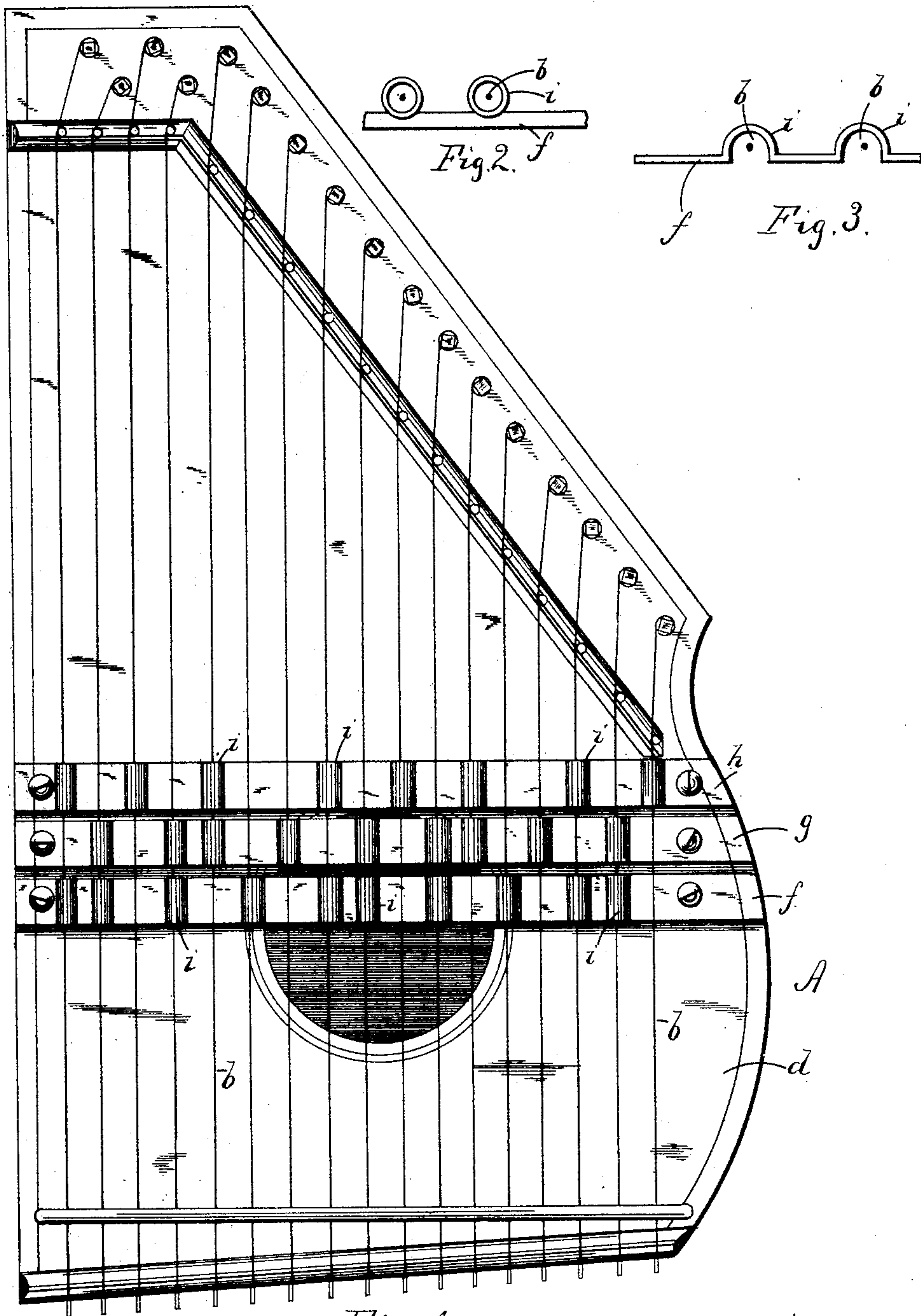


(No Model.)

W. W. BATCHELDER, Jr.
HARP.

No. 456,977.

Patented Aug. 4, 1891.



WITNESSES

A. S. Eager
H. Dwyer

Fig. 1.

INVENTOR:
William W. Batchelder, Jr.
By *C. A. Shaw* ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM W. BATCHELDER, JR., OF BOSTON, ASSIGNOR OF ONE-HALF TO
JOSEPH R. GREEN, OF MALDEN, MASSACHUSETTS.

HARP.

SPECIFICATION forming part of Letters Patent No. 456,977, dated August 4, 1891.

Application filed January 27, 1891. Serial No. 379,305. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. BATCHELDER, Jr., of Boston, in the county of Suffolk, State of Massachusetts, have invented certain
5 new and useful Improvements in Harps or Zithers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make
10 and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 of the drawings is a plan view of a zither provided with my improvement; Fig.
15 2, a sectional elevation; and Fig. 3 an elevation showing a modification in the formation of the bridge and shield.

Like letters of reference indicate corresponding parts in the different figures of the
20 drawings.

My invention relates especially to an attachment for small harps, zithers, and similar instruments, whereby a set of strings forming chords may be struck without setting the adjacent or unharmonious strings into vibration;
25 and it consists in certain novel features, hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character
30 than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

35 In the drawings, A represents the zither, which is of the ordinary form and construction, and is provided with strings *b*, strung in the usual manner. Below the strings and across the top board *d* a series of three bridges
40 *f g h* are secured in parallelism. To each bridge a series of guards or shields *i*, preferably consisting of sections of soft rubber tubes, are secured. Through these guards certain of the strings *b* pass without contact.
45 These guards are so arranged on each bridge that the strings not inclosed therein, when struck, will vibrate in harmony. For example, when the pick is drawn longitudinally of the bridge *f* over the strings the guards or
50 shields *i* on said bridge protect certain strings from the action of the pick, while those ex-

posed on said bridge, when struck, are in accord. The guards are so arranged, respectively, on each bridge that the exposed strings will sound different chords in a manner
55 which will be readily understood by all conversant with such matters without a more explicit description. By employing the cylindrical guard described, disposed out of contact with the strings which they encircle, said
60 inclosed strings are permitted to vibrate freely, and the tones thereof are in no manner interfered with when the pick or thumb-piece is employed thereon in the usual way. I preferably form the guards of rubber tub-
65 ing, as the flexibility of the material prevents any harsh, grating noise from contact with the pick, which freely passes over said guards without causing the strings inclosed to vibrate.
70

It will be seen that the necessity of using dampers or similar devices for stopping the vibration of certain strings while the others are played in harmony is avoided by the use of my improvement, and the disagreeable
75 grating noise caused by the contact of the pick or finger with said damped strings is done away with.

The shields or guards may be formed integral with the bridge, as in Fig. 3, if preferred,
80 or each of the protected strings may be provided with an independent shield fastened directly to the sounding-board, without departing from the spirit of my invention, the purpose of which is to protect determined
85 strings from the contact of the pick in playing chords.

Having thus explained my invention, what I claim is—

1. A zither provided with a shield or set of
90 shields protecting determined strings from contact with the finger-pick or thumb-piece, substantially as and for the purpose set forth.

2. In a zither or similar musical instrument, a bridge secured to the sounding-board
95 and provided with guards or shields encircling determined strings of said instrument, substantially as and for the purpose set forth.

3. In a zither or similar musical instrument, a series of bridges secured to the sounding-board, in combination with a series of
100 guards secured to each bridge, said guards

respectively protecting determined strings of the instrument, substantially as described.

4. A zither or similar musical instrument A, provided with a series of bridges, as *f g h*,
5 in combination with the series of guards *i*, constructed of rubber tubing or similar flexible material, said guards being secured to

said bridges and encircling determined strings of said instrument.

WILLIAM W. BATCHELDER, JR.

Witnesses:

O. M. SHAW,
K. DUFFEE.