No. 709,054. Patented Sept. 16, 1902.

C. H. SHAW.

PERFORATED MUSIC SHEET FOR AUTOMATIC MUSICAL INSTRUMENTS.

(Application filed Mar. 20, 1902.)

(No Model.)

Fig. 1,

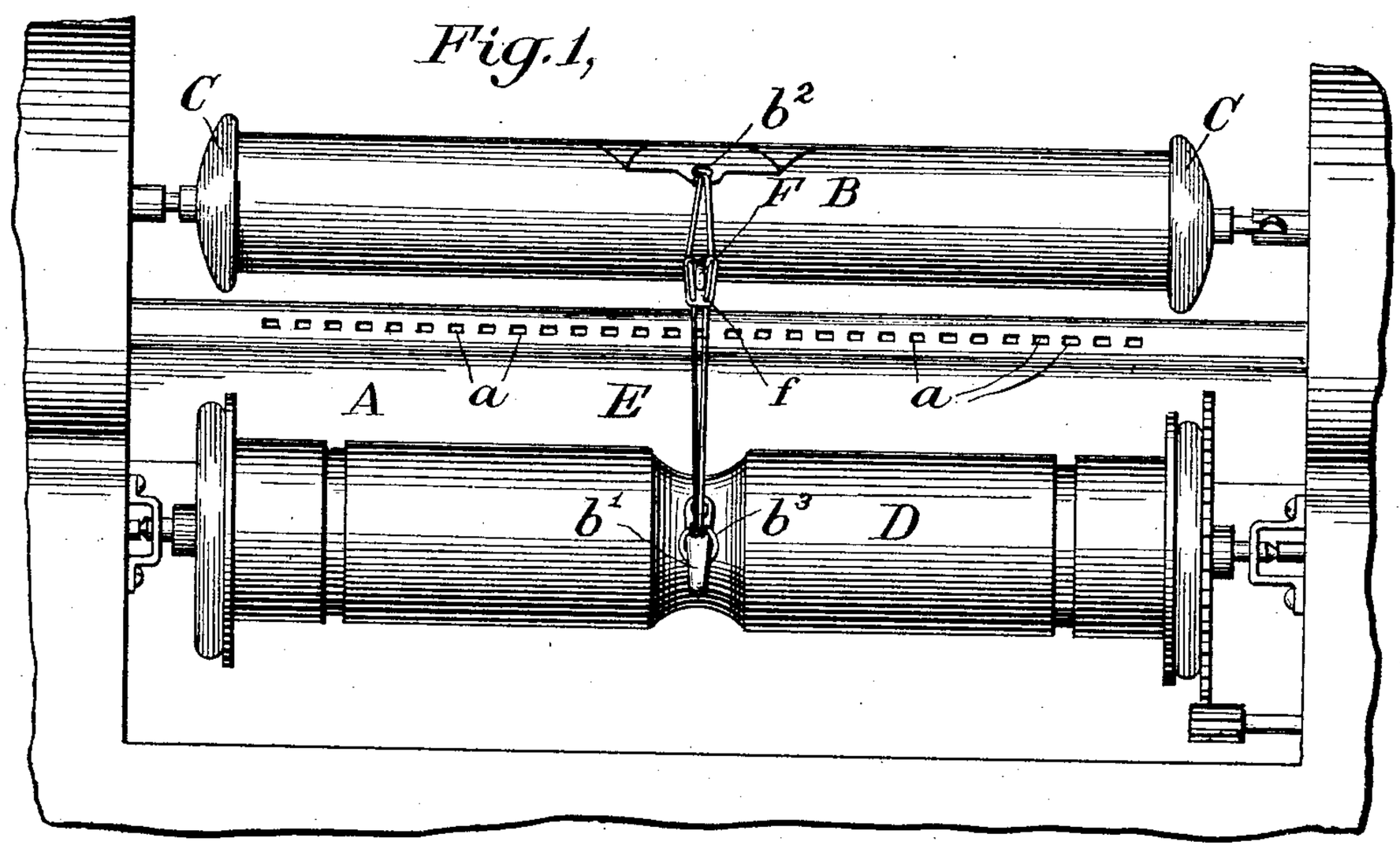


Fig. 2,

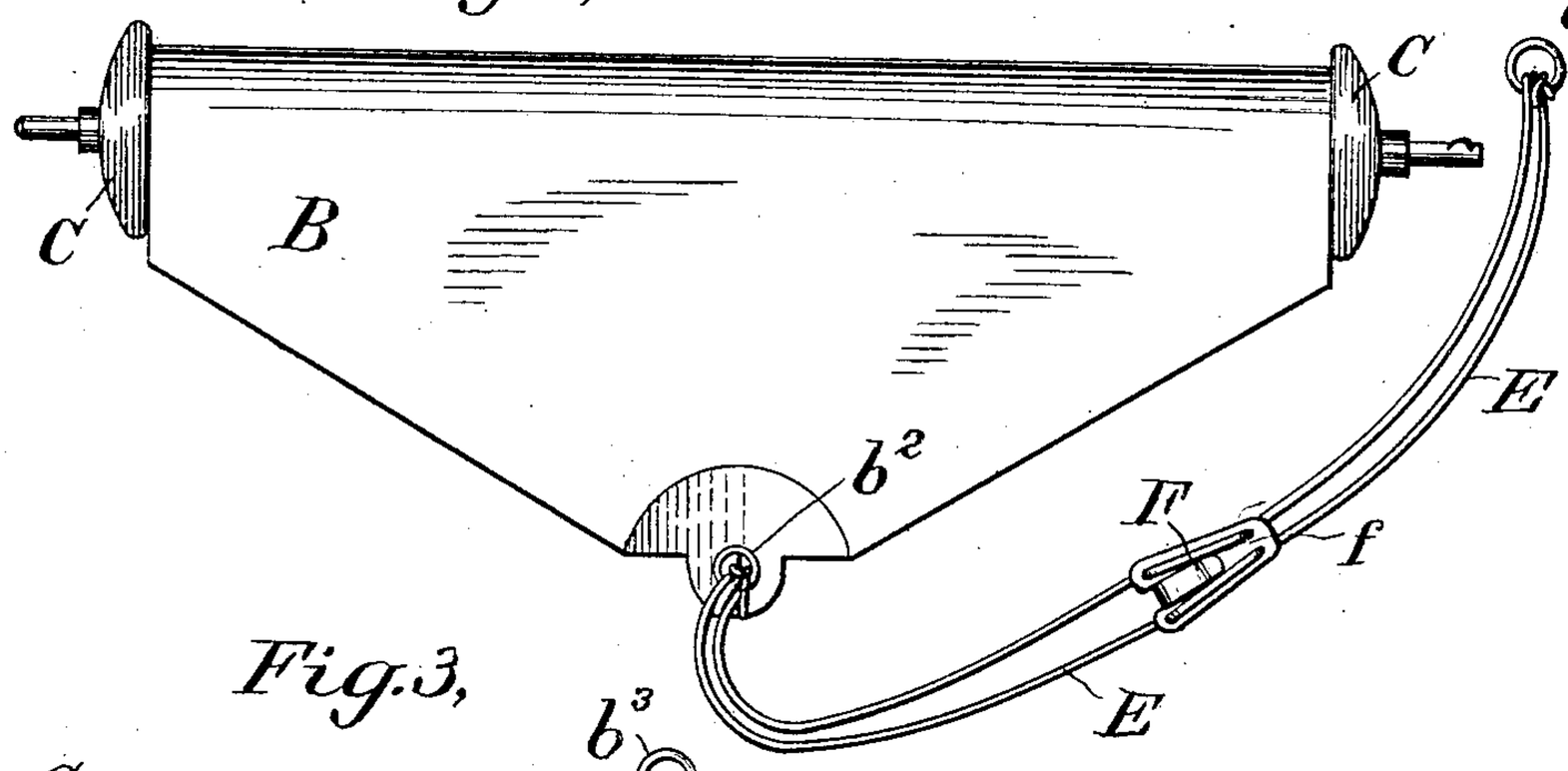
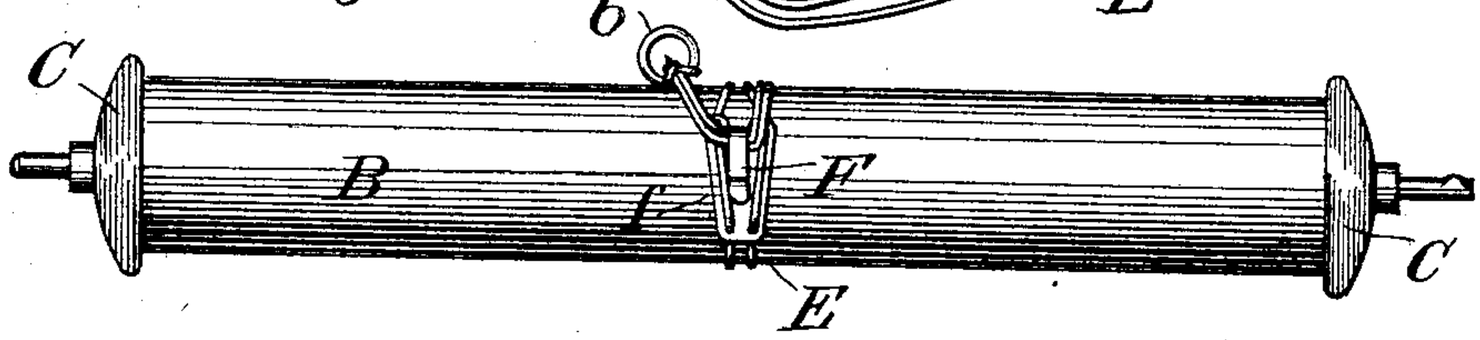


Fig. 3,



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES HARRIS SHAW, OF BROOKLYN, NEW YORK, ASSIGNOR TO THE AEOLIAN COMPANY, OF NEW YORK, N. Y., A CORPORATION OF CONNECTICUT.

PERFORATED MUSIC-SHEET FOR AUTOMATIC MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 709,054, dated September 16, 1902.

Application filed March 20, 1902. Serial No. 99,045. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HARRIS SHAW, of the borough of Brooklyn, county of Kings, city and State of New York, have invented a new and useful Improvement in Perforated Music-Sheets for Automatic Musical Instruments, of which the following is a specification.

Automatic musical instruments are quite commonly controlled by perforated music-sheets which are made of paper and which while not in use are kept wound upon a roll, usually called a "music-roll" and adapted to be detachably engaged with bearings in the musical instrument to be controlled by the music-sheet. It is desirable to provide some simple and convenient means for securing the music-sheets in a rolled condition.

The object of my improvement is to provide such a means.

The improvement comprises a piece of cord or similar flexible material attached to the outer end of the music-sheet and made of suitable length to be wound around the music-sheet after the same shall have been fully wound on the music-roll. With this cord or similar material is combined a ring or analogous device for engagement with the take-up roll onto which the music-sheet is wound during the playing of a tune. There will also be combined with the cord or similar material a catch with which the cord or similar material may be engaged after having been passed around the music-sheet.

In the accompanying drawings, Figure 1 is a front or top view of certain parts of an automatic musical instrument having a music-sheet embodying my improvement applied thereto. Fig. 2 is a similar view of the music-sheet but partly unwound and with the cord and appurtenances which embody my improvement extended. Fig. 3 is a similar view of the music-sheet, with the cord wound around the music-sheet and engaged with a catch.

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

A designates the tracker of a musical instrument. I have represented it as of an ordinary construction, comprising ducts *a*.

B designates a music-sheet provided with perforations for controlling the ducts *a*.

C designates a music-roll to which the music-sheet is permanently attached and upon which it is fully wound when not in use. This music-roll has one or both of its journals constructed so that it may be detachably engaged with its bearings and so as to be capable of receiving rotary motion from one of them.

D designates another roll which ordinarily will be a fixture in the instrument and is commonly known as a "take-up" roll. The outer end of the music-sheet is engaged with it when the music-sheet is to be used, and thus the music-sheet will be unwound from the music-roll and wound upon the take-up roll. Of course the engagement of the outer end of the music-sheet with the take-up roll must be detachable. Commonly the take-up roll has a circumferential groove *b* midway between its ends and a hook *b'* arranged within that groove. When such is the construction of the take-up roll, the engaging device of the music-sheet is usually a ring adapted to engage with the hook *b'* of the take-up roll.

The outer end of the music-sheet B is here shown as provided with an eyelet b^2, and with that is engaged a piece of cord E or similar flexible material. At the outer end of the cord or similar material will be a device for engaging with the take-up roll. In the present instance that device is shown as a ring b^3. A catch is also provided, and in the present instance this catch consists of a hook F, extending from a plate *f*, having four holes near its corners, through which duplicate portions of the cord E are passed. This is a convenient way of engaging the hook with the cord, as provision is afforded for sliding the hook along the cord lengthwise. After the winding of the music-sheet the cord or similar material will be wound around the same and the end portion engaged with the hook F. The hook F will preferably be of such proportions as to grip and hold the free end of the cord, and it may be resilient. It and its plate *e* may advantageously be made of sheet metal. When the duplicate portions of the cord are threaded through holes near the cor-

ners of the plate *e*, so that portions of the cord will extend above the plate *e*, these portions of the cord may aid in securing the free end portion of the cord by friction. When the engaging device of the music-sheet is attached to the hook *b'* of the take-up roll, the cord E will lie in the groove *b* of the take-up roll, and hence it will not produce any ridge on the take-up roll beneath the music-sheet when the latter is wound upon the take-up roll.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same and provided with an engaging device for attachment to the take-up roll of an automatic musical instrument.

2. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same and provided with an engaging device consisting of a ring for attachment to the take-up roll of an automatic musical instrument.

3. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same and a catch for the free end portion of the cord.

4. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same, and a catch consisting of a hook for the free end portion of the cord.

5. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same and a catch consisting of a resilient hook for the free end portion of the cord.

6. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same, and a catch consisting of a hook extending from a plate through which portions of the cord or similar material are threaded.

7. The combination with a music-roll and a music-sheet of a cord or similar material extending from the same and provided at its outer end with an engaging device for attachment to the take-up roll of a musical instrument, and provided intermediate of its ends with a catch for engaging the free end portion of the cord or similar material.

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

CHARLES HARRIS SHAW.

Witnesses:
GEO. E. CRUSE,
R. H. E. STARR.