

No. 688,253

Patented Dec. 3, 1901.

G. B. KELLY.  
SPOOL FOR MUSIC ROLLS.

(Application filed July 1, 1901.)

(No Model.)

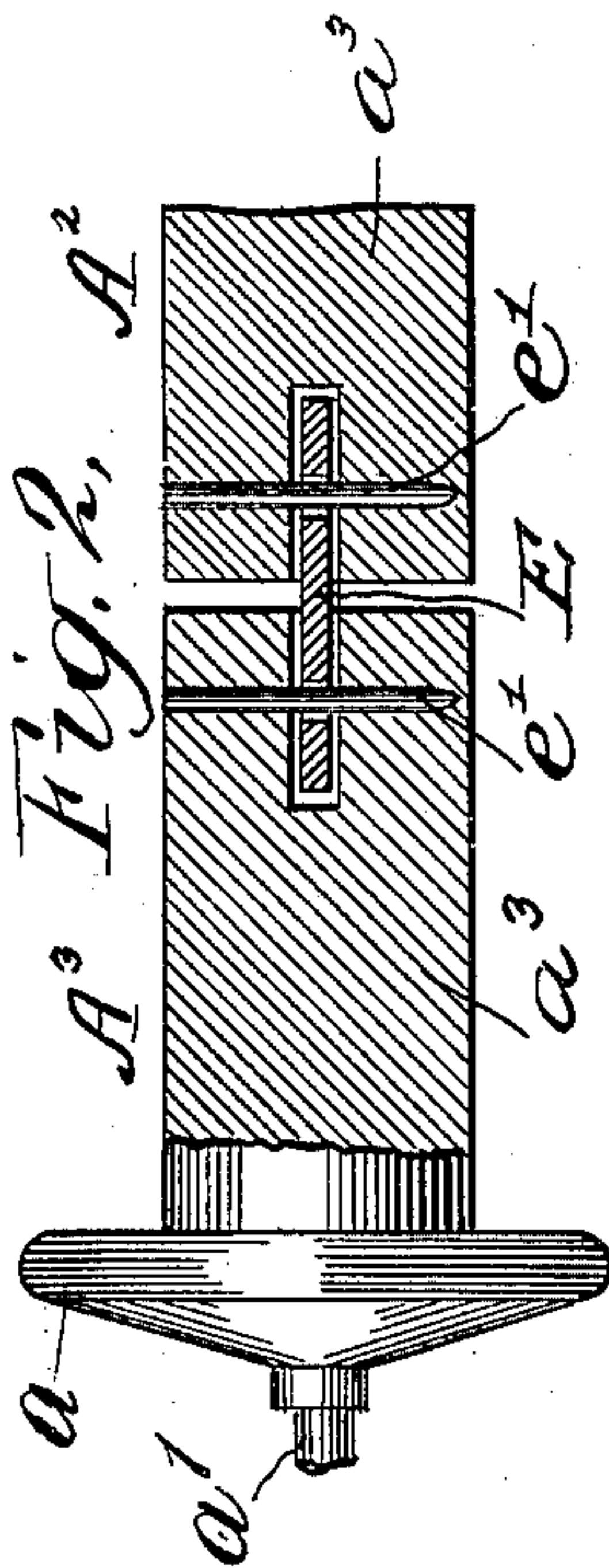
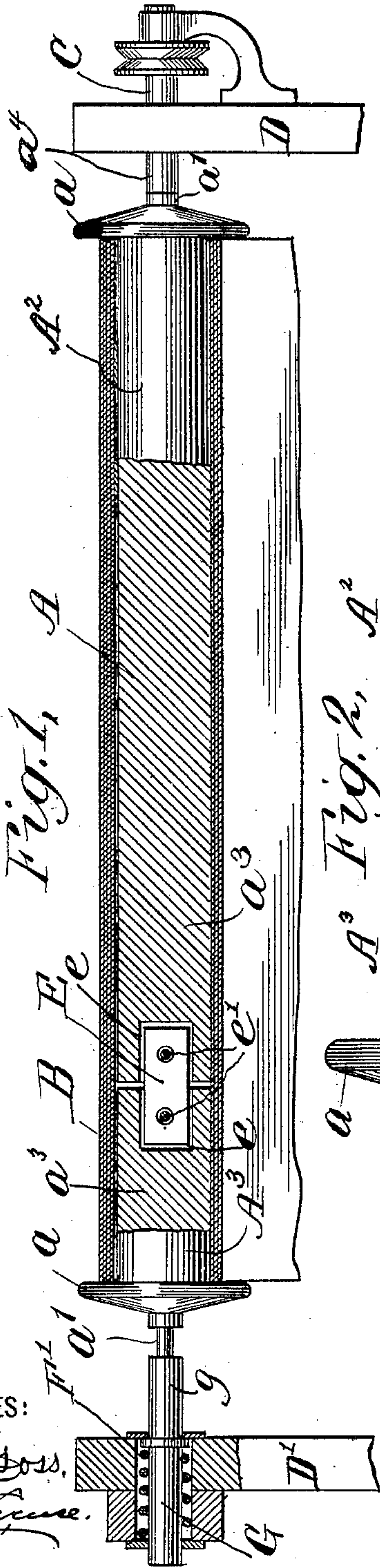
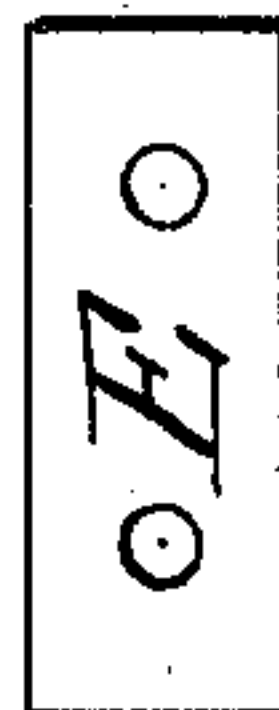


Fig. 3,



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE BRADFORD KELLY, OF JAMAICA PLAIN, MASSACHUSETTS.

## SPOOL FOR MUSIC-ROLLS.

SPECIFICATION forming part of Letters Patent No. 688,253, dated December 3, 1901.

Application filed July 1, 1901. Serial No. 66,635. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE BRADFORD KELLY, a citizen of the United States, residing at Jamaica Plain, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Spools for Music-Rolls, of which the following is a specification.

My invention relates to spools for music-rolls; and the object of my invention is to provide a spool for such rolls which will permit of the music-sheet expanding and contracting due to changes in the atmosphere.

I will describe a spool for music-rolls embodying my invention and then point out the novel features thereof in the claims.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a spool for a music-roll embodying my invention and mounted in the usual bearings provided for such rolls in a mechanical musical instrument. Fig. 2 is a detail sectional view drawn to a larger scale than Fig. 1. Fig. 3 is a detail view.

Similar letters of reference designate corresponding parts in all of the figures.

A represents a spool, and B a perforated music-sheet wound thereon, the whole constituting a music-roll. The spool A is here shown as being in two parts  $A^2$   $A^3$ , each provided with a flange  $a$ , by means of which the music-sheet is evenly wound and confined on the spool, and with a journal  $a'$ . The body  $a^3$  of the part  $A^2$  is preferably longer than the body  $a^3$  of the part  $A^3$ , and its journal  $a'$  is provided with a feather or otherwise formed to engage in a socket  $a^4$  or bearing formed in the end of a driving-shaft C, supported in a standard D.

The music-sheet B is wound about both parts of the spool, and its end is secured to the part  $A^2$  by pasting or otherwise. The part  $A^3$  is left entirely free to have longitudinal movement, and thus can be moved by the paper in one direction when it swells. To prevent the part  $A^3$  from dropping out of position in the roll, I provide a plate E, of metal or other material, (see Fig. 3,) which is set in recesses  $e$  in the abutting ends of the two sections and held therein by pins  $e'$ , which pass through openings  $e^2$ , provided in the plate E. The openings  $e$  are of a larger diameter than the pins  $e'$  in order that the part  $A^3$  may have longitudinal movement. The plate E also has the function of a spline—

that is, when the part  $A^2$  is rotated the part  $A^3$  will be rotated simultaneously. A further use of the plate E is that it permits of either part of the spool being grasped by the hand for rotating the spool to tighten the paper about it.

In the use of the roll the journal  $a'$  of the part  $A^3$  is adapted to fit in a socket  $g$ , provided in a cylinder G, mounted in a standard  $D'$ , which is normally forced in the direction of the spool A by a spring  $F'$ . The advantage of having the movable part of the roll engage with a yielding journal is that the flange  $a$  of this part will always when the roll is in use be pressed against the longitudinal edge of the music-sheet to travel in a proper course over a tracker-board.

What I claim as my invention is—

1. A spool for a music-roll consisting of two parts one of which is connected with the end of a music-sheet and the other free thereof to have free longitudinal movement to compensate for changes in the music-sheet due to atmospheric changes.

2. A spool for a music-roll consisting of two parts, one of which is connected with the end of a music-sheet and the other free thereof and a suitable connection between the two parts such as to prevent displacement of the free part from its position in the roll and to permit some longitudinal movement of the free part in the roll.

3. A spool for a music-roll consisting of two parts, one of which is connected with the end of a music-sheet and the other free thereof, and means for preventing displacement of the free part from its position in the roll, said means consisting of a plate having an end extending into a recess provided in each part of the spool and pins which pass through openings in the said plate.

4. The combination of a spool formed of two independent parts, a music-sheet secured at one of its ends to one of said parts, of a stationary bearing for the part of the spool to which the music-sheet is connected and a yielding bearing for the free part of the spool substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE BRADFORD KELLY.

Witnesses:

GEO. E. CRUSE,  
K. G. LE ARD.