

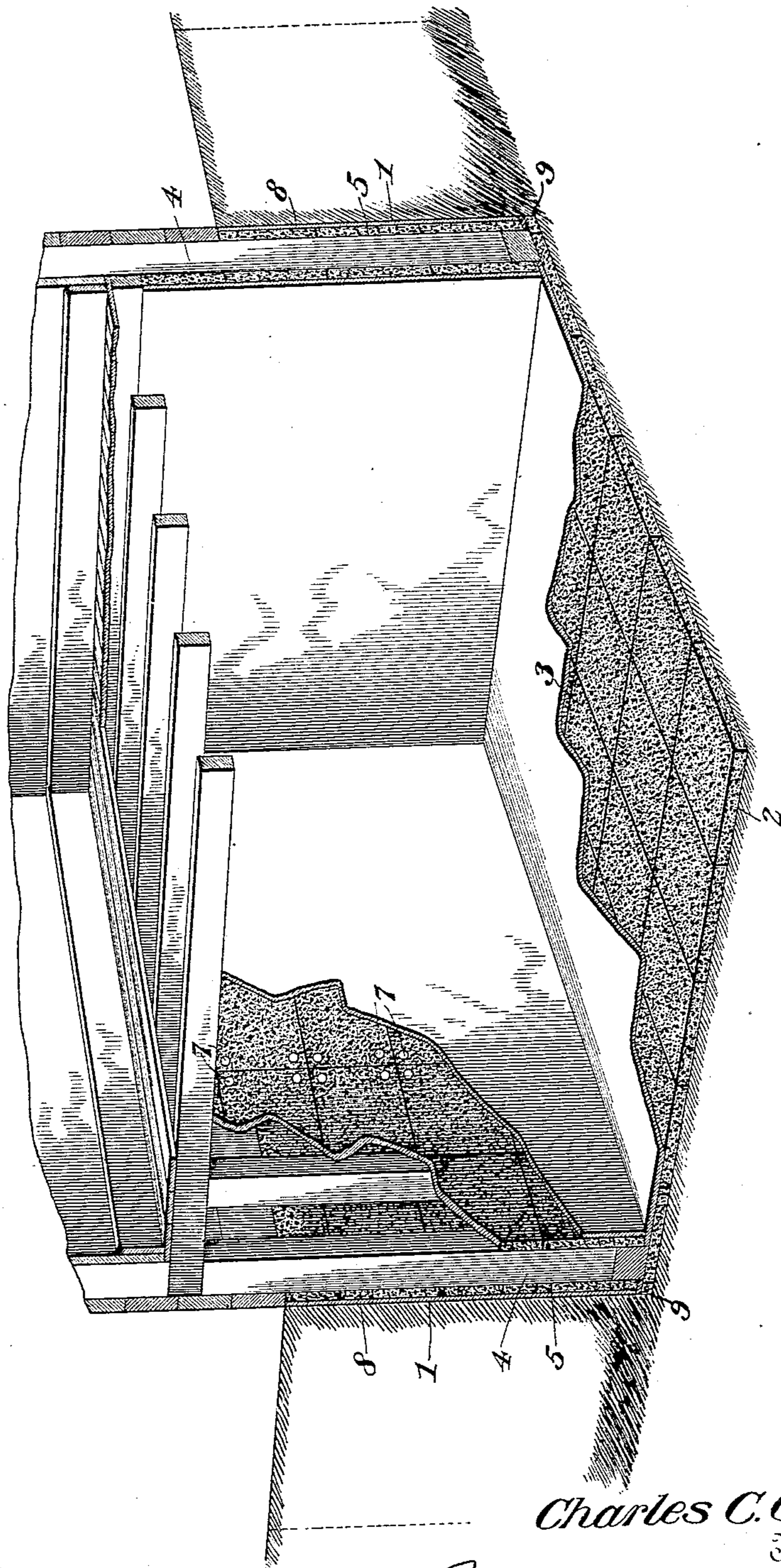
(No Model.)

C. C. GILMAN.

MEANS FOR PREVENTING DAMPNESS IN CELLARS, &c.

No. 559,941.

Patented May 12, 1896.



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Witnesses

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# UNITED STATES PATENT OFFICE.

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## MEANS FOR PREVENTING DAMPNESS IN CELLARS, &c.

SPECIFICATION forming part of Letters Patent No. 559,941, dated May 12, 1896.

Application filed April 12, 1895. Serial No. 545,505. (No specimens.)

*To all whom it may concern:*

Be it known that I, CHARLES CARROLL GILMAN, of Eldora, county of Hardin, State of Iowa, have invented certain new and useful  
5 Means for Preventing Dampness in Cellars and in the Processes of Producing the Same, of which the following is a specification, reference being had to the accompanying drawing.

The object of my invention is to produce  
10 by an improved process improved means for rendering a cellar or underground excavation absolutely dry and waterproof, and it is attained in the manner hereinafter specified.

Among the methods at present in vogue of  
15 draining cellar excavations the most common recourse is to construct a blind drain in the bottom of the cellar, which, although it carries off the major part of any water which may accumulate in the cellar, does not prevent dampness, which, being occasioned by  
20 the capillary attraction of the side walls in contact with the moisture of the surrounding earth, cannot be prevented without completely cutting off the means of access through  
25 the walls. If protection of the side walls is sought only by coating them on the inside, dampness is not entirely eradicated because of the contact of the unprotected walls with the outside earth. The consequence is that  
30 the dampness is not only not prevented, but there is a constant tendency of the moisture in the walls to loosen the inside protective coating.

My invention enables a builder in a practicable manner to perfectly protect the exterior of all sunken walls, and thereby to altogether exclude the presence of moisture in the inclosed chamber.

In the accompanying drawing I have illustrated in perspective a section of a building  
40 erected in accordance with my invention.

Referring to the figures on the drawing, 1 indicates the side walls of a portion of the cellar excavation, and 2 the earth floor thereof.  
45 The excavation for the cellar should be about four feet wider and four feet longer than is required to hold the structure that is to be built upon the floor. When the excavation has been completed to a proper depth, the  
50 earth floor is leveled off and a pavement 3 of sheets or squares of brick stuff—such, for example, as that shown and described in my

Patent No. 405,028, dated June 11, 1889—is laid in position upon it. The purpose of the employment of this material being, however, to  
55 afford a porous body for the application of a mortar surface, in order to produce an artificial-rock coating, I may substitute for that particular material any suitable porous material of sufficient strength and durability. 60  
Having laid the brick stuff in position, I thoroughly saturate it with water. Next I square the area of the excavation to equal distances from the earth walls and bed to a level thereon the frame-sills in any suitable hydraulic  
65 mortar, and also cover the entire brick-stuff-paved surface with the same to the depth of about an inch, taking care to closely fill every crevice about the bottom of the sill, within and without, with the mortar. 70

In practice it is necessary to protect the floor of saturated brick stuff with boards or the like in order to allow the workmen to walk over the material without injuring it.

After having laid the sills and coated the  
75 brick-stuff pavement with mortar it is necessary to allow it to set, which it will do in a few days, the chemical conversion of the mortar to stone being compelled by the moisture contained in the brick stuff. If necessary, 80  
however, more water may be applied to the surface of the mortar to hasten its conversion to stone.

When the bedding of the walls and the floor is properly set, the frame-pieces or studs  
85 4 of the structure are erected upon the sills and are properly braced in the usual manner. After the studs or framework are in place its outside is covered with a sheathing 5 of brick stuff. The sheathing is cut into squares or  
90 slabs to fit and secured in place by large or disk-headed nails 7, the ground course of the sheathing being preferably nailed directly to the sills. Before the sheathing is erected to place it is saturated with water and subsequently a coating 8 of hydraulic cement mortar is spread preferably in horizontal courses from the top down upon the sheathing. Care  
95 should be taken to run a close-fitting joint 9 of the mortar along the line of juncture of the walls with the floor. After the coating of the mortar has set sufficiently—say within about  
100 forty-eight hours after it has been applied—I treat to repletion with a brush the entire wall

and floor with hot soapsuds of a strength sufficiently great to show iridescence in pouring and follow immediately with a similar application of hot alum solution of a strength equal to one part in eight of alum to eight of boiling soft water. By the application of soapsuds and alum or similar filler the pores of the stone surface are rendered perfectly waterproof. The space of the excavation in excess of dimensions of the structure affords ample room for placing the sheathing and treating the coating. After the filler is applied the earth is filled in around the exterior of the structure and is stamped firmly to place.

By my invention as above described a coating perfectly impervious to moisture is prepared upon the outer walls of the structure wherever it comes in contact with the earth.

It is desirable, particularly in damp localities, to employ such a filler as has been described; but under certain conditions the application of a filler might be omitted, the density of the rock coating being sufficient to prevent permeation of moisture.

In the foregoing specification I have suggested the application of my process in connection with a structure framed of wooden timbers; but it is obvious that other framing or building materials may be employed to advantage. Under some conditions it might be desirable to coat the interior walls and floor

of the structure with a superficial rock facing, applying it to the exposed inner surface of the brick-stuff sheathing, where wooden framing is employed, but under most conditions it will be found sufficient to use the exterior coating exclusively.

What I claim is—

1. As a means of preventing dampness in cellars, the combination with the frame of a structure, of a sheathing of porous material, and a rock-face coating thereon, substantially as set forth.

2. As a means of preventing dampness in cellars the combination with the frame of the structure, of an envelop of porous material secured thereto, a rock-face coating thereon, and a filler of waterproofing material upon the rock-face coating, substantially as specified.

3. As a means of preventing dampness in cellars, the combination with the frame of the structure, of an envelop of porous material secured thereto, a rock-face coating thereon and a filler of soapsuds and alum solution, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

CHARLES CARROLL GILMAN.

Witnesses:

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GILBERT JOHNSON.