Dec. 28, 1926. 1,612,092

A. P. BLACKBURN

NONCONDUCTING SECTIONAL WALL

Filed July 18, 1925

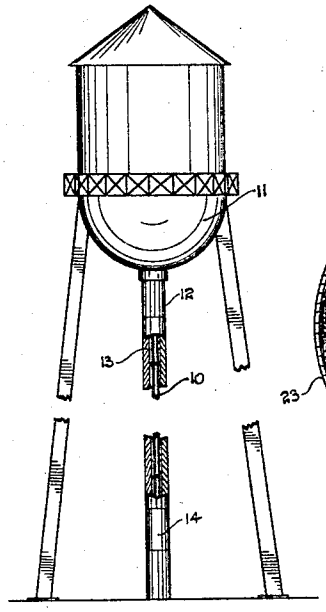


Fig. 1

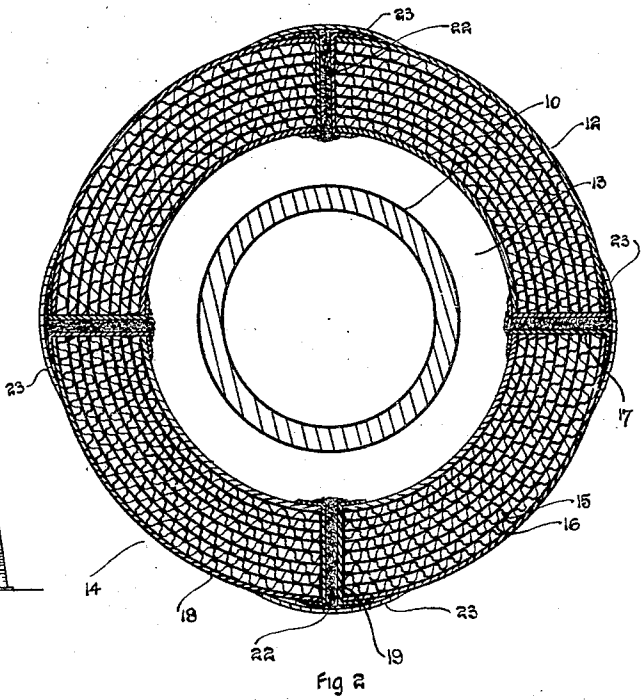


Fig 2

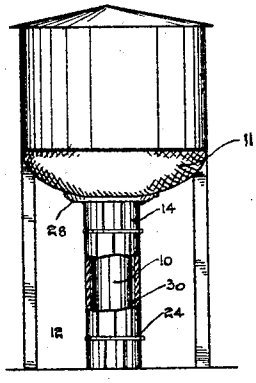


Fig 3

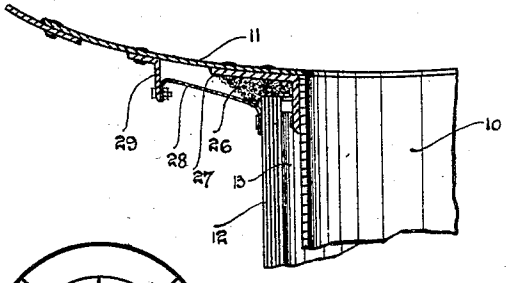


Fig 4

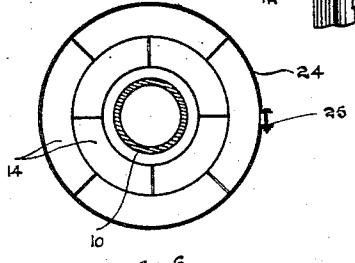


Fig 6

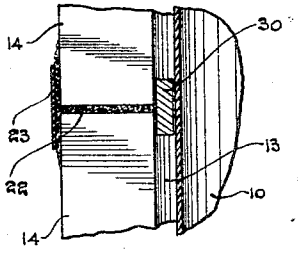


Fig. 5

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UNITED STATES PATENT OFFICE.

ALAN PIERCE BLACKBURN, OF WESTMOUNT, QUEBEC, CANADA.

NONCONDUCTING SECTIONAL WALL.

Application filed July 18, 1925. Serial No. 44,528.

The invention relates to non-conducting sectional wall, as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially of the novel features of construction pointed out in the claim for novelty following a description containing an explanation in detail of an acceptable form of the invention.

The objects of the invention are to protect the contents of chambers and passages, containing flowing or quiet liquid from frost or other climatic conditions; specifically to protect water passages from frost, such as the mains from sprinkler or other water supply tanks set at an elevation in exposed places; to facilitate the installation of protective casings for various uses; to furnish a construction that will lend itself to the fortification of enclosed substances and materially lessen the possibilities of temperature disarrangements; to produce a frost wall at a reasonable cost and of indestructible material and thereby avoid damage to life and property; and generally to provide a durable, efficient and economical means for enclosing chambers and passages.

In the drawings, Figure 1 is an elevation of a water tank showing one application of this invention.

Figure 2 is an enlarged cross sectional view of the invention showing the stand pipe and protecting wall.

Figure 3 is an elevation of a water tank, showing another application of the invention.

Figure 4 is a detail of the joint between the tank and the protecting wall.

Figure 5 is a detail disclosing the spacing block.

Figure 6 is a plan of the wall sections, bound together in a double wall arrangement.

Like numerals of reference indicate corresponding parts in the various figures.

In this invention materials that are very well known in coverings for pipes, walls and other installations are used, in fact the corrugated feature to effect air spaces is common to boxes, wrappers of all kinds, pipes, coverings and to wall structures.

It will be seen in the description of this invention that not only new combinations of parts are set forth but new structural features are pointed out quite novel in the art.

Referring to the drawings, the numeral 10 indicates a stand pipe of a water tank 11 and the numeral 12 the frost proof wall, while 13 indicates the dead air space, forming an annular sealed chamber around the stand pipe 10.

The wall 12 is fixedly secured and sealed to the bottom of the tank at its upper end and to the ground, the roof of a building or other base at the lower end, so as to form the sealed annular chamber 13 aforesaid.

The wall 12 is formed of the sections 14 arcual in cross section and formed in lengths of the desired height and breadth for the purposes of their use.

The wall is of a composite nature being made of asbestos paper, roofing or lining felt and a cementitious substance adapted to stiffen the structure. The several sections are coated with a bituminous and asbestos fire and water proofing substance and are joined together by an asbestos cement, which is applied as a motor so as to fill in and to completely cover the joints.

The asbestos paper is arranged in alternate layers of corrugated sheets 15 and plain sheets 16 and 17.

The inner and outer walls of each section are covered with the roofing or lining felt 18, as also are the ends at 19, the end pieces overlapping the outer and inner coverings, thus completely enclosing the asbestos paper which is previously treated with a cementitious substance for stiffening purposes, this substance not being specified though it will in most cases be of a silicious nature.

The sections are sealed and form individual parts to a wall and the asbestos cement 22 is introduced between the end and side walls of these parts and spread over the joints in the same manner as mortar in order that the chamber surrounding the water pipe or other enclosure to be protected may be effectively closed in, and further the strips 23 are added across the joints and the cement trowelled thereover at the edges.

In erecting the wall the sections are securely bound by the hoops 24 fastened by the clamp 25, by means of which the sections are brought into closer relationship in order to insure air tight joints at the cement joinings.

The completed wall is preferably sealed at the tank bottom by filling of suitable fire and waterproofing material 26 of an asbestos and bituminous nature, this material being

introduced and packed above the top of the wall and against the bracket 27 securing the pipe to the tank.

The circular sheet 28 encircles the wall and is fastened thereto and extends across to the angle bar 29 thus completely enclosing the filling and packing 26, this sheet being made of roofing felt or other suitable fire and water proof material.

The spacing blocks 30 maintain the wall at an even distance from the stand pipe and are preferably placed at the joints of the wall sections.

The roofing or lining felt forms the outer casing of the section and the ends are preferably separate pieces. Naturally this casing may be of several thicknesses, the outer layer being coated on all sides with an asphaltic and asbestic compound to withstand the ravages of the weather and generally to endure under severe climatic conditions.

It will be seen that the sections when joined together as described form a tubular casing which can readily be closed at the ends and thereby form the annular dead air chamber already mentioned.

There are many other uses for this particular kind of wall or casing, where the application thereof will necessitate quite different details, though the actual structural features outside of the shape will remain substantially the same.

One of the many advantages of this wall is its great strength and rigidity which combined with its lightness makes it a desirable protection, especially where a considerable weight is objectionable. Besides for shipping purposes it is of great importance to reduce the weight and yet be assured of the durability.

What I claim is:—

A non-conducting sectional wall, comprising frost proof casings adapted to encircle the stand pipe of a water tank and form a dead air space therearound, a filling forming a fire and water proof packing at the top of said wall and under said tank and a circular sheet of proof material encircling said wall and enclosing said filling and secured to the wall and to an angle bar rigid with the bottom of the tank.

Signed at Montreal, Canada, this 11th day of July, 1925.

ALAN PIERCE BLACKBURN.