

PATENT SPECIFICATION

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COMPLETE SPECIFICATION.

Improvements in Heat Insulating Vessels.

We, NÜRNBERGER METALL- & LACKIER-
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ACTIENGESSELLSCHAFT, of No. 16, Blumen-
strasse, Nürnberg, Germany, Manufac-
turers, do hereby declare the nature of
this invention and in what manner the
same is to be performed, to be particularly
described and ascertained in and by the
following statement:—

This invention relates to heat insulat-
ing vessels of the type which are composed
of a material made of cement and asbestos.

Vessels of this type have previously
been made of a material consisting of
asbestos, blast furnace dust, Portland
cement, and water in suitable proportions,
such ingredients being mixed together to
a pulp, moulded to the desired shape and
dried.

In building railway carriages so as to
make them fireproof it has been proposed
to use slabs composed of a mixture of
cement and asbestos fibre and to cement
such slabs together, but it has not been
proposed to use any special kind of cement
for this purpose.

The object of this invention is to pro-
vide a heat insulating vessel more particu-
larly such as may be used as a fireless
cooker or cooking box from slabs of arti-
ficial slate formed of a slightly compressed
mixture of cement and asbestos such as is
known under its registered trade mark
as Eternite.

Such a material has great insulating
properties because it is composed of a
plurality of layers that are slightly
pressed above one another, and it is more-
over fireproof and unaffected by moist-
heat and changes of temperature.

Difficulties however have arisen when

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making vessels of this material from
separate slabs, chiefly in the finding of
a suitable cement for causing the slabs
to bind together in a fireproof manner. 45

This difficulty may be overcome by
using Sorel cement consisting of burnt
magnesite, and magnesium chloride.
This cement is an excellent insulator and
is made by stirring the magnesite in an
aqueous solution of magnesium chloride
to paste so that it acquires cementing
properties. 50

It has previously been proposed when
using slabs made of tough organic 55
material such as compressed cork or cork
substitute coated on one face with a
secondary layer of an oxychloride or a
Portland cement, for making walls of
buildings fireproof, to cement the blocks 60
together by a cement composed of calcined
magnesite and chloride of magnesium in
a form of a solution mixed with sawdust,
hair, or other fibres.

This invention consists of a heat insu- 65
lating vessel whose walls consist of
separate plates of artificial slate composed
of asbestos and cement and known under
its registered trade mark as "Eternite"
such walls being jointed together so as 70
resist the effects of heat by a Sorel cement
composed of burnt magnesite and mag-
nesium chloride.

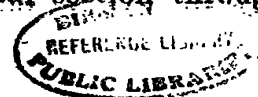
A practical form of the improved vessel
according to this invention is illustrated 75
by way of example in the accompanying
drawings in which:—

Fig. 1 is a side elevation and,

Fig. 2 is a plan of the improved vessel.

Fig. 3 is a vertical section, and

Fig. 4 is a horizontal section through 80
the vessel,



The improved vessel is constructed in the form of a cupboard or safe with feet 1 and lid 2. The bottom of the vessel is composed of four frame members 3. Two eternite plates 4, 5 are let into these frame members 3 and are arranged a certain distance apart so as to leave a space 6 between them. Four posts 7 extend up from the frame members 3 of the bottom and are held together at the top by a frame composed of frame members 8. In this manner four side frames are formed each of which is filled or panelled with two eternite plates 9, 10. These plates are likewise arranged a certain distance apart so as to leave a space 11 between them.

The inner plates 5 and 10 are jointed together at their joints by a grooved beading 12, 13, of a Sorel cement consisting of burnt magnesite, and magnesium chloride and made as heretofore described. The lid 2 consists likewise of a frame comprising the frame members 14 and the two eternite plates 16, 17 that enclose a space 15 between them. 18 are handles for facilitating the moving of the safe.

The spaces between the plates may be filled with air, or they may be filled with other material such as cork or the like. The frames serving as mounts for the

plates are preferably made of wood but they may be made of any other material.

A specially favourable result is obtained by using the improved insulating vessel as a fireless cooker, by using the vessel in combination with two heat-storing devices consisting of a good heat-conducting material. As heat-storing devices iron gratings may be employed between which the food vessels are placed.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A heat insulating vessel whose walls consist of separate plates of artificial slate composed of asbestos and cement and known under its registered trade mark as "Eternite", such walls being jointed together so as to resist the effects of heat by a Sorel cement composed of burnt magnesite and magnesium chloride.

2. An improved heat insulating vessel, substantially as and for the purpose hereinbefore described and also as illustrated in and by the accompanying drawings.

Dated this 8th day of February, 1918.

MARKS & CLERK.

[This Drawing is a reproduction of the Original on a reduced scale.]

