June 27, 1972 J. V. PHILLIPS 3,672,991

MAGNETIZED RECORDER THREAD

Filed June 2, 1970

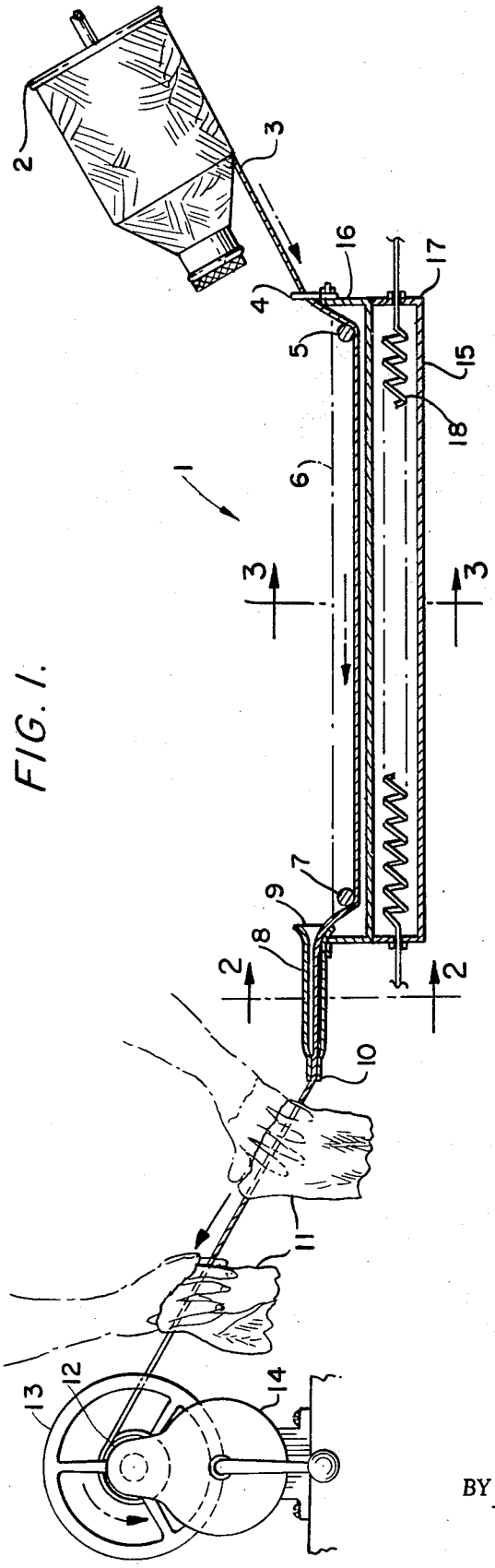


FIG. 1.

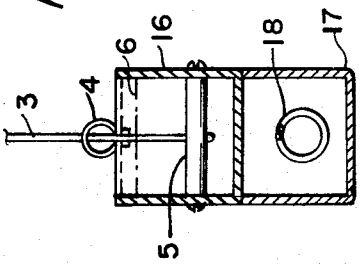


FIG. 3.

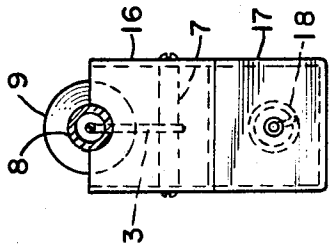


FIG. 2.

INVENTOR

JAMES V. PHILLIPS

BY Schmeiser and Mattare

ATTORNEYS

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MAGNETIZED RECORDER THREAD

James V. Phillips, 30 King George Road, Warren, N.J. 07060

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ABSTRACT OF THE DISCLOSURE

A magnetized recorder thread and method of making same, wherein a textile thread is easily and economically impregnated with a mixture of wax and iron oxide and which can be used only once and then is thrown away if desired.

BACKGROUND OF THE INVENTION

This invention relates to a magnetic member which is particularly suited for use in magnetic recording and reproducing devices.

In the prior art, various magnetic or magnetizable materials have been utilized for magnetically recording sound vibrations so that they may be reproduced at a subsequent time. For example, magnetized tapes are currently available but such tapes are very expensive and are intended to be erased and reused. The present invention provides a magnetized recorder thread which is very easily and economically manufactured and which, because of its inexpensiveness, can be used only once and then disposed of at less cost to the user than if the more expensive recording members, such as magnetized tapes, are used several times.

OBJECTS OF THE INVENTION

It is an object of this invention to provide a magnetic recorder member which may be very easily and economically manufactured.

It is another object of this invention to provide a magnetic recorder member which may be economically manufactured and which can be used only once and then disposed of at less cost to the user than if more expensive recording members are erased and reused.

It is a specific object of this invention to provide a magnetized textile thread impregnated with a mixture of wax and magnetic iron oxide which is economically manufactured and which can be disposed of after a single use.

BRIEF DESCRIPTION OF THE FIGURES

FIG. 1 is a side view in elevation partly in section illustrating the apparatus utilized for manufacturing the magnetized recorder thread according to the present invention.

FIG. 2 is a sectional view of the apparatus shown in FIG. 1 and is taken along the line 2—2.

FIG. 3 is a sectional view of the apparatus shown in FIG. 1 and is taken along the line 3—3.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIG. 1, the apparatus for manufacturing a magnetized textile thread for a recording machine is indicated generally at **1** and comprises a spool or bobbin **2** having a suitable textile thread **3** wound thereon. The thread **3** passes through a guide ring **4** and under a guide pin **5** into a bath **6** comprising a mixture of wax and magnetic iron oxide. The thread **3** passes under a guide pin **7** at the opposite side or end of the bath from guide pin **5** and through a scraper **8** having an enlarged flared inlet opening **9** at one end and a diametrically reduced opening **10** at the opposite end for removing excess amounts of wax and iron oxide mixture from the thread. Upon exiting from the scraper **8**, the thread **3** is wiped by means of suitable cloths **11** or the like to rub the mixture of wax and iron oxide into the textile thread. The thread is received over the hub **12** of a reel **13** or the like mounted to a hand crank **14** which is operated to draw the thread from the bobbin or spool **2** through the guide **4** and under the guide **5** through the bath **6** under guide **7** and through scraper **8** and wipers **11**. The bath **6** is contained within a pan or container **15** comprising an upper part **16** in which the guides are mounted and in which the bath **6** is disposed and a lower part **17** having a suitable heating element **18** disposed therewithin for heating the bath to maintain the wax in a molten state.

The scraper **8**, in the preferred embodiment, comprises a glass tube having an opening in the reduced diameter end **10** on the order of ⅛ inch in diameter to regulate the amount of mixture deposited on the thread. It is preferred that the thread be impregnated with a mixture of either palm, carnauba or paraffin wax and magnetic iron oxide. A mixture of 75 percent palm wax, 25 percent carnauba wax and 50 percent of the volume of wax of magnetic iron oxide give the best results. Any suitable textile thread may be used, but it is preferred that a thread made of cotton, silk or nylon be utilized in the present invention. It is to be understood, of course, that the wipers **11** could be mechanically held instead of being hand held as shown in the drawings and that the crank **14** could be motor operated rather than cranked by hand as illustrated in the drawings.

As can be seen, by means of the present invention, a magnetized recorder thread is very easily and economically manufactured and because the magnetized thread is very inexpensive, it is used a single time and then thrown away.

As this invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, the present embodiment is therefore illustrative and not restrictive.

I claim:

1. An inexpensive, disposable magnetized recorder thread, consisting of a cotton thread, a mixture of 75 percent palm wax, 25 percent carnauba wax and 50 percent of volume of wax of magnetic iron oxide in said thread, and the amounts of wax and magnetic iron oxide in the thread being of such quantity that the recorder thread can be used only once.

2. An inexpensive, disposable magnetized recorder thread, consisting of a silk thread, a mixture of 75 percent palm wax, 25 percent carnauba wax and 50 percent of volume of wax of magnetic iron oxide in said thread, and the amounts of wax and magnetic iron oxide in the thread being of such quanity that the recorder thread can be used only once.

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WILLIAM D. MARTIN, Primary Examiner
B. D. PIANALTO, Assistant Examiner

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117—237; 252—62.54