

April 19, 1938.

R. M. NYHAGEN. JR

2,114,906

BUILDING CONSTRUCTION

Filed Jan. 30, 1937

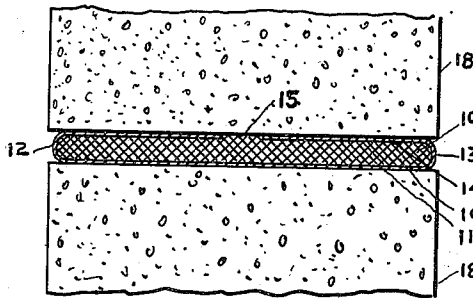


Fig. 1.

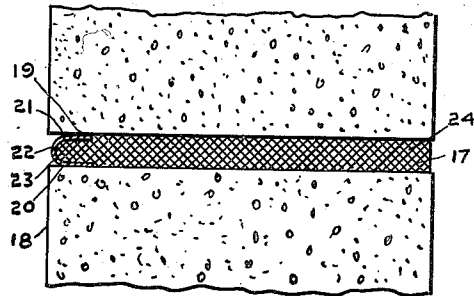


Fig. 2.

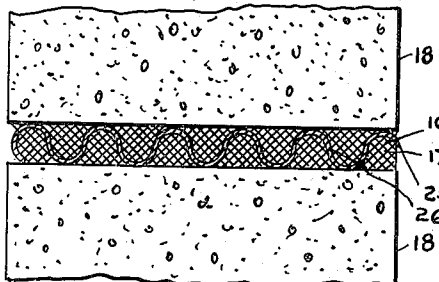


Fig. 3.

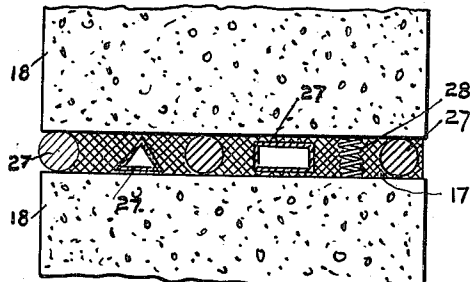


Fig. 4.

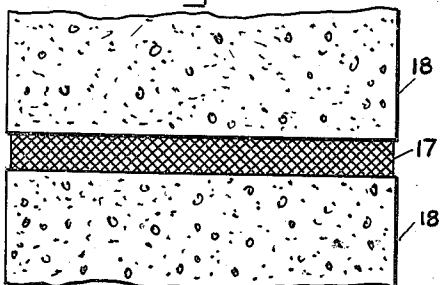


Fig. 5.

INVENTOR.
Richard M. Nyhagen Jr.
BY *James R. McKnight*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,114,906

BUILDING CONSTRUCTION

Richard M. Nyhagen, Jr., Chicago, Ill., assignor
of one-twentieth to Dorothy Nyhagen, Chicago,
Ill.

Application January 30, 1937, Serial No. 123,089

6 Claims. (Cl. 72—107)

My invention relates to building construction and particularly to a pressure relieving and wall strengthening joint.

Among the objects of my invention is to provide a device adapted to be used in combination with mastic to form a pressure relieving and wall strengthening joint; to create such a joint so as to produce a water tight course; to supply means for using mastic which will prevent the mastic from oozing out onto the face of the building; to the use of mastic alone as a pressure relieving and wall strengthening joint; and such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have shown in the accompanying drawing preferred embodiments of my invention, yet I wish it understood that the same are susceptible of modification and change without departing from the spirit of my invention.

Referring to the drawing, Fig. 1 is a sectional view of one embodiment of my joint shown in place in a building; Figs. 2, 3, and 4 are similar views of different embodiments of my invention, Fig. 5 shows mastic shown alone.

The form of my joint shown in Fig. 1 comprises a body member 10 having a closed bottom 11 and closed ends 12 and 13. The top portion 14 may have an opening 15 but may be constructed without the same. The end portions are preferably comparatively low leaving a long flat body member with a hollow interior portion 16 into which is placed a filling of mastic 17. One of the closed ends 12 or 13 is placed adjacent the face of the building material 18, so as to prevent any mastic from squeezing out of the end on to the face of the building.

The form shown in Fig. 2 comprises a cap 19 having a bottom portion 20 and a top portion 21 connected by a closed end 22. Mastic 17 fills the interior 23 of the cap 19 and extends back to fill the space 24 between the units of building material 18. The closed end 22 is positioned adjacent the face of the building material 18 so as to prevent the mastic from oozing out on to the face of the building.

The form shown in Fig. 3 comprises a body member 25 having throughout its body a plurality of corrugations or undulations 26 which may run either at a right angle to the face of the building material 18 or parallel thereto. Mastic 17 is placed between the corrugations 26 but cannot spread out onto the face of the building material because it is blocked by the corrugation nearest the face of the building material 18.

The form shown in Fig. 4 comprises a plurality of solid body members 27 spaced in the space between the units of building material 18. Between said body members 27 is a filling of mastic 17, which is prevented from running out onto the face of the building by the body member nearest the face of the building material 18. The body members may of course be of varied shape such as rectangles, triangles, balls, and any other desirable shape. The body members instead of being solid may be hollow to be filled with mastic or may be springs 28 surrounded by mastic.

While I prefer that the body members in all the embodiments of my invention may be made of ductile metal such as lead, yet any desirable substance may be used such as fiber, rubber, or any other substance having compressible qualities similar to lead.

My joint may be used in any type of building construction and particularly where the construction is divided into zones. My joint may be placed in any place and as many times as desired within each zone and at any place between units of a wall.

In all buildings of stone, terracotta, granite, or marble facades certain destructive movements occur which cause the facing blocks to crack or spall. These movements include those caused by the compression of steel, the expansion of stone due to temperature change, wind-stress, settlement, vibration and the like. These conditions are frequently aggravated by faulty setting. To overcome any disastrous results from the above movements my joint has been developed to incorporate a feature of elasticity into the wall for the life of the building which may not be obtained as well in any other manner. When the excessive weight is placed on the facing blocks there is relief provided simply by the raised portions of my joint being forced down, which automatically restores the desired, intended weight to the facing material. With the use of my joint the building is zoned into story heights. Where the stones are bonded onto the floor or in the use of shelf angles this material permits these types of construction to function as intended. This material permits these types of construction to function as intended by assuring for the life of the building that the weight of the facade will rest on either the angle iron or the floor. My joint also is used to provide relief in a wall bearing structure by compensating for expansion, settlement, wind-stress, vibration and faulty setting. Another desirable feature

of my invention is the elimination of substantially all future tuckpointing.

With my joint a water tight course is assured due to the substantially complete filling of the space between the units of building material with my holder and mastic.

My invention also contemplates the use of mastic alone as a filler in the space between two units of building construction. Where mastic is used alone there is, however, some difficulty in setting due to the weight of the superimposed unit, tending to cause spreading of the mastic.

My body member or members in the several forms shown in this application tend to aid in setting the units as well as adding strength to the mastic for supporting weight. My body members may be so positioned or one of said members may be so placed that the mastic cannot pass it onto the face of the building, thereby protecting the face of the building from unsightly and disfiguring particles of mastic, and the need for removing them.

Mastic as used herein may be defined as a plastic substance having the quality of continued pliability. It is also non-straining and is substantially impervious to the elements.

Having thus described my invention, I claim:

1. A compressible filler for use as a pressure relieving joint in a wall structure comprising a filling of mastic in the space between facing blocks in the wall structure, and means in said space for preventing said mastic from passing onto the face of the wall structure.

2. A compressible filler for use as a pressure relieving joint in a wall structure comprising a holder positioned in the filler space, a filling of mastic in said holder, said holder having a closed end adjacent the face of the wall structure so

as to prevent any mastic from passing onto the face of said wall structure.

3. A compressible filler for use as a pressure relieving joint in a wall structure comprising a metal body member having a closed end and a top portion, a hollow interior, a filler of mastic within the hollow interior of said body member, said body member positioned in said wall structure with the closed end adjacent the face of said wall structure to prevent any mastic from passing onto the face of said wall structure.

4. A compressible filler for use as a pressure relieving joint in a wall structure comprising a metal cap having a bottom and top closed by a connecting end portion, a filling of mastic in the cap, said cap positioned in said wall structure with the closed end adjacent the face of said wall structure to prevent any mastic from passing onto the face of said wall structure.

5. A compressible filler for use as a pressure relieving joint in a wall structure comprising a metal body member having a plurality of corrugations, a filling of mastic between said corrugations, the corrugation nearest the face of said wall structure adapted to block the passage of any mastic onto the face of said wall structure.

6. A compressible filler for use as a pressure relieving joint in a wall structure comprising a plurality of spaced body members positioned in the space between facing blocks in the wall structure, said body members contacting both the upper and lower facing blocks, a filling of mastic between said body members, one of said body members positioned nearest the face of said wall structure so as to block the passage of any mastic onto the face of said wall structure.

RICHARD M. NYHAGEN, JR.