

M. A. POSSONS.
GRAMOPHONE NEEDLE OR STYLUS.
APPLICATION FILED DEC. 16, 1913.

1,103,829.

Patented July 14, 1914.

Fig. 1.

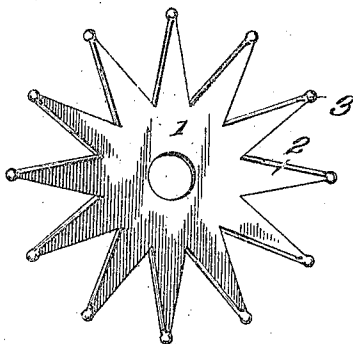


Fig. 2.

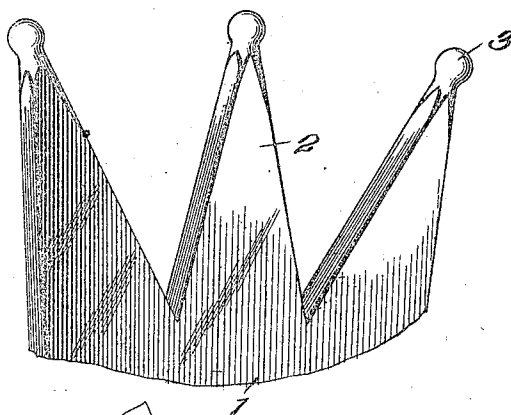
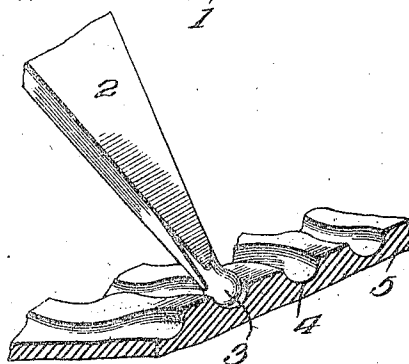


Fig. 3.



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UNITED STATES PATENT OFFICE.

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GRAMOPHONE NEEDLE OR STYLUS.

1,103,829.

Specification of Letters Patent.

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Application filed December 16, 1913. Serial No. 807,074.

To all whom it may concern:

Be it known that I, MINARD A. POSSONS, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in a Gramophone Needle or Stylus, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in gramophone needle or stylus.

The object of my invention is to provide a needle or stylus for a gramophone which can be made of a very thin sheet of metal and yet have the stability to support the reproducer.

Another object of my invention is to provide a needle of this character in which the thickening of the supporting point not only strengthens the needle for supporting the reproducer but also forms a round surface adapted to fill the sound grooves of the records which does away with the grinding sound usually caused by the ordinary pointed needle or stylus and also prevents any injury to the record.

A still further object of my invention is to provide a needle of cheaper construction in that there is a great saving of material and at the same time having the necessary strength and flexibility.

In the accompanying drawing—Figure 1 is a perspective view of a star needle embodying my invention. Fig. 2 is an enlarged perspective view of a portion of the star showing more fully the rounded elliptical members carried by the ends of the points of the star. Fig. 3 is a vertical enlarged sectional view of a record showing the needle in perspective in its position in the sound grooves.

In needles or styli for gramophones it has been found necessary to make the same of metal of such thickness and to form a blunt point in order to retain sufficient area at the point to support the reproducer. By providing the point of the needle with a rounded elliptical shaped member it has been found that the needles can be made of a sheet of metal four and one half thousandths

of an inch thick which has heretofore been found to be far too thin to support the reproducer without injury to the record.

Referring now to the drawing 1 represents my improved star needle which is made of very thin metal of a thickness heretofore stated and provided with the points or needles 2, which may be of any desired number as this forms no part of the invention. These points as shown are of a tapering form and carry at their outer ends the rounded elliptical members 3 which are preferably formed integral with the needles. These members as shown in Fig. 3 are of a width equal to that of the sound grooves 4 of the record 5 and are of a length greater than the depth of the sound grooves 4 whereby there will be no scratching of the needle in the sound grooves of the record.

The rounded elliptical portions carried by the ends of the needles give the necessary area to the point to support the reproducer yet giving the necessary resiliency to the needle above the same.

While I have shown and described the needle in the form of a star, it will be understood that the same could be made in the ordinary single form without departing from my invention.

I claim—

1. A gramophone needle, comprising a sheet of thin metal having an enlarged rounded member on its outer end.

2. A gramophone needle, comprising a sheet of thin metal tapering and having an enlarged rounded member on its outer end.

3. A gramophone needle, comprising a sheet of thin metal having an enlarged rounded member formed integral therewith on its outer end.

4. A gramophone needle comprising a sheet of thin metal having an elliptical member on its outer end.

5. A gramophone needle comprising a sheet of thin metal having an elliptical member formed integral therewith on its outer end.

6. A gramophone needle comprising a sheet of thin tapering metal having an elliptical-shaped member formed on its outer

end of a greater diameter than the thickness of the sheet of metal for the purpose described.

5 7. A gramophone needle comprising a sheet of thin tapering metal having an elliptical-shaped member on its outer end and integral therewith, and of a diameter greater than the thickness of the sheet of metal.

10 8. A gramophone needle comprising a star-shaped sheet of thin metal, the points

of which have elliptical-shaped members formed thereon and integral therewith and of a diameter greater than the thickness of the sheet of metal.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

MINARD A. POSSONS.

Witnesses:

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