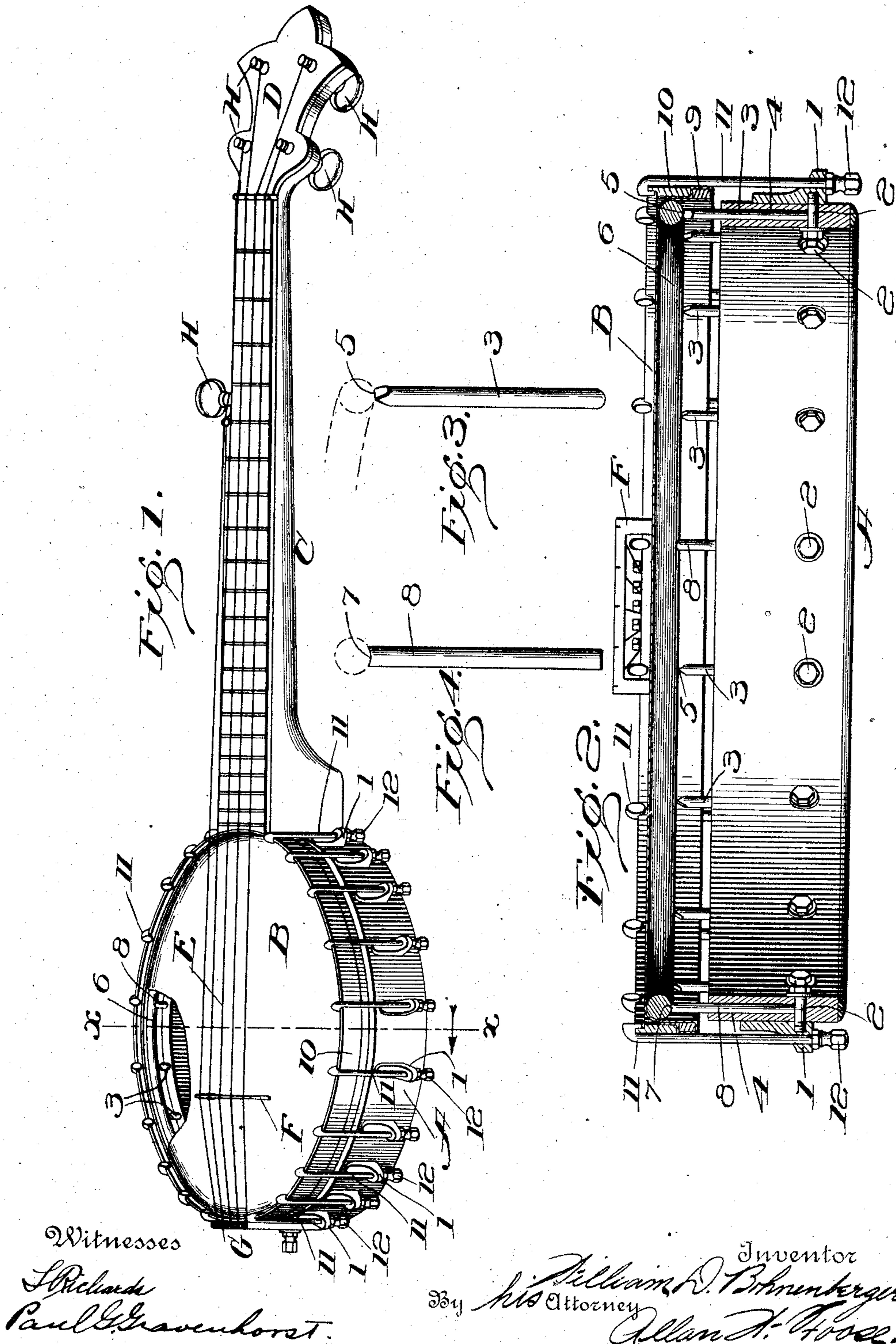


No. 876,430.

PATENTED JAN. 14, 1908.

W. D. BOHNENBERGER.  
STRINGED MUSICAL INSTRUMENT.

APPLICATION FILED MAR. 25, 1907.



Witnesses  
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# UNITED STATES PATENT OFFICE.

WILLIAM D. BOHNENBERGER, OF EAST ORANGE, NEW JERSEY.

## STRINGED MUSICAL INSTRUMENT.

No. 876,430.

Specification of Letters Patent.

Patented Jan. 14, 1908.

Application filed March 25, 1907. Serial No. 364,498.

*To all whom it may concern:*

Be it known that I, WILLIAM D. BOHNENBERGER, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented new and useful Improvements in Stringed Musical Instruments, of which the following is a specification.

My invention relates to stringed musical instruments, more particularly to banjos, and has for its object to produce such an instrument as will render a clear, sharp and loud tone of the finest quality when played.

This invention consists in the features of construction, combinations of elements and arrangement of parts which will be hereinafter described in the specification and pointed out in the claims.

A desirable embodiment of my invention is illustrated in the accompanying drawings in which the reference characters of the specification indicate the corresponding parts in all the views.

Figure 1 is a perspective view of my invention partly broken away to show the standards and supporting ring resting thereon. Fig. 2 is a cross-section on the line  $x-x$  of Fig. 1. Fig. 3 is a detail view of one of the standards on which the supporting ring rests. Fig. 4 is a detail of one of the standards having its upper end curved to fit the supporting ring, whereby said ring is held in alinement.

In the drawing, A represents the rim of my improved banjo; B the vibrating diaphragm thereof; C the neck; D the head piece and E the strings which extend over the bridge F. The strings are secured at their lower ends to a tail piece G, and at their upper ends to tuning keys H.

The rim A is provided with a series of brackets 1 around the circumference thereof, which are secured thereto by bolts 2 extending through the rim.

3 are vertical standards fitting in vertical holes 4 in the rim and resting on the bracket bolts 2. The upper ends of the standards are beveled on two opposite sides to an edge 5 extending diametrically across the tops of said standards and radially to the center of the rim.

6 is the resounding diaphragm supporting ring resting on the edges 5 of the standards 3, and fitting in the concaved upper ends 7 of standards 8. The standards 8 hold the ring in alinement and prevents the same from sliding off the standards.

The vibrating diaphragm B rests on top of the supporting ring 6 and extends downwardly over the outside thereof, having its outer edge wrapped around the flesh hoop 9.

10 is the stretching hoop directly above the flesh hoop, said stretching hoop being engaged by the hooks 11 extending downwardly through openings in the brackets 1. The lower ends of the hooks are threaded to receive nuts 12. When the nuts are turned, the hooks, stretching hoop and flesh hoop are pulled downwardly, gripping the diaphragm between the stretching hoop and flesh hoop, whereby the diaphragm is drawn tightly over the supporting ring to the proper tension.

When the instrument is played it will be apparent from the manner in which the resounding ring is mounted and the space between the ring and the rim, that the ring will be allowed to vibrate in harmony with the vibrations of the diaphragm, whereby the tone of the instrument is greatly improved, as above mentioned.

I do not desire to limit myself to the precise details herein shown and described, as it is obvious that variations may be made without destroying the identity of my invention. An instance of such variations would be to have the upper ends of the standards concaved or pointed instead of beveled to an edge, as shown and described.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a musical instrument, the combination, a rim, standards mounted in said rim, said standards being beveled to an edge on their upper ends, a resounding ring resting on said upper ends of said standards, a vibrating diaphragm drawn over said resounding ring, and means for fastening and adjusting said diaphragm in position on said ring.

2. In a musical instrument, the combination, a rim, bolts extending through said rim, standards mounted within recesses in said rim and resting on said bolts, a resounding ring resting on the upper ends of said standards, a vibrating diaphragm drawn over said resounding ring, and means for fastening and adjusting said diaphragm in position on said resounding ring.

3. In a musical instrument, in combination, a rim, brackets, bolts extending through said rim and securing said brackets thereto, standards fitting in holes in said rim and

- resting on said bolts, said standards being beveled to an edge on their upper ends, a resounding ring resting on said edges of said standards, a flesh hoop a vibrating diaphragm drawn over said resounding ring and wrapped around said flesh hoop, a stretching hoop above said flesh hoop, said diaphragm being adapted to be gripped between said flesh hoop and said stretching hoop, hooks engaging said stretching hoop and extending through holes in said brackets, and nuts on the lower screwthreaded ends of said hooks whereby the diaphragm is adjusted on said resounding ring.
4. In a musical instrument, in combination, a rim, standards mounted in said rim, said standards being beveled to an edge on their upper ends, a resounding ring resting on said edges of said standards, a space between the top edge of the rim and the resounding ring, a vibrating diaphragm resting on said resounding ring, and means for drawing the diaphragm to the proper tension on said resounding ring.
5. In a musical instrument, a rim, standards mounted in said rim, a diaphragm supporting ring resting on the upper ends of said standards, said upper ends of the standards being shaped to fit the ring, whereby the said ring is held in alinement.
6. In a musical instrument, in combination, a rim, standards mounted in said rim,

said standards being beveled to an edge at their upper ends, a resounding ring resting freely upon said edges of said standards and adapted to vibrate about said edges, a vibrating diaphragm resting on said resounding ring, and means for drawing the diaphragm to the proper tension on said resounding ring.

7. In a musical instrument, a rim, standards mounted in said rim and provided with concave upper ends, and a diaphragm supporting ring provided with a convex lower surface resting in said standards.

8. In a musical instrument, in combination, a rim having mounted therein a plurality of standards having beveled edges at their upper ends and a plurality of standards having concave upper ends, and a resounding ring provided with a convex lower surface resting within the said concave ends and upon said edges whereby said ring is held into alinement by certain of said standards and permitted to vibrate freely by the others thereof.

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

WILLIAM D. BOHNENBERGER.

Witnesses:

WALTER CRONHEIM,  
JOHN MULVANEY.