UNITED STATES PATENT OFFICE.

EDWARD GABLE, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF TO FRANKLIN GABLE, OF SAME PLACE.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 635,312, dated October 24, 1899.

Application filed April 6, 1899. Serial No. 711,978. (No model.)

To all whom it may concern:

Be it known that I, EDWARD GABLE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented new and useful Improvements in Musical Instruments, of which the following is a specification.

This invention relates to musical instruments having sounding-boards or other resonant parts; and the object is to improve the tone and power of such instruments by amplifying and sweetening the sounds produced by the vibration of the strings, reeds, &c.

I have discovered after extended experiments that by thoroughly coating either or both surfaces, external and internal, of certain parts of a musical instrument with an alkaline silicate, such as silicate of soda or silicate of potash, in such manner that the said silicate will penetrate and fully permeate the part or parts to which it is applied the sonorousness of the instrument is increased and the power and sweetness of tone are greatly improved, so much so, in fact, that a musical instrument—such, for instance, as a violin of ordinary construction—when treated in accord with my invention is greatly improved in timbre, strength of sound, and sweetness of tone to an extent never before produced by any method known to me.

In the practice of my invention I apply to one or both sides, external or internal, of each piece of material used to increase the sound of a musical instrument one or more coats of silicate of soda or potash or other suitable silicate that will penetrate the resonant part to which the silicate is applied. I preferably employ the commercial silicate of soda. If the part to be coated with silicate should require coloring, the necessary stain is applied to that part before the silicate is put on. It is preferable to apply the silicate thickly—that is to say, in several coats one on another. The silicate of soda or potash or other suitable silicate will thoroughly permeate the parts to which it is applied, and also imparts a smooth surface.

I have found that a suitably-thick coating of silicate applied to resonant parts of a musical instrument and thoroughly permeating the same possesses the valuable property of greatly increasing the sonorousness of the instrument, imparting added volume and power, and largely improving all the desirable qualities of tone and sweetness. It is preferable to apply the silicate coating to the interior of an instrument, such as a violin, and the coating should be applied somewhat thickly to produce the best results.

The silicate coating may be rubbed down until a smooth polished surface is obtained. If desired, the silicate coating may be burnished over or rubbed with oil, and this can be allowed to remain several days in order to render the coating of silicate more elastic.

The silicate coating is to be applied to any desired parts or to the whole of a musical instrument, according to its construction and character, the application being made wherever it is desirable to increase the resonance and improve the tone by securing a thorough penetration of the silicate into an appropriate part or parts of the instrument.

I would have it understood that the silicate is preferably applied to the interior of a musical instrument, as the improved tone and power will be thereby more perfectly developed.

What I claim as my invention is—

1. A musical instrument having a resonant part or parts containing a coating of a silicate, whereby to improve the tone and power of said instrument, substantially as described.

2. A musical instrument having a resonant part or parts, the material of which is thoroughly permeated with a silicate whereby to improve the tone and power of said instrument, substantially as described.

3. A musical instrument having a resonant part or parts, the material of which on the interior is thoroughly permeated with a silicate whereby to improve the tone and power of said instrument, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD GABLE.

Witnesses:
JAMES L. NORRIS,
F. B. KEEFER.