

# UNITED STATES PATENT OFFICE.

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## BLUE-RED DISAZO DYE AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 679,974, dated August 6, 1901.

Application filed May 27, 1901. Serial No. 62,014. (No specimens.)

To all whom it may concern:

Be it known that I, AUGUST LEOPOLD LASKA, chemist, doctor of philosophy, residing at Obermainstrasse 35, Offenbach-on-the-Main, Germany, have invented new and useful Improvements in Bluish-Claret-Red Disazo Dyes, of which the following is a specification.

If benzoyl-2:5-amidonaphthol-7-sulfonic acid is made to act upon intermediate products derived from paradiamins and the oxy-carboxylic acids of the benzene series, coloring-matters are obtained, dyeing unmordanted cotton in bluish-claret-red shades of good fastness, being especially distinguished from all other similar dyestuffs by their great fastness to light. In order to form such dyes, there may be employed as diamins benzidin, tolidin, dianisidin, para-phenylendiamin, and as oxy-carboxylic acids those of the benzene and their homologues.

The following is an example of carrying out my invention, the parts being by weight: Dyestuff from -

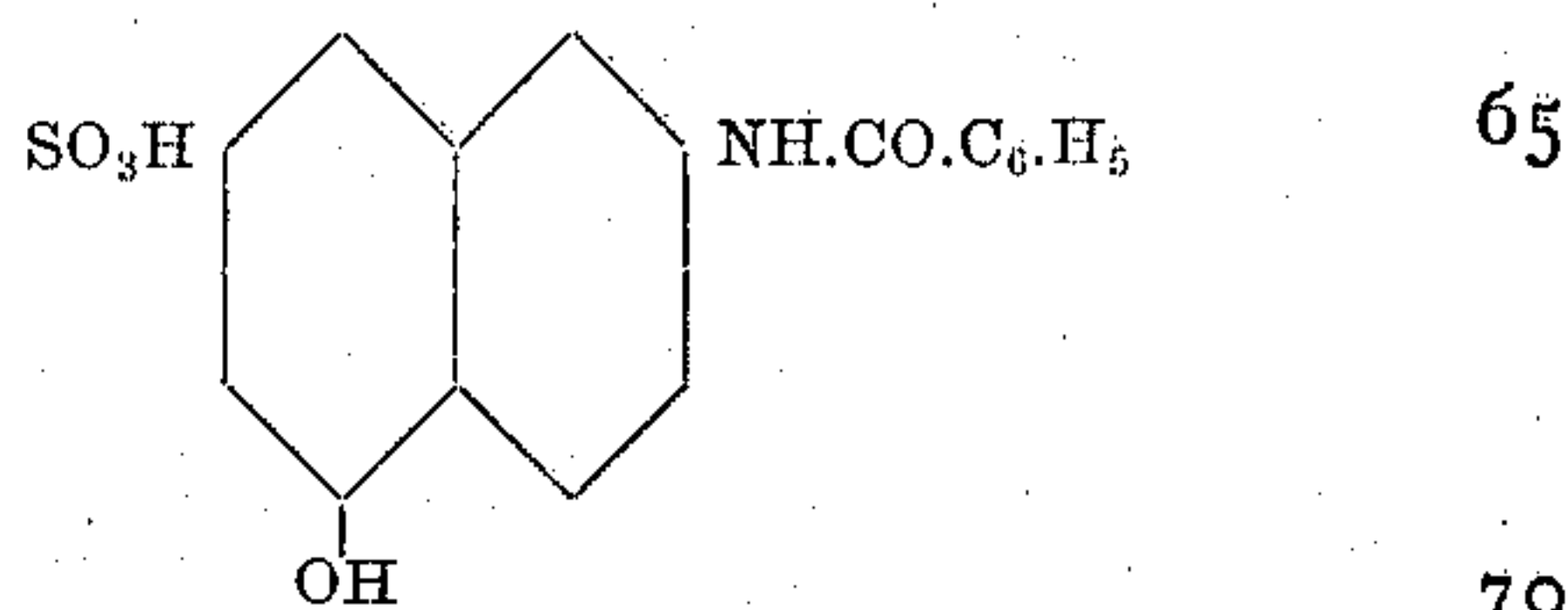
25 Benzidin { Salicylic acid  
Benzoyl-2:5-amidonaphthol-7-sulfonic acid.

30 Dissolve 9.2 parts of benzidin in 28.5 parts of hydrochloric acid of 20° Baumé and three hundred parts of water, and at a temperature of 5° centigrade tetrazotize by adding a solution of seven parts of sodium nitrite in fifty parts of water, then pour the tetrazo liquid in an ice-cold solution of 7.3 parts of salicylic acid and twenty-four parts of sodium carbonate in four hundred parts of water. To the intermediate product thus formed add a solution of eighteen parts of benzoyl-2:5-amidonaphthol-7-sulfonic acid, allow to stand for twenty-four hours in order to complete the reaction, then raise slowly the temperature up to 80° to 90° centigrade, precipitate with common salt, press, and dry. The coloring-matter thus obtained forms in its dry state a reddish black-brown powder with a metallic luster, hardly soluble in cold and readily soluble in hot water, with a yellowish-red color and dyes unmordanted cotton a bluish claret red fast to light and washing.

What I claim, and desire to secure by Letters Patent, is—

1. The herein-described process of production of claret-red disazo coloring-matters consisting in the combination of the intermediate products from paradiamins and the oxy-carboxylic acids of the benzene series with benzoyl-amidonaphthol-sulfonic acid.

2. As new articles of manufacture the bluish-claret-red disazo dyestuffs herein described resulting from the combination of the intermediate products from paradiamins and oxy-carboxylic acids with the benzoyl-2:5-amidonaphthol-7-sulfonic acid of the formula



hardly soluble in cold, readily soluble in hot water with a yellowish-red color and dyeing unmordanted cotton a bluish claret red.

3. As a new article of manufacture the dyestuff, the constitution of which is represented by the following scheme

Benzidin { Salicylic acid  
Benzoyl-2:5-amidonaphthol-7-sulfonic acid

which forms in its dry state a reddish black-brown powder, scarcely soluble in cold, readily soluble in hot water yielding a yellowish-red solution, from which on adding concentrated sodium-lye, a reddish, and on adding hydrochloric acid a brownish precipitate falls down, dissolves in concentrated sulfuric acid to a pure-blue solution, which by running in water yields a reddish-brown precipitate and dyes unmordanted cotton a bluish claret red; very fast to washing and light.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUST LEOPOLD LASKA.

Witnesses:

HERMANN WEIL,  
KARL SIEGLE.