U. S. PATENTS OF INTEREST IN CONNECTION WITH MICROPORITE:

PLAINTIFF'S EXHIBIT GF-2412

No. 1,045,933 - December 3, 1912 - Charles H. Belknap (assigned to Armstrong Cork Company)

A heat insulating material composed of an autoclaved mixture of diatomaceous earth (75%), hydrated lime (12½%) and asbestos fibres (12½%).

Note: This product was formerly marketed by Armstrong under the name "Nonpareil Insulation" but did not make headway in the market since it was too heavy in weight (about 25 lbs. per cubic foot) and too expensive (due to the high cost of infusorial earth).

No. 1,204,086 - November 7, 1916 - E. R. Sutcliffe

Autoclaved mixture of sand (4 to 5 parts), lime (1 part) and asbestos fibre (15% of the finished weight). The mixture is compressed in a mold, to expel the water. The patent then goes on to state "I then clamp a number of such sheets or slabs together so as to retain them under pressure and I place the sheets within a chamber where they may be subjected to the action of steam....."

No. 1,223,834 - April 24, 1917 - William Sänger

Manufacturing shingles by autoclaving a mixture of cement (80 parts), asbestos (15 parts) and "chemically active precipitated anhydrous silica" (5 parts).

No. 1,335,038 - March 30, 1920 - C. B. Ayers

Manufacture of artificial stone composed of lime (20 parts), silica (6 parts), soapstone (8 parts) and asbestos fibre (2 parts). The patent does not state whether the material is self-hardening or whether it must be autoclaved. It does explain the addition of "finely divided soapstone", "for the purpose of reducing the porosity and water-absorbing capacity and improving the surface resistence and polish of the resultant stone".

No. 2,016,796 - October 8, 1935 - Arthur S. Brock and Carl F. Meinzer

Manufacturing molded building materials by autoclaving a mixture of pulverized, water-granulated slag (more than 90%) and sodium silicate (less than 10%). The patent states:

"Among the benefits secured in steam curing under pressure may be mentioned:

1. The compressive strength usually obtained through a slow process covering fourteen to twenty-eight days or more, is obtained in eight to twelve hours of steam curing under pressure.

2. The volume change or shrinkage of products cured by the usual methods during the drying-out period, is greatly reduced or practically eliminated when steam curing under pressure is used.

3. Products which are steam cured under pressure dry out rapidly to a practically constant amount of moisture in about forty-eight hours after removal from the kiln.

4. Due to the combination of the above three character-

Articles:

"The Manufacture of Artificial Stone or Sand-lime Brick", by S. V. Peppel, Ohio Geological Survey, Bulletin No. 5, The Springfield Publishing Co., Springfield, Ohio, 1905.

"Artificial Silicates with Reference to Amorphous Silica", by W. S. Williams, p. 276, Bulletin No. 14, Illinois State Geological Survey (Year Book for 1908), Published by University of Illinois, Urbana, Ill., 1909.

"A Study of Sand-lime Brick", by S. W. Parr and T. R. Ernest, Illinois Geological Survey, Bulletin No. 18, Illinois State Journal Co., Springfield, Ill., 1912.

"Bricks and Artificial Stones of Non-plastic Materials", by A. B. Searle, Published by J. & A. Churchill, London, 1915.

"A New Synthetic Stone", by H. C. Peffer, H. L. Harrison and R. N. Shreve, Journal Industrial & Engineering Chemistry, Vol. 25, page 719, 1933.

Article by V. A. Vigfusson, G. M. Bates and T. Thorvaldson, Canadian Journal Research, Vol. 11, page 520, 1934.

"Diatomaceous Earth - Equilibrium and Rate of Reaction in the System Hydrated Lime - Diatomaceous Silica - Water", by A. B. Cummins & L. B. Miller, Journal Industrial & Engineering Chemistry, Vol. 26, page 688, 1934.

"Calcium Hydrosilicate as a Building Material", by F. O. Anderegg, Journal Industrial & Engineering Chemistry, Vol. 27, page 1019, Sept. 1935.

"Formation of Hydrated Calcium Silicates at Elevated Temperatures and Pressures", by E. P. Flint, H. F. McMurdie & L. S. Wells, Research Paper No. 1147, National Bureau of Standards, Washington, D. C., 1938.

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