Sept. 20, 1927. 1,642,681

J. KAPLAN

REEL STOPPING DEVICE FOR RECORD-O-PHONES

Filed Feb. 17, 1926

Fig. 1.

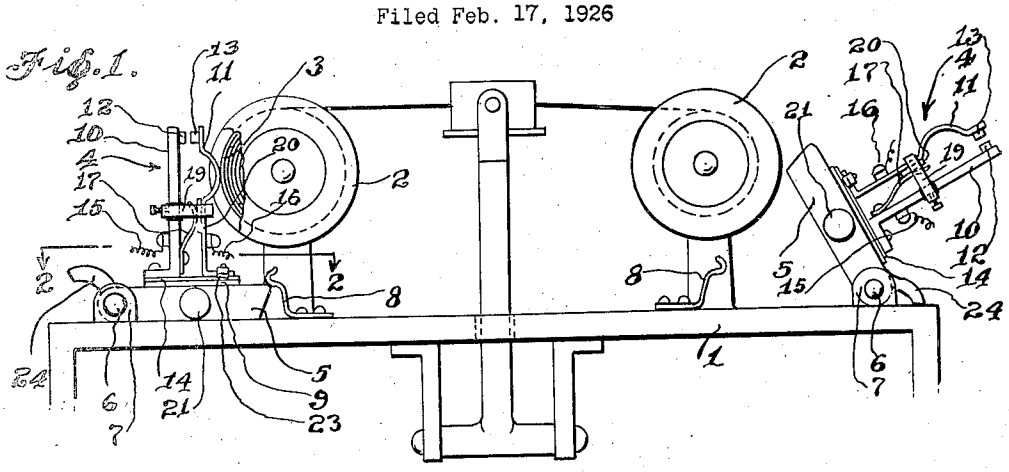


Fig. 2.

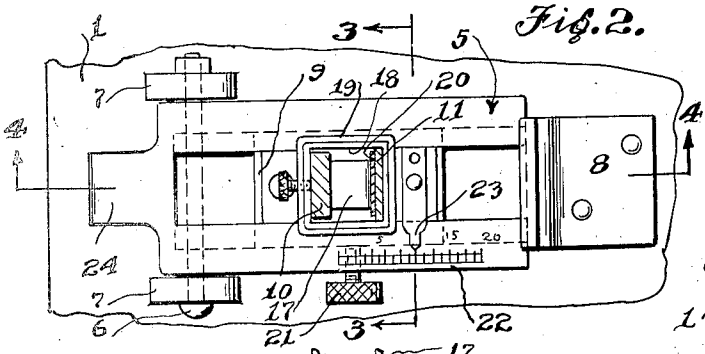


Fig. 3.

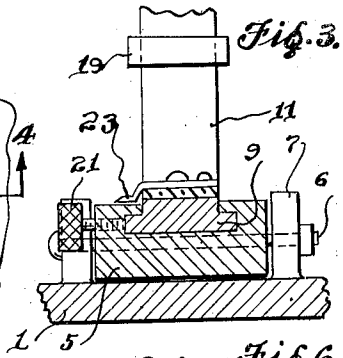


Fig. 4.

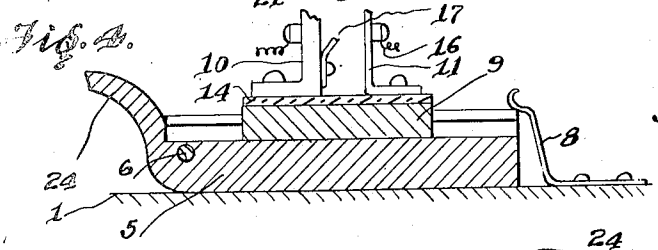


Fig. 6.

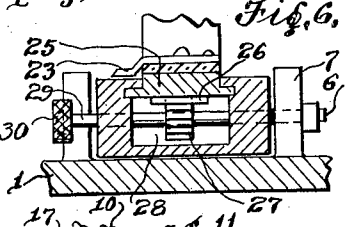


Fig. 5.

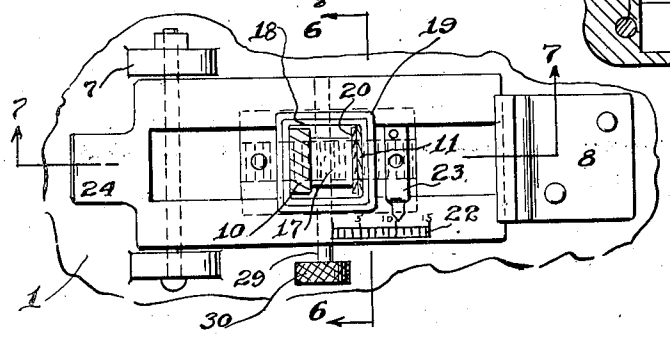
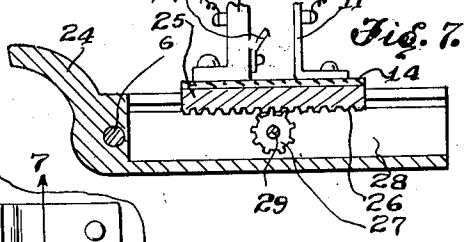


Fig. 7.



Inventor

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# UNITED STATES PATENT OFFICE.

JACOB KAPLAN, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO RECORD-O-PHONE COMPANY, INC., OF WASHINGTON, DISTRICT OF COLUMBIA, A CORPORATION OF DELAWARE.

## REEL-STOPPING DEVICE FOR RECORD-O-PHONES.

Application filed February 17, 1926. Serial No. 88,970.

This invention relates to record-o-phones of the wire type for recording and reproducing sound and has for its object the provision of means to automatically stop the machine when the windings on any of its reels increase to a certain diameter.

In brief the device consists of a pair of flexible and rigid contact members, fastened to a block adapted to slide in a base, means to ascertain the position of the contact members with respect to the reels and means to swing the structure out of the way so the reels can readily be taken off their hubs.

For a more detailed understanding of the invention attention is now called to the drawings in which a preferred embodiment is shown illustrated. In these drawings like parts are designated by like reference characters in all the views.

Fig. 1 is a front view of a record-o-phone having a set of circuit closers attached thereto adjacent the reels.

Fig. 2 is an enlarged section on line 2—2 of Fig. 1.

Fig. 3 is a section on line 3—3 of Fig. 2.

Fig. 4 is a section on line 4—4 of Fig. 2.

Fig. 5 is a top view partly in section of a modified form of the invention.

Fig. 6 is a section on line 6—6 of Fig. 5.

Fig. 7 is a section on line 7—7 of Fig. 5.

Referring now to the drawings in detail, numeral 1 designates the usual base of the record-o-phone, 2 the usual reels and 3 the reel windings. Adjacent the reels are a pair of circuit closers 4. The circuit closer at the left is shown in the operative position while the circuit closer at the right is shown swung out of the way so the reel can be readily taken off the hub. As both circuit closers are alike one will be described.

The circuit closer 4 consists of a base 5 hinged on a bolt 6 to a pair of lugs 7 and retained in its operative position by a spring snap 8.

Movable within the base is a block 9 to which are attached a rigid member 10 and a flexible member 11 and at the top of the said members are contact points 12 and 13. Insulating the members 10 and 11 from the block 9 is a block 14 composed of a non-conducting material. Fastened to the said flexible and rigid members are a pair of conductors 15 and 16 which lead to a switch (not shown) which shuts off the current for stopping the motor (not shown) when the points 12 and 13 contact.

The members 10 and 11 are normally urged apart by the spring 17 and to prevent the members from spreading apart too much collars 18 and 19 are provided. The inner collar 18 is composed of an insulating material. The spring 17 is insulated from the member 11 by an insulating plate 20.

To retain the slidable block in any desired position a set screw 21 is provided. As noticed in Fig. 2 a set of graduations is engraved on the upper face of the base 5. Coacting with the graduations and attached to the slidable block 9 is a pointer 23.

The operation of this device is as follows:

The pointer 23 is set in a position which will correspond to almost the largest diameter of the windings 3. When the windings have reached its maximum amount the flexible member 11 will be bent towards the rigid member 10, complete an electric circuit and operate a switch (not shown) for stopping the motor (not shown).

The circuit closer can be swung out of the way as noticed in Fig. 1 to the right so the reel can be taken off and slipped on the reel hub. Integral with the base 5 is a stop 24 for limiting the turning movement of the circuit closer.

In Figs. 5, 6, and 7 is shown a modified form of the device. The operation and structure of this modification is the same as that shown in the preceding figures with the exception of the means to move the block 25.

As will be noticed in Figs. 6 and 7 the under portion of the block 25 is formed with teeth 26 and engaging the teeth is a small gear 27 housed in a recess 28 of the base and mounted on a shaft 29. For moving the block 25 to the right or to the left the knob 30 is turned according to the direction of movement desired.

Having thus described my invention, what I desire to secure by United States Letters Patent is:

1. In a device of the class described in combination, a reel, windings on said reel, a flexible member, a rigid member, the said members adapted to contact when the diameter of the windings on said reel increase, means to normally urge the said flexible and rigid members apart, means to limit the distance between the said members, a movable

block and means to adjust the position of the said block.

2. In a record-o-phone in combination, a reel, windings on said reel, a flexible member, a rigid member, a base, a movable block, the said flexible and rigid members attached to said block, means to normally urge the said flexible and rigid members apart, means to limit the distance between the said members, the under side of said block formed into a rack, a gear and shaft, and means for ascertaining the position of the said block with respect to the said reel.

3. In a device of the class described, a reel, windings on said reel, a flexible member and a rigid member attached to a movable block, the said members adapted to contact when the diameter of the windings increase, means to normally urge the said flexible and rigid members apart, means to limit the distance between the said members, means to adjust the position of the said block and means to ascertain the position of the said flexible and rigid members.

4. In a device of the class described, a reel, windings on said reel, a flexible member, a rigid member, the said members adapted to contact when the diameter of the windings on said reel increase, means to normally urge the said flexible and rigid members apart, means to limit the distance between the said members, a base, a movable block, means to adjust the position of the said block and means to ascertain the position of said block.

5. In a device of the character described, a reel, windings on said reel, a flexible member, a rigid member, means to resiliently urge the said members apart, means to govern the distance between the said members, a base, a movable block, said flexible and rigid members attached to said block, the under side of said block formed into a gear rack, a gear and shaft, a set of graduations, and a pointer attached to the said movable block co-operating with the said graduations.

6. In a device of the class described, a block, a base, the said block adapted to move in said base, a flexible and rigid member attached to said block, the said members adapted to move in unison, means to normally urge the said flexible and rigid member apart, means to limit the distance between the said members, means to fasten the said block in any desired position, graduations, and a pointer for ascertaining the position of the said flexible and rigid members.

7. In a device of the class described comprising a base, a block slidable in said base, contact members attached to said block, means for resiliently urging the said contact members apart, means to limit the distance between the said contact members, means for fastening the said base in place and means for ascertaining the position of the said contact members.

8. In a device of the class described in combination, a reel, windings on said reel, a flexible member, a rigid member, the said members adapted to contact when the diameter of the windings on said reel increases, and means to normally urge the said flexible and rigid members apart, the said flexible and rigid members attached to a block slidable in a base, the said base being pivoted and adapted to be swung in a vertical plane out of the way of the reel.

9. Claim 2, with the addition of, said movable block adapted to slide in a base, the said base being pivoted at one end and adapted to be swung in a vertical plane out of the way of the reel.

10. Claim 3, with the addition of, the said base being pivoted at one end and adapted to swing in a vertical plane out of the way of the reel.

11. Claim 4, with the addition of, the said movable block adapted to move in a base, the said base being pivoted at one end and adapted to swing in a vertical plane out of the way of the reel and means to retain the said base in its operative position.

12. Claim 5, with the addition of, said base being hinged and adapted to swing in a vertical plane out of the way and clear the reel.

13. Claim 6, with the addition of, said base being hinged at one end and adapted to swing in a vertical plane out of the way to clear the reel.

14. Claim 7, with the addition of, said base being hinged at one end and adapted to swing in a vertical plane out of the way to clear the reel.

15. Claim 8, with the addition of, the said base being pivoted at one end and adapted to swing in a vertical plane to clear the reel, and means to retain the said base in its operative position.

In testimony whereof I affix my signature.

JACOB KAPLAN.