

(No Model.)

J. S. F. PIZZUTI.
MUSICAL INSTRUMENT.

No. 452,193.

Patented May 12, 1891.

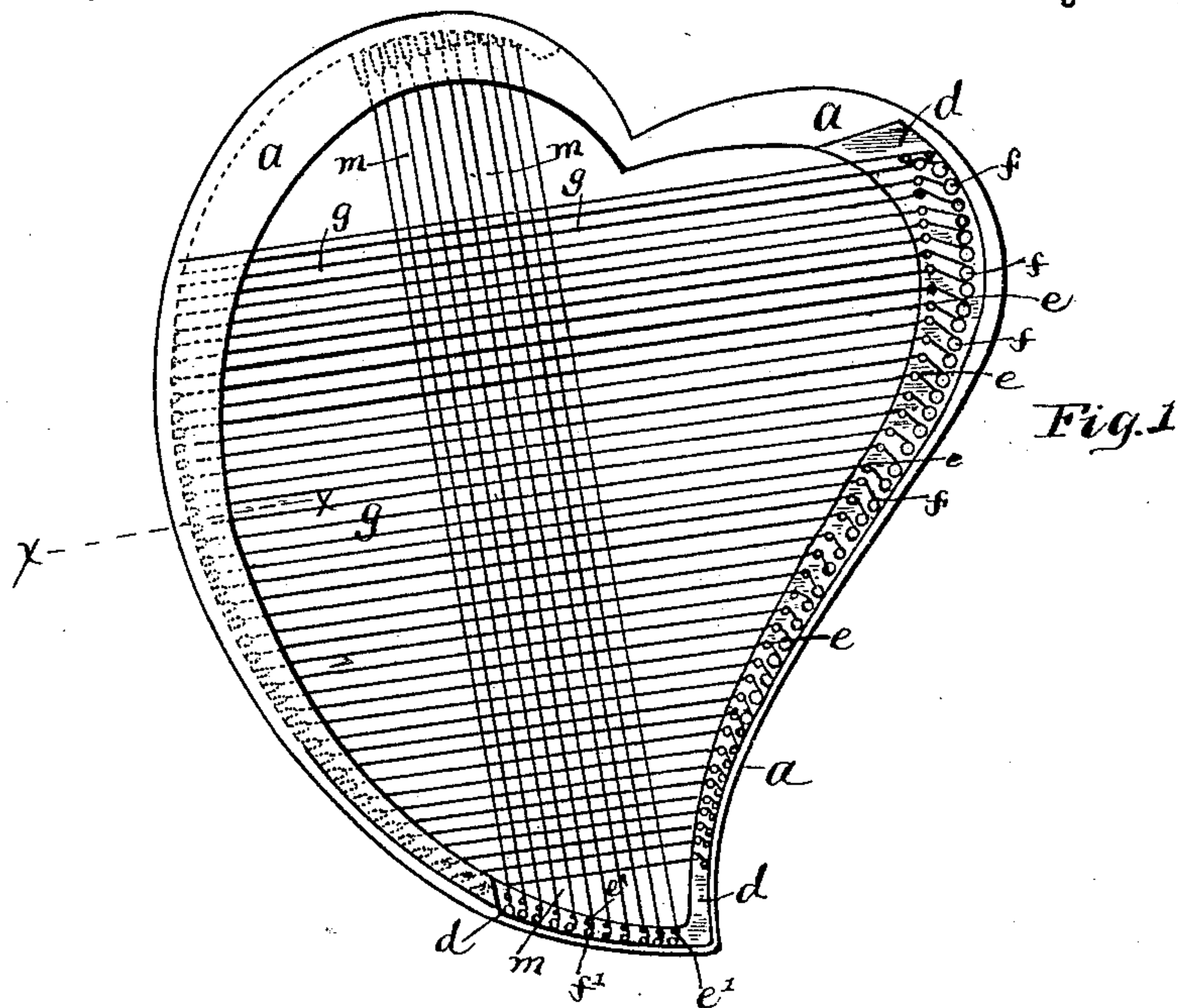


Fig. 2

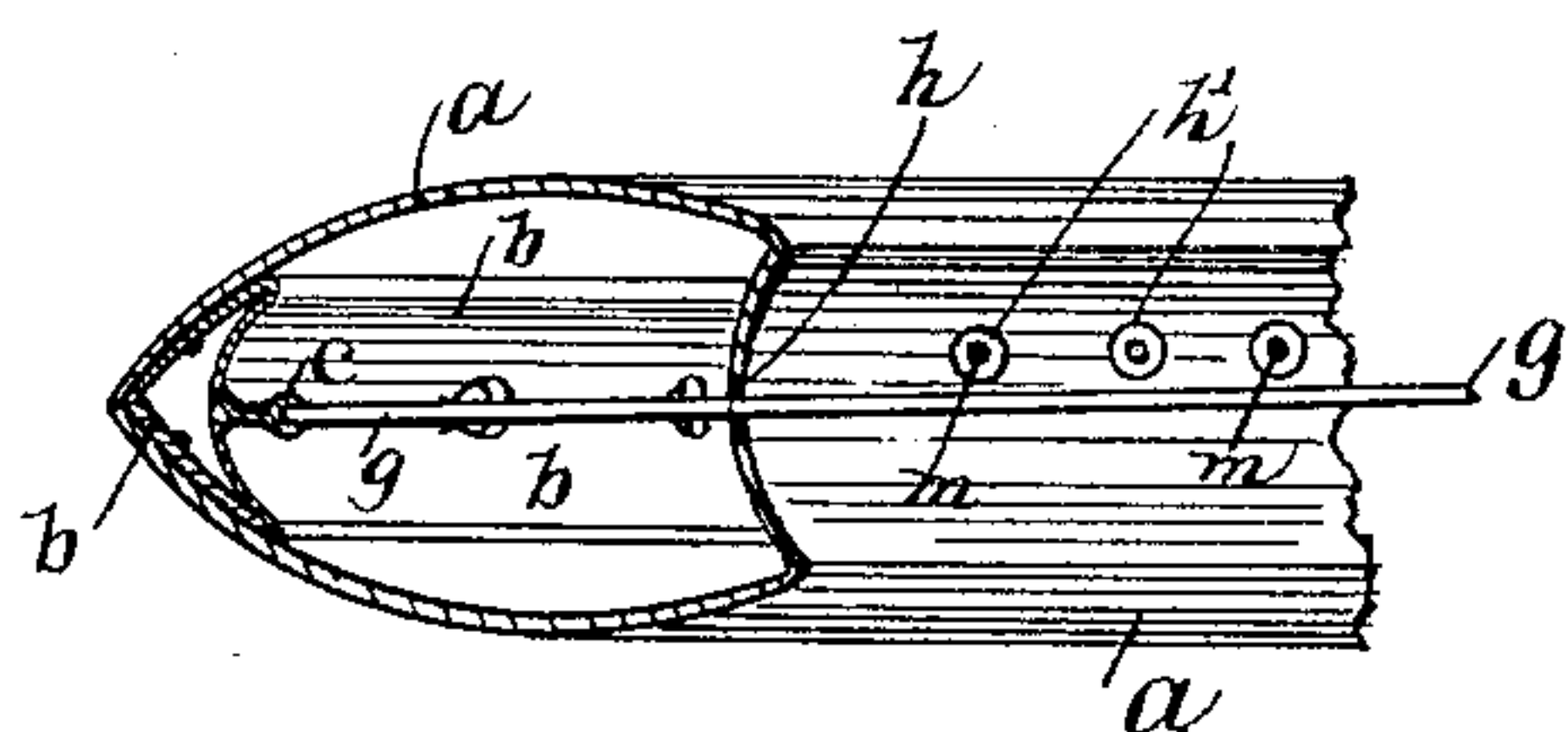


Fig. 3

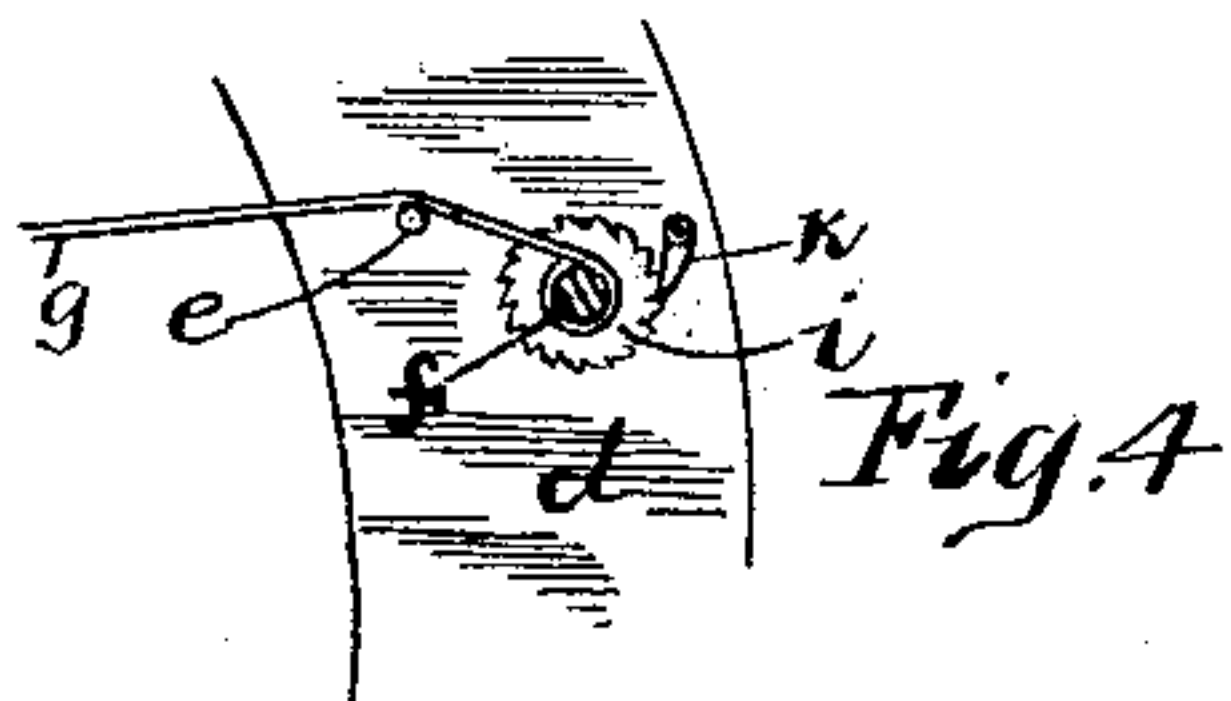
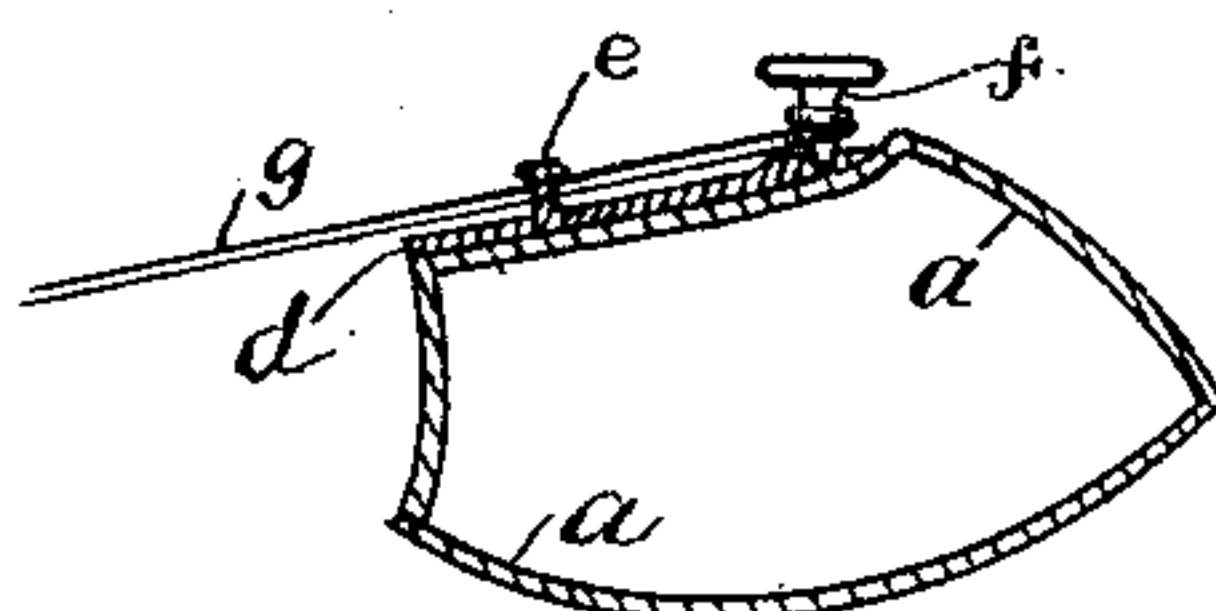
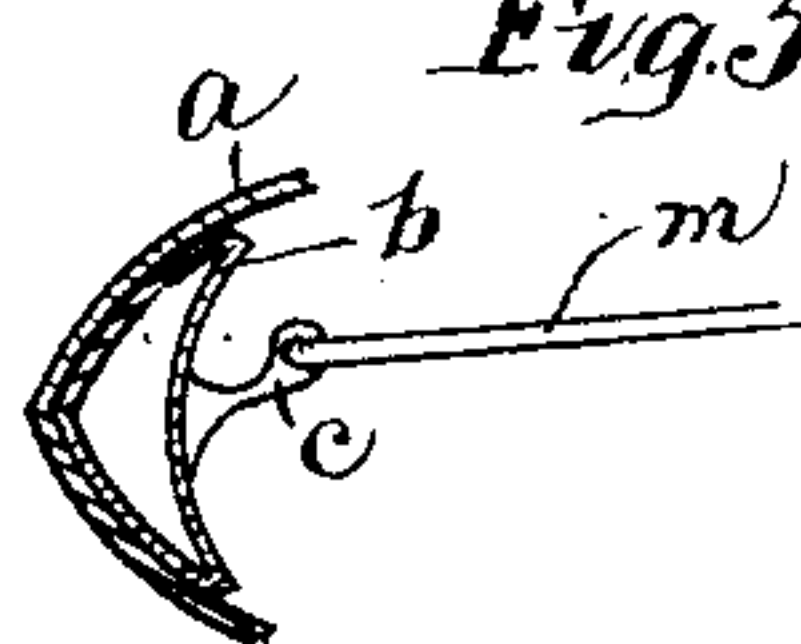


Fig. 5



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MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 452,193, dated May 12, 1891.

Application filed September 22, 1890. Serial No. 365,791. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH S. F. PIZZUTI, a citizen of Italy, residing at Columbus, in the county of Franklin and State of Ohio, United States of America, have invented a certain new and useful Improvement in Musical Instruments, of which the following is a specification.

My invention relates to musical instruments, and has particular relation to the improvement of stringed instruments or harps.

The objects of my invention are to produce an instrument of this class in such form as to facilitate the manipulation of the strings, to provide improved means of connecting the frame and strings, and to so construct said instrument as to produce thereon fine musical tones which shall be soft and pleasing to the ear. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation of my improved instrument. Fig. 2 is an enlarged transverse section of a portion of the frame, taken on line *xx* of Fig. 1. Fig. 3 is a similar view of the opposite side of the frame. Fig. 4 is a detail face view showing one manner of increasing the tension of the strings, and Fig. 5 is a detail view showing the manner of connecting the upper ends of the bass-strings with the frame.

Similar letters refer to similar parts throughout the several views.

a represents the frame, the general form of which is that of a heart having its left lobe enlarged. The body of this frame is hollow and partially of an oval form in cross-section, the front and rear halves of the frame-body being so shaped as to form at the juncture of their outer edges an acute angle. The inner side of the frame-body is concave, as shown.

b represents a hollow metallic body, which is approximately shield-shaped in cross-section, and which, as shown in Fig. 2 of the drawings, is secured within the hollow of the left side of the frame, fitting within the angle of the outer wall thereof. This metallic body *b* is provided at regular intervals on the outer surface of its inner concave side with outwardly-projecting lugs or posts *c*, each of said lugs having formed thereon a suitable eye.

As indicated in dotted lines on the left side of the frame, the metallic body *b* extends throughout said left frame-lobe, its projecting lugs being graduated in length, for the reason hereinafter described. The right frame-arm or right side of the frame is of a construction corresponding with the left side, with the exception that the front surface of said right side frame-arm is flattened or depressed within a short distance of its outer side, said depression extending throughout the length of the said right frame-arm and being continued across the lower end of the frame and a short distance upon the lower portion of the left frame-arm. In this depression is fitted and secured a metallic plate *d* of corresponding shape. This plate is provided on its upper surface and near its inner edge with a series of projecting pins *e*, said series or row of pins extending to a point near the lower end of the frame.

g represents the soprano-strings of the instrument, the ends of which are connected with one side of the frame *a* by passing through suitable holes *h* formed at equidistant points in the inner side of the left frame-arm, and being secured, respectively, to the eyes of the lugs *c*. These soprano-strings, of which there are preferably forty-three in number, extend from the left frame-arm in parallel lines across to the pins *e* of the right frame-arm. Passing over these pins each of said strings extends to one of a series of reel-posts or string-tightening plugs *f*, one of which projects from the upper side of the outer portion of the frame-plate *d* on the outer side of and slightly below each of the pins *e*. These posts *f*, to which are secured and about which are adapted to be wound the slack ends of the strings *g*, are slightly tapering, and may be supported in suitable sockets formed in the plate *d* and held therein by friction. Each of said posts may, however, be provided with a small ratchet-wheel *i*, as shown in Fig. 4, with the teeth of which may engage a pawl *k*, pivoted upon said plate *d*, said pawl operating by such engagement to prevent the reversal of the post when, the latter is turned, to increase the tension of the string.

As shown in the drawings, each soprano-string is slightly shorter than the one immediately above it, thus insuring the desired

graduation of tones. The decrease in length of the strings results partly from the shape of the frame and partly from the fact that the projecting lugs *c* of the metal body *b* are graduated in length.

m represents the bass-strings, which, as shown, extend in front of the soprano-strings, approximately at right angles therewith. These bass-strings, of which there are preferably eleven in number, have their upper ends passing through suitable holes *h'* in the under side of the top portion of the left lobe of the frame and secured within said frame to the upper lugs *c* of the metal body *b*. These upper lugs, as shown in Fig. 5 of the drawings, are inclined upward to insure the elevation of the bass-strings above the soprano. The lower ends of the bass-strings are aligned and held by pins *e'* and reel-posts *f'*, which project from the lower arm of the plate *d* and correspond with the pins *e* and posts *f*. The bass-strings decrease in length from right to left.

In playing my improved instrument the soprano-strings are operated by picking with the fingers of the right hand, while the bass-strings are manipulated by the fingers of the left hand.

From the construction shown and described

it will be seen that a large number of strings may be utilized, and that the relative position of the bass and soprano strings is such as to greatly facilitate the manipulation of said strings.

The hollow frame and the metal connections of the strings will insure excellence of tone and a pleasing result.

It is obvious that by the herein-described method of connecting the strings within the hollow of the frame none of the effects of the tone are lost, as is the case where the connection is made on the outer side of the frame.

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

In a musical instrument, the combination, with the herein-described approximately heart-shaped frame and transverse soprano-strings extending between the sides of said frame, of the bass-strings extending between the upper and lower ends of said frame and crossing said soprano-strings, substantially as described.

JOSEPH S. F. PIZZUTI.

In presence of—

BARTON GRIFFITH,
C. C. SHEPHERD.