

J. A. JOHNSON.
STOP FOR GRAMOPHONES.
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982,138.

Patented Jan. 17, 1911.

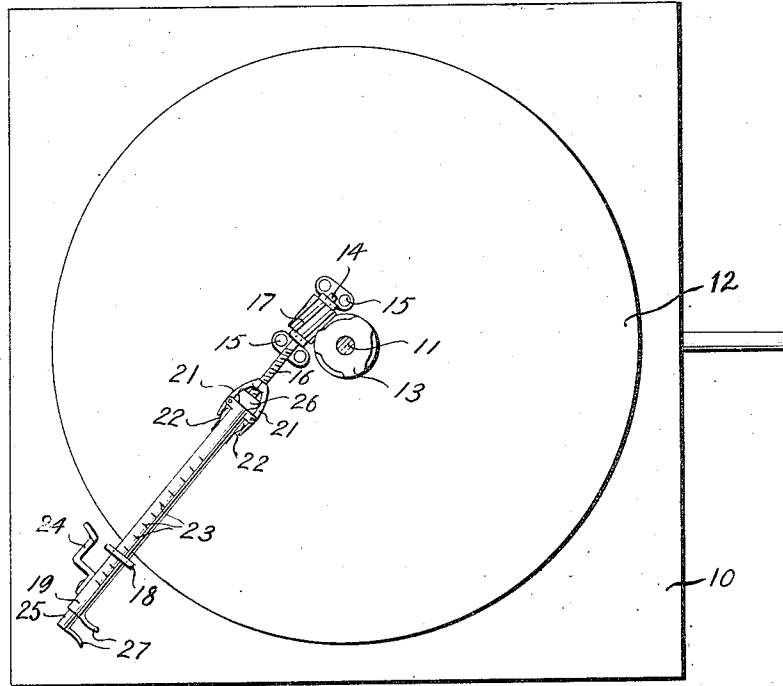


Fig. 1

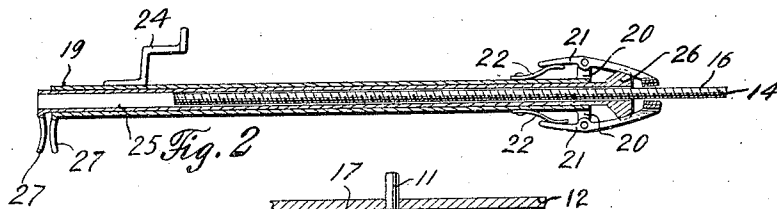


Fig. 2

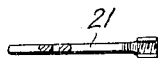


Fig. 3

Witnesses

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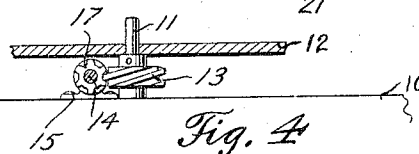


Fig. 4

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STOP FOR GRAMOPHONES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN A. JOHNSON, a citizen of the United States, residing at Sauk Center, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Stops for Gramophones; of which the following is a specification.

This invention relates to gramophones and particularly to brakes for the same which will stop the rotation of the turn table when the extremity of the record has been reached.

It also contemplates the construction of a device of this type which may be retained from operation while the same is being set.

A further object is the provision of a means whereby the records may be gaged and the brake set to conform with the size of the record.

With the above and other objects in view this invention consists in the construction, combination, and arrangement of parts all as hereinafter more fully described, claimed, and illustrated in the accompanying drawings, wherein.

Figure 1 is a top plan view of a gramophone embodying the present invention, illustrating the box and turn table diagrammatically; Fig. 2 is a central longitudinal section of the brake operating mechanism; Fig. 3 is an interior elevation of one of the operating shaft engaging levers; Fig. 4 is an end elevation of the brake operating shaft illustrating the cooperation thereof with the gramophone shaft.

The present invention resides in the provision of a worm gear carried on the central vertical shaft of a gramophone directly beneath the turn-table, said worm gear meshing with a worm keyed to a shaft, and said shaft extending outwardly toward the periphery of the turn-table and is threaded substantially its entire length. A tubular member is mounted under the turn table and carries at its inner extremity a pair of oppositely disposed spring pressed levers which are threaded to engage the threads of said shaft. Thus as said shaft turns said tubular member is drawn inwardly and due to the fact that the same carries a brake which will operate against the edge of the turn table, consequently the rotation of said turn table will cease.

An inner tubular member provided with an enlargement at its inner extremity is reciprocatingly mounted within the outer

tubular member and is so constructed that an enlargement at the terminal thereof will release the levers aforesaid from engagement with the threads on the shaft permitting the brake carried by the outer tubular member to be withdrawn from the periphery of the turn table.

Reference being had more particularly to the drawings 10 indicates the top of a gramophone box provided with a central vertical shaft 11 on which is rigidly mounted the turn table 12. Keyed to the shaft 11 directly below the turn table is a worm gear 13, said gear being adapted to rotate with the shaft and at the same rate of speed. A shaft 14 is journaled in the bearings 15 adjacent to the worm gear 13 and is provided with the threads 16 extending substantially from one of said bearings to the terminal of the shaft. In order that this shaft may be constantly rotated by the worm gear 13, a worm 17 is keyed to the shaft 14 between the brackets 15 and is constantly in mesh with the gear 13.

A guide or bracket 18 is secured to the top 10 of the gramophone box adjacent to the periphery of the turn table 12, in which is slidably mounted the outer tubular member 19 which incases the threaded extremity of the shaft 14. The inner terminal of this tubular member is provided with the oppositely disposed ears 20 to which are pivoted the levers 21, the rear terminals of said levers having the springs 22 bearing thereagainst to insure the constant engagement of the thread 16 by the forwarded threaded terminals of the levers 21, said springs being carried by the tubular member. The outer side of the member 19 is provided with a gage 23 which in combination with the bracket provides a means whereby the brake may be adjusted to various sizes of records.

A brake member 24 is carried by the tubular member 19 in such a manner that the same is adapted to bear against the periphery of the turn table as the tubular member is drawn in by the contact of the threaded levers 21 with the constantly rotating shaft 14.

An inner tubular member 25 is slidably mounted in the member 19 and is provided at its inner terminals with the slotted enlargement 26, the slots of which are adapted to engage the levers 21 and cause the same to disengage the shaft 14 when the inner

member 25 is forced inwardly, thus permitting the brake to be withdrawn from the edge of the turn table.

The outer terminals of the tubes 19 and 25 are provided with the finger pieces 27, which facilitate the operation of the device. From the foregoing it will readily be seen that when the threaded levers 26 are brought into contact with the threads 16 of the shaft 14, which is constantly in rotation, the tubular member 19 will be gradually drawn toward the center of the phonograph, as a result of which the brake 24 will be brought into operative engagement with the periphery of the turn table 12, thereby stopping the rotation thereof. When it is desired to release the brake and withdraw the tubular member 19 in order that the next record may be started the inner tubular member 25 is forced inwardly, the slotted enlargement 26 causing the levers 21 to disengage the shaft, thereby permitting the tubular member 19 to be withdrawn.

Having thus fully described my invention, what I claim as new and desire to secure by United States Letters Patent is:

1. An automatic brake for talking machines, comprising in combination with a turn table, of a threaded shaft adapted to constantly rotate with said turn table, and means operative by the threads on said shaft whereby a brake may be applied to said turn table.

2. An automatic brake for gramophones, comprising in combination with a turn table, of a rotatable threaded shaft adapted to constantly rotate with said turn table, means operated by said shaft for applying a brake to the periphery of said turn table, and means whereby said last named means may be adjusted.

3. An automatic brake for gramophones comprising in combination with a turn table, of a rotatable threaded shaft adapted to constantly rotate with said turn table, means operated by said shaft for applying a brake to the periphery of said turn table, and means whereby the brake may be released.

4. An automatic brake for gramophones comprising in combination with a turn table, of a threaded shaft adapted to rotate therewith, a tubular member mounted under said turn table and adapted to incase said shaft, means whereby said tubular member may be drawn inwardly by said shaft, and a brake carried by said tubular member.

5. An automatic brake for gramophones comprising in combination with a turn table, of a threaded shaft adapted to rotate

therewith, a tubular member mounted under said turn table and adapted to incase said shaft, means whereby said tubular member may be drawn inwardly by said shaft, and means whereby the brake may be withdrawn from the turn table.

6. An automatic brake for gramophones, comprising in combination with a turn table operating on the central shaft of a gramophone, of a threaded shaft disposed below said turn table and driven directly from said central vertical shaft, a tubular member reciprocatingly mounted on said shaft, means carried by said tubular member whereby the same may traverse on said shaft, and a brake carried by said tubular member adapted to operate against the periphery of the turn table.

7. The combination with a gramophone having a central vertical shaft and a turn table carried thereby, of a threaded shaft mounted on said gramophone beneath said turn table adapted to be operated directly from said central vertical shaft, a tubular member reciprocatingly mounted on said shaft, levers pivoted to the inner terminal of said tubular member adapted to engage the threads of said shaft, and means whereby said levers may be disengaged from said shaft.

8. The combination with a gramophone having a central vertical shaft and a turn table carried thereby, of a threaded shaft mounted on said gramophone beneath said turn table adapted to be operated directly from said central vertical shaft, a tubular member reciprocatingly mounted on said shaft, levers pivoted to the inner terminal of said tubular member adapted to engage the threads of said shaft, and a secondary tubular member reciprocatingly mounted in said first mentioned tubular member adapted to disengage said levers from said threaded shaft.

9. The combination with a gramophone, of a shaft adapted to cooperate with the turn table thereof, means adapted to be drawn inwardly by said shaft, a brake carried by said means adapted to cooperate with the periphery of said turn table, and spring actuated shaft engaging members carried by said brake carrying means.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN A. JOHNSON.

Witnesses:

ALEX BENSON,
G. L. COOPER.