March 23, 1954 R. BENZIE 2,672,705

RODENT EXTERMINATOR

Filed Feb. 21, 1952

2 Sheets-Sheet 1

Fig. 1

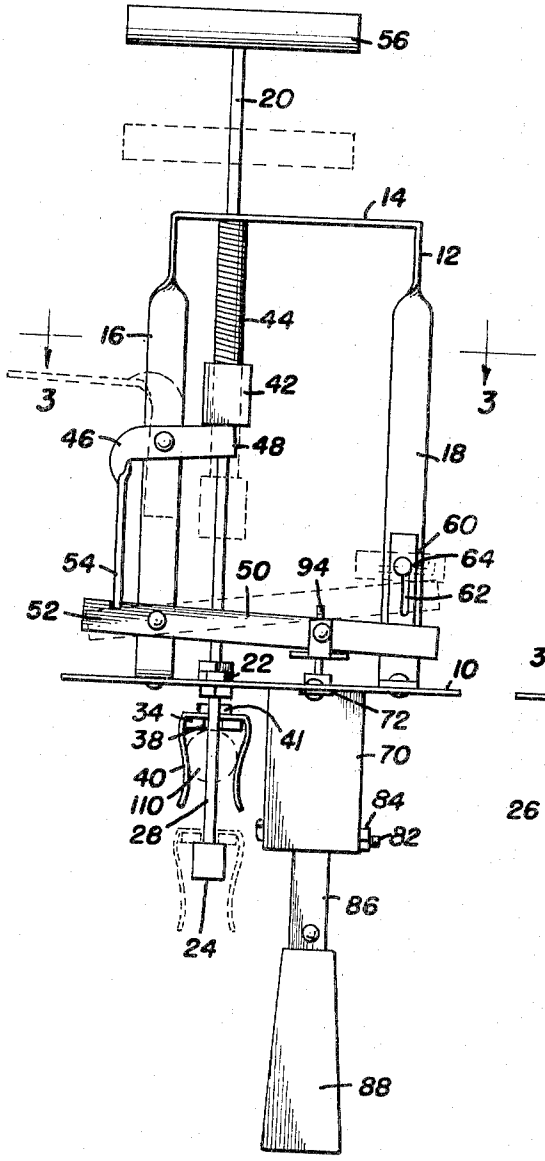


Fig. 2

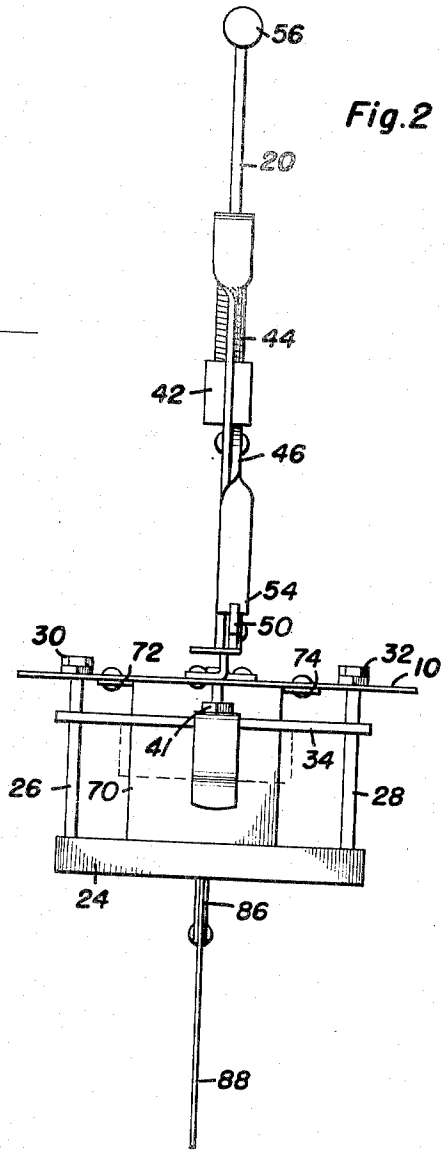
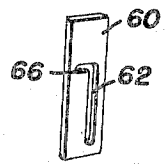


Fig. 6



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2 Sheets-Sheet 2

Fig. 3

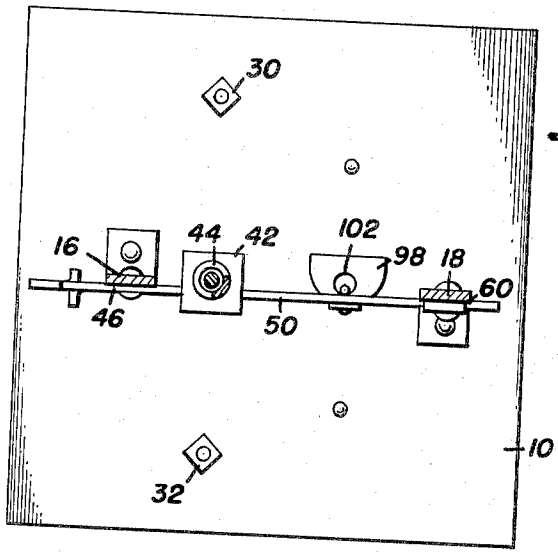


Fig. 5

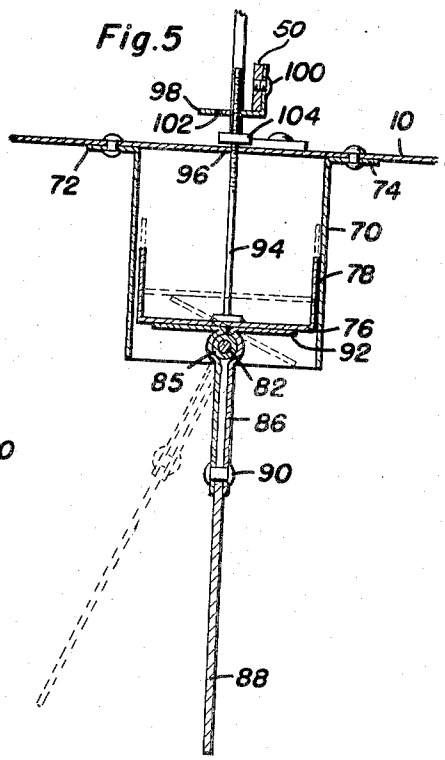
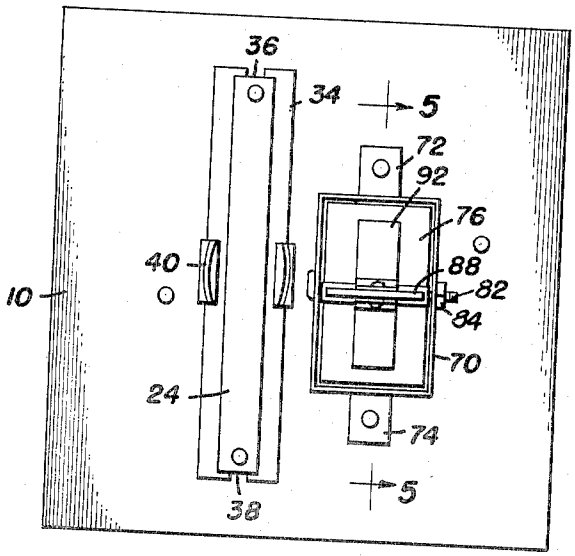


Fig. 4



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RODENT EXTERMINATOR

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9 Claims. (Cl. 43—125)

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This invention relates to a rodent exterminator and particularly to a device for eliminating gophers.

The control of rodents such as gophers has been extremely difficult because of the habit of gophers. When a gopher finds his burrow disturbed and an opening blocked therein he immediately turns around and throws a great deal of dirt and other rubbish into the breech to completely seal the tunnel and makes a new tunnel therearound. For this reason, it is extremely hard to catch gophers in ordinary traps as they stay a sufficient distance away from the trigger element so that they are seldom if ever caught.

The present invention makes no effort to catch the gopher in a so-called trap arrangement but provides an arrangement by which clouds of gas are distributed through the burrows because of the presence of a gopher and the gopher is exterminated because of the presence of the gas rather than being caught in a trap.

The apparatus according to the present invention comprises a platform to be set on the ground and a trigger to be extended into the gopher burrow and a holder for an ampule of deleterious gas which is to be broken when the gopher throws dirt against the trigger.

Accordingly an object of this invention is to provide a rodent exterminator.

It is further object of this invention to provide a rodent exterminator utilizing gas to exterminate rodents.

It is still another object of this invention to provide a rodent exterminator having means for breaking a vial of gas.

It is a further object of this invention to provide an exterminator which can be operated by the throwing of dirt against a trigger.

Other objects and many of the attendant advantages of this invention will be apparent from the detailed description taken in conjunction with the accompanying drawings in which:

Figure 1 is a front elevation of the rodent controller in set posiltion;

Figure 2 is a side elevation;

Figure 3 is a cross section taken substantially on the plane indicated by the line 3—3 of Figure 1;

Figure 4 is a bottom plane view of the controller;

Figure 5 is an enlarged section elevation through the trigger mechanism taken substantially on the plane indicated by the line 5—5 of Figure 4; and

Figure 6 is a perspective view of the safety catch.

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In the exemplary embodiment of the invention a substantially square smooth platform 10 serves as a mounting for an upstanding inverted U-shaped frame having a bight portion 14 and a pair of parallel legs 16 and 18. The U-shaped frame 12 is constructed out of a length of flat stock material and the legs 16 and 18 are twisted at right angles so that they are presented in parallel edge-to-edge relation with each other. The bight portion 14 of the frame 12 is provided with an aperature adjacent one end thereof through which passes a hammer rod 20. The platform 10 is likewise provided with an aperture in which is provided a guide 22 through which the rod 20 extends. The aperture in the bight 14 and the aperture receiving the guide bushing 22 are in substantial alignment so that the hammer rod 20 extends substantially vertically through the platform 10.

A breaker bar 24 is mounted on rod-like guides 26 and 28 which are firmly secured to the platform 10 by means of screw fasteners 30 and 32. The guide rods 26 and 28 are in spaced parallel relation and depend substantially vertically from the platform 10 so that the breaker bar 24 is in alignment with the apertures in the platform 10 and the bight 14. A hammer 34 is mounted on the lower end of the hammer rod 20 and the ends of the hammer 34 are provided with bifurcations 36 and 38 which embrace the guide rods 26 and 28 and has sliding relation therewith. A clip 40 is mounted on the hammer 34 by a nut 41 for supporting an ampule vial, or cartridge of gas or other destroying chemicals but preferably a type of asphyxiating gas.

A stop 42 is secured on the hammer rod 20 in the portion intermediate the apertures in the plate 10 and the bight 14. A spring 44 is mounted on the rod 20 between the bight 14 and the stop 42. The spring 44 tends to force the stop 42 downward so the the hammer 34 is passed into contact with the breaker bar 24. A bell crank shaped pawl 46 is pivoted on the leg 16 intermediate the ends thereof and has an extended portion 48 which can be rotated under the stop 42 to lift or retain the stop 42 to restrain movement of the hammer 34. The latch 50 is pivotally mounted on the leg 16 and extends across to the leg 18 and is slidably engaged on the flat face of the leg 18. The latch 50 extends outwardly from the leg 16 and has a notch 52 therein for engaging the end 54 of the pawl 46. The hammer rod 20 is provided with a handle 56 by which the rod 20 can be pulled upwardly against the tension of the spring 44 so that the extended end 48 may be caught under the stop 42 and

locked in position by means of the notch 52 in the latch bar 50.

Since cyano-gas and many of the other rodent exterminators are extremely dangerous to persons it is desirable to provide a means by which the latch 50 may be locked in safety position so that the hammer 34 cannot be released to break the ampule against the breaker bar 24. For this purpose a safety detent 60 is provided with a longitudinal L-shaped slot 62 which is mounted on a pivot pin 64 rigidly secured in the leg 18 of the frame 12. The safety detent 60 can be rotated about the L-shaped slot 62 and the pivot pin extended into the offset portion 66 so that the safety detent 60 will be in firm engagement with the top of the latch 50 so that it cannot be moved to release the end 52 of the pawl 46. When it is desired to release the safety detent after the exterminator has been set the detent 60 can be rotated about the pin 64 until the pin 64 is in the longitudinal bight of the slot 62 and the detent can be slid laterally in transverse position to the leg 18 so that it remains completely out of contact with the latch 50 and the exterminator can be operated.

The trigger mechanism of the exterminator comprises a guide cylinder or channel 70 rigidly secured to the platform 10 by any suitable means such as the ears 72 and 74 which can be welded or riveted to the platform 10. A cross-head 76 having upturned guide portions 73 is slidably mounted in the guide 70 for longitudinal motion therein. A pivot bar 82 is mounted transversely of the guide channel 70 preferably secured by suitable means such as a nut 84. A trigger support 86 is mounted on a sleeve 85 which is mounted on the pivot rod 82. The trigger 88 is rigidly mounted on the end of the trigger support 86 by any suitable means such as a rivet 90. A crank 92 is rigidly secured to the trigger holder 86 so that when the trigger is oscillated about the pivot rod 82 the crank 92 will be operative to lift the cross-head 76 and cause it to move longitudinally in the guide channel 70.

The latch operating rod 94 is rigidly secured to the cross-head 76 and extends through an aperture 96 in the platform 10. A bracket 98 of L-shaped formation is secured on the latch 50 by any suitable means such as the screw 100. The bracket 98 is provided with an aperture 102 through which the top end of the latch operating rod 94 extends. An adjustable contact stop 104 is mounted in threaded engagement with the upper end of the rod 94 and because of its threaded engagement with the rod 94 may be adjusted longitudinally along the rod 94. When the cross-head 76 is reciprocated in the channel 70 the rod 94 will be projected upwardly through the opening in the bracket 98 and the stop 104 contacts the bracket 98 after which further progress of the rod 94 will lift the latch 50 and disengage the notch 52 from the end 54 of the pawl 46. In the operation of the exterminator according to the invention the run of the rodent will be located and an opening made so that the trigger 88 may be freely distended thereacross. A portion is also dug out alongside of the burrow so that the breaker bar 24 may be extended adjacent thereto. The hammer rod 28 will be withdrawn by the handle 53 and the pawl 46 engaged in the notch 52 of the latch 50 which will be held in safety position by means of the safety detent 60. A vial, ampule or cartridge of poison gas 110 will be placed in the clip 40 and

the exterminator will be placed in position after which substantial light sealing engagement with suitable packing will be made around the channel 70 so that the rodent will not be apprised of the presence of the exterminator until he comes into the immediate vicinity thereof. After the exterminator has been set the safety detent will be released and the exterminator will be in operative position. When the rodent discovers the obstruction in his burrow he will as usual turn around and start throwing dirt thereagainst. The impact of the dirt against the trigger 88 will release the latch 50 so that the hammer 34 will drop against the breaker bar 24 and crush the ampule of gas 110, poisonous gas will then penetrate the burrow of the rodent and cause the destruction thereof.

It will thus be seen that while certain rodents such as gophers have a tendency to remain at a safe distance from the ordinary spring traps the present invention will release poisonous gas which will effectively destroy the rodent.

For purpose of exemplification a particular embodiment of the invention has been shown and described according to the best present understanding thereof, however, it will be apparent to those skilled in the art that many changes and modifications can be made therein without departing from the true spirit of the invention.

Having described the invention, what is claimed as new is:

1. A rodent exterminator comprising a platform, a breaker bar, a pair of parallel spaced apart guide rods firmly secured to said platform, said guide rods securing said breaker bar in dependent spaced relation to said platform, a hammer adapted to strike said breaker bar, said hammer including bifurcated end portions slidably mounted on said guide bars, resilient means urging said hammer toward said breaker bar, a latch restraining movement of said hammer, an ampule clip adapted to support an ampule in alignment between said hammer and said breaker bar, a trigger guide rigidly secured to said platform, a trigger pivotally mounted on said guide, and a push rod operatively connected between said trigger and said latch to release said hammer in response to movement of said trigger.

2. A rodent exterminator comprising a platform, a breaker bar, a pair of parallel spaced apart guide rods firmly secured to said platform, said guide rods securing said breaker bar in dependent spaced relation to said platform, an ampule breaking hammer, said hammer including bifurcated end portions slidably mounted on said guide bars between said platform and said breaker bar, resilient means urging said hammer toward said breaker bar, a latch restraining movement of said hammer, an ampule clip adapted to retain an ampule in position between said hammer and said breaker bar, a guide channel mounted on said platform, a cross-head mounted in said channel, a push rod secured to said cross-head, said push rod being operatively connected to said latch whereby movement of said cross-head causes said latch to release said hammer, a trigger pivotally mounted in said guide channel, and a crank member rigidly secured to said trigger and operatively engaging said cross-head for causing movement of said cross-head in response to movement of said trigger.

3. A rodent exterminator comprising a platform, a breaker bar, a pair of parallel spaced apart guide rods firmly secured on said platform and securing said breaker bar in dependent

spaced relation to said platform, a hammer slidably mounted on said guide rods, said hammer including bifurcated end portions mounted on said guide bars, resilient means urging said hammer toward said breaker bar, a latch restraining movement of said hammer, an ampule clip adapted to retain an ampule in the path of movement between said hammer and said breaker bar, a guide channel mounted on said platform, a cross-head mounted in said channel, a push rod secured to said cross-head, said push rod being operatively connected to said latch to release said latch is response to movement of said cross-head, a trigger pivotally mounted in said guide channel, a crank member rigidly secured to said trigger and operatively engaging said cross-head, and an adjustable connection between said push rod and said latch.

4. A rodent exterminator comprising a platform, an inverted U-shaped frame mounted on said platform, a hammer rod reciprocatably mounted in said frame and said platform, a stop secured on said rod, a spring mounted on said rod between said stop and the bight of said frame, a pawl pivotally mounted on said frame and adapted to engage said stop, a latch pivotally mounted on said frame, said pawl and said latch cooperating to restrain movement of said hammer rod, a trigger operatively connected to said latch, a breaker bar, mounting rods securing said breaker bar under said platform and in alignment with said hammer rod, a hammer mounted on said hammer rod, and a vial clip mounted on said hammer, said vial clip being adapted to retain a vial in alignment with said breaker bar and said hammer, whereby release of said hammer will cause the vial to release its contents when it strikes said breaker bar.

5. A rodent exterminator comprising a platform, a frame mounted on said platform, a breaker bar, a pair of spaced apart rods securing said breaker bar in spaced relation below said platform, a hammer supported by said frame and adapted to strike said breaker bar, the ends of said hammer being guidedly mounted on said rods, resilient means urging said hammer toward said breaker bar, a latch restraining movement of said hammer, a trigger operatively associated with said latch for releasing said hammer, and a cartridge clip interposed between said hammer and said breaker bar, said clip adapted to retain a cartridge in position between said hammer and said breaker bar, whereby release of said hammer will cause the cartridge to release its contents.

6. A rodent exterminator comprising a platform, an upstanding U-shaped frame secured on said platform, said platform and the bight of said frame having aligned apertures therein, a hammer rod extending through said apertures, a stop secured on said hammer rod intermediate said apertures, a breaker bar, a pair of spaced apart parallel guide rods securing said breaker bar in spaced dependent relation to said platform, said breaker bar being in alignment with said hammer rod, a hammer mounted on said rod, resilient means urging said hammer toward said breaker bar, an ampule clip adapted to retain a frangible ampule in position between said hammer and said breaker bar, a latch pivotally mounted on said frame, means operatively connected between said latch and said stop for restraining movement of said hammer, a trigger guide rigidly mounted on said platform, and a trigger pivotally mounted on said guide, said trigger being operatively connected to said latch

for releasing said hammer in response to movement of said trigger.

7. A rodent exterminator comprising a platform, an upstanding U-shaped frame secured on said platform, said platform and the bight of said frame having aligned apertures therein, a hammer rod extending through said apertures, a stop secured on said hammer rod intermediate said apertures, a breaker bar, a pair of spaced apart parallel guide rods securing said breaker bar in spaced dependent relation to said platform, said breaker bar being in alignment with said hammer rod, a hammer mounted on said rod, resilient means urging said hammer toward said breaker bar, an ampule clip adapted to retain an ampule on the striking face of said hammer, a bell crank pawl pivotally mounted on one leg of said frame, a latch pivotally mounted on said leg of said frame in spaced relation to said pawl, means on said latch engaging said pawl, said pawl engaging said stop to restrain movement of said hammer rod toward said breaker bar while said latch is in engagement with said pawl, and a trigger operatively connected to said latch whereby movement of said trigger will disengage said latch from said pawl.

8. A rodent exterminator comprising a platform, an upstanding U-shaped frame secured on said platform, said platform and the bight of said frame having aligned apertures therein, a hammer rod extending through said apertures, a stop secured on said hammer rod intermediate said apertures, a breaker bar, a pair of spaced apart parallel guide rods securing said breaker bar in spaced dependent relation to said platform, said breaker bar being in alignment with said hammer rod, a hammer mounted on said rod, resilient means urging said hammer toward said breaker bar, an ampule clip mounted on said hammer and adapted to support an ampule between said hammer and said breaker bar, a bell crank pawl pivotally mounted on one leg of said frame, a latch pivotally mounted on said leg of said frame in spaced relation to said pawl, means on said latch engaging said pawl, said pawl engaging said stop to restrain movement of said hammer rod toward said breaker bar while said latch is in engagement with said pawl, a guide channel mounted on said platform, a cross-head mounted in said channel, a pushrod secured to said cross-head and connected to said latch, and a trigger mounted in said channel for reciprocating said cross-head in said channel.

9. A rodent exterminator comprising a platform, an upstanding U-shaped frame secured on said platform, said platform and the bight of said frame having aligned apertures therein, a hammer rod extending through said apertures, a stop secured on said hammer rod intermediate said apertures, a breaker bar, a pair of spaced apart parallel guide rods securing said breaker bar in spaced dependent relation to said platform, said breaker bar being in alignment with said hammer rod, a hammer mounted on said rod, resilient means urging said hammer toward said breaker bar, an ampule clip mounted on said hammer rod and adapted to hold an ampule on the striking face of said hammer, a bell crank pawl pivotally mounted on one leg of said frame, a latch pivotally mounted on said leg of said frame in spaced relation to said pawl, means on said latch for engaging said pawl, said pawl engaging said stop to restrain movement of said hammer rod toward said breaker bar while said latch is in engagement with said pawl, a guide channel mounted

on said platform, a cross-head mounted in said channel, a push rod secured to said cross-head and connected to said latch, a trigger mounted in said channel for reciprocating said cross-head in said channel, said latch extending into proximity with the other leg of said frame, and a safety detent mounted on said other leg, said detent being movable into and out of locking engagement with said latch.

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