

W. G. BETZ.
MUSIC ROLL FOR PNEUMATIC MUSICAL INSTRUMENTS.
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1,357,214.

Patented Nov. 2, 1920.

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Inventor:
William G. Betz.
By George C. Mueller
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM G. BETZ, OF BUFFALO, NEW YORK.

MUSIC-ROLL FOR PNEUMATIC MUSICAL INSTRUMENTS.

1,357,214.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM G. BETZ, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Music-Rolls for Pneumatic Musical Instruments, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to music sheets such as are employed on pneumatic instruments, that is, pneumatic player-pianos, and has to do more particularly with a simplified arrangement for placing the notes and corresponding words of a song in association with the corresponding perforations in the sheet; or the notes alone may be placed upon the sheet for other instruments, so that as the sheet travels over the tracker-bar of the piano, the notes and words, corresponding to the notes being played, appear in proper alinement with the note perforations.

Various methods have been suggested for doing this, one being to place the words only of a song on a line with the notes being played. There are certain objections to this, however, in that one must first learn the melody before it is possible to sing the words of the song, as it is practically impossible to tell what note is to be next played by its position on the sheet. Another method which has come into use is to place both the words and notes with their staves in alinement with the note perforations, the staff being cut up into half-measures, or only long enough to contain a single note, and having its staff lines horizontally disposed. These last schemes are objectionable, however, because the staff is cut up into such short portions and without any idea of continuity, so that it requires a constant readjustment of the eye to the note staff every fraction of a second, and the repeated efforts of identifying with the eye and realizing with the brain the position of each note as it appears.

In ordinary sheet music a certain number of measures are included in one continuous staff, according to the size of the sheet, the melody notes of the song corresponding in position with the words. Such music is comparatively easy to read, but it will be apparent that it would be very difficult, if

not impossible, from a musical viewpoint, to interpret correctly a composition if the staff were separated or broken up into parts of measures.

One of the objects of my invention is to combine the note perforations and the musical staff in such a way that the notes may be readily followed as the sheet travels downwardly. To this end, I provide a staff which is oblique to the line of travel of the music sheet, each staff or section of staff preferably containing one or more measures.

In the accompanying drawing I have illustrated the preferred form of my invention, the usual music spool being shown with a section of sheet music having the melody note perforations, and the music staff to one side, preferably at the right side. As here illustrated, I have shown one measure for each oblique staff, the notes and corresponding words being in horizontal alinement with the associated melody note perforations.

In the form illustrated in the drawing, each staff comprises one measure, the bar at the end of each measure extending as a connecting line to the bar at the beginning of the ensuing measure. In this way, there is a continuity not present when the connecting bar or line is left out. This connecting line, although not absolutely essential, I believe will assist the eye in following the staff as the music sheet travels downwardly. I also preferably extend each staff to a point in horizontal alinement with the beginning of the first melody note of the ensuing measure, then starting the ensuing staff before this first note is reached so that the note in the staff may be placed on a line with the beginning of the associated note perforation. It will be noted that the upper end bar of each staff carries an indicating dot at the edge of the sheet, this point indicating the dividing bar or point between measures. I also preferably employ a curved note-arm, as in this way it avoids the adjacent note, whether above or below, as is illustrated in the drawing.

As illustrated, other notes beside the song notes may be represented, for instance, a violin accompaniment. In such case these notes are also preferably placed in horizontal alinement with the perforations, other notes and words, or syllables, as the case may be. These notes are also smaller

than the song notes, so as to more clearly bring out the distinction.

Where words accompany the notes, they are placed adjacent the notes as shown in the drawing, preferably in horizontal alignment with the beginning of the note perforations. The staff preferably continues from the beginning of the roll to the end, words being placed wherever necessary, and rests, or other indications, placed at the proper points, as called for the composition. In this way, the singer follows the music composition the same as any other sheet music, the place always being indicated by its position over the middle of the tracker bar.

Although I have indicated staffs with measures of equal length, it will be understood that they may vary, their length being determined by the length of the measure of the note perforations. That is, the note perforations of one measure may extend over a length different from another measure. These variations may occur from a change in tempo, from the holding of any particular note, or other causes.

What I claim as new and desire to cover by Letters Patent is:

1. In a music roll, the combination with a perforated music sheet for pneumatic player-pianos, of a music staff having staff lines trending obliquely across the sheet and having notes corresponding to the note perforations.

2. In a music roll, the combination with a perforated music sheet for pneumatic player-pianos, of a music staff having staff lines trending obliquely across the sheet and having notes corresponding to the note perforations and in horizontal alinement therewith.

3. In a music roll, the combination with a perforated music sheet for pneumatic player-pianos, of a music staff having staff lines trending obliquely across the sheet and having notes and words corresponding to the note perforations.

4. In a music roll, the combination with a perforated music sheet for pneumatic player-pianos, of a music staff having staff lines trending obliquely across the sheet and having notes and words corresponding to the

note perforations; and in horizontal alinement therewith.

5. In a music roll, the combination with a perforated music sheet for pneumatic player-pianos, of a music staff having staff lines trending obliquely across the sheet and having notes corresponding to the note perforations, the notes being correspondingly situated relative to the beginning of the accompanying perforations.

6. A music roll comprising a perforated music sheet for pneumatic musical instruments and a music staff divided into sections having staff lines trending obliquely across the sheet and having notes corresponding to the note perforations.

7. A music roll comprising a perforated music sheet for pneumatic musical instruments and a music staff divided into sections having staff lines trending obliquely across the sheet and having notes corresponding to the note perforations and in horizontal alinement therewith.

8. A music roll comprising a perforated music sheet for pneumatic musical instruments, and a music staff divided into sections having staff lines trending obliquely across the sheet and having notes and words corresponding to the note perforations and in horizontal alinement therewith.

9. A music roll comprising a perforated music sheet for pneumatic musical instruments, a music staff divided into measures corresponding in length to the length of the measure as indicated by the note perforations and trending obliquely across the sheet, upper and lower bars for the measures, and a connecting line running from the upper bar of one section to the lower bar of the next section, and notes on the staff corresponding to the note perforations.

10. A music roll for player-pianos comprising a perforated music sheet, staff lines trending obliquely across the sheet, notes corresponding to the note perforations and in horizontal alinement therewith, the note-arms of the notes being curved so as to avoid the adjacent note.

In witness whereof, I have hereunto subscribed my name.

WILLIAM G. BETZ.