

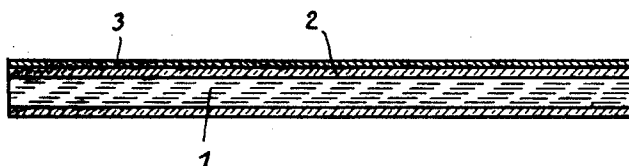
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METAL COATED RECORDING MEDIUM FOR RECORDING INSTRUMENTS

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METAL COATED RECORDING MEDIUM FOR
RECORDING INSTRUMENTS

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1 Claim. (Cl. 117—71)

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The invention relates to metal coated recording
mediums, such as dielectric recording strips to
which, for instance, the metal coating can have
been applied by evaporation. Recording strips of
this type are preferably used in recording instru-
ments recording readings of measuring instru-
ments by having an electrical stylus burn a trace
into the metallized coating of the recording
strips.

The object of the invention is to increase the
life of the metal coating and to prevent its pre-
mature deterioration. Premature failure of the
metal coating has, for instance, been noticed on
dielectric strips with an evaporated zinc coating,
which were found to be unsatisfactory due to dis-
integration of the metal.

As research has shown that the disintegration
of the metal is primarily due to chemical action
caused by water absorbed by the hygroscopic
paper to which the metal is applied, the present
invention therefore provides that the to be metal-
lized surface of the recording strip or both its sur-
faces be coated with nonhygroscopic, chemically
neutral material.

Such a recording strip can, for instance, be
made of paper, one surface of which has been
varnished and then been coated with metal ap-
plied by evaporation. When storing such record-
ing strips in rolls the metallized coating of one
winding will be in contact with the non-metallized
back of the next winding and will, thus, be ex-
posed to corrosive action. It will, therefore, be
found expedient to varnish both sides of the
paper strip prior to metallizing its top surface.
It is, of course, also possible to replace the paper
strips with strips made wholly of chemically neu-
tral and nearly nonhygroscopic material such as
polystyrene.

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It has further been found that the life of the
metal coatings also depends on the selection of
the coating metal. Cadmium applied by evapo-
ration has been found to form the most stable
metal coating. Cadmium coated recording medi-
ums have retained their serviceableness for many
years.

The object of the invention is illustrated by way
of example in the accompanying diagrammatic
drawing which shows a sectional view of a paper
strip 1 having a varnish coating 2 applied to both
its surfaces. The cadmium coating 3 has been
applied by evaporation to one of the varnish coat-
ings 2. The drawing does not correspond to
actual conditions. Actually the thickness of the
paper is 15–20 μ the thickness of the varnish coat-
ing 0.8–1 μ and the thickness of the metal coating
0.05–0.1 μ .

What I claim is:

A strip for electrical recording comprising, in
combination, a strip consisting of hygroscopic
material, said strip having two faces arranged op-
posite to each other; a layer consisting of non-
hygroscopic material and being superposed to one
of said faces of said strip, said non-hygroscopic
layer having a thickness of between .8 and 1 μ ;
and a cadmium layer superposed to said non-
hygroscopic layer, said cadmium layer having a
thickness of between .05 and .1 μ .

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,274,444	Freed	Feb. 24, 1942
2,382,432	McManus et al.	Aug. 14, 1945