W. G. ALTENBURGH.

AUTOMATIC CUT-OFF AND STOP FOR SOUND REPRODUCING MACHINES.

APPLICATION FILED JULY 26, 1909.

972,794. **Patented Oct. 18, 1910.**

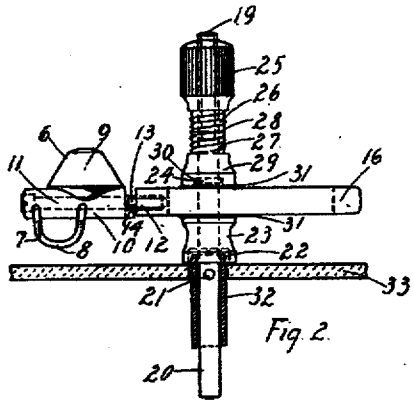

Fig. 2.

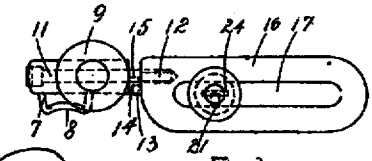

Fig. 3.

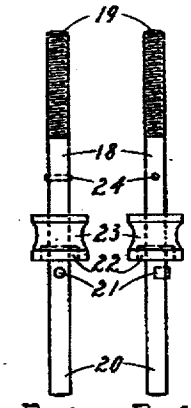

Fig. 4.

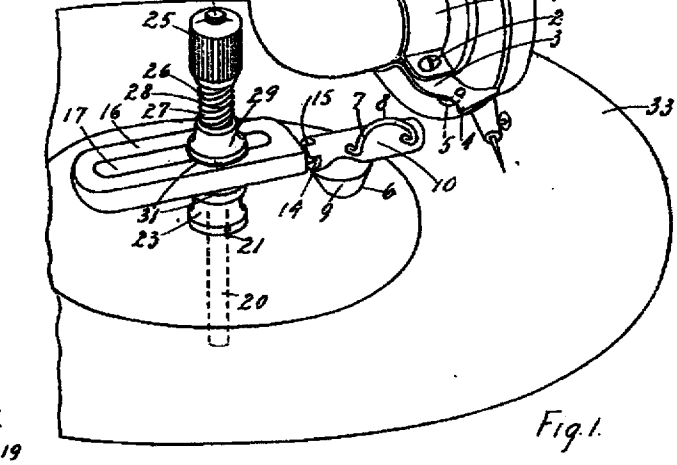

Fig. 1.

Fig. 5.

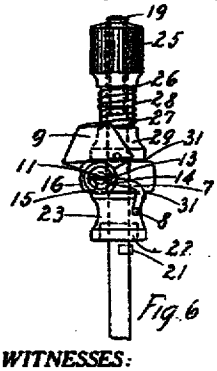

Fig. 6.

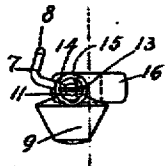

Fig. 7.

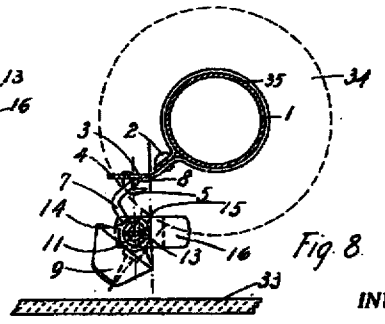

Fig. 8.

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AUTOMATIC CUT-OFF AND STOP FOR SOUND-REPRODUCING MACHINES.

972,794. Specification of Letters Patent. Patented Oct. 18, 1910.

Application filed July 26, 1909. Serial No. 509,620.

To all whom it may concern:

Be it known that I, WILFORD G. ALTENBURGH, a citizen of the United States, residing at National City, in the county of San Diego and State of California, have invented a certain new and useful Improvement in Automatic Cut-Offs and Stops for Sound-Reproducing Machines, of which the following is a specification.

My invention relates to an improved automatic cutoff and stop for sound reproducing machines, and is more particularly adapted to machines using the disk record.

The objects are:—to provide a simple, cheap, safe and positive means for automatically raising the needle and stopping the machine at the end of the record, or at any predetermined point when desired; further, it is adjustable to different records and is adaptable to different makes of machines now in use and may be used therewith.

The uses and advantages of my invention will readily be apparent from the following description, references being had to the accompanying drawings, in which—

Figure 1 is a partial perspective view of the sound reproducing mechanism and showing my automatic cutoff and stop complete as used therewith. Fig. 2 is an elevational view of part of my device assembled. Fig. 3 is a top view thereof. Figs. 4 and 5 are side views of spindle 20, the one transverse to the other. Fig. 6 is a transverse elevational view of Fig. 2. Fig. 7 is a detail of the arm with the stop attachment thereon and Fig. 8 a side view of the portion on the sound tube, in connection with the arm and its attachment, showing the sound box and needle in dotted lines after the machine is stopped.

Similar characters of reference refer to similar parts throughout the several views.

My device is composed of two assembled parts, one of which is attached to the central vertical post of the machine while the other is attached to the sound tube of said machine. 34 represents the sound box with the needle, 33 a disk record, 35 a sound tube and 36 a portion of a horn all of which are of the ordinary style. Around the sound tube 35 and adjacent to the sound box 34 is placed a clamp 1, adapted to be clamped tight thereon by means of screw 2, one portion of said clamp being extended and formed so as to be approximately upon a horizontal plane with this disk, and into which is riveted hook 5.

Into the vertical post 32 of the machine I have provided a central hole and in its top have provided a slot on one side so as to fit the spindle 20 and pin 21 therein. This keeps the spindle 20 from turning after the insertion into said vertical post. Upon spindle 20 is rigidly set an arm clamp 23 shaped as shown best in Figs. 4 and 5, being provided with a recess 22 in its bottom surface to fit over the top of the central post 32 and rests upon the record 33. Above said arm clamp 23 is placed another arm clamp 29 upon said spindle 20 with an extended portion 27 extended upward and in the lower side is provided with a slot 30 adapted to fit over pin 24 which extends through spindle 20 and into the slot in the upper arm clamp 29. The top end of said spindle is provided with a thread 19 on which thumb nut 25 is adapted to screw, the extended portion 26 being downward and adjacent to portion 27. Over portions 26 and 27 a compression spring 28 is placed for the purpose of keeping a slight compression on the upper arm clamp 29 when the thumb nut 25 is released for adjusting the arm 18. Between the two arm clamps 29 and 23, and on said spindle, is placed adjusting arm 16 and washers 31, one on each side, for the purpose of allowing the spindle to revolve a little independent of the arm 16, when the nut 25 is tightened, thus producing a gradual stop. Said adjusting arm 16 is provided with a slot 17 a trifle wider than the spindle 20 and adapted to allow adjustment of the arm 16 endwise. Into the extended end of said arm 16 is screwed a stud 11, a little to one side of the center as shown and upon which is mounted a cylinder 10, in one side of said cylinder 10 is inserted a U shaped catch adapted to operate in connection with hook 5 and on the lower side a weight 6. On the inner end of said cylinder 10 is provided a lug 15 adapted to come in contact with another lug 13 upon the arm 16, when the cylinder revolves to a certain position in relation to the arm 16.

It can readily be seen that by this method of construction, after adjusting the clamp 1 upon the sound tube 35, then setting the needle in the end of the record groove with disk 33 and with nut 25 released and cylinder 10 turned so that weight 9 is on top as shown in Fig. 2, and setting the point 6

of the weight with point 3 of the clamp then tighten the thumb nut 25 and start the machine as usual, that when the point 3 touches point 6 sufficiently, the weight 9 is thrown over center which brings U catch 8 up into position as shown in Fig. 1, and the machine coming around again the hook 5 will catch into U catch 8 which will revolve cylinder 10 until lug 15 comes in contact with lug 13 on arm 16 which prevents further revolution of cylinder 10 which gradually raises the needle and stops the machine.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a sound reproducing machine, a sound tube, a sound box, a needle, a projecting arm adjustably mounted upon the central post of the machine and provided with a revoluble catch mounted upon the extended end of said arm and a hook mounted on said sound tube, adapted to engage with said revoluble catch for raising said needle and stopping said machine, all substantially as set forth.

2. In a sound reproducing machine, the combination of a sound tube, a sound box, a needle, an arm provided with a slot and mounted upon a spindle set in the central post of the machine and provided with a pin to prevent its turning, clamps on said spindle on each side of said arm, a thumb nut screwed on the top end of said spindle for tightening said clamp, a spring to provide a slight tension on the clamp at all times, a catch mounted on a cylinder set in the extended end of said arm, a weight mounted upon said cylinder, a lug on said cylinder for stopping it at a certain position, and a clamp attached to said sound tube and provided with a hook adapted to engage with the the said catch, all substantially as set forth.

3. In a sound reproducing machine, the combination of a sound tube, a sound box, a needle, a radially projecting arm mounted upon the central post of the machine and adapted to be adjusted longitudinally, and having a catch revolubly mounted upon said arm, and an adjustable clamp mounted upon said sound tube and provided with a hook adapted to engage with said catch for raising said needle and stopping said machine, all substantially as set forth.

4. In a sound reproducing machine, the combination of a sound tube, a sound box, a needle, a radially projecting arm provided with a slot and mounted upon a spindle, said spindle being set vertically into a hole in the central post of the machine and provided with a pin to prevent its turning, clamps on said spindle on each side of said arm, means for tightening said clamp, a catch revolubly mounted on a stud screwed horizontally into the extended end of said arm and provided with a weight for setting the position of said clamp, means for stopping the revolution of said catch, and a clamp attached to said sound tube and provided with a hook adapted to engage with said catch to raise said needle and then stop the machine, all substantially as set forth.

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Witnesses:

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