

UNITED STATES PATENT OFFICE.

GEORGE S. DONAHEY, OF PITTSBURG, KANSAS.

PROCESS OF PRODUCING FIRE AND WATER PROOF ARTICLES.

1,015,426.

Specification of Letters Patent.

Patented Jan. 23, 1912.

No Drawing.

Application filed September 8, 1908. Serial No. 452,032.

To all whom it may concern:

Be it known that I, GEORGE S. DONAHEY, a citizen of the United States, residing at Pittsburg, in the county of Crawford and State of Kansas, have invented certain new and useful Improvements in Processes of Producing Fire and Water Proof Articles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a process for producing a strong, durable, lasting and inexpensive fire and water proof article such as railway ties, fence posts, telegraph poles, building blocks and the like.

The process consists in thoroughly commingling by agitation or otherwise by weight 25/100 of coal clay; 60/100 of coal shale; 10/100 of sand and 5/100 of crude Kansas petroleum; then molding the composition so formed into the desired shape, and finally baking the article until a glazed or japanned surface is obtained.

I wish it to be understood that by using crude Kansas petroleum as one of the ingredients of my composition the effect of baking after molding is to drive off the volatile constituents of this and leave behind a binder consisting principally of the more refractory residua, which in Kansas petroleum consist largely of hard resistant asphaltic materials and coke that form a coating highly resistant to weather influences,

as well as a quite ornamental black japan like coating. The shale, particularly when used in the proportions specified, is very efficient. It seems to have a considerable affinity on the one hand for the crude petroleum and on the other it mixes well with the clay. The sand in the proportion indicated, is just about enough to keep an object from cracking during burning. The burning must be continued until the clays and sand are thoroughly burned together but must not be continued long enough to effect the oxidation or evaporation of the petroleum residua and coke.

What I claim is:

The process of producing a fire and water proof article as described consisting in mixing together thoroughly in proportion 25 pounds of coal clay, 60 pounds of coal shale, 10 pounds of sand and 5 pounds of crude petroleum, then molding this mixture into the article desired, and finally baking the same to drive off the volatile constituents, and to burn together the clays and sand, the burning being stopped before the petroleum residua and coke are all burned or evaporated and at a point where a black or japan like coating will be left on the article.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

GEORGE S. DONAHEY.

Witnesses:

T. H. SHANKS,
G. A. HENNEY.