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(54) Name bearing plate with locking elements for quickıy locking outer push-buttons

(57) The present invention relates to a name-bearing plate including locking elements for quickly locking outer push-buttons, which comprises a plate body having a plurality of windows for name bearing glass elements, with adjoining holes for push-button elements.

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

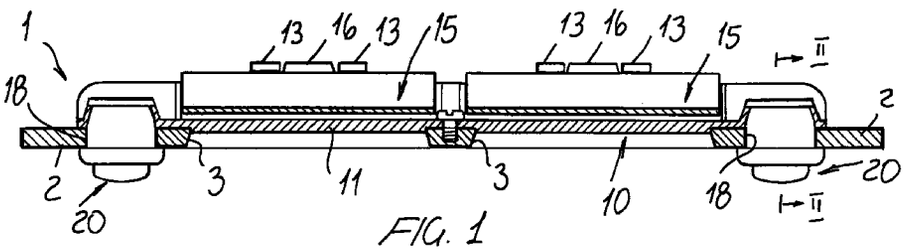

FIG. 1

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Description

BACKGROUND OF THE INVENTION

The present invention relates to a name bearing plate with locking elements for quickly locking outer push-buttons.

As is known, in making brass name bearing plates great difficulties are at present encountered for coupling the ring push-buttons, which are also conventionally made of a brass material.

Actually, it is conventionally necessary to assemble several component elements by screw-type of connections, which have a comparatively high cost and require a comparatively long assembling time.

Moreover, problems are frequently encountered in performing a proper electrical insulation, since it is necessary to adopt specifically designed insulating processes.

SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to overcome the above mentioned drawbacks, by providing a name bearing plate construction with means for quickly locking outer push-buttons, and in particular affording the possibility of performing, in a brass name bearing plate, a snap coupling of the outer push-button, without the need of using assembling tools or instruments.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a name bearing plate in which the electrical insulating operation can be performed in a very simple manner, thereby solving all of the related electrical connecting operation problems.

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

Yet another object of the present invention is to provide such a name bearing plate construction, including locking means for quickly locking the outer push-buttons, 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 construction, with locking means for quickly locking the outer push-buttons, comprising a plate body having a plurality of windows for the name bearing glass elements adjoining push-button holes, characterized in that said name bearing glass elements define quick coupling means for locking the body of the 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 construction with locking means for quickly locking the outer push-buttons, and being 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 with adjoining windows therethrough;

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

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

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

Figure 5 is a view from inside illustrating a double name bearing glass element;

Figure 6 is another view from inside illustrating a single name bearing glass element;

Figure 7 is a cross 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 that same sheet restraining element; and

Figure 10 is a cross sectional view illustrating a push-button.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the number reference of the above mentioned figures, the name bearing plate construction with locking means for quickly locking the outer push-buttons according to the present invention, which has been generally indicated by the reference number 1, comprises a brass material plate, which is provided with a plurality of windows 3, which can be arranged in an adjoining mutual relationship, by pairs, or which can be provided as single mutually superimposed elements.

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

Each name bearing glass element defines an increased thickness region 11, which engages within the windows 3 and being provided with longitudinal side edges 12 having coupling tooth elements 13, in order to allow sheet element restraining elements 15 to be engaged therein, said restraining element 15 being provided with lugs 16 to be arranged between the tooth elements 13 for allowing application and removal operations to be easily performed.

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

More specifically, the push-buttons 20 have a hollow push-button body 21 in the inside of which a slider 22 is provided, also made of a brass material, and being connected to one end of a pin element 23 provided, on end arm portions 24 thereof, with a ring like enlarged portion 25 snap engaging inside an annular groove 26 as formed on the slider.

A spring 27 is moreover provided for operating between the push-button and innert bottom of the push-body 21.

The push-body 21 is provided, on the outer surface thereof, with a cut-out 30 being delimitated by an abutment element 31.

In the cut-out 30 quick connecting means can be engaged, said quick connecting means being defined by the glass elements 10 and comprising resilient tongues 35 engaging in the cut-out 30 and abutting against the abutment element 31 thereby allowing the push-button 20 to be quickly and easily 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, the fact is to be pointed out that the push-button can be easily connected and locked by simply engaging the push-button body 21 inside the tongues 35, which in turn engage in the cut-out or groove 30 thereby providing a firm locking.

To the foregoing it is to be added that also the push-button can be quickıy and easily assembled since said pin can be coupled to said slider by a simple pressing operation; the latter will cause the arm elements 23 to be deflected, so as to cause the enlarged portion 25 defined at the end parts of said arms of said pin to be easily engaged in the groove 26 of the slider.

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

Claims

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

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

3. A name bearing plate construction, according to one or more of the preceding claims, characterized in that said quick coupling means comprise resilient tongues defined by said glass elements about an opening in which can be engaged the push-button body and having a cut-out delimited by an abutment element which can be engaged with the end portions of said resilient tongues.

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

5. A name bearing plate construction, according to one or more of the preceding claims, characterized in that said pin is provided with a pair of mutually flexible arms being provided with a projecting ring element which can be engaged in a groove correspondingly formed on said slider.

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

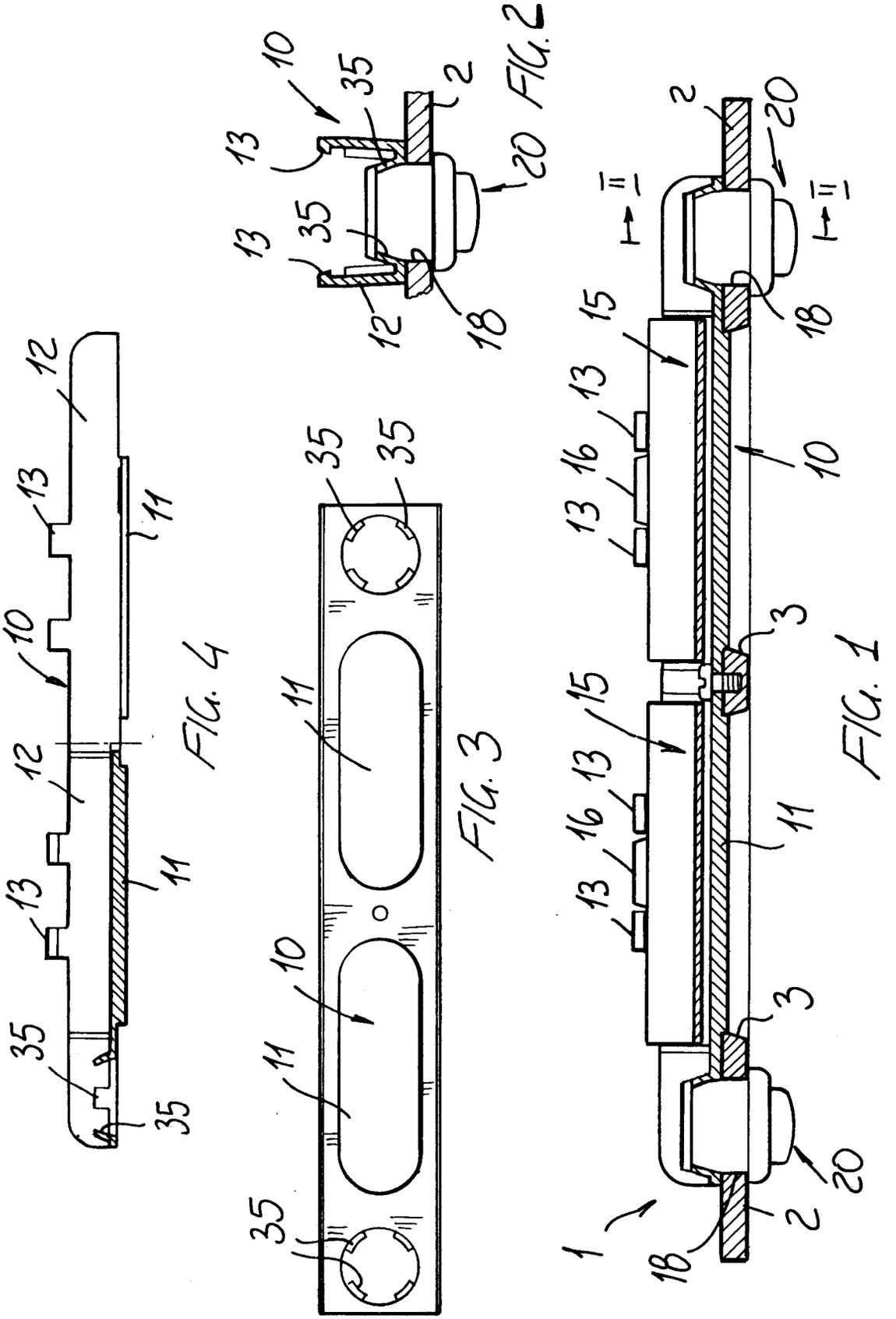

FIG. 1

FIG. 2

FIG. 3

FIG. 4

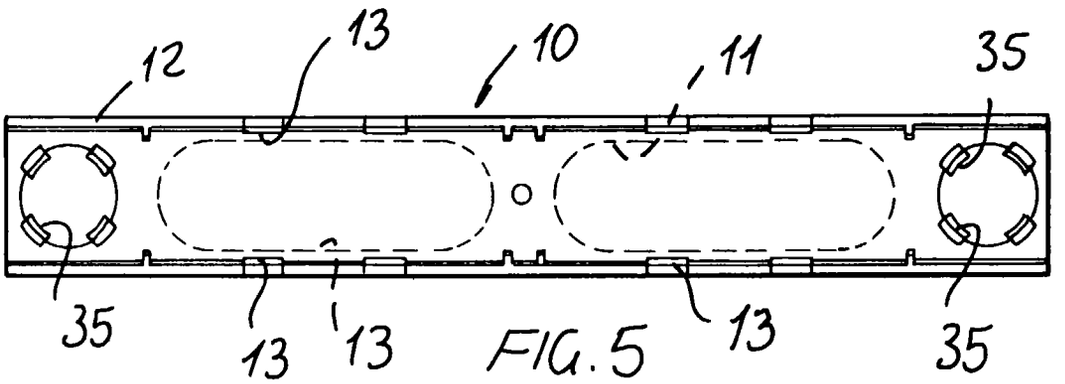

FIG. 5

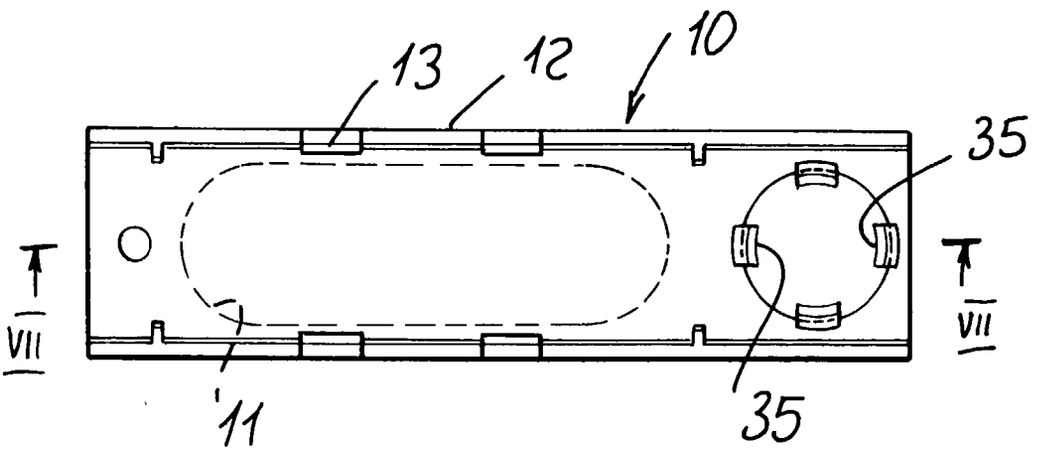

FIG. 6

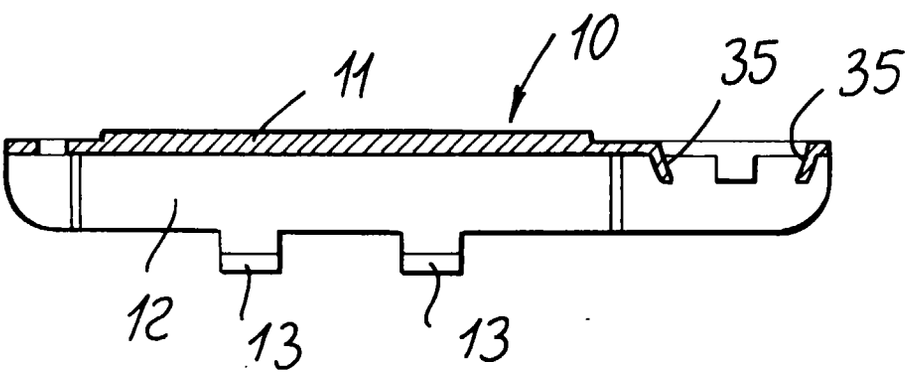

FIG. 7

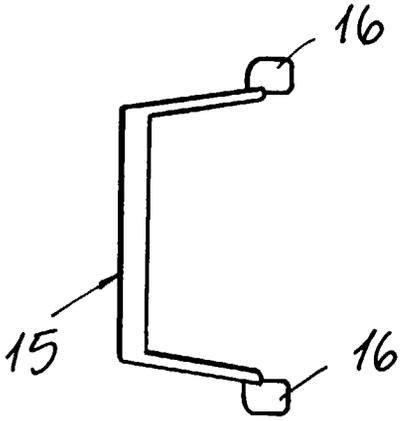

FIG. 9

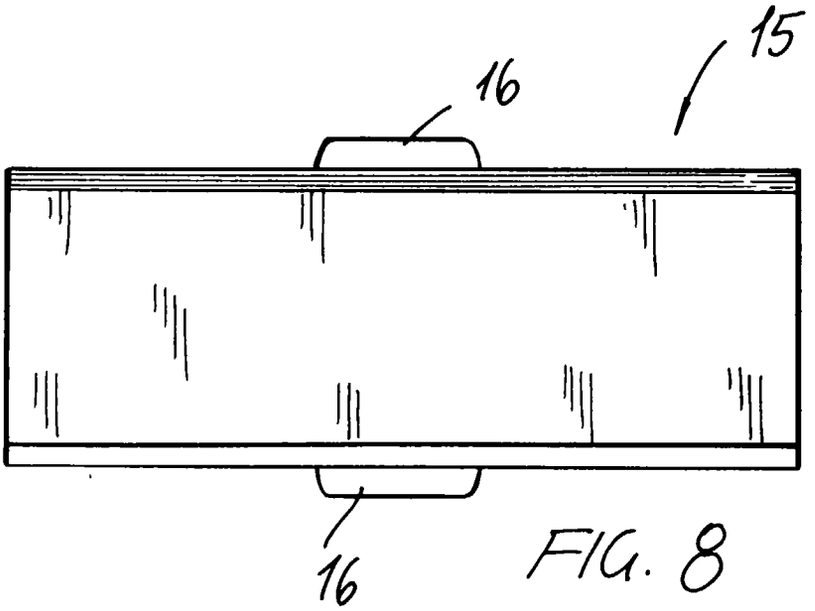

FIG. 8

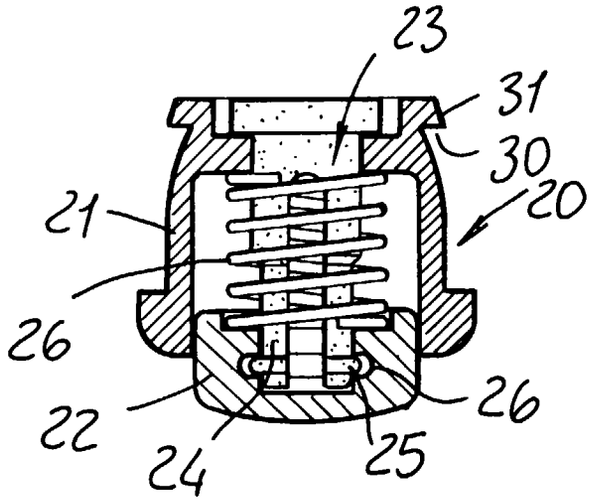

FIG. 10