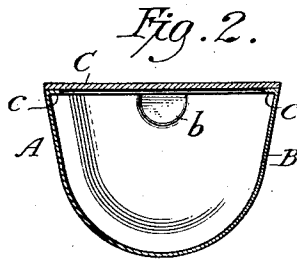
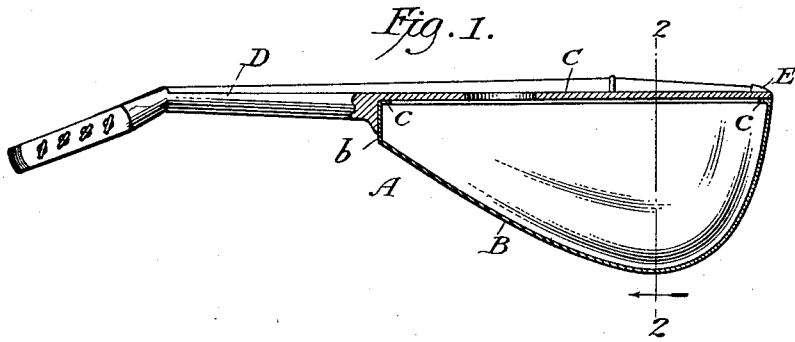


F. RIGA.
 STRINGED MUSICAL INSTRUMENT.
 APPLICATION FILED OCT. 1, 1909.

1,004,905.

Patented Oct. 3, 1911.



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UNITED STATES PATENT OFFICE.

FEDERICO RIGA, OF NEWARK, NEW JERSEY.

STRINGED MUSICAL INSTRUMENT.

1,004,905.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed October 1, 1909. Serial No. 520,476.

To all whom it may concern:

Be it known that I, FEDERICO RIGA, a subject of the King of Italy, residing in the city of Newark, county of Essex, and State of New Jersey, have invented certain new and useful Stringed Musical Instruments, of which the following is a specification.

This invention is a stringed musical instrument, and it pertains more particularly to such instruments as mandolins, violins, guitars, and analogous stringed instruments.

In the manufacture of instruments embraced in the classes just noted, it has been customary heretofore to construct the body of wood or metal, but more particularly of wooden pieces which are employed because of the resonance of the material, said wooden pieces being given the required shape and being united by a suitable adhesive substance, such as cement or glue.

As is well known, instruments having their bodies constructed in the manner described are subject to the serious objection of having the glue or cement soften under climatic and atmospheric influences, with the result that the body disintegrates by the separation of the pieces composing it, thus making the instrument worthless.

My object is to overcome the foregoing, and other, objections inherent in the built up wooden bodies of stringed musical instruments, and at the same time to produce a body which not only secures improved tone qualities when the instrument is played, but which is very strong, light and so durable as to be almost indestructible in the ordinary usage of the instrument.

To the accomplishment of these ends, I provide a composite body comprising a member composed of molded stiff and untanned animal skin, and a rigid reinforcing member, preferably of wood, united to said skin member, as will be more fully herein described.

In the accompanying drawings I have illustrated a practical embodiment of the invention, wherein—

Figure 1 is a longitudinal section through the mandolin. Fig. 2 is a vertical cross section thereof.

Referring to the drawings, the body A of a mandolin comprises a shell member B and a sounding board C, said shell member being composed of a single piece of untanned stiff molded animal skin. The sounding board is composed, preferably, of a thin layer of

wood or wood veneer, this material being employed because of the well known resonant qualities possessed by said materials, but it is obvious that metal or other material may be used in the manufacture of member, C. Member, B, constitutes the major part or shell of the mandolin body, and it consists of a one piece untanned animal skin molded to the required shape and artificially stiffened so as to render it practically rigid.

As a material suitable for the purpose, I employ an untanned goat skin which is treated according to the usual depilating process for removing the hair and for otherwise preparing the fleshy side of the skin so as to render it suitable for my purposes. While the skin is in a wet condition, it is stretched tightly over a former or mold which serves to impart the desired shape to the skin, that is, the skin has the desired curvature imparted thereto, both lengthwise and crosswise, and at the same time, the flat narrow end, *b*, and marginal flanges, *c*, are produced on the skin. After stretching the skin on the mold or former, it is trimmed, and allowed to dry. During the drying process, the skin stiffens to a certain extent so that it effectively retains its shape.

Member, C, of the mandolin constitutes the top or belly of the instrument, and it conforms to the shape of the open side of skin member, B. Said member, C, is provided with the usual sound openings, and to it are attached the neck, D, and tail piece, E. Said member, C, is united to the skin body by cementing or gluing it to the flanges, *c*, of member, B, and thereafter members, B, C, are coated with suitable compounds, such as varnish or shellac, which serve to impart a desired finish to the article and tend to artificially treat the skin member so as to materially increase the stiffness or rigidity thereof.

My invention results in a stringed musical instrument, the body of which is so durable as to be practically indestructible in ordinary usage of the instrument. The body is light and strong, it is economical to manufacture, and secures improved tone qualities as compared with metal or wood. The skin is molded to the required shape, and it is stiffened artificially by applying a desired number of coatings thereto, either of shellac, varnish, or the like, with or without coloring pigments incorporated there-

with, whereby the coatings are absorbed, more or less, by the porous material employed. The skin member is further stiffened by uniting it to the rigid reinforcing member, such as member, C.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A stringed musical instrument of the class described provided with a hollow body comprising an unlined shell of a single piece of molded untanned and artificially stiffened animal skin and a wooden sounding board united thereto.

2. A stringed musical instrument of the

class described provided with a composite hollow body comprising an unlined shell composed of a single piece of stiff molded animal skin provided at its edges with an inwardly extending flange, and a wooden top overlapping the flange and rigidly attached by said flange to the shell.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FEDERICO RIGA.

Witnesses:

ANGELO F. BIONDI,
JAS. H. GRIFFIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."