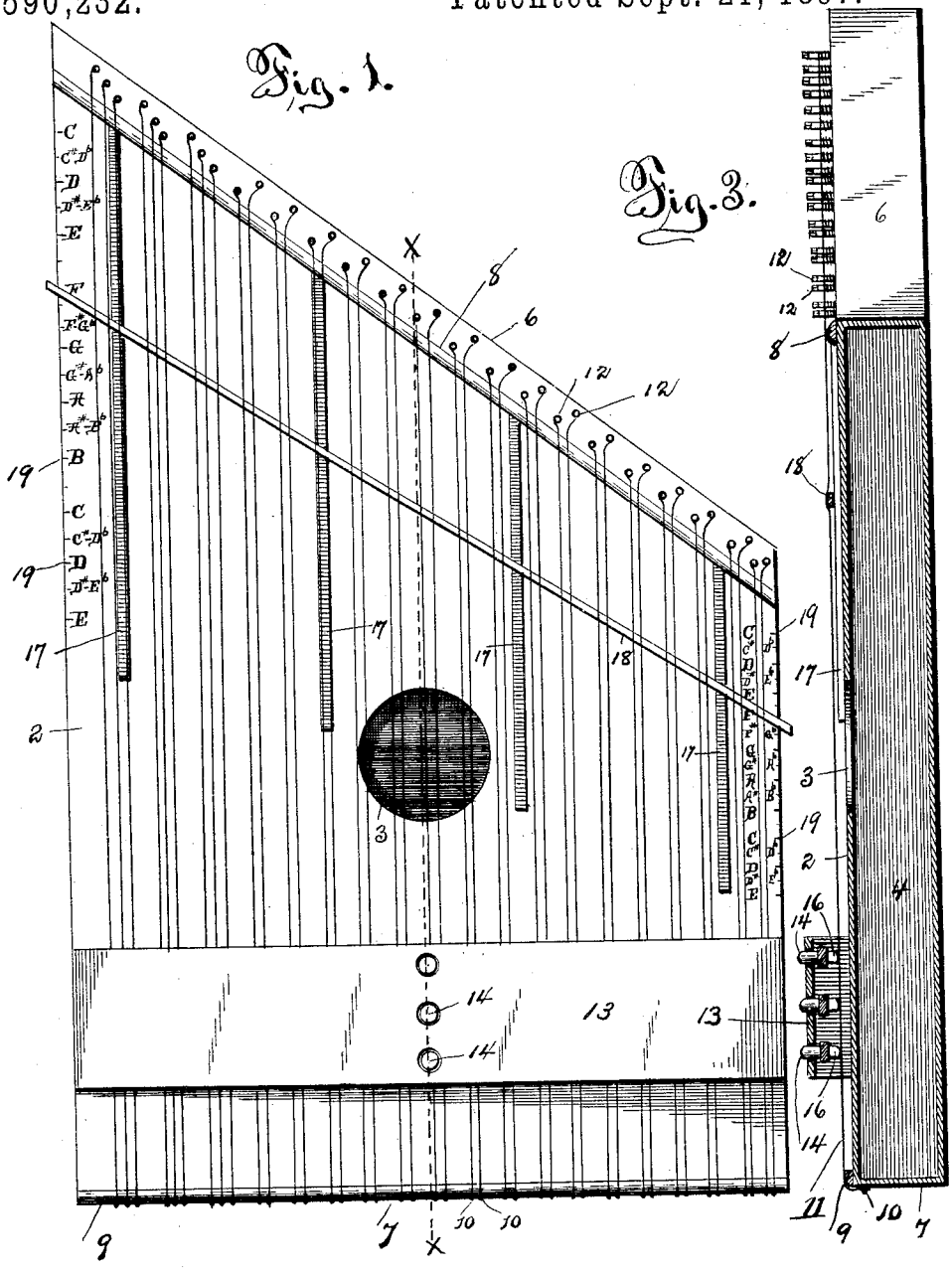
(No Model.) 2 Sheets—Sheet 1.

R. G. MILLER.

MUSICAL INSTRUMENT.

No. 590,232. Patented Sept. 21, 1897.



Witnesses
Marcus L. Byng
W. M. Mason

Inventor
Robert G. Miller
By John Wedderburn
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

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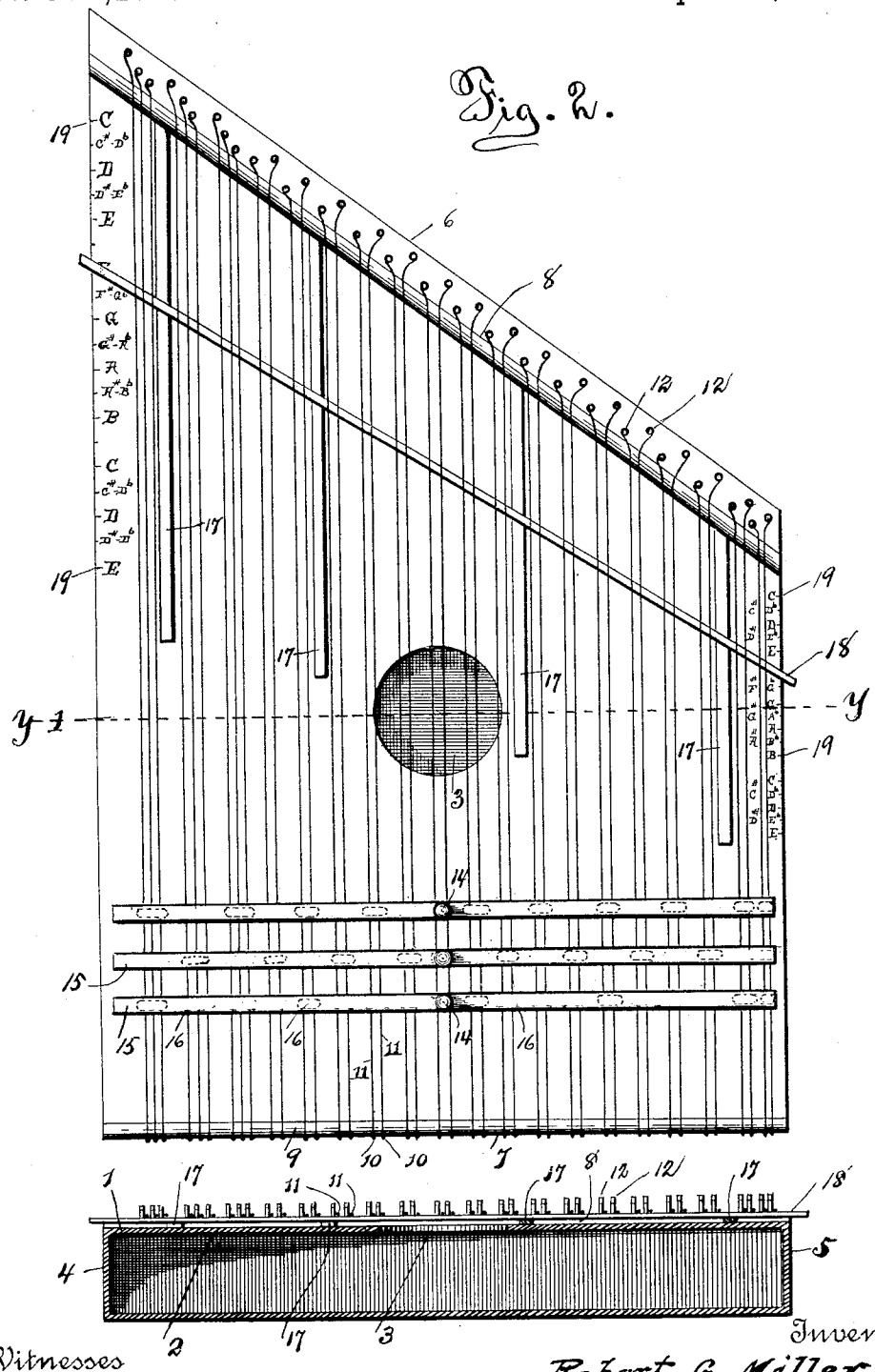
Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT G. MILLER, OF McDONALD, KANSAS.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 590,232, dated September 21, 1897.

Application filed January 15, 1897. Serial No. 619,335. (No model.)

To all whom it may concern:

Be it known that I, ROBERT G. MILLER, a citizen of the United States, residing at McDonald, in the county of Rawlins and State of Kansas, have invented certain new and useful Improvements in Musical Instruments; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in autoharps, the instrument to be known as an "autonian," the object of the invention being to provide means for deadening certain of the strings, to produce different chords from the remaining strings, and to provide means whereby the strings may be readily changed, so as to set the instrument for different keys.

The invention consists of an instrument shaped like the well-known autoharp, with one edge thereof angularly arranged relative to the opposite edge, strings arranged in pairs strung over bridges at the two ends of the instrument, a keyboard having a series of keys therein, operating-bars on the under side thereof for producing different chords, a series of longitudinally-arranged strips or bars secured to the frame of the instrument beneath the keys, and a movable bar adapted to be shifted longitudinally of the instrument bearing against the bars secured to the frame beneath the strings and adapted to engage the under side of said strings and be adjusted so as to set the strings for different keys.

The invention also consists in other details of construction and combinations of parts, which will be hereinafter more fully described and claimed.

In the drawings forming part of this specification, Figure 1 represents a plan view of my invention. Fig. 2 is a similar view of the same with the keyboard removed. Fig. 3 is a longitudinal section taken on the line $x\ x$ of Fig. 1. Fig. 4 is a cross-section taken on the line $y\ y$ of Fig. 2.

Like reference-numerals indicate like parts in the different views.

My improved instrument is made of wood with parallel top and bottom pieces 1 2, the top piece 2 being provided with an opening 3 therein for the emission of the sound. The two sides 4 5 of the instrument are parallel, but the upper end 6 is angularly arranged relative to the lower end 7. Bridges 8 and 9 are secured to the top piece 2 near the outer ends of the instrument and lie substantially parallel with the ends 6 7, respectively. Projecting outwardly from the end piece 7 are pins or projections 10 10, to which are secured the lower ends of the strings 11 11, which are arranged in pairs, pass up over the bridges 8 and 9, and are attached at their upper ends to the tuning-pins 12 12, as clearly shown. Extending over the top of the instrument is a keyboard 13, provided with a series of keys 14 14 therein which are connected to the upper ends of vibrating bars or levers 15 15, having felt or other projections 16 16 thereon for engaging certain of the strings 11, deadening them, and leaving the remaining strings free for certain chords. These vibrating levers 15 are similar in all respects to those now employed on the well-known autoharp.

17 17 represent a series of bars or strips secured to the top 2 and located just beneath the strings 11. Resting upon the top of these bars or strips is a flat key-setting bar 18, which is adapted to be moved longitudinally of the instrument and to be turned up, so as to engage the under sides of all of the strings 11 for the purpose of setting said strings to play in different keys. Along the two sides 4 and 5 are arranged graduations 19 19, indicating the position which the bar 18 must assume for setting the strings for different keys. These graduations are marked with the names of the different keys, as clearly shown.

I have described the strings 11 as being arranged and tuned in pairs. I may provide, however, at the side 4 a series of three or four strings 11, which are to different chords.

In using my improved instrument the different strings are tuned in the usual manner by screwing up or loosening the tuning-pins 12. Different chords may be sounded by operating the keys 14, depressing the bars or levers 15, attached to the under side thereof. When, however, it is desired to change the key to which the instrument has been tuned, it is merely necessary to shift the bar 18 so that the ends thereof will lie opposite two of

the graduations on the sides 4 5. The instrument may thus be set to play in any key without the necessity of retuning the strings.

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

1. In an instrument of the character set forth, the combination with the frame or sounding-board, having a series of strings strung longitudinally thereof, of a plurality of bars or strips on the upper surface of said frame located beneath said strings and a key-setting bar adapted to be shifted longitudinally of the instrument, bearing against the upper surface of said bars or strips and engaging the under surface of said strings, substantially as and for the purpose described.

2. In an instrument of the character set forth, the combination with the frame or sounding-board having a series of strings strung longitudinally thereof and provided with a series of graduations indicating different keys located at the sides of said instrument, of a plurality of bars or strips secured to the upper surface of said instrument and located beneath said strings and a flat, key-setting bar adapted to be shifted longitudinally of the instrument and to be brought opposite the graduations on the upper surface thereof, the said bar bearing against the upper surface of said strips and engaging the under surface of said strings, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of subscribing witnesses.

ROBERT G. MILLER.

Witnesses:
C. M. EGELSTON,
ANNA EGELSTON,
GEORGE REICHMAN.