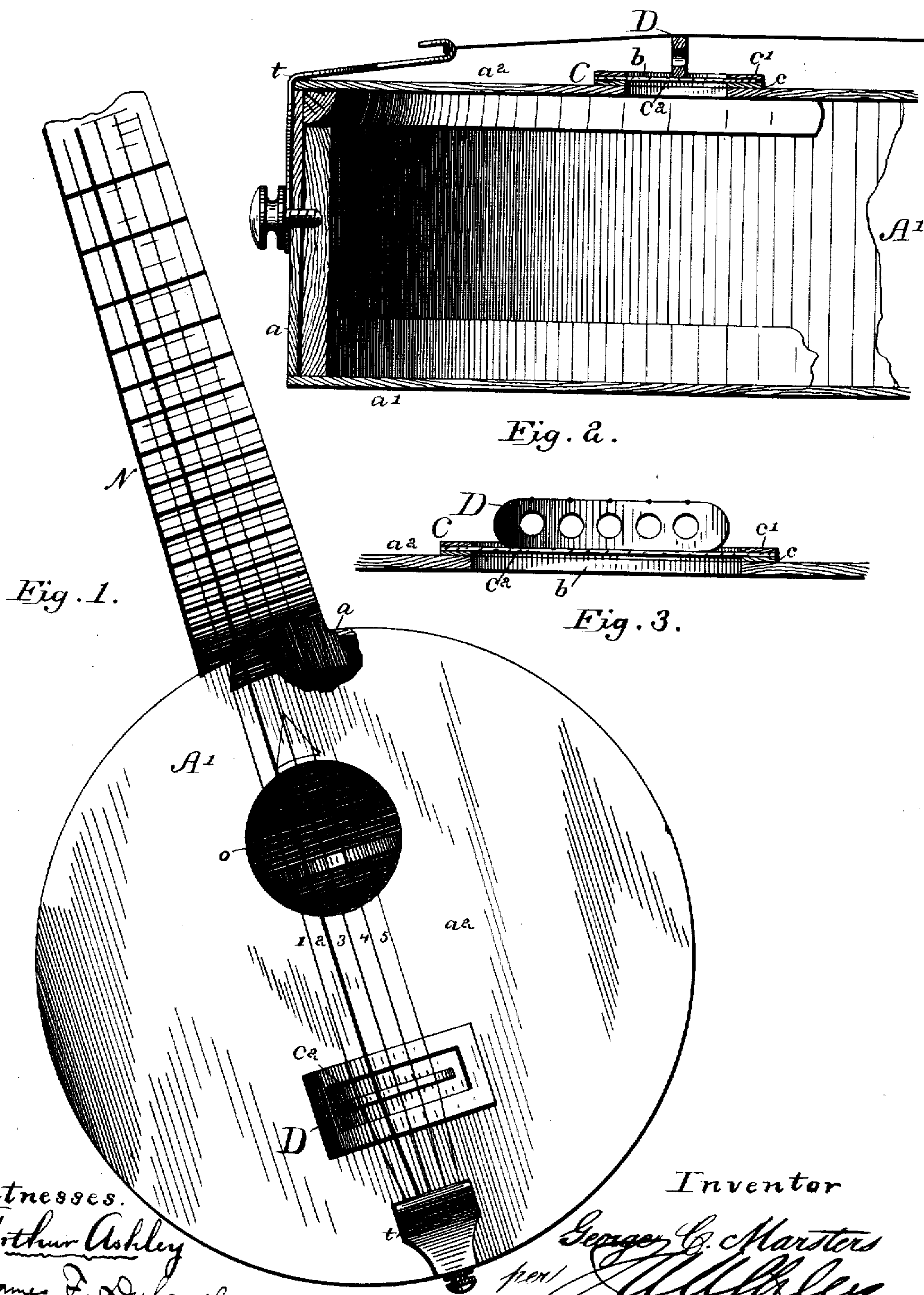


(No Model.)

G. C. MARSTERS.  
DULCETINA.

No. 411,554.

Patented Sept. 24, 1889.



Witnesses.  
Arthur Ashley  
James D. Duhamel

Inventor  
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per/ *A. Ashley*  
Att'y.



# UNITED STATES PATENT OFFICE.

GEORGE C. MARSTERS, OF BROOKLYN, NEW YORK.

## DULCETINA.

SPECIFICATION forming part of Letters Patent No. 411,554, dated September 24, 1889.

Application filed February 16, 1889. Serial No. 300,122. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE C. MARSTERS, a citizen of the United States, and a resident of the city of Brooklyn, in the county of Kings, in the State of New York, have invented a new and useful Dulcetina, of which the following is a description.

The invention relates to that class of musical instruments which consist, essentially, of a head, a neck or handle, a body, and a series of strings which are stretched lengthwise along the instrument from the head, over the neck, and partially or entirely across the body, the strings being operated by direct contact of the hands of the musician.

The invention consists in certain novel parts and in certain novel combinations of parts in or in connection with the head of the instrument, whereby the strength of the same is increased, and whereby the sweetness and purity of its tone are greatly enhanced.

In the accompanying drawings, Figure 1 represents a top plan view of the instrument or of so much thereof as is necessary to illustrate the invention, portions being broken out of the sounding-board to show the interior construction. Fig. 2 is a fragmentary vertical transverse section on the line *ww* in Fig. 1. Fig. 3 is a partial vertical longitudinal section on the line *xx* of Fig. 1.

The head of the instrument *A* may be of any approved construction, and the neck *N* terminates at the body, as is seen in Fig. 1.

The body *A'* consists of the insular wall or hoop *a*, the flat bottom *a'*, the flat top or sounding-board *a''*, and the necessary strengthening-braces, running-buttress, and collar, all these parts being composed of wood and secured together by glue or other well-known means, as may be preferred. The sounding-board *a''* has a sound-opening *o*, of suitable dimensions, beginning at a distance from the base of the neck, equal to about one-fifth the diameter of the board, as experience has shown to be productive of advantageous practical results.

At a point preferably about midway between the inner extremity of the sound-opening and the outer edge of the sounding-board a small opening *b*, preferably rectangular in form, as shown, is provided in the body of the

board, and upon or within this opening is placed the bridge-support or carrier *C*, which, as best seen in Figs. 2 and 3, is composed of an open or frame-like rectangular base *c*, a cap *c'*, corresponding in form and dimensions to the base *c*, such base and cap plates being composed of wood, and an intermediate imperforate diaphragm or support proper *c''*, which is composed of parchment or equivalent thin leathery or membranous material, the three parts being secured together by means of glue, and the support as a whole being by preference fitted upon and secured to the top surface of the sounding-board, although, as is obvious, it might, by slight modifications in construction, be fitted within its opening *b*.

The bridge *D*, of ordinary construction, rests directly upon the slightly-flexible parchment-like support *c''*, and receives the strings 1 2 3 4 5, which extend from the tail-piece *t* across the body and along the neck to the head of the instrument.

It has been found that an instrument constructed in the manner thus described has great resonance and remarkable sweetness and purity of tone.

Having described my invention, I claim—

1. In a stringed musical instrument, a top or sounding-board, which is composed of wood, which has a sound-opening, and which has also an opening which is closed by a parchment-like bridge-support, substantially as and for the purposes specified.

2. A stringed musical instrument in which the body is circular, in which the sounding-board is composed of wood, and in which the bridge rests upon a support which is composed of parchment.

3. The combination, with the neck *N*, of the body *A'*, embracing the imperforate circular wall or hoop *a*, flat imperforate bottom *a'*, and sounding-board *a''*, the hoop, the bottom, and the sounding-board being composed of wood, and the sounding-board being provided with a sound-opening and with a parchment-supported bridge.

GEORGE C. MARSTERS.

Witnesses:

F. B. RICHARDSON,  
C. H. BENEDICT.

It is hereby certified that in Letters Patent No. 411,554, granted September 24, 1889, upon the application of George C. Marsters, of Brooklyn, N. Y., for an improvement in "Dulcettinas," an error appears in the printed specification requiring correction, as follows: In line 34, page 1, the word "insular" should read *circular*; and that the Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 8th day of October, A. D. 1889.

[SEAL.]

CYRUS BUSSEY,  
*Assistant Secretary of the Interior.*

Countersigned:

ROBERT J. FISHER,  
*Acting Commissioner of Patents.*