No. 632,855. Patented Sept. 12, 1899.

N. SULLO.

MUSICAL INSTRUMENT.

(Application filed Apr. 8, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1

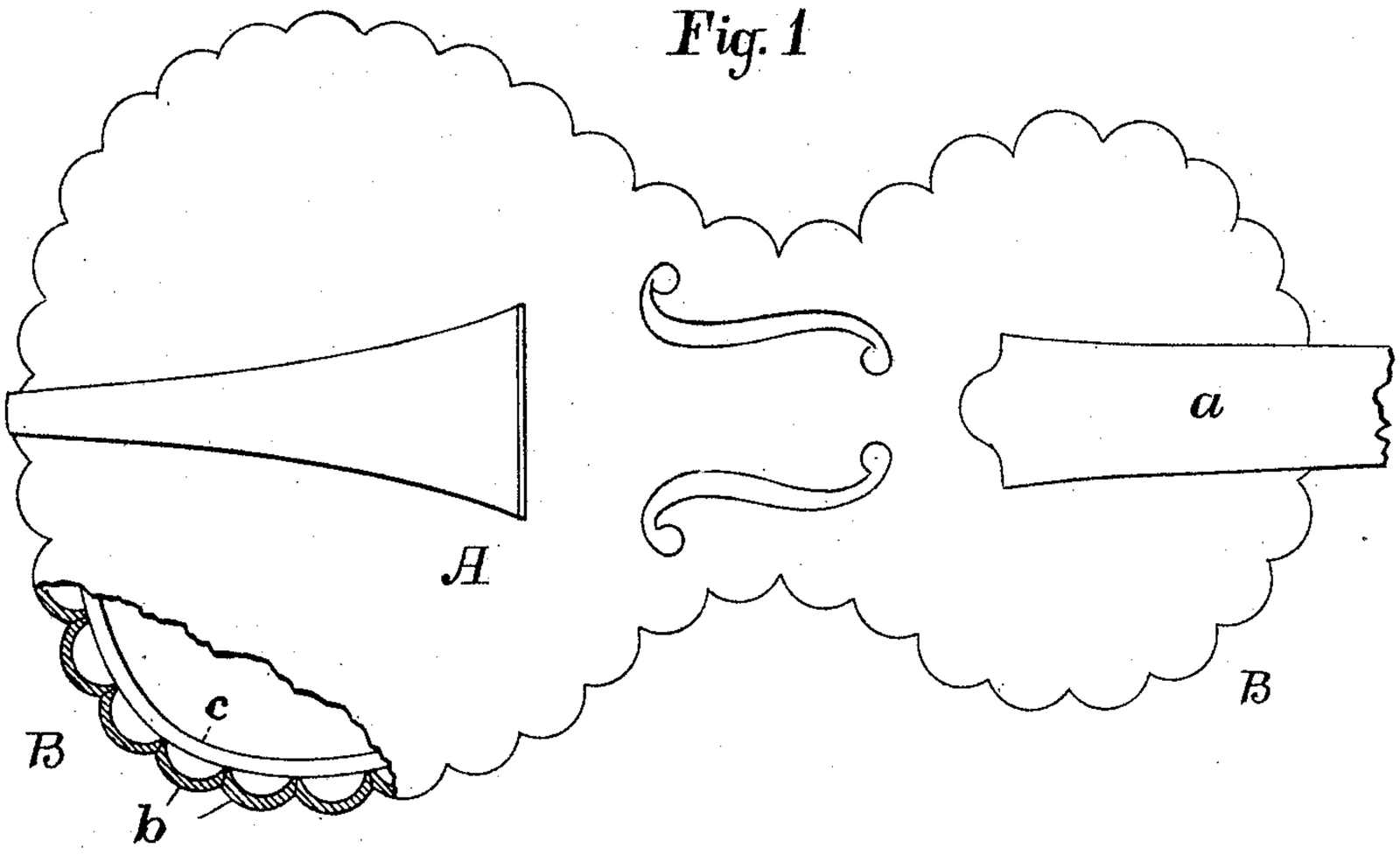
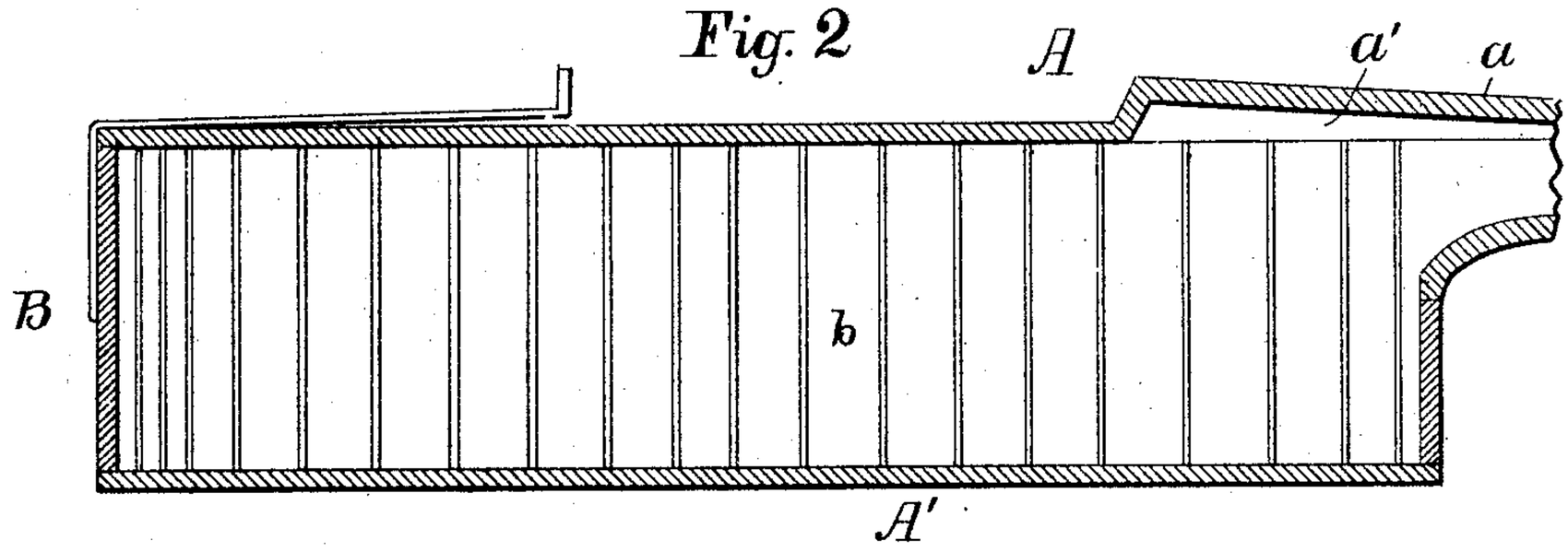


Fig. 2



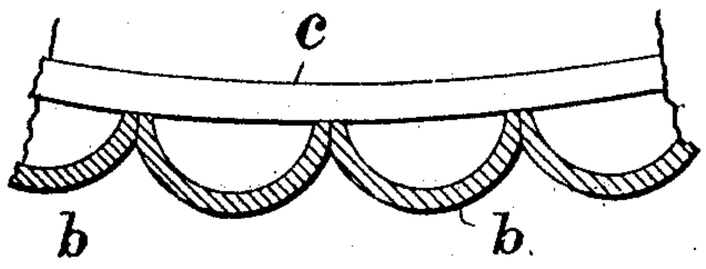


Fig. 4

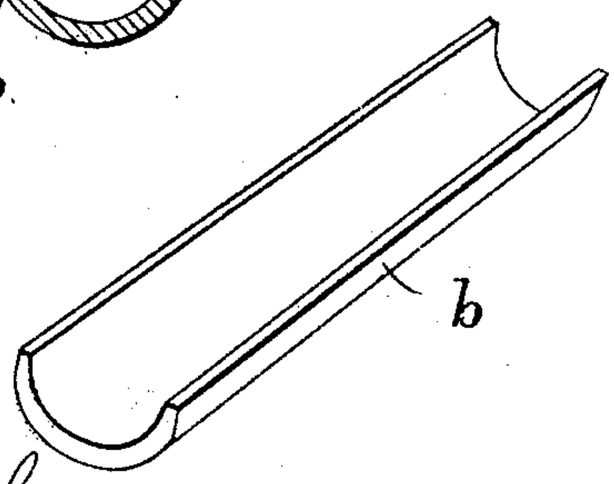


Fig. 3

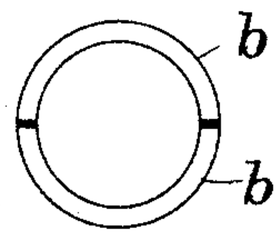


Fig. 5

Attest;

M. U. Upham

F. Greenwood

Inventor,

Nicholas Sullo;

By A. B. Upham,
His Attorney.

No. 632,855. Patented Sept. 12, 1899.

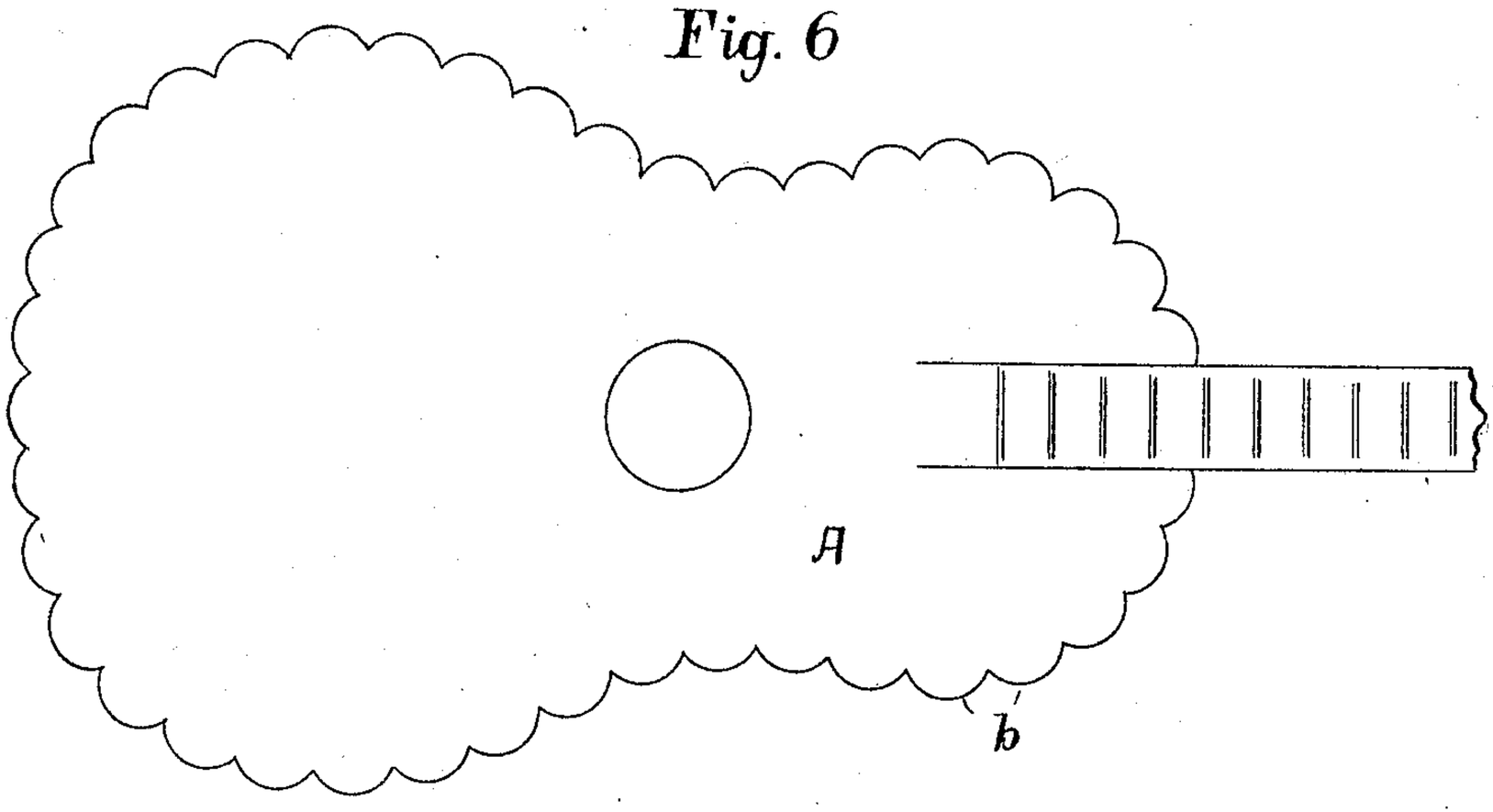
N. SULLO.

MUSICAL INSTRUMENT.

(Application filed Apr. 8, 1899.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 6



Attest;

F. Greenwood

M. W. Upham

Inventor,

Nicholas Sullo;

By A. B. Upham,
His Attorney

UNITED STATES PATENT OFFICE.

NICHOLAS SULLO, OF WAKEFIELD, MASSACHUSETTS.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 632,855, dated September 12, 1899.

Application filed April 8, 1899. Serial No. 712,233. (No model.)

To all whom it may concern:

Be it known that I, NICHOLAS SULLO, a subject of the King of Italy, residing at Wakefield, in the county of Middlesex and State of Massachusetts, have invented a new and useful Musical Instrument, of which the following is a full, clear, and exact description.

My invention belongs to that class of musical instruments in which vibratory strings are carried by a resonant box or body adapted to reinforce, intensify, and give richness to the vibrations of the strings; and the object of my invention is the construction of the body of such an instrument which shall give the maximum of richness, power, and singing quality, together with the minimum expense of manufacture. This is accomplished by the construction hereinafter set forth, and illustrated in the drawings, forming part of this specification, in which drawings—

Figure 1 is a plan view of a musical instrument embodying my invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a perspective view of one of the integral parts employed in the formation of the sides of my musical instruments. Fig. 4 is a transverse section of a series of said integral parts, showing the method of applying them in position. Fig. 5 is an end view of the tubular body from which said integral parts are cut, and Fig. 6 is a plan view of a guitar embodying my invention.

The special classes of musical instruments of the kind above referred to to which my invention is applied comprise the violin, guitar, mandolin, cello, &c.; but the form of such instrument which I have selected for illustration in Figs. 1 and 2 is the violin, the top and bottom of which are indicated by the letters of reference A A′, respectively. These parts do not differ substantially from the corresponding portions of other musical instruments of the same class; but the sides B of this instrument instead of being formed from substantially a single one or a limited number of separate pieces of wood are built up from a large number of separately-formed semicylindrical integers placed edge to edge and having their convex surfaces external and their concave surfaces internal. This is shown somewhat clearly in Fig. 1, where the portion of the top A is broken away to illustrate the inner surfaces of said integers *b*, while the remainder of the violin-top is seen to be scalloped to fit the outer surfaces of said semicylindrical integers. Fig. 2 also illustrates this construction, but hardly so clearly as in Fig. 1.

My preferred method of construction is to saw off equal lengths of bamboo and then to split the same through the center, thereby forming a sufficient number of the semicylindrical integers *b* for the particular musical instrument desired. Having affixed a suitably-contoured strip of wood *c* to the violin-bottom A′, as indicated in Figs. 1 and 4, and having planed off the outer edges of each integer *b*, as shown in Figs. 3 and 4, I then proceed to glue these integrals to each other and to the said bottom, locating them by means of the said strip *c*. When the sides have thus been applied to the bottom A′, the top A is glued upon their upper ends and the edges of both top and bottom pieces shaped to fit the exterior surfaces of said integers. Instead of having the violin-neck affixed to the end alone of the violin-body I form the top of the violin integral with the upper face of the neck, making said neck hollow and recessing, as at *a*′, the under surface of the juncture of said neck and top.

While, as will be evident, this manner of constructing the sides of musical instruments is a comparatively inexpensive and yet an ornamental one, the main purpose thereof is the increase and reinforcement of the volume of sound of which the instrument is capable, and in addition to give it richness and beauty of tone. This is accomplished, first, by the multitudinous recesses formed by the concave faces of the integers *b*, which cause the sound-waves to so echo, reëcho, and reverberate within the body of the instrument as to give it the quality of sound desired; second, I have discovered that the fiber of the bamboo of which these integers are formed and the natural varnish or finish of its outer surface, together with other qualities possesed by no other wood, but which I have not yet been able to locate, unite to give to the musical instrument a sweetness, richness, and power of tone and a singing quality of its notes which cannot be equaled by any of the violin, guitars, &c., of the usual make.

The guitar illustrated in Fig. 6 differs only in shape and certain other details from the construction previously described for the violin.

What I claim as my invention, and for which I desire Letters Patent, is as follows, to wit:

1. In a musical instrument, the combination with the top and bottom thereof, of the series of semicylindrical integers terminally affixed to said top and bottom and at their lateral edges to each other, whereby a body is formed with a large number of internal reverberatory recesses, and such instrument given thereby added richness and power, substantially as set forth.

2. The combination in a musical instrument, of the top and bottom, the curved strip affixed to said bottom near its edge, and the semicylindrical integers equal in length and having their lateral edges planed off, and glued to said bottom against said strip, the edges of said integers being glued to each other, and said top being glued to the upper ends of said integers, substantially as set forth.

3. The combination with the top and bottom of a musical instrument, of the semicylindrical sections of bamboo affixed at their ends to said top and bottom and at their lateral edges to each other, substantially as and for the purpose set forth.

In testimony that I claim the foregoing invention I have hereunto set my hand this 27th day of March, 1899.

NICHOLAS SULLO.

Witnesses:
A. B. UPHAM,
GUY H. HOLLIDAY.