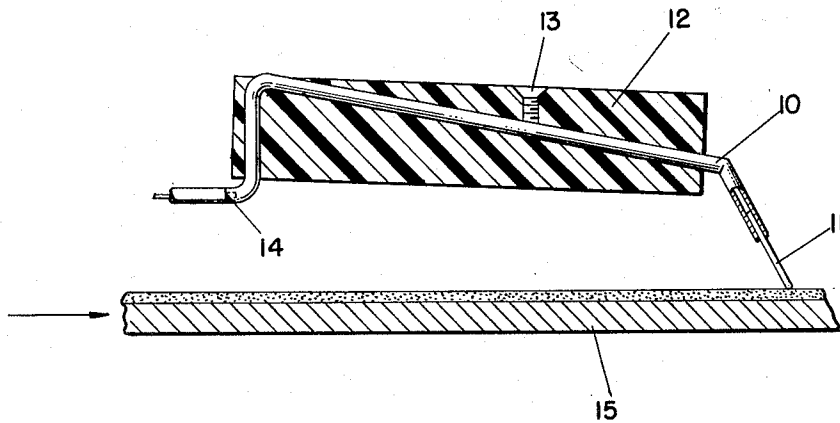


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M. E. NELSON
STYLUS FOR RECORDING ELECTRICAL
IMPULSES ON CARBON COATED PAPER
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INVENTOR.
MILES E. NELSON

BY

W. E. Whitlock, a. w. Law & H. J. Forman
ATTORNEYS

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2,867,491

STYLUS FOR RECORDING ELECTRICAL IMPULSES ON CARBON COATED PAPER

Miles E. Nelson, Philadelphia, Pa., assignor to the United States of America, as represented by the Secretary of the Army

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1 Claim. (Cl. 346—74)

The invention described herein may be manufactured and used by or for the Government for governmental purposes without payment of any royalty thereon.

This invention relates to a stylus of a sort used for making marks on carbon coated paper in response to electrical impulses, and has for an object to eliminate the blurred appearance of marks or lines which they have heretofore possessed and provide instead clean, black marks.

It has been common practice for such styli to be used on said carbon coated paper such as that known as Teledeltos paper to record dots or lines as a pulse of electric current passes through a stylus burning a black mark on the paper. Heretofore, the stylus has been of phosphor bronze. For some unknown reason the carbon collected around the prior art stylus making a blurred, wide and slightly smeared line. The same disadvantage was also present with stainless steel pens.

According to this invention, a finer line or dot has been obtained for an unknown and unexplained reason. A tungsten point of the same size under the same conditions of pressure, current, etc. was found to be free of the objection possessed by the prior art styli of collecting carbon. Professors at one of the large universities could not explain the reason for the ability of tungsten to overcome the aforementioned objections of the prior styli.

The single figure of the drawing shows one embodiment of the present invention in which the paper is generally horizontally disposed.

In the embodiment illustrated, stainless steel tubing 10 having an outside diameter of 0.28 inch and an inside diameter of about .018 inch has been swaged around a tungsten tip about .015 inch in diameter. The tubing 10 is secured in an insulating block 12 by means of a set

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screw 13 or in any other convenient manner. The insulating material of the block 12 is not important but lucite or plexiglas have been found satisfactory. The rear or left end of the tubing is led to some connecting terminal 14 through which current is supplied to the tubing 10 and the tungsten tip 11. The end of the tungsten tip in contact with the paper is given a generally hemispherical or rounded shape for the purpose of writing as smoothly on the paper as is possible. In practice, the block 12 and the tungsten tip 11 are arranged to be able to float or yield as the paper 15 may be moved upward or downward slightly. Also in practice, the tubing and tungsten wire 11 have been usually mounted in a large group, there being in the preferred embodiment 24 such styli each yieldably mounted to float with any unevenness in the paper.

A chief advantage of the present invention is the production of finer, better and less blurred lines due to the absence of carbon collecting around the point which bears on the paper.

By the term carbon coated Teledeltos paper, is meant any carbon coated flexible sheet used with a stylus, through which an electric current has been passed and in which a stylus of phosphor bronze or stainless steel would make blurred marks on the sheet and collect carbon particles around the point.

I claim:

An improved stylus and mounting therefor for use with recording apparatus of the type employing a heat sensitive record sheet, said improvement comprising a stainless steel rod, a terminal at one end of said rod to which an electric current source is connected, a tungsten rod one end of which is swaged into the other end of said stainless steel rod, the other end of said tungsten rod being rounded to allow for smooth movement over said heat sensitive record sheet without danger of tearing or digging in, and a block of non-conductive material for holding said stainless steel rod and tungsten rod.

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