June 10, 1958 F. P. M. BASCHET 2,837,953

STRINGED MUSICAL INSTRUMENTS

Filed Nov. 29, 1954

Fig. 1

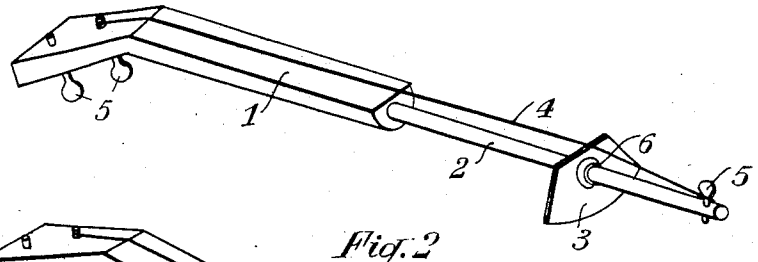


Fig. 2

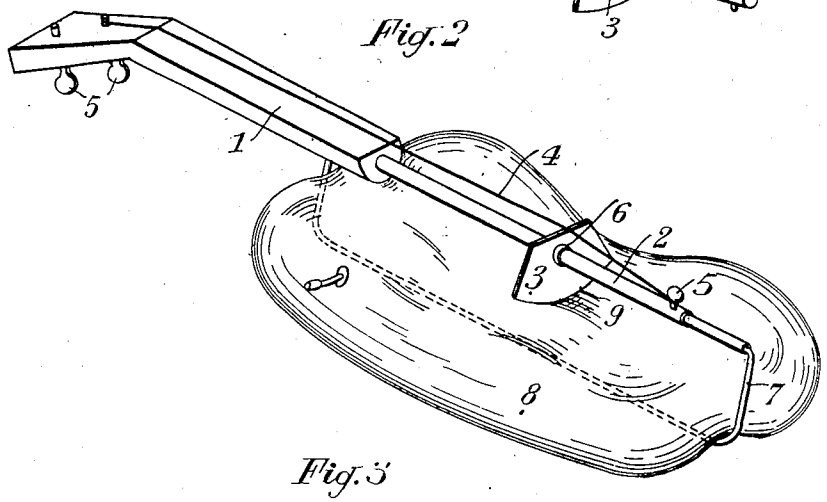
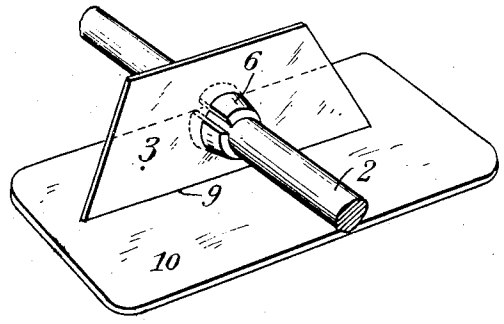


Fig. 3



INVENTOR
FRANCOIS PIERRE MAURICE BASCHET
BY
ATTORNEY

United States Patent Office 2,837,953
Patented June 10, 1958

2,837,953

STRINGED MUSICAL INSTRUMENTS

François Pierre Maurice Baschet, Paris, France

Application November 29, 1954, Serial No. 471,853
Claims priority, application France November 30, 1953
6 Claims. (Cl. 84—275)

The present invention has for its object the use as a resonance chamber for a stringed musical instrument, a balloon, a bladder or the like, inflated with air or any other inert gas.

The tests carried out by the applicant, and which have led to the present invention, have made is possible to establish that, by taking a few special precautions in assembly, which will be described later, the transmission to this balloon of the vibrations impressed on the strings is amply satisfactory from the acoustic point of view. In these circumstances, it becomes possible to construct musical instruments of adequate quality which have the double advantage of having a cost price very much lower than that of the standard instruments, and of being carried with a much smaller bulk.

An application of this kind thus leads to the conception of an instrument which is exclusively constituted, apart from the balloon resonance chamber, by a support upon which the strings are tensioned, the said strings being supported by a bridge mounted in an adjustable position on the said support, to which is fitted a light stirrup coupling.

In its application to an instrument of the kind comprising a guitar or a violin, the invention is illustrated by the attached drawings, in which, by way of limitation only:

Fig. 1 is a perspective view of an instrument neck upon which a vibrating string is tensioned;

Fig. 2 is a perspective view of an instrument provided with a neck in accordance with Fig. 1, and to which is fitted a balloon which forms the resonance chamber;

Fig. 3 gives an alternative form of the detail of the mounting of the bridge on the neck.

In Fig. 1, there is shown at **1** the neck proper of the instrument, extended by a cylindrical portion **2** on which is engaged the bridge **3**, the latter being provided with a circular hole for that purpose. The strings, such as **4**, are tensioned on this bridge by means of keys **5** in such manner that, in the instrument which will eventually be constructed by means of a neck-support of this kind, it is the latter which alone withstands the strain produced by the tension of the strings. In order to prevent the vibrations of the bridge **3** from being absorbed by the neck-support, an elastic joint **6** (see Figs. 1 and 2) is interposed between the said bridge and the neck-support, experience having proved that if this joint is sufficiently elastic, the amplitude of the sound transmitted to the resonance chamber is comparable with that of instruments with rigid sound chambers.

Fig. 2 shows an instrument of the violin or guitar type constituted by a neck-support in accordance with Fig. 1, to which is fitted a light rod system which ensures the connection with the balloon **8** forming the resonance chamber, this balloon being, for example, composed of thin and very flexible plastic material.

It is an advantage to use a fairly amply dimensioned

bridge **3** in order that the supporting surface **9** on the balloon may be relatively large, experience having shown that it is only under these conditions that a good sound effect is obtained. As shown in Fig. 3, this surface may be increased with advantage by the use of a small plate **10** on which it rests and which is itself applied in contact with the balloon **8**. As in the previous case, the vibrations of the bridge and of the plate are prevented from being absorbed by the support **2** by the interposition of at least one elastic coupling between the bridge and the small plate, or between the small plate **10** and the support **2**.

The invention is applicable not only to instruments of the type described, but in a general way to all stringed instruments which utilise a resonance chamber.

What I claim is:

1. A stringed musical instrument, comprising in combination: an elongated neck support, including a peg box and a finger board; an extension member connected to said neck support; a bridge mounted on said extension member; resilient means disposed between said bridge and said extension member; at least one string connected to said peg box and contacting the upper edge of said bridge; a key connected to said extension member on the portion thereof on the other side of said bridge from said neck support, said string being connected to said key; a member secured to said extension member having portions, one of which extends away from said extension member, a second of said portions extending parallel with, but spaced from, said extension member, and a third of said portions extending toward, and connected to, said neck support, said portions of said extension member defining an enclosure; an inflated, flexible, closed envelope mounted in said enclosure, said envelope engaging said bridge.

2. The combination of claim 1 wherein said extension member extends through an opening in said bridge, said resilient means including an elastic washer disposed in said opening between, and contacting, said extension member and said bridge; said bridge having a small plate mounted thereon and extending transversely thereto, said plate engaging the surface of said envelope.

3. A stringed musical instrument, including in combination: an elongated frame, including a peg box and a finger board; an inflatable, flexible, closed envelope mounted within said frame; a bridge contacting said envelope and means mounting said bridge for movement independently of said frame; at least one string secured to said peg box adjacent one end thereof, said string passing over and contacting said bridge and being secured adjacent its other end to said frame.

4. The combination of claim 3, including elastic means between said bridge and said frame for isolating vibrations of said bridge from said frame; a plate secured to said bridge and extending substantially at right angles thereto, said plate having a flat surface engaging said envelope.

5. A stringed musical instrument, comprising in combination: an elongated neck support, including a peg box and finger board; an extension member connected to said neck support; a bridge mounted on said extension member; elastic means disposed between said bridge and said extension member for isolating vibrations of said bridge from said extension member; string means connected at one end thereof to said peg box and contacting said bridge and connected at the other end thereof to said extension member on the portion of said extension member on the other side of said bridge from said neck support; means for adjusting the tension of said string means; an inflated, flexible, closed envelope and means for holding said envelope in engagement with said bridge

so that vibrations of said bridge are transmitted to said envelope.

6. The combination of claim 5 wherein said bridge is a solid plate and including a second plate secured to said bridge and having a surface bearing on the surface of said envelope.

References Cited in the file of this patent

UNITED STATES PATENTS

1,635,429 Miller ..... July 12, 1927

FOREIGN PATENTS

393 Switzerland ..... Jan. 18, 1889

OTHER REFERENCES

"Pig Bladder Hath Charms to Soothe, Musician Insists," The Washington Post, January 8, 1953.