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TIE FOR BINDING SPACED WALLS TOGETHER

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Fig. 1.

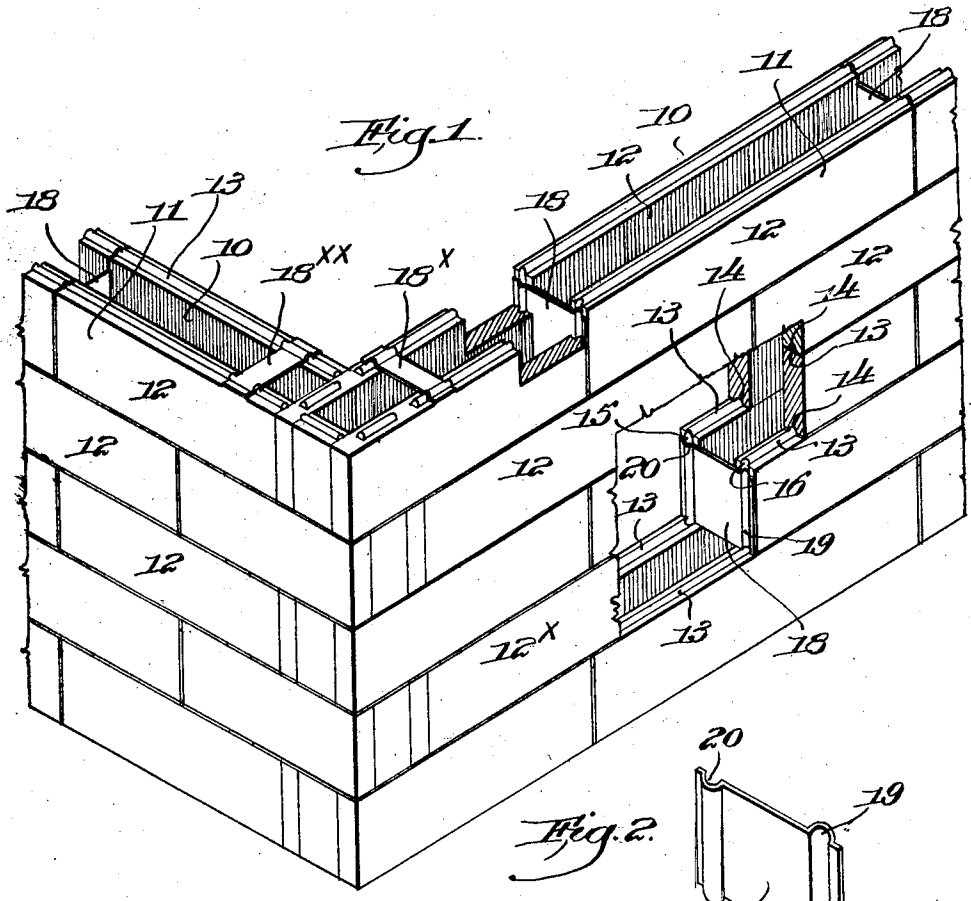


Fig. 2.

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TIE FOR BINDING SPACED WALLS TOGETHER.

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This invention relates to building construction and more particularly to an element therefor.

It is an object of the invention to reduce the cost of hollow wall construction without impairing the strength or rigidity thereof, the attainment of which is made possible by the use of simple and comparatively inexpensive building elements adapted to be rapidly assembled by unskilled labor.

It is a further object of the invention to erect hollow wall structures comprising a plurality of substantially flat interlocking elements preferably of concrete which may be laid up to form an inner and an outer shell in spaced relation, the elements of each shell interlocking with each other, but not with those of the other shell, and to impart rigidity and maintain the spaced relation by other simple elements arranged to interlock with the elements of both shells.

Heretofore in hollow wall construction, the wall was laid up in hollow concrete blocks or the like, which were expensive to manufacture, and required care and experience to lay, or slab like elements were used which interlocked each with the other in each shell of the wall, and with those of the other shell of the wall, or the slabs of the two shells were interlocked, at their ends, with expensive columns which were held from separation by tie rods in a crude and unstable manner.

Each of the last mentioned constructions was a costly one, because of the amount of concrete it was necessary to use to make the hollow blocks, the interlocking slabs or the columns, and because of the costly molds and skilled labor required to first make the blocks, slabs, or columns and thereafter lay them up.

It is an object of the present invention to reduce the slabs to a simple form, to eliminate the protuberances or extensions heretofore necessary to interlock the slabs of one shell of the wall with those of the other shell, and thereby save in the cost of manufacture and molds required therefor, and to interlock the two shells of a wall by a simple and inexpensive element, easily assembled with the slabs at the ends or the edges thereof as occasion requires.

Other objects of the invention will be fully understood from a description of the drawings and the claim hereinafter given.

Of the drawings:

Figure 1 represents in perspective a portion of a hollow wall structure partially broken away to show the invention applied thereto.

Figure 2 is a detail of one of the tie elements seen in Figure 1.

Like characters represent like parts in the figures of the drawings.

Referring to the drawings:

The drawings herewith illustrate a simple form of hollow wall which may be constructed in accordance with this invention but it will be understood that various changes might be made therein without departing from its spirit and scope.

In the present instance the wall is made up of two shells 10 and 11 with a dead air space between, and comprising a plurality of preferably flat slabs 12, some of which have a tongue 13 and a groove 14 on opposite edges thereof, and a tongue 15 and a groove 16 on opposite ends thereof, which arrangement serves to lock each of the slabs with its neighbors when assembled to form a shell of the wall as seen in Figure 1 of the drawings.

The inner faces of the slabs 12 are flat and consequently the slabs of one shell have no direct physical contact, for the purpose of interolcking, with those of the other shell; the outer faces of the slabs, particularly of the outer shell, may be molded to represent brick, masonry, shingles, or clapboards to suit the fancy.

As before stated, the slabs of the respective shells have no direct physical contact for the purpose of tying the shells together, and since it is desirable, and sometimes necessary, to tie them together, a tying element 18 is provided for the purpose.

The said element 18 is preferably formed of thin but stout sheet metal, having a depression or groove 19 in one face thereof, and a like groove or depression 20 in the other face; this arrangement being advisable, as it permits of the making of the slabs for both shells in one mold, and enables them to be laid up with corresponding faces exposed, by reversing the ends of the slabs of one shell with respect to those of the other.

For the best results, the elements 18 are of a height approximating the width of the slabs 12, and are arranged to be assembled with them between the ends of pairs thereof as best seen at the broken out portion of Figure 1, wherein the element 18 has a protuberance formed by its grooved portion 19 seated in the end groove 16 of a slab 12 of the

outer shell, and its grooved portion 20 in engagement with the tongue 15 of a slab of the inner shell.

The slab 12ˣ of the outer shell, and which has its end adjacent the element 18 broken away, and the corresponding slab, not shown, of the inner shell, would have a tongue and groove respectively, in engagement with the groove 19 and a protuberance formed by the groove 20 of the said element 18.

In practice, the tongues and grooves of the slabs, and the grooves and the protuberances formed thereby, of the element 18, will be arranged to receive and be received by the others to form reasonably tight joints.

Because of the long bearings offered by the engaging portions of the slabs 12 and elements 18, a rigid structure may be built, even though light weight slabs are used, and in fact a wall constructed as above described may be laid up of slabs of less thickness than heretofore used, and afford rigid and weight bearing qualities, equal to those of a wall composed of thicker slabs which interlock with each other in the same shell and with those of the other shell.

The arrangement of the slabs 12 and the elements 18 is such that the two shells of the wall are firmly tied together, and the tendency of one shell to sway relatively to the other is transmitted to the other so that swaying of either of the shells is prevented.

In certain portions of a wall structure it may not be convenient to assemble the elements 18 with the ends of the slabs as above described, in which case the element will have both of the grooves in one face thereof and will be assembled with the top and bottom edges of the slabs of the inner and outer shells as seen at 18ˣ and 18ˣˣ.

Having described the invention, I claim:

A tie of the class described comprising a substantially flat thin metal plate formed with a single pair of parallel grooves, one on one side of said plate adjacent and parallel with one end thereof and the other on the opposite side of said plate adjacent and parallel with the opposite end thereof, each of said grooves providing a rib upon the side of said plate opposite thereto.

Signed by me at Belmont, Massachusetts, this 22nd day of October, 1925.

VICTOR H. WIGGLESWORTH.