

UNITED STATES PATENT OFFICE.

J. BURROWS HYDE, OF NEWARK, NEW JERSEY.

MATERIAL FOR FACING MOLDS FOR CASTING METALS.

Specification forming part of Letters Patent No. 28,579, dated June 5, 1860.

To all whom it may concern:

Be it known that I, J. BURROWS HYDE, of the city of Newark, county of Essex, and State of New Jersey, have discovered a new and useful Material for Facing Molds for Casting Metals; and I declare the following to be a full and complete description thereof. (See my application for patent for treating peaty matters for certain purposes, filed January 25, 1856.)

In casting metals it is customary to sift over the surface of the mold a thin coating of powdered mineral coal, wood-coal, black-lead, burned flour, soapstone, &c., sometimes mixing two or more of the above together, in which operation there are two purposes, one being that the fine powder will present a smooth medium between the mold and the metal when cool, so that it will take a more even surface and readily leave the mold; and, secondly, that the fluid metal when coming in contact with the cold mold becomes of a plastic condition, and will not search itself into all the smaller portions or angles of the mold, for which reason the carbonaceous materials are employed.

My invention consists in the employment of finely-powdered peaty matter, which I use separately or mixed with any of the materials before named, in proportions according to the article to be cast and the judgment of the molder. For this purpose I procure peat as free from leaves, fibers, or woody matter as possible, preferring that kind which is of a buttery consistency when saturated with water. I collect the material and dry it thoroughly,

then grind it as fine as possible and pass it through sieves or bolts to obtain uniformity of powder, in which condition it may be applied to the mold in the same manner as facings are usually employed; but for most purposes it will be found best to mix with it pulverized charcoal in almost equal parts.

The kind of peat above named is highly carbonaceous, containing about fifty per cent. of gas-yielding matter, thirty-three per cent. of carbon, and the remaining being chiefly hydrogen and oxygen. Consequently it will yield an intensely-heated carbureted hydrogen gas, which is instantly set free when in contact with the hot metal, to which, in turn, it imparts its caloric, and by the same cause the residuary carbon succeeds with its action in its fully ignited state, leaving its ash for the first casting of the mold. The metal is hence more thoroughly acted upon than by the ordinary material employed for this purpose, yielding castings smoother and sharper than are usually made when such materials as before named are used.

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

The herein-described peaty material for facing molds for casting metals, and which I propose to designate as "Vulcan Dust." I also claim the use of said material when combined with other material, for the purpose set forth.

J. BURROWS HYDE.

In presence of—

HENRY BURT,
A. D. MACDONALD,