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A. STAPELFELDT

2,248,790

SOUND RECORDING DEVICE

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Fig. 1

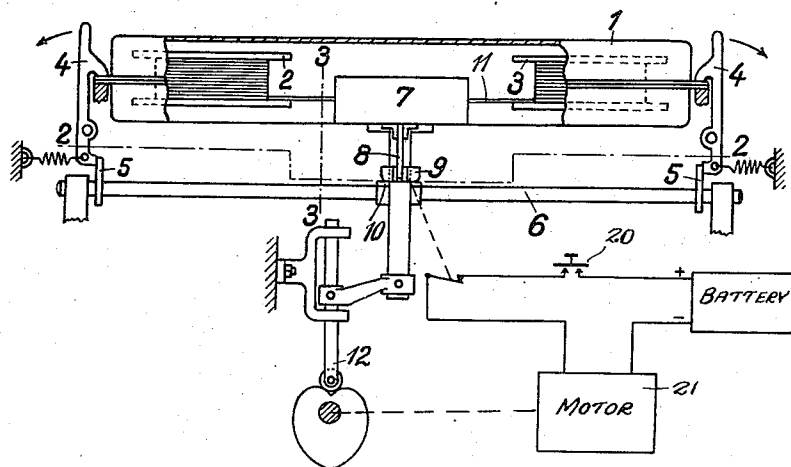


Fig. 2

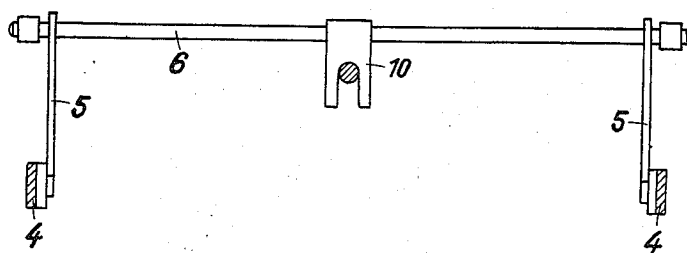
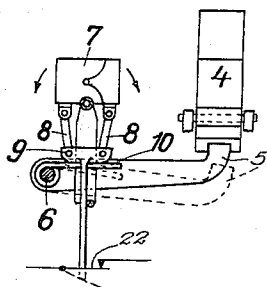


Fig. 3



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UNITED STATES PATENT OFFICE

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SOUND RECORDING DEVICE

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9 Claims. (Cl. 274-4)

The invention relates to magnetic sound recording devices of the kind having an interchangeable housing for the drums or reels arranged to coil and uncoil a wire-shaped record carrier. More particularly, the invention is concerned with those recording devices whose talking head is arranged to reciprocate under the control of a cam disc in accordance with the transverse movements of the record carrier, that is, movements directed axially with respect to the drums.

The invention aims to prevent the record carrier from breaking whenever the drum housing is replaced by another. According to the invention this housing can only be removed when the talking head is in a predetermined position, such as the lowest one, for instance. Such predetermined position coincides with the position of the record carrier in such manner that the record carrier will not break when interchanging the drum housing.

In the accompanying drawing, Fig. 1 is a somewhat diagrammatic sectional view showing one embodiment of the invention, Fig. 2 represents a fragmentary section on line 2-2 of Fig. 1, while Fig. 3 shows a fragmentary section on line 3-3 of Fig. 1.

1 denotes the housing in which two drums 2, 3 for the record carrier 11 are mounted. Housing 1 is secured in position by spring actuated pawls 4. In order to remove the housing 1 the pawls 4 must be moved in the direction of the arrows. Normally, this movement is prevented by stop levers 5 which are fastened on a shaft 6. The talking head 7 is made in two parts which may be separated for the purpose of inserting or removing the recording wire therefrom in a manner known in the art, for example, similar to that shown in Patent 2,048,487, July 21, 1936, to Semi Begun, and has two levers 8 fulcrumed one to each part carrying a sleeve 9 which when the talking head is in its lowermost position bears against a lever 10 rigidly mounted on shaft 6. By opening the talking head as indicated by the arrows the sleeve 9 is moved still farther downward and thereby turns the shaft 6 by means of lever 10 until the levers 5 are out of engagement with the pawls 4, as shown in dotted lines in Fig. 3. The pawls 4 may then be pushed aside, whereupon the assembly 1, 2, 3 may be removed. The pawls 4 thus cannot be retracted from housing 1 until the talking head is in its lowermost position and until it has been opened. An advantage of this arrangement also is that the drum housing cannot be removed without opening the

talking head, since otherwise the record carrier would be destroyed.

According to another feature of the invention a key 20 may be arranged for closing the circuit of the motor 21 and an auxiliary contact 22 may be arranged to interrupt this circuit, such break contact being actuated by the talking head as soon as this reaches its lowest position as indicated by the dotted line. The arrangement here is preferably such that by operating this key the motor be caused to run forward in order that after interchanging the drum housing a record carrier which just received a record may be used for making a second record without the risk of superimposing two records. Such key, which preferably is made in the form of a push button, in the first place acts to close a circuit which extends from the plus pole of a battery over said key, said auxiliary contact, through the motor, to the minus pole of the battery.

Numerals 12 denotes the gearing that comprises a cam disc and by which the talking head is given its reciprocatory movement.

What is claimed is:

1. In a sound recording device having a record carrier, drums for colling and uncolling this record carrier, a removable housing for these drums, a talking head, and drive means for giving the talking head a reciprocatory movement axially with respect to said drums, a locking device for securing the said housing in position, and blocking means controlled by said talking head to prevent such locking device from being released until the talking head is in a predetermined axial position.
2. A sound recording device according to claim 1, in which the said predetermined position of the talking head is the lowest position thereof.
3. A sound recording device according to claim 1, in which said talking head is made in two parts which may be opened, and means operative upon opening of said talking head for releasing said means for preventing the release of said locking device.
4. A sound recording device according to claim 1, wherein said locking device comprises pawls and means to release said pawls, further comprising means being adapted to be operated by the talking head in its lowermost position for operating said releasing means.
5. A sound recording device according to claim 1, in which said talking head is made in two parts which may be opened, and the said locking device comprises pawls and stop levers for said pawls and means for moving said stop lever to

release said pawls on opening the talking head.

6. A sound recording device according to claim 1, having levers fulcrumed to the talking head, a sleeve carried by these levers, and means adapted to be acted upon by such sleeve and thereby to release said locking device.

7. A sound recording device according to claim 1, having a key, an electric circuit under the control of this key, a motor included in this circuit and adapted to drive the said means for producing the reciprocatory movement of the talking head, and means to interrupt such circuit by the talking head reaching its lowest position.

8. A sound recording device according to claim 1, having a key, an electric circuit under the control of this key, a motor included in this circuit

and adapted to drive the said means for producing the reciprocatory movement of the talking head, and a break contact in such circuit, this contact being under the control of the talking head with the lowest position thereof.

9. A sound recording device according to claim 1, having a key, an electric circuit under the control of this key, a motor included in this circuit and adapted to drive the said means for originating the reciprocatory movement of the talking head, and means to interrupt such circuit by the talking head reaching its lowest position, said key being adapted to cause the forward motion of the motor.

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