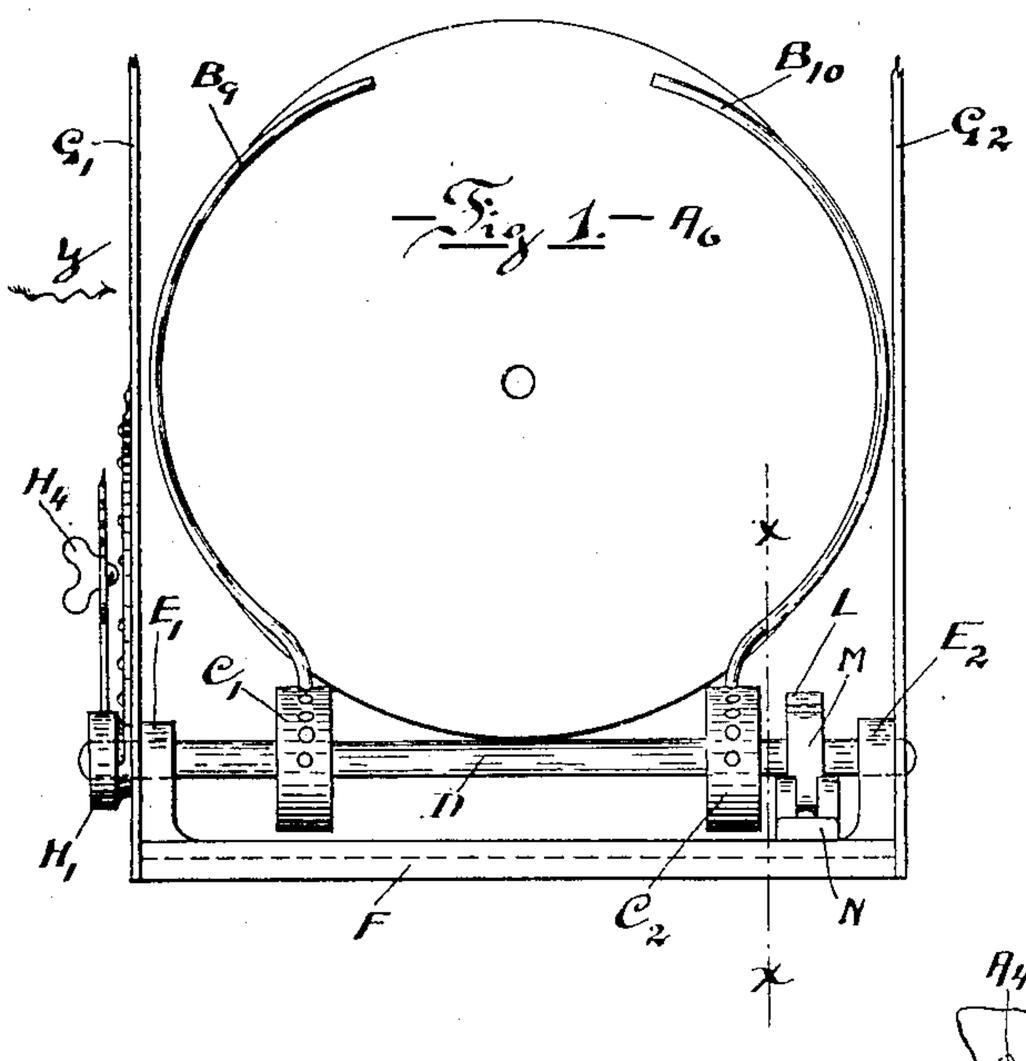
No. 658,034. Patented Sept. 18, 1900.

J. WELLNER.

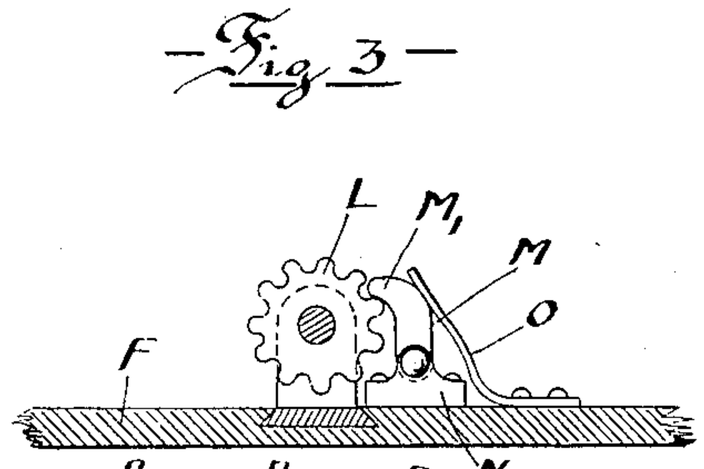
TUNE SHEET FEEDER.

(Application filed Sept. 28, 1899.)

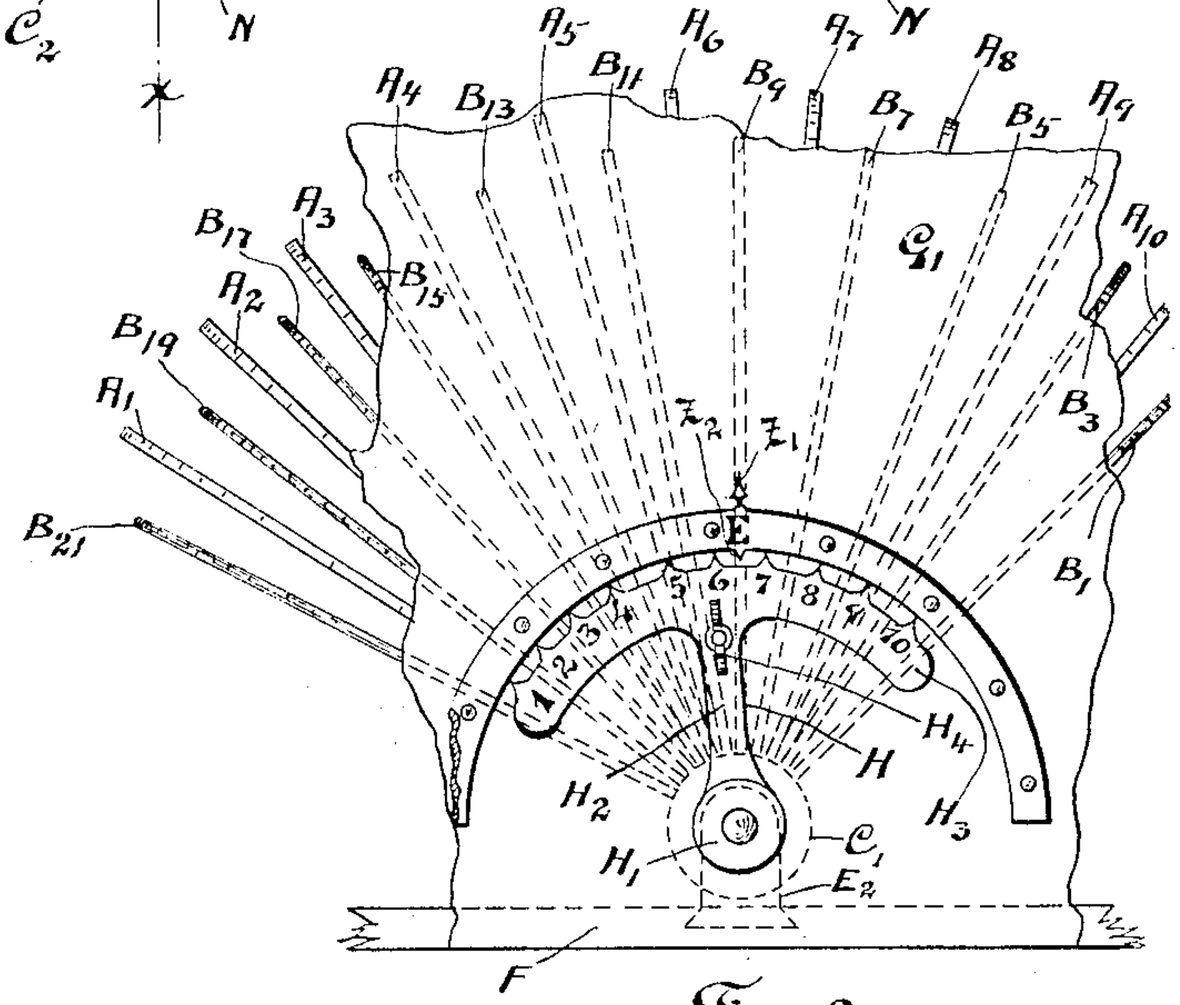
(No Model.)



— Fig 1. —



— Fig 3 —



— Fig 2. —

Witnesses

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UNITED STATES PATENT OFFICE.

JULIUS WELLNER, OF JERSEY CITY, NEW JERSEY.

TUNE-SHEET FEEDER.

SPECIFICATION forming part of Letters Patent No. 658,034, dated September 18, 1900.

Application filed September 28, 1899. Serial No. 731,904. (No model.)

To all whom it may concern:

Be it known that I, JULIUS WELLNER, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Tune-Sheet Feeders; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to the method of feeding the toothed disk technically known in mechanical-musical-instrument boxes as the "tune-sheet" into the position it must occupy previous to its elevation into the final position which brings it into operative contact with the star-wheels and the comb.

In describing my invention I may state that the object of my invention is to furnish a conveying means for the tune-sheets into the position from whence they can be elevated into their operative position. This conveying means, which I shall in the ensuing description designate as the "tune-sheet feeder," is mainly distinguishable from the same means used in other mechanical musical instruments by the fact of its being stationary swiveled means.

In further describing my invention I shall call attention to the accompanying drawings, wherein like letters of reference indicate corresponding parts in the different views.

Figure 1 shows a front view of my improved swiveled tune-sheet feeder; Fig. 2, a side view of the feeder as seen in Fig. 1 looking in the direction of the arrow *y*, and Fig. 3 a sectional side view through a line X X of Fig. 1 looking similarly in the direction indicated by the arrow *y*.

A^6 represents one of a series of tune-sheets arranged in my improved feeder. A′ to A^5 and A^7 to A^{10}, respectively, indicate the remainder of the said series, as seen in Fig. 2.

B^9 and B^{10} indicate in Fig. 1 two rods bent toward each other in the shape shown in said figure, and B′ to B^7 and B^{11} to B^{21} all the bent rods supporting the tune-sheets on the left side of the frame. These rods are secured in a suitable mechanical manner in two rings C′ and C^2, having holes drilled in them to that effect, in which the screw-cut ends of the rods can be inserted, the said holes of course being similarly screw-cut, or the rods can be soldered firmly in such holes. The rings are keyed on or otherwise firmly affixed to a shaft D, mounted in bearings E′ and E^2, said bearings forming part of the foundation-plate F.

G′ and G^2 indicate the side frames of the box containing the musical instrument operated by such tune-sheets as the herein described.

It will be readily understood that between the curved rods B′ and B^2, B^9 and B^{10}, &c., the whole series of tune-sheets can be arranged, as illustrated in Fig. 2. The position from which the desired tune-sheet has to be elevated by any suitable mechanism constructed for such purpose into the operative position where it can be brought into contact with the star-wheels and comb is in the central position indicated by the letter E, (see Fig. 2,) said letter E being inscribed upon or bodily attached to the side frame G′—that is, in other words, the tune-sheet must be in a vertical position.

In order to operate the tune-sheet feeder, a lever H is secured on the end of the pivot-shaft D outside of the side frame G′. Said lever H consists of a collar H′, affixed firmly to the shaft, consequently when manipulated swiveling said shaft D. Further, the lever consists of an arm H^2, having an approximately-semicircular flange H^3, which flange is inscribed with as many numerals as there are tune-sheets between the rods. To manipulate said lever H, there is a handle H^4 secured on the arm H^2, so that when the handle H^4 is moved either to the right or the left side the fan-shaped feeder, consisting as stated, of the curved rods B, attached in the rings C′ and C^2, mounted on the pivot-shaft D and having the tune-sheets lying between them, will be swiveled also. It can, moreover, be seen that as the letter E inscribed on the side frame G′, conjointly with the two arrow-heads Z′ and Z^2, indicates the exact position in which the elevating means will carry a tune-sheet into operative position and as, further, each numeral indicates a different tune-sheet every time a certain de-

sired tune-sheet is required the handle is manipulated, so as to bring such number in alinement with the letter E and the arrow-heads Z′ and Z². Thus an easy method of changing the tune-sheets, simple both in principle and means, has been invented, which was the desired object I had in view.

In order to control the swiveling motion of the feeder and insure its stoppage in the exact position at the exact movement, a ratchet-wheel L, having as many teeth as are necessary to correspond with the number of tune-sheets, is mounted on the pivot-shaft D. Cooperating with this ratchet-wheel there is a pawl M, pivoted in a bearing N, said bearing secured to the foundation-plate F. Bearing against this pawl, so as to force its head M′ against the ratchet-wheel, is a spring O, secured to the foundation-plate, the head M′ constructed to conform to the rounded spaces between the teeth of the ratchet-wheel. This rounded formation of the pawl-head and ratchet-teeth, combined with their relative positions, permits a swiveling movement of the feeder both to the right and to the left side, which, it will be observed, is a necessity in order to feed any tune-sheet of the series into operative position.

That any number of tune-sheets can be contained in this device is obvious, all depending on how many curved rods B are introduced into the means securing them to the pivot-shaft. I may further state that such elements as the controlling means, indicator, and sheet separating and supporting rods can be altered and improved upon, as also the rings to which the sheet separating and supporting rods are attached; but

What I specially claim as new, and desire to secure protection for by Letters Patent, is—

1. In a mechanical musical instrument, separate tune-sheets for operating the same, a swiveled pivot having means supporting the tune-sheets substantially as and for the purposes described.

2. In a mechanical musical instrument, separate tune-sheets for operating the same; means separating and supporting the tune-sheets attached to a pivot for the purposes set forth substantially as described.

3. In a mechanical musical instrument, separate tune-sheets for operating the same, a swiveling pivot, means secured to such pivot separating and supporting the tune-sheets for the purposes set forth substantially as described.

4. In a mechanical musical instrument, separate tune-sheets for operating the same, a swiveling pivot supported in a frame, means secured to said pivot separating and supporting the tune-sheets, means for regulating the feeding of each sheet in turn, a manipulating and indicating lever attached to the pivot substantially as and for the purposes described.

5. In a mechanical musical instrument, separate tune-sheets for operating the same, a swiveled pivot mounted in a frame, means secured on said pivot having rods arranged in alined pairs forming a fan on each side, means for regulating the feeding of each individual sheet and a manipulating-arm secured on the pivot externally to the frame of the instrument for the purposes set forth substantially as described.

6. In a mechanical musical instrument, separate tune-sheets for operating the same, a swiveled pivot mounted to the frame of the instrument having means for supporting tune-sheets, a ratchet-wheel mounted on the pivot, a pawl coöperating with said ratchet-wheel, an indicating and manipulating lever attached to the pivot substantially as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of September, A. D. 1899.

JULIUS WELLNER.

Witnesses:
FRANK YÜLG,
AUGUST M. TRESCHOW.