June 7, 1960 D. E. VEGLIANTE ET AL 2,939,712

INDEXING SYSTEM

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Fig. 1

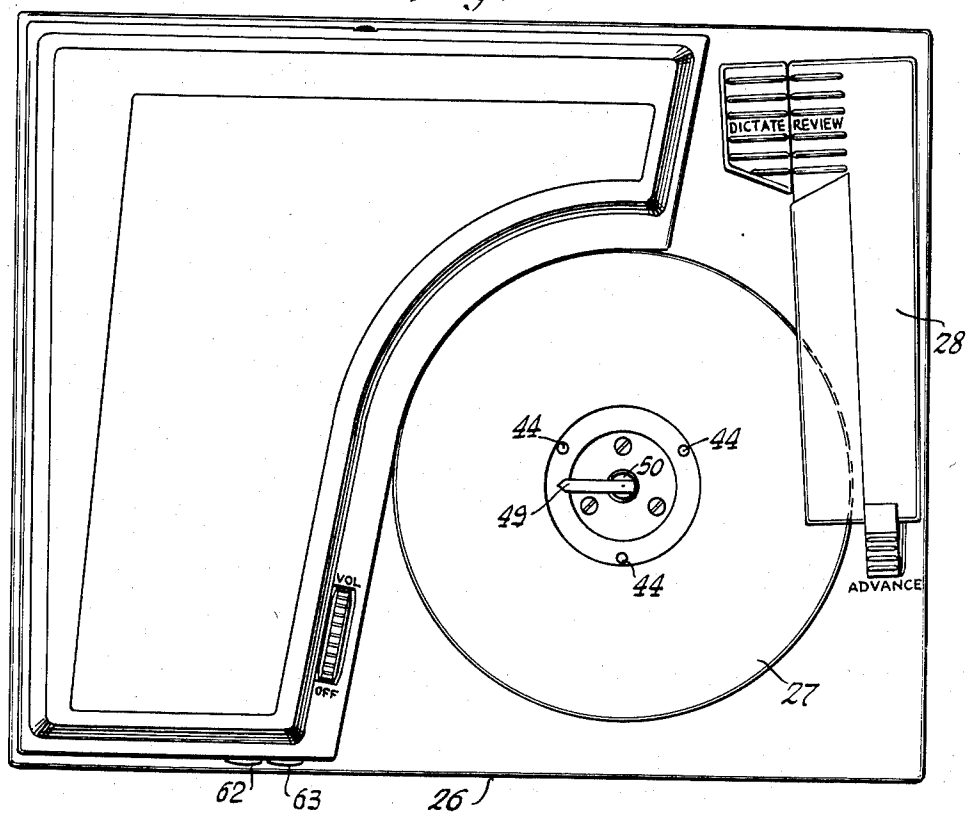


Fig. 2

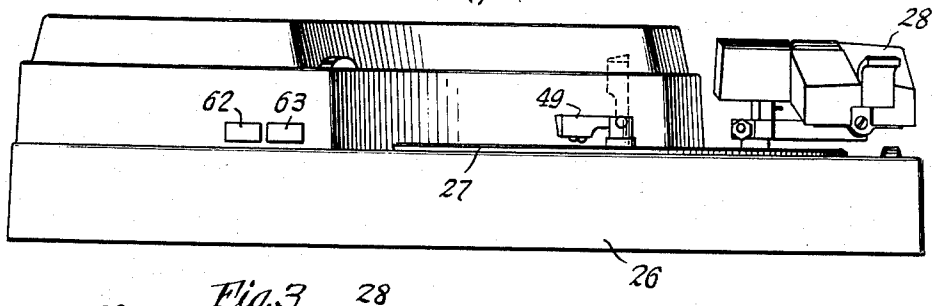
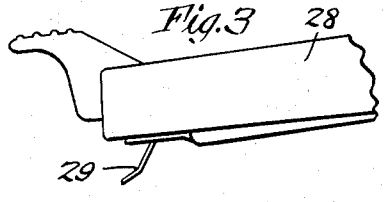


Fig. 3



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INDEXING SYSTEM

Filed Sept. 7, 1955 3 Sheets-Sheet 2

Fig. 4

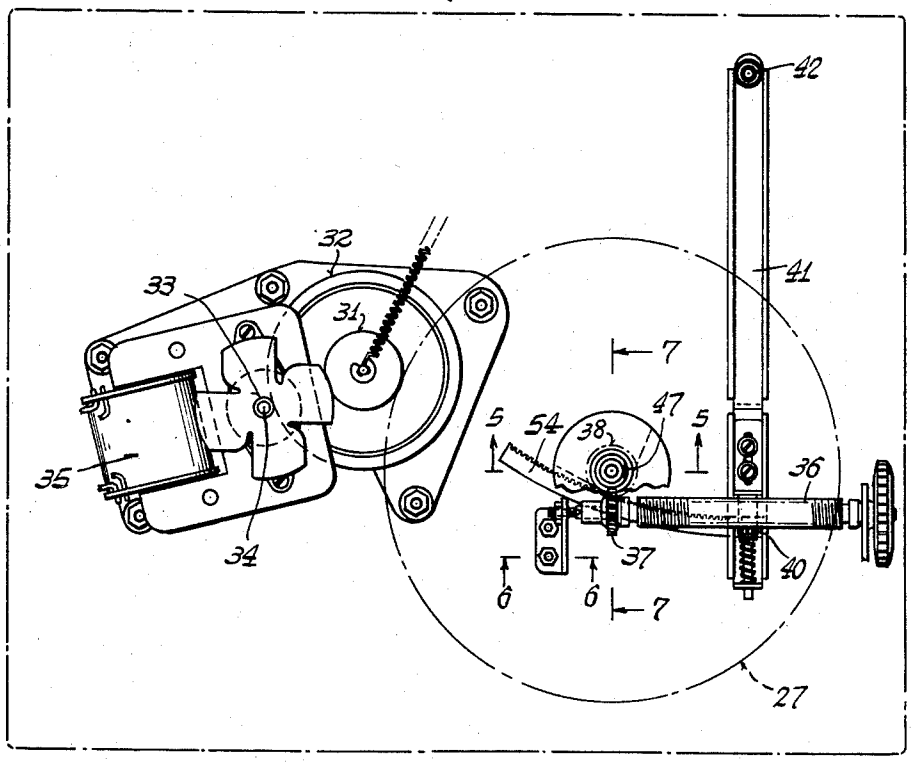


Fig. 5

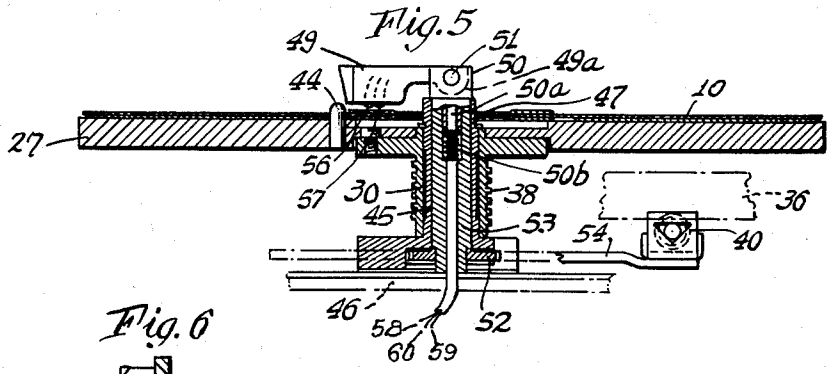
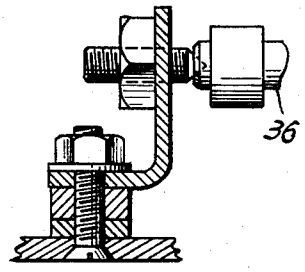


Fig. 6



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INDEXING SYSTEM

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Fig. 7

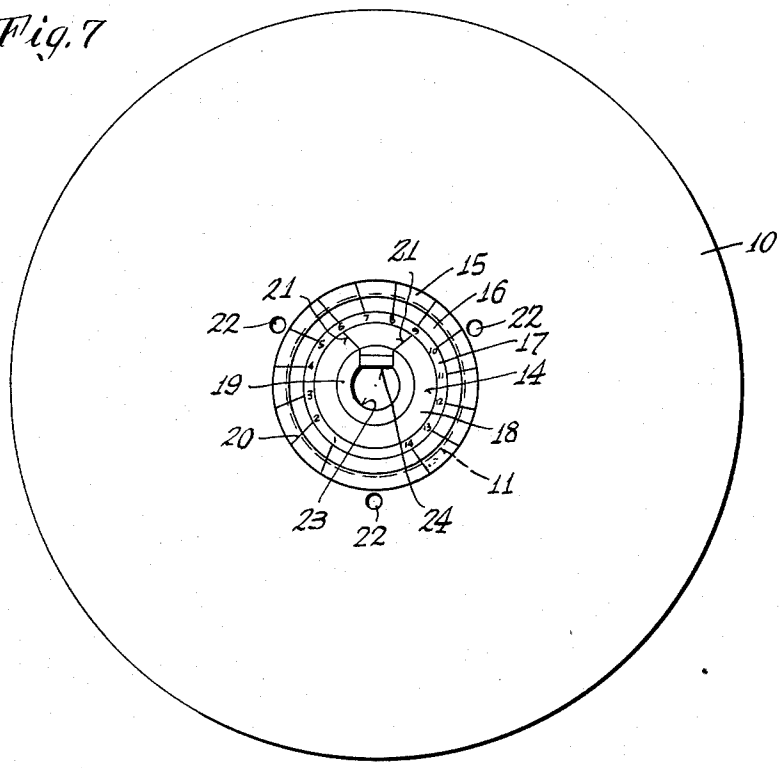
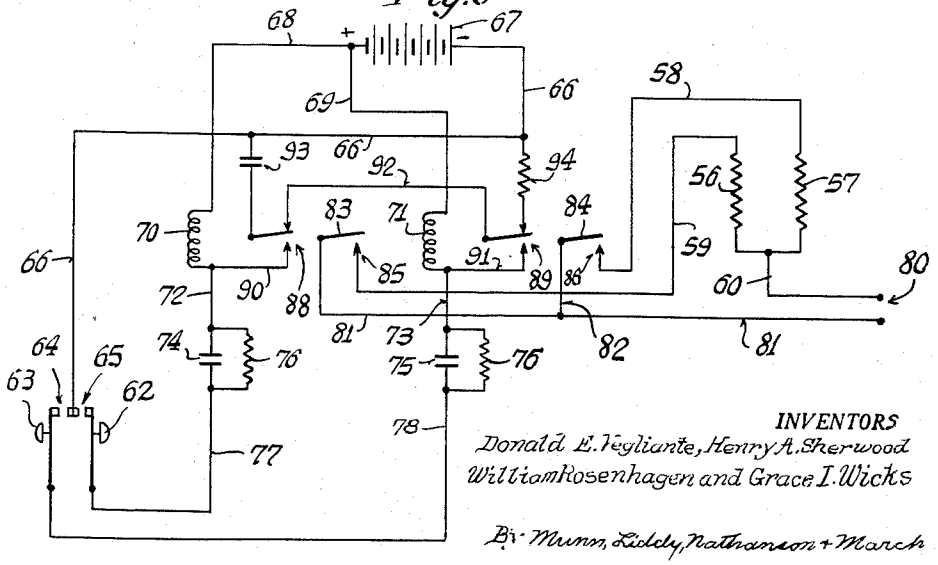


Fig. 8



Fig. 9



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United States Patent Office 2,939,712 Patented June 7, 1960

2,939,712

INDEXING SYSTEM

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Filed Sept. 7, 1955, Ser. No. 532,882

22 Claims. (Cl. 274—9)

This invention relates to the dictating and transcribing art, and more particularly to indexing means and methods for use with dictating and transcribing machines.

In the past various indexing means or systems have been employed, in conjunction with the recording media of dictating machines, to set down information pertinent to the recording. In one such system a long pad was utilized, it being intended that the user manually write on the pad the necessary index information. In another prior indexing system, index strips or sheets were provided, arranged to be mounted on the machine and to be marked in accordance with the positions of certain indicator members. Still another prior arrangement involved a discontinuance of the recording marks on the record, e.g. there were intervals characterized by no marks, to provide the desired indexing information.

These prior indexing systems have various drawbacks or disadvantages. For example, the log pad required the use of a pencil or pen, and involved manual writing. The paper strip or sheet system was susceptible to loss of the strips, rendering the records virtually useless in the absence of the same. Those systems involving blank spaces or zones on the records required expensive optical devices, which were normally usable only on the transcribing machine.

The above drawbacks and disadvantages of prior indexing systems are obviated by the present invention, and one object of the invention is to provide a novel and improved indexing mechanism and method which is extremely simple and convenient to use and which constitutes, in so far as possible, a function of the machine as distinguished from handwriting on log pads, index strips, etc.

Another object of the invention is to provide an improved indexing means as above set forth, wherein the index information is carried by the record member so as to be normally inseparable therefrom, and is easily readable and usuable without the necessity for special optical equipment.

A still further object of the invention is to provide an improved indexing device in accordance with the above, which has utility and may be interpreted regardless of whether the record member is on the recorder, the transcriber, or on a combination machine.

Yet another object of the invention is to provide an improved indexing mechanism as above set forth, which may be readily controlled from a point remote from the record and index members themselves.

A still further object of the invention is to provide a novel and improved, unitary assemblage of record and index member for use in an indexing system as above set forth, which assemblage is extremely simple, economical to fabricate, and reliable in operation at all times.

A feature of the invention resides in the provision of a novel indexing mechanism characterized by a pointer adapted to extend through the center of a disc and index assembly, for the purpose of traversing the index portion

thereof, said pointer being so constituted and arranged as to enable the assembly to be readily mounted on or removed from the machine.

A still further object of the invention is to provide an improved index mechanism for an indexing machine, wherein the index marks may be easily and quickly made without the need for ink, pencil, or other renewable members or substances.

Another feature of the invention resides in the provision of an improved indexing means of the above character, wherein the marking is accomplished by electrical means so arranged and constituted as to be proof against incorrect operation on the part of the user.

Still another feature of the invention resides in the provision of an improved indexing means for dictating machines, wherein use is made of a heat-sensitive material to effect the marks on the index member.

Yet another feature of the invention resides in the provision of novel marking means on a marking member, whereby differently placed marks may readily be effected at the will of the operator, to indicate desired information.

Other features and advantages will hereinafter appear.

In the drawings accompanying this specification, similar characters of reference indicate corresponding parts wherever possible in the several views, in which:

Fig. 1 is a top or plan view of a dictating machine having an indexing mechanism made in accordance with the invention.

Fig. 2 is a front elevational view of the machine shown in Fig. 1.

Fig. 3 is a fragmentary side elevational view of the free or forward end of the tone arm of the dictating machine.

Fig. 4 is a top or plan view of the mechanism in the interior of the machine casing.

Fig. 5 is a fragmentary vertical sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a fragmentary vertical sectional view taken on line 6—6 of Fig. 4.

Fig. 7 is a top or plan view of a record and index assemblage made in accordance with the invention.

Fig. 8 is a fragmentary axial sectional view, enlarged, of the assemblage shown in Fig. 7.

Fig. 9 is a schematic circuit diagram of the electrical control of the index means.

The novel indexing apparatus of the present invention may be considered as constituted of three cooperable assemblies or entities. One assembly comprises the record on which the vibrations are to be recorded; the second assembly comprises the physical, dictating-machine structure arranged to carry the record and co-act therewith; and the third assembly or entity comprises an electrical control system, including circuits, relays and other electrical components, by which the physical or mechanical structure of the machine is controlled and actuated to produce the desired indexing functions.

Considering first the record assembly, referring to Figs. 7 and 8, the invention is shown as embodied in a flat, disc-type record as distinguished from cylindrical records, or records having other, different shapes. It should be understood, however, that the present invention is not limited to the disc-type record described and claimed herein, and that the following description is intended for illustrative purposes only; the scope of the invention is outlined and defined in the appended claims, and therefore not by the specific structures disclosed. The same is true for the dictating machine structure illustrated and described herein, and the electrical control apparatus associated with the machine structure.

Referring to Figs. 7 and 8, the record on which the vibrations are to be recorded may comprise a flat disc 10 formed of a material which is suitable for having opera-

tions performed on it, such as the impressing of grooves, undulations or irregular formations representing vibrations due to sound. It is at present preferred to form the disc **10** of a plastic composition having a vinyl base, as for example, vinyl chloride acetate resin known to the trade by the trademark "Vinylite."

In accordance with the present invention there is provided on the disc **10** a novel, permanently-mounted, easily read index means by which information pertinent to the material which has been recorded on the disc may be readily indicated and preserved for subsequent use. Such information, in addition to including the date and initials or name of the person who has done the dictating, may include indicia identifying corrections, ends of letters, or ends of dictated material. This improved index means is disposed on a portion of the disc which is normally unused and unusable, and is permanently carried by the disc so that it cannot at any time become detached therefrom and lost or misplaced. Moreover, the index means is so arranged and constituted as to be capable of remote control, and to not require handwriting as regards the data relating to the recording process e.g. the corrections, ends of letters, and ends of dictated material. The index means is available for use on both sides of the record, thereby enabling the data pertinent to each side to be individually and understandably set forth. Moreover, the index means is so arranged as to provide the necessary and desired indications in an unmistakable manner without requiring special viewing or interpreting equipment, and the indexing information is usable when the record is on either a recording machine, or a transcribing machine, or a combination of both. The indexing means is further characterized by extreme simplicity and economy of manufacture, so that it may be discarded with the used record, without adding appreciably to the cost of the dictating operation. As shown in Figs. 7 and 8, the disc **10** is provided with a relatively large central opening **11**, and mounted on both sides of the disc to overlie portions thereof surrounding said opening, are index members or discs **12** and **13**. The index discs **12** and **13** are preferably formed of paper capable of being readily marked on, and the center portions **14** of the index discs are preferably off-set inwardly or toward each other and joined together within the area defined by the opening **11**, thereby to constitute a bearing means by which the index discs are centralized on the record disc **10** and also rotatable with respect to the latter.

Each index disc **12**, **13** preferably has a layout of concentric zones, consecutively numbered from the outside toward the center, **15**, **16**, **17**, **18** and **19**. The zones **15** and **16** may be subdivided by substantially radially-extending lines **20**, by which the zones may be subdivided into time intervals, e.g. minutes. The lines **20** may be numbered **1** through **14** as shown, the numbers being placed in the annular zone **17**. The outermost annular zone **15** may be used for recording information as to errors in dictation, and the next inner zone **16** may be used for recording information as to the ends of letter, ends of dictation, etc. The zone **18** may be used for the dictator's name or initials, for the date, and further used for information as to the subject matter and the like, and suitable subdivisions as provided by lines **21** may be provided, to separate this information.

As will be later brought out in detail, the machine of this invention is so organized and constituted as to provide the desired indications or information on the index discs **12** and **13** easily and quickly, by remote control and without requiring handwriting, as regards the error indications and those setting forth the ends of letters or ends of dictated matter. To effect this function the record disc **10** and the index discs **12** and **13** are provided with keying means by which relative rotation between the index and record discs may be effected. The keying means also advantageously provides for centering of the record and index discs.

As shown in Fig. 7, the record disc **10** may be provided with a plurality (here shown as 3) through openings **22** symmetrically disposed at equal distances from the center of the disc, and the center portions of the index discs **12** and **13** may be provided with a center opening or perforation **23** having a flat **24**. The perforations **22** and **23** may engage suitable co-acting members of the recording machine, by which the discs are keyed to effect a relative rotation thereof. In the particular embodiment of the invention illustrated herein the index discs **12** and **13** are actually held stationary, although for the purposes of the invention they may be rotated but at a different rate from the record disc **10**, as will be later more fully explained.

Referring to Figs. 1–5 showing the second mentioned entity, the improved recording machine of the invention comprises a casing generally designated by the numeral **26**, having a turntable **27** and a tone arm **28** provided with a stylus **29**, the arrangement being such that the tone arm and stylus are positively driven or fed so as to traverse a record carried by the turntable **27**. The tone arm **28** is of the type having a head or cartridge which may be utilized for both dictation and reproduction.

Referring to Figs. 4–6, the turntable **27** is shown as being mounted on a rotary spindle **30** by which it is rotatable on the casing **26**. Power is supplied to the turntable **27** by a friction wheel **31** engaging the periphery of the turntable, said wheel being on the same shaft with a larger, driven friction wheel **32** engaging a friction roller **33** on the shaft **34** of an electric motor **35**.

Traversing or feeding movement of the tone arm **28** is effected by a feed screw **36** connected to a worm gear **37** engaging a worm **38** on the turntable spindle **30**. The feed screw **36** is engaged by a nut element **40** carried by a feed arm **41** which is coupled to the tone arm **28** to move simultaneously therewith, and it will be understood that the feed arm **41** and tone arm **28** turn about a pivotal axis **42** as the feed screw **36** is turned in response to rotation of the turntable **27**.

In accordance with the present invention, novel driving means and novel marking means are provided for cooperation with the record and index means described above, by which relative turning of the index disc with respect to the record disc is effected and marking of the index discs accomplished to indicate desired information as regards corrections, ends of letter, ends of dictated matter, etc. As shown in Fig. 5 the turntable **27** is provided with a plurality of upstanding pins **44** adapted to enter and pass through the driving perforations **22** of the disc **10** as the latter is placed on the turntable, thereby to centralize the disc and also effect simultaneous turning thereof with the turntable. Within the spindle **30** there is provided a stationary shaft **45** which is secured to a support member **46** carried by the casing **26**. The stationary shaft **45** projects upward beyond the turntable **27** and has a flatted portion **47**, being so dimensioned that it may readily extend into and pass through the central perforation **23** of the index discs **12** and **13**. The stationary shaft **45** not only centralizes the index discs **12** and **13** but also prevents their rotation when the record disc **10** is being turned during the recording operation.

For cooperation with the upper one of the index discs **12**, **13** there is provided a marking means comprising a marking member **49** in the form of a pointer carried on a rotatable hollow shaft **50** journaled in the stationary shaft **45**. The marking member or pointer **49** is arranged so that it may extend horizontally, as shown in the full lines in Figs. 2 and 5, above the index discs **12** and **13**, thereby to be in position for making marks on the said discs.

For the purpose of enabling the record disc to be easily and quickly placed on and removed from the turntable **27**, the pointer **49** is secured to the shaft **50** by a pivot **51**, by which it may be swung upward to a vertical posi-

tion as indicated by the broken outline in Fig. 2. When in such position, the pointer 49 will readily pass through the center opening or perforation 23 of the index discs. Any suitable detent means may be provided to hold the pointer 49 in vertical and horizontal positions, one such means including a tubular detent member 50*a* releasably urged upward by a coil spring 50*b*, the detent member 50*a* engaging a track 49*a*, Fig. 5, on the pointer 49 adjacent the pivot 51 thereof.

By the present invention the pointer 49 is caused to rotate at a much slower rate than and simultaneously with the turntable 27, thereby to slowly traverse the upper index disc 12, 13. To effect this, a gear 52 is provided on the lower end of the hollow shaft 53, meshing with a rack 54 connected to the feed arm 41 to be driven by said arm. It will be understood that a large gear reduction is effected between the turntable 27 and the pointer 49 whereby the latter will travel through but a fraction of a revolution during a movement of many revolutions of the turntable. The gear reduction is so arranged, preferably, that the pointer 49 does not travel through more than an arc of 360° for one complete traversing movement of the tone arm 28 and feed arm 41, representing a complete use of one side of the record 10.

Also, by the present invention, novel marking means are provided on the pointer 49, by which indications may be easily and quickly made on the upper index disc 12, 13 by remote control and at the will of the operator. Such indications may, for example, be placed in either the annular zone 15 or the annular zone 16 or both, to indicate corrections, ends of letters, ends of dictation and the like. The marking means provided by the present invention is electrically controlled and employs heaters and heat-responsive members. However, it should be understood that other suitable marking means may be utilized in conjunction with the novel record and index assemblage described above, taken together with the traversing pointer 49.

As shown in Fig. 5 a pair of heater wires 56 and 57 is provided on the underside of the pointer 49, said wires being exposed below the pointer and being connected with three feed wires 58, 59 and 60, Figs. 5 and 9. In conjunction with the heater wires 56 and 57 the index discs 11 and 12 are made heat-sensitive in such a manner that they will evidence a visible mark upon being heated to a predetermined temperature. Preferably the surfaces of the index discs 12 and 13 are treated to make them heat sensitive in this manner. It will thus be understood that if one or the other of the wires 56, 57 is heated, as by electrical energization thereof, the said wire, being in close proximity to one or the other of the zones 15, 16 of the upper index disc 12, 13 will result in a mark being formed on said disc in the appropriate zone. Whenever the wire 56 is energized for a brief period during traversal of the index disc by the pointer 49, it will make a mark in the outer zone 15, and when the inner wire 57 is energized and heated it will make a mark in the inner zone 16. Thus, by suitably energizing the heaters 56, 57 through the wires 58, 59 and 60 indications as to desired corrections, ends of letters, ends of dictation and the like may be readily made on the index disc, easily and conveniently by remote control.

Such remote control may be accomplished by the said third-mentioned entity, the novel control apparatus shown in schematic form in Fig. 9. In accordance with the present invention, this novel control apparatus is so constituted and organized that electrical impulses of predetermined, closely-controlled duration are fed to the heater wires 56, 57 by the actuation of suitable buttons, the duration of the impulse being independent of the length of time the button is actuated by the operator and being sufficient to provide a clear and distinct mark on the index disc, in the desired zone or area. The quantity of electricity passing through either of the heater wires is also closely controlled to provide the proper degree of heat thereof, such control involving both the intensity of the current and the duration thereof.

In Fig. 9, correction and end-of-letter buttons 62 and 63 are shown (see also Figs. 1 and 2) controlling pairs of cooperable contacts 64 and 65. The pairs of contacts 64 and 65 have a common lead wire 66 connected to the negative side of a voltage supply 67 whose positive side is connected by wires 68 and 69 to relay coils 70 and 71 respectively, said coils being connected by wires 72 and 73 to capacitors 74 and 75. The capacitors 74 and 75 are bridged by discharging resistors 76 and connected respectively by wires 77 and 78 to the contact pairs 64, 65 controlled by the buttons 62, 63.

Actuation of either of the buttons will thus cause a momentary energization of the associatied relay coil through a capacitor, the duration of such energization being substantially independent of the length of time that the control button is depressed. Also, use is made of this in effecting a controlled energization of the heaters 56, 57, as follows: The common wire 60 of said heaters is connected to a source of energy represented by terminals 80, said source being also connected by wires 81 and 82 to relay contacts 83 and 84 associated respectively with the relay coils 70, 71. The cooperable contacts 85 and 86 of the relays are connected respectively to the wires 59 and 58. Through these connections energization of one or the other of the heaters 56, 57 may be effected from the source 80. The extent of such energization is controlled by a pair of single-pole, double-throw holding contacts 88 and 89, said contacts being connected by wires 90 and 91 to the relay coils 70 and 71, and being connected to each other by a wire 92. The holding contacts 88 are connected through a condenser 93 to the wire 66, and the contacts 89 connected through a resistor 94 to the wire 66. When either of the relay coils 70—71 is energized momentarily through the circuits including the capacitors 74, 75, such energization will be continued for a predetermined short duration by virtue of the circuits including the capacitor 93. Such circuits, however, will suffer a decay of current, thereby deenergizing the relay in a given interval, and consequently one or the other of the heaters 56, 57 will be heated by a predetermined quantity of electricity, sufficient to impart the desired sharp mark on the index disc juxtaposed to it. Upon release of the depressed button 64, 65 the associated capacitor 74, 75 will discharge through its discharge resistor 76, and the circuit will be again in readiness for operation.

Operation of the present improved index mechanism will be readily understood from the above detailed description; it is, however, briefly summarized herewith, as follows: Prior to placing the record 10 in the machine, the pointer 49 is swung upward to its vertical position. The record is then placed on the turntable 27 and the pointer 49 swung downward to the horizontal position shown in Figs. 2 and 5. The tone arm 28 is brought to the beginning or outer portion of the record 10, and the recording commenced in the usual manner. Whenever a correction is to be made, the correction button 62 is depressed. This energizes the relay coil 70 and causes an electrical pulse to pass through the correction heater wire 56, causing a mark to appear on the outer zone 15 of the index disc at the top surface of the record 10. Whenever the operator desires to indicate the end of a letter, or the end of dictation, he will depress the button 63. This will energize the relay coil 71 and cause an energization of the heater wire 57, resulting in a mark being made in the zone 16 on the index disc. Upon the dictation being completed, the operator swings upward the pointer 49 and removes the record 10 from the machine. The record will now have selectively-placed marks on its index disc, indicating by their positions the corrections, ends of letters, and ends of dictation, and when the record is placed in the transcriber the pointer thereof, working in conjunction with the transcriber tone arm, will indicate

to the operator the places where corrections, ends of letters etc. will occur, and the pointer of the machine will move in response to manual shifting of the tone arm, to enable the operator to pick out such places at will.

By this invention we have provided a novel method for indicating index information, characterized by the steps of causing relative movement between two portions of a record one portion of which is adapted to carry the index information, moving a marking member over said one portion at a speed proportional to and slower than the movement of the other portion, and placing marks on said one portion at positions determined by the marking member.

There has thus been provided by this invention a novel method and an advantageous, electrically-operated remote control apparatus by which marks may be made as desired, at the will of the operator, on the upper one of the index discs **12, 13** at any point during the recording operation. Such mark, by virtue of the gear reduction existing between the pointer **49** and the record **10**, will have a predetermined fixed position indicative of the place on the record where the correction or the end of the letter occurs. Since the index discs **12, 13**, while rotatable on the record disc **10** are normally not shifted with respect to the record disc during the handling of the latter, such fixed position of the marks will not be disturbed but will remain as an exact index indication. When the record is placed on a transcriber having a corresponding pointer, the operator need merely notice when the pointer in traversing the index disc reaches a particular mark, whereupon he or she will be apprised that a correction is imminent, or an end of the letter or dictation. Likewise, if the record is on the dictating machine and the operator desires to review the dictation, he or she may immediately pick out the place on the record where the corrections and ends of dictation occur, since the gearing or coupling between the pointer **49**, tone arm **28** and feed arm **41** is fixed and invariable, regardless of disengagement of the feed arm **41** from the feed screw **36**.

It will be understood from the above that there has been provided by this invention an extremely novel and advantageous indexing mechanism wherein the index information is easily and quickly ascertainable, and is always associated with the disc to which it refers, wherein the indicia on the disc may be applied by a simple and convenient remote control, and wherein the indexing information may be interpreted on either the record machine, the transcribing machine or a combination of both, without the necessity for special optical equipment. The indexing apparatus is extremely simple, small and compact, reliable in operation at all times, and economical to manufacture. It facilitates to a remarkable extent the recording and transcribing operations.

While the invention has been described in some detail, it will be understood that variations and modifications may be made without departing from the spirit of the invention or the scope of the appended claims.

We claim:

1. A record means for use in the recording of vibrations, comprising a record member formed of material capable of being readily worked, said record member having a surface adapted to be traversed by a stylus; an index member having a surface exposed to view and adapted to be marked to indicate information pertinent to the vibrations recorded on the record member; and means movably mounting the index member on the record member, said means holding said index member captive against removal from the record member.

2. A record means for use in the recording of vibrations, comprising a record member formed of material capable of being readily worked, said record member having a surface adapted to be traversed by a stylus; an index member having a surface exposed to view and adapted to be marked to indicate information pertinent to the vibrations recorded on the record member; means movably mounting the index member on the record member, said means holding said index member captive against removal from the record member; and keying means on said members, for enabling relative movement to be imparted thereto.

3. The invention as defined in claim 2 in which the record member comprises a disc, in which the index member comprises a second disc mounted centrally on the record disc, and in which the keying means includes means for centering both said discs.

4. In a dictating machine, in combination, a base; means on said base for driving a record to record vibrations thereon; an index member having an exposed surface adapted to be marked to indicate information pertinent to the vibrations which are to be recorded on the record; means for removably mounting said index member on the base; a marking member; means for mounting the marking member on the base, one of said members being rotatably movable on the base with respect to the other; means coupling said one member with said record driving means, to provide for simultaneous movement of the record and said one member at different rates of speed; marking means on said marking member, for providing indications on said index member to convey desired information thereto; and remote-controlled electro-responsive means including a delay device, for activating said marking means on the marking member over a predetermined time interval.

5. In a dictating machine, in combination, a base; an index member comprising a disc having an exposed surface adapted to be marked to indicate information pertinent to vibrations which are to be recorded on the record, said member having a through opening; means for removably mounting said index member on the base; a marking member comprising a pointer; marking means on said pointer, for providing indications on said index member to convey desired information thereto; and means extending through the opening of the index member for mounting said marking member on the base, including a pivotal connection to the pointer, said pivotal connection being dispsoed above the index member by which the pointer is enabled to be swung out of its plane of operation to permit removal of the index member.

6. In combination, a dictating machine for use with a record disk, said machine comprising a turntable adapted to carry and drive the record said turntable having a hollow spindle; a rotary markable index member extending around the spindle; a marking member comprising a pointer; and means passing through the said hollow spindle, rotatably mounting said pointer at the center of the turntable, for rotative movement with respect thereto whereby the pointer may be made to traverse the index member in a circular path.

7. The invention as defined in claim 6 in which the mounting means for the pointer includes a pivotal connection located above the turntable, by which the pointer may be positioned both horizontally and vertically.

8. The invention as defined in claim 6 in which the pointer has electro-responsive means comprising a heating wire for marking the index member.

9. In combination, a movable member formed of material which is suitable for having operations performed on it; a tool for performing the said operations on the movable member; means mounting said member and tool for relative movement; an index member having an exposed surface adapted to be marked to indicate information pertinent to the operations performed on said movable member; means movably mounting the index member on said movable member, said means holding said index member captive against removal therefrom; a marking member; means mounting the marking member, providing for relative movement between the same and the index member; means coupling said tool and marking member, to provide for simultaneous movements thereof; and means on said marking member for pro-

viding indications on the index member, to convey desired information thereto.

10. A record means for use in the recording of vibrations, comprising a record disc formed of material capable of being readily worked, said record disc having opposite faces adapted to be traversed by a stylus and having a central opening extending through it; a pair of index discs of smaller diameter than said record disc and disposed on opposite sides of the latter at the center thereof, said index discs overlying inner portions of the record disc surrounding the opening thereof and having surfaces exposed to view and adapted to be marked to inicate information pertinent to the vibrations recorded on the record disc; and means securing said index discs to each other as a unit, said means extending through the central opening of the record disc and enabling relative movement to occur between the record and index discs.

11. A record means for use in the recording of vibrations, comprising a record member formed of material capable of being readily worked, said record member having a surface adapted to be traversed by a stylus; an index member having a surface exposed to view and adapted to be marked to indicate information pertinent to the vibrations recorded on the record member; and means movably mounting the index member on the record member, said means holding said index member captive against removal from the record member, said record member comprising a disc and said index member comprising a disc rotatively mounted at the center of the record disc, said index disc having a pair of oppositely disposed surfaces adapted to carry index marks.

12. A record means for use in the recording of vibrations, comprising a record member formed of material capable of being readily worked, said record member having a surface adapted to be traversed by a stylus; an index member having a surface exposed to view and adapted to be marked to indicate information pertinent to the vibrations recorded on the record member; and means movably mounting the index member on the record member, said means holding said index member captive against removal from the record member, said record member comprising a disc and said index member being centrally located on the record disc and having separate space zones for displaying index marks indicating different information.

13. In combination, a movable member formed of material which is suitable for having operations performed on it; a tool for performing the said operations on the movable member; means mounting said member and tool for relative movement; an index member having an exposed surface adapted to be marked to indicate information pertinent to the operations performed on said movable member; means movably mounting the index member on said movable member, said means holding said index member captive against removal therefrom; a marking member; means mounting the marking member, providing for relative movement between the same and the index member; means coupling said tool and marking member, to provide for simultaneous movements thereof; and means on said marking member for providing indications on the index member, to convey desired information thereto, said index member being heat sensitive, said marking means comprising a heater; and means for maintaining the index member stationary while the movable member and tool are moving.

14. In a dictating machine, in combination, a base; means on said base for mounting and driving a record having two, relatively movable portions; a stylus; means on the base, mounting the stylus for traversing movement with respect to one of said relatively movable portions of the record, said means being geared to said record driving means; a marking member; means mounting said marking member on the base; a keying member; means mounting the keying member on the base for engagement with the other of said relatively movable portions of the record; means coupling one of said members to said record driving means, providing for traversal of the said one record portion by the marking member; a marking device on the marking member for imprinting indications on said other one of the relatively movable portions of the record, said marking member including a pointer disposed adjacent the axis of the record-driving means, said mounting means for the marking member including a pivot disposed above the record mounting means for enabling the said pointer to be disposed in different angular positions, to facilitate removal of the record.

15. In combination, a movable rotary member formed of yieldable, workable material which is suitable for having operations performed on it, said member having a circular zone centrally disposed thereon; an index member appreciably smaller than and movably carried by said movable member, said index member having a face overlying and extending over said circular zone of said movable member, said face being exposed and capable of being marked to indicate information pertinent to the operations which are to be performed on the first-mentioned member; a movable marking member juxtaposed to said index member; drive means connected between said movable member and marking member, to provide for simultaneous movements thereof at different rates of speed, said marking member moving at a slower rate; mounting means providing for relative rotation between the marking member and index member; and cooperable marking means on said marking member and face of said index member for marking the face of said index member to establish desired information thereon.

16. The invention as defined in claim 15 in which the marking means comprises a thin electro-responsive heater wire for converting electrical current into heat, and comprises a heat-sensitive material on the face of the said index member by which the member is enabled to respond to heat by evidencing a visible mark.

17. The invention as defined in claim 16 in which there is an automatic control means connected to said heater wire, by which the duration of current flow may be held to definite time intervals.

18. The invention as defined in claim 15 in which the index member is circular, and in which the marking member is co-axial with and extends through said index member.

19. A record means for use in the recording of vibrations, comprising a record disc formed of material capable of being readily worked, said record disc having opposite surfaces adapted to be traversed singly by a stylus; an index disc and means movably mounting the index disc on the record disc so that it is shiftable to different positions thereon, said index disc having opposite surfaces exposed to view and located adjacent the opposite surfaces respectively of the record disc, said surfaces of the index disc having marking means to enable information pertinent to the vibrations recorded on the record member to be indicated on the index; and keying means on said members, for enabling relative movement to be imparted thereto.

20. In a dictating machine adapted to carry a record for recording vibrations, in combination, a base; an index member comprising a disc having a center hole and an exposed surface capable of being marked to indicate information pertinent to the vibrations which are to be recorded on the record; means engaged with the center portion of the index member for removably mounting said index member on the base; a marking member; means extending through the center hole of the index member for mounting the marking member on the base, said index member mounting means and said marking member mounting means enabling one of said members to be rotatably movable with respect to the other; and marking means on the marking member, for providing

indications on said index member to convey desired information thereto.

21. In combination, a dictating machine for use with a record disk, said machine comprising a turntable adapted to carry a record of the type having a central opening; a rotary markable index member and means for rotatably mounting the index member on the record so as to be rotatable with respect to outer portions of the record; means on said turntable, engageable with the said outer portions of the record for centering and driving said record; and means disposed centrally of the turntable, engageable with the said index member, for centering and holding immovable said index member.

22. The invention as defined in claim 21 in which there is a pointer and means rotatably mounting said pointer

at the center of the turntable to provide for traversal of the index member by the pointer.

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