No. 873,739. PATENTED DEC. 17, 1907.

R. EDMONDSON.

REINFORCED INTERLOCKING CONCRETE WALL.

APPLICATION FILED MAY 18, 1907.

Fig. 1.

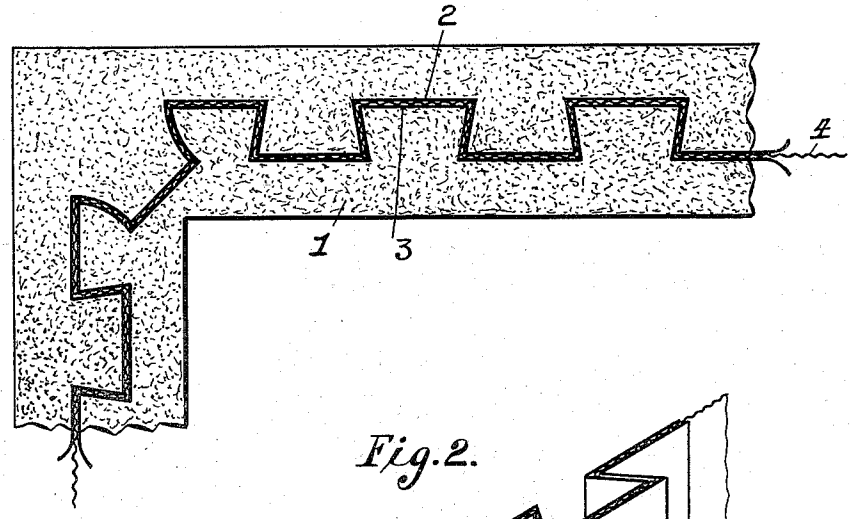
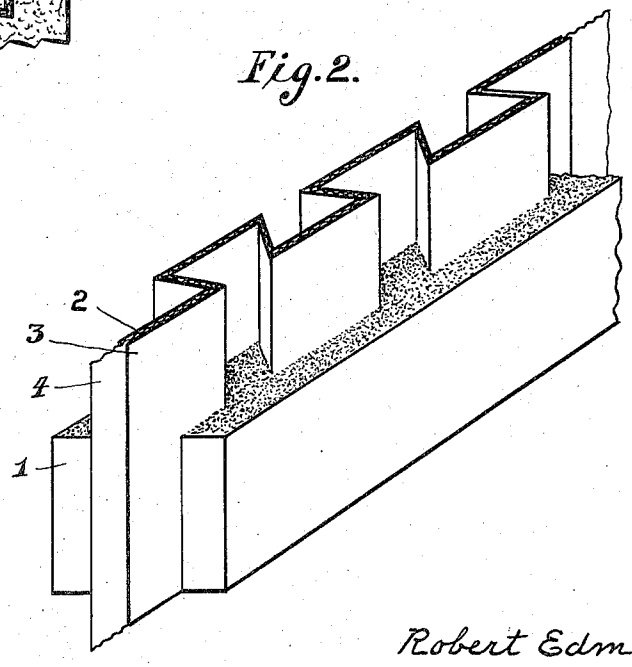


Fig. 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

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REINFORCED INTERLOCKING CONCRETE WALL.

No. 873,739. Specification of Letters Patent. Patented Dec. 17, 1907.

Application filed May 18, 1907. Serial No. 374,365.

To all whom it may concern:

Be it known that I, ROBERT EDMONDSON, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Reinforced Interlocking Concrete Walls, of which the following is a specification.

This invention relates to reinforced interlocking concrete walls.

One object of the invention is to provide a reinforced interlocking concrete wall embodying such characteristics that moisture and frost cannot penetrate through the wall.

Another object resides in the provision of a reinforced concrete wall constructed to withstand intense heat in the event of a fire, and thereby prevent collapsing of the wall incident to heat due to fire.

With the above and other objects in view, the present invention consists in the combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes may be made in the form, size, proportion, and minor details without departing from the spirit or sacrificing any of the advantages thereof.

In the drawings:—Figure 1 is a horizontal sectional view of a corner of a structure embodying my invention. Fig. 2 is a fragmentary perspective view of a portion of a wall illustrating my invention.

Referring now more particularly to the accompanying drawings, the reference character 1 indicates a concrete or other cementitious wall which is preferably tamped and built up in molds to provide a continuous wall without joints. Molds for building continuous walls without joints are old and common and in this application I am not making claim to any specific form of mold, and therefore consider it not necessary to illustrate the mold. Embedded in the wall are plates 2 and 3 each of which is of dovetail corrugation or zig-zag formation in cross section. These plates are fitted within each other and provide an interlocking reinforcement.

As frost and moisture may penetrate through the wall, it is preferred to dispose the plates 2 and 3 in spaced relation to each other, thereby providing a dead air space between the interlocking metallic members to prevent moisture or frost from penetrating entirely through the wall. The spacing of these members may be effected by the disposition between them of a sheet of asbestos 4, which I prefer to be corrugated so as to hold the metallic members in spaced relation and also to provide the dead air space between the members to obviate the possibility of moisture or frost penetrating the wall beyond the first or outer metallic member. By virtue of the outer metallic member water cannot possibly leak into the dead air space.

Concrete deteriorates easily under intense heat and it is for this reason that I prefer to employ an asbestos filling. The asbestos filling is a non-conductor and protects the inner half of the wall from heat in case of fire. If the outer surface of the wall should crumble or collapse incident to intense heat the inner portion of the wall would remain intact, thereby preventing the entire building from collapsing. It is obvious that if the outer wall should crumble from the effects of heat that the same could be easily and rapidly repaired, the interlocking members holding the repair material in place.

It will be understood that each plate 2 and 3 may be formed in separate pieces or in one piece, as may be preferred. It will also be understood that if each plate is formed of separate pieces that at the corners of the structure each corner plate would preferably consist of one piece extending around the corner of the building.

What is claimed is:—

1. A reinforced concrete wall comprising cementitious material, interlocking metallic reinforcing members embedded in the wall, each member being of dovetail corrugated formation in cross section and fitting one within the other, and means arranged between the metallic members to provide a dead air space between the latter.

2. A reinforced interlocking concrete wall comprising cementitious material, metallic reinforcing members embedded in the wall, each member being of dovetail corrugated formation in cross section and fitting one within the other, and corrugated asbestos arranged between the metallic members to provide a dead air space between the latter.

3. A wall comprising sheet metal members spaced apart and arranged in alternating dovetailed channels and ribs, with the channels and ribs of one member interlocking with the channels and ribs of the other mem-

ber, sheets of asbestos bent to conform to the configuration of the spaced metal plates and disposed between the same, and cementitious material applied to the outer faces of the ribs of the metal members and within the dovetailed interstices therebetween.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT EDMONDSON.

Witnesses:
GEORGE OLTSCH,
G. M. COLE.