

W. CUTHBERTSON.
 DEVICE FOR AUTOMATICALLY STOPPING THE TURN TABLE OF A PHONOGRAPH.
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1,154,975.

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Fig. 1.

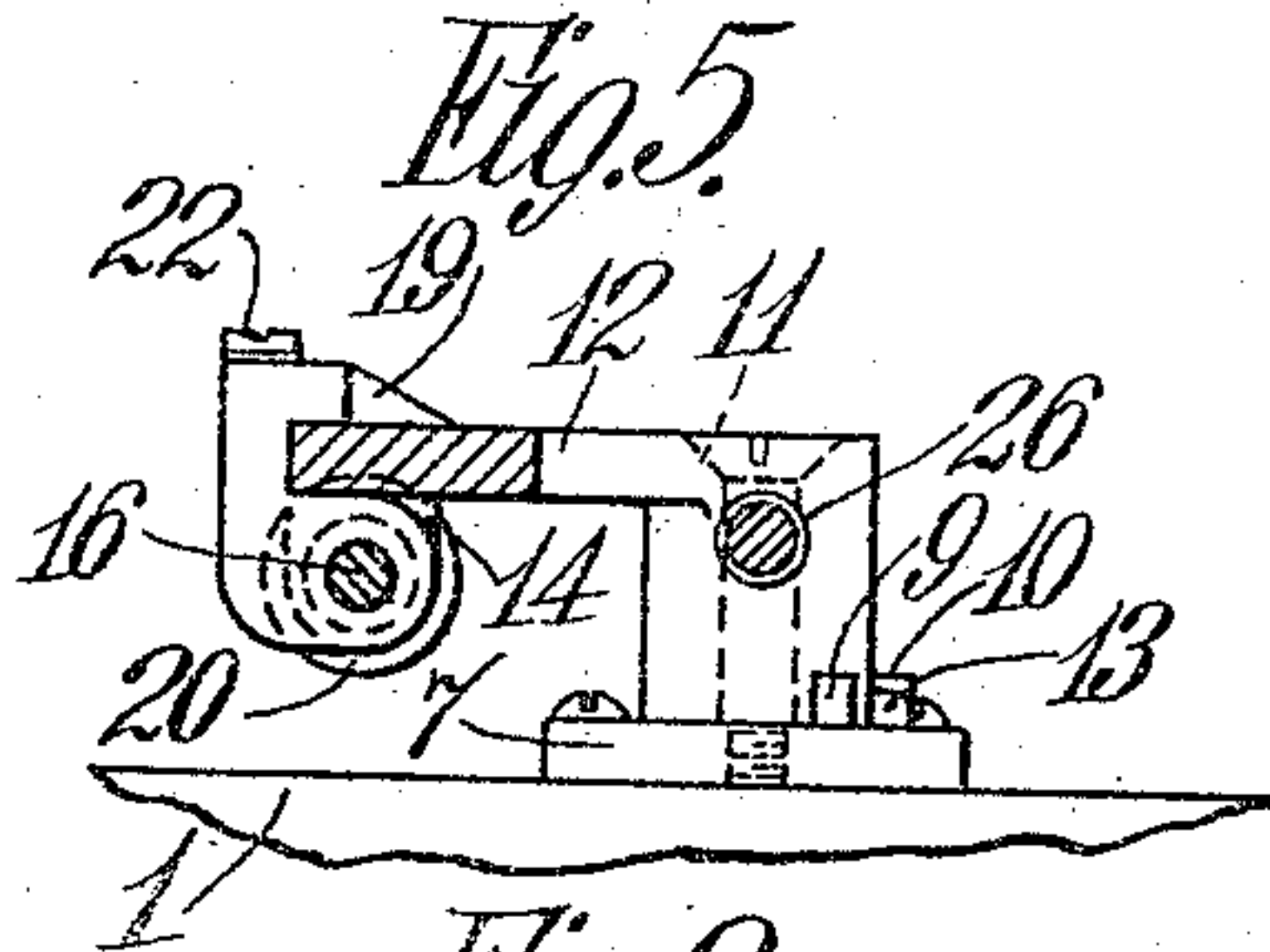
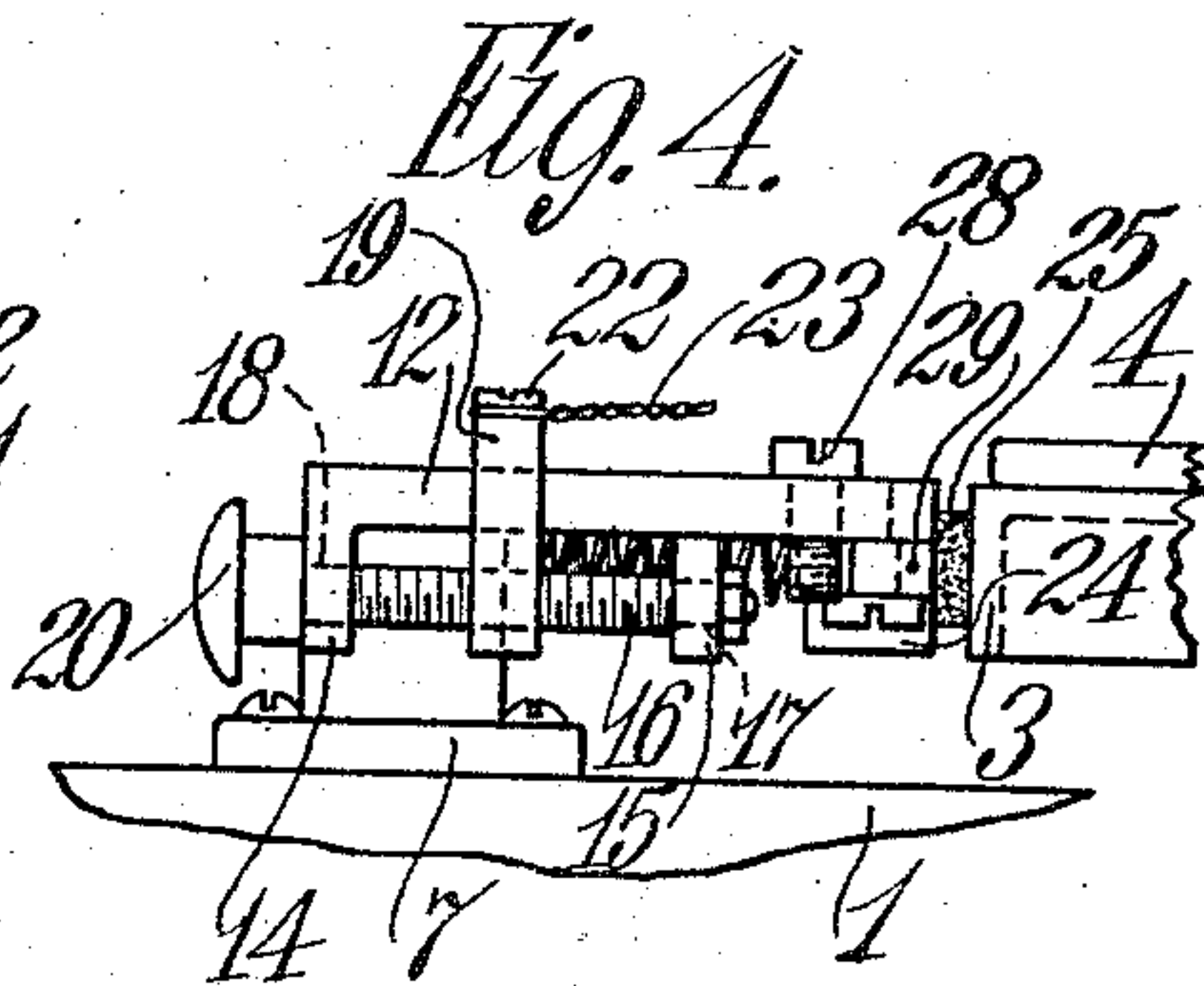
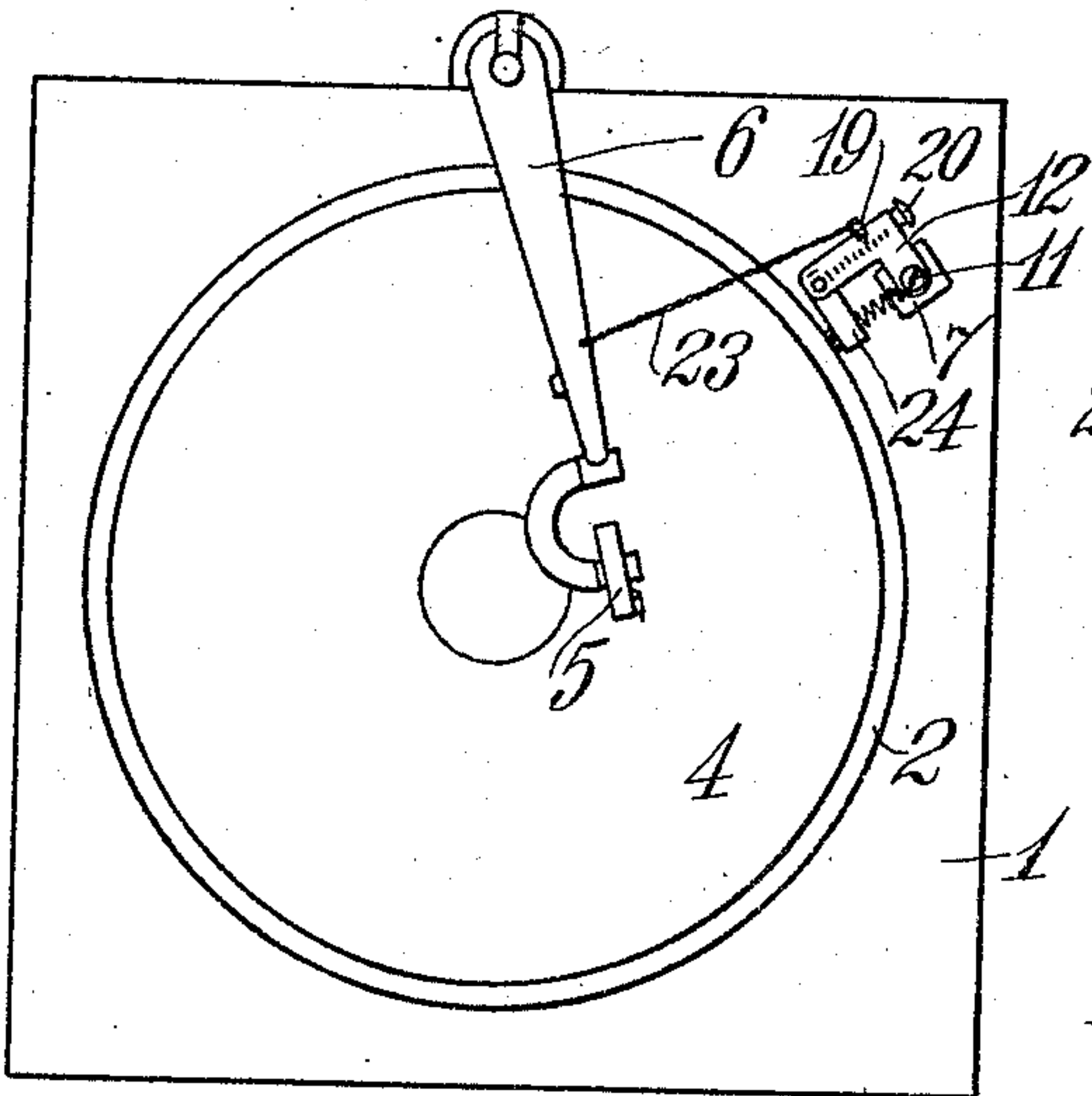


Fig. 2.

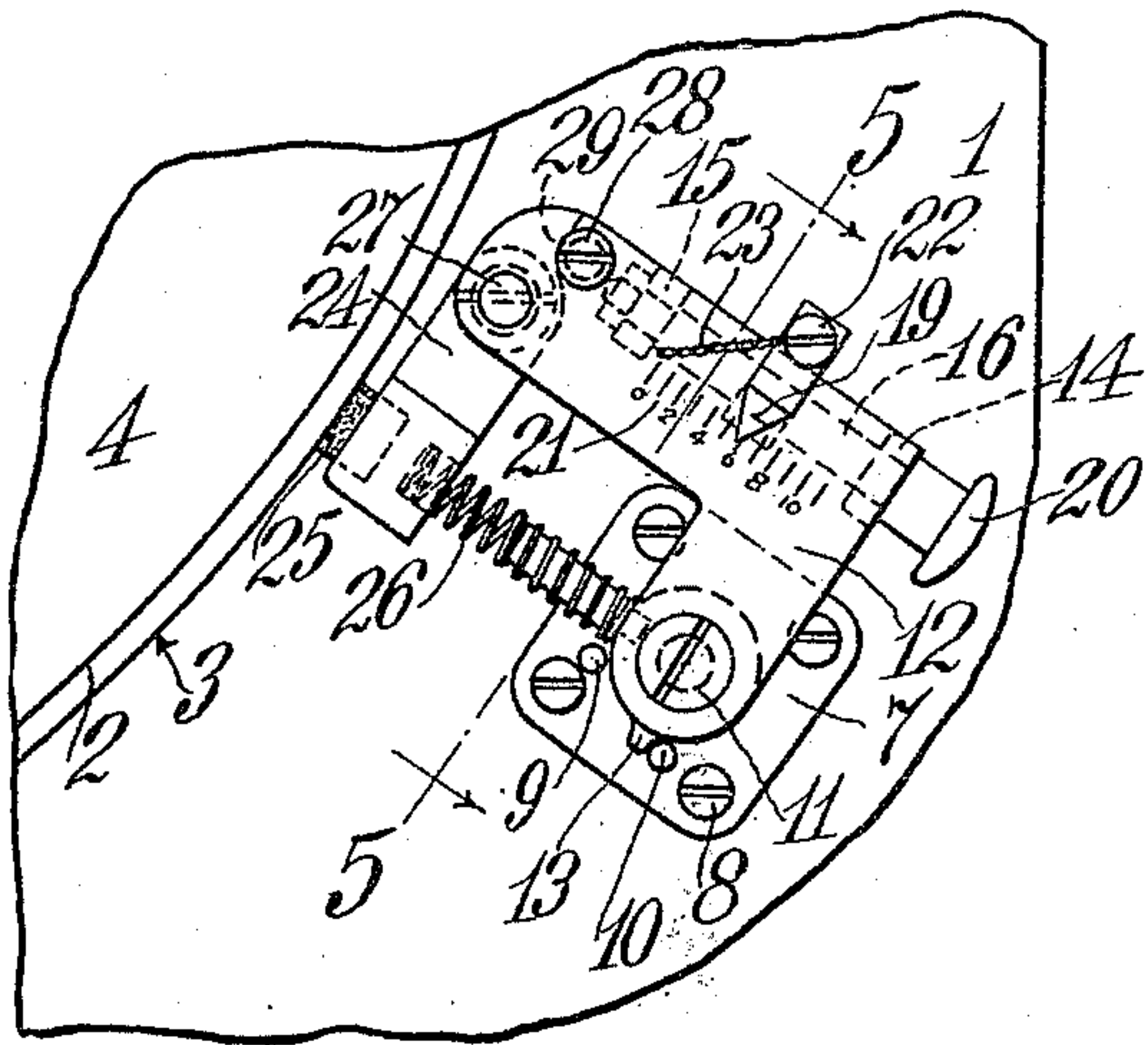
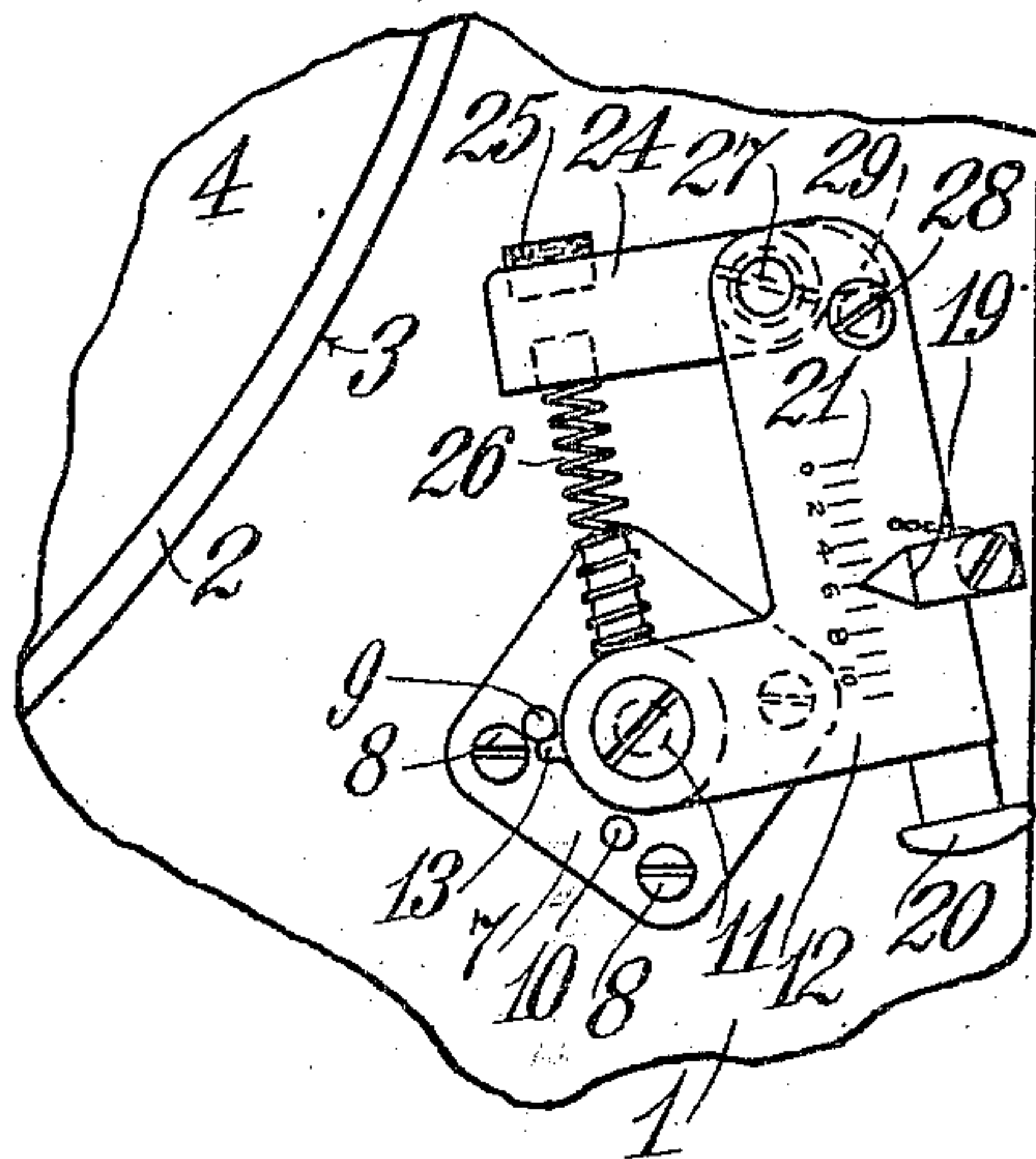


Fig. 3.



WITNESSES:
A. C. Hartwell.
E. H. Wallis.

INVENTOR,
William Cuthbertson.
 BY *Chapin & Co.*

ATTORNEYS

UNITED STATES PATENT OFFICE.

WILLIAM CUTHBERTSON, OF PITTSFIELD, MASSACHUSETTS.

DEVICE FOR AUTOMATICALLY STOPPING THE TURN-TABLE OF A PHONOGRAPH.

1,154,975.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM CUTHBERTSON, a citizen of the United States of America, residing in the city of Pittsfield, county of Berkshire, and State of Massachusetts, have invented certain new and useful Improvements in Devices for Automatically Stopping the Turn-Table of a Phonograph, of which the following is a specification.

10 This invention relates to improvements in devices for automatically stopping the turn table of a phonograph or a talking machine at the completion of the playing of the record.

15 In many machines it is desirable to have some automatic device to bring the rotation of the turn table to a standstill at the termination of the playing of the record as the continued rotation of the turn table causes a disagreeable scratching noise of the needle on the record.

20 The object of my invention is to provide a device that can be used to stop the rotation of the turn table when records of different lengths are used, that is to say, some pieces of music take longer time for them to be rendered than others and my device embodies adjustable means, whereby the size of the record will not make any difference about automatically bringing the machine to a stop at the proper moment. Broadly, it comprises a plate adapted to be screwed to the casing of the machine, a pivotally mounted piece attached to this plate and provided with a brake lever that is pivoted to the pivotally mounted piece and which carries the pad that engages the turn table, also an adjustable pointer from which leads a connection to the swinging arm of the talking machine, whereby the position of this pointer can be adjusted to correspond with the size of the record and stop the machine when the record is finished.

25 Referring to the drawings, Figure 1 is a plan view showing in general the construction and arrangement of my improvement, the position of the arm which carries the sound reproducing box being at the inward end of its travel or at the termination of the playing of the piece; Fig. 2 is a plan view on an enlarged scale showing the presser foot in engagement with the edge of the turn table; Fig. 3 is a view similar to Fig. 2 but showing the position of the device in its inoperative position; Fig. 4 is a side elevational view illustrating the adjustable

pointer to which the connection extending from the arm thereto is connected; and Fig. 5 is a vertical sectional view on the line 5-5 of Fig. 2, illustrating the pivotal connection of the angular-shaped arm, the adjusting screw for the pointer and the spring which holds the pad against the edge of the turn table.

Referring to the drawings in detail: 1 designates the casing which contains the usual motor parts of the machine, 2 the usual turn table having the down turned flange 3, 4 a record that is placed on the table 2 during the playing of the same. The usual arm to which the reproducing box is connected is shown at 6.

7 designates a plate that is secured to the box 1 by means of the screws indicated at 8. Extending upwardly from this plate are stops 9 and 10. Pivotally secured to this plate by means of the pin 11 is an angular shaped member 12. This member is formed with a projection 13 that is adapted to engage either one or the other of the stops 9 or 10 according to whether it is in braking or running position of the table 2. As shown in Fig. 2, it is in braking position, and as shown in Fig. 3, it is in running position, with the projection 13 engaging the stop 9. The member 12 is formed with two downwardly extending lugs 14 and 15. Rotatably mounted in these lugs is a screw 16 the inner end of which turns in a pivotal bearing 17 in the lug 15 and the other in a pivotal bearing 18 in the lug 14. Carried by this screw is a pointer 19, whereby when the milled head 20 is turned the pointer can be moved backward or forward over a scale indicated at 21. Attached to this pointer by means of a screw 22 is a chain or other suitable engaging device 23 which leads to the arm 6, as shown in Fig. 1. Pivotally attached to the inner end of the angular-shaped member 12 is a brake lever 24 to which the friction pad 25 is secured. Extending between the brake lever 24 and the inner end of the member 12 is a compression spring 26 which normally tends to force the brake lever outwardly. The brake lever is pivotally attached to the member 12 at the point 27. In order to limit the outward movement of the brake lever a stop 28 is provided against which the projection portion 29 of the lever 24 engages when the turn table is running.

Having thus described the construction of

my automatic stopping device its operation may be stated as follows: Considering the device in the position shown in Fig. 3, it being understood that the arm 6 is at the 5 outer or starting edge of the record disk 4, as the needle travels radially inward it turns the pivotal member 12 on its pivot 11. In order to determine at what point on the scale 21 the pointer 19 should be placed in 10 order to automatically stop the machine when the arm 6 reaches the inward end of its travel, this arm is first swung into a position with the needle resting on the record corresponding to the end of the piece. 15 The pointer 19 is now moved over the scale 21 until the chain 23 is taut. If this pointer stands at the numeral 6 for instance, the same numeral is marked on the face of the record for future reference, preferably in 20 the center portion thereof. Thus, when this record is later played the pointer is first adjusted to correspond with the numeral on the face of the record, as for example 6. When the needle arm reaches the end of the 25 record the connection 23 will then move and the friction pad 25 will be automatically thrown into the stopping position, the spring 26 affording sufficient pressure to bring the turn table to a stand still. When the record 30 is removed and a new one put in its place the operator of the machine simply swings the brake device back into the position shown in Fig. 3, and before the machine is again started with a new record he first 35 adjusts the pointer 19 to correspond with the numeral on the face of the record, as for instance, "10". Then, when the needle reaches the end of the record, without any attention from the operator, the machine 40 will be automatically stopped as before. It will thus be seen that I have provided a brake mechanism that can be used with any size of record and one that will not in any way interfere with the normal operation of 45 the machine.

What I claim is:—

1. A stop device for talking machines comprising, a plate secured to the casing of the machine, a turn table, a swinging arm 50 movable thereover, an angularly shaped

member pivotally attached to said plate, a pointer device adapted to be adjusted along the upper surface of said member, a brake lever pivotally connected to said member and a connecting device between the pointer 55 and the swinging arm of the machine, whereby when the swinging arm reaches the inward position of its travel the brake lever will be automatically brought into engagement with the turn table and the turn table 60 brought to a standstill.

2. A stop device for talking machines comprising, a member pivotally secured to the casing of the machine, a turn table, a swinging arm movable thereover, a brake 65 lever attached to said member, a pointer movable over a scale on said member, and connecting means between the arm of the machine and the pointer, whereby when the pointer is set to a previously designated 70 mark on the scale, the brake lever will be automatically thrown into engagement with the turn table at the termination of the inward swing of the arm.

3. An automatic stopping device for a 75 talking machine, comprising in combination with the turn table thereof, a lever member pivotally secured to the casing of the machine, stops to limit the outward and inward movements of said member, a brake 80 lever pivotally attached to the inner end of said member and to which a frictional brake pad is secured, a compression spring extending between the brake lever and said 85 lever member, a threaded rod, a pointer attached thereto whereby the pointer may be moved into different positions, a swinging arm and a connection extending from the pointer to the swinging arm of the machine, whereby when the pointer is set to a prede- 90 termined position and the swinging arm is at the inward limit of its travel, the frictional pad will be automatically thrown against the turn table and the turn table stopped, as described.

WILLIAM CUTHBERTSON.

Witnesses:

GEORGE A. KENYON,
WM. H. BARROWS.