

(No Model.)

2 Sheets—Sheet 1.

R. C. MADDUX.  
INSECT DESTROYER.

No. 556,760.

Patented Mar. 24, 1896.

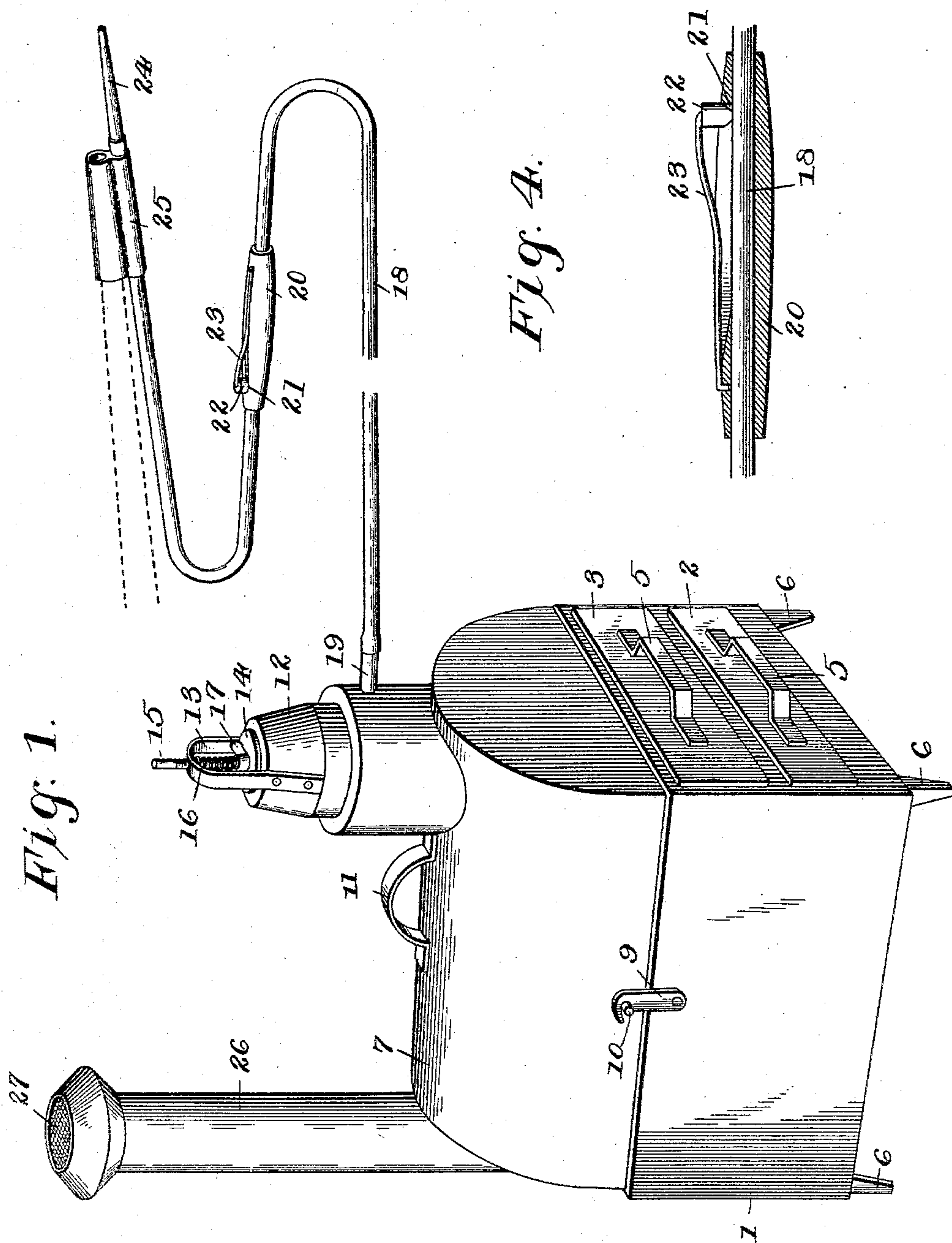


Fig. 1.

Fig. 4.

Inventor

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Witnesses

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R. M. Smith

By his Attorneys,

C. A. Snow & Co.

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Fig. 3.

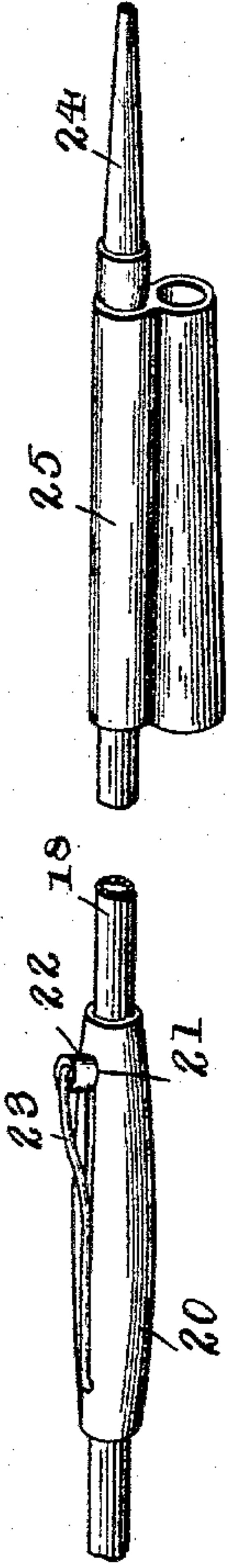


Fig. 5.

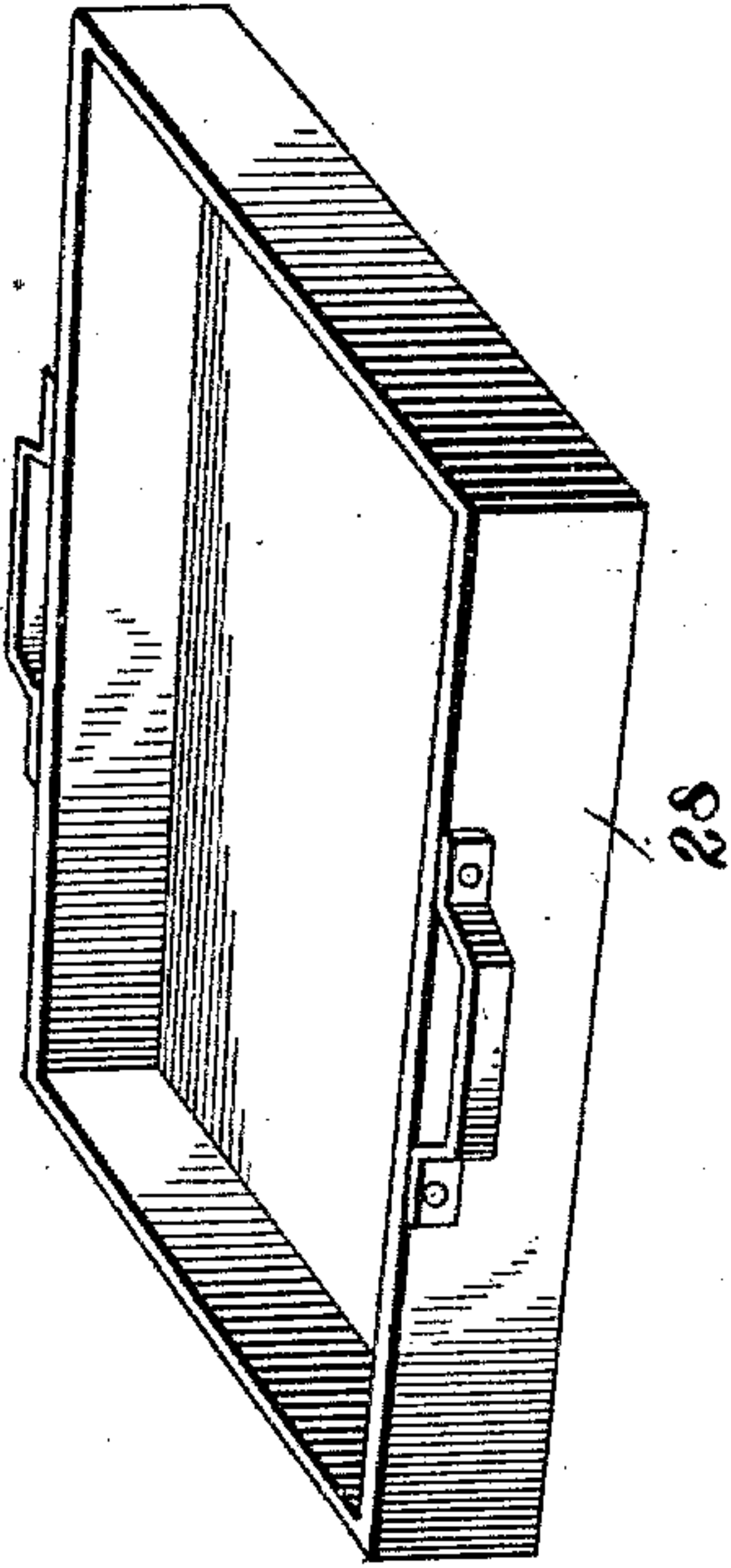
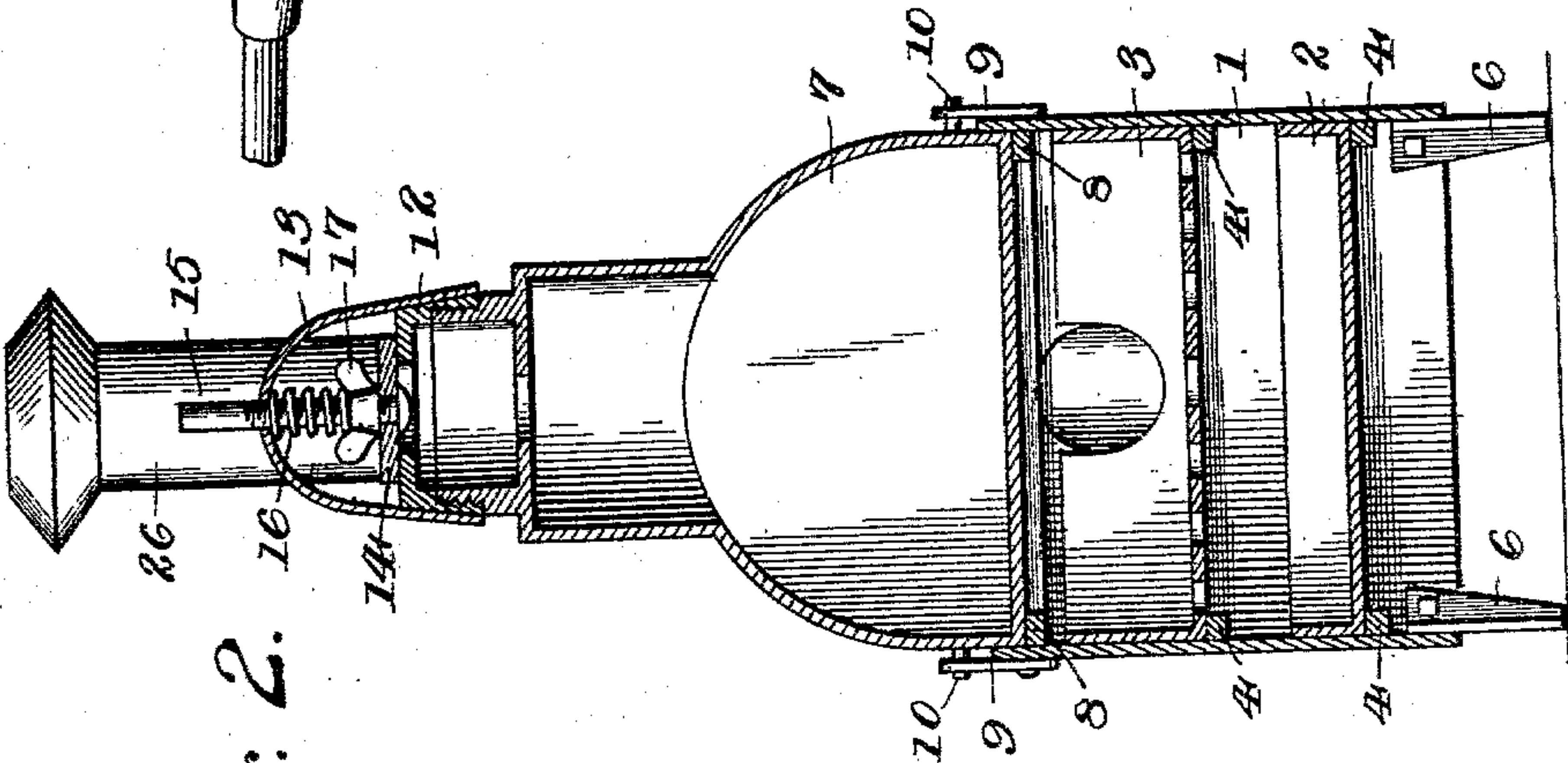


Fig. 2.



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# UNITED STATES PATENT OFFICE.

RICHARD CALVIN MADDUX, OF DUSTER, TEXAS.

## INSECT-DESTROYER.

SPECIFICATION forming part of Letters Patent No. 556,760, dated March 24, 1896.

Application filed August 10, 1895. Serial No. 558,899. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD CALVIN MADDUX, a citizen of the United States, residing at Duster, in the county of Comanche and State of Texas, have invented a new and useful Insect-Destroyer, of which the following is a specification.

This invention relates to an improvement in devices for exterminating insects in general, and has for its object to provide a novel construction of steam-generator and to use in connection therewith removable drawers forming the fire-box and ash-pan of the generator, a safety-valve connected with the steam-boiler, and a novel form and construction of flexible discharge-tube, the same being provided with a cut-off device and with a socket-piece adapted to receive a handle by means of which the discharge end of the flexible tube may be elevated and conducted to any desired point.

Other objects and advantages of the invention will appear in the course of the subjoined description.

To the above end the invention consists in a steam insect-destroyer embodying certain novel features and details of construction and arrangement of parts, whereby advantages in point of general utility and adaptability are attained, as hereinafter fully described, illustrated in the drawings and finally pointed out in the claim.

In the accompanying drawings, Figure 1 is a perspective view of the improved insect-destroyer constructed in accordance with this invention. Fig. 2 is a vertical transverse section through the same. Fig. 3 is an enlarged detail perspective view of the flexible spray-tube. Fig. 4 is a longitudinal sectional view showing the cut-off for the steam-spray tube. Fig. 5 is a detail view of a heating or cooking pan or tray, which may be substituted for the steam-boiler.

Similar numerals of reference designate corresponding parts in the several figures of the drawings.

Referring to the drawings, 1 designates an open rectangular frame, which is composed preferably of sheet metal and made of sufficient height to accommodate the introduction therein of two sliding trays or drawers 2 and 3, forming respectively the ash-pan and fire-

box of the device. The lower tray or drawer, 2, is made of imperforate metal and provided with a surrounding vertical flange for confining the hot coals and ashes and preventing the same from dropping upon the floor or carpet and setting fire to the latter. The upper tray or drawer is formed in its bottom with a plurality of perforations, allowing for the escape of ashes, and is also formed with a surrounding vertical flange for confining the coals therein, the front wall of said tray being perforated to give the necessary draft. Both of said trays or drawers are supported and adapted to slide at their opposite side edges upon longitudinally-disposed cleats or ledges 4 and are each provided with a suitable handle 5, by means of which the same may be withdrawn and replaced within the body 1. The rectangular frame or body 1 is also provided at its corners with feet 6, of a suitable height for preventing the burning of the floor or carpet by reason of the proximity of the fire-box.

7 designates a steam-boiler which is preferably made in the semicylindrical form shown, and of a size adapted to fit snugly within the upper portion of the rectangular frame or body 1, so as to have its flat side disposed downwardly and located immediately over the fire-box above referred to. This boiler is securely held in place by means of a horizontally-disposed inwardly-extending flange 8 within the frame or body 1, and upon which said boiler rests and has its support, and the boiler is prevented from being accidentally displaced by means of a pair of pivoted hooks 9, secured one to each side of the frame or body 1 and adapted to be vibrated into engagement with laterally-projecting pins or studs 10 on either side of the boiler. The boiler and also the frame or body 1 and the contained trays or drawers may be lifted by means of a bail or handle 11, secured in proximal relation to the center of the boiler 7 for the purpose of carrying the device, as a whole, to the desired point for use. At the front end the boiler 7 is formed with an upwardly-projecting dome to which is applied a screw-threaded cap 12. This cap has an inverted-U-shaped yoke 13 secured to it and extending upwardly therefrom, and said cap is also formed in its upper wall with a verti-



cal perforation, over which is placed a safety-valve 14. This safety-valve is provided with a vertically-arising screw-threaded shank or spindle 15, and a spiral tension-spring 16 is disposed around said shank between the inner face of the yoke 13 and an adjusting-nut 17 on said threaded shank, near the safety-valve. By means of this construction the safety-valve is held by spring-pressure against its seat on the cap 12, and by turning said adjusting-nut the amount of pressure with which the valve may be caused to bear upon its seat may be regulated to suit the steam-pressure required for exterminating the insects and for rendering the device perfectly safe in operation.

18 designates a flexible steam-tube which is composed preferably of rubber and connected at its inner end to a nipple 19, communicating with the steam-dome at the front end of the boiler. Surrounding this flexible tube at any convenient point is a sleeve or housing 20, having a bore just sufficient to receive said tube without compressing the same, and formed adjacent to one end with an opening 21 communicating with said bore. Within the opening 21 is placed a plug 22, and from this plug an arm 23, composed preferably of a piece of stout wire, extends longitudinally of the sleeve or housing and is connected with the same in such manner as to permit the plug 22 to be depressed within its opening sufficiently to pinch the flexible steam-tube and thereby cut off the passage of the steam through the same. By means of this construction the passage in the flexible steam-pipe may be closed while the steam-pressure is increasing within the boiler and until the safety-valve is forced from its seat, if desired. The nozzle 24 of the steam-pipe is then directed to the desired point and the steam cut-off released, whereupon the steam-spray will be projected with its full pressure into the midst of the insects which it is desired to destroy.

25 indicates a duplex tubular socket, which comprises a smaller member of a size just sufficient to receive the flexible steam-tube 18 and a larger tapering member in which may be inserted the tapered end of a suitable stick or handle. This duplex socket-piece is slipped over the flexible tube 18, after which the nozzle 24 is applied and serves as a stop for preventing the escape of said socket-piece from the end of the tube. By the aid of the stick or handle referred to the nozzle end of the flexible tube may be elevated to any desired extent and directed to any desired point. 26 represents a vertically-disposed smoke-stack, which has an elbow connection through the rear end of the rectangular frame or body 1 with the interior thereof, and the rear wall of the fire-box 3 is cut away or provided with an opening in alignment with the entrance-point of said stack for facilitating the passage of the products of combustion up said stack. The upper extremity of the stack is provided

with a double conical cap, the aperture in which is covered by a piece of wire cloth or fabric 27, whereby a simple spark-arrester is formed, which will add materially to the safety of the device for indoor use.

The device above described forms a very safe, reliable, and efficient steam exterminator for insects in general, and is easily portable, and may be carried from one point to another and steam quickly generated, so as to place the device in condition for use.

The cut-off 22 is a very valuable feature, as it economizes the steam-pressure, and the safety-valve will also be found of great advantage as rendering the device perfectly safe in operation.

If desired, the boiler 7 may be removed by means of the hooks 9 and a pan or tray 28 substituted therefor, which will adapt the lower part of the device to be used as an ordinary stove for cooking food, heating irons, roasting coffee, and other purposes.

Various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

In an insect-destroyer, the combination with an open rectangular frame or body having longitudinal ledges upon its interior and also having a smoke-stack communicating therewith, of longitudinally-sliding and removable trays or drawers having surrounding sides and constituting the fire-box and ash-pan of the device, the rear wall of the fire-box being apertured in line with the lower end of the smoke-stack to promote the draft, a removable steam-boiler of substantially semicylindrical form having its flat face disposed downward and supported upon ledges of the main body or frame, pivoted hooks for holding the boiler in place, a flexible pipe communicating with the boiler and having a discharge-nozzle at its outer end, a metal socket or ferrule surrounding said pipe behind the nozzle and carrying a tapering socket adapted to receive the end of a handle, whereby the nozzle may be elevated and carried to any point, and a steam cut-off located intermediate the ends of the flexible pipe and comprising a metal sleeve surrounding said pipe and a spring-arm attached at one end to said sleeve and carrying at its free end a plug which operates through an opening in the sleeve and serves to pinch the flexible pipe for closing the steam-passage therein, all combined and arranged substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

RICHARD CALVIN MADDUX.

Witnesses:

JOHN T. CROW,  
EFFIE DABBS.