Specification of William Pidding : artificial fuel.

Contributors

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A.D. 1852 . . . . . N° 13,911.

SPECIFICATION

OF

WILLIAM PIDDING.

ARTIFICIAL FUEL, &c.

LONDON:
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A.D. 1852 . . . . . N° 13,911.

Artificial Fuel, &c.

PIDDING'S SPECIFICATION.

TO ALL TO WHOM THESE PRESENTS SHALL COME OR BE MADE KNOWN, I, WILLIAM PIDDING, of the Strand, in the County of Middlesex, Gentleman, send greeting.

WHEREAS Her present most Excellent Majesty Queen Victoria, by Her Royal Letters Patent under the Great Seal of Great Britain, and bearing date at Westminster, the Twenty-fourth March, in the fifteenth year of Her reign, and in the year of our Lord One thousand eight hundred and fifty-two, did, for Herself, Her heirs and successors, give and grant unto me, the said William Pidding, my ex̃ors, adm̃ors, and assigns, Her especial licence, full power, sole privilege and authority, that I, the said William Pidding, my ex̃ors, adm̃ors, or assigns, or such others as I, the said William Pidding, my ex̃ors, adm̃ors, 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, to wit, fourteen years from the date thereof, should and might lawfully make, use, exercise, and vend, within Her most Excellent Majesty's Kingdom of England, Her Dominion of Wales, the Town of Berwick-upon-Tweed, in the Islands of Guernsey, Jersey, Alderney, Sark, and Man, and also in all and every Her Majesty's Colonies and Plantations abroad, my Invention of "IMPROVEMENTS IN THE MANUFACTURE, PREPARATION, AND COMBINATION OF MATERIALS OR SUBSTANCES FOR THE PRODUCTION OF FUEL, AND OTHER USEFUL PURPOSES TO WHICH NATURAL COAL CAN BE APPLIED;" in which

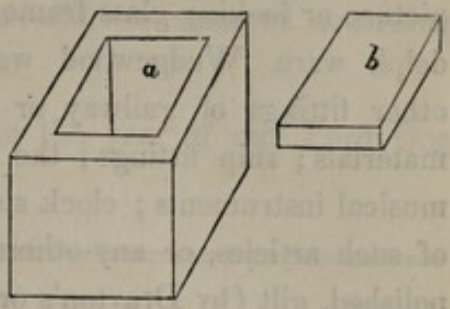
said Royal Letters Patent is contained a proviso that I, the said William Pidding, shall cause a particular description of my said Invention, and in what manner the same is to be performed and carried into practical effect, to be enrolled in Her Majesty's High Court of Chancery within six calendar months next and immediately after the date of said herein in part recited Letters Patent, as in and by the same, reference being had thereto, will more fully and at large appear.

NOW KNOW YE, that in compliance with the said proviso, I, the said William Pidding, do hereby declare the nature of my said Invention of "Improvements in the Manufacture, Preparation, and Combination of Materials or Substances for the Production of Fuel, and other useful Purposes to which Natural Coal can be applied," to be the same as described and represented in and by the following statement thereof, that is to say:—

My Invention consists,—

Firstly, of certain combinations of coal, usually small coal, the refuse at the pit's mouth) coke, peat, charcoal, coal tar, anthracite, resins, cocoa and other nut sheels, stalks of shrubs, bark, and the roots of vegetables dried, of brewers' grains, and carbonizing the mass, adding, when desirable, saltpetre. The mass being carbonized I compress or break the same by any available means, but use a steam hammer in preference) into pieces of the smallest possible size, and into such shapes as will occupy the least possible space when packed. I also force into the pores of coke a strong solution of saltpetre, dessicate it afterwards, and repeat the process until I have obtained a highly inflammable or ignatable substance of use for fuel. Or I take wood (sawdust), fibrous, or other of the above-named vegetable matters instead of coke; or I use coal tar, or other resinous or bituminous or oleagenous substances to fill up the pores of the coke, which I effect by compression instead of the saltpetre aforesaid; but I sometimes use both processes, that is to say, mixing the solution of saltpetre with the other above stated substances, and compressing the product into the pores or interstices of the coke. Or I boil the vegetable substances named in coal tar, and, pouring the product into moulds of any size or shape that may be required, I make a casing of any size or shape of coke or of charcoal, heated as herein-before mentioned, or of a combination of anthracite coal and pitch, such combination to be recarbonized; and in such case or mould I leave a hole, of any shape that may be found most convenient for packing, through which I pour the combustible materials (the composition of which I have herein described, I then fit in a plug, made of the same composition as the mould or case, securing the same into its socket by any available and secure means, thus forming a block, brick,

or shape suitable for all purposes for which coal or coke are now used, and possessing in an extraordinary degree the properties of each, more easily ignited than either, and sustaining or maintaining in its substance a higher and more durable amount of caloric. Below I have illustrated one of the shapes of the above-mentioned casings or moulds for my combustible combinations, but, as before remarked, any shape or form may be used for the purpose of receiving the composition which enters, or is filled in at *a*, and the portion of the top side *b* may be used as a plug, and secured first with resin or drying oil, and also by means of male and female screws. I also make a mixture of the dust or powders of coal, charcoal, and anthracite, with peat leaves, bark, or any of the vegetable substances herein-before mentioned, subjecting the combination to compression as aforesaid. Or the whole of the articles herein named as forming parts of combinations for making fuel are heaped together, saturated with a solution of glue or size, raising the whole up to a higher degree of heat, so that the compost or mass may be saturated with pitch. In this process I of course employ a high compression power, so as to render the incorporation complete, the mass may then be divided into pieces or blocks of a convenient shape and size for general use.



The second part of my Invention applies to the preparation of coke in combination with other materials in or to give to that substance such tenacity or resisting power as to render it capable of sustaining shocks, weights, or variations of temperature, that in its original state as coke it is incapable. Where great solidity is required, I force into the pores of the coke powdered coal, coke, charcoal, or anthracite, or all or either, or any two or more of the said substances reduced to powder. I then re-carbonize the coke so heated, and after such re-carbonization I reduce the mass to a very fine powder, such as will pass through a fine sieve. When the whole has been sifted, I place the powder so obtained into a mould or moulds, made in the various shapes or configurations required, compressing the same until the moulds are known to be completely filled with the powder; I then bake the whole in a proper oven. In making my composition for the production of certain articles, in order the more firmly to bind the powder in the baking process, I mix therewith portions of wax, tallow, starch, or pitch; and when I do this I do not use powdered coal, as mentioned in the first combination. Again, in working sounding boards for musical instruments, I fill up the pores of the coke with metal of such description as may be most suitable for the purpose in hand.

I will now enumerate a few of the articles to the formation of which my amalgamation herein-before described may be applied. And I do not confine myself to the production of such articles only, but merely to shadow out the purposes to which my Invention is applicable. I make articles of furniture, picture or looking-glass frames, plates, dishes, and all articles usually made of delph ware, Wedgewood ware, or porcelain; railway sleepers, panels or other fittings of railway or other vehicles; brick tiles or other building materials; ship fittings; the cases, keys, sounding boards, or other parts of musical instruments; clock stands or frames; backs of books, &c. The whole of such articles, or any others made from my combination aforesaid may be polished, gilt (by Drayton's or other process, or electrotyped with any suitable metal, or strengthened in the bends, elbows, or otherwise by metal wire or plate, as is usually done with plaster or meerschaum and similar articles, or coated or covered with porcelain, glass, or a mixture of both, with or without any coloring matter, or otherwise ornamented or treated as taste or utility will direct.

Having now described the nature of my Invention of "Improvements in the Manufacture, Preparation, and Combination of Materials or Substances for the Production of Fuel, and other useful Purposes to which Natural Coal can be applied," I would remark, that I have not given any description of the machinery or apparatus used in effecting the purposes of the said Invention, because they may be effected by the machinery or apparatus at present in use for the various purposes of crushing, boiling, pressing, and packing; nor do I claim any of the materials or substances employed in the first and second parts of my Invention when taken separately, but only when combined and treated in the way and manner herein-before described; but as of my Invention,—

Firstly, I claim the various mode or modes of preparing, combining, and treating certain substances herein-before described as of the first part of my Invention, and the product or products thereof, such product or products forming a new and useful species of fuel.

Secondly, I claim the sole use the combination, as herein-before described, of certain substances with coke, producing by such combination a material or substance applicable to many useful and ornamental purposes.

In witness whereof, I, the said William Pidding, have hereunto set my hand and seal, this Twenty-second day of July, in the year of our Lord One thousand eight hundred and fifty-two.

WILLIAM (L.S.) PIDDING.

AND BE IT REMEMBERED, that on the Twenty-second day of July, in the year of our Lord 1852, the aforesaid William Pidding came before our said Lady the Queen in Her Chancery, and acknowledged the Specification aforesaid, and all and every thing therein contained and specified, in form above written. And also the Specification aforesaid was stamped according to the tenor of the Statute made for that purpose.

Enrolled the Twenty-third day of July, in the year of our Lord One thousand eight hundred and fifty-two.

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