(No Model.) 2 Sheets—Sheet 1.

F. F. WICHARD.

CITHERN.

No. 294,832. Patented Mar. 11, 1884.

FIG. 1.

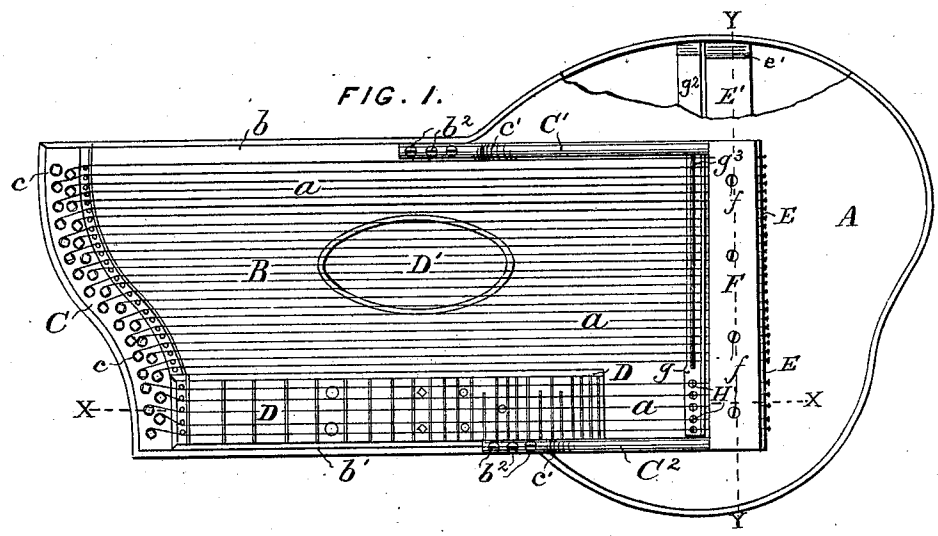


FIG. 2.

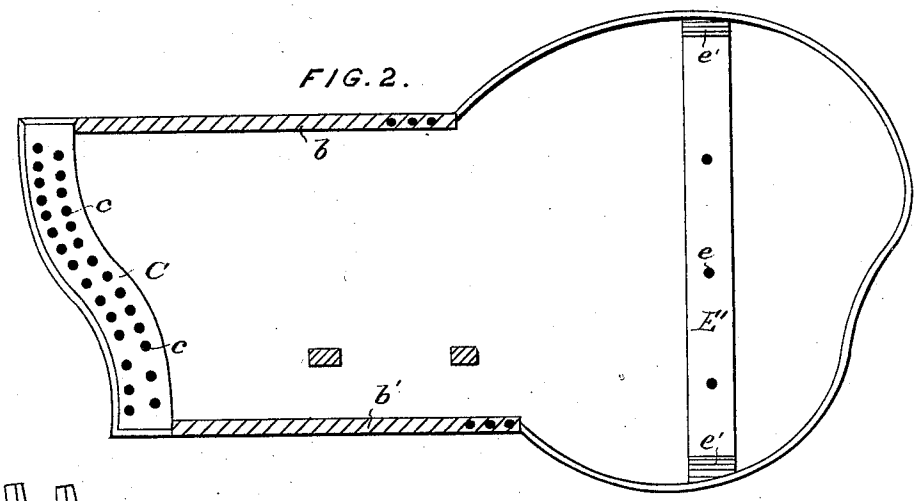
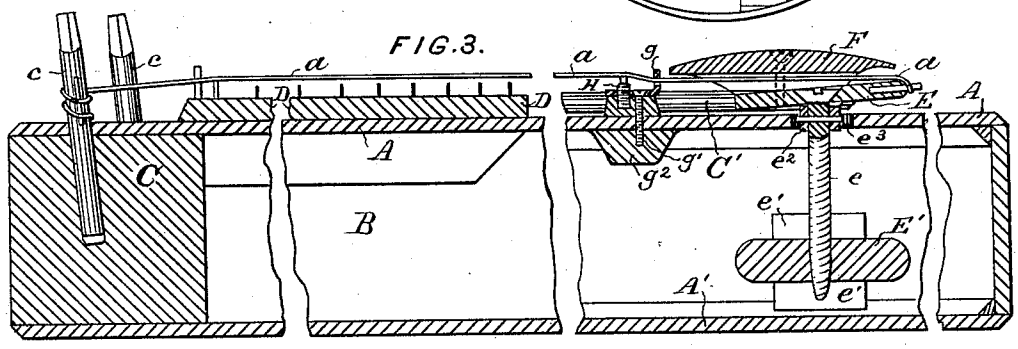


FIG. 3.



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(No Model.) 2 Sheets—Sheet 2.

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FIG. 4.

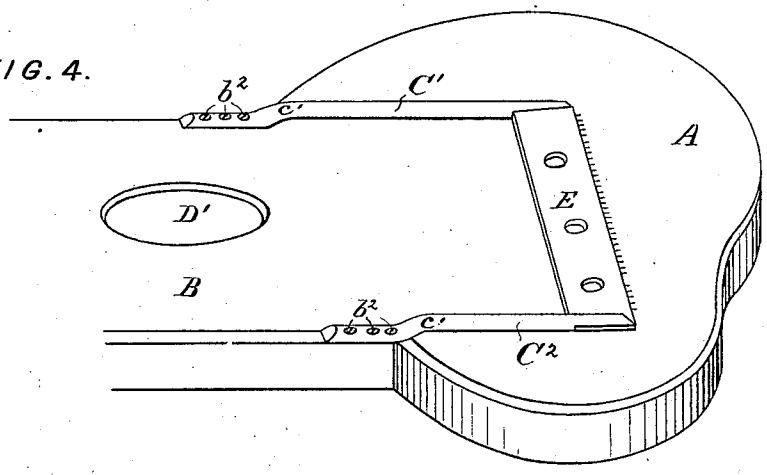


FIG. 5.

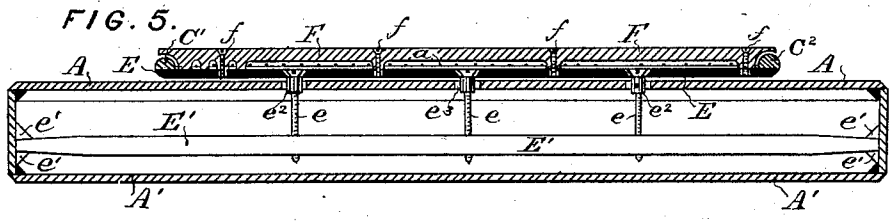


FIG. 6.

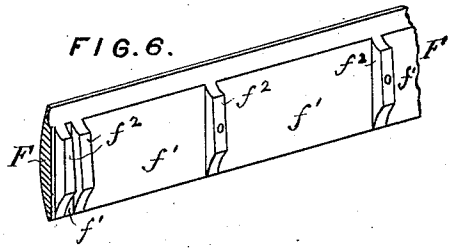


FIG. 7.

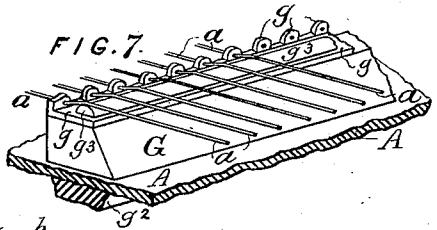
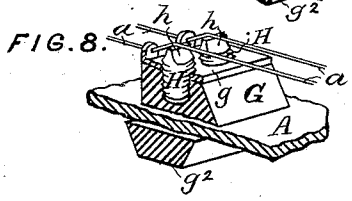


FIG. 8.



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UNITED STATES PATENT OFFICE.

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CITHERN.

SPECIFICATION forming part of Letters Patent No. 294,832, dated March 11, 1884.

Application filed August 10, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK F. WICHARD, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Citherns, of which the following is a specification.

In the customary way of fastening the strings of instruments of this kind one end is tied or otherwise secured to wire pins situated in the tail-block at the rear end of the body or shell, then passed over a solid bridge at the top and rear edge of said shell, and stretched longitudinally over the instrument and fastened to the tuning-pins in the head-block of the instrument. In this mode the entire strain of the strings must be withstood by the shell or body, which, in its construction, is therefore made very strong and heavy, which added strength and weight at this part of the instrument destroys the perfect resonant action of the same, and gives the instrument a weak, indistinct, and imperfect sound or tone.

The chief object of my invention is to overcome this defect by relieving the shell or body from all strain of the strings, and so that it will be free to act, and be sensitive to all vibrations of sound, and have the proper resonance and a clear, loud, and full tone.

My improvements consist, first, in strengthening the neck of the instrument at the sides, and lightening the shell or body, and in the new and novel manner of transferring the strain of the strings to the neck by means of a pair of braces secured to said neck and to a string-plate, which they hold above the top shell and free from contact with the same; second, in the manner of adjusting the string-plate to the shell or body and bracing same; third, in the manner of adjusting the five fret-strings to the finger-board by means of an improved adjustable bridge for each string; lastly, in the construction of detail parts, all of which will be fully described.

In the drawings, Sheet 1, Figure 1 is a top plan of the instrument. Fig. 2 is a top plan of the frame or skeleton of the instrument. Fig. 3 is a section on line *x x* of Fig. 1, and on an enlarged scale. Sheet 2, Fig. 4 is a perspective view of the body of the instrument, showing the braces and string-plate alone. Figs. 5 is a cross-section on line Y Y of Fig. 1. Fig. 6 is a detail perspective and sectional view of the string-plate cover. Fig. 7 is a detail perspective view of the wire-bridge. Fig. 8 is a like view of the adjustable bridge.

A A′ is the shell or body of the instrument, which may have the represented or other customary form. B is the neck. C is the head-block for the tuning-pins *c*. D is the fret or finger board. D′ is the sound-hole. All of these parts may be of and in the customary shape and positions. The frame of the neck B is strengthened by being made heavy on both sides at *b b′*, for the purpose of receiving the strain of all the strings. (See Fig. 2.) To these sides of the neck are secured steel braces C′ and C^2 by means of bolts or screws b^2. (See Fig. 1.) These braces extend back and over the top shell or body, A, to a point in line transversely with about the middle of same, and are riveted, soldered, or otherwise fastened to the ends of a string-plate, E, which they hold between them. These braces C′ C^2 are bent up at *c′*, so that they are free of the shell or body, and the string-plate is thus held suspended over said shell, as shown in Figs. 3, 4, and 5. To prevent the braces from being drawn up, and the string-plate from tipping or being pulled off when the strings are stretched, and the entire strain brought to bear on these parts, and to insure safety as well as surety in maintenance of tune, the string-plate is held in position by means of the screws *e*, which pass through the same and enter the wood cross-brace E′, which is situated inside the instrument, extending across from side to side directly underneath and parallel with the string-plate, and is held down and in position by blocks *e′*, glued to the insides of the frame of the shell.

e^2 is a washer or collar, held by pins or otherwise to or forming part of the neck of the screw, to hold the plate rigid and firm.

e^3 are holes in the top shell or sounding-board, to allow the screws to pass through, and are made large enough to prevent the screws from coming in contact with said top shell.

F is a cover or guard for the strings, and is fastened by means of screws *f* or the like to the top of the string-plate, (see Figs. 1 and 2,) and may be provided with grooves or spaces *f′*, for the passage of one or more strings, and the

solid portions or feet f^2, for resting on the string-plate, as well as to add strength and body for the screws. (See Figs. 3 and 6.)

G is a solid bridge glued to the top shell or body directly in front of the string-plate.

g is a metal plate, fastened to the bridge G by screws g'. g^2 is a cross-brace underneath the top shell and under the bridge, for relieving the shell from all pressure of the strings. The plate g is L-shaped, and the upright portion is provided with small holes accurately spaced for the strings, and acts as a guide for the same, and is made very light, as shown in Figs. 7 and 8. On the horizontal portion is laid a wire, g^3, flattened on its under side, and over this wire the strings a pass after leaving the guide. The guide-holes are lower than the top of the wire, thereby causing the strings to be firmly held and bent down over said wire, and preventing said strings from slipping or rattling when used.

H are adjustable screws, one of which is directly under each fret-string, which latter it supports and regulates or adjusts to the height required to suit the fret or finger board D. These screws are held by the L-shaped plate g, (see Fig. 8,) and in line with the half-wire g^3. (See Fig. 1.) The upper end of the screw H is flattened, and forms a straight edge, h, on its top, for the strings to rest on, and is raised or lowered by a key, which fits the flattened end, thus forming an adjustable bridge for said strings.

Having thus fully described my invention, what I claim is—

1. In a cithern, the braces C' C^2 and string-plate E, in combination with the neck B and shell A, as herein shown and described, and for the purpose set forth.

2. In a cithern, the braces C' C^2 and string-plate E, in combination with the brace E', screws e, and shell A, as and for the purpose set forth.

3. The combination of the braces C' C^2, string-plate E, brace E', cover F, strings a, and body or shell A, all constructed and arranged as shown and described, and for the purpose set forth.

4. The screw H, having flattened end and straight edge h, in combination with the guide-plate g, to form an adjustable bridge, as herein shown and described, and for the purpose set forth.

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Witnesses:
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ADOLPH DIETERICH.