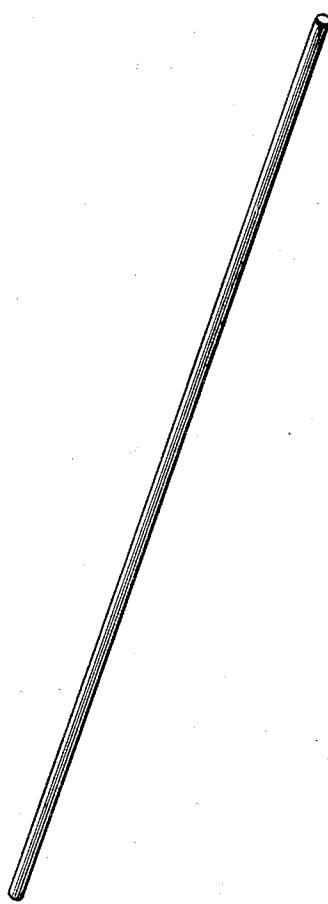


(No Model.)

E. W. PERRY, Jr.  
PENCIL OR CRAYON.

No. 452,890.

Patented May 26, 1891.



Witnesses.

Phil. G. Scott,  
A. H. Morris.

Inventor.

Enoch Wood Perry Jr.

By James L. Morris.

Atty.

# UNITED STATES PATENT OFFICE.

ENOCH WOOD PERRY, JR., OF NEW YORK, N. Y., ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE AMERICAN LEAD PENCIL COMPANY, OF SAME PLACE.

## PENCIL OR CRAYON.

SPECIFICATION forming part of Letters Patent No. 452,890, dated May 26, 1891.

Application filed June 21, 1890. Serial No. 356,283. (No specimens.)

To all whom it may concern:

Be it known that I, ENOCH WOOD PERRY, Jr., a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Pencils or Crayons, of which the following is a specification.

This invention has for its object to provide new and useful lead-pencils, slate-pencils, and crayons which are far stronger and tougher than any heretofore made; and to such end it consists, essentially, in a pencil or crayon composed of a body material, such as plumbago, graphite, chalk, Chinese clay, blue or red or other coloring-matter, in conjunction or combination with nitro-cellulose or other pyroxyline compound.

The invention also consists in a pencil or crayon composed of plumbago, graphite, chalk, Chinese clay, or other coloring-matter, in conjunction with a pyroxyline compound and non-volatile or essential oil.

In the drawing the figure represents a pencil-stick made according to the invention.

In carrying my invention into effect I mix, by trituration or otherwise, a quantity of graphite or plumbago and a quantity of nitro-cellulose or other pyroxyline compound. The proportion of graphite or plumbago may vary from fifty to one hundred and fifty per cent. or more of the amount of pyroxyline used, according to the quality of pencil desired; or instead of plumbago, ivory or lamp-black or other dark pigment may be employed, and the proportions of the same may vary according to the intensity of the pigment used. To still further intensify the color of the pencil, there may be used, in addition to the pigment colors, aniline colors, such as nicrosine or the like.

In order to exemplify the working of the invention, I mix about as follows: To one hundred parts, in weight, of dry pyroxyline pulp I add a body material composed of one hundred and twenty-five parts of graphite, seventy-five parts camphor, and about seventy-five parts of alcohol. This mixture is then manipulated on rolls, as is well known in the arts, and then pressed into blocks and cut into

sheets, which are subdivided as may be desired; or the rolled material may be placed into a stuffing-machine and the material stuffed into such shape as may be needed. I have found that the above gives a pencil of a good average marking quality. In order to produce a pencil of a greater intensity of color, I increase the proportion of graphite and add thereto a certain amount of lamp-black or other coloring-matter. In this way I produce a very tough pencil, which is totally free from grit.

I further have found that the mark of the pencil may be made more permanent by an addition of oil to the aforementioned compound, and for this purpose I may use castor or camphor or cedar oil, or other oil or glycerine, or stearine may be employed. For example, twenty per cent. of cedar oil added to the ingredients aforesaid will make a pencil of excellent quality. Colored pigments may be employed to produce various colored crayons or pencils, in combination with pyroxyline, and manipulated in the same manner as the before-mentioned graphite compound.

The material prepared as described is formed into pencil-sticks, which may be enclosed in wooden, paper, or other sheaths, or the sticks can be used in holders, such as are adapted for ordinary movable lead crayons.

Having thus described my invention, what I claim is—

1. As a new article of manufacture, a pencil or crayon consisting of a body material and a pyroxyline compound, substantially as described.

2. A pencil or crayon consisting of a body material, a pyroxyline compound, and an oil, substantially as described.

3. A pencil or crayon consisting of a body material, a pyroxyline compound, an oil, and a coloring agent, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

ENOCH WOOD PERRY, JR.

Witnesses:

J. H. CARMENCKE,  
G. V. A. CONGER.