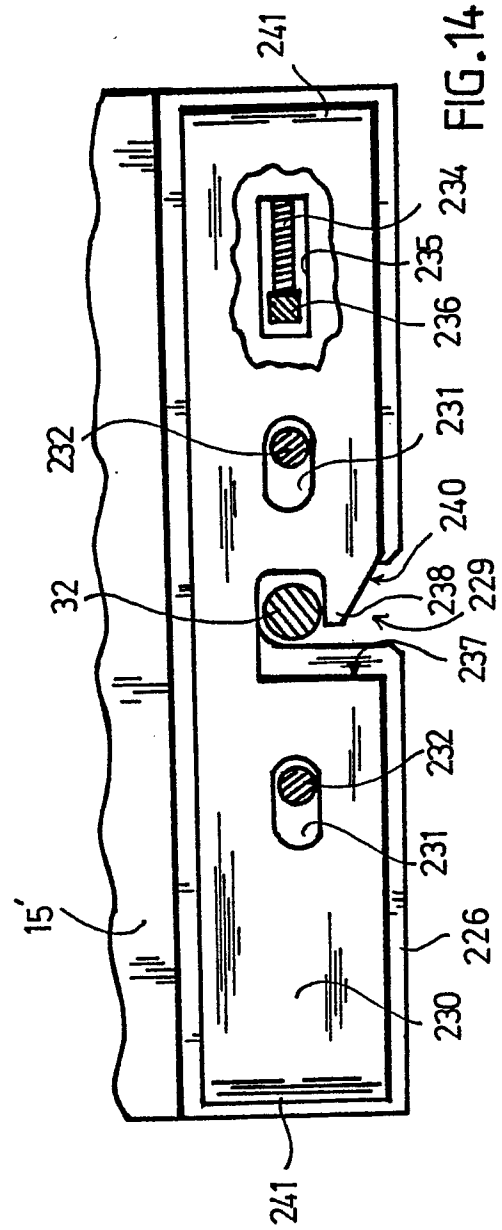
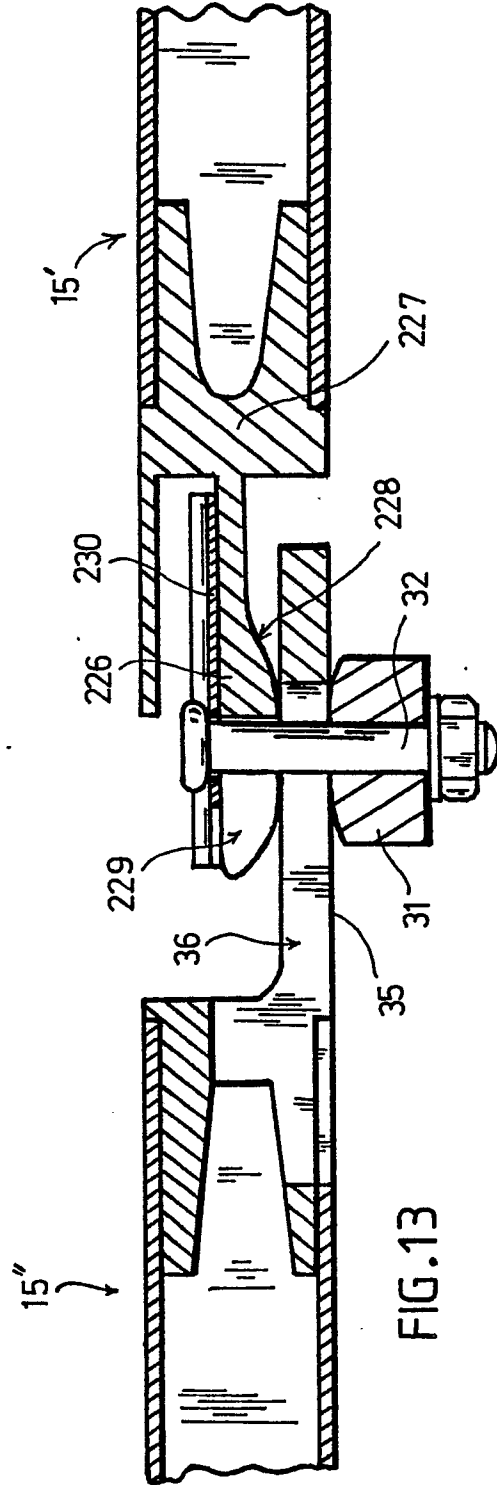
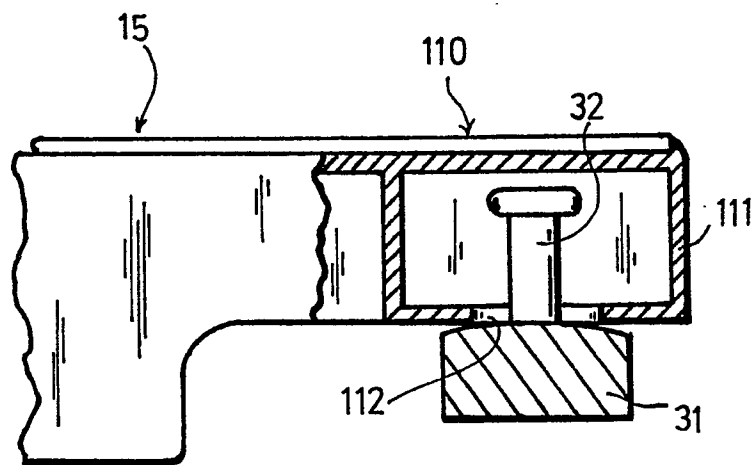
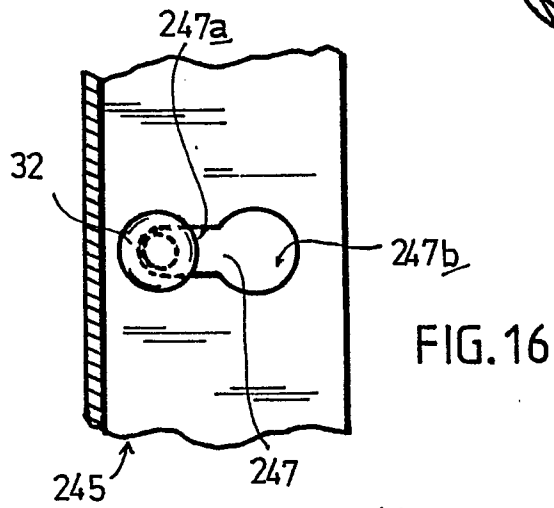
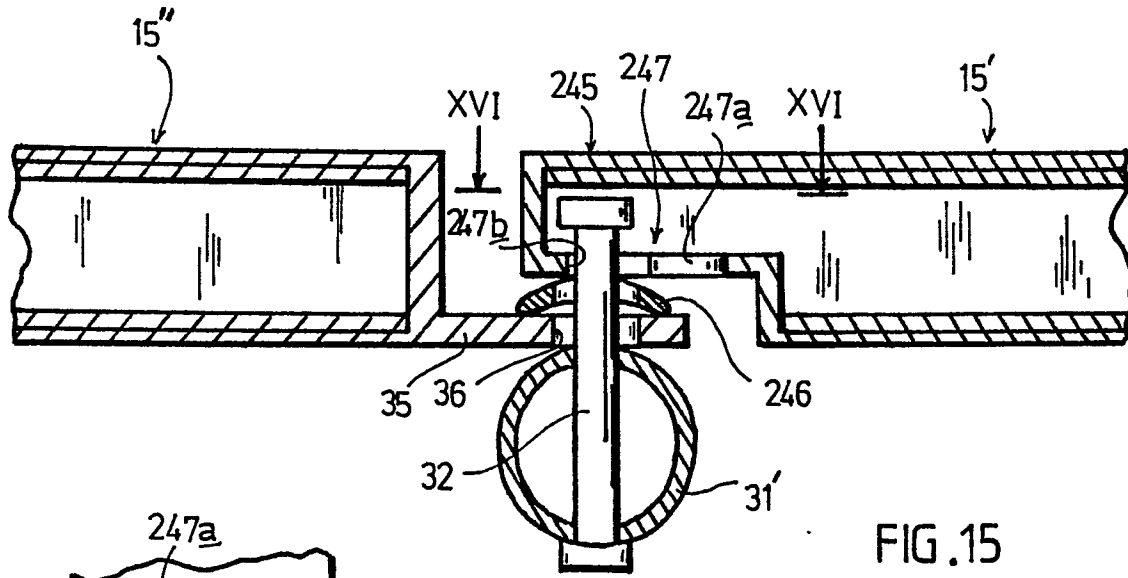


FIG. 12e





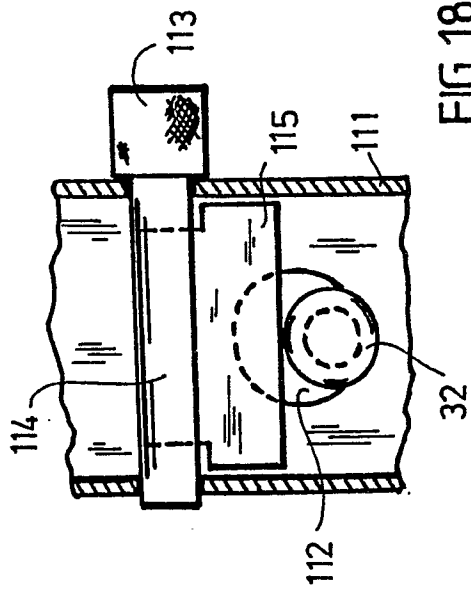


FIG. 18

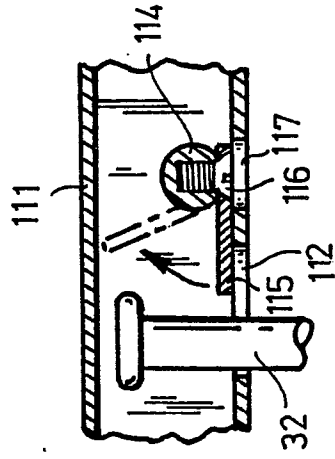


FIG. 19

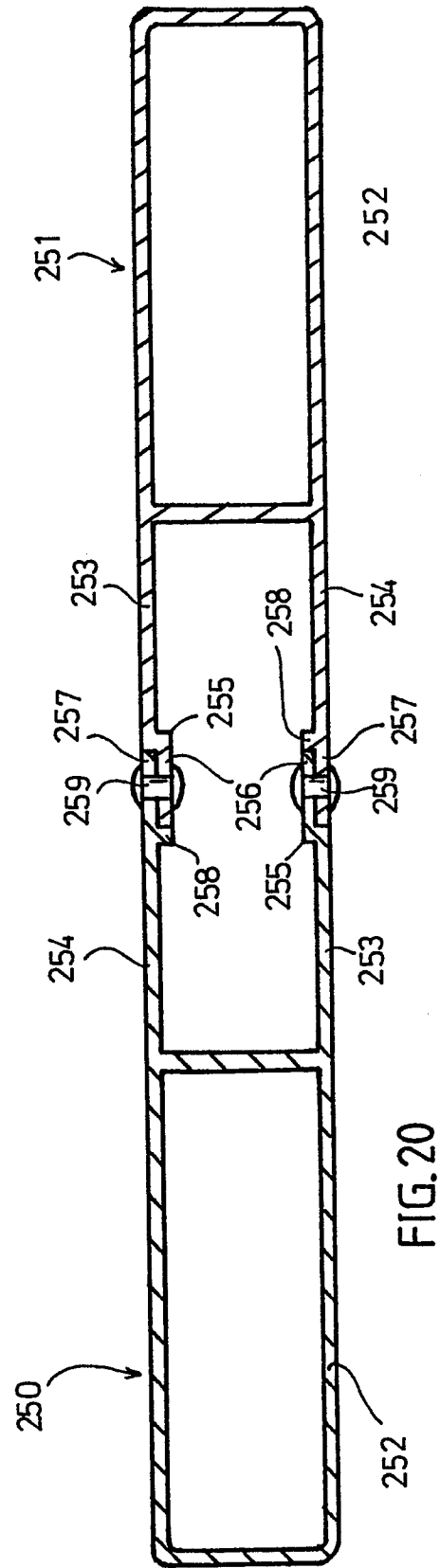


FIG. 20