

United States Patent Office.

HENRY WURTZ, OF NEW YORK, N. Y., ASSIGNOR TO JAMES LORIMER GRAHAM, OF SAME PLACE.

Letters Patent No. 99,741, dated February 8, 1870.

IMPROVED CHEMICAL PRODUCT CALLED FUSED OR ANHYDROUS GRAHAMITE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY WURTZ, of New York, in the county of New York, in the State of New York, have invented a new and improved article of manufacture, or chemical product, called by me Fused or Anhydrous Grahamite; and I do hereby declare that the following is a full and exact description thereof.

Description.

The nature of my invention consists in a new chemical preparation, or article of manufacture, made by heating the mineral from Ritchie county, West Virginia, called by me Grahamite, in a vessel which is closed or covered, nearly, but not quite, tight, up to the point of incipient decomposition, so as to conjoin, with the action of the heat, that of a low pressure, by which treatment the mineral undergoes a sort of tarry semi-fusion, evolving at the same time the water which is naturally combined with it, together with some other volatile products, and affording, as a residuum, the new preparation which forms the subject of this patent, which, after cooling, is found better adapted to certain uses than the raw Grahamite, namely, for such purposes as those in which Grahamite is used by me, (according to a previous patent, issued to me August 13, 1867, No. 67,697, for "compositions for varnishing, coating, and protecting surfaces," &c., and according to specifications included in a pamphlet report upon Grahamite, printed in New York in the year 1865, a copy of which is filed herewith,) in combination with oily substances, either animal, vegetable, or mineral, in the composition of paints, varnishes, printing-inks, lubricators, &c.

The superior adaptability of the new preparation is due to the greater readiness and completeness with

which the mineral, when freed from water, combines with and dissolves in oily substances, and also in some cases to a change which has been effected in the ingredient discovered by me in Grahamite, and called by the name of *alpha resinoid*, or *viscosine*, which ingredient is thus rendered less adhesive in its nature, the altered mineral being, therefore, less liable to cake when ground together with fluid or semi-fluid substances.

I prefer to effect the dehydration and semi-fusion of Grahamite in ordinary horizontal iron retorts, such as are commonly used in the manufacture of gas and coal-oil. From such a retort the tarry semi-fused Grahamite readily flows out, or may be drawn out, when the lid is removed, (particularly if the retort be set inclined toward the front at a small angle,) and a fresh charge of the raw mineral is then readily introduced.

It is obvious, however, that any vessel may be used which admits of being covered so closely as to leave an aperture sufficient only for the exit of the *aqueous* vapor and other volatile distillates.

Claim.

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

The new article of manufacture or chemical product above described, produced substantially as above set forth, and called by me fused or anhydrous Grahamite.

In testimony whereof, I have hereunto set my signature, in the presence of two witnesses, in the city of New York, on this 28th day of September, 1867.

HENRY WURTZ.

Witnesses:

CHARLES A. SEELY,
MICHAEL J. HAVILAND.