

UNITED STATES PATENT OFFICE.

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MANUFACTURE OF PEAT BLOCKS.

SPECIFICATION forming part of Letters Patent No. 768,445, dated August 23, 1904.

Application filed February 3, 1903. Serial No. 141,744. (No model.)

To all whom it may concern:

Be it known that I, FRANZ WASSILIWICZ GAERTNER, engineer, a subject of the Emperor of Austria-Hungary, residing at 104 Newski Prospekt, St. Petersburg, in the Empire of Russia, have invented new and useful Improvements in the Manufacture of Peat Blocks, of which the following is a specification.

My invention relates to a process for manufacturing peat blocks.

By this process I am enabled to produce peat blocks weighing from eight to ten kilograms with the aid of comparatively little machinery and at a small expense. The blocks are not liable to fall to pieces either in the burning, or in water, or in the air. They have a heating power of from six thousand to seven thousand calories, ignite rapidly, raise steam in an exceedingly short time, develop neither smoke nor sparks, and burn with a vivid bright flame to the last atom, leaving only small quantities of ashes behind—say from two to two and one-half per cent. These blocks resemble natural coal in point of hardness and luster, their hardness being such that they may be dropped on the ground from a height of eight to ten meters without breaking to pieces. In order to achieve this result, peat reduced to a granular form is intimately mixed with powdered colophony and a very slight quantity of powdered sulfur by the dry and cold method, so as to cause the binding agent to adhere uniformly to all the parts by weight of the peat. I mix one hundred parts of peat with two to two and one-half parts of colophony to which one per cent. of sulfur has been added. Such a mixture, either in the cold state or only slightly heated, is conveyed directly to the press without the application of any of the well-known intermediate treatments in melting and hot-kneading or pugging apparatus.

The addition of a slight quantity of sulfur to the colophony has a very material advantage, for while colophony containing twenty-nine thousand calories binds the peat fibers and at the same time increases the heating power of the blocks the sulfur, by reason of the fine distribution of the two substances through the peat, enables the entire block to be rapidly ignited. Moreover, the addition of sulfur affords the further important gain that when in commencing, for instance, to heat a boiler the blocks are laid flat one upon the other they will be ignited with greater rapidity and will not get charred or carbonized, thus giving rise to a more vivid and more perfect combustion.

Peat blocks manufactured by this process are excellently adapted for the heating of stationary, locomotive, and marine boilers and for other industrial purposes on account of the great facility and cheapness of production.

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

1. A process for manufacturing peat blocks, consisting in intimately mixing peat with powdered colophony and powdered sulfur all in the dry and cold state, the product thus obtained being subjected directly to pressure in the press, substantially as set forth.

2. A process for manufacturing peat blocks, consisting in intimately mixing peat with powdered colophony and powdered sulfur all in the dry and cold state, the product thus obtained being subjected in a slightly-heated condition to pressure in the press, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANZ WASSILIWICZ GAERTNER.

Witnesses:

AL. A. LOVIAGUINE,
E. W. LOWRY.