No. 664,604. Patented Dec. 25, 1900.

R. J. BENNETT.

AUTOMATIC DEVICE FOR ENGAGING ENDS OF TRAVELING MUSIC SHEETS.

(No Model.) (Application filed Feb. 8, 1898.)

Fig. 2.

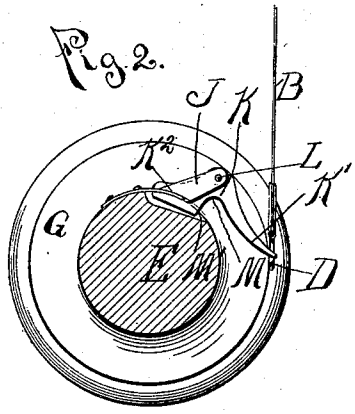


Fig. 4.

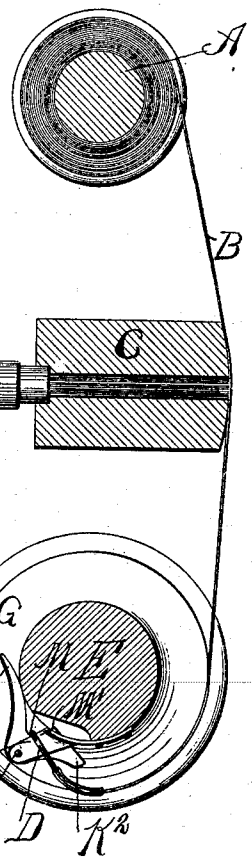


Fig. 3.

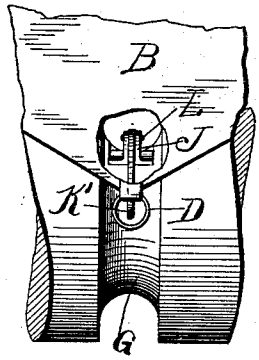


Fig. 1.

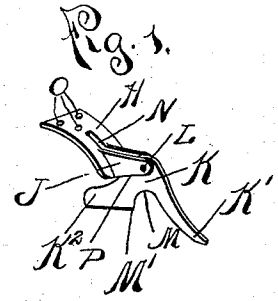
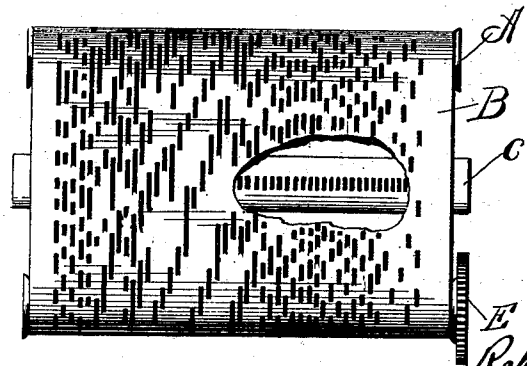


Fig. 6.



Fig. 5.



Witnesses:
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

ROBERT J. BENNETT, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE LYON & HEALY, OF SAME PLACE.

AUTOMATIC DEVICE FOR ENGAGING ENDS OF TRAVELING MUSIC-SHEETS.

SPECIFICATION forming part of Letters Patent No. 664,604, dated December 25, 1900.

Application filed February 8, 1898. Serial No. 669,605. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. BENNETT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Automatic Device for Engaging the Ends of Traveling Music-Sheets, of which the following is a specification.

Referring to the accompanying drawings, wherein like reference-letters indicate the same or corresponding parts, Figure 1 is a perspective view of my locking-hook. Fig. 2 is a vertical transverse section of a winding-roller, showing the locking-hook in the act of engaging with the end of the traveling music-sheet. Fig. 3 is a front elevation of the parts shown in Fig. 2 with a portion of the traveling music-sheet cut away to disclose the engaging device beneath. Fig. 4 is a vertical section of the traveling music-sheet roller, the music-sheet tracker, and the winding-roller, showing my automatic locking-hook engaged with the traveling music-sheet and locking it to the winding-roller. Fig. 5 is a front elevation of the parts shown in Fig. 4 with a portion cut away to disclose the music-sheet tracker. Fig. 6 is one form of equivalent of my locking hook or lever, as shown in Fig. 1.

My invention relates to that class of musical instruments whose sound-producing mechanism is operated by means of a perforated paper strip or its equivalent, commonly termed a "traveling music-sheet;" and it particularly relates to the means for connecting such traveling music-sheet to the winding-roller and disconnecting it therefrom. Heretofore the means for connecting the traveling music-sheet to the winding-roller and disconnecting it therefrom has been imperfect and inconvenient, requiring careful manipulation to properly effect the engagement and disengagement of the sheet. Furthermore, the old devices are defective, for the reason that the sheet is liable to become accidentally disengaged from the winding-roller.

The object of my device is to remedy these disadvantages.

To that end my invention consists in certain features of construction and combination hereinafter described, and pointed out in the claims.

In the accompanying drawings, A is a music-sheet roller or supply-roll; B, a traveling music-sheet provided at its free end with a ring, eye, or similar device; C, a music-sheet tracker, and E a winding-roller having a groove or slot G, of such shape as may be desired, cut or sunk in the face thereof.

The general operation of the music-sheet roller or supply roll A, the traveling music-sheet B, the music-sheet tracker C, and the winding-roller E is the same as that now commonly used and old in the art.

Heretofore it has been necessary for the operator of such an instrument when it was desired to attach a traveling music-sheet to the winding-roller or disconnect it therefrom to perform the operation by hand, such connection or disconnection, as the case may be, being respectively accomplished by passing a hook, eye, ring, or other equivalent over a pin, hook, or similar engaging device or removing the same therefrom. This manual operation is inconvenient and sometimes difficult. I therefore have substituted in place of the hook, pin, or similar engaging contrivance now in common use a locking hook or lever which automatically engages the traveling music-sheet and causes it to be smoothly and properly wound or drawn around the winding-roller.

In Fig. 1, H is a base-plate, at one end of which suitable means is provided for fastening it in place to the winding-roller E—for example, the small perforations O, through which pins, screws, or the like may be passed. At the other end of the plate H is a lug or lugs J, having near its or their farther end or ends a perforation or perforations L, through which any suitable pin or other device may be passed to serve as a pivot for the locking hook or lever K. The result is that when the music-sheet B is brought into the proper position and the roller E is turned in the winding direction the end K′ of the hook or lever K catches in the ring D and forces the latter backward into the recess M and against the shoulder M′, which being upon the opposite side of the fulcrum causes the projecting part K′ to be withdrawn into the groove G of the roller E, where it will not interfere with the proper rolling of the music-

sheet B upon the roller E. The continued rotation of the roller E winds the music-sheet B smoothly and evenly around its periphery. To disengage the music-sheet from the winding-roller, it is only necessary to reverse the movement of the roller.

It will be observed that the draft of the ring D upon the shoulder M′ of the hook or lever K has the effect to lock the latter securely in the groove G while the winding operation is going on. It will also be observed that the periphery of the roller E is recessed to accommodate the weighted end K^2 of the hook or lever K and to limit the outward throw of its tapered arm K′. Instead of the weight it is obvious that a cam, spring, or other equivalent means may be employed for projecting the arm K′ of the hook or lever K into the path of the music-sheet B and that the form of the device may be greatly varied without departing from the principle of the invention—for example, the form shown in Fig. 6.

While the engaging operation has been hereinbefore described as automatic, it may also readily and conveniently be performed by hand, it only being necessary that the operator should bring the winding-roller and the music-sheet into proper position and slip the ring D over the arm K′, whereupon the further rotation of the roller in the winding direction will automatically lock the music-sheet to the same.

Having thus described the principle of my invention and one way in which it may be carried into practice and illustrated in the drawings, Fig. 6, one form of an equivalent of my locking hook or lever, what I claim as new, and desire to secure by Letters Patent, is—

1. In a musical instrument of the character described, a winding-roller having a groove or recess therein, an engaging member fulcrumed in said groove or recess, an engaging part of said member which projects beyond or out of said groove or recess, when the winding-roller is at rest or rotating in a direction opposite to that of winding and an abutment or extension also on the engaging member operated by the end of the music-sheet when the latter is caught by the projecting part of the engaging member.

2. In a musical instrument of the kind described, a hook, or its equivalent, fulcrumed upon the winding-roller, and provided with an engaging end, or arm, K′, and at the opposite end therefrom an end, or arm, K^2, adapted through its gravity or other equivalent means, to cause the engaging arm, K′, when in its normal position, to protrude beyond the periphery of the winding-roller for the purposes herein set forth, substantially as described.

3. In a musical instrument of the kind described, an angular hooked lever fulcrumed upon the winding-roller, having one arm adapted to automatically engage with the music-sheet as the roller is rotated, and the other arm so constructed that the continued rotation of the roller in the winding direction causes the ring of the music-sheet to press against it and thereby withdraw the projecting arm into the groove of the roller.

4. In a musical instrument of the kind described, in combination with the winding-roller a hook, or lever, consisting of the base-plate, H, the lug or lugs, J, and the lever K, having the pointed arm, K′, the weighted arm K^2, the recess M, and the shoulder, M′, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT J. BENNETT.

Witnesses:
CHAS. C. BULKLEY,
ROBERT WEIR.