Oct. 5, 1965 J. H. GRIFFIN 3,209,485

BUILT-IN INSECTICIDE DISTRIBUTION SYSTEM

Original Filed Jan. 12, 1962

2 Sheets-Sheet 1

Fig. 1

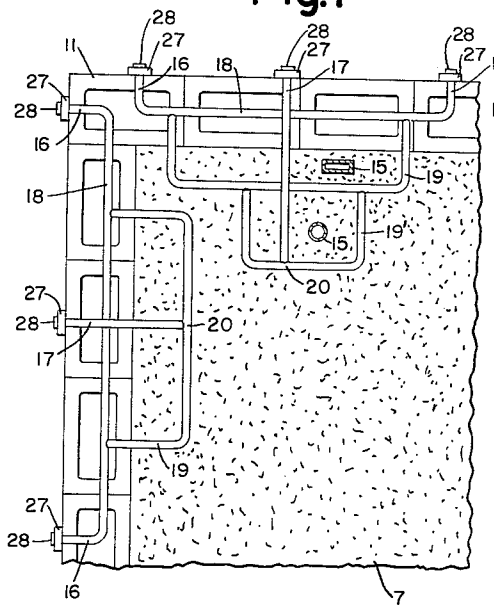


Fig. 2

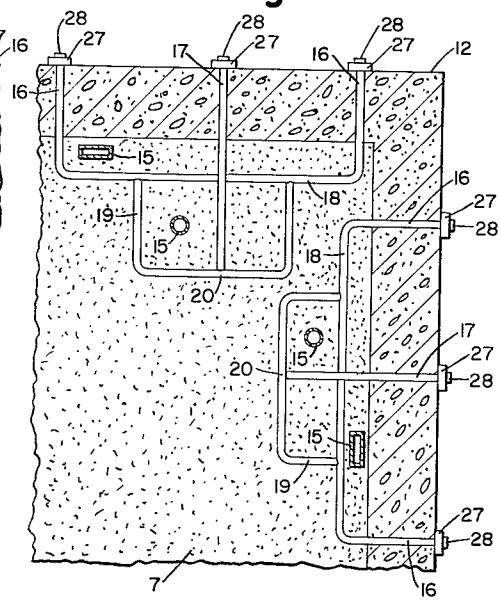


Fig. 3

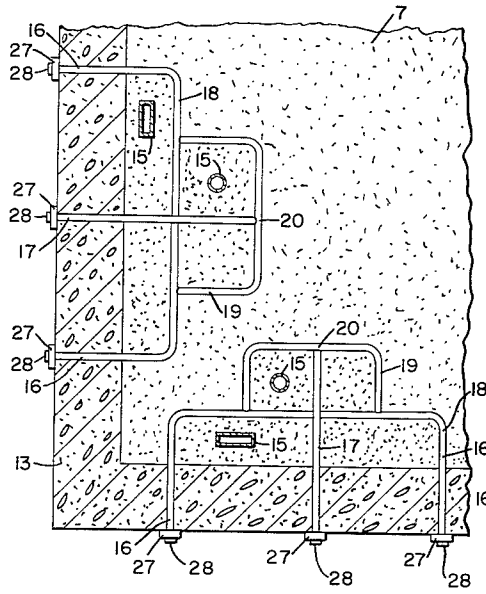
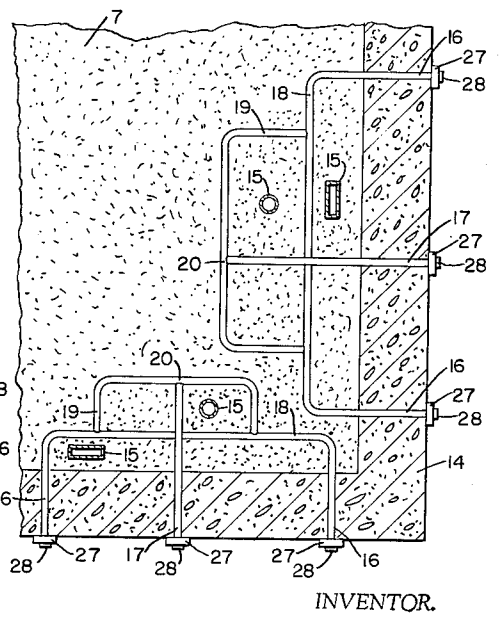


Fig. 4



INVENTOR.

BY James H. Griffin

Oct. 5, 1965 J. H. GRIFFIN 3,209,485

BUILT-IN INSECTICIDE DISTRIBUTION SYSTEM

Original Filed Jan. 12, 1962 2 Sheets-Sheet 2

Fig. 5

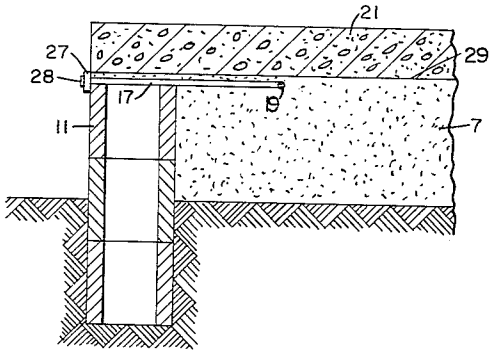



Fig. 6

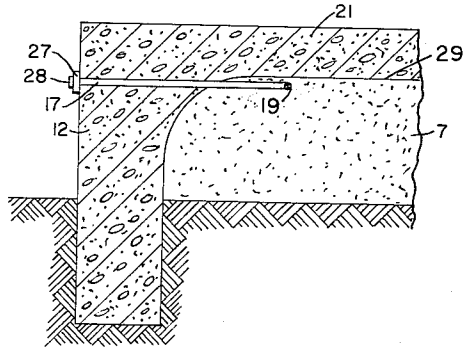



Fig. 7

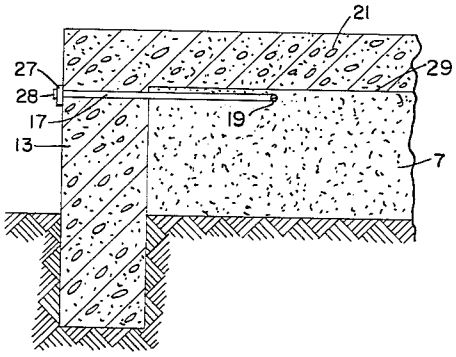
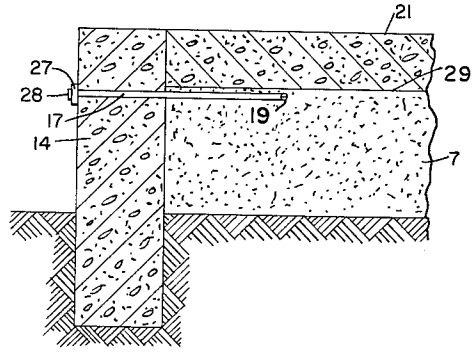



Fig. 8



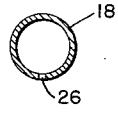




Fig. 9

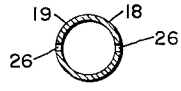



Fig. 10

INVENTOR.

BY James H. Griffin

United States Patent Office

3,209,485
Patented Oct. 5, 1965



3,209,485

# BUILT-IN INSECTICIDE DISTRIBUTION SYSTEM

James H. Griffin, 3587 Charleswood Ave., Memphis, Tenn.

Continuation of application Ser. No. 166,474, Jan. 12, 1962. This application Sept. 12, 1963, Ser. No. 308,927
3 Claims. (Cl. 43—124)

This is a continuation of my application, Serial Number 166,474 filed January 12, 1962, now abandoned.

This invention relates to certain new and useful improvements in systems for the introduction of insecticides, particularly into dwellings and buildings, and more particularly relates to such systems which are adapted for receipt and distribution of specially adapted insecticides for the purpose of ridding such dwellings and buildings of termites and insect or pest life.

The present invention contemplates a multiple of individually operated systems to each dwelling and building, particularly adapted for utilization with modern constructions in such structures. Such modern constructions consist of:

(1) A voided foundation with a concrete floor slab poured over the top of the foundation wall and gravel fill, as illustrated in FIG. 1 and FIG. 5.

(2) A monolithic type concrete foundation wall and concrete slab floor, foundation and floor slab poured integrally within a peripheral form, over a gravel fill, as illustrated in FIG. 2 and FIG. 6.

(3) A concrete foundation wall with a concrete floor slab poured over the top of the foundation wall and gravel fill, as illustrated in FIG. 3 and FIG. 7.

(4) A concrete foundation wall with a concrete floor slab poured over the gravel fill, and adjacent to and at the same height as the foundation wall, as illustrated in FIG. 4 and FIG. 8.

This system may also be installed in crawl space, full or partial basement dwellings and buildings.

The principal object of the present invention is to provide in buildings structures, a new and novel pipe system means for killing of termites and other pests or insects.

A further object of the invention is to provide in such a system, a multiple of individual pipe systems, each operating independently in a circular manner, and which are permanently installed during the initial construction of the building, and which are tightly locked into position by the interaction of elements of construction of such building.

A further object of the invention is to provide in such a system, a multiple of individual pipe systems, each operating independently in a circular manner, and which overlie the voided foundation portions of a structure and gravel fill, and which includes discharge means positioned to communicate with voids within foundation, gravel fill and other openings or voids in the concrete floor caused by penetrations of heat ducts, conduits and plumbing pipes.

A further object of the invention is to provide in such a system, a multiple of individual pipe systems, each operating independently in a circular manner, and which overlie the gravel fill, and which includes discharge means positioned to communicate with openings or voids in the concrete floor caused by penetrations of heat ducts, conduits and plumbing pipes.

A further object of the invention is to provide in such a system, a multiple of individual pipe systems, each operating independently in a circular manner, and which includes two points of intake, which intake means are located at opposite ends of individual system, and which intake means, when injected into simultaneously creates opposing pressure within individual system.



A further object of the invention is to provide in such a system, a multiple of individual pipe systems, each operating independently in a circular manner, which in addition to the two opposite intake means, include a third pipe, hereafter referred to as a bleeder pipe, which is connected solely to the branch tubing at the most distal point of the branch tubing, and which bleeder pipe serves both as an auxiliary intake or cleanout pipe of the individual system.

A further object of the invention is to provide in such a system, means for introduction of termite or pest killing insecticides or the like into adjacency with pipes projecting through said fill and slab floor areas of the structure.

A further object of the invention is to generally improve the design, construction and efficiency of systems for the introduction of termite or pest control insecticides into various parts of the building structures.

The means by which the foregoing and other objects of the present invention are accomplished and the manner of their accomplishment will be readily understood from the following specifications upon reference to the accompanying drawings, in which:

FIG. 1 is a fragmentary top plan view of a typical installation and showing one-quarter of a voided foundation construction with the floor slab removed to show the piping arrangement therebeneath;

FIG. 2 is a fragmentary sectional view through the foundation walls of another typical installation and showiny one-quarter of an integrally poured monolithic type foundation construction;

FIG. 3 is a fragmentary sectional view through the foundation walls of another typical installation and showing one-quarter of a concrete foundation construction;

FIG. 4 is a fragmentary sectional view through the foundation walls of still another typical installation and showing one-quarter of a concrete foundation construction;

FIG. 5 is a fragmentary cross-sectional view of the voided foundation of FIG. 1 with the floor slab shown in place;

FIG. 6 is a fragmentary cross-sectional view of the monolithic type foundation of FIG. 2;

FIG. 7 is a fragmentary cross-sectional view of the foundation of FIG. 3;

FIG. 8 is a fragmentary cross-sectional view of the foundation of FIG. 4;

FIG. 9 is a cross-sectional view of the main tubing overlying the voids in the foundation walls of FIG. 1 and showing a discharge opening directed downwardly; and

FIG. 10 is a cross-sectional view of the branch tubing of FIG. 1 and the main and branch tubing of FIGS. 2, 3 and 4, and showing transversely disposed discharge openings therein.

Referring now to the drawings in which the various parts are indicated by numerals, a typical dwelling or building construction is illustrated in several steps and phases. In the construction as illustrated in the present drawings, a foundation **11**, **12**, **13** and **14**, is formed preferably of either hollow block **11**, or solid concrete **12**, **13** or **14**, of substantially conventional type and ex-

tends around the periphery of the structure to be undertaken. While the present drawings indicate a square foundation plan, it is understood that other formations and shapes of foundations may be employed with the present invention. Within the confines of foundation **11**, **12**, **13** and **14**, the building structure is preferably provided with a fill **7**, as of gravel or other form of aggregate.

Within the building structures are usually one or more pipes which are adapted to extend upwardly into the interior of the building, which pipes to be mounted as upon a foundation and which extend downwardly through the supporting structure into the earth beneath. These pipes may include heat ducts **15**, and other plumbing piping **15**, desirable for dwellings and buildings.

Preferably in the construction of dwellings and buildings, as the type here under consideration, foundation **11**, **13** and **14** is mounted with the lower part of foundation **11**, **13** and **14** being extended horizontally along a trench of suitable dimensions cut into and beneath the surface of the earth. Piping, such as heat ducts **15**, and other plumbing piping **15**, is mounted in position and thereafter, the foundation and mounted pipes are ready for the reception of the gravel fill **7**. In the case of FIG. 6, showing integral poured foundation **12**, and floor slab **21**, of monolithic type construction, form boards are installed around the periphery of the structure to be undertaken. Piping, such as heat ducts **15**, and other plumbing piping **15**, is mounted in position and thereafter, the mounted pipes are ready for the reception of the gravel fill.

Prior to the application of the waterproofing **29** and pouring of a concrete floor slab **21**, as shown in FIGS. 5, 7 and 8, all tubing of each individual system is associated with the structure. In the case of FIG. 6, prior to application of the waterproofing and pouring of the concrete foundation **12** and floor slab **21**, all tubing of individual system is associated with the structure.

Thus as illustrated in FIG. 1—a foundation **11**, a main tubing **18**, preferably lies substantially along the longitudinal midline of the voided foundation **11**, with two points of intake means **16**, each intake means **16**, located at opposite ends of main tubing **18**, which intake means **16**, extend outwardly beyond foundation for purpose of providing access to tubing after completion of the building structure with which it is associated. Branch tubing **19**, is connected with main tubing **18**, and extends therefrom to overlie fill and thence longitudinally closely adjacent inside perimeter of foundation, additional branch tubing **19′**, connected with said branch tubing which overlies fill **7**, and surrounding piping **15**, that penetrates concrete slab floor.

Bleeder piping **17**, is connected solely with branch tubing **19** or **19′**, at the most distal point **20**, of said branch tubing **19** or **19′**, which bleeder piping **17**, extends therefrom beyond said foundation, thereby serving as an extra intake or cleanout pipe, as well as a check point to be absolutely certain that chemicals or fluids are reaching the most distal point of the individual system.

FIGS. 2, 3 and 4—the main tubing **18**, overlies the gravel fill **7**, closely adjacent inside perimeter of foundation. Branch tubing **19**, and bleeder tubing **17**, which is connected solely with branch tubing **19**, at the most distal point **20**, is installed in the same manner as outlined in paragraph which explains installation of system in FIG. 1.

Main tubing **18** and branch tubing **19** and **19′** are provided with discharge openings **26** for discharging termicide and pesticide fluids in main tubing **18** and branch tubing **19** and **19′**, as illustrated in FIGS. 9 and 10 of drawings.

The two opposite intake means **16**, and bleeder piping **17**, have external openings **27**, and threaded plugs to fit external openings, which threaded plugs are marked **28**.

While the holes for discharge openings **26** are predrilled, it is understood that additional holes may be drilled after the individual system is in place.



In FIG. 1—a voided foundation—top plan view—discharge openings **26**, in main tubing **18**, are directed downwardly for injection of fluids within voids of the foundation **11**, as illustrated in drawings marked FIG. 9. Discharge openings **26**, in branch tubing **19** and **19′**, are directed transversely as illustrated in drawings marked FIG. 10.

In FIGS. 2, 3 and 4—top plan view—discharge openings **26**, in main tubing **18** and branch tubing **19**, are directed transversely as illustrated in drawings marked FIG. 10.

The two opposite intake means **16**, and bleeder piping **17**, have threaded external intake openings for threaded coupling **27** and threaded plug **28**. When threaded plugs **28** are in place in each individual system, same is sealed from exterior use. Access to main tubing **18**, is provided through the opposite intake means **16**, by simple removal of threaded plugs **28**, and the simultaneous application thereto of a suitable pressure means, such as a compression pump. For extra intake or cleanout of individual system, remove threaded plug to bleeder piping **17**.

It accordingly will be seen that the present invention provides for a completely built-in and integrally locked system of tubing for the purpose of receiving termite and pest control material for discharge into suitable strategic areas of the underpinnings and undersurfaces of the building structure, that such tubing systems are permanently installed and built into the structures and include portions which are bonded on top of the gravel fill by the concrete floor slab of the structure. Accordingly, it will be seen that the present invention includes a multiple of individual pipe systems, each operating independently in a circular manner, with built-up pressure in each system, and which includes a bleeder pipe which may be used as an extra intake means or cleanout pipe to assure one's knowledge that chemicals or fluids are reaching the most distal point of the individual system. It will be appreciated that changes may be made in detail of the structure as herein defined without departing from the present invention.

I claim:

**1.** In a building which includes a foundation, a fill within said foundation, and a concrete slab overlying said fill; termite and pest control means comprising at least one individual pipe system united with said building, said pipe system comprising a main tubing having a pair of oppositely disposed and spaced main tubing ends, said main tubing including a pair of intake means respectively located adjacent said main tubing ends and outside of said foundation; said main tubing extending from one of said intake means, below said slab, adjacent the upper part of said fill, and to the other of said intake means, and said main tubing having apertures therethrough respectively extending from the interior of said main tubing to the exterior thereof adjacent said fill, whereby termite and pest control fluid is normally adapted to be injected into either of said intake means and discharged into said fill through said apertures; a branch tubing having a pair of oppositely disposed and spaced branch tubing ends, said branch tubing being connected at said branch tubing ends to said main tubing intermediate said main tubing ends; said branch tubing extending from one of said branch tubing ends, below said slab, adjacent the upper part of said fill, and to the other of said branch tubing ends, and said branch tubing having apertures therethrough respectively extending from the interior of said branch tubing to the exterior thereof adjacent said fill, whereby termite and pest control fluid from said main tubing is normally adapted to flow through said branch tubing and be discharged into said fill through said apertures in said branch tubing; and a bleeder pipe having an opening means adjacent one end located outside of said foundation and an opposite end connected to and communicated with said branch tubing at the most distal point intermediate said pair of ends of said branch tub-

ing whereby said bleeder pipe is adapted to serve as a checkpoint to be sure fluids are reaching said most distal point and as an auxiliary intake means.

2. The combination of claim 1 in which said main tubing is substantially U-shaped.

3. The combination of claim 1 in which said main tubing and said branch tubing are substantially U-shaped and said bleeder pipe at the place of connection with said branch tubing is substantially equi-distant from said branch tubing ends.



**References Cited by the Examiner**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 1,532,944 | 4/25 | Puffer | 137—559 X |
| 2,272,970 | 2/42 | Frymoyer | 137—551 X |
| 2,842,892 | 7/58 | Aldridge et al. | 43—124 |
| 2,915,848 | 12/59 | Griffin | 43—124 |


SAMUEL KOREN, *Primary Examiner.*

ABRAHAM G. STONE, *Examiner.*