Sept. 14, 1943. G. R. LANG 2,329,627

DRAIN PIPE WITH SEATING DEVICE INTO MASONRY

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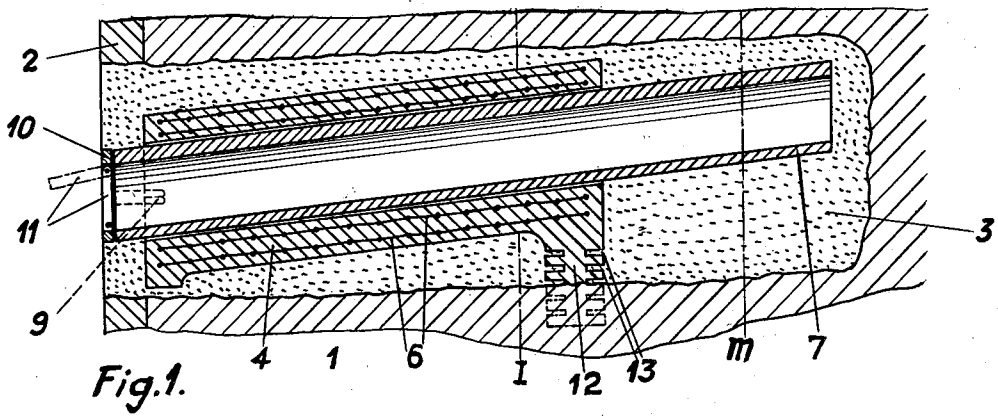


Fig. 1.

Fig. 4

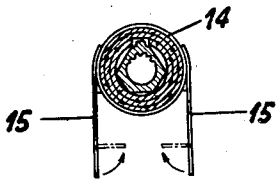


Fig. 3

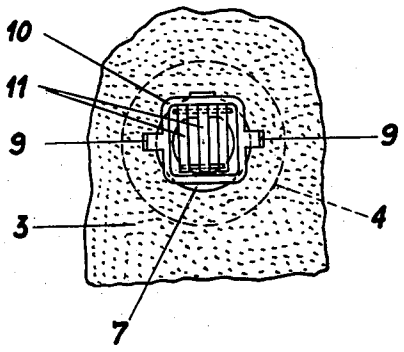


Fig. 2

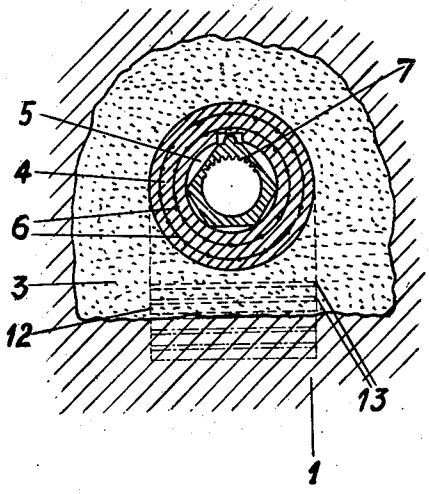
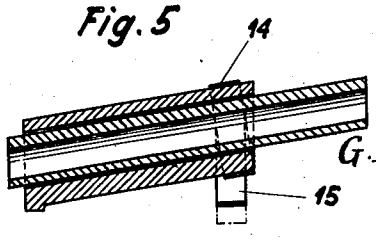


Fig. 5



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DRAIN PIPE WITH SEATING DEVICE INTO MASONRY

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6 Claims. (Cl. 72—127)

The present invention relates to drain pipes and more particularly to means for seating the same in walls of masonry for providing an effective drainage therefor and an object of the invention is to provide a protective covering for drain pipes which will not only increase their life, but will prevent sand, gravel and other foreign matter draining therein which in time would cause the pipe to become clogged.

Another object of the invention is to provide a support for drain pipes which will retain the latter in the desired drainage position prior to permanently sealing the pipe in the wall of masonry to be drained and said support being adjustable whereby the pipe supported thereby may be easily and readily adjusted to the required drainage position.

Other objects of the invention will be in part obvious and in part pointed out in the following detailed description and the accompanying drawing which discloses several ways in which the present invention can be carried out, whereby, those persons skilled in the present art can readily apprehend and make use of the same.

In the drawing:

Figure 1 is a detail vertical longitudinally extending sectional view of a wall of a building having the invention applied thereto.

Figure 2 is a vertical transverse section taken on the line I—I of Figure 1.

Figure 3 is a detail elevation of the wall showing the opened end of the drain pipe therein.

Figure 4 is a detail sectional view of the drain pipe, its protective covering and a slightly modified form of support, and

Figure 5 is a vertical longitudinal section of the same.

Referring now more particularly to the drawing wherein like and corresponding parts are designated by like reference characters throughout, the numeral 1 indicates a portion of a vertical wall of masonry having a facing 2 and in which my improved drain pipe is applied for collecting the moisture within the wall and draining the same therefrom.

To apply my drain pipe to the wall a cavity 3 is first formed therein having a depth of approximately one half of the thickness of the wall and a width and height exceeding that of the drain pipe and its support. The drain pipe 7 is formed from the customary permeable material so that liquids may seep therein and drain therefrom, but the outer periphery thereof is preferably of a hexagonal configuration as shown in the drawing. These drain pipes are usually made from fragile materials and therefore I provide a protective covering 4 which is also made from permeable materials, but reinforced with a metallic netting 6. This protective covering may be of any shape desired, but preferably cylindrical as shown whereby it may extend about the drain pipe and form spaces 5 therebetween where water may accumulate before entering the drain pipe. The drain pipe may also be provided with a longitudinally projecting rib 8 which is seated within a corresponding recess formed within the protective covering so as to prevent the pipe from turning therein. One end of the protective covering has formed therewith a slight projecting leg, whereas the opposite end thereof is provided with a relatively long leg 12 both of which provide a support for the protective covering and the pipe housed therein. This protective covering may be arranged about the drain pipe in the manner as shown, or it may entirely cover the same, but I prefer the opposite ends to extend therefrom in order that the forward end of the pipe may extend to the outer face of the building wall when applied thereto and the inner end of the pipe seated within the mortar placed within the cavity 3 for closing the same.

In applying the drain pipe 7 within a wall the protective covering is first placed thereabout and this unit is then placed within the cavity 3 of the wall where it is retained at the proper inclination whereat the liquid that accumulates therein may drain from the forward end of the pipe and this forward or outer end of the drain pipe terminates with the outer face of the facing 2.

The leg 12 of the protective covering is normally of the length as illustrated in full and dotted lines in Figures 1 and 2 of the drawing and to reduce the inclination of the drain pipe 7 it is necessary to shorten the length of the leg 12. In the form of leg support as shown in Figures 1 and 2, a plurality of notches 13 are formed therein for dividing the same in layers or sections which may be easily severed from the leg whereby the latter may be reduced in length or of such a length as would support the drain pipe at the proper inclined relation to the wall in which it is installed. Instead of forming the leg 12 with the protective covering I may substitute therefor a metallic band 14 which latter is secured about the protective casing or covering and has secured thereto a pair of depending legs 15. These legs 15 are normally of the length as shown in full lines in Figure 4 of the drawing and when it is required to reduce their lengths the outer extremities

thereof may be severed or cut to the length required or they may be bent inwardly as shown in dotted lines in Figure 4.

After the drain pipe is installed within the cavity 3 of the wall or other structure to be drained a mortar which will remain permeable after setting, is poured therein embedding the drain pipe and its protective covering and support, but allowing the outer opened end of the drain pipe to extend to the outer surface of the mortar in the manner as is illustrated in Figures 1 and 3 of the drawing. Before the mortar sets the bolts 9 are embedded therein for supporting and fastening a frame 10 thereto. This frame 10 is provided with a hingedly connected grate 11 which latter extends over the outer opened end of the drain pipe 7 so as to prevent noxious insects, rodents or other foreign matter accumulating therein. By moving the grate to the dotted position as shown in Figure 1 access may be gained to the interior of the drain pipe 7 for cleaning the same.

Manifestly, the construction herein shown is capable of considerable modification and such modifications as come within the scope of my claims, I consider within the spirit of my invention.

I claim:

1. A drain for masonry having a cavity formed therein and opened at the outer face of the masonry, a drain pipe seated within said cavity and having its outer opened end terminating flush with the opened end of the cavity, a permeable protective covering enclosing said drain pipe and frangible means at the inner end of said covering for supporting said drain pipe and said covering within the cavity of the masonry.

2. A drain for a wall of masonry having a cavity formed therein, a drain pipe seated within said cavity and having one end extending to the outer face of the wall of masonry, a permeable protective sleeve surrounding said pipe and having means for adjustably supporting the same within said cavity, a permeable mortar sealing said cavity supporting means embedded within said permeable mortar adjacent each side of the drain pipe end in the outer wall face, a frame secured to said supporting means and a grate pivotally connected to said frame adapted to close over the end of said drain pipe at the outer face of the masonry wall.

3. A protective covering and support for frangible drain pipes comprising a sleeve of permeable material, and a pair of supporting legs one of said legs having readily severable portions whereby said leg may be adjusted for supporting said sleeve at various inclined positions.

4. A protective covering and support for frangible drain pipes comprising a sleeve of permeable material, a metallic netting embedded within said sleeve, a leg formed with one end of said sleeve and said leg consisting of a plurality of frangible sections whereby the length of the leg may be reduced by removing one or more of said sections.

5. The combination with a drain pipe having an outer periphery of substantially a hexagonal configuration, a cylindrical permeable reinforced sleeve surrounding said drain pipe forming spaces therebetween, and an adjustable support on said sleeve for retaining said drain pipe at various inclined positions.

6. A drain for masonry walls comprising in combination with a suitable opening in a wall, an elongated porous hexagonal tube, a porous fabric reinforced cylindrical tube around the greater portion of said hexagonal tube, a longitudinal upstanding rib exterior of said hexagonal tube adapted to interfit with a longitudinally extending groove in the interior wall of said reinforced cylindrical tube, adjustable supporting means at an end of said reinforced tube adapted to vary the angle of said hexagonal and cylindrical tubes before insertion within the wall opening, and a porous sealing medium massed around and adapted to embed the aforementioned tubes within the said wall opening.

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