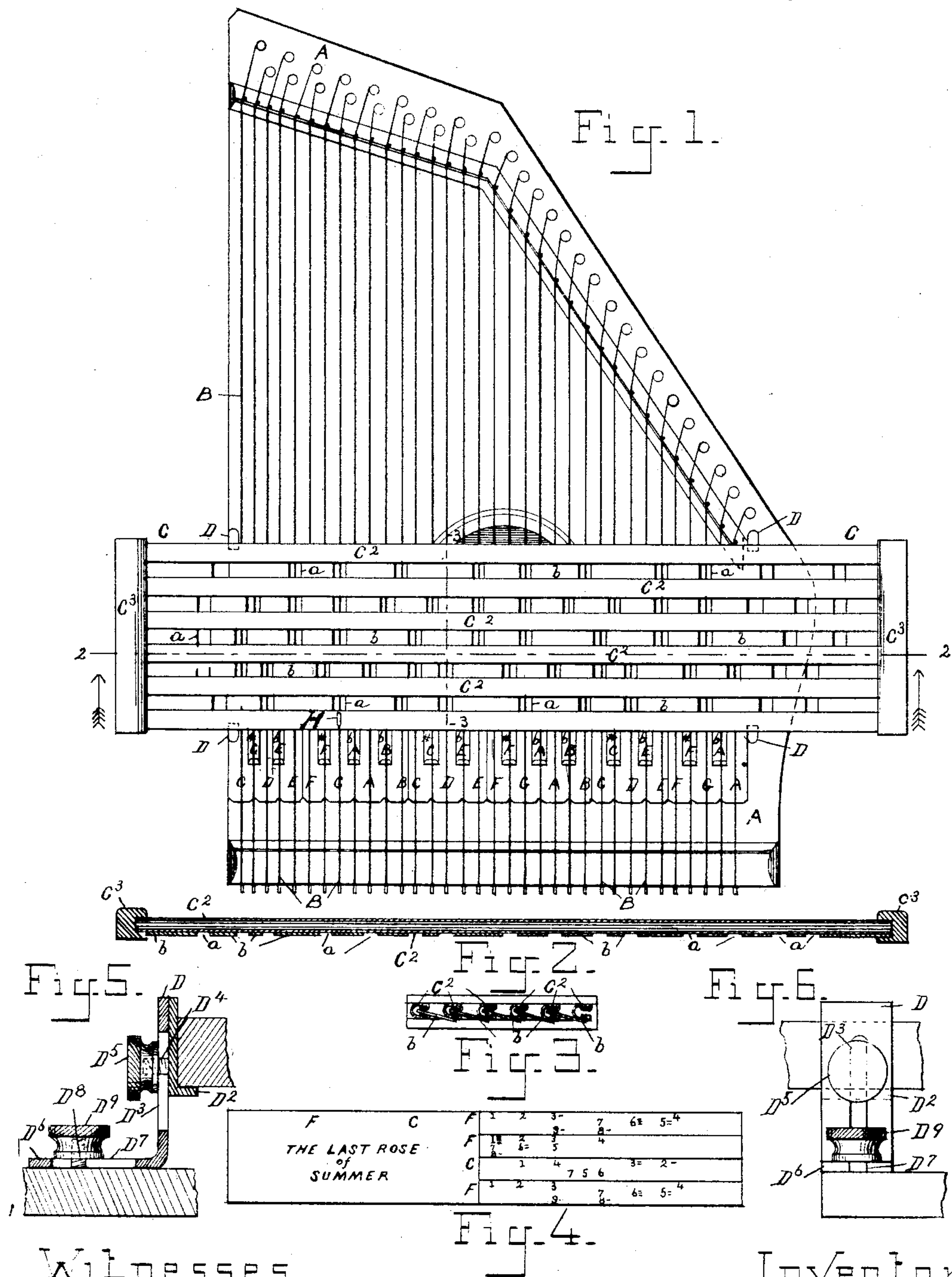


(No Model.)

J. C. ST. JOHN.
HARP.

No. 542,576.

Patented July 9, 1895.



UNITED STATES PATENT OFFICE.

JOHN C. ST. JOHN, OF BOSTON, MASSACHUSETTS.

HARP.

SPECIFICATION forming part of Letters Patent No. 542,576, dated July 9, 1895.

Application filed May 13, 1893. Renewed June 8, 1894. Serial No. 513,967. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. ST. JOHN, a citizen of the United States of America, and a resident of the city of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Harps, of which the following is a full, clear, and exact description.

This invention relates to certain new and useful improvements in harps, and particularly in the shield by which the proper strings are exposed to or prevented from contact, as desired, with the pick or instrument with which the harp is played; and it has for its object to improve and simplify the construction thereof while extending their utility; and it consists in the various features of construction and arrangement of parts, substantially as hereinafter more particularly pointed out.

In the drawings forming part of this specification, Figure 1 is a plan view of a harp of this invention. Fig. 2 is a longitudinal section of the shield, line 2 2, Fig. 1. Fig. 3 is a cross vertical section of the shield, line 3 3, Fig. 1. Fig. 4 is a face view of a music-card referred to, and to be placed on the harp under and across the strings. Fig. 5 is a vertical section, enlarged, of a supporting-post for the shield; and Fig. 6 is a side face view, Fig. 5.

In the drawings, A represents the sounding-board or top of a zither or harp, and B its several strings, all as usual.

C is a shield extending across the strings at one end portion thereof, and at each of its side edges and at opposite sides of the sounding-board A it is supported on posts D, preferably constructed as hereinafter explained, and so that it may be slid on said posts in a direction across the strings, and so adjusted, as and for a purpose hereinafter appearing.

The scale of the strings is chromatic, and, as indicative of what each string represents in the scale, the sounding-board, at one and at its end toward the player, is provided with a representation of a keyboard suitably lettered, as fully shown in the drawings.

The shield has a series of parallel rows of openings *a*, separated from each other by raised ribs *C*², arranged as to each row so as

to expose certain strings and to cover other and intervening strings, and all so that at each row of openings, with the shield properly adjusted, a determined chord may be sounded by drawing a pick or other suitable implement over the shield along said row of openings, the other strings embraced in said row of openings being covered by the portions *b* of the shield intervening between said openings. The intervening portions *b* of the shield are made of india-rubber or other like or suitable material, and at one edge they are held on one of the raised ribs *C*³ and at their other edge they lie under the next adjacent rib, Figs. 2 and 3, so that as the pick is drawn along any one row of openings said portions *b* will yield thereto, and, while preventing the sounding of the strings which are shielded by them, they enable the pick to pass from one exposed string to another and through the series with no perceptible noise and in a smooth and even manner, the advantage of all of which is obvious without further explanation. The intervening portions of the shield depressed, as stated, by the pick return automatically to their normal positions as the pick leaves them, one after the other.

As shown, Fig. 3 particularly, each portion *b* of the shield is composed of a strip of rubber confined between a fold or double of a strip of metal, which preferably has each of its edges first doubled over. This folded metal strip constitutes in the shield the dividing-rib *C*² between two rows of openings thereof, and said several strips of metal, at each end, are held on end-pieces *C*³. The shield is provided with an index-mark *H* to be used and by which to set it, using the scale on the sounding-board as a guide to any key that may be desired, as for instance, the key of G, as shown, and so setting the openings in the shield, thus enable the chords in that key to be sounded, as before explained.

Fig. 4 is an illustration of a music-card by which, when placed under the strings of the zither or harp and over the scale thereon, the performer may be guided in playing the air of a tune, such, for instance, as "The Last Rose of Summer," and at the same time sound the proper chords in harmony with it and at the proper times. The figures on the music-

card represent the strings to be plucked for the air, and the single, double, or treble cross lines against the figures the row of openings along which the pick is to be drawn to sound the appropriate chords, the said rows of openings being numbered in proper relation therefor. The same is true of any other tune which it may be desired to play by the use of a suitable music-card as has been explained for the tune named.

Each music-card has a series of parallel rows of figures, from figure 1 upward, as may be necessary for the different strains of the tune to be played, and also at the end of each row a letter indicative of the key in which it is to be played and according to which the card must be changed in its position under the strings, corresponding guide-letters being on the instrument by which to properly set the card therefor. Again, said figures on the card are in columns corresponding in width to the width of separation of the strings from each other.

The supporting-posts D of the shield, as particularly shown, are made of a right-angular piece of rigid metal having along its upright length a slot D³ and along its horizontal length a slot D⁷. There are four of these posts, two at and along each side of the shield, and each post (Fig. 5) is secured in place near to the edge of the instrument by means of a vertical screw-pin D⁸, which is fixed on the instrument and extends through the slot D⁷ of the horizontal length of the post and a milled screw-nut D⁹, which is screwed onto said screw-pin to a rigid bearing against said length of the post, thus securing the post to the harp.

Each post D has a ledge D² on the inner side of its vertical length, and each ledge D² is at the lower end of a vertical arm, which lies against the inner face of the post, and is there held by means of a screw-pin D⁴, fastened to it, and which passes through the vertical slot D³ of the vertical length of the post and receives a milled screw-nut D⁵, which on being properly turned binds said ledge to the post. The sliding shield, as shown, rests and moves on the ledges of the several posts D, and from the construction and arrangement of the ledges and posts and their attachment—the ledges to the posts and the posts to the harp—obviously said shield-rests are capable of vertical adjustment, and through their carrying-posts, also, of an adjustment lengthwise of the harp, by all of which the shield can be located for the best service.

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

1. The combination with a zither, or harp, of a shield, which extends above and across and beyond the strings, and has a series of parallel rows of openings to expose certain strings, and coverings adapted to be depressed toward and rise from said strings, and supports for, and which are adapted for the slide longitudinally of, said shield, to adjust its openings as to the strings of the harp, substantially as described, for the purpose specified.

2. The combination with a zither or harp, of a shield which extends above and across and beyond the strings, and has a series of parallel rows of openings to expose certain strings, and coverings adapted to be depressed toward and rise from said strings, supports for, and which are adapted for the slide longitudinally of, said shield thereon, to adjust its openings as to the strings of the harp, and means, which are on said shield and said harp, and are relatively adapted as guides for said adjustments of the shield, substantially as described, for the purpose specified.

3. The combination with a zither or harp, of a shield, which extends above and across the strings, suitably supported, and has a series of parallel rows of openings to expose certain strings and portions in each of said rows, that intervene between said openings, and cover certain strings, and are adapted to be depressed toward, and to rise from the strings, substantially as described, for the purpose specified.

4. The combination with a harp or zither, of a shield which extends above and across the strings, suitably supported, and has a series of parallel ribs and a series of parallel rows of openings to expose certain strings and portions in each of said rows that intervene between said openings and cover certain strings, said portions along one side being attached to, and along the other side free of, said ribs; substantially as and for the purpose described.

5. A shield for a harp or zither, composed of end pieces, and a series of parallel ribs each made of sheet metal doubled upon itself, and resilient or flexible portions held and supported by said doubled-over ribs, and openings between said portions; all substantially as and for the purposes described.

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

JOHN C. ST. JOHN.

Witnesses:

ALBERT W. BROWN,
MARION E. BROWN.