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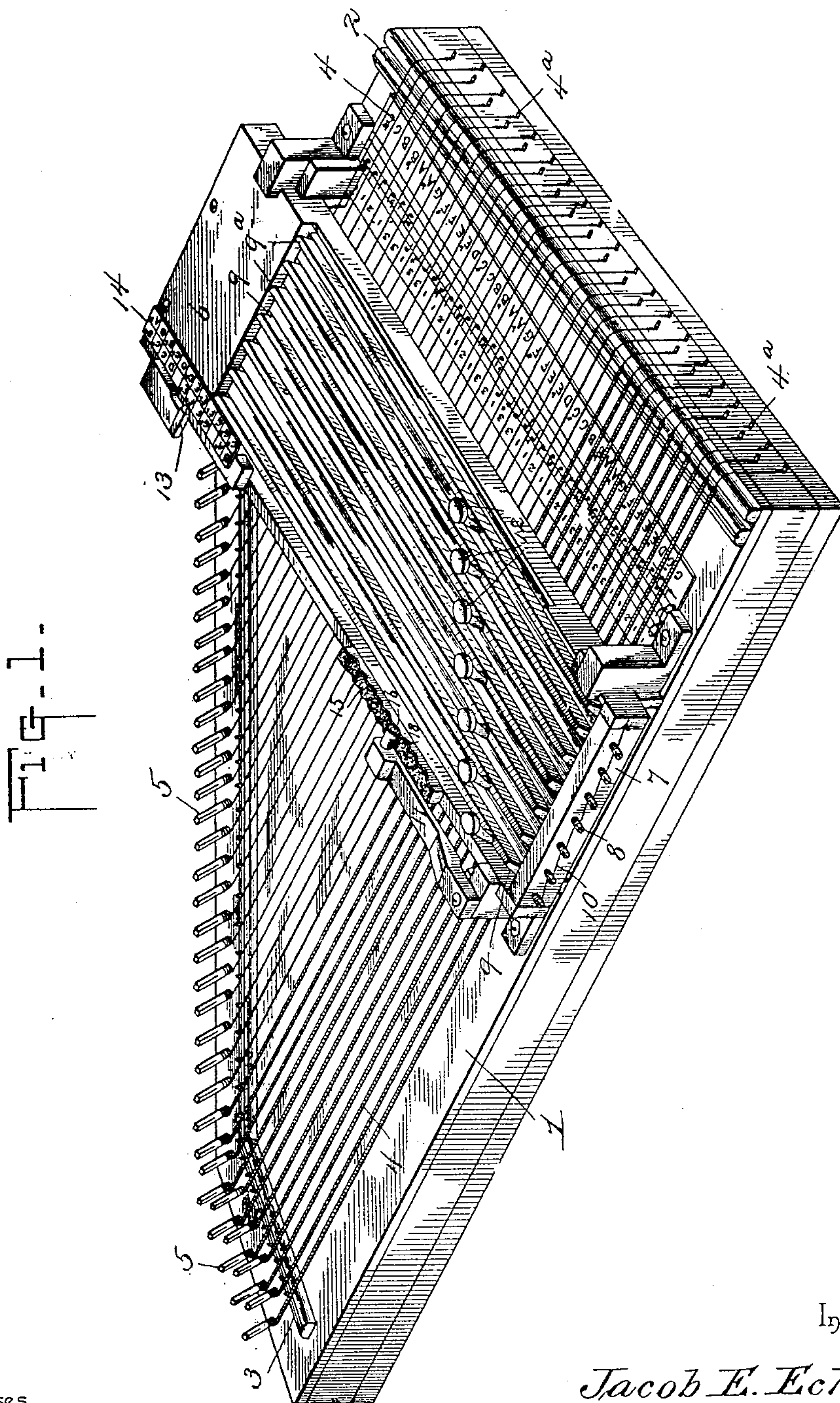
(No Model.)

2 Sheets—Sheet 1.

J. E. ECKERT.  
AUTOHARP.

No. 604,914.

Patented May 31, 1898.



Witnesses

Harry L. Amer.

*B. E. Kelly*

Inventor

*Jacob E. Eckert.*

By *his* Attorneys,

CA Snow & Co.

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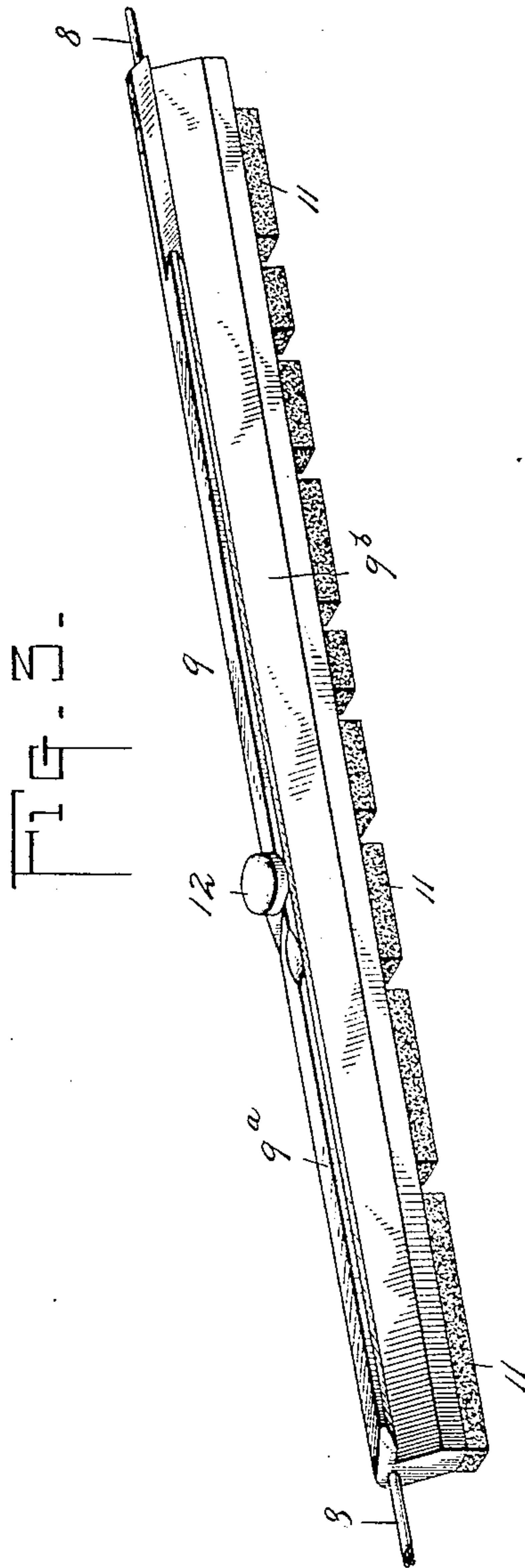
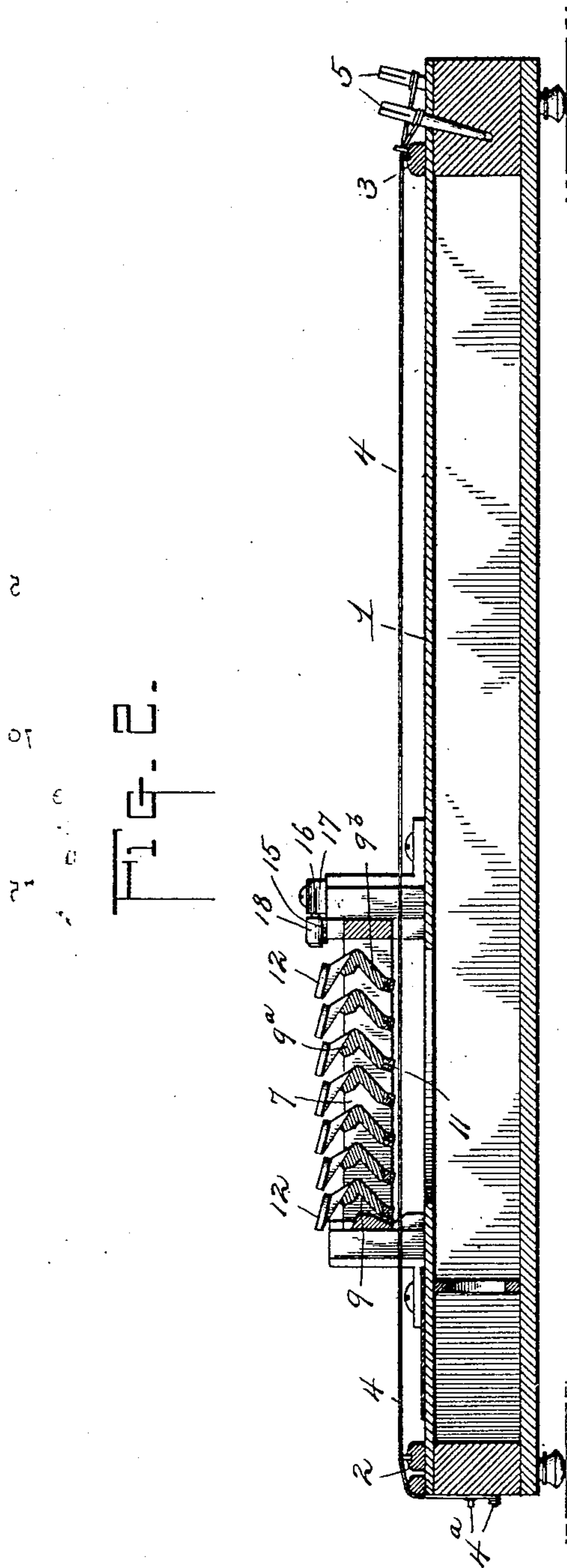
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*Harry L. Amer*  
*[Signature]*

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*Jacob E. Eckert.*

*C. A. Snow & Co.*



# UNITED STATES PATENT OFFICE.

JACOB E. ECKERT, OF MARENGO, IOWA.

## AUTOHARP.

SPECIFICATION forming part of Letters Patent No. 604,914, dated May 31, 1898.

Application filed January 18, 1897. Serial No. 619,658. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB E. ECKERT, a citizen of the United States, residing at Marengo, in the county of Iowa and State of Iowa, have  
5 invented a new and useful Autoharp, of which the following is a specification.

My invention relates to autoharps, and has for its object to provide means for securing in this class of musical instruments increased  
10 resonance, to provide an improved construction of damper-bars whereby increased certainty of operation is secured, and to provide simple and efficient means for changing the  
15 positions of the damper-bars with relation to the strings to vary the key of the chords formed by the open strings when the damper-bars are manipulated.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be  
20 particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of an autoharp constructed in accordance with my invention. Fig. 2 is a longitudinal section. Fig. 3 is a detail view in perspective of one of the damper-bars.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.  
30

1 designates a sounding-board or body of the instrument, provided with bridges 2 and 3, from which extend the strings 4, said strings being attached at one end to pins 4<sup>a</sup> and at  
35 the other end to adjustable tuning-pegs 5.

Mounted for transverse movement in suitable guides supported by the sounding-board is a damper-frame 6, having terminal bars 7, provided with bearings for the spindles 8 of  
40 the damper-bars 9, said spindles at one end being split or notched to engage the extremities of return-springs 10. The damper-bars are of cross-sectionally angular or V shape, with upper wings 9<sup>a</sup> and lower wings 9<sup>b</sup>, the  
45 latter being provided with clothing or pads 11, adapted to be brought into contact with the strings to stop the latter. The strings left open when a damper-bar is operated are adapted to form a musical chord, and by the  
50 use of a plurality of damper-bars a series of chords in any given key may be sounded without picking particular strings and without

sounding those which do not properly occur in the chord desired. When the keys 12, with which the upper wings of the damper-bars are  
55 provided, are depressed, the lower or operative wings thereof occupy approximately vertical positions. The keys are preferably arranged in an inclined or diagonal series, whereby the damper-bars may be arranged in  
60 close relation and whereby the position of the hand of the operator may be natural and comfortable. A stationary pointer or indicator 13 is arranged upon one of the supporting-standards or guides in operative relation with  
65 a scale 14, consisting of letters representing different keys or scales, and when it is desired to play in a given key the sliding frame should be moved to bring the letter representing that key under the pointer or indicator. In the  
construction illustrated seven damper-bars are employed, and by the adjustment of the frame the chords represented by said damper bars may be sounded in either of the keys indicated by the scale.

Any suitable means may be employed for securing the frame at the desired adjustment, the means shown in the drawings consisting of a padded rack 15, in engagement with which is arranged a pin 16 on a holding-spring 17,  
80 an antifriction-roller 18 being preferably mounted upon said pin.

In connection with the construction above described I preferably employ a key consisting of a chromatic scale arranged upon a staff  
85 intersected by lines corresponding and parallel with the strings of the instrument, said lines being designated by numerals representing the damper-bars to be operated in order to produce the note arranged at the intersection  
90 of the staff and string lines.

The advantage of the peculiar construction of damper-bars above described resides in the fact that being mounted for rocking movement their padded wings are brought through  
95 out their lengths into operative relation with the strings without the yielding to which reciprocable damper-bars are liable, and, furthermore, the above-described manner of mounting the damper-bars in place enables  
100 them to be operated from any desired point of their lengths.

Various changes in the form, proportion, and the minor details of construction may be



resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. In an autoharp, the combination with the strings, of rocking damper-bars of cross-sectionally angular or V shape having padded lower wings and angularly-disposed upper wings bearing keys, and return-springs connected respectively with the bars, substantially as specified.

2. In an autoharp, the combination with a body and strings, and stationary guides on the body, of a damper-frame mounted in said guides for sliding movement, and held from vertical movement, and provided parallel with its length with a rack consisting of a series of shallow rounded depressions fitted with pad-

ding or clothing, a fixed holding-spring provided at its free end with a pin fitted with an antifriction-roll for permanently engaging the rack, and adapted to slip from one depression to another thereof when longitudinal pressure is applied to the damper-frame, without manipulation of said holding-spring, and also adapted to hold the frame from accidental movement, and damper-bars mounted upon the damper-frame and yieldingly held out of contact with the strings, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JACOB E. ECKERT.

Witnesses:

C. E. VANCE,

H. E. OLDAKER.