

# CLASSICS



A.D. 1856 . . . . . N° 1984.

## Dyeing Fabrics.

LETTERS PATENT to William Henry Perkin, of King David Fort, in the Parish of Saint George in the East, in the County of Middlesex, Chemist, for the Invention of "PRODUCING A NEW COLORING MATTER FOR DYEING WITH A LILAC OR PURPLE COLOR STUFFS OF SILK, COTTON, WOOL, OR OTHER MATERIALS."

Sealed the 20th February 1857, and dated the 26th August 1856.

PROVISIONAL SPECIFICATION left by the said William Henry Perkin at the Office of the Commissioners of Patents, with his Petition, on the 26th August 1856.

I, WILLIAM HENRY PERKIN, do hereby declare the nature of the said  
5 Invention for "PRODUCING A NEW COLORING MATTER FOR DYEING WITH A LILAC OR PURPLE COLOR STUFFS OF SILK, COTTON, WOOL, OR OTHER MATERIALS," to be as follows:—

Equivalent proportions of sulphate of aniline and bichromate of potassa are to be dissolved in separate portions of hot water, and, when dissolved, they are  
10 to be mixed and stirred, which causes a black precipitate to form. After this mixture has stood for a few hours it is to be thrown on a filter, and the precipitate to be well washed with water, to free it from sulphate of potassa, and then dried. When dry it is to be boiled in coal-tar naphtha, to extract a brown

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Provisional  
Specification.

*Perkin's New Colouring Matter for Dyeing Silk, Cotton, &c. Lilac or Purple.*

substance from it, and this process must be repeated several times, until such substance is entirely separated. The residue is then to be boiled in methylated spirit, to extract the coloring matter, and the spirit is afterwards to be separated from the coloring matter by distillation. The coloring matter thus obtained is a solid of a bronze color. The coloring matter, when required for 5 use, is to be powdered with a given quantity of oxalic or tartaric acid, and moistened with a little methylated spirit, and is then thrown into boiling water. The materials to be dyed are then to be immersed, the solution being kept boiling, and when dyed they are to be washed with cold water, to cleanse them from the acid. The materials thus dyed are of a lilac or purple color of a 10 very durable character, the tints or shades of which may be varied by the quantity of coloring matter used.

SPECIFICATION in pursuance of the conditions of the Letters Patent, filed by the said William Henry Perkin in the Great Seal Patent Office on the 21st February 1857. 15

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, WILLIAM HENRY PERKIN, of King David Fort, in the Parish of Saint George in the East, in the County of Middlesex, Chemist, send greeting.

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twenty-sixth day of August, in the year of our Lord 20 One thousand eight hundred and fifty-six, in the nineteenth year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said William Henry Perkin, Her special licence that I, the said William Henry Perkin, my executors, administrators, and assigns, or such others as I, the said William Henry Perkin, my executors, administrators, and assigns, 25 should at any time agree with, and no others, from time to time and at all times thereafter during the term therein expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "PRODUCING A NEW COLORING MATTER FOR DYEING WITH A LILAC OR PURPLE 30 COLOR STUFFS OF SILK, COTTON, WOOL, OR OTHER MATERIALS," upon the condition (amongst others) that I, the said William Henry Perkin, my executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and 35

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*Perkin's New Colouring Matter for Dyeing Silk, Cotton, &c. Lilac or Purple.*

cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the date of the said Letters Patent.

NOW KNOW YE, that I, the said William Henry Perkin, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement (that is to say):—

The nature of my Invention consists in producing a new coloring matter for dyeing with a lilac or purple color stuffs of silk, cotton, wool, and other materials in the manner following:—

10 I take a cold solution of sulphate of aniline, or a cold solution of sulphate of toluidine, or a cold solution of sulphate of xyloidine, or a cold solution of sulphate of cumidine, or a mixture of any one of such solutions with any others or other of them, and as much of a cold solution of a soluble bichromate as contains base enough to convert the sulphuric acid in any of the above-  
15 mentioned solutions into a neutral sulphate. I then mix the solutions, and allow them to stand for ten or twelve hours, when the mixture will consist of a black powder and a solution of a neutral sulphate. I then throw this mixture upon a fine filter, and wash it with water till free from the neutral sulphate. I then dry the substance thus obtained at a temperature of 100° centigrade,  
20 or 212° Fahrenheit, and digest it repeatedly with coal tar naphtha, until it is free from a brown substance which is extracted by the naphtha. Any other substance than coal tar naphtha may be used in which the brown substance is soluble and the coloring matter is not soluble. I then free the residue from the naphtha by evaporation, and digest it with methylated spirit, or any other  
25 liquid in which the coloring matter is soluble, which dissolves out the new coloring matter. I then separate the methylated spirit from the coloring matter by distillation, at a temperature of 100° centigrade, or 212° Fahrenheit.

To produce the lilac or purple color in the material to be dyed, I add a  
30 strong solution of the coloring matter (preferring an alcoholic solution) to a dilute boiling solution of tartaric acid or oxalic acid, and work the silk, cotton, or other material through it when cold.

For dyeing wool it is found advantageous to boil the wool with the above solution and sulphate of iron, to rinse it in water, and afterwards wash it in  
35 soap and water.

Having now described the nature of my Invention, and in what manner the same is to be performed, I hereby declare that I claim as the Invention, whereof the exclusive use is intended to be secured by the above-mentioned



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Specification.

*Perkin's New Colouring Matter for Dyeing Silk, Cotton, &c. Lilac or Purple.*

Letters Patent, the producing in the manner above described a coloring matter for dyeing silk, cotton, wool, or other materials with a lilac or purple color.

In witness whereof, I, the said William Henry Perkin, have hereunto set my hand and seal, this Twenty-first day of February, in the year 5 of our Lord One thousand eight hundred and fifty-seven.

W. H. PERKIN. (L.S.)

Signed, sealed, and delivered in the presence of

JAMES EDELL,  
7, Crescent, Minorities, Sol<sup>r</sup>.

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LONDON:

Printed by GEORGE EDWARD EYRE and WILLIAM SPOTTISWOODE,  
Printers to the Queen's most Excellent Majesty. 1857.

