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(71) Applicant : **FA.TA.R. s.n.c. di RAGNI Cav.**
LAURINO & F.lli
8, Via Offagna
I-62019 Recanati (MC) (IT)

(72) Inventor : **Ragni, Lino**
8, Via Offagna
I-62019 Recanati (MC) (IT)

(74) Representative : **Sneider, Massimo**
Studio Tecnico Lenzi, Via Lucania, 13
I-00187 Roma (IT)

(54) **Electric and/or electronic keyboards and, in particular, church organ keyboards.**

(57) Beneath each key and carried by the keyboard support there is a basically round-shaped elastic or elasticized element, the base of which lies on the keyboard support, such a round-shaped surface, which may be achieved by hot-pressing a rubber sheet, and on top of which there is a collar the aim of which is to provide a certain resistance to the key, thus distributing the deformation resistance to the key, thus distributing the deformation caused by the pressed key over the entire surface of the round-shaped element. In other words, the top collar, under the effect of the pressed key, moves parallel to itself, thus causing the uniform deformation of the entire rubber element.

The keyboard support consists of a board or plate on which a layer of plastic material is injected in such a manner as to cover the edges and the ends of the board or sheet, while leaving the middle parts uncovered, thus forming a sort of grid.

It is a well-known fact that by pressing the key of a church organ keyboard one opens a valve in the flue-pipe connected to that key causing air to escape, and this generates the sound.

An organ-player by repeatedly playing this instrument gets used to the so-called escapement effect, which is caused by the abrupt entry of air into the pipe and the closing of the valve.

By pressing the key, a control lever opens the valve, thus causing the so-called escapement effect.

This invention concerns the improvements to electric and/or electronic keyboards and, in particular, church organ keyboards.

The first object of this invention is the keyboard support structure, which consists of two parts, a detailed description of which is given later.

Another object of this invention is the device which creates the so-called escapement effect when a key is pressed.

According to this invention, the keyboard support consists of a board or plate on which a layer of plastic material is injected.

This plastic material is applied in such a manner as to cover the edges and the ends of the board or sheet, leaving portions of the middle uncovered, in other words, it is applied in such a manner as to form a grid, on both the upper and lower surfaces of the keyboard support.

The normal guiding and control elements are then mounted on this support, besides a rubber sheet, provided with truncated cone or round-shaped foam-expansions, each one of which is located beneath a key, both black and white. When the key is lowered the round-shaped rubber expansion springs out of shape, thus giving the player the so-called escapement effect.

This invention will be better understood and further details will be acquired by reading the following description, which makes reference to the attached drawings, in which:

figure 1 shows a cross-section of the keyboard support;

figure 2 shows a cross-section of the keyboard support with the keys and control elements.

With reference to said drawings and, in particular, to figure 1, the keyboard support (2) consists of a plastic material (11) injected onto a steel plate (12). The plastic material being placed in such a fashion as to leave the middle part and the edge of the plate (12) free, thus forming a grid.

Fig. 2 shows that a contact block (3) is fixed on the lower surface of the support (2) by means of screws (4). Furthermore, in order to achieve contact with the contact block (3) a dynamic contact made of conductive rubber (5) and carried by one of the white (6) or black (7) keys is also provided.

On the top of the keyboard support (2) are then placed a series of basically round-shaped rubber ele-

ments (8), one for each key, which, when the bottom of said key pressed down on them, spring out of shape, thus providing the so-called escapement effect.

Lastly, the guiding and control system is completed by a rubber key-guide (9).

The drawing shows that on top of the rubber round-shaped element (8), which may be obtained by hot-pressing a rubber sheet, there is a sort of collar, the aim of which is to provide a certain resistance to the key, thus distributing the deformation caused by the pressed key over the entire surface of the round-shaped element. In other words, the top collar, under the effect of the pressed key, moves parallel to itself, thus causing the uniform deformation of the entire rubber element.

The foregoing description of the improvements to electric and/or electronic keyboards and, in particular, to church organ keyboards are given as an example, therefore, this invention may be modified and realized in a different manner, however, within the framework of the following claims.

Claims

1. Improvements to the electric and/or electronic keyboards and, in particular, to church keyboards, characterized by the fact that beneath each key and carried by the keyboard support there is a basically round-shaped elastic or elastitized element, the base of which lies on the keyboard support.
2. Improvements to the electric and/or electronic keyboards and, in particular, to church organ keyboards, according to the foregoing claim 1, characterized by the fact that on top of the round-shaped rubber element, which may be obtained through hot-pressing a rubber sheet, there is a collar the aim of which is to provide a certain resistance to the key, thus distributing the deformation caused by the pressed key over the entire surface of the round-shaped element. In other words, the top collar, under the effect of the pressed key, moves parallel to itself, thus causing the uniform deformation of the entire rubber element.
3. Improvements to the electric and/or electronic keyboards and, in particular, to church organ keyboards, according to the foregoing claim 1, characterized by the fact that a contact block is fixed on the lower surface of the keyboard support and in order to achieve contact with the contact block a dynamic contact made of conductive rubber is provided, while on the top surface of the key-

board support are placed a series of basically round-shaped rubber elements, according to the foregoing claim 2, the guiding and control system being completed by a rubber key-guide.

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4. Improvements to the electric and/or electronic keyboards and, in particular, to church organ keyboards, according to the foregoing claim 1, characterized by the fact that the keyboard support consists of a board or plate on which a layer of plastic material is injected in such a manner as to cover the edges and the ends of the board or sheet, while leaving the middle parts uncovered, thus forming a sort of grid.

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FIG. 1

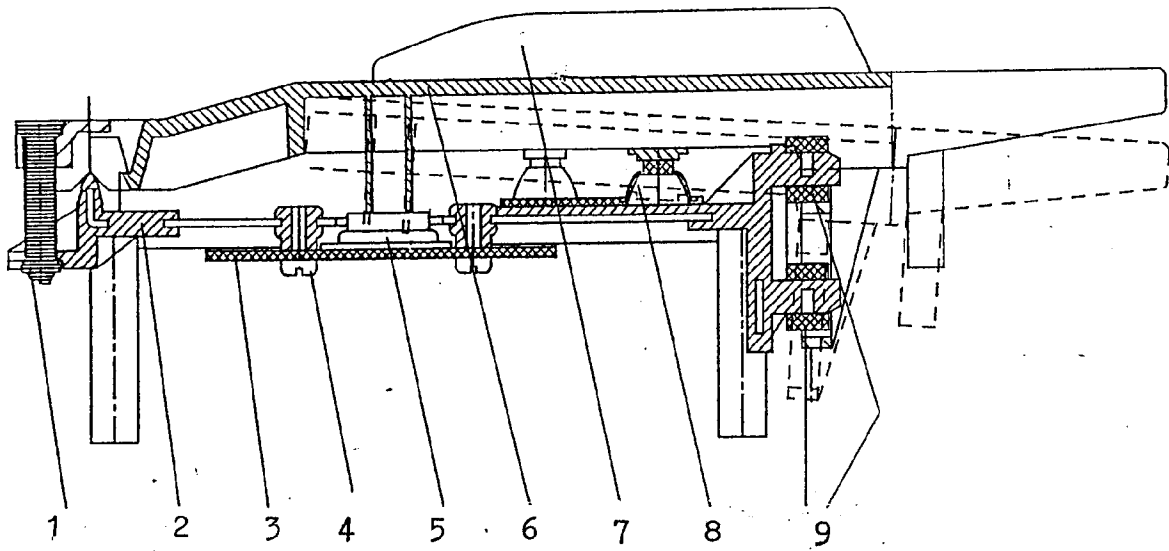
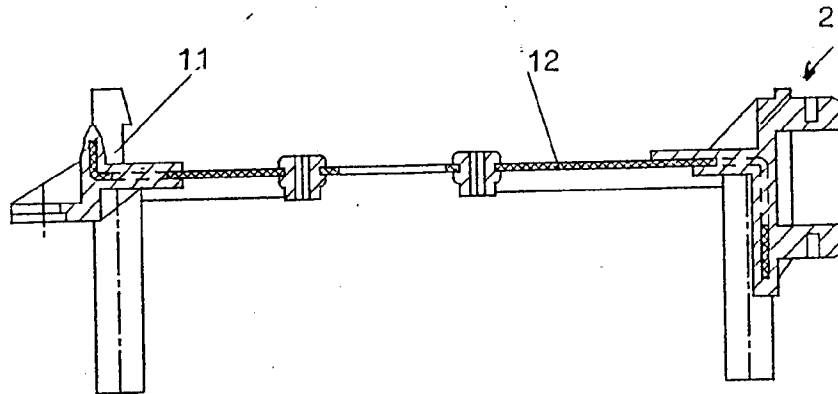


FIG. 2