

No. 621,844.

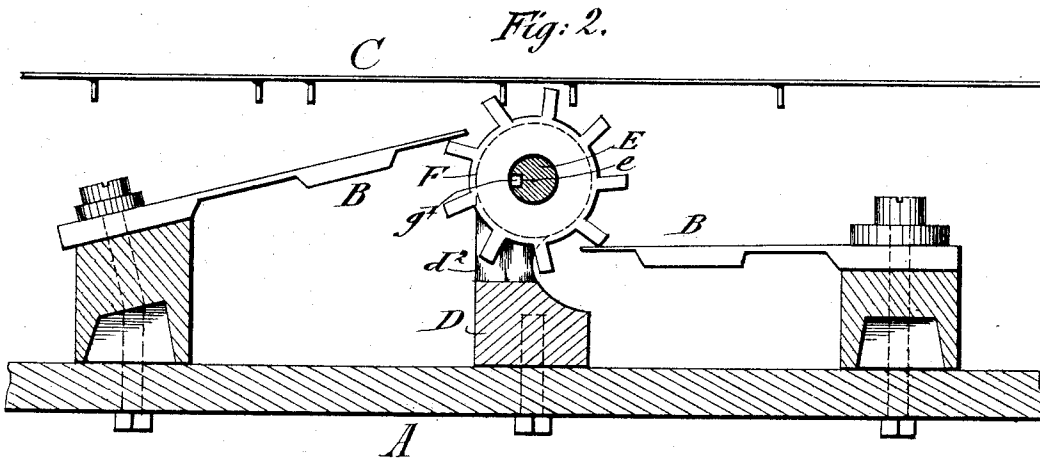
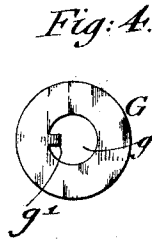
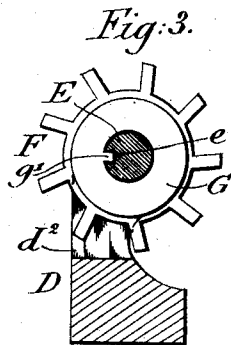
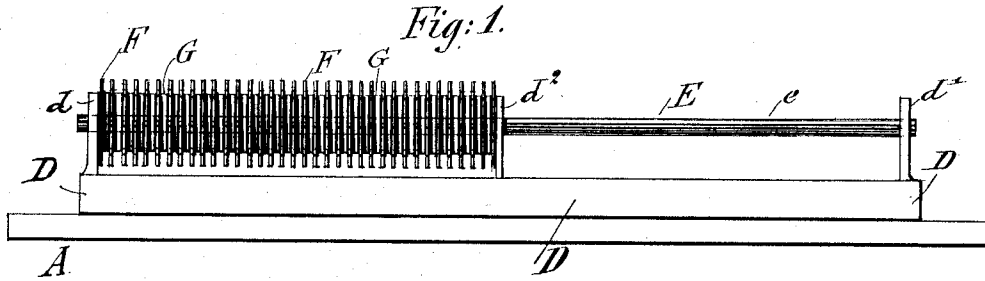
Patented Mar. 28, 1899.

J. NATTERER.

SUPPORT FOR STAR WHEELS OF MUSIC BOXES.

(Application filed July 20, 1898.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOSEF NATTERER, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO THE SYMPHONION MANUFACTURING COMPANY, OF NEW YORK.

## SUPPORT FOR STAR-WHEELS OF MUSIC-BOXES.

SPECIFICATION forming part of Letters Patent No. 621,844, dated March 28, 1899.

Application filed July 20, 1898. Serial No. 686,459. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEF NATTERER, 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 Supports for the Star-Wheels of Music-Boxes, of which the following is a specification.

This invention relates to music-boxes, and more particularly to the construction of the support for the star-wheels, which vibrate the sound-emitting tongues.

The object of the present invention is to simplify and render the constructions of similar natures cheaper, and, further, to so arrange and construct the intervening spacers of the star-wheels as that they can be quickly assembled, together with the star-wheels, upon the shaft upon which the said star-wheels turn, the number of direct bracket-supports for the shaft being reduced to a minimum and only being of sufficient number to prevent the springing of the shaft and the unnecessary binding of the star-wheels.

The invention consists of certain features of construction to be hereinafter described and then pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of a star-wheel support constructed in accordance with my invention, some of the star-wheels being omitted for clearness of illustration. Fig. 2 is an enlarged vertical sectional view of parts of a music-box, showing my invention in connection therewith. Fig. 3 is an enlarged and detached vertical section of my improved star-wheel support with the star-wheels and spacers thereon, and Fig. 4 is a side elevation of one of the spacing washers or disks.

Referring to the drawings, A indicates the bed-plate, B the sound-emitting tongues, and C the perforated music-disk, of a music-box. The support for the star-wheels comprises a base-piece D and end brackets  $d$   $d'$ , in which the ends of the shaft E are fixed. One or more intermediate brackets  $d^2$ , as occasion requires, may extend upwardly from the base-piece D to hold the shaft  $d$  in axial position

and prevent the springing of the same. The number of these intermediate brackets  $d^2$  is reduced to a minimum, so that therefore the cost of the construction of those parts necessary for supporting the shaft is lessened and the tediousness of manufacture thereof very much obviated. The shaft E is provided on one side with a longitudinal groove  $e$ , which extends from end to end of the same, and between each pair of adjacent star-wheels F is placed a sheet-metal washer or disk G, which is provided in its center opening  $g$  with an inwardly-projecting lug  $g'$ , that is inserted in the groove  $e$  in the shaft E. These disks are by means of the lugs  $g'$  prevented from turning upon the shaft E.

In assembling the parts the star-wheels F, with the intermediate washers G, are strung in alternate succession upon the shaft E, the lugs  $g'$  being engaged into the groove  $e$ , and then the shaft is applied to the brackets which are to support the same. The washers or disks G being of sheet metal, the sides of the same will be perfectly smooth and free from any projecting points of metal which would thereby interfere with the proper turning of the star-wheels.

It will be observed that in place of the usual brackets between the adjacent star-wheels the smooth-sided washers G are used, thereby rendering the construction of the device much simpler and doing away with the extraordinary care necessary in obtaining a perfect alinement of the openings in the brackets through which the shaft is to pass. The present construction also obviates the formation of an undesirable number of brackets, which are formed by first boring and then making saw-cuts, so as to define the width or thickness of each bracket, and which saw-cuts also leave objectionable rough portions or edges and interfere with the free turning of the star-wheels.

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

The herein-described support for the star-wheels of music-boxes, the same consisting of

a base-piece provided with a minimum number of brackets, a fixed shaft supported by said brackets, and washers or disks supported stationary on said shaft and spaced at suitable intervals apart to receive between them  
5 the star-wheels which turn upon the shaft, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

JOSEF NATTERER.

Witnesses:

GEO. L. WHEELLOCK,  
GEO. W. JAEKEL.