

UNITED STATES PATENT OFFICE

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CONTAINER WALL

Walter C. Bussert, Kalamazoo, Mich.

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2 Claims. (Cl. 72-6)

This invention is a process of proofing a container in part or in whole by means of a method of coating the surface of the container with a material. 12, 1931, Serial No. 508,103, and a continuation in part of my application for a container wall member Jan. 11, 1931, Serial No. 508,103, and a continuation in part of my application for a container wall member Jan. 11, 1931, Serial No. 508,103.

The object of this invention is to provide a concrete container with inside walls that are permanently proofed by an acid resistant material which will prevent the penetration of the ensilage through the surface openings or other openings into the container located within the container.

A further object of the invention is to treat the inside wall of a container of a concrete block or other material and to provide a concrete block or other material with a coating of paraffin or other wax-like material into said pores and recesses by heating the material and will fill the pores and recesses in the presence of the material and the material of like material will also form a coating of covering over the inside surface of the container of container material and this coating of covering will bond with the material of the material of the material which is the material of the material.

A still further object of the invention is to treat the coating of the inside wall of the container so all portions of the coating will be acid resistant.

Another object of the invention is to provide a concrete wall with a coating of material which will be acid resistant in the pores and recesses of the roughness of the material which is the material of the material.

The above objects and other objects will hereinafter appear and are accomplished by means illustrated in the accompanying drawings, in which:

Fig. 1 is a vertical side elevation of a container wall out of block material, the wall and the surface being brushed with a material showing the inside wall of the container and the material of the material.

Fig. 2 is a vertical view of a container wall of a container wall.

Fig. 3 is a vertical side elevation of a container wall and the material of the material.

Fig. 4 is a perspective view of a concrete block formed with a coating of material which will hold the material in the pores and recesses of the surface of the material and the material of the material.

Fig. 5 is a fragment magnified of a concrete silo block treated with paraffin and showing how the surface coating is bonded to wax portions entering and filling the pores and recesses of the concrete.

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Like characters of reference indicate like parts in the several views.

The silo walls shown in Fig. 1 are formed out of preformed concrete slabs or blocks 6, with cement mortar joints 4 and strengthened by outside hoops 3, in the usual manner, and is typical of many silos now in use throughout the country.

Fig. 2 is typical of a monolithic or substantially monolithic silo, many of which are also in use at the present time. Practically all these concrete silos and tanks are deteriorating through the action of the ensilage or various chemically active materials stored therein. Nothing has heretofore been developed that will effectively arrest this progressive destruction and that can be applied conveniently and economically.

By my invention the inside of the walls of concrete containers are proofed with asphalt, paraffin or other wax-like material at any time after they have been constructed. Actual experience has shown that this proofing positively stops further deterioration, even in old silos that have become deeply etched and pitted through the chemical action of ensilage.

In proofing containers the walls of the containers are cleaned by means of brooms or wire brushes, to remove any loose particles, and, in the case of an old silo, to remove any ensilage that sticks to the wall. Next, an area of the wall is heated by the direct flame of a blow torch or similar device. This is continued until all moisture is driven out of the concrete at and near the surface, so that the capillary openings are free to attract and receive the molten acid resistant material. In the meanwhile a quantity of paraffin or asphalt has been melted in a pail, and has been kept at a temperature close to the boiling point. This liquid acid resistant material is now applied to the preheated wall area by brushing or spraying and the capillary action of the concrete carries it well below the surface. There it finally comes in contact with the cool inner portion of the wall and it begins to solidify. This process of solidification continues toward the outside as the wall cools and in this manner all openings in the wall, large or small, become filled with the solid acid resistant and these fillings 9 are bonded with a coating 10 covering the inner side of the wall. Sometimes it is not possible to

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ment or other joint-filling material interlocking with the rough edges of the adjoining wall members and held in the joints by reason of the interlocking of the rough edges irrespective of the function of said material.

6. A silo wall formed of a plurality of concrete members each having rough joint-edges, each of said members being infused from its inner sur-

face and its joint-edges with paraffin or asphalt, cement filling the joints between the wall members and retained by the rough edges of the joints and a coating of paraffin or asphalt bonded to said infused coating on the inner surfaces of the members.

WALTER O. BRSSERT.

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W. O. BRASSERT
CONCRETE CONTAINER WALL
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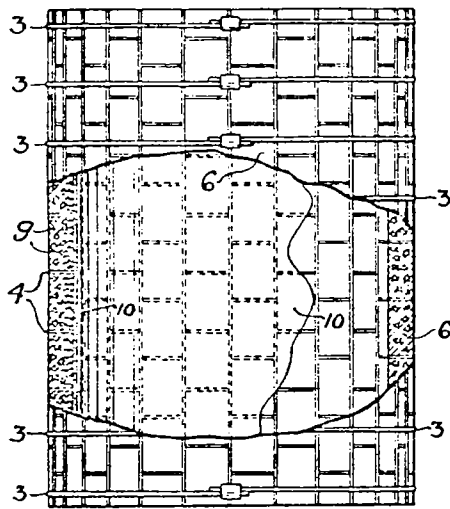


Fig. 1

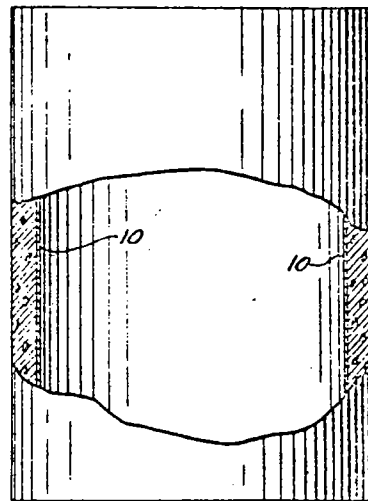


Fig. 2

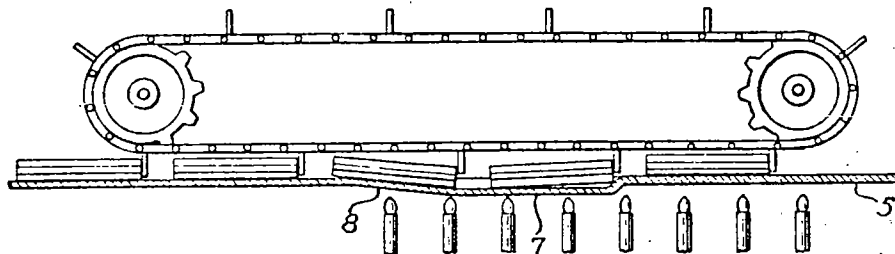


Fig. 3

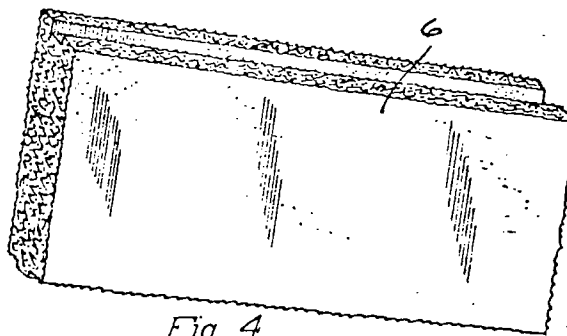


Fig. 4

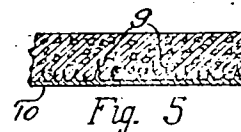


Fig. 5

Inventor,
Walter O. Brassert,
By
Minturn & Minturn
Attorneys.

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