

(No Model.)

T. G. HOSTER.

SELF PLAYING STRINGED MUSICAL INSTRUMENT.

No. 574,426.

Patented Jan. 5, 1897.

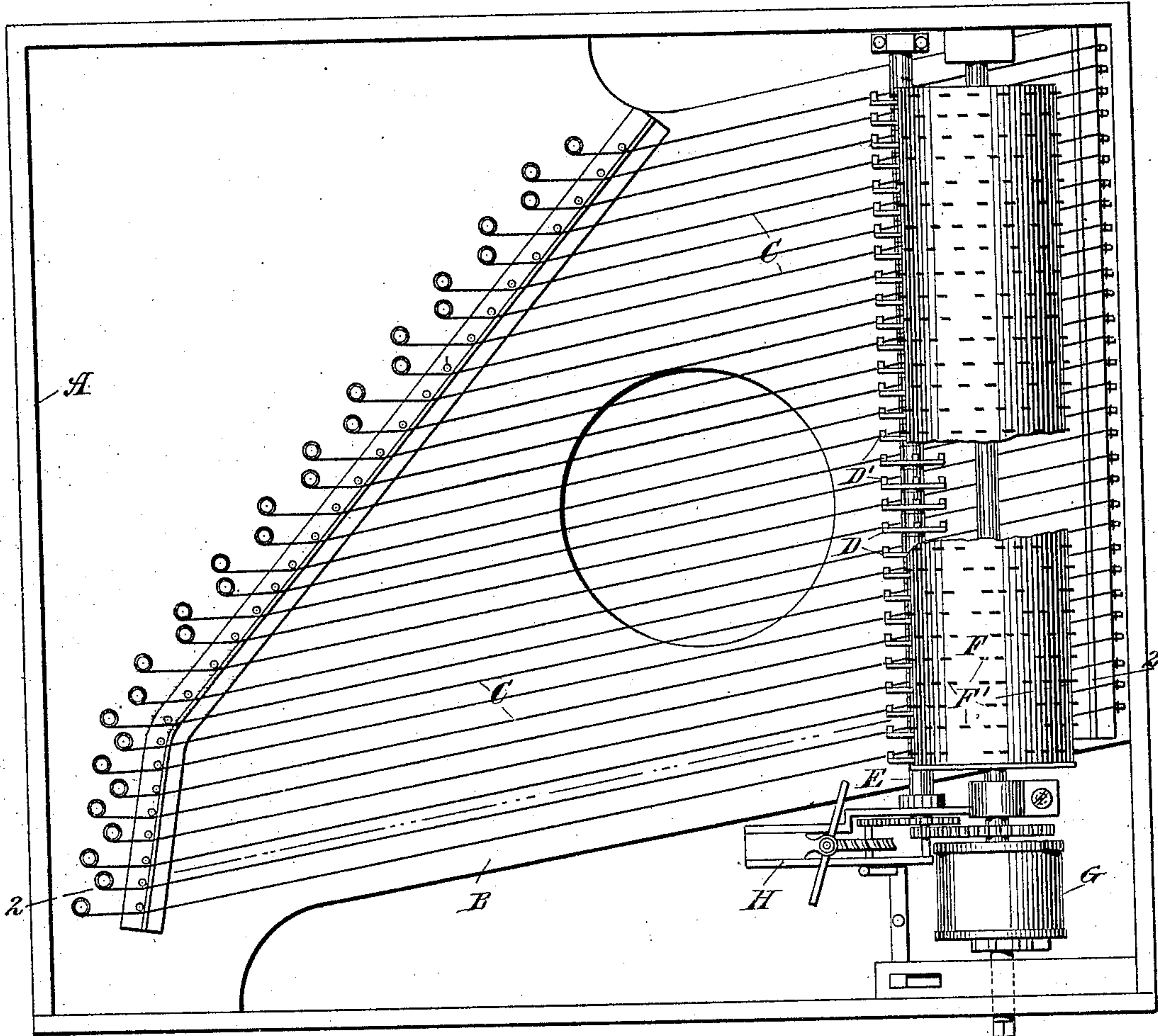


Fig. 1.

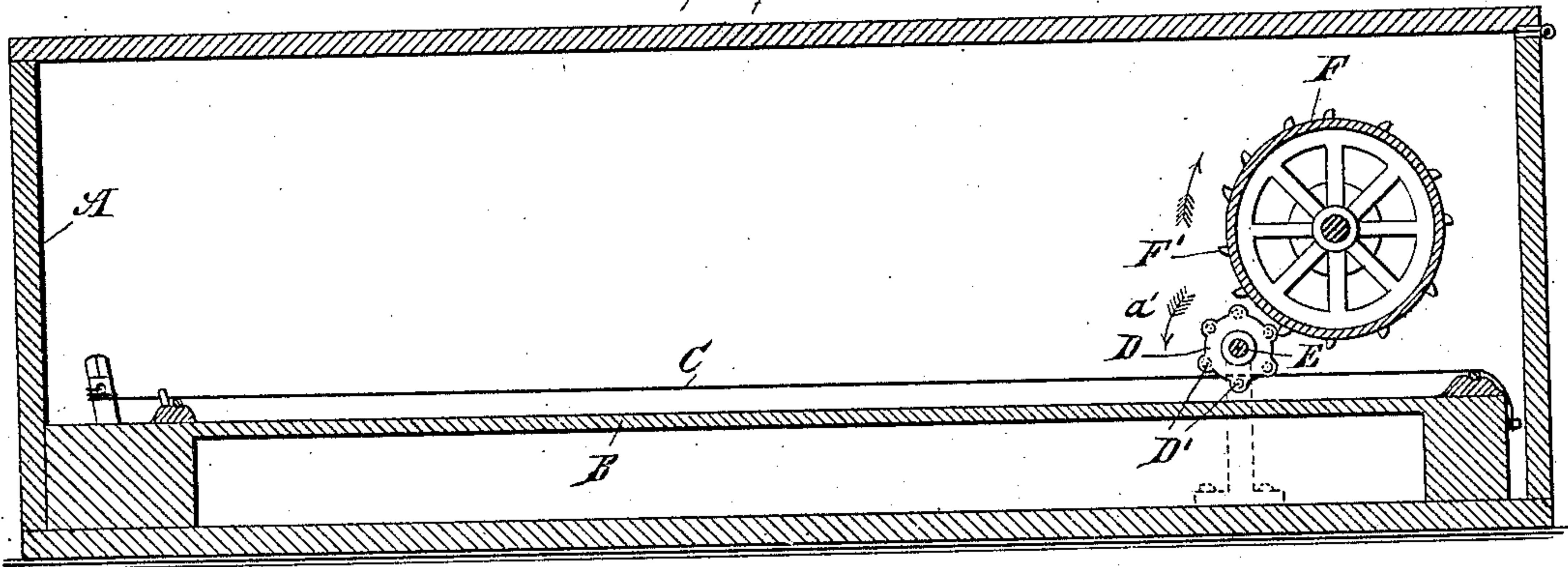


Fig. 2.

WITNESSES:

William P. Goebel.
Jno. M. Ritter

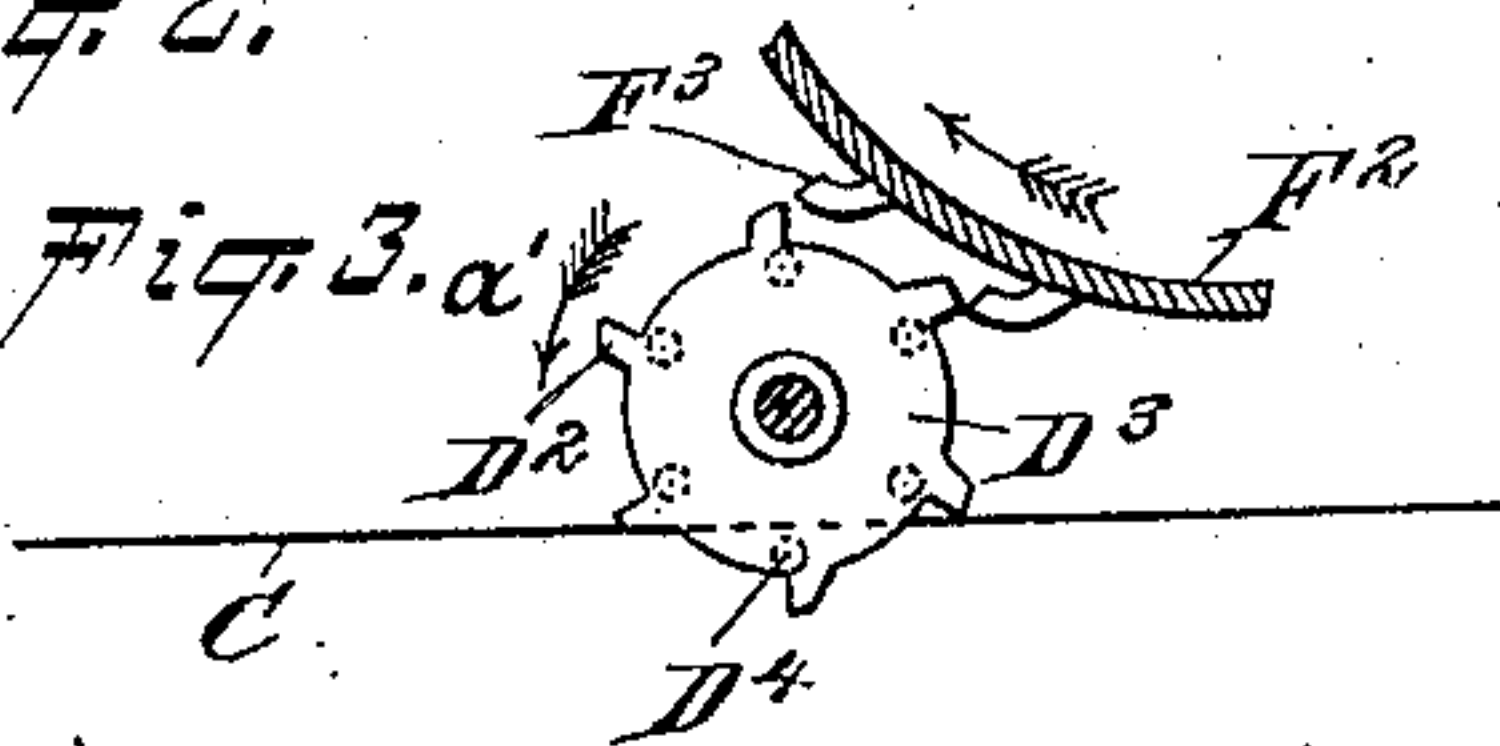


Fig. 3.

INVENTOR

T. G. Hoster

UNITED STATES PATENT OFFICE.

THEODORE G. HOSTER, OF RUTHERFORD, NEW JERSEY.

SELF-PLAYING STRINGED MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 574,426, dated January 5, 1897.

Application filed March 28, 1896. Serial No. 585,199. (No model.)

To all whom it may concern:

Be it known that I, THEODORE G. HOSTER, of East Rutherford, in the county of Bergen and State of New Jersey, have invented a new and Improved Self-Playing Stringed Musical Instrument, of which the following is a full, clear, and exact description.

The invention relates to stringed musical instruments, such as autoharps and the like; and the object of the invention is to provide a new and improved self-playing stringed musical instrument in which the strings are automatically and properly picked and sounded in a very simple manner.

The invention consists of certain parts and details and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement with the cover of the box removed and part broken out. Fig. 2 is a sectional side elevation of the same on the line 2 2 of Fig. 1, and Fig. 3 is an enlarged side elevation of a modified form of star-wheel.

The self-playing musical instrument is preferably arranged in a suitable box A, containing a sounding-board B, over which are stretched in the usual manner the strings C, representing both melody and accompaniment strings for any desired number of octaves.

A series of star-wheels D, one for each string C, is arranged above the sounding-board and between the strings, with the faces of the wheels at angles to the strings, as plainly indicated in Fig. 1. Each star-wheel D is provided on its face, next to its corresponding string, with lateral pickers D' in the form of pins or lugs arranged in a circle and placed equidistant apart, with one of the pickers extending directly over the string, so that when the wheel is rotated in the direction of the arrow α' then this picker D' engages the string and picks the same to produce the tone to which the string is tuned. Now it will be seen that as the wheel D stands at an angle to its

string it is evident that the picker D' first fully moves in engagement with the string, and on further rotation of the wheel this picker gradually moves out of engagement with the string, thereby releasing the same and causing it to sound. When the picker D' has passed into a lowermost position, the rotary motion of the wheel ceases and the next following picker stands directly above the string, ready to engage and pick the string the second time on the next rotary impulse given to the star-wheel. Thus it will be seen that the pickers D' of each star-wheel move in a plane convergent to the string, and consequently all the other pickers D' of the revolving wheel except the one that is doing the picking at the time are completely out of alinement and out of engagement with the string, as the wheel revolves at an angle to the string.

The several star-wheels D are mounted to rotate loosely and independent one of the other on a rod or shaft E, held in suitable bearings attached to the box B. The star-wheels D are preferably held apart by suitable friction-washers, which not only separate the wheels, but also prevent one from carrying the adjacent one along when rotated.

The star-wheels D are intermittently rotated by a note sheet or barrel F, made in the form of a revoluble cylinder, cone disk, or the like. The note-sheet illustrated is cylindrical in form and is provided with note projections or pins F', adapted to engage one of the non-active pickers D' at the time for turning the star-wheel, as above described. It is, however, expressly understood that I do not limit myself to the form of the note-sheet shown, as it is evident that I may employ any one of the well-known forms of note-sheets now in use for driving star-wheels in self-playing musical instruments.

The note sheet or barrel may be of the interchangeable type and driven from a suitable spring or other motor G, having the usual governor H. A stopping and starting device of the ordinary type is also provided.

As shown in Fig. 3, the note-sheet F² engages with its pins or lugs F³ peripheral teeth D² on the star-wheel D³ to turn the latter and

cause its lateral pickers D⁴ to pick and sound the strings in the manner above described.

Having thus fully described my invention, I claim as new and desire to secure by Letters ; Patent—

1. A musical instrument comprising strings extending over a sounding-board, a series of star-wheels, one for each string and each provided with pickers movable against the corresponding string in planes convergent to the string, and a movable note-sheet for turning the said star-wheels independently of one another, substantially as shown and described.

2. A stringed musical instrument provided with a revoluble star-wheel having on its face a plurality of pickers at an angle to the plane of rotation of the wheel, substantially as described.

3. A stringed musical instrument provided with strings, and pickers movable against said strings in planes convergent to the strings, substantially as shown and described.

4. A stringed musical instrument, provided with star-wheels having lateral pickers, and strings adapted to be picked by said pickers, the face of each star-wheel and its corre-

sponding string standing at angles one to the other, substantially as shown and described.

5. A stringed musical instrument, comprising a sounding-board, strings extending over the said sounding-board, a series of star-wheels, one for each string and each having its face extending at angles to the corresponding string, and lateral pickers formed on each wheel and adapted to successively pick the corresponding string, substantially as shown and described.

6. A stringed musical instrument, comprising a series of strings extending over a sounding-board, star-wheels, one for each string and each having its face extending at angles to the corresponding string, each star-wheel being provided with lateral pickers for picking the string, and a movable note-sheet for engaging and turning the said star-wheels independent one of the other, substantially as shown and described.

THEODORE G. HOSTER.

Witnesses:

JNO. M. RITTER,

WILLIAM P. GOEBEL.

It is hereby certified that the residence of the patentee in the grant and in the head of the printed specification of Letters Patent No. 574,426, granted January 5, 1897, upon the application of Theodore G. Hoster, for an improvement in "Self-Playing Stringed Musical Instruments," was erroneously written and printed "Rutherford, New Jersey," whereas said residence should have been written and printed *East Rutherford, New Jersey*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 26th day of January, A. D., 1897.

[SEAL.]

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.