E. C. HODGES.

SANITARY FOUNDATION.

APPLICATION FILED SEPT. 7, 1920.

1,433,205.

Patented Oct. 24, 1922.

2 SHEETS—SHEET 1.

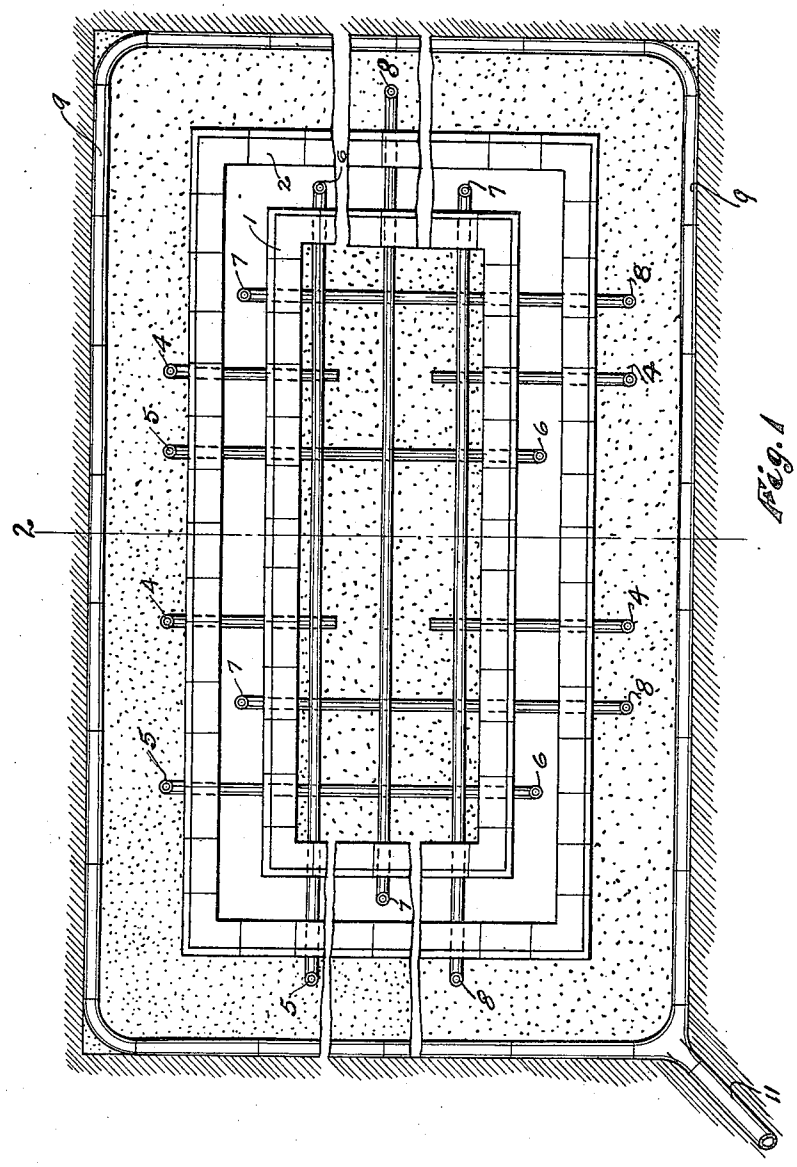


Fig. 1

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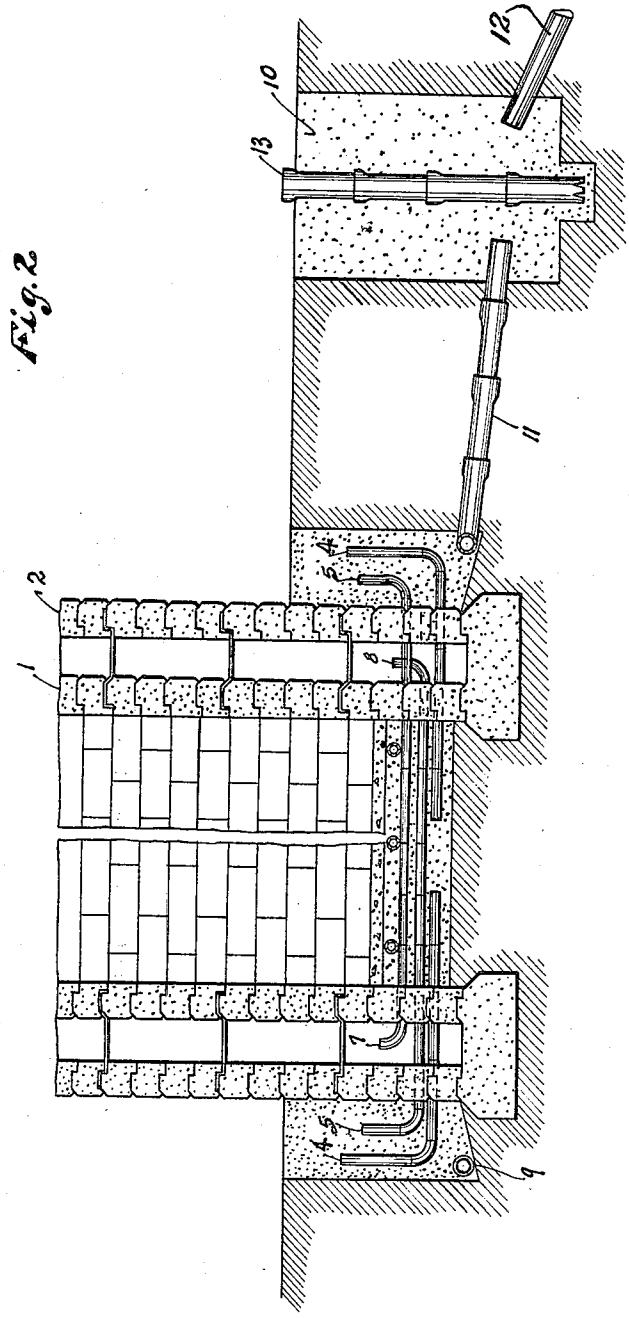
APPLICATION FILED SEPT. 7, 1920.

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2 SHEETS—SHEET 2.

Fig. 2




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Patented Oct. 24, 1922. 1,433,205

# UNITED STATES PATENT OFFICE.

EMERY C. HODGES, OF JOLIET, ILLINOIS.

## SANITARY FOUNDATION.

Application filed September 7, 1920. Serial No. 408,471.

*To all whom it may concern:*

Be it known that I, EMERY C. HODGES, a citizen of the United States, and a resident of the city of Joliet, county of Will, and State of Illinois, have invented a certain new and useful Sanitary Foundation, of which the following is a specification.

My invention relates to buildings of all classes and has for its primary object the provision of a sanitary foundation for said buildings.

A further object of my invention is the provision of a sanitary foundation that is economical to construct and that will exclude moisture and obnoxious gases from the building.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Fig. 1 is a top plan view of my foundation, and

Fig. 2 is a sectional view along the line 2—2 of Fig. 1.

The preferred form of construction comprises a foundation having double walls 1 and 2, said double walls 1 and 2 being constructed of waterproof blocks having water-tight joints, said blocks forming the subject matter of Patent No. 847,476 isssued March 19, 1907, to this applicant.

Extending around the exterior side of said foundation is an excavation 3 which abuts the walls of the foundation on its inner side. Within said foundation the earth is removed to a depth of three or four feet below the basement floor line. Extending into the basement from the exterior wall and at a point beneath the level of the basement floor line are ventilator pipes 4, said ventilator pipes 4 do not extend clear through the basement. Ventilator pipes 5 and 6 are inserted through the exterior sides of the building beneath the level of the basement floor line. These ventilator pipes are extended the full length or width of the basement, passed through the inner wall on the opposite side and there bent upwardly, as illustrated at 7 and 8. The ventilator pipes described above may be supplied in any number and may be inserted under the floor of the basement at any point around the exterior circumference of the building.

After the installation of the ventilator pipes within the foundation, large clean porous cinders are dumped into the outer excavation 3 and into the basement. When the cinders reach the level of the floor line within the basement and the ventilator pipes are fully covered, they are carefully levelled and the floor built upon the cinder foundation. The exterior excavation is filled with cinders about three-quarters of its entire depth, and the crushed rock is used to fill up the remaining quarter; the purpose of the crushed rock being to prevent the loose, small dry ashes from being blown away and also to assist in creating a neat and attractive foundation.

A drain pipe 9 extending around the circumferential exterior of the exterior excavation is provided, said drain pipe being adapted to drain into a cinder filled sump 10 by means of a drainage line 11, and where the sanitary foundation is built near a sewer a ventilator pipe 12 may be extended from the sewer to the sump 10. A pump casing 13 is inserted into the sump 10 and provides means whereby drainage water coming from around the foundation may be pumped from the sump, however, such action would be necessary only in case of severe floods or the like.

The foundation indicated in the drawings and specification has been tested and the results are unbelievable. The provision of the water-tight joint blocks, double walls, the drainage pipes, ventilator pipes and the exterior excavation make the basement and upper portion of the building, having the aforesaid foundation, absolutely dry and sanitary in every respect. The air passing down through the loose gravel and cinders in the exterior excavation passes into the basement ventilator pipes 4, into the porous cinders beneath the basement floor and up through the pores in said floor into the basement, thus keeping the basement floor dry and allowing only pure and fresh air to flow into the basement. The air flowing from the inner end of one ventilator pipe, 4, after passing through the intervening portion of the porous bed will enter the similar end of an opposite pipe or pipes and pass through the latter and be discharged at the end of such pipe or pipes, 4, outside the

building, a circulation of air being thus effected and resulting in the carrying off from beneath the basement floor of any noxious or other objectionable gases tending to accumulate beneath such floor, this circulatory action taking place especially under conditions or wind pressure upon one side of the building that tends to blow or force air through the pipe, 4, from that side of the building. The air passing into the ventilator pipes 5 and 6 travels under the ground to the space between the opposite walls and is permitted to flow freely about said space. During the hot summer months the air passing through the ground to the opposite wall will be cooled and upon reaching the space between the opposite walls will keep said walls cool and dry. In the winter time the frosty air will be warmed during its passage beneath the ground to the opposite walls and will consequently keep the walls warm and dry.

Applicant has discovered that by the use of the exterior excavation about a building that a basement may be kept absolutely dry and free from obnoxious odors. In the foundation constructions in use today the earth is packed solidly about the exterior of the sunken wall and water seeping through the earth adjacent the sunken wall keeps said wall in a damp condition at all times, the nature of the earth being such that air is not permitted to reach the damp wall and dry it out. Oft times in heavy rains or floods the pressure of the earth acts upon stratas of water and forces said water through the pores of the wall and into the basement. However, with my foundation no water will be permitted to gain admittance to the basement inasmuch as it is drained off as fast as it gathers in the outer excavation and inasmuch as the porous filler will allow the air to permeate the excavation the wall will dry off very quickly.

A gaseous basement is caused by the fermentation of vegetation in stratas in the ground. As the fermentation increases the gas attempts to escape to the air through stratas in the ground and should some of these stratas abut a foundation the gas following said stratas will come in contact with the sides of the side walls and due to the ever increasing pressure from behind will be forced through the cracks and pores of the foundation into the basement. The excavation around the outer circumference of the foundation will prevent gas from coming in contact with the side walls. It will merely flow into the porous cinders and easily find an exit exteriorly of the wall of the basement.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A building construction having hollow walls, a pipe or pipes which extend beneath the building at a level below the surface of the ground adjacent the building, such pipe or pipes at one end opening to the exterior of the building and having an air inlet thereat and at the other end opening into the wall space and delivering air thereto.

2. A building construction having hollow walls, a pipe or pipes which extend beneath the building at a level below the surface of the ground adjacent the building, such pipe or pipes at one end opening to the exterior of the building and having an air inlet thereat and at the other end opening into the wall space and delivering air thereto, and filtering material above the inlet end or ends of such pipe or pipes.

3. A building construction having a floor, pipes leading from outside the building at separated points whereat they open to the air outside the building and extending beneath the floor with their inner ends open and separated or spaced apart, such ends being in communication with a common chamber, whereby air flowing from one of such pipes beneath the floor may find its way beneath the floor to the open end of the other pipe beneath the floor.

4. A building construction having a floor, a porous filler beneath the floor, and reaching to a depth below the level of the ground adjacent the building; and means to circulate air through said filler comprising a pipe connection between the same and the exterior of the building, said pipe connection having exterior to the building an air inlet, and an air outlet from such filler.

5. A building construction having a floor, a porous filler beneath the floor and reaching to a depth below the level of the ground adjacent the building exterior, means to introduce air into said filler comprising a pipe or pipes leading from a point exterior to the building and receiving air thereat, having an air outlet into the filler, means for passing air from said filler, a porous filler in an excavation adjacent the building exterior into which said pipe or pipes extend, and a drain pipe in said external filler at a lower level than the air receiving portion of said pipe or pipes.

6. A building construction having a floor, a porous filler beneath the floor and reaching to a depth below the level of the ground adjacent the building exterior, means to

circulate air through said filler comprising an open-ended pipe leading from a point exterior of the building into the filler, and a porous filler in an excavation adjacent the building exterior into which said pipe extends.

7. A building construction having hollow side walls and a floor, a porous filler in an excavation adjacent the building exterior, a porous filler beneath the floor reaching to a depth below the level of the ground adjacent the building exterior, means to circulate air through said filler beneath the floor comprising piping that extends from such filler to the filler in the external excavation, and means establishing air communication between the interior of the hollow walls and the exterior of the building comprising piping leading from the filler in the external excavation to the interior of the hollow walls.

8. A building construction having a floor, a porous filler beneath the floor and reaching to a depth below the level of the ground adjacent the building exterior, and pipes extending outwardly from the filler in opposite directions and reaching to the exterior of the building, such pipes being open to the filler beneath the floor and being open at their outer ends.

9. A building construction having a floor, a porous filler beneath the floor and reaching to a depth below the level of the ground adjacent the building exterior, pipes extending outwardly from the filler in opposite directions and reaching to the exterior of the building, such pipes being open to the filler beneath the floor and being open at their outer ends, and a filler of porous material in an excavation outside the building in which said pipes terminate.

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

EMERY C. HODGES.

Witnesses:

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ROSE K. TRIB.