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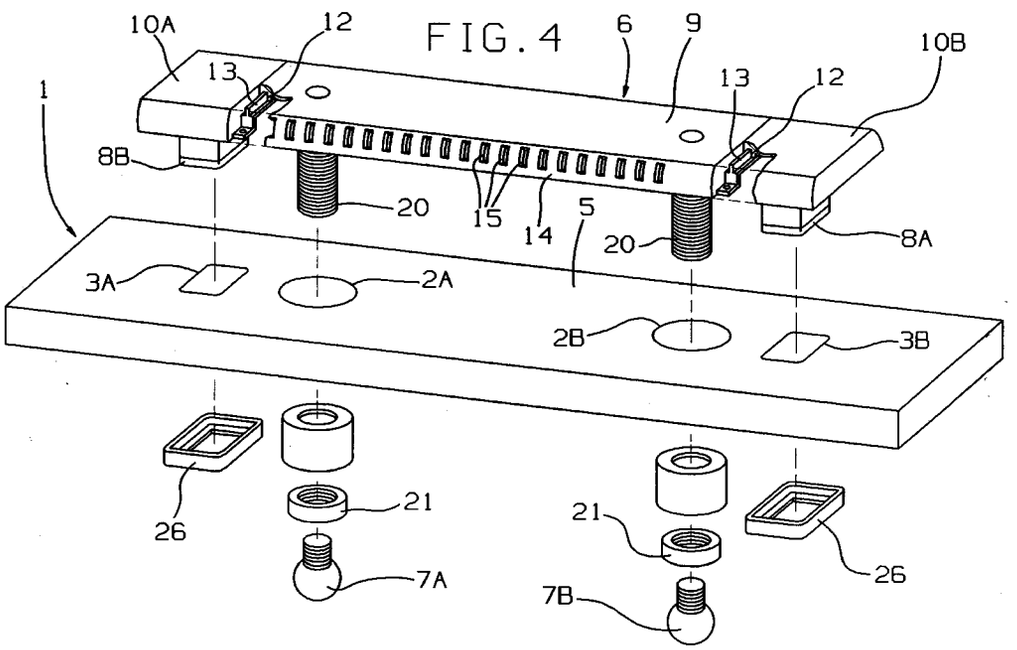
(54) Modular case for electric component assembling

(57) - Modular case for electric component assembling, especially for consoles and brackets in bathroom furniture and the like, comprising an elongated middle portion (9) for light sources (7A, 7B) with relevant fittings (20, 21, 22, 23) assembling and interchangeable distal portions (10A, 10B) for pushbutton switches (8A) and power points (8B) and relevant fittings (25, 26) assembling.

FIG. 4



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Description

- Present invention concerns a modular case for electric component assembling, especially for consoles and brackets in bathroom furniture and the like, comprising an elongated middle portion (9) for light sources (7A, 7B) with relevant fittings (20, 21, 22, 23) assembling and interchangeable distal portions (10A, 10B) for pushbutton switches (8A) and power points (8B) assembling.

State of the art

- It is known in bathroom furniture and the like the use of grouping light sources, sockets for electric razors and the like, with relevant switches and fittings, near the mirrors, there usually placed over the washbasins.

- For looking and usefulness purposes, and also for security sake as for distance from water level and children keeping, in many bathroom furniture these electric components are grouped in horizontal brackets overhanging the mirrors, where light sources (usually middle placed), sockets and switches (usually side placed), spring downwardly, while the relevant electric components are grouped out of look over the same brackets.

- For quick work purposes these electric components are furnished preassembled by manufacturers, fitted inside elongated metal boxes, facing the upper surfaces of brackets, through which holes are made to make spring downwardly what may concern.

Disadvantages of known art

- Such elongated metal boxes according to known art, inside which the electric components referred to are preassembled, show various disadvantages:

- firstly their making is relatively elaborate, because four working stages, namely boring, blanking, edging and bending, are required;
- in the second instance they are often unfit as for insulation and waterproof regulation standards;
- in the third and decisive place their structuration is incompatible with modularity requirements of furniture manufacturers about adjustment with contingent embodiments, not only as for length and distance between components springing through bracket holes, but also as for combination among the same components, for instance glow or halogen lamps in combination with sockets of the various standards, so that manufacturers are forced to make to order or to undertake large stocks of various, or almost more usual, combinations.

Objects of the invention

- Main object of present invention is so to achieve a supporting structure for electric component preassembling especially in brackets of bath room furniture and the like, plastic made in preference, suitable to utmost foster the manufacturing and assembling modularity with the electric components concerned.

- Other object of present invention is to achieve what above by a multipurpose structure suitable for a plurality of embodiments of brackets of bath room furniture and the like.

- Other object of present invention is to achieve what above by a structure easy and speed to be made, that does not change kind and form of components.

- Other object of present invention is to achieve what above by a structure suitable for large use.

- Other object of present invention is to achieve what above by a structure in compliance with security standards.

- Other object of present invention is to achieve what above by a simple and cheap structure with reference to the results attained.

Abstract of the invention

- These and other further objects are all achieved by the modular case for electric component assembling, especially for consoles and brackets in bathroom furniture and the like, according to present invention, comprising an elongated middle portion (9) for light sources (7A, 7B) with relevant fittings (20, 21, 22, 23) assembling and interchangeable distal portions (10A, 10B) for pushbutton switches (8A) and power points (8B) assembling.

Detail of the attached drawings

- Further features and advantages of the structure according to present invention are more apparent by the following detailed specification of one preferred but not sole embodiment and of some relevant embodiment variants, shown by way of example in the four sheets of attached drawings, in which:

- figure 1 is a perspective view of a bathroom bracket with the structure according to present invention there assembled;
- figure 2 is a view of the structure according to present invention exploded in its elements;
- figure 3 is a section view of an element of the structure according to present invention;
- figure 4 is a view of the structure according to present invention as assembled to a bathroom bracket;
- figure 5 is a view of one first embodiment variant of an element of the structure according to present invention;
- figure 6 is a view of one second embodiment variant of an element of the structure according to present invention.

Description of one preferred embodiment

- With reference to these figures, and especially to figure 1, 1 is a bracket of bathroom furniture, for instance of the kind usually placed as "top" over the mirrors of washbasins, through which two middle holes 2A and 2B and two side holes 3A and 3B are made (see also figure 4).

- In the below side 4 of the bracket 1 two light sources 7A and 7B, for instance glow or halogen lamps, are insertet inside the middle holes 2A and 2B, and one switch 8A and one socket 8B are inserted inside the side holes 3A and 3B.

- Over the upper side 5 of the bracket 1 an elonged box 6, plastic made and shell shaped in preference, is fixed in whatever suitable way, for instance by screws, to cover the holes 2A, 2B, 3A and 3B of the bracket 1.

- The shell 6 (see in particular figure 2) is divided in one middle elongated portion 9 and in two side or distal portions 10A and 10B, fixed one other with groove and tongue coupling secured by screws 11 and formed by cross groove 12 on a part and hook tongue 13 on the other (see also figure 4), so that the middle portion 9 is furnished of a groove 12 at one end and of one tongue 13 at the other.

- Through the bend rises 14, along the border of the middle elongated portion 9 of the shell 6, lines of cuts 15 are pierced and in the inner side of the same bend rises 14, near their edges and in the bottom 16 of the middle portion 9 (see also figure 3), longitudinal grooves 17 are made to press retain "L" shapes 18 with comb wing 19 facing the cuts 15.

- At the bottom 16 of the middle portion 9 of the shell 6, seats are placed for assembling of the mountings 20, with bushes 21, of the light sources 7A and 7B, and projections 22 for assembling of bridges 23 for retaining of various fittings, one transformer (not shown) in particular, when the light sources 7A and 7B are halogen lamps.

- In the bottom of the side or distal portions 10A and 10B of the shell 6 one moulded projection 24 is provided for assembling of the frames 25, with mask 26, of the switch 8A or soket 8B.

- Figure 6 shows one connector 28, for instance interchangeable with the distal portion 10B, like this last sized and provided with one moulded projection 24 for assembling of the frames 25, but equipped at one side with hook tongue 13 for couping to one middle portion 9 and at the other side of groove 12 for coupling to one more middle portion 9 or to one distal portion 10B not shown.

- Figure 5 shows one stopper 27 interchangeable for instance with the distal portion 10B, for the below detailed functions.

Funcions

- The middle portion 9 of the shell 6 can be predisposed and stocked by preassembling of the light sources 7A and 7B, for instance glow or halogen lamps or else, and relevant fittings;

- in the same way the side or distal portions 10A and 10B can be predisposed and stocked by the preassembling of switches 8A, sockets 8B and relevant fittings.

- As occasion requires, the middle portions 9, chosen among the relevant various equipment, can be assembled with the side portions 10A and 10B, chosen among the relevant various equipment, so to immediately attain the combination required by customers.

- The so attained shell structures 6 can be in this way immediately assembled to brackets 1, where the preassembled "L" shapes 18 provide proper ventilation and heat dissipation by the facing side boring formed the comb wings 19 in combination with the cut lines 15, at the same time preventing water permeation inside the structure, in compliance with security standards.

- The shell structures 6 can be furthermore developped to second different manifacturing requirements, for instance:

- by disposing one or more following middle portions 9 between distal portions 10A and 10B;
- or, like figure 5, by disposing one connector 28 between one middle portion 9 and one other middle portion 9, if one switch 8A or one socket 8B or else is required in middle position;
- or, like figure 6, by disposing the stoppers 27 to complete the shell 6, if the elemenets lodged in the distal portions 10A and 10B are not required;
- finally, angled middle portions 9 or angled distal portions 10A and 10B can be disposed to get angled shaped shell structures 6.

Further embodiments

- Obviously that in further embodiments the structure according to present invention can be accomplished by technical and mechanical equivalents having same result, or combined with completing devices, as below exemplified:

- the middle elongated portions of the shell may have whatever length and shape, the same for the side distal portions;
- the coupling system of the portions of the structure may be whatever fit for the purpose;
- the electric components completing the structure may be of whatever kind and in whatever way combined;
- the structure can be applied in further utilizations wherever may be suitable to group electric or electronic components to the rear of surfaces;
- the same structure may also be used alone, with screens, as a lamp.

Advantages of the invention

- As evident from the above complete specification, the structure according to present invention attains the advantages corresponding to the purposed objects by putting in cocrete form a simple and cheap supporting structure for electric components preassembling especially in brackets of bathroom furniture, suitable for large use, suitable to utmost foster the manufacturing and assembling modularity with the electric components concerned and suitable for a plurality of embodiments.

Claims

1. Modular case for electric component assembling, especially for brackets in bathroom furniture and the like, characterized in that it comprises an elongated middle portion (9) for light sources (7A, 7B) with relevant fittings (20, 21, 22, 23) assembling and interchangeable distal portions (10A, 10B) for pushbutton switches (8A) and power points (8B) and relevant fittings (25, 26) assembling.

2. Modular case for electric component assembling, especially for brackets in bathroom furniture and the like, characterized in that it comprises:

   - an elongated middle portion (9) and two interchangeable distal portions (10A, 10B) coplanarly assembled with groove and tongue coupling formed by cross groove (12) and hook tongue (13) so that said middle portion (9) is furnished of a groove (12) at one end and of one tongue (13) at the other;
   - lines of cuts (15) made along the bend rises (14) of the border of said middle elongated portion (9) facing "L" shapes (18) with comb wing (19) retained by longitudinal grooves (17) made in the inner side of said bend rises (14) near the border and in the bottom (16) of said middle portion (9);
   - seats at said bottom (16) of said elongated middle portion (9) for assembling of bushes (20) and fittings (21) of light sources (7A, 7B) and projections (22) for assembling of bridges (23) for retaining of various fittings;
   - moulded projections (24) in said side or distal portions (10A, 10B) for assembling of frames (25) and fittings (26) supporting switches (8A) and sokets (8B).

3. Structure as from second claim, characterized in that said elongated middle portion (9) and said distal portions (10A, 10B) are made in plastic material and in die casting nylon in preference.

4. Structure as from second claim, characterized in that said elongated middle portions (9) have whatever length.

5. Structure as from second claim, characterized in that it comprises a plurality of said middle portions (9) coupled one after the other.

6. Structure as from second claim, characterized in that it comprises stoppers 27 in the place of said distal portions (10A, 10B).

7. Structure as from second claim, characterized in that it comprises connectors (28) interposed between said middle portions (9).

8. Structure as from second claim, characterized in that said middle portions (9) and/or said distal portions (10A, 10B) have angled shaped plant.

9. Structure as from second claim, characterized in that said middle portions (9) and/or said distal portions (10A, 10B) have whatever length and shape.

10. Structure as from second claim, characterized in that said middle portions (9) and/or said distal portions (10A, 10B) are coupled in whatever way fit for the purpose.

11. Structure as from second claim, characterized in that of being completed with whatever kind of electric components in whatever way combined.

12. Structure as from second claim, characterized in that of being applied in whatever utilization wherever may be suitable to group electric and/or electronic components to the rear of surfaces.

13. Structure as from second claim, characterized in that of being completed with whatever kind of fittings and fixing means to form a lamp.

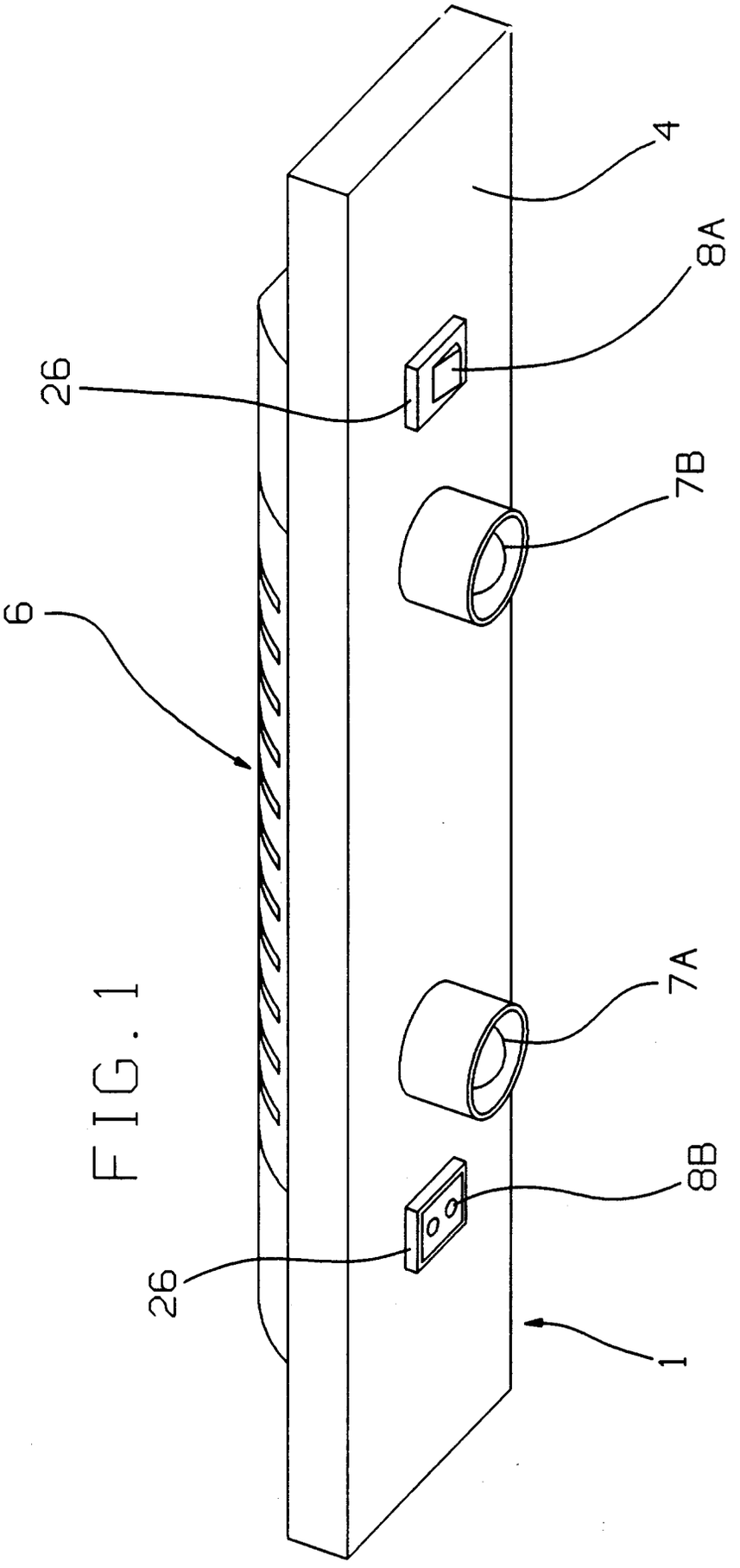


FIG. 1

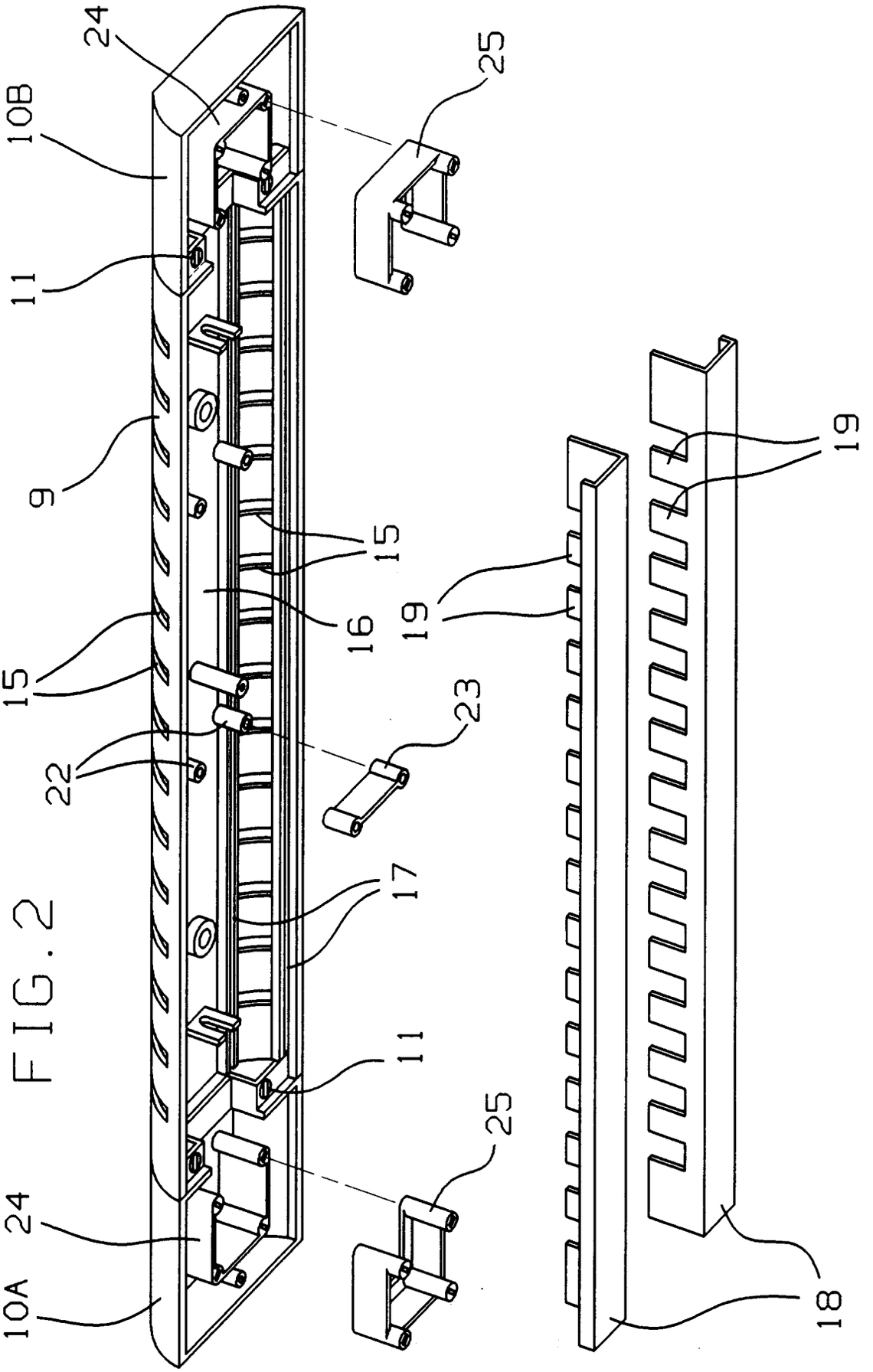


FIG. 2

FIG. 5

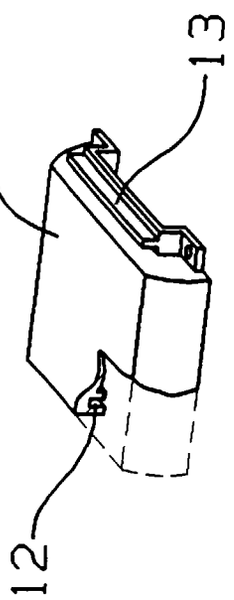


FIG. 6

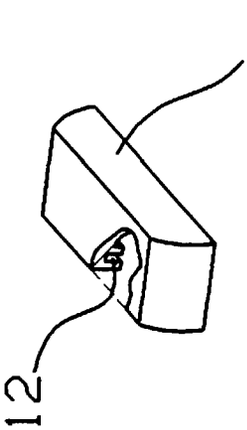
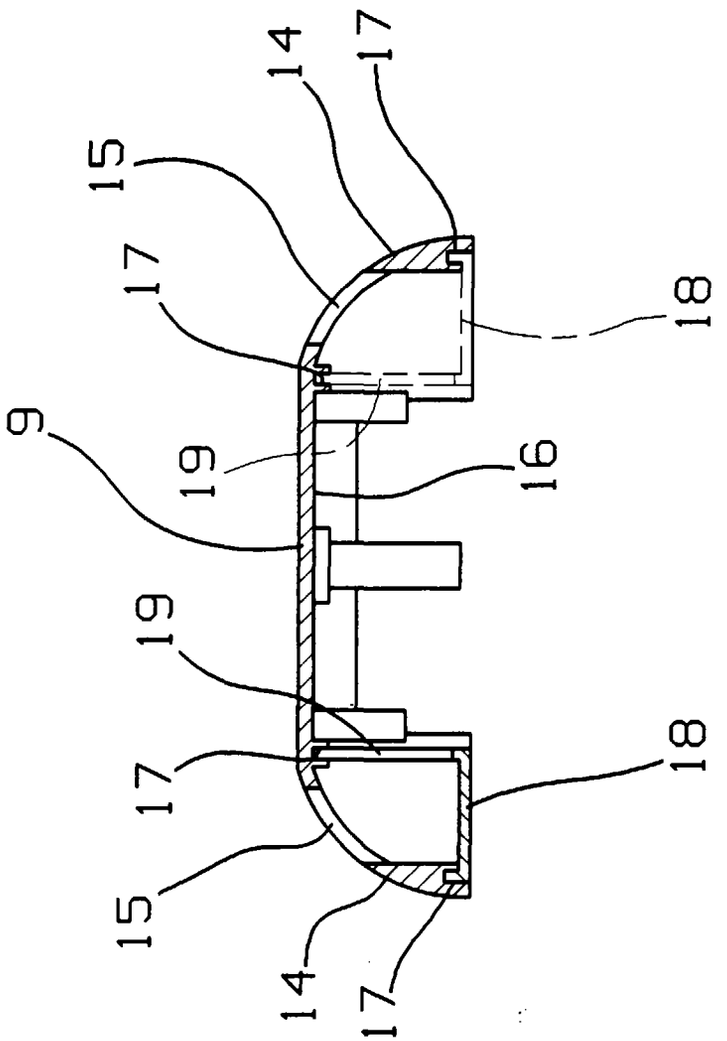


FIG. 3



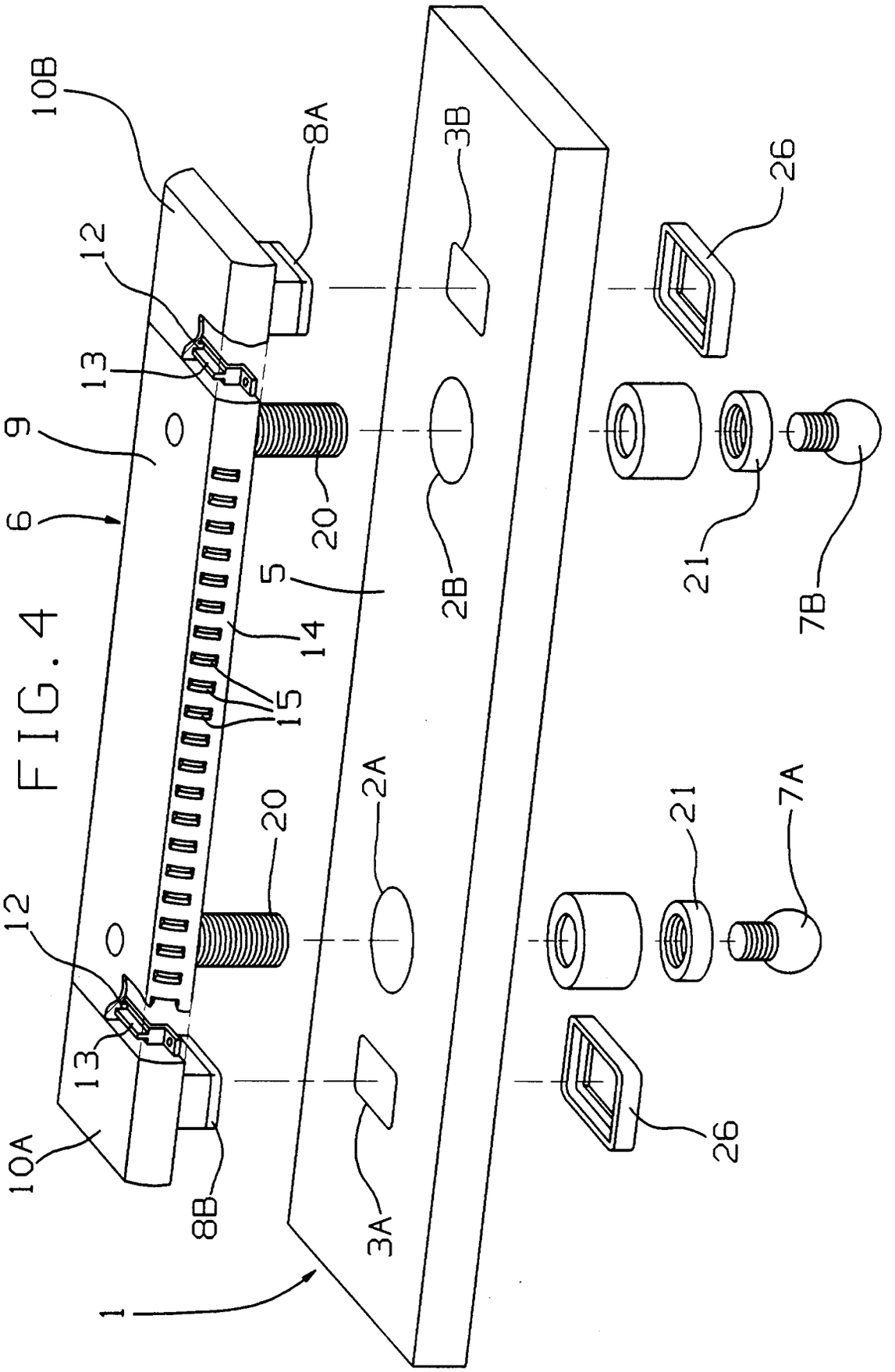

10B
8A
3B
26
12
13
9
6
20
5
2B
21
7B
14
15
20
2A
21
7A
12
13
10A
8B
3A
26
1

FIG. 4