Oct. 21, 1958 C. R. BODENBACH ET AL 2,856,724

RODENT EXTERMINATOR

Filed Feb. 25, 1957

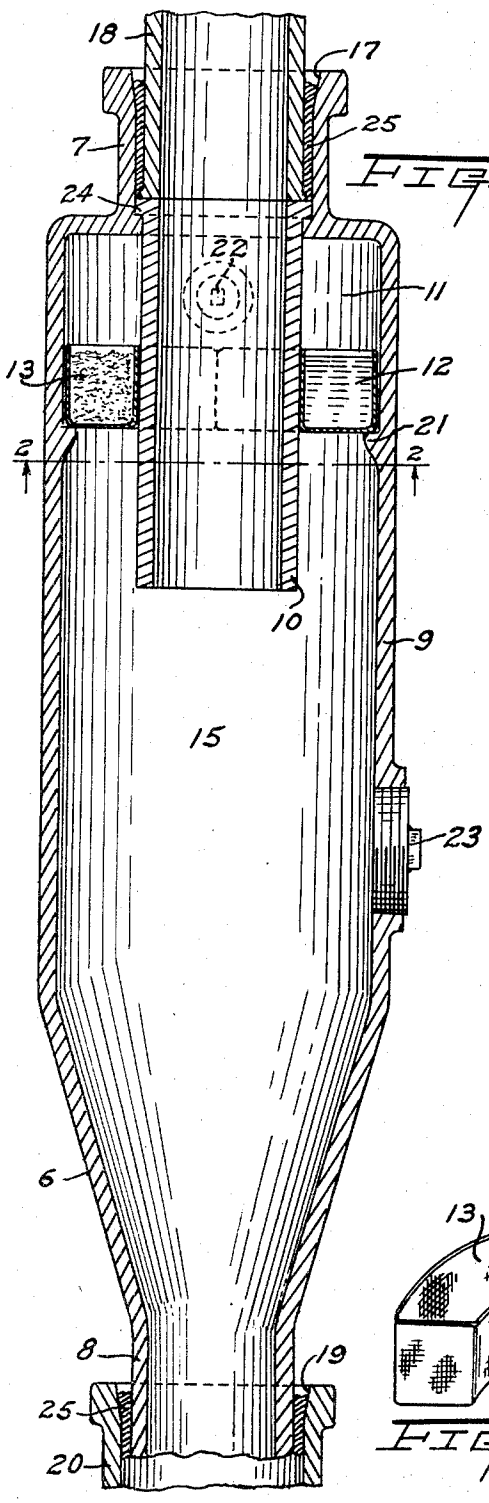


FIG. 1.

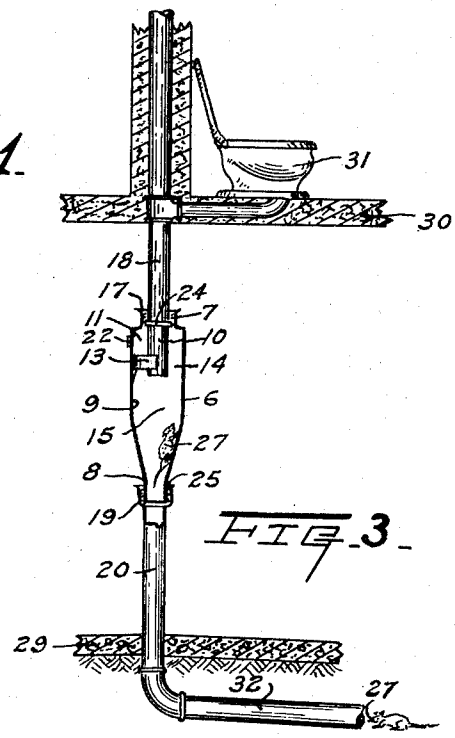


FIG. 3.

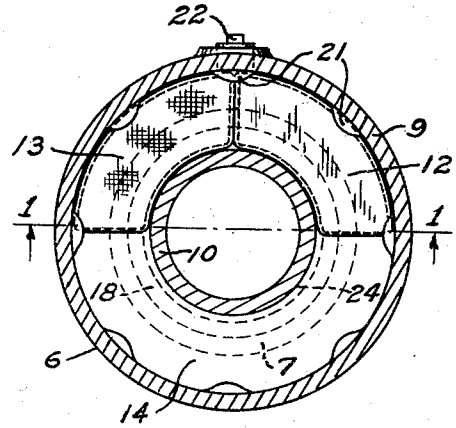


FIG. 2.

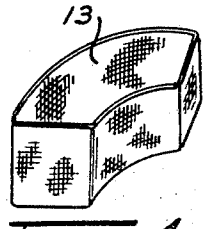


FIG. 4.

INVENTORS
Clyde R. Bodenbach
BY William J. Currie
Lieber & Lieber
ATTORNEYS.

United States Patent Office 2,856,724 Patented Oct. 21, 1958

2,856,724

RODENT EXTERMINATOR

Clyde R. Bodenbach, West Bend, and William J. Turrie, Whitefish Bay, Wis.

Application February 25, 1957, Serial No. 642,007

6 Claims. (Cl. 43—131)

The present invention relates generally to improvements in the art of exterminating dangerous rodents, and it relates more specifically to improvements in the construction of devices for preventing rodents such as rats from entering buildings through the sewage disposal installations of the latter.

The primary object of this invention is to provide an improved rodent exterminator which is simple in construction and highly effective in use.

It has heretofore been proposed to prevent rodents such as rats from entering the interiors of buildings through the drain pipes of the plumbing systems, by providing devices for hindering the progress of the animals while traveling within these pipes toward the plumbing fixtures associated therewith. At least one of these prior devices comprises a unitary metal fitting having upper inlet and lower outlet ends formed for attachment to the adjacent upper and lower sections respectively of the main upright drain pipe below the branches thereof leading to possible exit openings such as toilets, the fitting being provided with an enlarged annular outer wall connecting its upper and lower ends and also having an integral inner tubular wall depending from its outlet end and coacting with the outer wall to provide a downwardly open annular space for trapping the upwardly advancing animals.

While this type of device may have some merit in retarding the upward progress of the rodents toward the plumbing fixtures, it does not definitely exterminate the pest, and since rats especially are very dexterous in maneuvering such animals can still avoid the contemplated entrapment and proceed upwardly through the inner tubular wall of the unit. Then too, the formation of this prior rodent trap as a unitary structure, makes it difficult to gain free access to the interior of the device for inspection and cleaning.

It is therefore an important object of our invention to provide an improved rodent exterminating unit adapted to be installed in the drain pipe of any ordinary plumbing system, and which not only retards the progress of rats or the like within the pipe but also definitely exterminates the animals.

Another important object of this invention is to provide an improved rodent retarder of the type formed for application between drain pipe sections as hereinabove described, and wherein the inner tubular wall is detachable from the main fitting so as to permit free access to the interior of the device.

A further important object of the invention is to provide an improved rodent exterminator adapted to trap and to quickly kill entrapped rats or the like while attempting to enter a building through the drain pipes of the plumbing system.

Still another important object of the present invention is to provide an improved rodent extermination unit which can be readily manufactured and conveniently installed and regenerated at moderate cost, and which positively destroys the pest and automatically delivers the carcass from the zone of execution by gravity.

These and other more specific objects and advantages of the invention will be apparent from the following description.

A clear conception of the features constituting the present improvements and of the construction and functioning of a typical rodent exterminator embodying the invention, may be had by referring to the drawing accompanying and forming a part of this specification wherein like reference characters designate the same or similar parts in the various views.

Fig. 1 is an approximately central vertical section through one of the improved rodent exterminating units fully assembled and installed ready for action in the drain pipe line of a building, the section having been taken along the line 1—1 of Fig. 2;

Fig. 2 is a transverse horizontal section taken through the extermination unit of Fig. 1, along the line 2—2;

Fig. 3 is a diagram depicting a typical plumbing system and rat exterminating installation embodying the present invention; and

Fig. 4 is a perspective view of one of the poison receptacles involved in our improved exterminator.

While the invention has been shown and described herein as being especially advantageously applicable as a rat exterminator adapted to be associated with the drain pipe of a building plumbing system of a particular type, it may also be likewise applicable for the extermination of other rodents in other types of systems; and it is contemplated that specific descriptive terms employed herein be given the broadest possible interpretation consistent with the actual disclosure.

Referring to the drawing, the improved rodent exterminating unit illustrated therein comprises in general, a casing or fitting 6 having an upper inlet end 7 and a lower outlet end 8 interconnected by an integral outer tubular wall 9 of larger transverse internal area than that of the ends 7, 8; an internal tubular wall 10 detachably secured to and depending from the upper end 7 of the fitting 6 and coacting with the outer wall 9 to provide an annular downwardly open space 11 at the top of the fitting interior; and several poison receptacles 12, 13 removably confined within and partially spanning the space 11 so as to maintain an unobstructed semi-annular passage 14 connecting the upper portion of this annular space with the lower interior chamber 15 of the fitting.

The fitting 6 and the detachable wall 10 are preferably formed of relatively non-corrosive metal, and the upper inlet end 7 of the fitting 6 is provided with a socket 17 for receiving the straight lower extremity of an upper drain pipe section 18, while the straight lower outlet end 8 is cooperable with a similar socket 19 formed at the upper extremity of a lower drain pipe section 20, see Fig. 1. The central bores of the upper pipe section 18, the internal wall 10, the lower outlet end 8, and of the lower pipe section 20, are all of the same diameter and axially alined, and the outer fitting wall 9 is provided with an annular series of integral internal lugs 21 for supporting the receptacles 12, 13 and also has therein upper and lower access openings normally closed by pipe plugs 22, 23 respectively. The upper extremity of internal wall 10 is provided with an integral suspension flange 24 with which the lower end of the pipe section 18 coacts to normally hold the wall 10 firmly within the fitting 6, and the usual calking 25 may be applied within the socket 17, 19 so as to provide a sealed sewage drainage conduit.

The two poison receptacles 12, 13 are of substantially the same shape and depth, each being quarter-annular in length and adapted to be inserted within or removed from the interior of the fitting 6 through the upper inlet opening of the latter when the inner wall 10

is withdrawn. The receptacle **12** is preferably imperforate and adapted to retain a supply of poison liquid, while the other receptacle **13** may be perforated so as to hold a supply of granular rodent poison in relatively dry condition, as depicted in Fig. 1, and these poisons may be supplied to the receptacles and periodically replenished through the side opening in the wall **9** which is normally sealed by the pipe plug **22**. Upon being properly applied within the fitting **6**, the receptacles **12**, **13** rest upon the lugs **21** on one side of the depending wall **10** while the lugs **21** within the open passage **14** merely serve as steps for the rats **27** as they crawl up the internal surface of the wall **9** and enter the space **11** above the poison receptacles. The lower pipe plug **23** merely serves to seal an inspection and clean-out opening for the lower chamber **15** and pipe **20**.

When the improved rodent exterminator has been properly constructed and assembled as above described, it may be readily installed in upright position in the drain pipe of an ordinary plumbing system in the manner illustrated diagrammatically in Fig. 3. Here the unit has been inserted between the basement floor **29** and the first floor **30** of a building, and associated with an upright drain pipe section **18** communicating with a toilet bowl **31** and with a lower upright drain pipe section **20** leading to the sewer through a drain pipe **32**. After the exterminator has been thus properly installed and the sealing caulking **25** has been applied, the receptacles **12**, **13** may be supplied respectively with liquid and granular poison, thus placing the unit in operative condition.

If rats **27** subsequently enter the exterminator from the sewer through the pipe sections **32**, **20** they will naturally be attracted by the food in the receptacles **12**, **13** and will crawl through the chamber **15** and through the semi-annular passage **14** into the space **11** above these receptacles. The rodents **27** will then partake of the dry granular poison in the receptacle **13** and become thirsty whereupon they will also drink poison liquid from within the receptacle **12**, thus causing them to be quickly exterminated and to drop through the passage **14** and chamber **15** into the drain pipe section **20** from which they will be eventually flushed into the sewer by the sewage which is delivered into the upper pipe section **18** from the toilet and otherwise.

It will thus be apparent that the present invention in fact provides a rodent exterminator which is simple and compact in construction and highly effective in use. The improved device not only traps the rodents, but also functions to kill them and to bring about their removal. The inner tubular wall **10** is normally clamped firmly in place, but its detachability permits the poison receptacles **12**, **13** to be conveniently applied within or removed from the casing fitting **6**, while the pipe plug **22** provides means for permitting periodic replenishing of the poison supply in the receptacles **12**, **13**. The improved unit may obviously be produced at moderate cost for cooperation with standard plumbing systems, and is operable with utmost safety.

It should be understood that it is not desired to limit this invention to the exact details of construction of the exterminator herein specifically shown and described, for various modifications within the scope of the claims may occur to persons skilled in the art.

We claim:

1. A rodent exterminating unit adapted for application in the upright drain pipe of a plumbing installation, and comprising, a fitting having upper and lower ends provided with inlet and outlet openings respectively and an outer tubular wall of larger transverse internal area than said inlet opening formed for attachment to the adjacent ends of upper and lower sections of a drain pipe, said fittings ends being interconnected by said outer tubular wall, an internal tubular wall depending from said inlet end into said fitting and coacting with said outer wall to provide an annular downwardly open space at the top of the fitting interior, and a poison receptacle confined within said space.

2. A rodent exterminating unit adapted for application in the upright drain pipe of a plumbing installation, and comprising, a fitting having upper and lower ends provided with inlet and outlet openings respectively and an outer tubular wall of larger transverse internal area than said inlet opening formed for attachment to the adjacent ends of upper and lower sections of a drain pipe, said fitting ends being interconnected by said outer tubular wall, an internal tubular wall depending from said inlet end into said fitting and coacting with said outer wall to provide an annular downwardly open space at the top of the fitting interior, and a poison receptacle confined within said space, said internal wall being detachable from said fitting to provide an opening for effecting insertion or removal of said receptacle.

3. A rodent exterminating unit adapted for application in the upright drain pipe of a plumbing installation, and comprising, a fitting having upper and lower ends provided with inlet and outlet openings respectively and an outer tubular wall of larger transverse internal area than said inlet opening formed for attachment to the adjacent ends of upper and lower sections of a drain pipe, said fitting ends being interconnected by said outer tubular wall, an internal tubular wall depending from said inlet end into said fitting and coacting with said outer wall to provide an annular downwardly open space at the top of the fitting interior, and several receptacles for independent batches of wet and dry poisons confined within said space.

4. A rodent exterminating unit adapted for application in the upright drain pipe of a plumbing installation, and comprising, a fitting having upper and lower ends provided with inlet and outlet openings respectively and an outer tubular wall of larger transverse internal area than said inlet opening formed for attachment to the adjacent ends of upper and lower sections of a drain pipe, said fitting ends being interconnected by said outer tubular wall, an internal tubular wall depending from said inlet end into said fitting and coacting with said outer wall to provide an annular downwardly open space at the top of the fitting interior, and a poison receptacle confined within said space, said receptacle being of less transverse cross-section than said space to provide an unobstructed passage between the space above the receptacle and the interior of said fitting beneath said space.

5. A rodent exterminating unit adapted for application in the upright drain pipe of a plumbing installation, and comprising, a fitting having upper and lower ends provided with inlet and outlet openings respectively and an outer tubular wall of larger transverse internal area than said inlet opening formed for attachment to the adjacent ends of upper and lower sections of a drain pipe, said fitting ends being interconnected by said outer tubular wall, an internal tubular wall depending from said inlet end into said fitting and coacting with said outer wall to provide an annular downwardly open space at the top of the fitting interior, and a pair of adjoining quarter-annular poison receptacles confined within and spanning only about one-half of said space to provide an unobstructed semi-annular passage connecting the space above said receptacles with the interior of said fitting beneath said space.

6. A rodent exterminating unit adapted for application in the upright drain pipe of a plumbing installation, and comprising, a vertically elongated upright fitting having upper and lower ends provided respectively with inlet and outlet openings and an outer tubular wall of greater transverse internal area than said upper inlet opening formed for attachment to adjoining drain pipe sections, said fitting ends being interconnected by said outer tubular wall, said fitting ends being interconnected by an

outer upright annular wall, an internal annular wall detachably secured to and depending from said upper fitting end and coacting with said outer wall to provide an annular downwardly open space at the top of the fitting interior, and several poison receptacles partially spanning the lower portion of said space and being insertible within said fitting through said inlet opening.

References Cited in the file of this patent

UNITED STATES PATENTS

728,734	Lovely	May 19, 1903
890,430	Mann	June 9, 1908