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(71) Applicant: **Elvox Costruzioni Elettroniche S.p.A.**
35133 Padova (IT)

(72) Inventor: **Miozzo, Orlando**
Via A.Ferrero, 9, 35133 Padova (IT)

(74) Representative: **Cicogna, Franco**
Ufficio Internazionale Brevetti
Dott.Prof. Franco Cicogna
Via Visconti di Modrone, 14/A
20122 Milano (IT)

(54) Name bearing plate provided with quick locking means for locking the outer push-buttons

(57) The present invention relates to a name bearing plate provided with quick locking means for locking the outer push-buttons, which comprises a plate element including a plurality of windows for receiving corresponding name bearing glass elements, adjoining holes for receiving corresponding pushbuttons.

The main feature of the invention is that the name bearing glass elements define quick coupling means for quickly locking the body of the pushbutton.

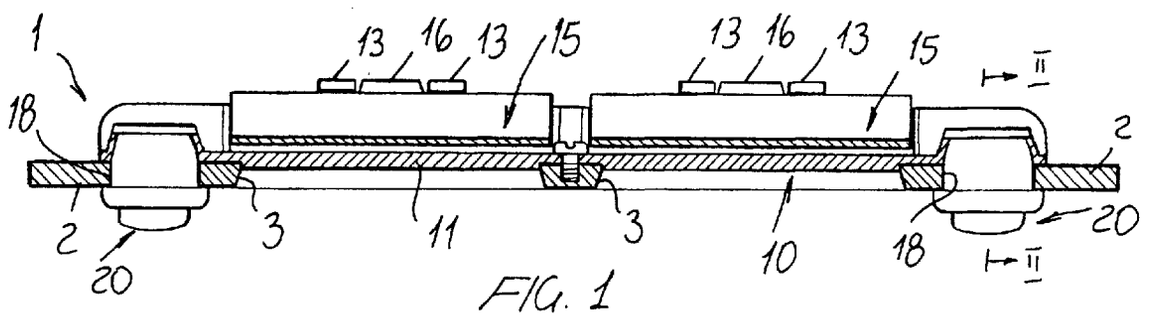

FIG. 1

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Description

BACKGROUND OF THE INVENTION

The present invention relates to a name bearing plate, provided with quick locking means for locking the outer push-buttons associated with said plate.

As is known, in making brass name bearing plate, a problem is that of properly coupling to the plate the ringer push-buttons, which push-buttons are also made of a brass material.

Actually, it is rather difficult to properly assembling a lot of component elements by using screw connections which, moreover, are very expensive mainly from the assembling time standpoint.

Moreover, a further problem is that of properly electrically insulating the ringer push-buttons.

SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to overcome the above mentioned drawbacks, by providing a name bearing plate with locking means for quickly locking outer push-buttons associated with said plate, which allows to make, on a brass name bearing plate element, a snap type of coupling for connecting an outer push-button, without using tools or the like.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a name bearing plate which allows to perform electrically insulating operations in a very simple manner, thereby solving all of the related problems.

Another object of the present invention is to provide such a name bearing plate which, owing to its specifically designed construction, is very reliable and safe in operation.

Yet another object of the present invention is to provide such a name bearing plate, including locking means for quickly locking outer push-buttons associated with said plate, which can be easily made starting from easily commercially available elements and materials and which, moreover, is very competitive from a mere economic standpoint.

According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a name bearing plate provided with quick locking means for quickly locking outer push-buttons associated with said plate, comprising a plate element having a plurality of windows for receiving corresponding name bearing glass elements adjoining holes for receiving said push-buttons, characterized in that said name bearing glass elements define quick coupling means for locking a body of a said push-button.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a name bearing plate with quick locking means for quickly locking outer push-buttons, which is illustrated, by way of an indicative, but not limitative, example, in the accompanying drawings, where:

Figure 1 is a cross-sectional view illustrating a name bearing plate provided with adjoining windows or openings;

Figure 2 is a further cross-sectional view substantially taken along the section line II-II of figure 1;

Figure 3 illustrates a name bearing glass element, specifically provided for bearing two names;

Figure 4 is an elevation view illustrating a name bearing glass element, as partially cross-sectioned;

Figure 5 is a double name bearing glass element, as seen from the inside thereof;

Figure 6 illustrates a single name bearing glass element, as seen from the inside thereof;

Figure 7 is across-sectional view substantially taken along the section line VII-VII of figure 6;

Figure 8 is a top plan view illustrating a name bearing sheet restraining element;

Figure 9 is an end view illustrating the same name bearing sheet restraining element;

and

Figure 10 is a cross-sectional view illustrating a push-button associated with the subject name bearing plate.

DESCRIPTION OF THE PREFERRED EMBODIMENT

With reference to the number references of the above mentioned figures, the name bearing plate, including quick locking means for quickly locking outer push-buttons associated with said plate, according to the present invention, which has been generally indicated by the reference number 1, comprises a brass plate, which is provided with a plurality of windows or throughgoing openings 3, which can be arranged in a by pair adjoining relationship, or which can be individual and overlaid one on the other.

In the mentioned windows or openings 3, is engaged a name bearing small glass element, generally indicated by the reference number 10, which can be either of a double type, as is shown in figures 3 to 5 or of a single or individual type, as is shown in figures 6 and 7.

Each name bearing glass element defines an enlarged thickness region 11 engaging inside the windows 3 and being provided with longitudinally extending side edge portions 12 provided with coupling tooth elements 13, for allowing name sheet restraining or holding elements 15 to be engaged therein, each said name sheet holding element being provided with fins or tabs 16 adapted to be engaged between said tooth element 13 for allowing said name bearing sheet holding element to be easily applied and removed.

Adjoining the windows 3 are provided a plurality of holes, indicated by the reference number 18, in which can be engaged push-buttons, generally indicated by the reference number 20.

More specifically, each push-button 20 is provided with a hollow push-button body 21, in the inside of which is provided a slider element 22, also made of a brass material, which is coupled to an end portion of a pin 23, provided, on end arm elements 24 thereof, with a ring-like enlarged portion 25, adapted to be snap engaged in an annular groove 26 formed on the slider element.

Between each push-button and the inside bottom portion of the push-button 20, is arranged a spring 27.

As shown, the push-button body 20 is provided, on the outer surface thereof, with a cut-out 30, delimited by an abutment 31.

In said cut-out portion 30, quick connecting means can be easily engaged, said quick connecting means being defined by said small glass element 10 and comprising resilient tabs 35, engaging in the cut-out portion 30 and abutting against the abutment 31, thereby allowing the push-button 20 to be quickly and simply locked inside the plate 2.

From the above disclosure it should be apparent that the invention fully achieves the intended aim and objects.

In particular, it should be pointed out that the push-button is connected by simply engaging the body of the push-button inside the tabs 35, which in turn engage in the cut-out portion or groove 30, thereby providing a quick locking operation.

In this connection it should be moreover apparent that the push-button can be easily assembled, since the push-button pin is coupled to the slider element by a simple pressing operation, which causes the arms 23 to be bent, thereby causing the enlarged portion 25 to be engaged in the groove 26 of the slider element, which enlarged portion 25 is defined, as shown, at the end portions of the arms of the push-button pin.

In practicing the invention, the used materials, provided that they are compatible to the intended use, as well as the contingent size and shapes, can be any, depending on requirements.

Claims

1. A name bearing plate provided with quick locking means for quickly locking outer push-buttons associated with said plate, comprising a plate element having a plurality of windows for receiving corresponding name bearing glass elements adjoining holes for receiving said push-buttons, characterized in that said name bearing glass elements define quick coupling means for locking a body of a said push-button.

2. A name bearing plate, according to Claim 1, characterized in that said name bearing plate and the body of the push-button are made of a brass material.

3. A name bearing plate, according to Claims 1 and 2, characterized in that said quick coupling or connecting means comprises a plurality of resilient tabs, defined by said glass elements about an opening in which can be engaged said body provided with a cut-out portion delimited by an abutment which can be connected to the end portions of said resilient tabs.

4. A name bearing plate, according to one or more of the preceding claims, characterized in that said push-button is provided with a brass slider element, which is removably coupled to an electrically insulating material pin, engaged inside the body of said push-button.

5. A name bearing plate, according to Claim 4, characterized in that said pin is provided with a pair of mutually flexible arms which are provided with a projecting ring-like element to be engaged in a groove correspondingly formed on said slider element.

6. A name bearing plate, according to one or more of the preceding claims, characterized in that the body of said push-button is provided, at the end portion opposite to that defining said cut-out, with an abutment edge portion which can be coupled about the holes for the push-buttons.

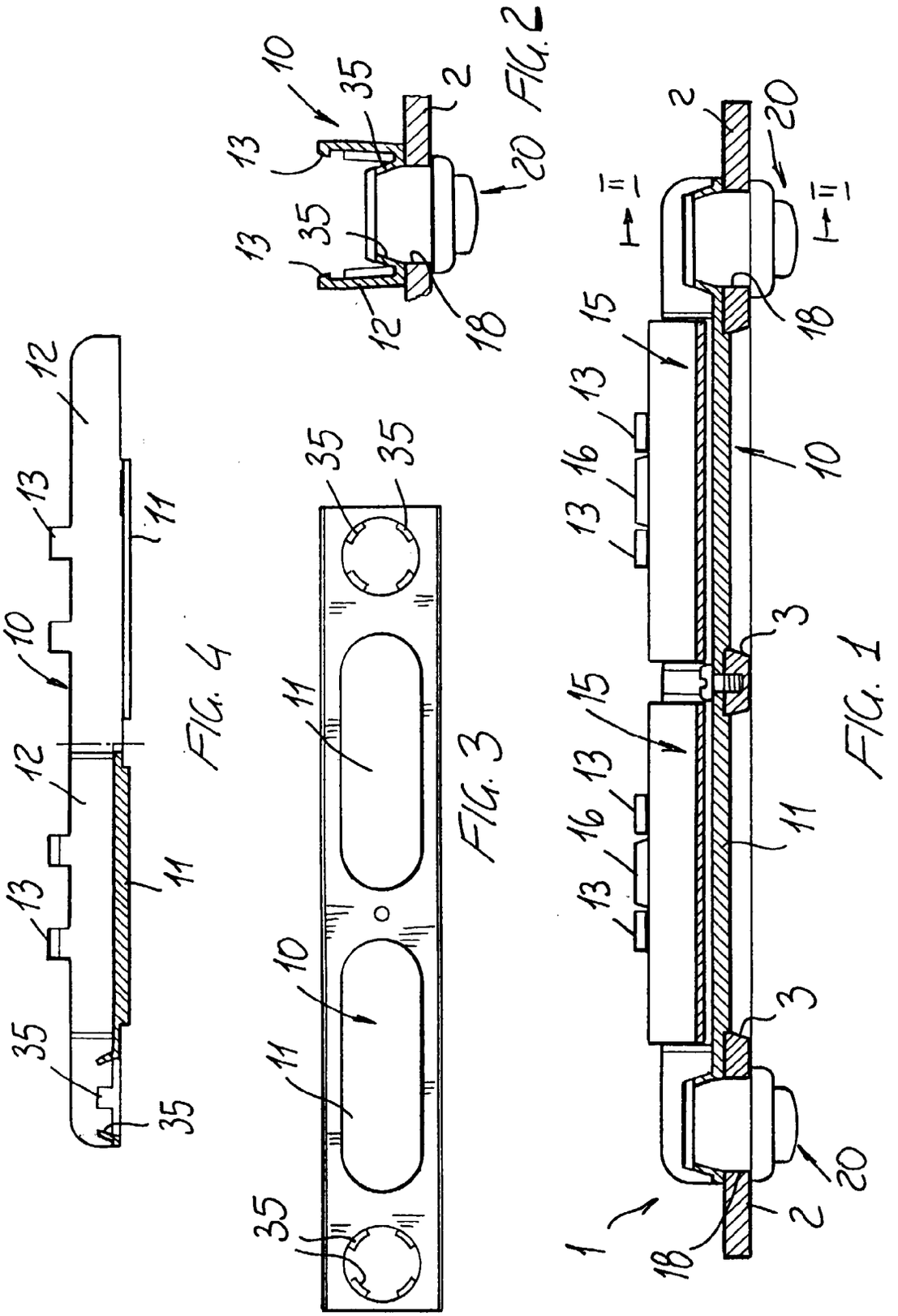

FIG. 1

FIG. 2

FIG. 3

FIG. 4

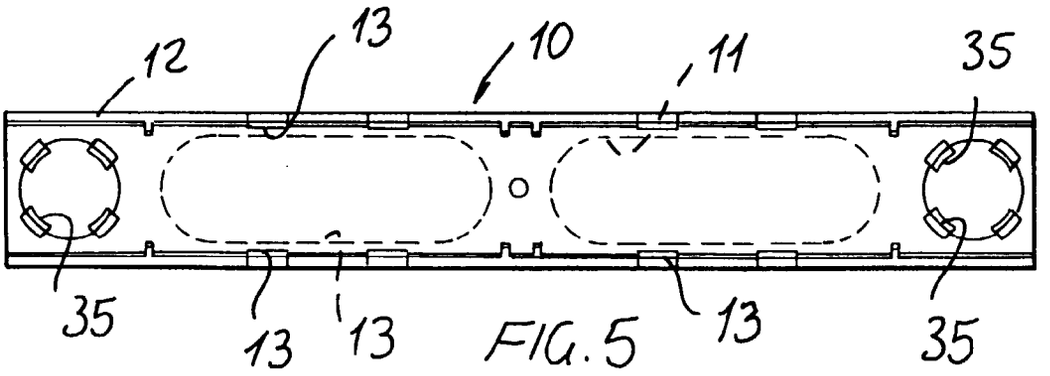

FIG. 5

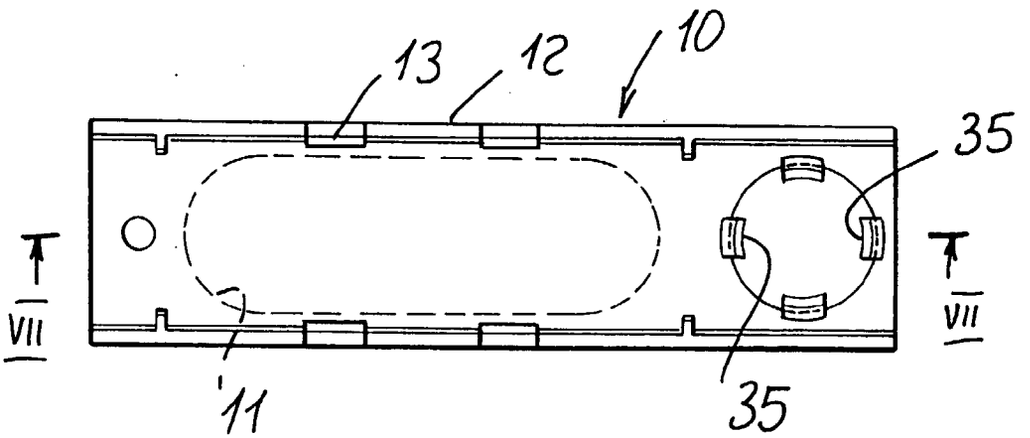

FIG. 6

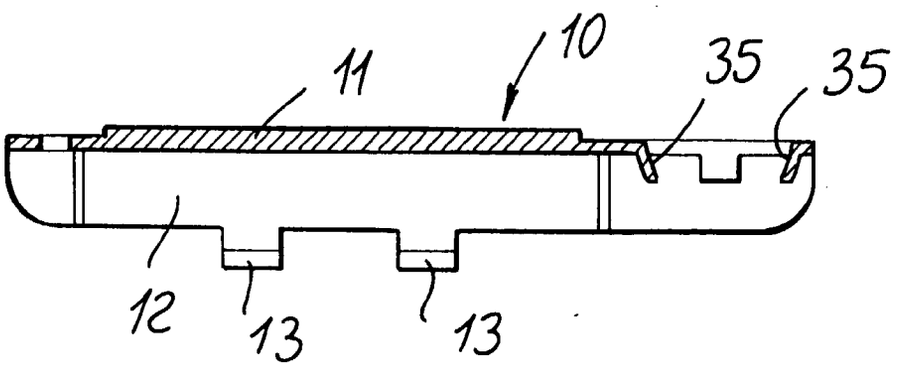

FIG. 7

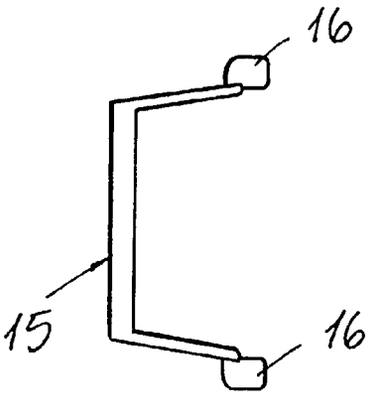

FIG. 9

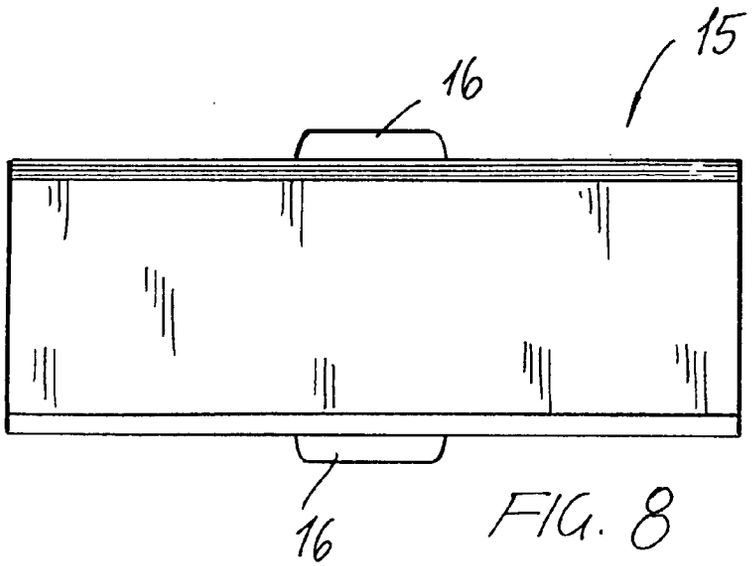

FIG. 8

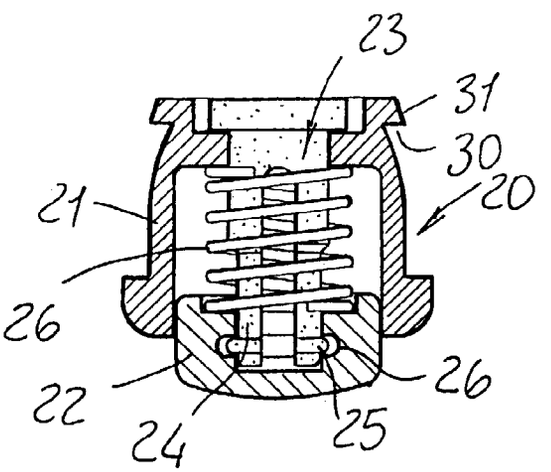

FIG. 10