

UNITED STATES PATENT OFFICE.

RICHARD FISCHER, OF LEVERKUSEN, NEAR COLOGNE, GERMANY, ASSIGNOR TO FAR-
BENFABRIKEN VORM. FRIEDR. BAYER & CO., OF ELBERFELD, GERMANY, A COR-
PORATION OF GERMANY.

PRODUCING STABLE SOLUTIONS OF DIAZOTIZED NITRANILINS.

1,057,137.

Specification of Letters Patent.

Patented Mar. 25, 1913.

No Drawing.

Application filed February 14, 1912. Serial No. 677,600.

To all whom it may concern:

Be it known that I, RICHARD FISCHER, doctor of philosophy, chemist, citizen of the German Empire, residing at Leverkusen, near Cologne, Germany, have invented new and useful Improvements in Producing Stable Solutions of Diazotized Nitranylins, of which the following is a specification.

A serious drawback in the use of diazo-
tized nitranylins for dyeing and printing is
the fact that the diazo solutions and the
printing pastes containing them are rendered
very quickly useless. It has now been
found that this fault can be remedied in
a simple manner by the addition of aromatic
sulfonic acids such as naphthalene sulfonic
acids or anthraquinone sulfonic acids or of
their salts to the diazo solutions. This addition
can be made before or after the diazotization
of the nitranylins. It is remarkable that for
this purpose even relatively small quantities
of the sulfonic acids are sufficient. If for
instance a naphthalene trisulfonic acid is
used, a quantity of this acid amounting to
 $\frac{1}{4}$ or $\frac{1}{3}$ of the weight of the nitranyl used
is sufficient to secure excellent stability of
the product. Although it is known from literature
that it is possible to prepare stable salts of
para-nitro-diazobenzene by means of sulfonic
acids of naphthalene, yet it could not be
foreseen from this fact that the aqueous
solutions of the diazotized nitranylins could
be rendered stable even with quantities of
these sulfonic acids far below the theory.

The term dyeing mediums is used in the
claims as generic to both the dyeing solutions
and the printing pastes of the diazotized
nitranylins.

I claim:—

1. Process for the production of stable

dyeing mediums of diazotized nitranylins,
which process consists in adding to the solutions
and pastes containing nitranylins, an aromatic
sulfonic acid in quantities which are not
sufficient for the formation of neutral salts
with the diazo compounds, substantially as
described.

2. The process for the production of stable
dyeing mediums of diazotized nitranylins,
which process consists in adding to the solutions
and pastes containing nitranylins, a naphthalene
trisulfonic acid in quantities which are not
sufficient for the formation of neutral salts
with the diazo compounds, substantially as
described.

3. Process for the production of stable
solutions of diazotized nitranylins which
comprises adding an aromatic sulfonic acid to
the solution before diazotizing.

4. Process for the production of stable
solutions of diazotized nitranylins which
comprises adding a naphthalene trisulfonic acid
to the solution before diazotizing.

5. As new articles of manufacture, dyeing
mediums comprising nitrodiazobenzenes and
a naphthalene trisulfonic acid.

6. As new articles of manufacture dyeing
mediums comprising a diazotized nitranyl
and a naphthalene trisulfonic acid amounting
to $\frac{1}{4}$ to $\frac{1}{3}$ of the weight of the nitranyl.

7. As a new article of manufacture a solution
comprising a diazotized nitranyl and a
naphthalene trisulfonic acid amounting to
 $\frac{1}{4}$ to $\frac{1}{3}$ of the weight of the nitranyl.

In testimony whereof I have hereunto set
my hand in the presence of two subscribing
witnesses.

RICHARD FISCHER. [L. s.]

Witnesses:

ALBERT NUFER,
HELEN NUFER.