(No Model.) 2 Sheets—Sheet 1.

M. C. R. ANDORFF.

ATTACHMENT FOR ZITHERS OR OTHER MUSICAL INSTRUMENTS.

No. 542,582. Patented July 9, 1895.

Fig. 1.

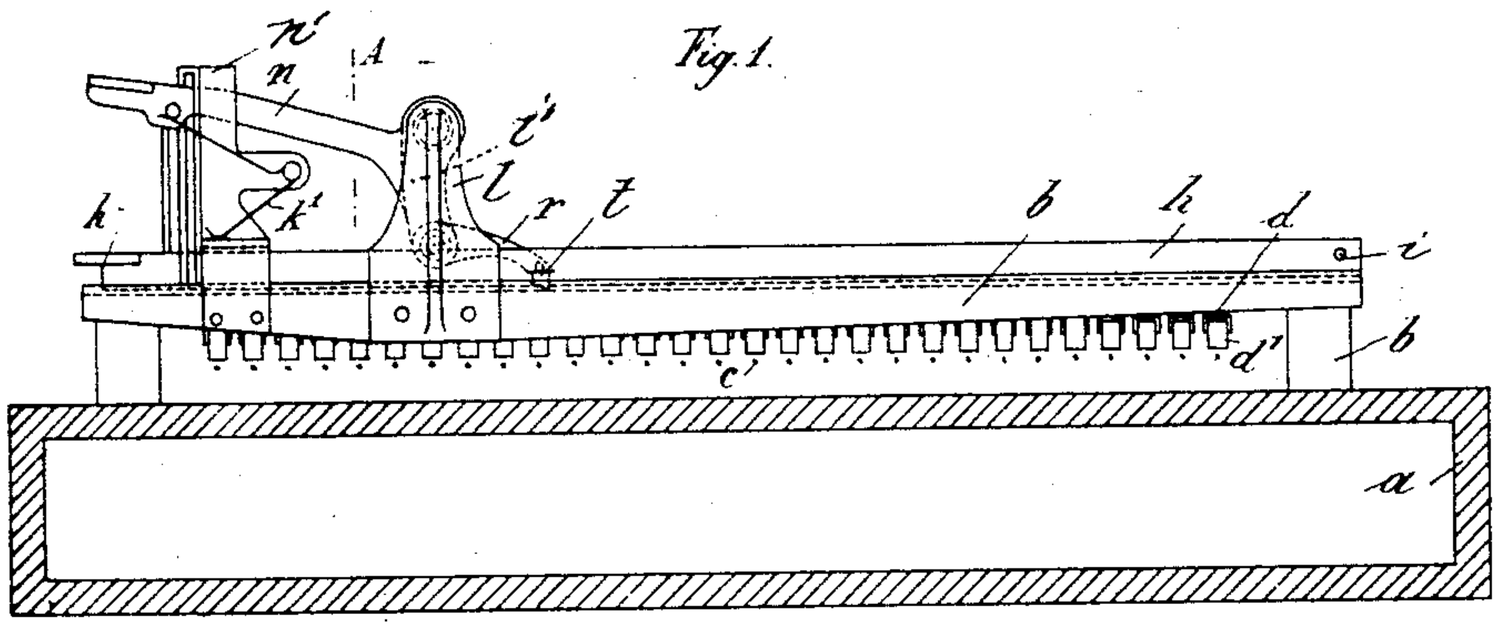
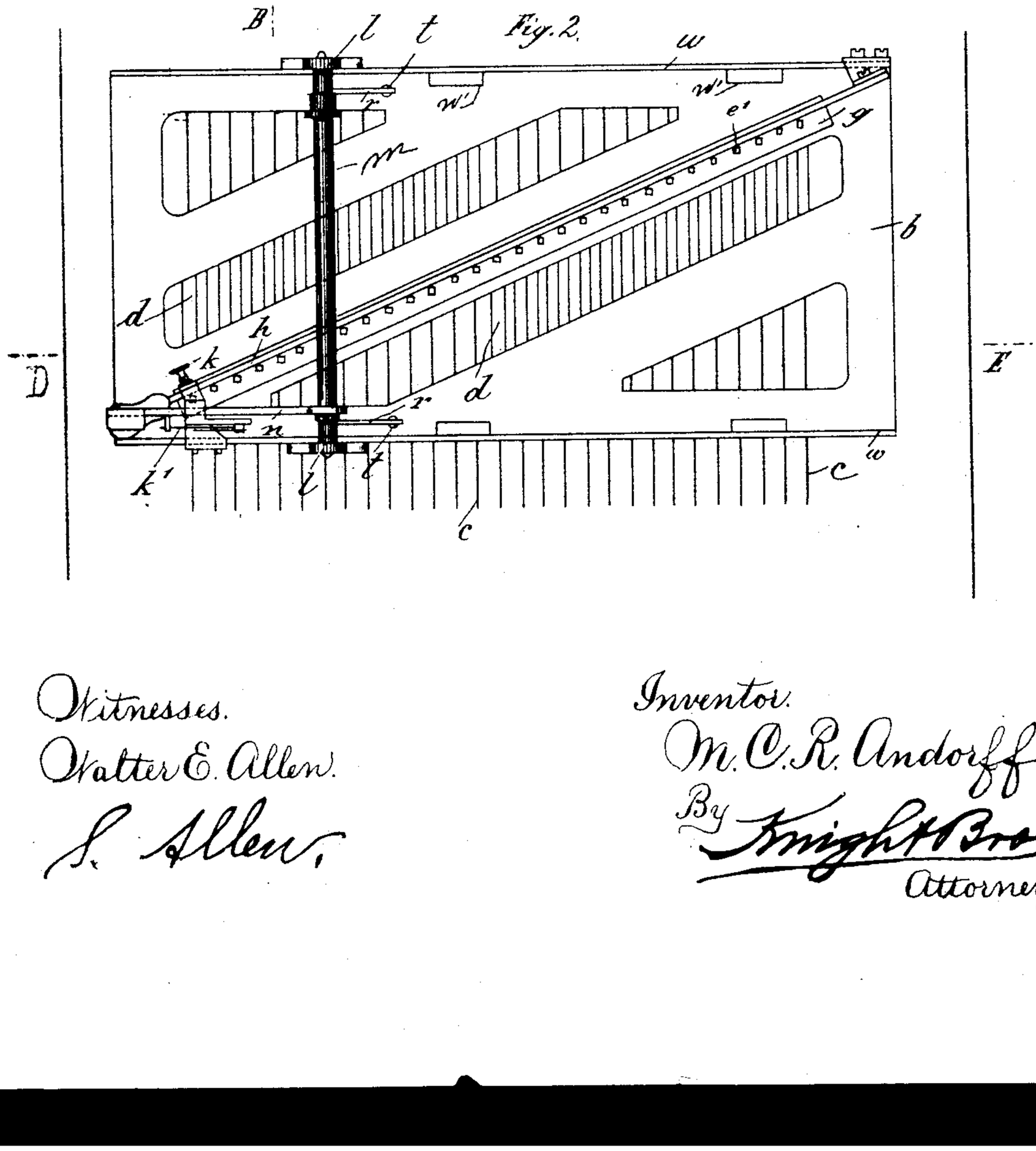


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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ATTACHMENT FOR ZITHERS OR OTHER MUSICAL INSTRUMENTS.

No. 542,582. Patented July 9, 1895.

Fig. 3.

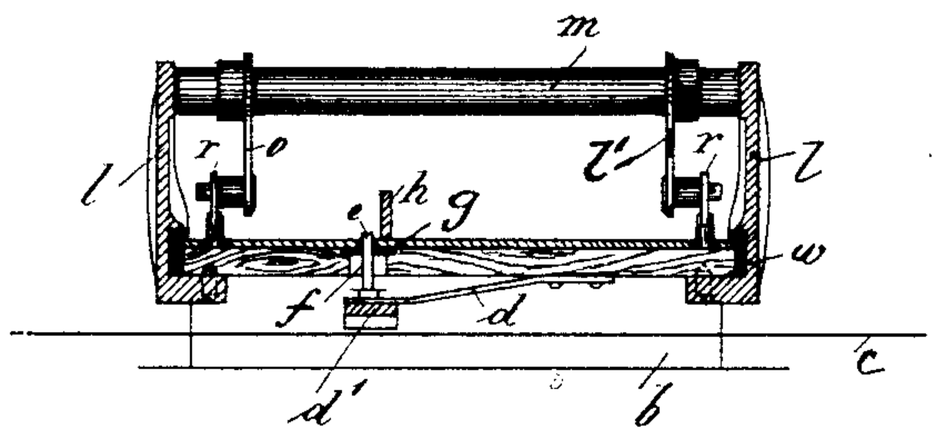


Fig 4.

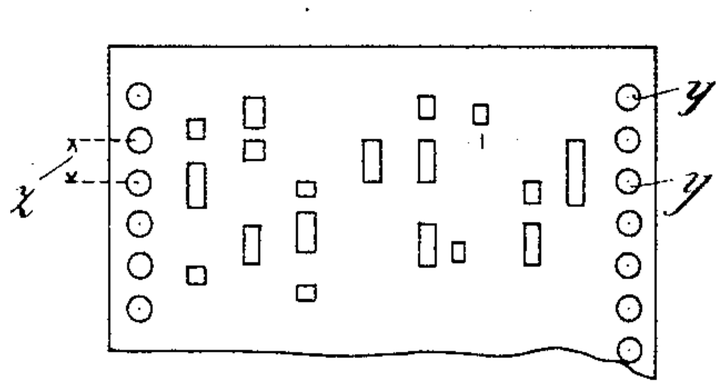
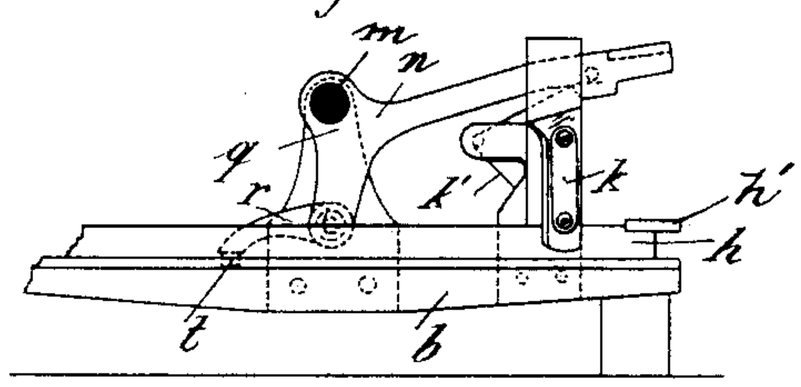


Fig. 5.



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UNITED STATES PATENT OFFICE.

MAXIMILIAN C. R. ANDORFF, OF MARKNEUKIRCHIN, GERMANY.

ATTACHMENT FOR ZITHERS OR OTHER MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 542,582, dated July 9, 1895.

Application filed October 11, 1894. Serial No. 525,625. (No model.)

To all whom it may concern:

Be it known that I, MAXIMILIAN CARL ROBERT ANDORRF, a subject of the King of Saxony, and a resident of Markneukirchin, in the Kingdom of Saxony, German Empire, have invented certain new and useful Improvements in Attachments for Zithers or other Musical Instruments, of which the following is a specification.

My invention has for its object to provide an attachment for zithers or other musical instruments in which sheets or strips having the music marked or cut thereon are employed for operating the dampers, and as the sheet or strip is fed forward a complete piece of music may be played. I accomplish this object by the mechanism hereinafter described, and pointed out in the claims.

In order that my invention may be fully understood, I will now proceed to describe the same with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my attachment. Fig. 2 is a plan thereof. Fig. 3 is a cross-section taken on line A B, Fig. 1. Fig. 4 is a detail plan view of the sheet or strip of music used, and Fig. 5 is a detail view taken on the line D E, Fig. 2.

In said drawings, *a* represents the sounding-box of the zither and *c* the strings secured thereto in the usual manner. At one end of the zither I locate my attachment. It consists broadly of the table *b*, constructed substantially in the manner shown, the dampers *d'* secured to the under side of the table by means of the flat springs *d*, and the mechanism for holding the paper on the table and for moving it forward over the dampers. The dampers *d'* are preferably arranged diagonally on the table, and their pins *e*, which are beveled at their upper ends, extend through openings *f* in the table and a plate *g*.

Pivoted at one corner of the table and extending diagonally across in close proximity to the keys is a strip or rod *h*, having an operating-head *h'*. This strip is intended to hold the sheet or strip of music shown in Fig. 4 closely to the table *b*, it being secured in its lower position by means of a set-screw *k*. The strip of music has preferably the notes cut therein, as seen in Fig. 4, and it can be made very narrow, owing to the dampers, which it is designed to operate, being placed in a diagonal direction across the table. The strip is guided in its course across the table by means of the strips *w* and the blocks *w'* secured thereto.

The mechanism for moving the strip of music is as follows: Secured to the sides of the table, as seen in Figs. 2 and 3, are a pair of standards *l*, and journaled in the upper ends of these standards is a rod *m*. At one end of the rod *m* is secured a bell-crank lever *n*, the operating arm of which works in an opening in a standard *n'*, also secured to the table. To the other arm *l'* is pivoted an arm *r*, having a pin provided with a beveled head. An arm *o*, similar to arm *l'*, is secured to the other end of the rod *m*, and it has pivoted thereto an arm *r*, provided with a pin *t*. By this construction, when the arm *n* is depressed, the arms *l'* and *o* raise one end of the arm *n*, depressing the other end and the pins *t*, which enter the perforations *y* and *z* in the edges of the strip and in this manner feed the strip forward. The lever *n* is returned to its normal position by means of a spring *k'*, one end of which is secured to the standard *n'* and its other end bearing on a pin on the said lever.

The operation of my device is as follows: The strip or sheet of music is placed on the table and the strip *h* secured in its lower position to firmly hold it on the table. The strip is then fed forward by means of the mechanism above described, and as it moves forward the surface of the strip works over the beveled edges of the pins, forcing the dampers down upon the strings. As the strip moves along over the damper-pins, the openings, which form interruptions in the surface of the strip, allow the springs *d* to successively raise certain dampers from the strings, and as the strings are struck in the usual manner those from which the dampers have been removed are allowed to sound.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In an attachment for stringed instruments, the combination of a series of dampers adapted to bear upon the strings of the instrument, a sheet or strip having note open-

ings cut therein and adapted to bear upon the dampers and suitable means for continuously feeding the strip or sheet of music forward across the dampers substantially as and for the purpose set forth.

2. In an attachment for stringed instruments, the combination of a suitable table carrying a series of dampers arranged across the said table, a sheet or strip having note openings cut therein, suitable means for holding the strip or sheet over the dampers, and suitable independent mechanism for continuously feeding the strip or sheet forward, substantially as and for the purpose set forth.

3. In an attachment for stringed instruments, the combination of a suitable table having a set of dampers movably secured thereto, a sheet or strip of music having note perforations cut therein and adapted to be fed forward over the dampers, a strip or rod secured to said table and adapted to hold the music strip onto the table, and suitable independent mechanism for continuously feeding the sheet or strip of music forward, substantially as and for the purpose set forth.

4. In an attachment for stringed instruments the combination of a suitable table carrying a series of dampers, a sheet or strip having note perforations cut therein adapted to be fed over the table and dampers and suitable mechanism consisting of a rod carrying a pair of arms, and a second pair of arms pivoted thereto and adapted to engage the strip or sheet of music and an operating lever secured to the rod adapted to move the same, substantially in the manner and for the purpose set forth.

5. In an attachment for stringed instruments, the combination of a suitable table carrying a series of dampers diagonally arranged thereon, a sheet or strip having note perforations cut therein and adapted to be fed along the table and over the dampers, suitable guides on said table for directing the course of the sheet or strip and suitable means for feeding the strip forward, substantially as and for the purpose set forth.

6. In an attachment for stringed instruments the combination of a suitable table having a series of dampers arranged thereon, and having their pins beveled at one end, a sheet or strip having note perforations cut therein and adapted to move along the table and over the pins of the dampers, suitable means for retaining the strip on the table and guiding it in its course over the table and suitable means for feeding the strip or sheet of music across the dampers consisting of a rod having attached thereto a pair of arms in engagement with the sheet or strip an operating lever attached to the rod, and a spring for holding the rod in an elevated position, substantially as shown and described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

MAXIMILIAN C. R. ANDORFF.

Witnesses:
MAX. MARTIN,
RICHARD HÄHNEL.