No. 893,632.

PATENTED JULY 21, 1908.

O. G. J. KOCH.

STRING MUSICAL INSTRUMENT.

APPLICATION FILED NOV. 7, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

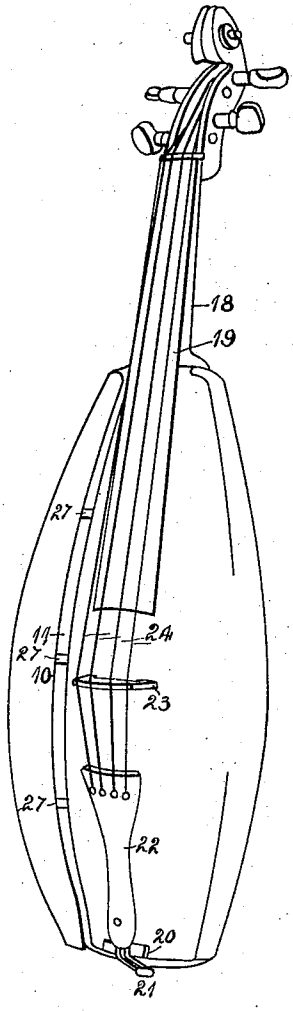


Fig. 2.

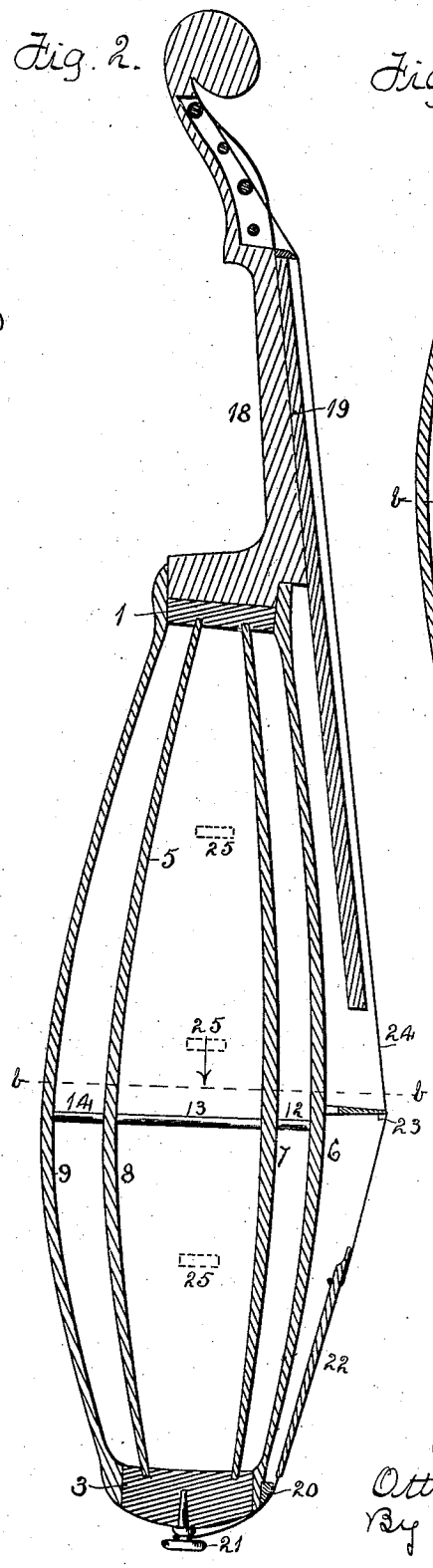
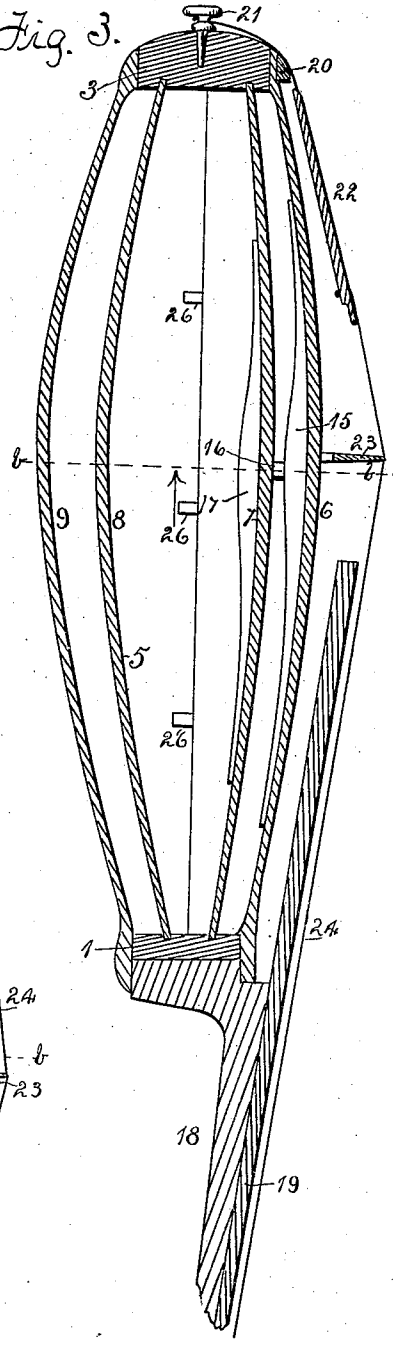


Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

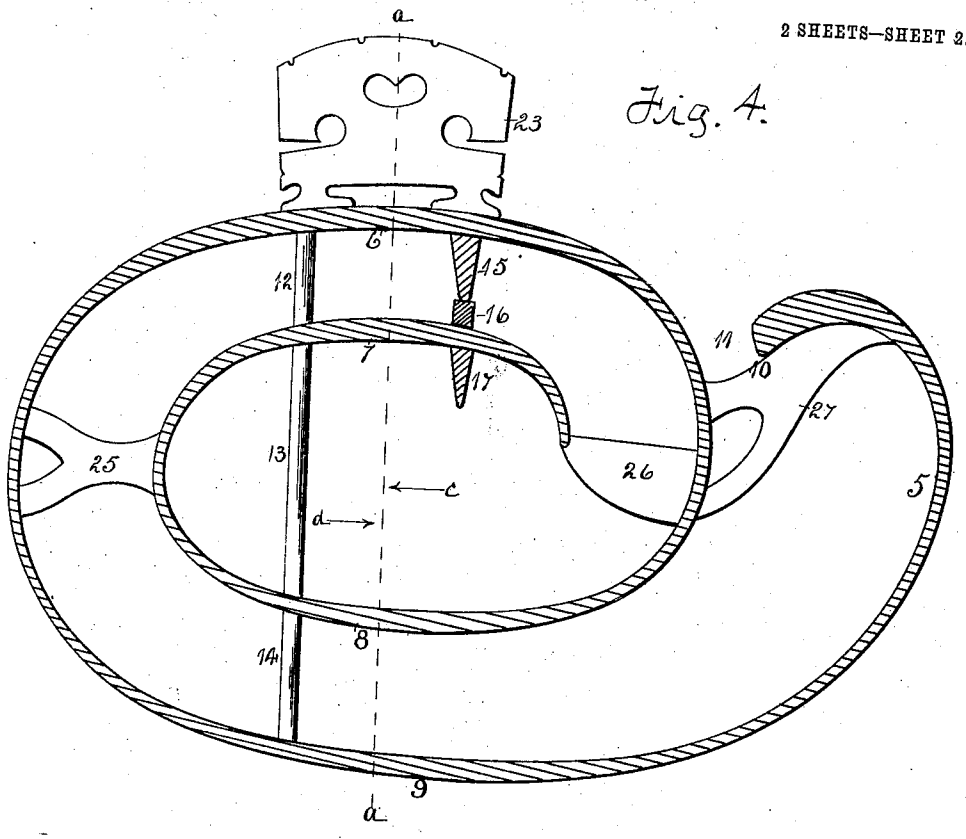


Fig. 5.

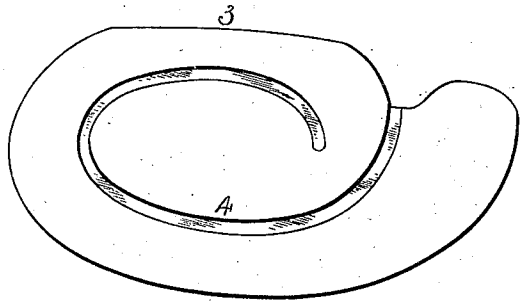
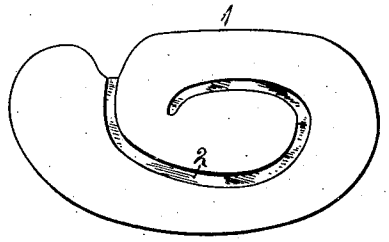


Fig. 6.



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UNITED STATES PATENT OFFICE.

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STRING MUSICAL INSTRUMENT.

No. 893,632. Specification of Letters Patent. Patented July 21, 1908.

Application filed November 7, 1907. Serial No. 401,094.

To all whom it may concern:

Be it known that I, OTTO G. J. KOCH, a citizen of the United States, residing at Belvidere, in the county of Boone and State of Illinois, have invented certain new and useful Improvements in String Musical Instruments, of which the following is a specification.

The object of this invention is to construct a musical instrument of the violin variety, in which the body is formed with convolutes terminating in an opening extending approximately the length of the instrument.

In the accompanying drawings, Figure 1 is a perspective view of my improved musical instrument. Fig. 2 is a lengthwise section on dotted line *a a* Fig. 4, looking in the direction of the arrow *c*. Fig. 3 is a lengthwise section on dotted line *a a* Fig. 4 looking in the direction of the arrow *d*. Fig. 4 is a transverse section on dotted line *b b* Figs. 2 and 3. Fig. 5 is an elevation of the end block as seen from its innerface and showing the groove for the end of the scroll. Fig. 6 is an elevation of the head block as seen from its innerface, and showing the groove for the end of the scroll.

The head block 1 has its inner face formed with a scroll groove 2 in convolute form, and the outer surface of this head block conforms approximately to the form of the scroll groove. The end block 3 has its innerface formed with a scroll groove 4 in convolute form, and the outer surface of this end block conforms approximately to the form of the scroll groove.

A scroll 5 has its ends seated in the scroll grooves 2 and 4, and secured to the outer surface of the head block 1 and end block 3. This scroll is of larger diameter at about the center of its length than at its ends, in order to increase the area. The scroll is somewhat flattened and the flattened portions 6, 7, 8 and 9 are thicker than the ends of the scroll as shown at Fig. 4. The flattened portions are thicker in the center of their length for some distance therefrom, and taper to their ends as shown in Figs. 2 and 3.

As shown in Figs. 1 and 4 the outer edge 10 of the scroll is separated some distance from the next adjacent section of the scroll, thereby leaving a space or opening 11, through which the sound escapes.

A post 12 is located between the sections 6 and 7. A post 13 is located between the sections 7 and 8, and a post 14 is located between the sections 8 and 9. These posts serve to hold the sections from collapsing. Along the innerface of the section 6 is secured a bar 15 thicker at its center and tapering toward its ends. A block 16 rests in contact with the underface of the bar 15 and the top face of the flattened section 7.

To the underface of the flattened section 7 is secured a bar 17, thicker at its center and tapering toward its ends. These bars serve to stiffen the flattened sections 6 and 7 of the scroll.

The head block 1 supports the neck 18 and finger board 19. The saddle 20 is connected to the end block 3. The end peg 21 has a connection with the end block. The tail piece 22 has its usual connection with the end peg. The bridge 23 is located between the finger-board and the tail piece, and adjacent to the posts 12. The strings 24 have the usual connection with the neck and tail piece.

The bars 15 and 17 underlie the E and A strings. By this construction of musical instrument, the different convolutes forming the scroll, increase the sounding board area, thereby increasing the volume of the sound, and by forming the opening 11 the length of the distance between the head block 1 and end block 3, the sound has a greater opportunity to escape.

Brackets 25 are located between the rounded portions of two of the convolutes. Brackets 26 are located between the inner edge of the inner convolute and the rounded end of the adjacent convolute, and brackets 27 are located between the outer edge 10 and the rounded portion of the adjacent convolute. These brackets hold the convolutes properly separated.

I claim as my invention.

1. A string musical instrument comprising a head block, an end-block, and a scroll-shaped sounding-board connecting the head and end-blocks.

2. A string musical instrument comprising a head-block, an end-block, and a scroll-shaped sounding-board connecting the head and end-blocks and said instrument provided with an opening extending approximately the distance between the blocks.

3. A string musical instrument comprising a head-block, an end-block, and a scroll-shaped sounding board connecting the head

and end-blocks, the front and back portions of the sounding-board being thicker in the middle than at the ends.

4. A string musical instrument comprising a head-block, an end-block, a scroll-shaped sounding-board connecting the head and end blocks, and posts holding the turns of the sounding-board separated.

5. A string musical instrument comprising a head-block, and end-block, a scroll-shaped sounding board connecting the head and end-blocks, and reinforcing bars secured to the underface of two of the turns of the sounding board.

6. A string musical instrument comprising a head-block, and end-block, a scroll-shaped sounding board connecting the head and end-blocks, reinforcing bars secured to the underface of two of the turns of the sounding board, and a block located between one of the bars and the wall of a turn.

7. A string musical instrument comprising a head-block, a scroll-shaped sounding board connecting the head and end-blocks, and brackets holding the several turns of the sounding board separated.

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

OTTO G. J. KOCH.

Witnesses:
A. O. BEHEL,
E. D. E. N. BEHEL