June 6, 1939. S. BEGUN 2,161,273

ELECTROMAGNETIC RECORDING ARRANGEMENT

Filed March 24, 1936

Fig.1

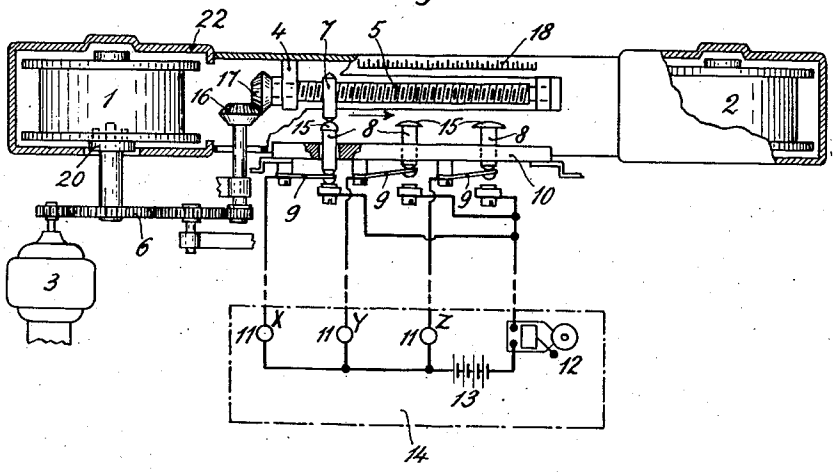


Fig.2

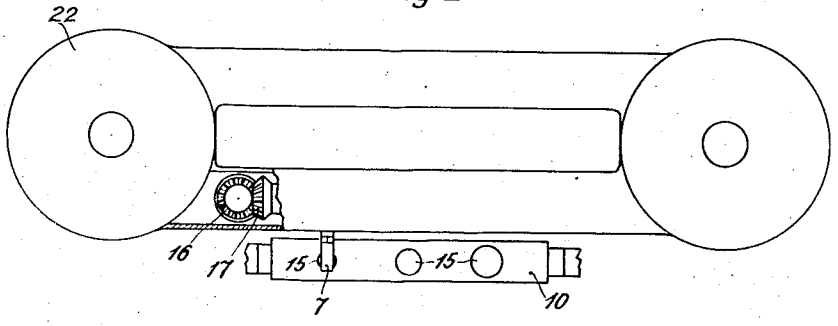
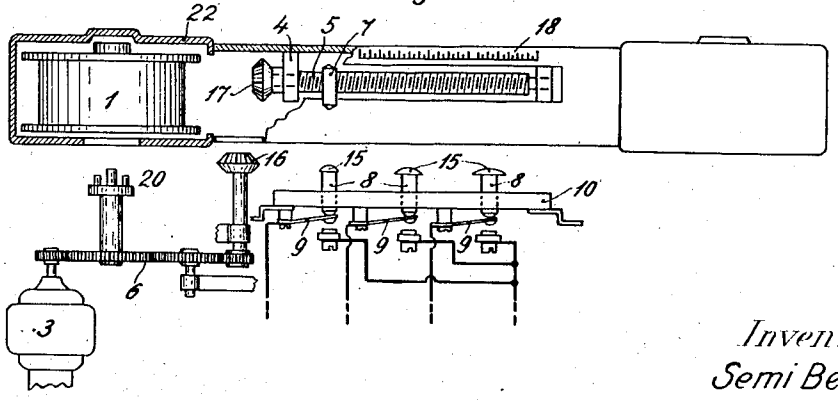


Fig.3



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ELECTROMAGNETIC RECORDING ARRANGEMENT

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Application March 24, 1936, Serial No. 70,564.

3 Claims. (Cl. 177—311)

This invention is an improvement upon the device described in the co-pending application Serial No. 11,887, filed March 19, 1935, for Electromagnetic recording arrangements.

Such device acts to transmit signals to the speaking or dictating person each time the record carrier, for instance a wire or tape, has been moved a predetermined distance, so that the speaking person shall at any time be able to ascertain how much time is still available for transmitting a dictation or a telephonic communication or, in other words, how much of the record carrier has already been used or is still available.

The invention described hereafter enables a pair of spools, upon which the record carrier is wound, to be supported by a replaceable frame piece so that any number of record carriers can be fitted to the machine alternately.

The invention will be fully understood from the following description and be particularly pointed out in the appended claims, reference being had to the accompanying drawing, which shows an embodiment thereof. In this drawing—

Figure 1 is a partially diagrammatic and partially sectioned elevation of this embodiment, Figure 2 a plan view thereof and Figure 3 an elevation similar to Figure 1, the said frame piece being shown here as detached.

Mounted in a frame piece 22 are two spools, 1, 2 which are provided with the record carrier, i. e., a steel wire or tape, for example, in such a manner that this wire or the like can be wound from one spool onto the other and then be recoiled, as is customary with telegraphones and like devices. The record carrier is not shown. Spool 1 is adapted to be driven by a motor 3. The frame piece 22 has a bearing 4 for a screw 5. The screw 5 is by a suitable gearing 16, 17, 6 connected with the motor 3 and carries a nut 7 arranged to be displaced along the screw. Projecting into the path of this nut are studs 8 which are seated on contact springs 9 and are guided in a bar 10. This and the studs 8 consist of an electrically insulating material. To each spring 9 a lamp 11 is allotted. A ringer 12 is adapted to be governed by each of the springs 9. These signalling means 11, 12 and a battery 13 are disposed at the place 14 where the speaking person is.

Motor 3 rotates spool 1 so as to wind the wire or the like, not shown, from spool 2 onto spool 1, and through the gearing 6, 16, 17 acts at the same time to revolve the screw 5. The nut 7 consequently moves along the screw in the direction of the arrow shown in Fig. 1 and depresses the studs 8 one after the other. The studs 8 in their turn depress the springs 9 and are restored by these to their normal position as soon as the nut leaves them. In the drawing, one stud 8 and spring 9 are shown as depressed. The lamps 11 are hereby successively cut in and out. Each time the ringer 12 is likewise included in the circuit.

The nut 7 by its position on the screw 5 indicates at a scale 18 of the frame piece 22 how far the record carrier has been wound on the spool 1 or unwound from spool 2. The indicators 11, 12 enable a similar supervision to be made at place 14 although this is remote from the recording machine.

In order to effect a saving of wires the time during which each spring 9 is depressed so as to close a circuit may be different from the time during which any of the other springs is depressed. In order to perform this studs 8 may be provided with heads 15 which differ from each other in width. By this means special acoustic or optic signals may be produced at place 14 through the medium of special arrangements of relays or by similar contrivances.

In the example shown the lamp 11 represented at Z is lit longer than the lamp 11 at Y and this lit longer than the lamp 11 at X while the ringer 12 is actuated accordingly long each time, so that the signals at 14 will be the more impressive the nearer the end of the period of time available for recording.

Spool 1 is attached to motor 3 through a clutch member 20 of the gear wheel 6 so that frame piece 22 and the parts 1, 2, 4, 5, 17, 7 supported by it can be disconnected from the driving means 3, 6, 16, as illustrated in Fig. 3, and another such frame piece be attached thereto as may be required or advantageous under peculiar circumstances of service.

What is claimed is:

1. In an electromagnetic recording system which includes a recording machine, a record bearing body supported on spools, a frame piece in which said spools are mounted, a movable indicator mounted within said frame, a driving means for one of said spools mounted outside said frame piece, a plurality of contact means mounted adjacent said driving means, means for detachably securing said frame to said driving means for positively driving one of said spools and for moving said indicator into successive operative positions with respect to said contact means in syn-

chronism therewith, and cam means responsive to the movement of said indicator into operative relation with said contact means for actuating one contact means after the other.

2. The system defined in claim 1 and in which said cam means includes a loosely mounted stud for each contact means, said studs being in the path of said indicator.

3. The system defined in claim 1 and in which each contact means comprises a normally open contact spring, said cam means consisting of loosely mounted studs, one resting on each contact spring and projecting into the path of the indicator, and signaling devices operated in response to the actuation of said contacts.

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