

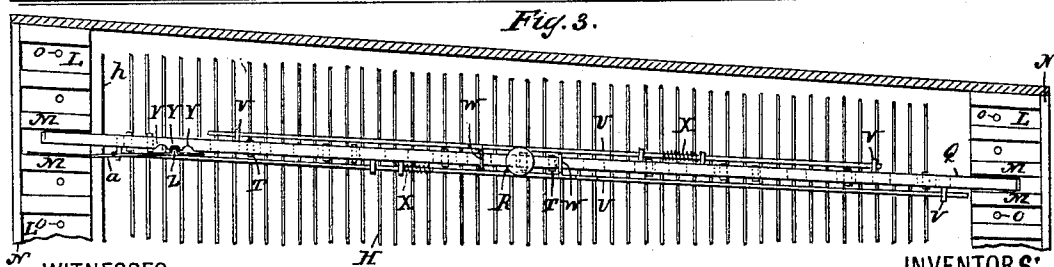
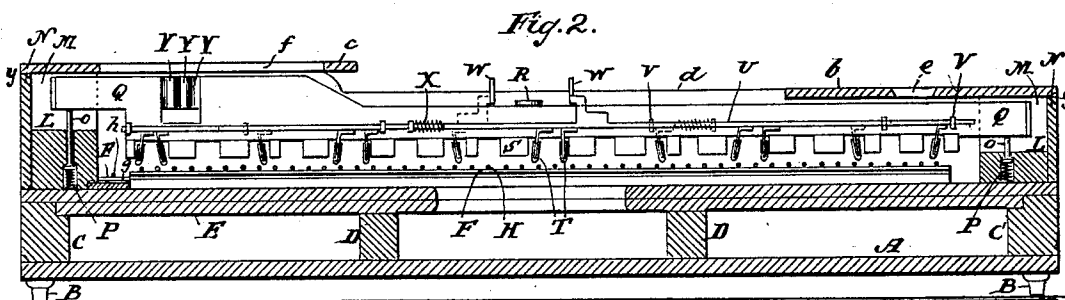
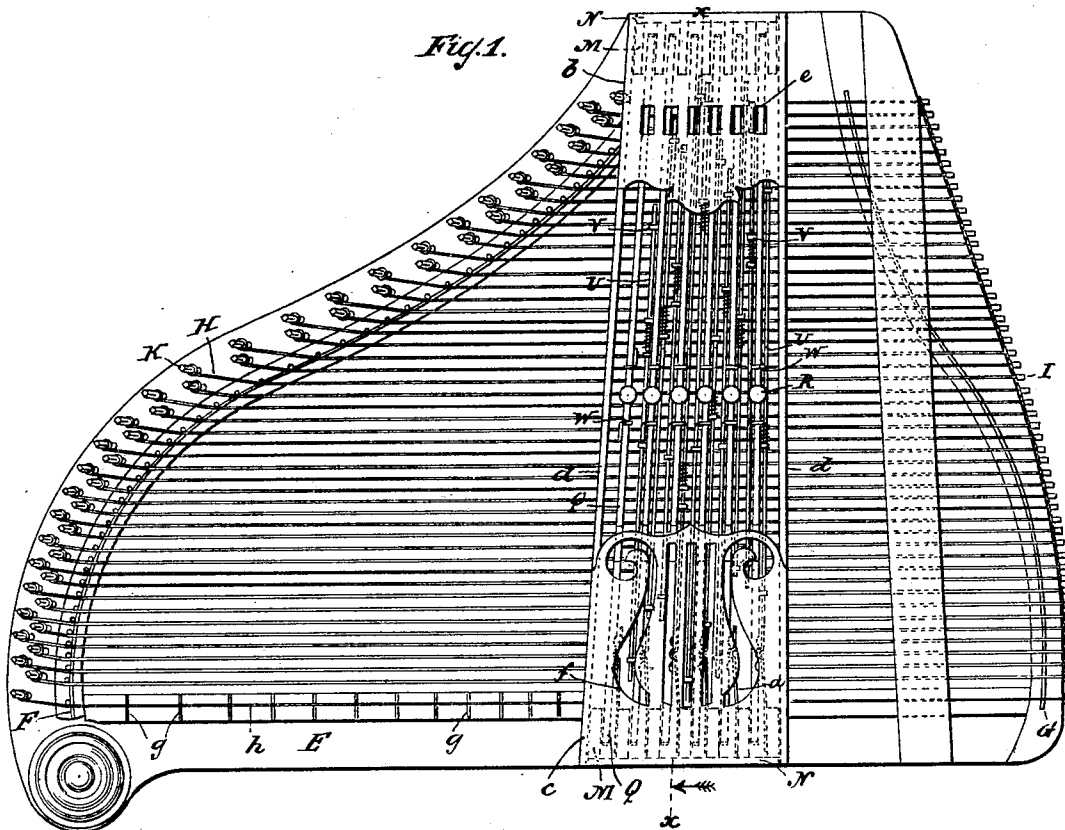
(No Model.)

A. J. GERY & R. DOLGE.

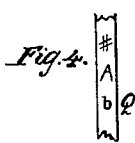
HARP.

No. 521,109.

Patented June 5, 1894.



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# UNITED STATES PATENT OFFICE.

ALDIS JONATHAN GERY, OF DOLGEVILLE, AND RUDOLF DOLGE, OF NEW YORK, ASSIGNORS, BY MESNE ASSIGNMENTS, TO THE C. F. ZIMMERMANN COMPANY, OF DOLGEVILLE, NEW YORK.

## HARP.

SPECIFICATION forming part of Letters Patent No. 521,109, dated June 5, 1894.

Application filed December 28, 1893. Serial No. 494,971. (No model.)

*To all whom it may concern:*

Be it known that we, ALDIS JONATHAN GERY, residing at Dolgeville, in the county of Herkimer, and RUDOLF DOLGE, residing at New York, in the county of New York, State of New York, citizens of the United States, have invented new and useful Improvements in Harps, of which the following is a specification.

This invention relates to an improvement in harps or zithers and the object of the invention is to provide an instrument which with a comparatively simple construction can be readily made to give a considerable variety of chords or tones and to this end the invention consists in the novel features of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a plan view of the instrument. Fig. 2 is a section along *xx* Fig. 1. Fig. 3 is a section along *yy* Fig. 2. Fig. 4 shows an end portion of a damper bar.

In the drawings the letter A indicates a base having legs or supports B and from which extend the strips or pieces C D carrying a sounding board E. This sounding board is shown in the example in the drawings as consisting of two layers or plates of material but of course the sounding board can be constructed in any way recognized by the art as suitable in each particular case. The sounding board carries bridges F G across which extend the strings H secured by hitch pins I and tuning pins K. These ridges or bridges F G are shown each with its opposite portions oppositely inclined or curved, the bridge portions at the longer strings having their concave sides faced inward or toward one another, while the opposite bridge portions or ends at the shorter strings are convex toward one another. On the sounding board are strips or blocks L supporting shorter strips or pieces M, the spaces between the strips M forming channels or guides for a purpose presently explained. The channels or spaces between the strips M are shown closed at their outer ends by plates or strips N. The studs or pins O are suitably guided through perforations in the blocks L and are pressed upward by

springs P, the studs O being suitably headed so that the springs P cannot press the studs O up too far or out of the blocks L. On the studs or pins O rest damper bars Q held by the springs P out of contact with the strings H, but which bars can be pressed by the finger buttons R against the action of the springs P so as to have their dampers in position to cut out the required strings. These damper bars Q are shown guided in the channels or spaces between the strips M. Each damper bar is shown provided with dampers S fixed to the bar and one or more of the damper bars may be provided with one or more sets of movable or shiftable dampers T carried by slides or bars U guided in eyes or holders V on the damper bar. Each slide U can be actuated by a trigger or finger plate W so as to carry its dampers into or out of action, the spring X restoring the slide U when released to its normal position. The shifter or trigger W is advantageously placed near the button R. The space between the plates or strips N is great enough to allow the damper bars Q to move or be shifted lengthwise. These bars Q are each shown provided with grooves Y (Figs. 2 and 3) into which can snap or engage a shoulder or lug Z (Fig. 3) carried by a spring finger *a* extending from guide strip M. The engagement of shoulder Z with a groove Y prevents accidental shifting of the damper bar Q but leaves said damper bar free to be shifted lengthwise when desired so that the lug Z will snap or engage into another one of the grooves Y. Obviously the same result would be obtained by forming the grooves Y on detent *a* and placing the lugs Z on the damper bar Q.

The shifting bars with the fixed and movable dampers S T can be used very effectively since for example the fixed dampers S can be arranged so that on the depression of the respective damper bar Q a certain series of strings H or a chord of a certain key is left free to sound, and the shifting of the movable dampers T can be made for example to change the chord of the key, and the shifting of the damper bar Q can be made to change the key of the chord.

The ends of the bars Q are shown covered

or protected by the covering plates *b c* conveniently fixed to or carried by the side pieces or strips *d* and this cover *b c d* can be readily secured, slipped or set onto the strips *M N*.

5 The covering plate *b* is shown provided with sight openings *e* exposing to view the end portions of the damper bars *Q* and the plate *c* is also shown broken or provided with openings or perforations *f* for sight or for the ready  
10 escape of sound. It may also be found convenient to provide the damper bars *Q* with marks or characters as seen in Fig. 4 which marks or characters showing through the openings *e* or *f* will indicate the position to which  
15 the bar *Q* has been shifted.

The instrument is shown with six damper bars *Q* five of said bars having two slides *U* and three grooves *Y*, but of course the number of these elements can be varied as for example in simple instruments or toys or in instruments for teaching beginners one bar *Q* without slides or with one slide *U* and two grooves *Y* may be found appropriate, while  
20 by increasing the number of these elements the scope of the instrument in readily producing various effects is increased. As the damper bars are shiftable independently of one another the desired effects can be obtained readily and without confusion or accidental movement of a bar not to be moved.  
30

The instrument is shown provided with a series of ridges *g* across which stretches a supplemental string *h* which by being pressed into contact with one or another of the ridges  
35 *g* can be made to give various notes and this supplemental string can be used in tuning the instrument or also for producing sounds or

effects of different character than that of the strings *H*. Additional supplemental strings like the string *h* but differently tuned might obviously be added so as to correspond with the melody strings or finger board of a zither or other instrument. 40

What we claim as new, and desire to secure by Letters Patent, is— 45

1. The combination with a stringed instrument, of a series of damper bars made movable and shiftable independently of one another, and adjustable dampers carried by and movable independently of one of said shiftable damper bars, substantially as described. 50

2. The combination with a stringed instrument, of a series of damper bars made lengthwise shiftable independently of one another and a slide having dampers and carried by  
55 damper bars, substantially as described.

3. The combination with a stringed instrument, of a shiftable damper bar provided with a slide mounted to move along a side face of  
60 the bar, dampers supported by said slide clear of the bar, and a shifter or trigger for moving said slide, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing  
65 witnesses.

ALDIS JONATHAN GERY.  
RUDOLF DOLGE.

Witnesses as to the signature of A. J. Gery:  
THEO. H. ROTH,  
JNO. J. JOYCE.

Witnesses as to the signature of R. Dolge:  
WM. C. HAUFF,  
E. F. KASTENHUBER.