

E. F. GILES.
 BRAKE TIMING ATTACHMENT FOR TALKING MACHINES.
 APPLICATION FILED APR. 16, 1917.

1,274,706.

Patented Aug. 6, 1918.
 2 SHEETS—SHEET 1.

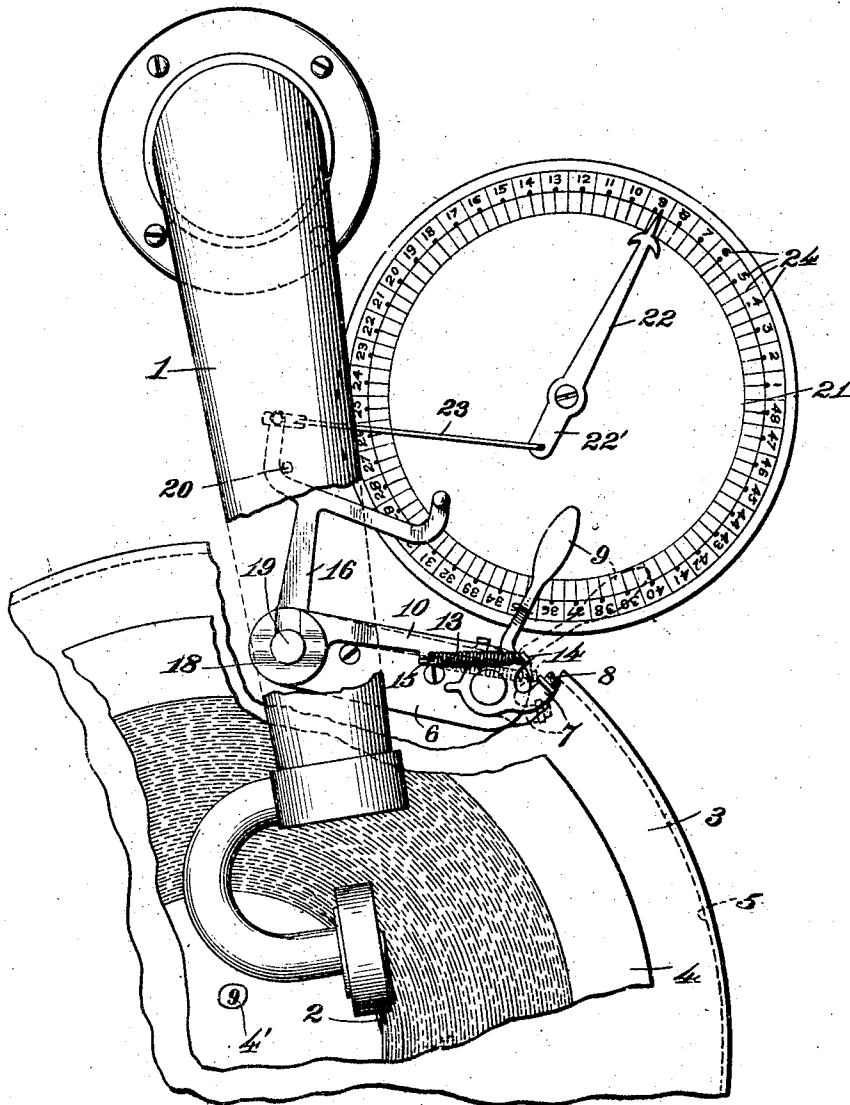


Fig. 1.

Inventor

Ellsworth F. Giles

By *John R. H. Totten*

Attorney

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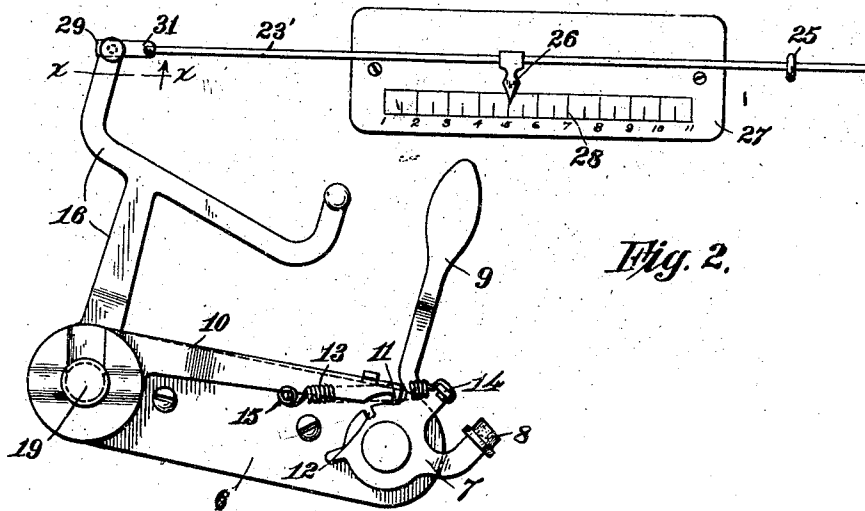


Fig. 2.

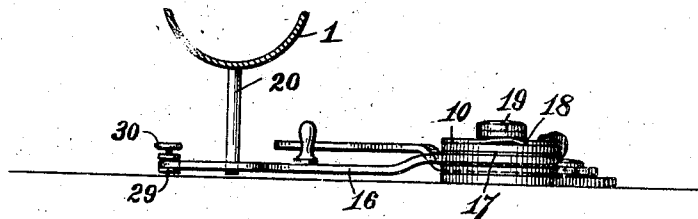


Fig. 3.

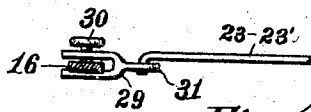


Fig. 4.

Inventor
Ellsworth F. Giles

By *John H. F. F. F.*

Attorney

UNITED STATES PATENT OFFICE.

ELLSWORTH F. GILES, OF ALTOONA, PENNSYLVANIA.

BRAKE-TIMING ATTACHMENT FOR TALKING-MACHINES.

1,274,706.

Specification of Letters Patent.

Patented Aug. 6, 1918.

Application filed April 16, 1917. Serial No. 162,294.

To all whom it may concern:

Be it known that I, ELLSWORTH F. GILES, a citizen of the United States, residing at Altoona, county of Blair, and State of Pennsylvania, have invented certain new and useful Improvements in Brake-Timing Attachments for Talking-Machines, of which the following is a specification.

This invention relates to phonographs or talking machines and has particular reference to means for automatically stopping the operation of the machine when the reproduction of the record has been completed.

I am aware that numerous brake devices have been devised for use upon machines of this class, but the difficulty of properly setting such brake mechanism to stop the mechanism quickly upon the completion of the reproduction is well known and is a source of annoyance to owners and operators. My invention does not contemplate any particular structure of brake mechanism but relates solely to an attachment or adjunct to such brake mechanism by means of which the brake mechanism may be readily and quickly set to operate at the proper time.

The object of my invention is to provide an attachment for a talking machine brake by means of which said brake may be readily and quickly set to operate at the proper predetermined time. Further objects of my invention are to provide a device of the character mentioned which shall be of simple construction, of low cost to manufacture and which may be readily applied to practically any machine equipped with the usual brake mechanisms either at the factory or to those that are in use. Other objects will appear hereinafter.

Brakes of the class used on talking machines generally comprise a brake arm provided with a brake shoe for frictionally engaging the rotary table of the machine, a pivoted latch for holding the brake arm in inoperative position and a trip arm frictionally connected to the latch. The swinging reproducer arm is provided with a depending post or detent which engages the trip arm thereby disengaging the latch and releasing the brake. To set the brake it has heretofore been necessary to place the needle of the reproducer in the groove of the record slightly beyond the end of the reproducing portion thereof and while in this position to bring the trip arm into engagement with the

depending post or detent on the reproducer arm, after which the arm is swung outwardly and placed in the outer convolution of the record and the brake released. At the completion of the reproduction of the record the depending post or detent on the reproducer arm engages the trip arm which through the frictional engagement with the latch releases the brake which is usually thrown into operative position by a spring. The difficulty with devices of this class is to properly place the needle when setting the brake and the time and trouble incident thereto. This is such a recognized difficulty that various means have been devised to minimize the same, such as equipping the machine with small electric flash lights and magnifying glasses, and the like. My invention contemplates the entire elimination of the difficulties arising from thus properly setting the brake.

With the above mentioned objects in view my invention consists generally in providing an indicator and scale and connecting the indicator with the trip arm of the brake mechanism so that the proper positioning of the trip arm will be indicated on the scale, and to equip each record with a number or symbol corresponding to the numbers or symbols on the scale. These numbers are determined experimentally, either by the user of the machine when the device is applied thereto or at the factory when the machines are equipped with the device before being placed on the market. A record having been once properly designated will always be properly reproduced and the machine stopped at the end of the reproduction thereof when the indicator is set at the corresponding symbol on the scale. My invention further consists in various details of construction and arrangements of parts all as will be fully described hereinafter and particularly pointed out in the claims.

My invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a detail plan view of a portion of a talking machine with its brake mechanism and equipped with the setting device embodying my invention in its preferred form, parts being broken away for the purpose of illustration,

Fig. 2 is a detail plan view of a modified

form of my invention illustrated in conjunction with one of the usual forms of brake mechanisms,

Fig. 3 is a detail side elevation of the brake mechanism and correlated parts, and Fig. 4 is a detail sectional view on substantially the line $x-x$ of Fig. 2.

Referring now to the drawings 1 indicates the swinging reproducer arm, 2 the needle carried thereby, 3 the rotary table and 4 a record disk thereon. The table 3 is provided with the usual depending peripheral flange 5 which is engaged by the brake mechanism.

As shown in the drawings I have illustrated a common form of brake mechanism such as is used on the Victor machines. This comprises a base plate 6 upon one end of which is mounted the brake arm 7 equipped with a brake shoe 8 for engaging the flange 5 on the table. The brake arm has formed integrally therewith a manually operable arm 9 for releasing the same. Mounted upon the opposite end of the base plate 6 is a latch or dog 10 provided with a detent 11 engaging in a notch 12 formed in a portion of the brake lever. A spring 13 secured at its ends to ears 14 and 15 on the lever 7 and dog 10 respectively hold the same normally in engagement. Coaxially mounted with the releasing dog 10 is a trip lever 16. The pivotal ends of the dog 10 and lever 16 are in frictional engagement as by a frictional washer 17 interposed between the same. A spring disk 18 interposed between said pivotal ends and the head of the pivot pin 19 produces the necessary frictional engagement. Depending from the reproducer arm 1 is a post or detent 20 in the path of which is arranged the lever 16 as clearly shown in Figs. 1 and 3. This portion of the device is old and forms no part of my invention except as used in combination therewith.

The normal operation of this portion of the device is as follows: To set the brake the needle 2 is placed in the inner portion of the groove of the record as indicated in Fig. 1 and the lever 16 is moved until it engages the detent 20. The needle is then moved outwardly in the outer convolution of the record, the brake is released by means of the arm 9, setting the device into operation. When the arm 9 and its integral brake arm 7 is swung into the position shown in dotted lines in Fig. 1, the detent 11 engages in the notch 12 holding the brake out of operation. As soon as the needle reaches the initial position, that is, the position where it was when the arm 16 was set, the detent 20 engages the trip arm 16 and the latter, through its frictional engagement with the dog 10 disengages the detent 11 from the notch 12 and released the brake, the spring 13 immediately throwing the brake shoe 8 into engagement with the flange 5 on the table thereby stopping the machine.

As before stated, my invention contemplates an attachment whereby the brake may be properly set without the necessity of placing the needle in position at the end of the record. To this end I provide a scale 21 and an indicator 22 connected by an arm 23 to the trip arm 16. The scale 21 is provided with a plurality of symbols 24 which correspond with symbols 4' provided on the record. As previously stated if the device is applied to a machine in use these numbers or symbols are applied to the records after properly experimenting with each record, but when supplied for machines equipped at the factory with my invention the records are also provided with the proper symbol 4' so that no experimenting or initial setting of the device is necessary. For instance, if the symbol 4' on the record is "9" the arm 16 is moved until the indicator 22 is at 9. The needle is placed in the outer portion of the record and the brake released. As soon as the needle reaches the end of the record the detent 20 engages the arm 16 and operates the same to actuate the brake.

In Fig. 1 I have illustrated a pivotally mounted indicator hand provided with a short arm 22' to which the connecting rod 23 is attached and the scale takes the form of a circle divided into the proper number of component parts suitably numbered or symbolized. In Fig. 2 I have indicated a modified form of my invention wherein the rod 23' is provided at its free end with a fixedly mounted guide 25 and is equipped with a fixed indicator point 26. A scale plate 27 provided with a suitable scale 28 is arranged in proper relation to the indicator point 26. It is obvious that swinging of the arm 16 will operate the point 26 similar to the operation of the indicator hand 22. To facilitate attaching the device to the arm 16, a bifurcated member or clamp 29 is provided equipped with a setscrew 30 by means of which it may be securely clamped to the arm 16 as shown in Figs. 2 and 4. The clamp 29 is provided with an ear 31 to which the end of the rod 23 or 23' is pivotally connected. To attach the device to a machine it is but necessary to secure the clamp 29 to the arm 16 and then properly locate the scale plate 21. If the device in the form shown in Fig. 2 is employed it is but necessary to secure the clamp 29 as above stated, then locate the guide 25, which is preferably a screw eye and then properly place the scale plate 27 with relation to the indicator point 26. It will thus be seen that the device is of very simple construction and may be readily and quickly attached to substantially any machine provided with a brake mechanism; also that the necessity of preliminarily setting the brake by means of initially placing the needle 26 at the end of the record with its inherent difficulties is avoided.

I claim:

1. A talking machine equipped with a brake comprising a brake arm, a latch and an adjustable trip arm in combination with
5 a pivotally mounted indicator hand, a connecting rod operatively connecting said indicator hand and said trip and a scale in operative relation to said indicator hand, substantially as described.
- 10 2. An attachment for talking machines equipped with a brake mechanism including an adjustable trip arm, said attachment comprising an indicator, a correlated scale and means for attaching said indicator to said
15 trip arm, substantially as described.
3. An attachment for talking machines equipped with a brake mechanism including an adjustable trip arm, said attachment comprising an indicator point and coöperating scale, a rod connected to said indicator point 20 and a clamp on the end of said rod for detachably connecting the same to said trip arm, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 25 two subscribing witnesses.

ELLSWORTH F. GILES.

Witnesses:

J. ELVIN BRUMBAUGH,
DOROTHY FOX.