M. CLARK.

TAKE-UP ROLL FOR AUTOMATIC MUSICAL INSTRUMENTS.

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1,009,829.

Patented Nov. 28, 1911.

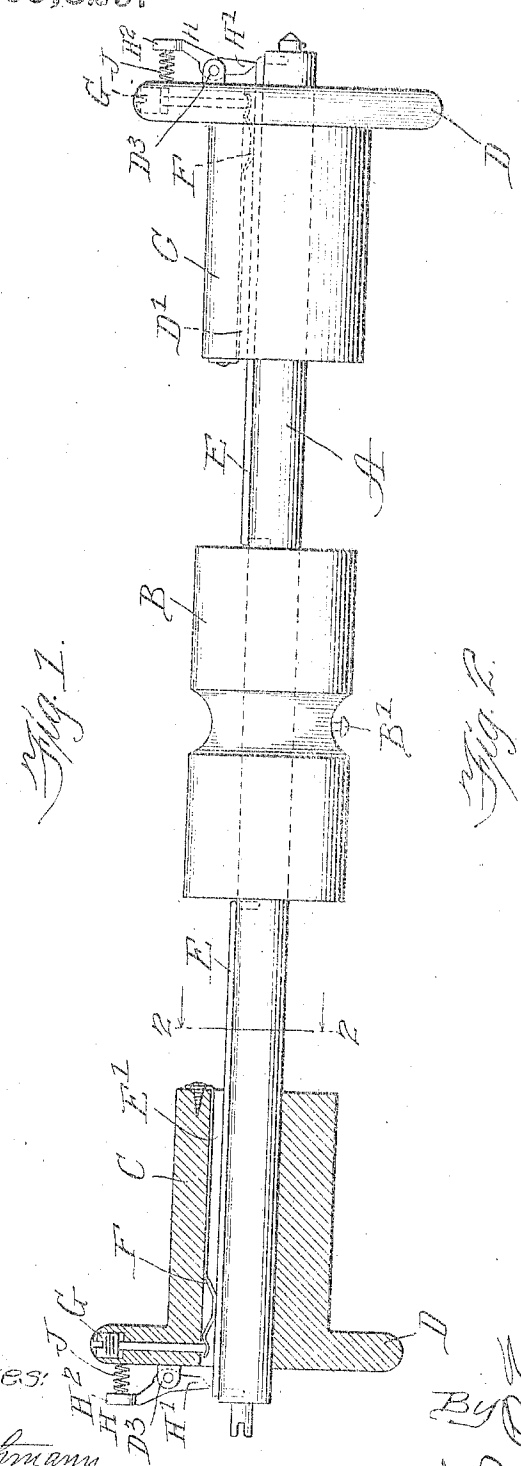


Fig. 1.

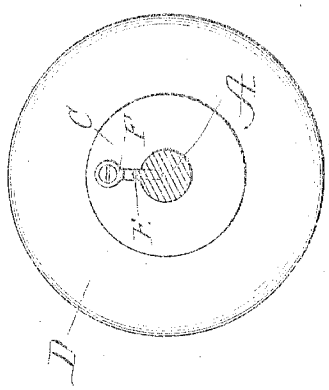


Fig. 2.

Witnesses:

P. J. Gathmann

Robt. H. Burton.

Inventor:

Melville Clark

By Chas. H. Burton

of Burton & Burton

his Attorneys:

UNITED STATES PATENT OFFICE.

MELVILLE CLARK, OF CHICAGO, ILLINOIS.

TAKE-UP ROLL FOR AUTOMATIC MUSICAL INSTRUMENTS.

1,009,829. Specification of Letters Patent. Patented Nov. 28, 1911.

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To all whom it may concern:

Be it known that I, MELVILLE CLARK, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Take-Up Rolls for Automatic Musical Instruments, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

The purpose of this invention is to provide a take-up roll for the controlling sheet of an automatic musical instrument, which shall be adapted to serve that purpose for sheets of the several different widths which are commonly employed,—to wit, for fifty-eight notes, sixty-five notes and eighty-eight notes, respectively,—and which shall also be adjustable to allow for slight expansion or contraction of the music sheets due to changes of moisture and temperature of the atmosphere.

Figure 1 is an elevation of a roll embodying this invention, certain parts being shown in section. Fig. 2 is a section taken as indicated by line 2—2 on Fig. 1.

A is the shaft of the roll. It is provided at one end with suitable means for driving engagement, and at the other end with means for centering it. This means may be in any of the customary forms. On the shaft occupying the middle portion of its length there is a short section of the roll B, which is made fast to the shaft in any convenient manner, and is preferably integral therewith and has the customary button B^1 for attaching the end of the controlling sheet. Mounted upon the shaft, at opposite sides of the middle portion B, there are end sections C, C, of the roll, having at their outer ends flanges D, D. These sections are slidable upon the shaft, which has feathers E, E, engaging the corresponding grooves D^1 D^1, in the sections C, C, for rotating them with the shaft. These feathers may be constructed in various ways, but are preferably formed of heavy wire, with ends bent into holes in the shaft, as shown in Fig. 1.

For positioning the sections C, C, at various points along the shaft to accommodate different widths of controlling sheets, the flat springs F, F, secured to the roll sections in their grooves D^1, D^1, and bearing against the feathers E, E, are provided. These constitute frictional clutches, such that the movable sections C, C, can be set accurately to accommodate the various sizes of controlling sheets, even though their widths may be slightly modified through changes of moisture and temperature of the atmosphere. The pressure of the springs F, F, upon the feathers may be varied as desired, by means of set screws G, G, shown in the flanges of the roll sections.

For preventing any increase of distance between the flanges D, D, after they have been set for a given width of sheet, and during the operation of the sheet-feeding mechanism, safety catches H, H are provided on each of them. These catches each comprise a dog pivoted to the flange, as shown at D^3, and having one end, H^1, shaped for engaging the feather E at an angle slightly less than 90°. Any movement of the flange toward the end of the shaft then would tend to increase this angle, with the well understood result of increasing the grip of the dog on the feather. A spring J presses the dog onto the feather E, and release is accomplished by pressure on the outer end H^2 of the catch-lever H.

I claim:—

1. A take-up roll for automatic musical instruments comprising a shaft; a roll section slidably mounted thereon and provided with a flange at its outer end; a spring device carried by the roll section for frictional engagement with the shaft; a dog mounted upon the flange for engaging the shaft to prevent movement of the roll section outward toward the end of the shaft; means for varying the pressure of the frictional spring device, and means for releasing the dog.

2. A take-up roll for automatic musical instruments comprising a shaft having a longitudinal feather; a roll section mounted thereon provided with a flange at its outer end and having a groove embracing the feather; a dog pivoted on said flange for engaging the feather to prevent movement of the roll section outward toward the end of the shaft, and means for releasing the dog.

3. A take-up roll for automatic musical instruments comprising a shaft having a longitudinal feather; a roll section mounted thereon provided with a flange at its outer end and having a groove embracing the feather; a spring device secured to the roll section in the groove for frictional engage-

ment with the feather; means for varying the pressure of said spring device; a dog pivoted on said flange for engaging the feather and preventing movement of the roll section outward, and means for releasing the dog.

In testimony whereof, I have hereunto set my hand, in the presence of two witnesses, at Chicago, Illinois, this 20th day of October, 1910.

MELVILLE CLARK.

Witnesses:
ROBT. N. BURTON,
JEAN ELLIOTT.