

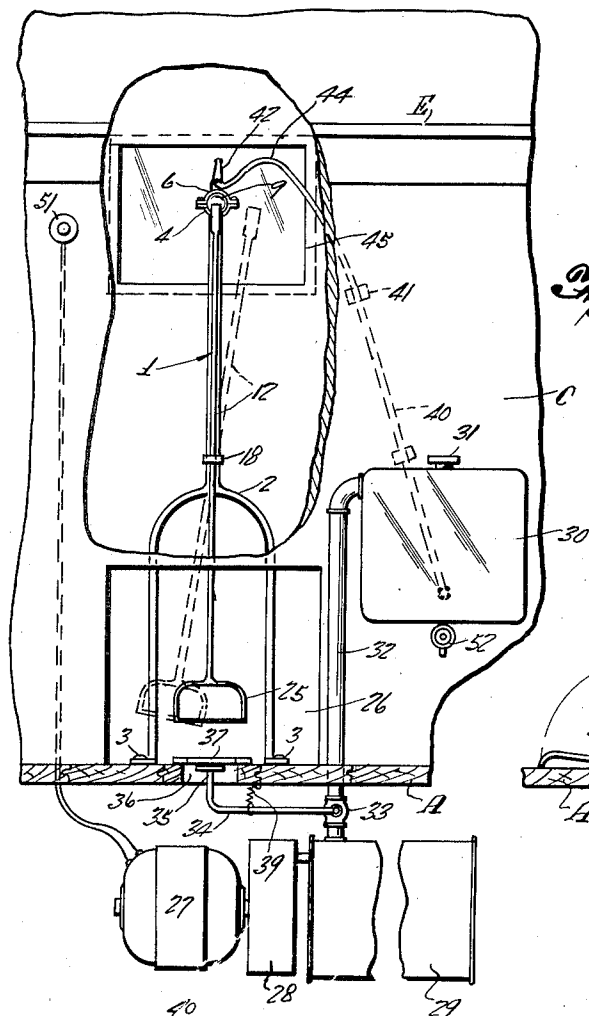
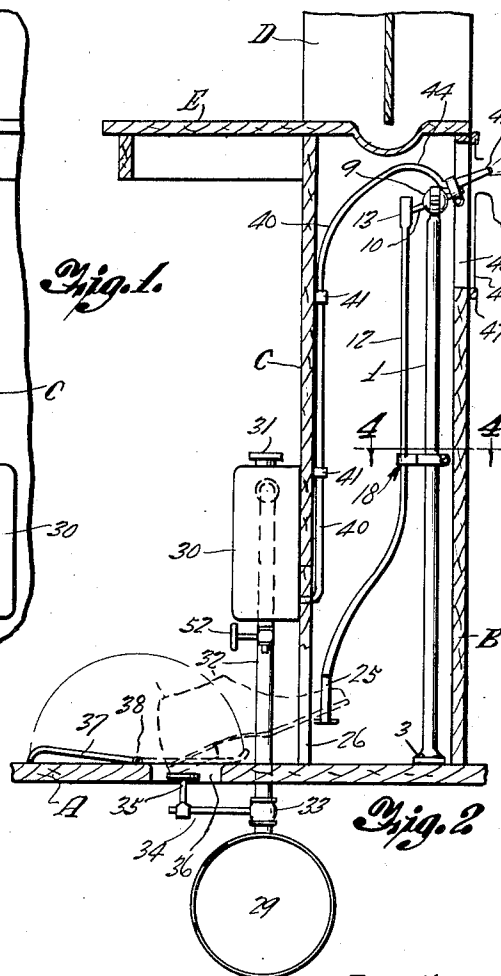
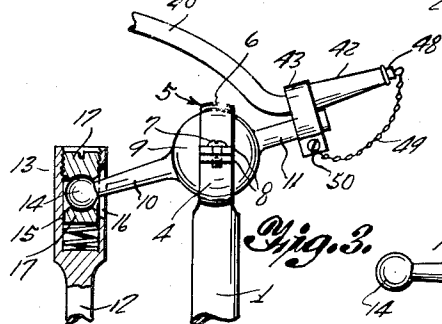
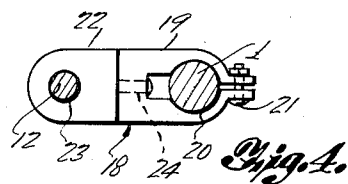
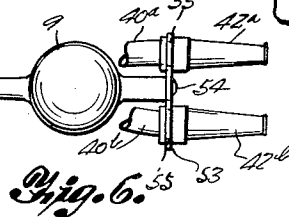
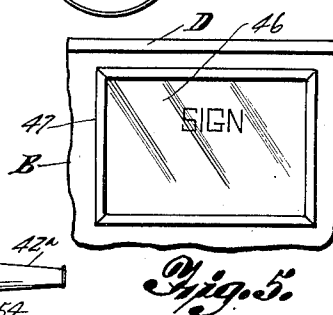
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BANK AND AUTOMOBILE PROTECTOR

Original Filed Sept. 8, 1933



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BANK AND AUTOMOBILE PROTECTOR

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2 Claims. (Cl. 299—95)

My invention relates generally to bank protective devices and the main object is to provide a means especially suitable for use in banks but readily applicable for use in all business houses, homes or autos and by which would be robbers or other marauders may be overcome and foiled in their nefarious attempts.

Another object is to provide a means or device of this kind and for this purpose in which a suitable chemical gas or liquid of noxious qualities may be expelled under the control of the bank teller, home owner or the like into the face or proximity of the robbers so that they are overcome or driven away.

Another object is to provide a simple and efficient assembly of elements for this purpose including a chemical tank, an air pressure generating and storing means, a nozzle supported for pointing in any direction, a foot operated means for so pointing the nozzle, a hose connecting the nozzle and chemical tank, and a valve arranged to be controlled by the same foot operating the nozzle and controlling the flow of chemical from the nozzle.

With these and other objects in view as will appear hereinafter the invention resides in the novel construction and arrangement of parts as described and claimed, reference being had to the accompanying drawing wherein:

Figure 1 is a rear or inside elevation of a bank wall or teller cage partially broken away and in section showing my invention applied thereto, and showing in dotted lines the foot rod swung to one side.

Figure 2 is a fragmental vertical section through the wall of Figure 1 showing my invention in side elevation and showing in dotted lines a foot in position for operating the foot rod and control valve.

Figure 3 is an enlarged side elevation of the nozzle, mounting means therefor and associated elements.

Figure 4 is an enlarged horizontal section along the line 4—4 in Figure 2, the wall being omitted.

Figure 5 is a fragmental elevation of the nozzle covering or concealing sign.

Figure 6 is an enlarged plan view on the side of Figure 3 of a nozzle supporting element showing the method of mounting two nozzles thereon.

Referring now with more particularity to the drawing and in carrying out my invention as shown therein I provide a stand 1 forked near its lower end at 2 providing spaced feet 3 by which it is screwed or otherwise secured to the floor A to project vertically upward therefrom

alongside and a short distance inwardly from what is hereinafter termed the outer wall B. This wall B with the spaced and parallel inner wall C form the front of the usual teller's cage and a window D and counter E are provided in usual manner. At its upper end the stand 1 terminates a short distance below the window D and has formed thereat the lower half 4 of a narrow, annular ball socket 5, the upper half 6 of which is removably mounted on the lower half by screws 7 through the mating ears 8. A ball 9 is journaled and seated in this ball socket 5, forming a universal joint and while held therein may swing or rotate vertically, horizontally or in any intermediate direction as will be apparent. A radially extended operating arm 10 is extended from the ball on the side facing the inner wall C and an axially aligned and somewhat shorter carrier arm 11 is extended from the other side of the ball at a diametrically opposite point.

An operating or foot rod 12 is mounted parallel with and inwardly of the stand 1 and has at its upper end a ball socket 13 similar to that employed in auto steering gear drag rods and here adapted to receive and pivotally hold a ball 14 formed on the end of the ball operating arm 10, said socket 13 including a tubular bore 15 formed in the end of the rod 12 and apertured at one side 16 to clear the rod and containing socket heads 17 engaging and holding the said ball 14 as shown. At some distance below this socket 13 the foot rod 12 is passed through a sliding and swivel bearing 18 comprising a clamp member 19 apertured and forked at 20 to encircle the stand 1 and secured thereon by a clamp screw 21 and an eye member 22 having an aperture 23 slidably receiving and holding the rod 12 and swiveled by a pin 24 on the clamp member 19 to rotate or rock thereon about a horizontal axis. Below this bearing 18 the foot rod 12 is bent rearwardly or inwardly and terminates in a foot loop or stirrup 25 located somewhat above the floor A and adjacent the inner wall C, through which access is had to this stirrup by an opening 26 formed in the said wall.

An electric motor 27 is mounted in any suitable location preferably below the floor A and is connected to a conventional air compressor or pump 28 which is adapted to compress and store air under pressure in the air tank 29. Mounted above the tank 29 and on the inner wall C is a chemical tank 30 having a filler opening and cap 31 and connected to the air tank 29 by a pipe 32. A control valve 33 is interposed in the pipe 32 below the floor A and is operated by an arm or

lever 34 extending beneath the floor and turned upwardly in the form of a foot pedal 35 projecting through an opening 36 formed in the floor just rearwardly or inwardly of and in alignment with the position of the stirrup 25 on the foot rod 12. The foot pedal 35 is normally covered by a trap door 37 hinged at 38 on the floor and lying flat over the opening 36 and the valve 33 is normally held in a closed position by a retractile coil spring 39 extended between the floor and the arm 34 in which position the foot pedal 35 lies just flush with the level of the upper side of the floor as shown. The air supply pipe 32 communicates with the chemical tank 30 near the top thereof and from a point adjacent the bottom of this tank a flexible tube or hose 40 extends upward between the walls B and C through clamps 41 and over the stand 1 where the hose is provided with a suitable nozzle or discharge device 42 clamped on the carrier arm 11 of the ball 9 by a clamp 43 and extended in axial alignment outward or forward from that arm. Sufficient length is provided in the hose 40 to form a free and flexible loop 44 allowing the necessary play as the nozzle 42 is moved and pointed in different directions as will be set forth.

Normally the nozzle 42 is turned up or down or to either side so as to clear the outer wall B but when turned to point outward is of sufficient length to project through an opening 45 formed in the wall below the window D as shown in Figure 2. A thin paper sign 46 bearing any suitable advertising or instructive indicia is mounted in a frame 47 placed over the opening 45 and serves to conceal the opening and the nozzle 42 from anyone outside of the teller's cage.

A suitable chemical gas or liquid having noxious or poisonous qualities is placed in the chemical tank 30 from which it may be blown forcibly through the hose 40 and nozzle 42 by the air pressure fed to the tank from the air tank 29 and generated by the compressor 28. Of course when the valve 33 is closed no air pressure enters the chemical tank and the chemical is not blown from the hose. To prevent any undesirable slow leakage from the nozzle 42 a rubber plug or stopper 48 (Figure 3) may be fitted therein and loosely attached by a light chain 49 to the clamp screw 50, this plug being set sufficiently tight to prevent the escape of chemical normally but adapted to fly out under the greater pressure when the compressed air is admitted to the chemical tank as will be understood.

In the use of the device and assuming that a teller in the cage is being held up by robbers outside the wall B the teller kicks the trap door 37 back with his heel exposing the foot pedal 35 on which his heel is then rested while his toe is placed on the stirrup 25 at the lower end of the foot rod as shown in dotted lines in Figure 2. By then raising, lowering or swinging this stirrup from side to side the ball 9 may be rotated to swing the nozzle 42 outward in the direction of the robbers, the nozzle as it swings outward breaking or tearing the paper sign 46 as shown in Figure 1 so as to expose its end. Simultaneously and as the nozzle is properly pointed the heel depresses the foot pedal 35 opening valve 33 and admitting compressed air to the chemical tank causing the chemical to be discharged from the nozzle 42 in a stream or cloud directly onto and into the faces of the robbers. They are thus overcome or driven away according to the characteristics of the chemical used and the robbery is prevented. With but a little practice the nozzle 42 may be pointed

in any direction by proper vertical and horizontal movement of the foot rod 12 and stirrup 28 and the entire operation is carried out by one foot and concealed from view of the robbers. The eye member 22 of the bearing 18 permits both the necessary vertical sliding and horizontal swinging movement of the foot rod to rotate the ball 9 in its socket 5 and properly point the nozzle. By maintaining the proper air pressure in the tank 29 it is always available for use and is sufficient at all times to discharge the chemical over a considerable territory so that by using several of the nozzle assemblies all run from the same compressed air and chemical tank and strategically placed the entire lobby of the bank may be covered by the chemical if necessary. The motor 27 may be controlled by a switch 51 but preferably has an automatic switch of conventional form (not shown) to start the motor when the air pressure falls below the desired point. A drain valve 52 is provided on the bottom of the chemical tank 30 by which the chemical therein may be drained off when desired or for practice with the device.

It will be apparent that any changes may be made in the physical arrangement of the several parts of my invention to adapt it to various installations not only in banks but in all business houses and in private homes and such changes are considered within the scope of this invention. Also the device may be used upon automobiles or trucks by mounting the ball and socket and nozzle through the windshield or car side and controlling it either by hand or by a suitable foot rod. In this case it may be desirable to employ two nozzles 42a and 42b (Figure 6) and they may be attached to the carrier arm 11 of the ball 9 by means of a plate 53 secured to the end of the arm by screws 54 and having apertures 55 to clear the nozzles. Each nozzle may be connected to a separate chemical tank (not shown) by hoses 40a and 40b and one used to discharge a poisonous gas while the other discharges paint to mark the attacking car for future identification or to obscure the windshield and necessitate the attacking car coming to a halt. The necessary air pressure may be obtained from the auto engine in manner similar to that used in connection with some forms of air operated horns, windshield wipers and the like or a motor and compressor may be used as herein described.

Further details of the utility, operation and advantages of my invention will be understood without further description herein and while I have set forth a certain preferred embodiment of my invention it is understood that I may vary therefrom in minor details so as best to construct a practical device for the purposes intended not departing from the spirit of the invention and within the scope of the appended claims.

I claim:

1. In a device of the kind described, a stand, a ball socket on the upper end of the stand, a ball mounted for rotation in the ball socket, axially aligned operating and carrier arms extended at opposite sides from the ball, a nozzle attached to the carrier arm, a slide and swivel bearing on the stand, a foot rod slidably and pivotally supported between its ends in the said bearing and pivotally connected at its upper end to the said operating arm, and a stirrup on the lower end of the foot rod.

2. In a device of the kind described, a stand, a ball socket on the upper end of the stand, a ball mounted for rotation in the ball socket, axially aligned operating and carrier arms extended at

opposite sides from the ball, a nozzle attached to the carrier arm, a slide and swivel bearing on the stand, a foot rod slidably and pivotally supported between its ends in the said bearing and pivotally connected at its upper end to the said operating arm, and a stirrup on the lower end of the foot rod, a chemical tank, a hose connecting the chem-

ical tank and nozzle, a source of compressed air connected to the chemical tank, a control valve between the source of compressed air and chemical tank, and valve operating foot pedal located adjacent the stirrup on the foot rod.

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