Aug. 16, 1960 A. P. MARCHI 2,948,993

DRAIN CONSTRUCTION FOR WALLS

Filed June 28, 1956 2 Sheets-Sheet 1

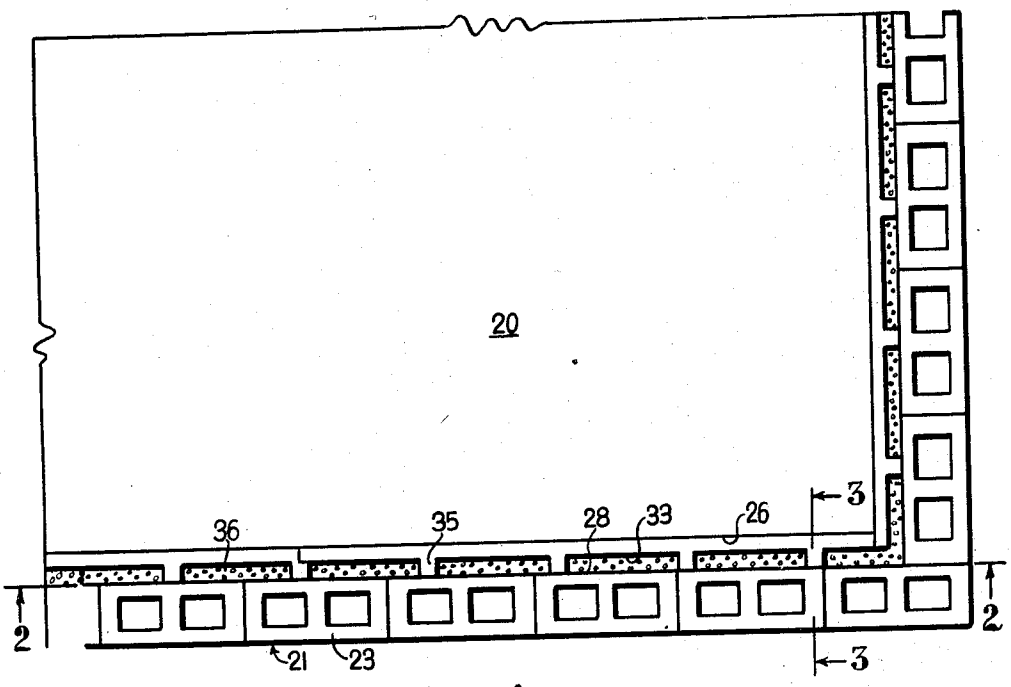


Fig. 1

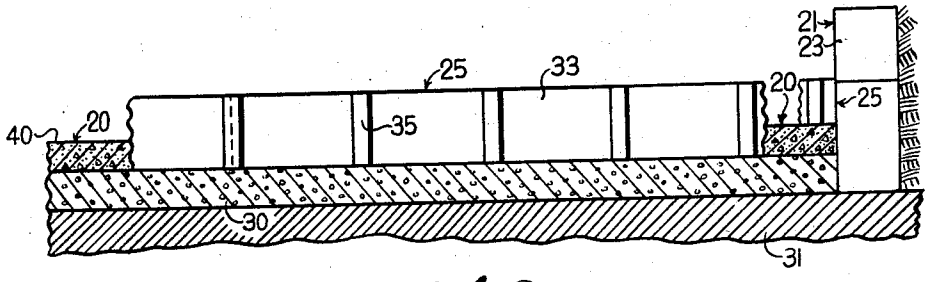


Fig. 2

INVENTOR.
Angelo P. Marchi.

BY Schmieding and Fultz

ATTORNEYS

Aug. 16, 1960 A. P. MARCHI 2,948,993

DRAIN CONSTRUCTION FOR WALLS

Filed June 28, 1956 2 Sheets-Sheet 2

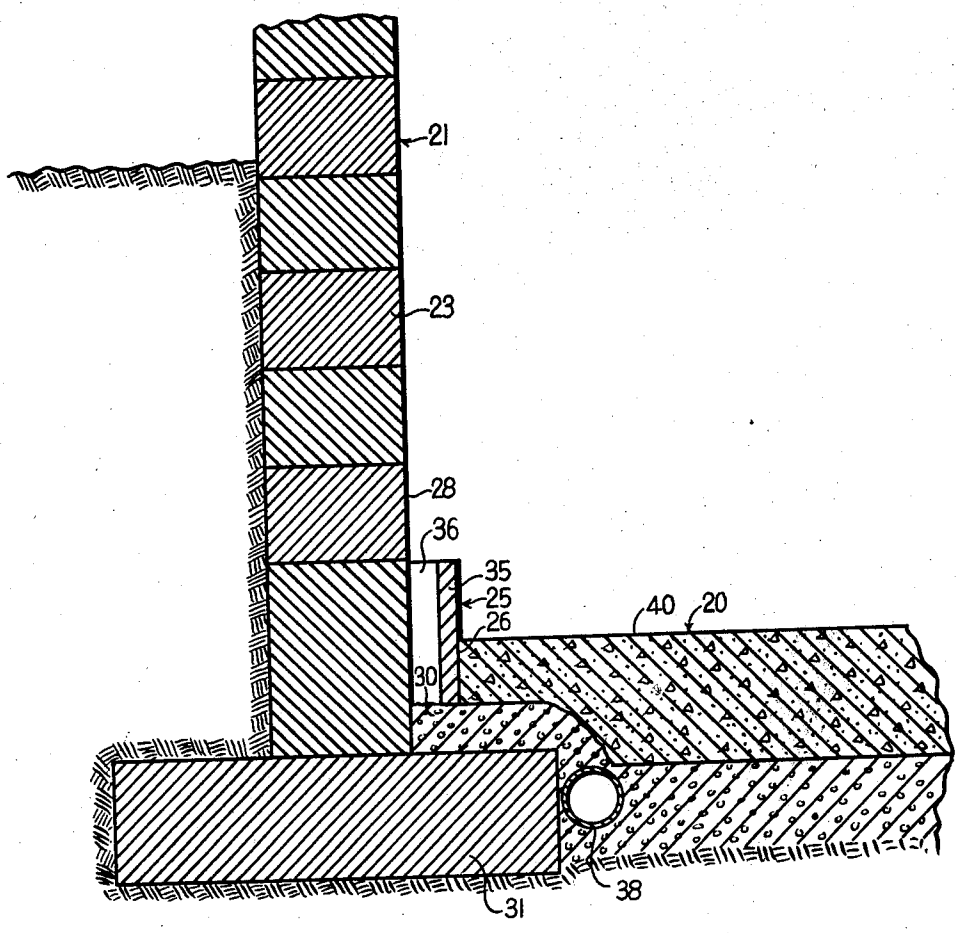


Fig. 3

INVENTOR.
Angelo P. Marchi.

BY Schmieding and Fultz

ATTORNEYS

United States Patent Office 2,948,993 Patented Aug. 16, 1960

2,948,993

DRAIN CONSTRUCTION FOR WALLS

Angelo P. Marchi, 1407 Sunbury Road, Columbus, Ohio

Filed June 28, 1956, Ser. No. 594,500

2 Claims. (Cl. 50—114)

This invention relates to the construction of walls and floors for basements of buildings and particularly to novel method and structure which provide a novel drain system for maintaining a basement floor free of water from the surrounding soil.

In general, the wall and floor construction of the present invention is formed by first building side walls on a suitable footer. A bed of water-permeable material such as gravel is next formed at the base of the inner surfaces of the side walls. A plurality of members forming vertically extending drain passages are positioned against the inner surfaces of the walls around the periphery of the floor space. Flooring material, such as concrete, is next poured over the floor space and against the inner surfaces of said passage-forming members. The flooring material, in the fluid state, urges the passage-forming members into position against the bases of the side walls and, upon hardening, the peripheral edges of the floor slab and the confronting inner surfaces of the bases of the side walls serve to maintain the passage-forming members in a location for receiving water seeping through the side walls to convey such water to the interstices of the water-permeable bed underlying the periphery of the floor.

As an aspect of the present invention the above mentioned passage-forming members may be of novel construction consisting of a vertically disposed sheet or moulding formed of plastic, pressed wood products such as Masonite, or other suitable sheet material. The outer surface of the sheet or moulding is provided with spaced ribs or projections which engage the inner surface of the base of the confronting side wall. Such ribs or projections maintain the outer surface of the sheet or moulding in spaced relationship with the confronting surface of the base of the side wall to form the above mentioned vertically extending drain passages.

As another aspect of the present invention the above mentioned passage-forming members are positioned with upper portions thereof disposed above the upper surface of the floor to form a base moulding around the periphery of the floor at the junctions of the side walls with the floor.

It is therefore an object of the present invention to provide an improved method for forming a basement side wall and floor construction which incorporates a drain system for maintaining the basement floor free of water from the surrounding soil.

It is another object of the present invention to provide a novel construction for the side walls and floor of a basement which construction incorporates simplified drainage structure that can be both fabricated and installed at low cost as compared to prior structures.

It is another object of the present invention to provide a novel construction for the side walls and floor of a basement which construction incorporates simplified drainage structure and also forms an attractive moulding around the periphery of the basement floor at the junction thereof with the side walls.

Further objects and advantages of the present invention will be apparent from the following description, reference being had to the accompanying drawings wherein a preferred form of embodiment of the invention is clearly shown.

In the drawings:

Figure 1 is a plan view of a basement floor and side walls constructed according to the present invention;

Figure 2 is a side sectional view of the construction of Figure 1 with the section being taken along the line 2—2 of Figure 1; and

Figure 3 is a second side sectional view of the construction of Figures 1 and 2 with the section being taken along the line 3—3 of Figure 1.

Referring next to the drawing, Figure 1 is a plan view of a basement floor, indicated generally at **20**, and basement side walls indicated generally at **21**. The side walls illustrated are of conventional construction and are built up from a plurality of individual concrete blocks **23**. It will be understood, however, that the invention can be applied to other types of wall constructions.

As seen in the various figures, a plurality of passage forming members, indicated generally at **25**, are positioned between the peripheral edges **26** of floor **20** of the confronting surfaces **28** of side walls **21**.

As best seen in Figure 3, lower edge of each passage-forming member **25** rests on a bed of water-permeable material **30**, such as gravel, which in turn rests on a suitable footer **31** and the supporting earth underlying the floor space..

With reference to Figures 1 and 2, each passage-forming member **25** includes an outer surface **33** provided with a plurality of spacers or projections **35** which engage a confronting inner surface **28** of a side wall **21**. The spacers **35** are spaced longitudinally along member **25** to form vertically extending drain passages **36** for conveying water from the inner surfaces **28** of side walls **21** downwardly through passages **36** to a suitable horizontally extending drain means such as is provided by water-permeable gravel bed **30**.

As seen in Figure 3, a drain tile **38** may be extended longitudinally along the footer for receiving and conveying away water passing downwardly through the drain passages **36** and water-permeable gravel bed **30**.

The passage-forming members **25** are preferably formed of plastic or a pressed wood product such as Masonite. In practice it has been found suitable to construct passage-forming member **25** with a height of 6 inches and a wall thickness of ¼ of an inch with spacers or projections **35** preferably extending ¼ of an inch outwardly beyond outer surface **33** fo the member. It will be understood that spacers **35** may be integrally formed on member **25** or attached thereto and may be of various suitable shapes. As one alternative, strips 6 inches long, one inch wide, and ¼ of an inch thick may be fastened to the outer surface **33** of passage-forming member **25**. If such separate strips are employed to form spacers **35** they may be secured to the sheet portion by means of staples or a suitable mastic. It will further be understood that passage-forming members **25** can be produced and supplied in any convenient length and assembled end to end along the entire lengths of the side walls **21**.

In practicing the method of the present invention, side walls **21** are built on footer **31** in a conventional manner. Passage-forming members **25** are then positioned along the bases of inner surfaces **28** of side walls **21**. The lower ends of passage-forming members **25** are rested on water-permeable gravel bed **30**. A self-hardening flooring material, such as concrete, is then poured over the floor space whereby such flooring material flows into engagement with the inner surfaces of passage-forming members **25**. It will be understood that the flooring material will exert an outwardly directed force against passage-

forming members **25** and urge same into close contact with the inner surfaces **28** of side walls **21** and after the flooring material hardens, passage-forming members **25** are securely maintained in position between the peripheral edge **26** of floor **20** and the confronting surface **28** of the side walls.

As seen in Figures 2 and 3, approximately the upper half of passage-forming members **25** may be disposed above the upper surface **40** of floor **20** to provide a moulding extending around the periphery of the floor at the junctions thereof with side walls **21**. Hence the upper portions of passage-forming members **25** provide a molding which elevates the entrances of drain passages **36** above the level of the floor. As a result, dirt accumulating on the floor will not enter the entrances to drain passages **36** and can be conveniently swept away without causing clogging of the drain passages. In addition, such base moulding lends an attractive appearance to the junctions between the side walls **21** and floor **20**.

While the form of embodiment of the present invention as herein disclosed constitutes a preferred form, it is to be understood that other forms might be adopted, all coming within the scope of the claims which follow:

I claim:

1. A side wall and floor construction for basements comprising vertical side walls defining the basement area with each of said side walls having outer and inner

surfaces thereof, a vertical passage-forming, water-impermeable member positioned in laterally spaced relation to the inner surface of at least one of said side walls adjacent the bottom edge thereof, a plurality of spacer means in laterally spaced relation connecting said passage-forming member to the inner surface of said side wall thereby defining a plurality of vertical passageways spaced along the inner surface of said wall, and a poured concrete floor, the side edge of said floor being in engagement with the free face of said passage-forming member with the top surface of said floor lying below the top free edge of said passage-forming member.

2. A side wall and floor construction in accordance with claim 1 wherein the water-impermeable member and the spacer means are integral with one another.

References Cited in the file of this patent

UNITED STATES PATENTS

195,471	Anthony	Sept. 25, 1877
539,259	Gilbreth	May 14, 1895
616,652	Booraem	Dec. 27, 1898
747,425	Hodges	Dec. 22, 1903
1,734,777	Pike	Nov. 5, 1929

FOREIGN PATENTS

176,960	Great Britain	of 1922