

Specification of Michael Linning : converting peat into fuel, and obtaining tar, gas, &c.;

Contributors

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A.D. 1837 N° 7296.

S P E C I F I C A T I O N

OF

MICHAEL LINNING.

—
CONVERTING PEAT INTO FUEL, AND
OBTAINING TAR, GAS, &c.
—

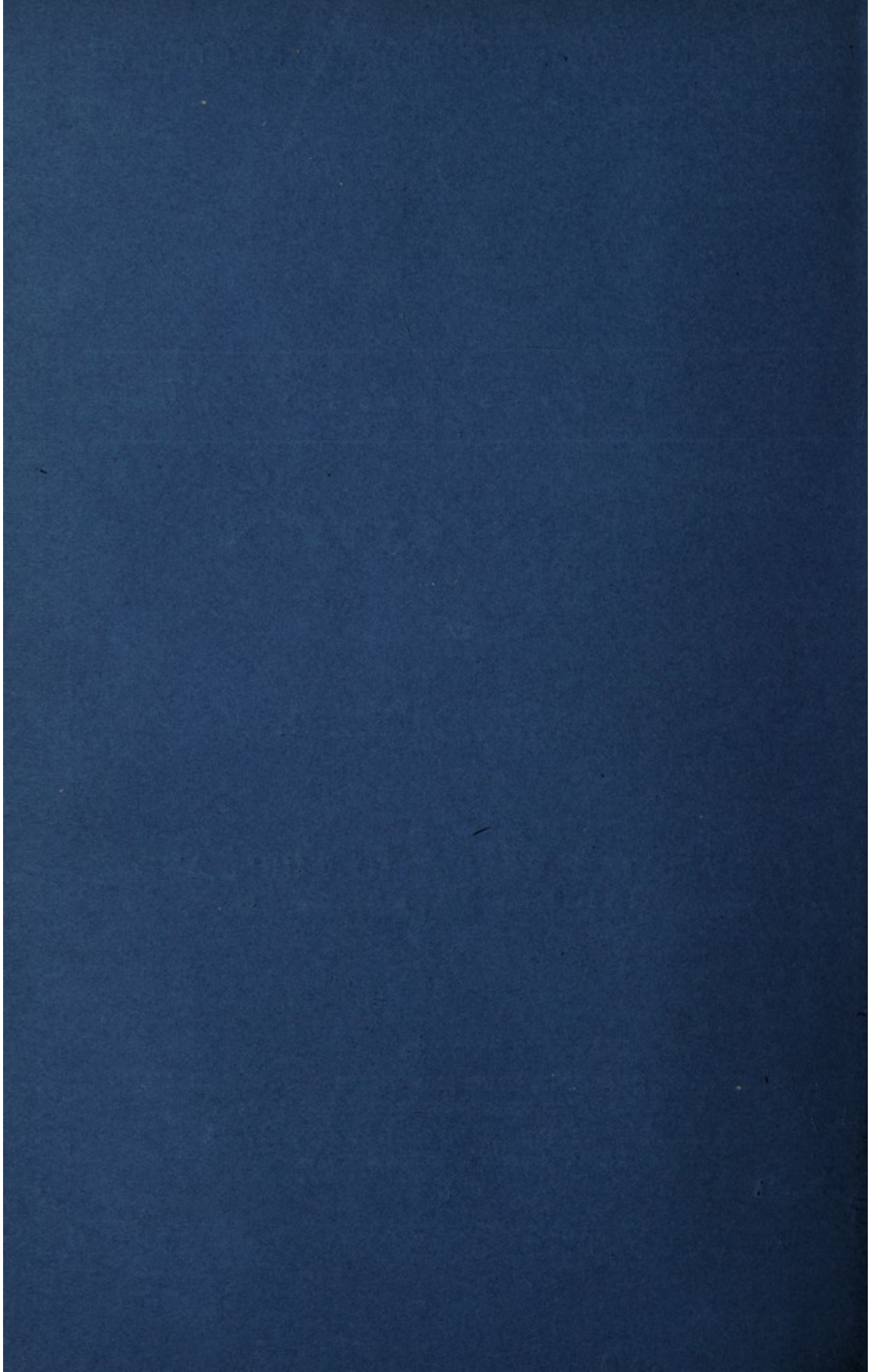
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A.D. 1837 N° 7296.

Converting Peat into Fuel, and obtaining Tar, Gas, &c.

LINNING'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, MICHAEL LINNING, of Number Twenty-two, Hill Street, in the City of Edinburgh, in North Britain, Clerk to Her Majesty's Signet, at present residing at Chryston Cottage, in the Parish of Calder, County of Lanark, send greeting.

5 WHEREAS His late most Excellent King William the Fourth, by His Letters Patent under the Great Seal of Great Britain, bearing date at Westminster, the Sixth day of February, in the seventh year of His reign, did, for Himself, His heirs and successors, give and grant unto me, the said Michael Linning, my eñors, adñors, and assignees, His special licence,
**10 that I, the said Michael Linning, my eñors, adñors, and assigns, or such others as I, the said Michael Linning, my eñors, adñors, or assigns, should at any time agree with, and no others, from time to time and at all times during the term of years therein expressed, should and lawfully might make, use, exercise, and vend, within that part of the United Kingdon of Great Britain
15 and Ireland called England, the Dominion of Wales, and the Town of Berwick-upon-Tweed, and also in all His said Majesty's Colonies and Plantations abroad, my Invention of "A CERTAIN IMPROVED METHOD OF OPERATING FOR THE PURPOSE OF CONVERTING PEAT MOSS AND PEAT TURF OR BOG INTO**

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FUEL, AND OBTAINING FROM IT TAR, GAS, AND OTHER CERTAIN SUBSTANCES OR MATTERS;" in which said Letters Patent is contained a proviso obliging me, the said Michael Linning, by an instrument in writing under my hand and seal, particularly to describe and ascertain the nature of my said Invention, and in what manner the same is to be performed, and to cause the same to 5 be enrolled in His said Majesty's High Court of Chancery within six calendar months next and immediately after the date of the said recited Letters Patent, as in and by the same, reference being thereunto had, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said 10 Michael Linning, do hereby declare that the nature of my said Invention of certain improvements in converting mosses into fuel, by preparing and drying said mosses so as to render them suitable as fuel for various economical and useful purposes, and for producing from said mosses or prepared fuel certain colouring matters and paints, and also for the production of gas, ammonia, 15 tar, oil, varnish, and a solid combustibile of which candles may be made, pitch and coke from the same, is described in manner following, that is to say:—

I in the first place reduce the mosses to a homogeneous pulpy mass, nearly in the same manner as brick makers reduce their plastic material to a uniform 20 state, namely, by passing it through what they call a puggy mill, but which I fit with longer and sharper knives somewhat obliqued; or I effect the same object by means of the vertical rollers also used by brick makers and by colour grinders, or by any other grinding or crushing apparatus, whereby the moss is subjected to the process of cutting, milling, kneading, or 25 pressing, whereupon it presents or exhibits a smooth, oily, or glutinous appearance on the surface. I then convey the moss so prepared to and place it on a table, platform, or floor, to be cut or moulded like bricks into any size or shape, either by the hand or by mechanical means; or if desirable, and for particular purposes, coke prepared from the moss itself may be mixed and 30 incorporated with the moss pulp before the same is cut or moulded into blocks. These blocks or pieces are then exposed or subjected to more or less pressure by means of levers, screws, hydraulic presses, or other compressing power or apparatus, and transferred to and arranged in a close chamber heated by flues, or a stove or to a kiln, in order that they may 35 dry or consolidate from the evaporation of the moisture they contain. Exposure in this manner to an artificial heat produced by or obtained from the substance itself, and raised from seventy to one hundred and twenty degrees or higher for a period of twenty-four hours will probably be sufficient

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to dry the manufactured article completely, as will be easily discernible, and which is obtained in a very hard and dense state, and may be used for the same purposes as pit coal, with the advantage that it is free, at least generally so, from sulphur; and besides, in the spring, summer, and autumnal months I
5 dry said fuel in sheds and tents, and in frames either of wood or iron wire, in the open air; said frames to have a tent or canopy roof so constructed as completely to throw off the rain and protect the fuel in the shelves underneath from the rain and from nocturnal dews and frosts; and for the better preservation of such frames I paint them with the tar extracted from the fuel in
10 the process of coking. I moreover obtain residuary matters from furnaces, fireplaces, and stove flues in which the above fuel is burnt, which, after being grinded either in water or oil, and freed from all impurities, may advantageously be employed as colouring matters, and as substitutes for ivory black and for Roman ochre or English umber and similar pigments. I likewise prepare
15 coke from the same fuel, in coking kilns similar in construction to those used for coking coal, but in which the draft is smaller and the access of external air still more restricted, or in retorts. I also produce tar in making the coke, which may be used as a substitute for foreign tar in smearing sheep, for making pitch, and other purposes. By heating the fuel in a close vessel or
20 retort, or proper distillatory apparatus, such as is well known to chemists and persons conversant in these matters, gas, ammonia, oil, and materials of which candles may be made, and which may be used as a varnish, are produced, besides the coke and tar. Again, by the admixture of this fuel, either in a high dried state or in its coke, with its own tar, I also obtain a totally new
25 and different modification of it, which will be found a powerful and fertile generative of steam or gas, giving out an intense heat and bright flame. For the immediate and economical supply of my fires and furnaces for my stoves, kilns, and retorts, I either by an expeditiously and simply applied compression and evaporation, or both, or in ovens, or on hot hearths, reduce the substance
30 directly as it comes either from the moss field or the mill into a fuel sufficiently adapted for the above temporary and subservient purposes, namely, of feeding my fires and furnaces.

Having now described my said Invention in such a manner as to enable competent persons to practice the same, I will point out what I claim as my
35 said Invention. And whereas the different mechanical and other apparatus, such as mills and presses, kilns and stoves, which I have described or referred to in describing how to convert peat moss, peat turf, or bog into fuel, according to my improved method, as well as the different processes which I have

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referred to of making tar gas for illumination, and ammoniacal gas, are not any of them new in themselves. And whereas the processes of coking peat prepared for fuel in the ordinary way, and the processes of obtaining gas and other substances from it, have been practised, or are or may be known to chemists, I wish it to be clearly understood that I make no claim of 5 Invention to the said apparatus or processes as such, nor do I in particular claim generally to discover how to obtain from peat the substances tar, gas, oil, ammonia, varnish, and spirit obtainable from it; all I claim as my Invention, in so far as regards these particular substances, is their appli- 10 cation to useful and practical purposes. But I wish it to be clearly understood that I specially, primarily, and exclusively claim as my Invention the particular method of operating which I have described, and of preparing, working, milling, and drying peat moss, peat turf or bog, so as to produce great and total change upon its qualities and properties, whereby I am enabled to convert said peat moss, peat turf or bog, into an highly useful and 15 extremely valuable fuel, assimilating it in some degree to coal, and rendering it subservient to various public and profitable purposes. And I moreover claim as my discovery or Invention, that the coke, the residuum of said fuel, may, by being ground either in water or oil, be employed as a pigment and used as a substitute either for ivory black or blackening, and for several other 20 purposes, and that the ashes obtained from said fuel may by the simple process of boiling in pure water, and by being freed from all impurities, and by being in like manner ground in water or oil, be employed as a pigment and used as a substitute either for Roman ochre or English umber. The conversion, then, of peat moss, peat turf or bog, into a fuel equal to coal 25 for some, and superior to it for several purposes, by the particular method of operating which I have described, and the extraction of the two several pigments I have specified, are the inventions and discoveries which I especially claim, and which constitute the foundation principles and elements of the Patent which I have obtained, conferring upon me the exclusive right, 30 privilege, and benefit of the same, and under and in virtue of which I claim protection accordingly in principle and in practice, whatever may be the modes, devices, or means which others may contrive or resort to in order to effectuate the same purposes and obtain the same or similar results. And such my Invention being to the best of my knowledge and belief entirely new, 35 and never before used within that part of Her Majesty's United Kingdom of Great Britain and Ireland called England, Her said dominions of Wales, or town of Berwick-upon-Tweed, nor within any of Her Majesty's Colonies or

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Plantations abroad, I do hereby declare this to be my Specification of the same, and that I do verily believe this my said Specification doeth comply in all respects, fully and without reserve or disguise, with the proviso in the said herein-before in part recited Letters Patent contained; wherefore I do
5 hereby claim to maintain exclusive right and privilege to my said Invention.

In witness whereof, I, the said Michael Linning, have hereunto set my hand and seal, this Thirty-first day of July, One thousand eight hundred and thirty-seven years (two words in the sixth line and four-
10 teen words in the seventh line from the top hereof being detete, and one word in the seventh line being interlined).

MICHAEL LINNING. (L.S.)

Taken and acknowledged by the above-named Michael Linning, party hereto, at Glasgow, this Thirty-first day of
15 July, One thousand eight hundred and thirty-seven years, before and in presence of one of Her Majesty's Justices of the Peace for the County of Lanark.

20 JAMES OSWALD,
One of Her Majesty's Justices of Peace for the County of Lanark, at Glasgow.

This is the Specification or Paper Writing referred to in my Affidavit of this
25 date, 4th August, 1837.

THO. DEANS.

W. WINGFIELD.

Thomas Deans, of Fludyer St., in the City of Westminster, Gentleman, maketh oath and saith, that he knows and is well acquainted with the manner of
30 handwriting of James Oswald, Esquire, one of Her Majesty's Justices of the Peace for the County of Lanark, at Glasgow, before whom the Specification or Paper Writing hereunto annexed hath been acknowledged, this Deponent having frequently seen him write, and that the name or subscription "James Oswald," with the addition thereto, "One of Her Majesty's Justices of Peace

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for the County of Lanark, at Glasgow," is of the true handwriting and subscription of the said James Oswald, as this Deponent verily believes.

Sworn at the Public Office, Southampton Buildings, in the County of Middlesex, this 4th day of August, 1837.

THO. DEANS.

5

W. WINGFIELD.

By Aff:

AND BE IT REMEMBERED, that on the oath of Thomas Deans the Specification aforesaid was inrolled word for word as above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

10

Inrolled the Fifth day of August, in the year of our Lord One thousand eight hundred and thirty-seven.

LONDON:

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