

Patented Apr. 21, 1942

2,280,477

UNITED STATES PATENT OFFICE

2,280,477

ROTPROOFING OF TEXTILES, PAPER, AND
OTHER FIBROUS MATERIALS

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No Drawing. Application October 20, 1937, Se-
rial No. 170,051. In Great Britain November
5, 1936

4 Claims. (Cl. 106—16)

This invention relates to the treatment of pa-
per and of fibres, yarns, fabrics and other mate-
rials used for textile or other purposes, which
are liable to suffer rotting or deterioration, or
whose properties would be adversely affected by
exposure to humid conditions, to seawater, or
atmospheric influences, or the influence of
moulds, fungi, bacterial attack, or other depre-
dations.

It is well known to treat textile materials, lia-
ble to such adverse influences with bactericides,
fungicides, or insecticides; and metallic salts of
the complex acids derived from the distillation
or refining of coal tars, petroleum or other crude
oils, have been proposed in this connection.

According to the present invention, a process
for treating paper, textile and other fibrous ma-
terials (of the kind hereinafter referred to) which
enables them to resist deterioration, notably to
render them rotproof, comprises treating the
materials, simultaneously with, or prior to the
sizing operation, with a normally water insol-
uble rot-proofing agent, a metallic salt or an ester
or naphthenic acid or a mixture of such salts
and/or esters dispersed in an aqueous vehicle,
which will not coagulate the sizing liquid, or in
the sizing liquid itself.

The invention also includes a composite liquor
for simultaneously rot-proofing and sizing the
said fibrous materials, which liquor comprises
a stable dispersion of a normally water insol-
uble rot-proofing agent as above specified and a
sizing composition (for example, a rosin wax size)
in an aqueous medium.

The materials which may be treated in ac-
cordance with the invention, include textile ma-
terials such as fibres, slivers, rovings, threads
and yarns, textile fabrics, either woven, knitted
or netted, for example, of cotton, jute, flax sisal,
Phorium tenax, ramie, silk or rayon; paper,
paper pulp or paper boards, fibre or fibre boards
and the like; composite surfaces such as plas-
ter or plaster boards; or wood or wood pulp.

Among the rot-proofing agents above specified,
I have obtained good results with metallic naph-
thenates (for example aluminium or zinc naph-
thenate).

In carrying out this invention in the manu-
facture of a rot-proof paper, using, for example,
a metallic naphthenate as the rot-proofing agent,
the latter may be added to the sizing material
and a composite liquor made up.

For this purpose zinc naphthenate may be dis-
persed in an aqueous vehicle by means of alkali
and the aqueous dispersion thus obtained in-
corporated with the materials used for making

paper size. Alternatively, the paper or other
fibrous material prior to the sizing stage, may
be impregnated with the aqueous dispersion of
zinc naphthenate and subsequently sized in the
ordinary way.

In the case of textile materials the fibrous
material impregnated with a rot-proofing agent
in accordance with this invention, as a prelimi-
nary or subsidiary operation may be easily oiled
in the softening or teasing process since the rot-
proofing agent in the form of a stabilised disper-
sion (for example, an ammonia-stabilised met-
allic naphthenate dispersion) will assist these
operations in a similar manner to a wetting
agent.

If desired, the rot-proofed and sized material
may be treated with a water-proofing agent. For
this purpose rubber in the form of stabilised rub-
ber latex, suitably compounded, may be employed
as the water-proofing agent; and in this case
the usual vulcanising agents and curing accel-
erators may be incorporated; or in place of suit-
ably treated or compounded rubber latex a vul-
canised rubber latex or latex gel may be em-
ployed.

What I claim is:

1. A composite liquor for sizing and rot-
proofing materials, which liquor comprises a
mixture of a sizing composition in the disperse
phase and a rot-proofing material in the con-
tinuous phase and comprising a normally water-
insoluble compound of naphthenic acid stably
dispersed in an aqueous vehicle by means of an
alkali.

2. A composite liquor for sizing and rot-proof-
ing materials, which liquor comprises a mixture
of a sizing composition in the disperse phase and
a rot-proofing material in the continuous phase
and comprising a normally water-insoluble me-
tallic salt of naphthenic acid stably dispersed in
an aqueous vehicle by means of an alkali.

3. A composite liquor for mixture of a sizing
and rot-proofing materials, which liquor com-
prises a sizing composition in the disperse phase
and a rot-proofing material in the continuous
phase and comprising a normally water-insoluble
ester of naphthenic acid stably dispersed in an
aqueous vehicle by means of an alkali.

4. A composite liquor for sizing and rot-proof-
ing materials, which liquor comprises a mixture
of a rosin wax size in the disperse phase and a
rot-proofing material in the continuous phase
and comprising a normally water-insoluble salt
of naphthenic acid stably dispersed in an aqueous
vehicle by means of an alkali.

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