No. 647,394. Patented Apr. 10, 1900.

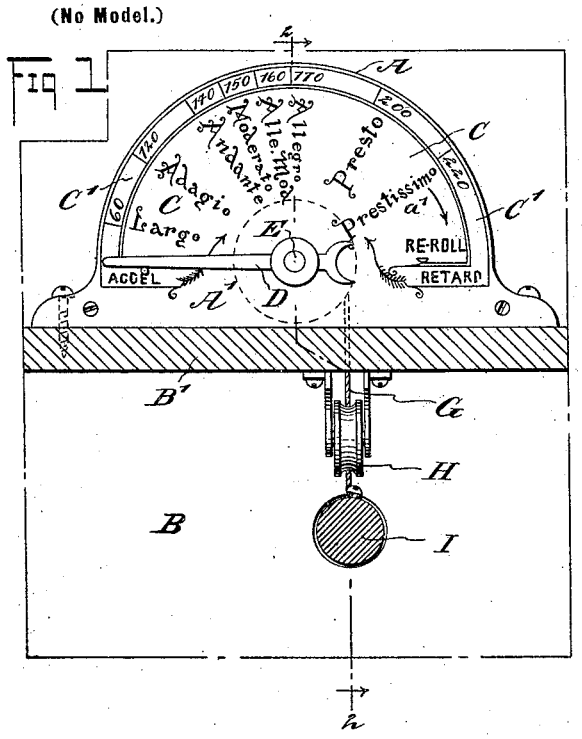
C. H. FREYER.

SPEED CONTROLLER AND TIME INDICATOR FOR SELF PLAYING PIANOS OR ORGANS.

(Application filed Sept. 20, 1899.)

(No Model.)

Fig 1



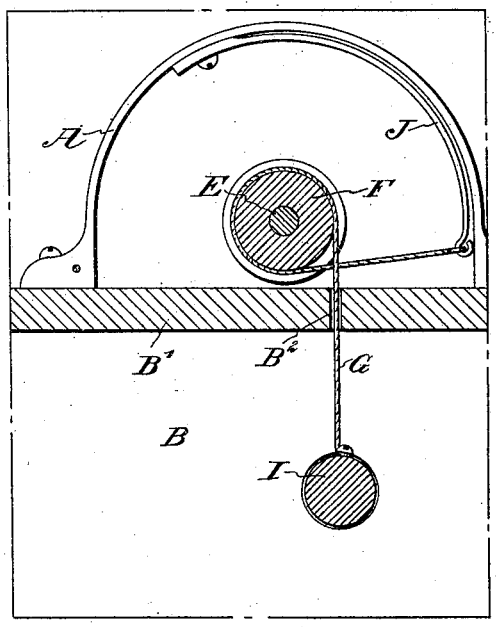


Fig 3

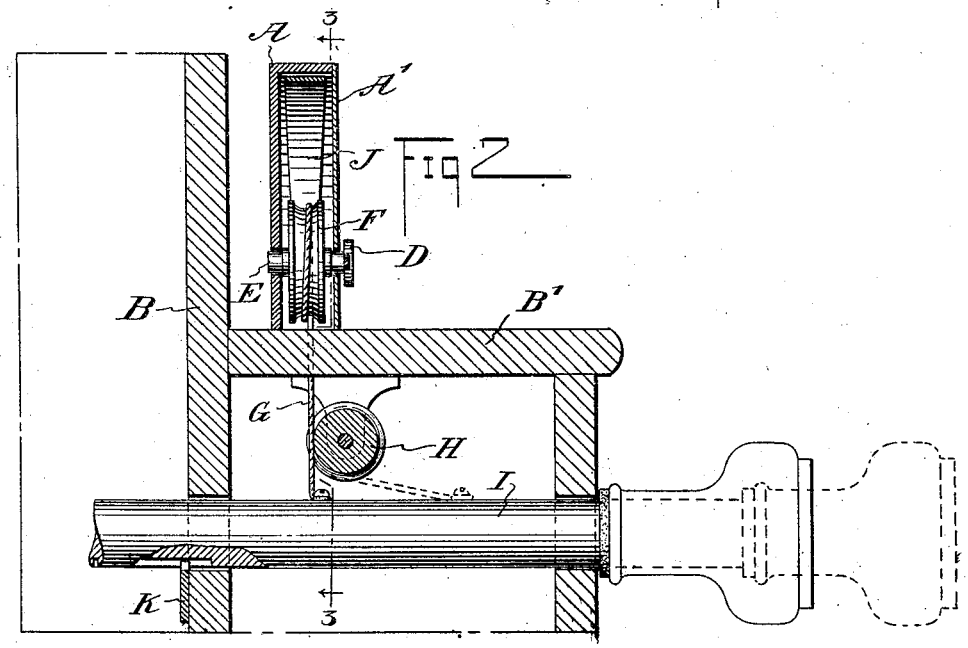


Fig 2

WITNESSES:

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CHARLES HENRY FREYER, OF MARIETTA, GEORGIA.

SPEED-CONTROLLER AND TIME-INDICATOR FOR SELF-PLAYING PIANOS OR ORGANS.

SPECIFICATION forming part of Letters Patent No. 647,394, dated April 10, 1900.

Application filed September 20, 1899. Serial No. 731,113. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HENRY FREYER, of Marietta, in the county of Cobb and State of Georgia, have invented a new and Improved Speed-Controller and Time-Indicator for Self-Playing Pianos or Organs, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved speed-controller and time-indicator for self-playing pianos, organs, and other similar musical instruments and arranged to enable the performer to control the speed of the instrument accurately according to the correct time stated on the notation of the music to be executed.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a face view of the improvement as applied and with parts in section. Fig. 2 is a transverse section of the same on the line 2 2 in Fig. 1, and Fig. 3 is a sectional front elevation of the same on the line 3 3 in Fig. 2.

The improved device is provided with a casing A, provided on its front face with a dial A′ and made approximately semicircular in shape, as shown in Fig. 1, the casing being secured to the front shelf B′ of the casing B of the musical instrument on which the device is applied, so that the dial is constantly in view of the performer seated in front of the casing.

The indicator-dial is provided with two scales C C′, of which the scale C gives the Italian names of the time, while the scale C′ indicates metronome time—that is, the number of beats per minute. On the scales C C′ is a pointer D, secured to a transversely-extending shaft E, journaled in the casing A, a drum F being secured to the said shaft within the casing. On this drum F winds a cord G, one end of which extends downward through an aperture B^2 in the shelf B′ to then extend over the rear of a pulley or guide H, the end of the cord being secured to a stop I, mounted to slide in the casing B and connected in the usual manner with the lever for controlling the speed of the instrument or preferably directly to the motor-valve, any motion of which is indicated on the dial directly through the cord G. The position of the stop I therefore varies according to the position of the motor-valve. The other end of the cord G is secured to the free end of a spring J, attached to the inside of the rim of the casing, as shown in Fig. 2. A stop-pin K, held on the instrument-casing B, engages a longitudinal recess I′ in the stop I to limit the inward and outward sliding motion thereof and to prevent the stop from turning in its bearings. The front end of the stop I is preferably located under the casing A and is within convenient reach of the performer, so that when the latter draws the stop I the cord G imparts a turning motion to the drum F in the direction of the arrow a', and at the same time the spring J is put under tension, and when the stop is pushed inward the spring draws on the cord and turns the drum F in the inverse direction of the arrow a'. When the drum F is thus rotated, the pointer D is moved over the face of the dial A′ to indicate both the name of the time and the metronome time—that is, the corresponding number of beats per minute. Now it is evident that when the music notation designates a given time—say, for instance, adagio, which corresponds to one hundred and twenty beats per minute—then the performer slides the stop I transversely until the pointer D indicates on the scales or graduations C C′ at "Adagio" and "120." Now the connection of the stop I with the speed-controlling lever of the instrument is such that the said lever is moved a distance to run the instrument according to adagio time, so that the music is performed accurately according to the time intended by the composer.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A speed-controller and time-indicator, comprising a dial, a pivoted pointer indicating thereon, a drum on the pivot of the pointer, a cord winding on said drum, a sliding stop which varies the speed, the pivot of the

pointer being parallel with said stop, and a guide arranged transversely of the stop and engaged by said cord, the end of the cord being attached to the stop.

2. A speed-controller and time-indicator, comprising a dial, a pivoted pointer indicating thereon, a drum on the pivot of the pointer, a cord winding on said drum, a sliding stop which varies the speed, the pivot of the pointer being parallel with said stop, and a pulley mounted to turn about an axis arranged transversely of the stop, the cord passing over said pulley and being attached to the stop.

3. A speed-controller and time-indicator, comprising an indicator-dial, a pointer for the same, a shaft carrying the pointer, a drum on the said shaft, a cord winding on the said drum and having one end secured to a spring, and a slidable stop for controlling the speed of the instrument and to which the other end of said cord is secured, the stop moving parallel with the axis of the shaft substantially as shown and described.

4. A speed-controller and time-indicator, comprising a sliding stop which varies the speed, a guide mounted to turn about an axis extending transversely of said stop, a dial, a pointer arranged to indicate thereon, and a flexible connection extending from the stop to said guide and from the guide to the pointer, to operate the latter.

CHAS. HENRY FREYER.

Witnesses:
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