Sept. 4, 1934. R. J. VARCOE 1,972,670

DRYING FLOOR FOR CHINA CLAY

Filed March 24, 1933

Fig. 1.

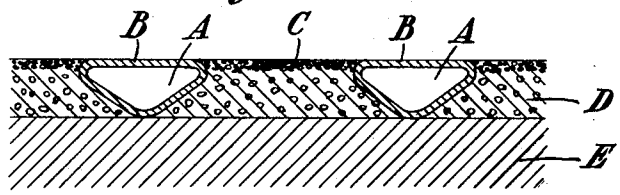


Fig. 2.

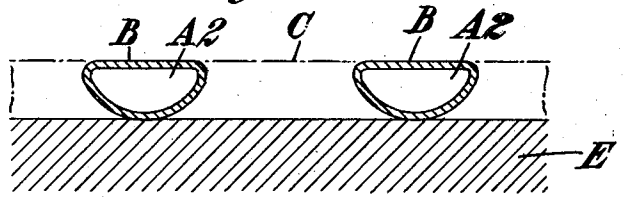
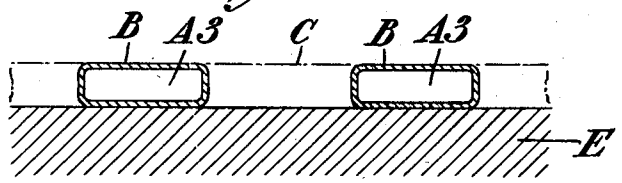


Fig. 3.



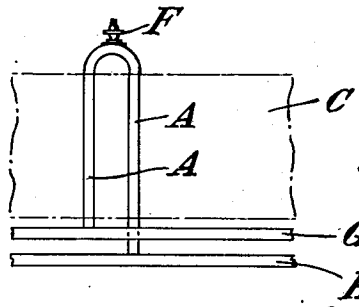


Fig. 4.

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DRYING FLOOR FOR CHINA CLAY

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Application March 24, 1933, Serial No. 662,478
In Great Britain August 13, 1932

1 Claim. (Cl. 34—14)

This invention relates to an apparatus or a floor for drying china clay, and its object is to provide for the more efficient drying of china clay than is afforded by previous proposals.

It is required that china clay should be dried from the plastic state, in which state it may be spread over the floor or surface on which it is to be dried. It is generally to be taken up after drying by means of shovels, or in some such way, and it is therefore desirable that the floor on which it lies should be reasonably flat and firm. It is the object of my present invention to provide such a floor, which will also be efficiently heated in a reasonably economical way. It has previously been proposed to dry china clay on a floor surface on or embedded in which are steam pipes, and in my own prior British Patent No. 370,102 I have disclosed a floor with circular sectioned protruding pipes, partially embedded in a poorly conductive material, such as china clay sand.

According to the present invention a china clay drying floor has embedded therein heating pipes having a substantially flat exposed upper surface lying flush with the upper surface of some suitable material of low heat conductive properties. Further, the pipes are disposed in a particularly convenient manner, as will be made more clear hereinafter. The non-conductive surface is preferably of clay, bricks, tiles, concrete or any like material, and in a preferred form consists of a bed of any suitable material, such as rubble, overlaid with a comparatively thin surface of china clay.

The invention will be more clearly understood by reference to the accompanying diagrammatic drawing, in which:

Figure 1 is a section showing one form of pipe embedded in the above-mentioned preferred form of surfacing;

Figure 2 indicates an alternative form of pipe;

Figure 3 shows an alternative substantially rectangular section, and

Figure 4 indicates diagrammatically in plan the arrangement of connections and lay-out of the pipes.

In Figure 1 pipes A of substantially triangular cross section have flat upper surfaces at B lying flush with the smooth and flat upper surface C of insulating material. This surface C is of china clay of relatively small thickness laid on a suitable deposit of any reasonable heat insulating material D such as broken brick, coarse concrete or the like, which in turn rests on the ordinary floor E of the drying chamber. In the adaptation shown, the pipes A actually rest on the floor E at their lowest points, but this is not essential.

In Figure 2 the surface C is merely indicated, and the pipes A2 are of approximately semi-circular section, still having a flat upper surface at B.

In Figure 3 the pipes A3 are of substantially rectangular section, their upper surfaces B again being flat and flush with the surface C.

In Figure 4 it will be seen that the pipes A are laid in the form of an elongated U, having at the bend a release tap F to allow draining or air release. Each limb of the U is connected to a manifold or feed pipe G or H, and any suitable means for disconnecting any particular pipe A may be provided. In actual construction the feed and return pipes G and H (although they are illustrated separately) may be cast or otherwise made in one. It will be seen that in each form the pipe presents a flat upper surface flush with the insulating material with which the spaces between the pipes are filled. It will be clear that there is no necessity for the pipes A to be straight as shown in Figure 4, but they may describe any convenient curves or be laid in any particular way providing they retain the essential features of the invention.

What I claim is:—

A drying floor for china clay and the like comprising hard, heat-insulating material in which are embedded heating pipes having substantially flat, exposed, upper portions, the portions of the floor between said exposed, upper portions of the pipes being overlaid with a relatively thin firm layer of china clay leaving a smooth upper surface substantially flush with said exposed upper portions of the pipe.

RICHARD JOHN VARCOE.