UNITED STATES PATENT OFFICE.

WILLIAM P. ELTRINGHAM, OF DUBOIS, PENNSYLVANIA.

ELECTRIC-LIGHT CARBON.

SPECIFICATION forming part of Letters Patent No. 457,763, dated August 11, 1891.

Application filed April 27, 1891. Serial No. 390,672. (No specimens.)

To all whom it may concern:

Be it known that I, WILLIAM P. ELTRINGHAM, a citizen of the United States, residing at Dubois, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Electric-Light Carbons; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to prolong the life of the carbon sticks, especially those used in arc lights, so as to do away in a measure with their frequent renewals, now necessary with those in general use; and it consists in heating or tempering the carbons by the use of borax, or any equivalent of borax, either during the process of manufacture of said carbons or afterward.

Formula.—For one hundred (100) pounds of product the following ingredients are used in about the following proportions: Coke, seventy-two per cent.; pitch, twenty-three per cent.; borax, any equivalents of borax, such as borate of sodium, sodium pyroborate, and disodic tetraborate, all commonly known as "borax," five per cent. This forms a mass which is molded into sticks called "carbon" and baked in a furnace. They are then ready for use, made in different sizes, ranging from seven-sixteenths of an inch to nine-sixteenths of an inch in width and of any length desired.

The use of the borax or its equivalents produces the results claimed—viz., each carbon stick will burn at least three (3) hours longer than the ordinary carbons now used, and in burning gives a much clearer, stronger, and whiter light.

The percentage of borax given in the above formula may be varied slightly—that is, a larger per cent. of borax may produce even better results; but tests so far show the proportions given above to be satisfactory.

I claim—

The herein-described composition to be used for producing electric-light carbons, consisting of coke, pitch, and borax or its equivalents, in the proportions specified.

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

WILLIAM P. ELTRINGHAM.

Witnesses:
GEORGE F. CANT,
J. H. PENTZ.