

(No Model.)

F. BARRIENTOS.  
MUSICAL INSTRUMENT.

No. 567,447.

Patented Sept. 8, 1896.

Fig. 1.

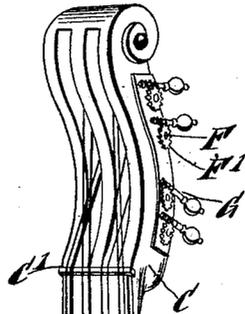


Fig. 2.



Fig. 3.

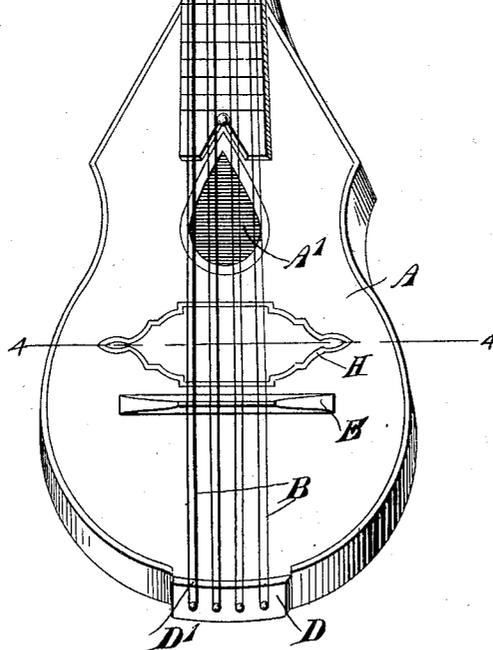
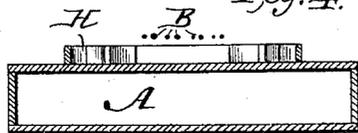


Fig. 4.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANCISCO BARRIENTOS, OF SAN JUAN BAUTISTA, MEXICO, ASSIGNOR OF TWO-FIFTHS TO FAUSTINO AVILA, V, OF SAME PLACE.

## MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 567,447, dated September 8, 1896.

Application filed April 16, 1896. Serial No. 587,831. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCISCO BARRIENTOS, a citizen of Mexico, residing in San Juan Bautista, Tabasco, Mexico, have invented new and useful Improvements in Musical Instruments, of which the following is a full, clear, and exact description.

My invention relates to musical instruments of that class which are played with a pick, and has for its object to enable the performer to readily play in octaves on such instruments, thereby producing sounds as if he were playing two instruments. For this purpose I employ a particular construction of the instrument proper, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improved musical instrument. Fig. 2 is a side view of the pick employed in playing my improved instrument. Fig. 3 is a separate view of one of the teeth of the pick; and Fig. 4 is a cross-section of the body of the instrument, taken on line 4 4 of Fig. 1.

The instrument consists of a body A of substantially the same construction as that of a guitar, said body having a sound-hole A'.

B are four sets of double strings extending from the neck C of the instrument to the tail-piece D thereof, and E is the bridge, which, for a purpose that will appear hereinafter, is set exactly at one-fifth of the distance between the two points at which the strings are supported, that is, between C' and D'. The ends of the strings are wound on pins F, carrying at their outer ends worm-wheels F', engaged by worms G. The strings are tuned by turning said worms. Between the bridge E and the sound-hole A' is located a raised stop H, which may be made in the nature of an incrustation.

The double pick, as illustrated in Figs. 2 and 3, consists of a body I and points or teeth J, set therein.

It will be observed that the distance from C' to the bridge E is to the distance from the bridge to the other support D' as four to one, and it follows according to well-known physical laws that the sound produced by the por-

tion of the strings below the bridge will be exactly two octaves higher than that produced on the portion above the bridge, assuming the strings to swing free, that is, without the performer applying his fingers at any point of the said strings. If, therefore, the performer with the double pick I J strikes the strings simultaneously, both above and below the bridge E, there will be heard simultaneously two notes, one of which is two octaves higher than the other. The raised portion H will form a stop to limit the movement of the pick, it being understood that said raised portion projects sufficiently from the body of the instrument to be engaged by the pick when the latter comes out of engagement with the strings. The performer may also, instead of striking the strings simultaneously above and below the bridge, play the octaves in succession, thereby producing a somewhat different effect, and the instrument will then sound as if the performer were playing on two instruments of different pitch.

When it is desired to simultaneously produce a certain tone and one which is one octave higher, the performer with his hand in the fifth position presses the strings with his third finger, so the portion of the string above the bridge when struck will produce a tone which is one octave higher than the fundamental tone of the string, while the portion below the bridge will produce a tone one octave higher than that produced above the bridge. The performer may therefore readily produce, either successively or simultaneously and in two successive octaves, the tones corresponding to the fundamental tones of the strings.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A musical instrument, comprising a suitable body, strings extending above the same, and a raised stop arranged on the body laterally of the strings, to arrest the pick, substantially as described.

FRANCISCO BARRIENTOS.

Witnesses:

PERFECTO G. PÉREZ,  
FORTINO GÓMEZ.