C. J. ASCHAUER.

CONCRETE BUILDING STRUCTURE.

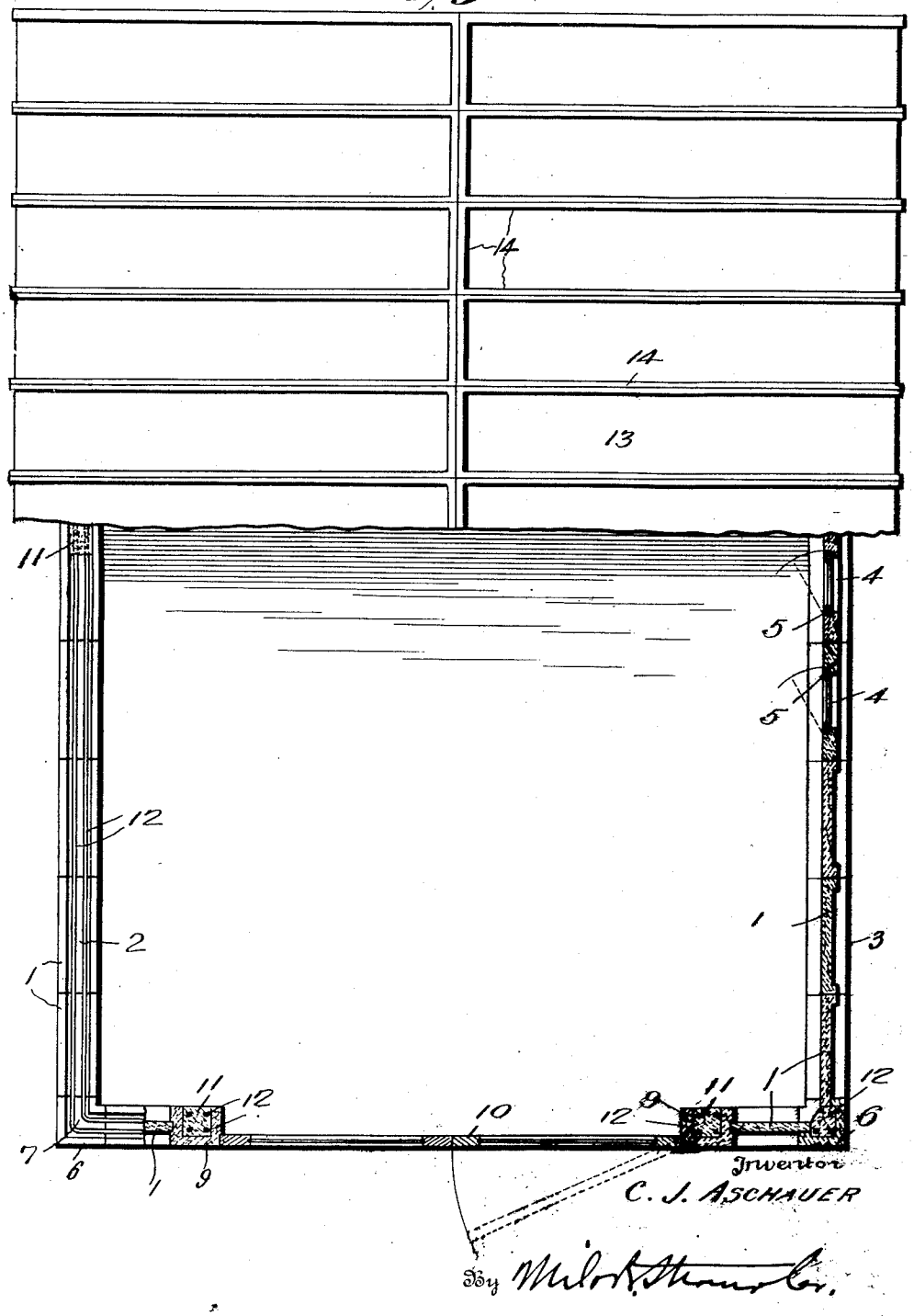
APPLICATION FILED AUG. 25, 1916.

1,383,183.

Patented June 28, 1921.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

Fig. 2.

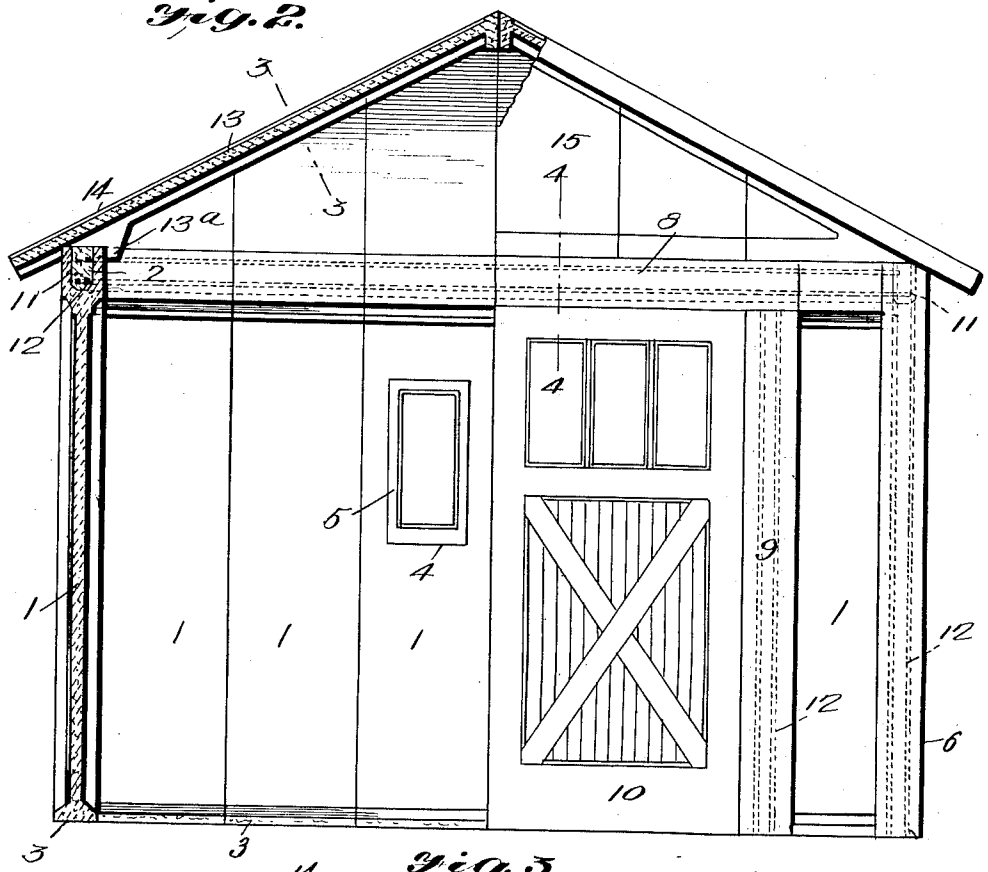


Fig. 3.

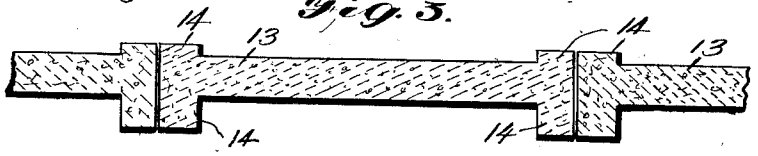


Fig. 4.

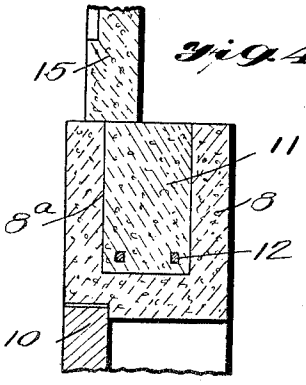
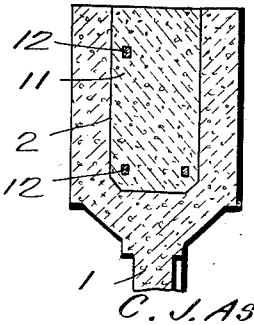


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CONCRETE BUILDING STRUCTURE.

1,383,183. Specification of Letters Patent. Patented June 28, 1921.

Application filed August 25, 1916. Serial No. 116,838.

To all whom it may concern:

Be it known that I, CHARLES J. ASCHAUER, a citizen of the United States, residing at Decatur, in the county of Macon and State of Illinois, have invented new and useful Improvements in Concrete Building Structures, of which the following is a specification.

This invention relates to concrete building structures and it consists in the novel features hereinafter described and claimed.

An object of the invention is to provide a fireproof building, as for instance, a garage composed of slabs or units, and these slabs may be reinforced with steel or wire rods as required.

Another object of the invention is to provide means for binding the slabs together at their upper ends and also for binding them to corner posts, stile posts, and lintels, whereby the walls of the structure are securely connected together, and the wall slabs are so retained that they may effectually sustain the weight and thrust strain of the roof slabs which are disposed in inclined position above the wall slabs.

A further object of the invention is to provide roof slabs of especial design bounded about three of their edges with laterally disposed strengthening flanges, and which are provided with heel portions adapted to bear against the inner surfaces of the walls of the structure, whereby the said roof slabs are securely held in position.

Other objects and advantages of the invention will be made manifest as the description thereof progresses.

In the accompanying drawings:

Figure 1 is a top plan view of a building structure built in acccord with the invention, with parts removed and parts shown in horizontal section;

Fig. 2 is a front elevation of the building with parts broken away and parts in section;

Fig. 3 is a transverse sectional view through a fragment of the roof slabs of the building on the line 3—3 of Fig. 2;

Fig. 4 is a transverse sectional view through the lintel and adjacent parts of the building, on the line 4—4 of Fig. 2, and

Fig. 5 is an enlarged detailed transverse sectional view through the upper portion of one of the wall slabs of the structure.

The wall slabs 1 are rectangular in side elevation and the said slabs are provided at their upper ends or edges with heads or enlargements in the top of which are channels 2 which extend completely across the slabs and have their ends opening at the side edges thereof. Each of said slabs is provided with an enlarged base portion 3 which is adapted to rest upon the ground or a foundation when the slab is placed in an erect or vertical position. Some of the slabs 1 are provided with openings 4 for window sashes 5.

Hollow posts 6 are arranged at the corners of the walls composed of the slabs 1, and the said posts have edge portions which bear against the outer surfaces of the adjacent slabs as shown at the lower right hand part of Fig. 1. The said corner posts are provided at their upper ends with channels 7 which communicate with the top channels 2 of the adjacent slabs 1.

A lintel 8 is located in one wall of the structure and has a top channel 8^a which communicates with the channels 2 of the adjacent slabs 1. The lintel is supported on hollow door stile posts 9. Doors 10 are hingedly mounted on one of the posts 9 in the usual manner. Provision will be made for casting in place all hardware for doors, windows, etc.

All of the parts hereinbefore described, except the doors, are made of concrete and if desired the doors may be made of metal, thus providing a fireproof structure. During the erection of the building the slabs 1, corner posts 6 and stile posts 9 are placed on end. The channels of the slabs in the same wall section are brought into alinement with each other and the slabs are placed with their edges in close contact. The lintel 8 is placed in position on the stile posts 9. The posts 9, the corner posts 6, the channels 2 and the channel 8^a of the lintel 8 are filled with a binder of concrete 11, and suitable reinforcing rods 12 are embedded in the said concrete filling. When the filling hardens it constitutes a continuous beam which extends entirely around the upper edges of the side walls of the building and down through the corner posts and the stile posts to the ground or foundation. Consequently, the side walls are efficiently braced and the slabs and posts are securely locked or fastened together.

The roof of the structure is composed of slabs 13 which are supported in inclined position over the walls. The roof slabs

are provided at their under sides and near their lower ends with abutments or heel portions 13ª which bear against the inner surfaces of the side walls of the structure and hold the upper ends of the slabs at one side of the building against the upper ends of the slabs at the opposite side thereof as best shown in Fig. 2 of the drawing.

The slabs 13 are bounded along three of their edges with laterally disposed strengthening flanges 14 and these flanges lie along the side edges and the upper ends of the said slabs. Therefore, when the slabs are in position on the side walls of the structure, their lower portion may project beyond the side walls of the structure and these projecting portions will act as eaves for the building. Inasmuch as the lower portions of the slabs 13 are devoid of laterally disposed flanges there is no obstruction to the free drainage of rain or water from the roof of the building. Gable slabs 15 are placed on the front and rear walls of the building to fill the space between the walls and the roof, thus forming a complete inclosure.

It is apparent that by arranging the slabs in tiers upon each other, a building of two or more stories may be erected.

It will be seen from the foregoing that a fireproof structure of a simple and durable nature is provided, and the same may be erected without the use of skilled labor. The slabs, posts and lintel may be made at some central plant and easily and cheaply shipped to some distant point for erection. Various colors and finishes of the slabs can be made and architectural embellishments added as desired.

No wood forms are required to erect the building, the various parts being pre-cast and sectional, and shipped ready to erect with a minimum amount of labor.

I claim:

1. A building structure composed of concrete slabs, each of said slabs being a solid unit of sufficient thickness and strength to serve as a weight bearing member, and having an integral top channel, said slabs being erected vertically to form the walls of the building, hollow posts located at the corners of the building and having an integral top channel which is in communication with the interior of the posts, the channels of the slabs and of the posts registering and forming a continuous channel extending entirely around the building and down through the corner posts, the top of the slab being increased in thickness to produce a head or enlargement in which the channel is made, and the ends of the slabs having laterally disposed strengthening flanges, the flanged ends of adjacent slabs abutting, and a binder filling said channel and the interior of the corner posts.

2. A building structure composed of concrete slabs erected vertically and forming the walls of the building, each of said slabs being a solid unit of sufficient thickness and strength to serve as a weight bearing member, and having an integral top channel, the channels of the slabs registering to form a continuous channel extending the entire length of the wall, the top of the slab being increased in thickness to produce a head or enlargement in which the channel is made, and the ends of the slabs having laterally disposed strengthening flanges, the flanged ends of adjacent slabs abutting, and a binder filling said channel.

In testimony whereof I affix my signature.

CHARLES J. ASCHAUER.