No. 651,304. Patented June 5, 1900.

E. ERIKSEN.

FINGER BOARD FOR STRING INSTRUMENTS.

(Application filed Nov. 13, 1899.)

(No Model.)

Fig. 1

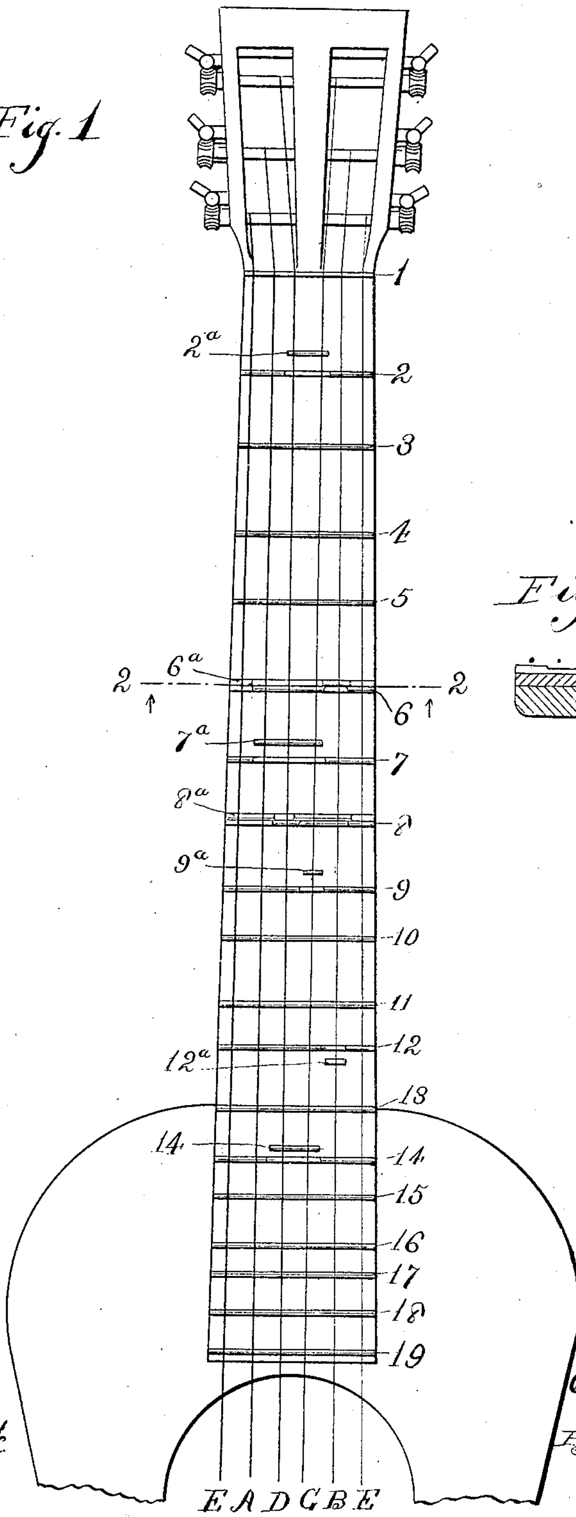
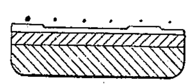


Fig. 2.



Witnesses

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ERICK ERIKSEN, OF CHICAGO, ILLINOIS.

FINGER-BOARD FOR STRING INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 651,304, dated June 5, 1900.

Application filed November 13, 1899. Serial No. 736,821. (No model.)

To all whom it may concern:

Be it known that I, ERICK ERIKSEN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Finger-Boards for String Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a novel construction in a finger-board for stringed instruments—such as guitars, mandolins, banjos, &c.—the object being to provide a device in which the frets are so located with reference to each string as to form a practically-separate scale therefor, thus producing perfect harmony in the instrument; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a fragmentary view in elevation of a guitar provided with a finger-board constructed in accordance with my invention. Fig. 2 is a sectional view on the line 2 2 of Fig. 1.

I have found in practice that a guitar or similar instrument is never in perfect harmony, except as tuned before playing thereon, owing to the fact that the graduation of the frets though correct for one string is only partially correct for another, so that no two strings can be similarly graduated and produce perfect harmony. To overcome or partially overcome this effect, it has been customary to set some of the frets at a slight incline to the others; but this I have found to be entirely insufficient to correct the defects.

My invention, therefore, consists in providing supplementary frets on the finger-board lying underneath the strings at various points sufficiently far removed from the main frets to correct the error in the note produced by depressing such string upon such main fret.

I have illustrated a guitar which is provided with six strings, named E, A, D, G, B, and E strings, respectively, the E string being an octave removed. When at the proper tension said strings when vibrated produce the corresponding notes, and by depressing any one of said strings upon one of the main frets and vibrating it a higher note is produced. Said frets are irregularly spaced, so that for each string successively depressed upon each of the same notes in a musical scale are produced. The notes produced on some strings on the same fret may be correct, but on one or more of the strings they may be incorrect.

I have numbered the main frets from "1" to "19." The instrument is tuned by depressing all of the strings on the fifth fret and adjusting their tension until each produces the correct note. By depressing the strings on frets 1, 3, 4, 10, 11, 13, 15, 16, 17, 18, and 19 each will produce the desired correct note, or so nearly correct that a very fine adjustment would be necessary to make same absolutely correct. On the remaining frets, however, one or several of the strings will produce correct notes, while the remainder will produce more or less incorrect notes to an extent sufficient to destroy perfect harmony. To overcome this, I cut recesses in said frets underneath such of the strings which produce incorrect notes thereon and adjacent such fret mount what I term a "supplemental" fret, said supplemental frets being indicated by 2^a, 6^a, 7^a, 8^a, 9^a, 12^a, and 14^a, each of said supplemental frets being in alinement with the recess in the main fret, so that in depressing the string it will touch said supplemental fret and be free of the main fret, thereby producing the correct note. The supplemental frets 6^a and 8^a extend beside the main fret 6 and 8 entirely across the finger-board and are provided with recesses at points corresponding to the raised portions of the main frets, and the latter are recessed to correspond with the raised portions of the supplemental frets.

Though I have illustrated my invention only as applied to a guitar, it may obviously be applied to mandolins and other instruments having finger-boards provided with frets.

I claim as my invention—

A finger-board for string instruments having a plurality of main frets and a plurality of supplementary frets adjacent some of said

main frets, some of said main frets being recessed at given points in alinement with said adjacent supplemental frets, whereby when a string passing over a recess in a main fret and over an adjacent supplemental fret is depressed, it will be brought in contact with said supplemental fret to produce a correct note.

In testimony whereof I affix my signature in presence of two witnesses.

ERICK ERIKSEN.

Witnesses:
E. F. WILSON,
RUDOLPH WM. LOTZ.