

(No Model.)

M. GALLY.

MECHANICAL MUSICAL INSTRUMENT.

No. 296,685.

Patented Apr. 8, 1884.

Fig. 1.

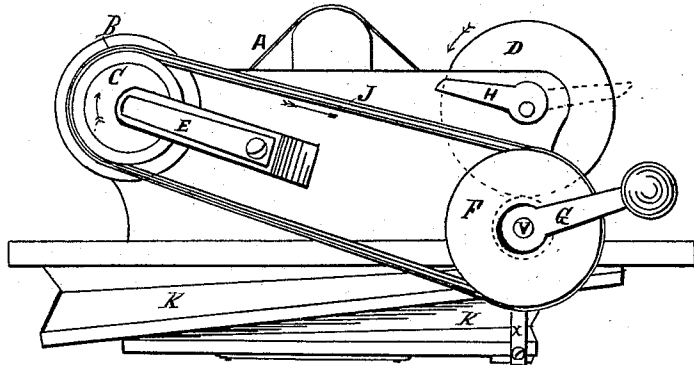


Fig. 2.

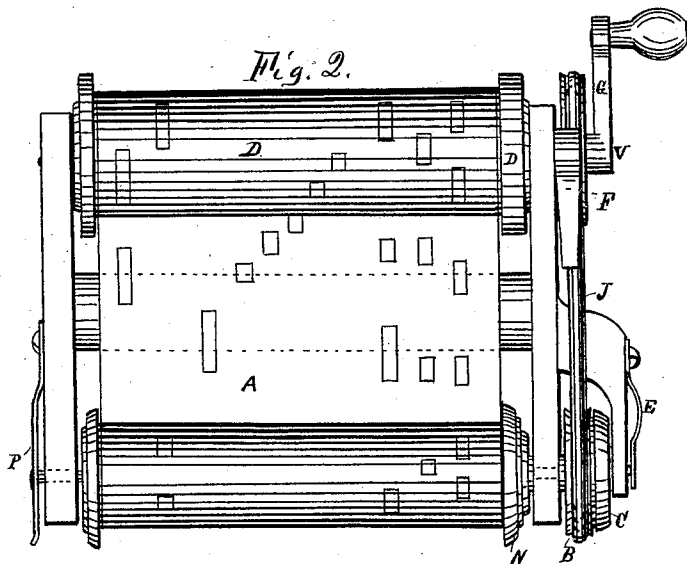


Fig. 3.

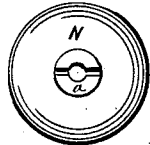
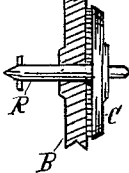


Fig. 4.



Witnesses:

*Man A. Gally.*  
*D. B. Gally*

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Inventor.

# UNITED STATES PATENT OFFICE.

MERRITT GALLY, OF NEW YORK, N. Y.

## MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 296,685, dated April 8, 1884.

Application filed January 16, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MERRITT GALLY, a citizen of the United States, residing in New York, in the county and State of New York, have invented certain new and useful Improvements in devices for rolling and re-rolling the music sheet of a mechanical musical instrument, of which the following is a specification.

10 My invention consists of a friction device, operating in connection with the delivery-roll of the music-sheet of a mechanical musical instrument, and operated by means of the motor of the take-up roller, whereby a constant friction movement of the device keeps the sheet taut while being wound on the take-up roller, and rewinds the music on the delivery-roller, when the take-up roller is freed from connection with its driving-motor.

15 In the accompanying drawings, Figure 1 is a side elevation, showing the devices of the invention, and the tube-board, music-sheet, bellows, &c., of a mechanical musical instrument. Fig. 2 is a plan of the same. Fig. 3 is an end view of the delivery-roller, and Fig. 4 is a view in cross-section of the friction devices.

20 It is customary to use simply a holding friction, independent of the motor of the music-sheet, for holding the sheet taut while being wound from the delivery-roller; but I find that a constant moving friction is much better, as it takes up any slack there may be in the music-sheet on the delivery-rolls, holds the sheet taut, and also serves as a rewind for the music-sheet as soon as the take-up roll is freed from its motor.

25 In Figs. 1 and 2 the motor-shaft V is shown as the driving-motor for the take-up roller D, and also the friction-wheel B, which connects with the receiving-roller N. The driving-wheel F is connected with the friction-wheel B by means of a belt, J, or other suitable gearing, so that wheel B shall have a constant tendency to rewind the sheet on roller N; but during the more positive connection of roller D and driver E, wheel B only serves as a holdback for keeping the sheet taut, as roller N is driven only by yielding friction. Any suitable slipping friction device may be used for this purpose.

The belt J may be allowed to slip on a pul-

ley which is made fast to the driving-journal of the roller N, or an additional friction device may be used, as shown, wheel B being loose on journal R, and a pressing friction, C, made fast to journal R, the friction being kept constant by means of spring E.

Any suitable driving-motor may be used instead of crank G, and may be connected or not with the bellows of the instrument, as desired.

The eccentric H is used to connect roller D with its driver V, to wind the music-sheet on roller D, and to free roller D from its driver to allow the friction device C to rewind the sheets.

It will be observed that the rewinding of the sheet on the delivery-roller N begins instantly as the take-up roller is freed from its driving-power, and that the rewinding is accomplished by the same mechanism which serves to hold the sheet taut while the winding from the delivery-roll to the take-up roll takes place.

What I claim is—

1. In a mechanical musical instrument, the combination, with a sheet-winding device operating on the take-up roll, of an oppositely-acting friction sheet-winding device of less power, substantially as described, simultaneously operating on the delivery-roll, as set forth.

2. In a mechanical musical instrument, the combination, with a sheet-winding device operating on the take-up roll, of an oppositely-acting friction sheet-winding device of less power, simultaneously operating on the delivery-roll, and mechanism, substantially as described, connecting the same with the motor of the take-up roll, all substantially as shown and set forth.

3. The combination, with the take-up roll and its power mechanism, constructed substantially as described, of the motor-shaft, a belt leading therefrom, and the oppositely-acting friction retarding and rewinding device, constructed substantially as described, and arranged to be driven by the belt and operate on the delivery-roll, as set forth.

MERRITT GALLY.

Witnesses:

WM. A. GALLY,  
D. B. GALLY.