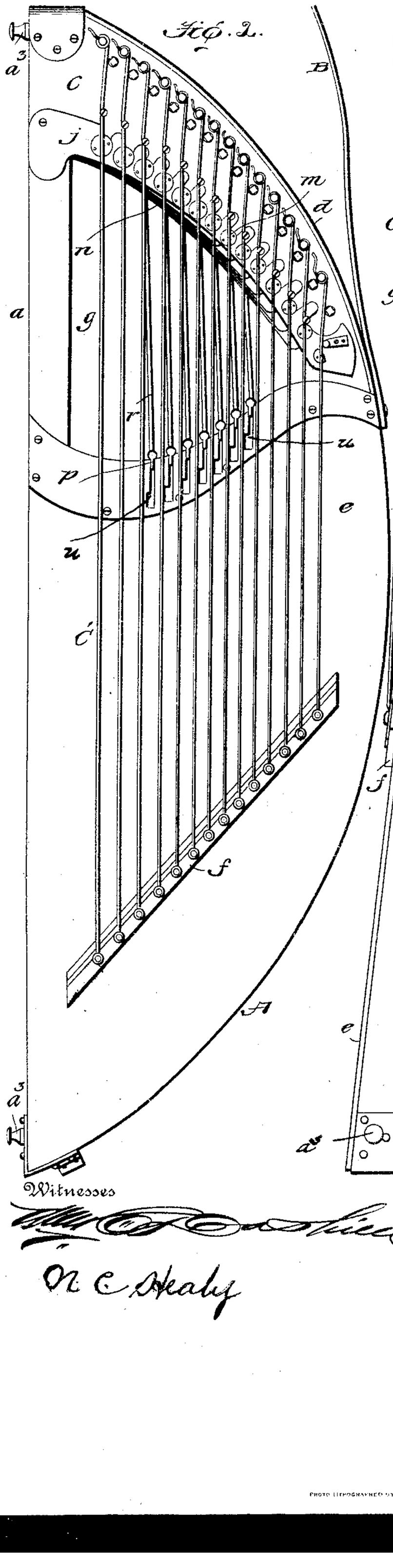
No. 790,029. PATENTED MAY 16, 1905.

J. E. CHILDS.

HARP.

APPLICATION FILED JUNE 23, 1904. RENEWED MAR. 20, 1905.

Fig. 2.



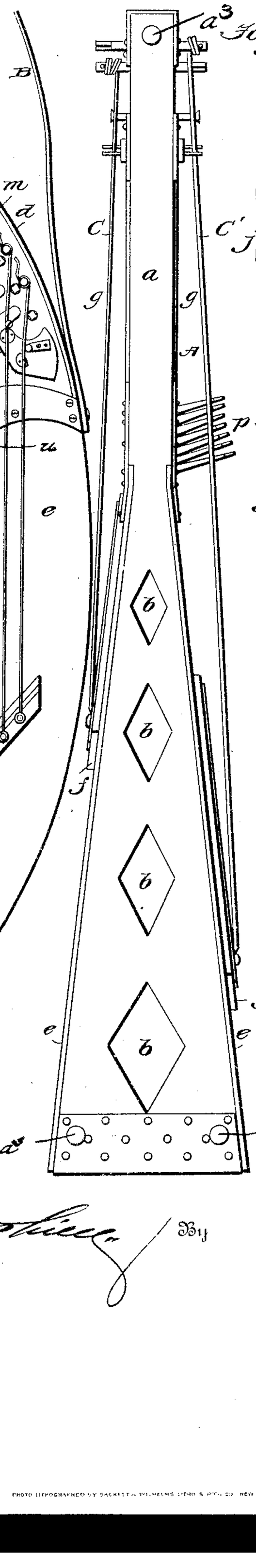


Fig. 1.

Fig. 4.

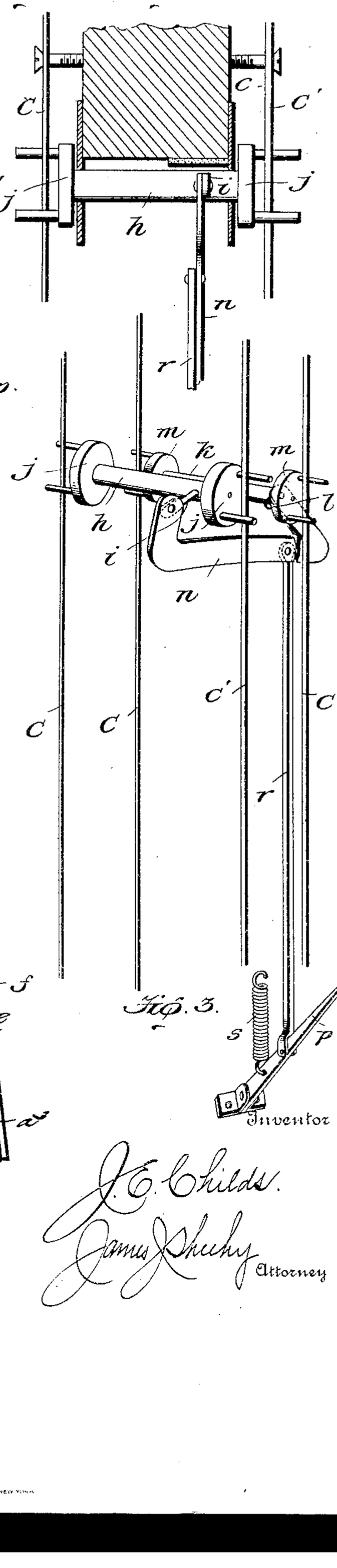


Fig. 3.

Witnesses

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No. 790,029. Patented May 16, 1905.

UNITED STATES PATENT OFFICE.

JAMES E. CHILDS, OF SPOKANE, WASHINGTON.

HARP.

SPECIFICATION forming part of Letters Patent No. 790,029, dated May 16, 1905.

Application filed June 23, 1904. Renewed March 20, 1905. Serial No. 251,010.

To all whom it may concern:

Be it known that I, JAMES E. CHILDS, a citizen of the United States, residing at Spokane, in the county of Spokane and State of Washington, have invented new and useful Improvements in Harps, of which the following is a specification.

My invention pertains to harps, and has for one of its objects to provide a harp adapted to be conveniently supported on the body and played with both hands and one which in proportion to its size is calculated to afford a large volume of sound.

Another object of the invention is to provide in a harp sharping devices so constructed and arranged that a player is enabled with a slight movement of one thumb or finger to sharp four strings of the same denomination—*i. e.*, bass and treble strings of a certain denomination and bass and treble strings of the same denomination, but an octave higher.

Other advantageous features of the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of the harp constituting the present and preferred embodiment of my invention. Fig. 2 is a side elevation of the harp. Fig. 3 is a perspective view illustrating the sharping mechanism complementary to corresponding bass and treble strings and bass and treble strings of the same denomination, but an octave higher; and Fig. 4 is an enlarged transverse section taken through the upper part of the harp and illustrating one of the sharping devices for corresponding bass and treble strings.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is the hollow body of my novel harp, which is made of any material suitable to the purpose and is, by preference, of the shape shown to permit of it being conveniently held on the body and played with both hands. The said body comprises a straight front wall *a*, having apertures *b* at intervals in its height for the escape of sound, a head *c*, a curved back wall *d*, connected to the lower end of the front wall and the upper side of the head, and side walls *e*, connected to the front and back walls and having strips or bridges *f* and also having their upper ends disposed about the proportional distance illustrated below the head *c* in order to provide a space *g* to enable the performer to see the treble strings presently described. In virtue of the body A being shaped and constructed as just described it will be observed that the said body has a large amount of sound-board in proportion to its size and is therefore calculated to give out a large volume of tone. It will also be observed that by reason of the body being shaped as stated the harp may be played with facility while the performer is standing, walking, or sitting, or lying down, and it will further be observed that the openings *b* in the front wall *a* of the body are advantageous, inasmuch as they permit the escape of sound in a direction away from the performer, and hence enable the sound to "carry" a considerable distance.

B is a loop or strap connected to the upper portion of the back wall *d* of the body A and designed to pass over the right shoulder and back and under the left arm of the performer and be buttoned at the lower end of the body A. The buttons a^3 on the front of the harp are designed to serve as legs or rests for the harp when the same is not in use.

C C′ are the strings of the harp, the strings C being the treble strings and the strings C′ the bass strings. In Fig. 3 of the drawings I have shown corresponding bass and treble strings and corresponding bass and treble strings of the same denomination as those first mentioned, but an octave higher, together with the mechanism complementary to said four strings for simultaneously sharping the said strings. The sharping mechanism complementary to each set of four strings are identical in construction, and therefore a detailed description of the mechanism shown in Fig. 3 will suffice to impart an exact understanding of all. The said mechanism, Fig. 3, comprises a rock-shaft *h*, arranged transversely in the head of the body A and having a crank *i* at an intermediate point of its length, and also having forks *j* at its ends,

which forks receive corresponding bass and treble strings, a rock-shaft *k* also arranged transversely in the head of the body and having a crank *l* at an intermediate point of its length and forks *m* at its ends, which forks receive strings of the same denomination as those in the forks *j*, but an octave higher, a rod *n* interposed between and connecting the cranks *i* and *l* of the two rock-shafts, a finger-lever *p*, fulcrumed in the upper portion of the sound-box formed by the front, back, and side walls of the body, a rod *r* connecting said finger-lever and the rod *n*, and a coiled spring *s* interposed between and connected to the finger-lever and the top of the said sound-box and adapted to normally hold the finger-lever in a raised position and the forks *j m* out of engagement with their complementary strings. The several finger-levers *p* extend laterally from one side of the body A and between the strings, as shown in Figs. 1 and 2, while the several rods *n* rest under the head *c* of the body A and side by side. The finger-levers extend through a metallic piece at one side of the sound-box, which metallic piece is provided with shoulders *u*, under which the finger-levers may be conveniently placed when it is desired to retain the strings in a sharp state.

In virtue of the sharping devices described it will be readily observed that a harpist is enabled by simply pressing with his left thumb on one of the levers *p* to simultaneously sharp four strings of the same denomination; also, that the harpist may when desired retain the lever *p* in its depressed position, and thereby keep the strings in a sharp state and may as readily release the lever and restore the original pitch of the strings.

In practice when my novel harp is tuned in the key of E-flat it may without retuning be played in the keys of C, G, D, A, E, F, B flat and E-flat major and their relative minor keys by using the finger-levers *p*.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present and preferred embodiment of my invention in order to impart a full, clear, and exact understanding of the same. I do not desire, however, to be understood as confining myself to such specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

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

1. A harp comprising a hollow body having a head at one end and an opening adjacent to said end forming a picking-space, and also having one or more openings in its front wall for the escape of sound, and strings connected to the said body.

2. A harp comprising a hollow body having a head at one end and an opening adjacent to said head forming a picking-space, and also having one or more openings in its front wall for the escape of sound, and bass and treble strings arranged at opposite sides of the body and connected to the same.

3. In a harp, the combination of a body, bass and treble strings connected to the body and arranged so that each treble string is opposite a corresponding bass string, and a sharping device complementary to each bass string and the corresponding treble string, and bass and treble strings of the same denomination but of an octave higher or lower; the said device comprising rock-shafts journaled in the body and having forks at their ends receiving the strings, and also having cranks, a rod connecting the cranks of said shafts, a finger-piece connected to the body, and a rod connecting the first-mentioned rod and the finger-piece.

4. In a harp, the combination of a body, base and treble strings connected to the body and arranged so that each treble string is opposite a corresponding bass string, and a sharping device complementary to each bass string and the corresponding treble string, and bass and treble strings of the same denomination but an octave higher or lower; the said device comprising rock-shafts journaled in the body and having forks at their ends receiving the strings, and also having cranks, a rod connecting the cranks of said shafts, a vertically-movable finger-lever connected to the body and extending laterally from one side thereof, a connection between the rod and the said lever, and a spring arranged to normally hold the finger-lever in a raised position, and means for locking said lever in its depressed position.

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

JAMES E. CHILDS.

Witnesses:
W. F. McCarthy,
J. T. Percival, Jr.