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A. PROUDFIT

3,047,872

STYLI UNIT

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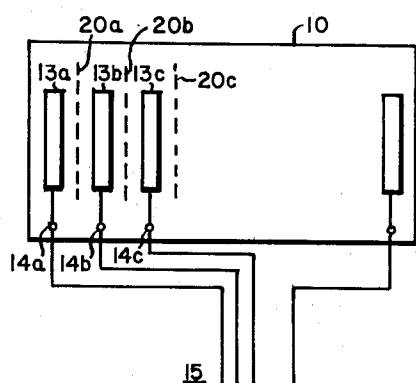


FIG. 1a

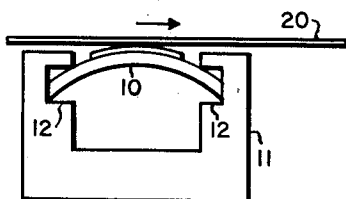


FIG. 1b

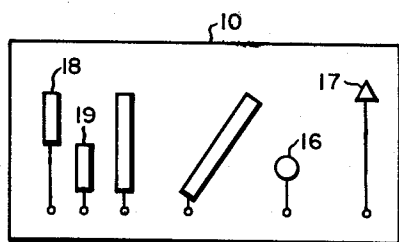


FIG. 2

1

3,047,872

STYLI UNIT

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This invention relates to a styli unit for recording apparatus.

The fabrication of presently used styli units involves first the design and construction of precision molds to make the blocks into which the styli are mounted. This is followed by the fabrication of styli of suitable material and the assembling of the styli into the blocks. It is quite apparent that such fabrication is not only costly, but also requires the labors of a skilled craftsman. If during multi-channel recording operations an individual stylus becomes damaged or broken, it has been found to be more economical to remove the entire styli unit and replace the complete unit rather than repair and replace the individual stylus. It is apparent, therefore, that a styli unit which is simple in construction and inexpensive to fabricate is very desirable.

It is an object of the present invention to provide a new and improved styli unit for recording apparatus.

It is another object of the present invention to provide a new and improved styli unit for recording apparatus which is simple in construction and inexpensive to fabricate.

In accordance with a particular form of the present invention, a styli unit for recording apparatus comprises a resilient backing adapted to be clamped in a holder and a plurality of electrically independent conductive styli affixed to the backing in predetermined positions.

For a better understanding of the present invention, together with other and further objects thereof, reference is had to the following description taken in connection with the accompanying drawing, and its scope will be pointed out in the appended claims.

Referring to the drawing:

FIG. 1a shows a top view of a styli unit constructed in accordance with the present invention;

FIG. 1b shows a side view of the FIG. 1a styli unit clamped in a holder and a recording medium passing over the styli unit, and

FIG. 2 shows various shapes and positioning arrangements of individual styli.

Referring to FIGS. 1a and 1b, there are shown the styli unit for recording apparatus constructed in accordance with the present invention. A resilient backing 10 is clamped in a holder 11. By placing the backing 10 in a pair of slots 12, 12 within the holder 11, the backing is caused to have a curved shape. A plurality of conductive styli 13a, 13b, 13c, etc. are fixed to the backing 10 in predetermined positions. The styli are individually connected to a plurality of terminals 14a, 14b, 14c, etc. A plurality of wires 15, which carry electrical signals which are to be recorded, are also individually connected to the terminals 14a, 14b, 14c, etc. The curvature of the backing 10 insures that the individual stylus will contact a recording medium 20, such as paper, in the desired manner.

One method by which styli units of the present invention may be constructed is through the use of printed wiring techniques. A Bakelite board having a copper surface is suitable for use as a styli unit. Drawings show-

2

ing the arrangement of the plurality of conductive styli are photographed onto and then etched upon the copper surface in a well-known manner. The use of such techniques not only reduces the cost and simplifies the fabrication of the styli unit, but offers more versatility as evidenced by the styli unit shown in FIG. 2. Various shapes of styli in any desired positions are possible. FIG. 2 shows a circular stylus 16 and a triangular stylus 17. The styli 18 and 19 are so positioned as to make possible a time delay between the time stylus 18 begins to record and the time stylus 19 begins to record. In each of these cases the contact area between the styli unit and the recording paper is not limited to the narrow single center line contact area shown in FIG. 1b. The various shapes and positionings of the styli are unlimited.

The styli unit previously described may be somewhat modified by providing each of the styli with individual resiliencies. Referring to FIG. 1a, the dotted lines 20a, 20b, 20c, etc. shown between the plurality of conductive styli indicate cuts in the backing 10. In this way the individual styli are affixed to individually resilient portions of the backing 10.

From the previous description it is apparent that a styli unit constructed in accordance with the present invention has numerous advantages in addition to those already mentioned. Units having differently shaped styli and differently positioned styli may be changed very easily as different needs arise. Also, such styli units require less space than the ones being presently used.

While there has been described what is at present considered to be the preferred embodiment of the invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the invention, and it is, therefore, aimed to cover all such changes and modifications as fall within the true spirit and scope of the invention.

What is claimed is:

1. A styli unit for recording apparatus comprising: a resilient backing adapted to be clamped in a holder; and a plurality of electrically independent conductive styli affixed to said backing in predetermined positions.

2. A styli unit for recording apparatus comprising: a backing, having individually resilient portions, adapted to be clamped in a holder; and a plurality of electrically independent conductive styli affixed to said backing and having predetermined positions within said individually resilient portions.

3. A styli unit for recording apparatus comprising: a resilient curvilinear backing adapted to be clamped in a holder; and a plurality of electrically independent conductive styli affixed to said backing in predetermined positions.

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