

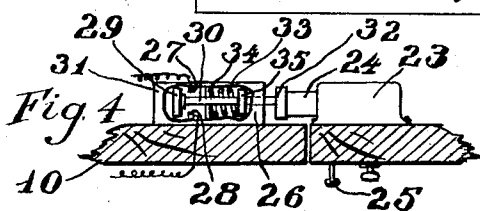
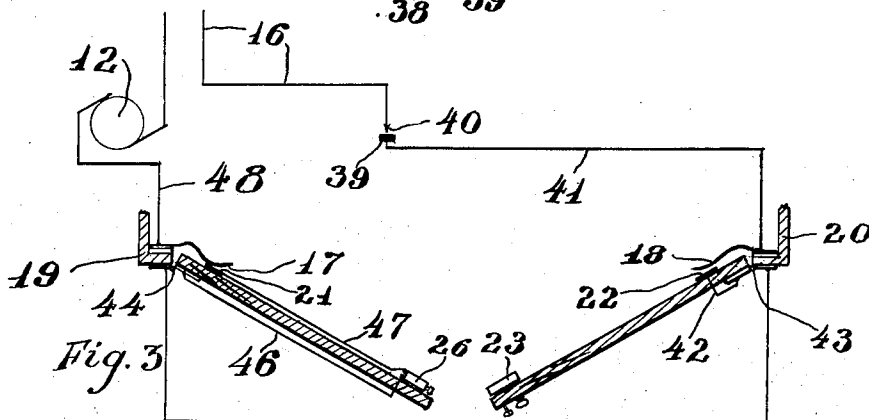
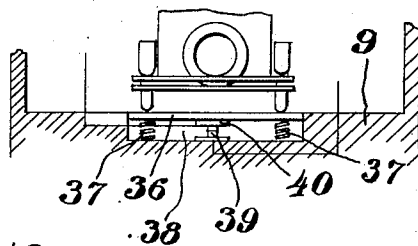
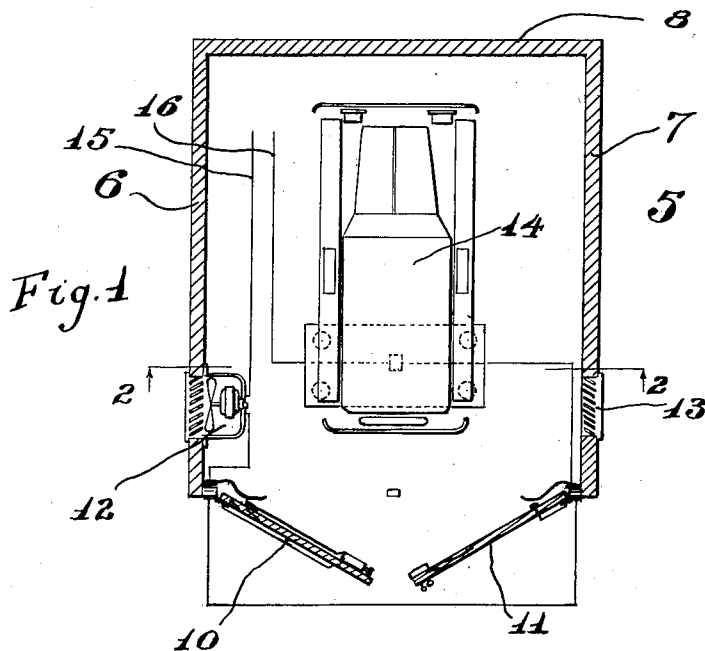
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SAFETY DEVICE FOR GARAGES

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SAFETY DEVICE FOR GARAGES

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5 Claims. (Cl. 98—29)

My invention relates to an automatic garage safety ventilator, adapted automatically to ventilate a garage whenever an automobile is housed therein and the doors thereof are closed without
5 being key-locked from without so as to permit of the possible presence of a person within the closed garage in the presence of the automobile.

Thus, according to my invention, means are provided for the automatic and sufficient ventilation of a garage or the like, so that persons may not be accidentally overcome by the poisonous exhaust gases of the automobile by an accidental closing of the doors of the garage while the automobile and person are both within the garage.

15 An object of my invention is to provide automatic safety ventilating apparatus of this character which will be normally inoperative and which will be set into operation automatically only by the concurrence of all those conditions
20 which give rise to the danger of asphyxiation.

With the above and other objects in view, which will appear more fully from the following detailed description, my invention consists of any suitable ventilator, preferably a power-driven
25 ventilator, and an electrical circuit and a series of circuit breakers and operating devices therefor, so arranged, that the ventilator will be rendered operative only by the concurrence of the several conditions which give rise to the danger
30 of asphyxiation. Thus, according to my invention, I may provide an electrically driven ventilator, an electrical circuit for operating the same, and a pair of circuit breakers in series in said circuit, normally tending to open and being closed
35 by the closing of the pair of doors of the garage beyond a certain given point. According to my invention, I may also provide another circuit breaker, also in series in said circuit, and normally tending to close and adapted to be opened into
40 an inoperative condition by an outside key operated lock-bolt. My invention may also include another circuit breaker disposed beneath a suitable movable platform mounted in the floor of the garage, and adapted to be operated by the
45 weight of the car, which will normally be open and which will be closed only by the weight of the automobile.

For the purpose of illustrating my invention, I have shown in the accompanying drawing one
50 form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my in-

vention is not limited to the precise arrangement and organization of the instrumentalities as herein shown and described.

Referring to the drawing in which like reference characters indicate like reference parts:—

Figure 1 represents a diagrammatic plan view of a garage with an automobile disposed therein and with the operating circuit shown diagrammatically and in the inoperative condition.

Figure 2 represents a fragmentary section on line 2—2 of Figure 1.

Figure 3 represents a circuit diagram, in which the doors of the garage have also been shown diagrammatically.

Figure 4 represents a horizontal sectional view of the key controlled circuit breaker.

My present invention may be applied to any suitable garage or similar enclosure, as that indicated generally by the numeral 5 in the drawing. The garage may include any suitable side walls
75 6 and 7, and rear wall 8, any suitable floor 9, and roof (not shown).

The present invention is applicable to garages regardless of the type of door or closure employed. Thus the invention is applicable to single-door, or double-door garages, or hinged or sliding-door garages, or in fact garage doors of any kind. In the particular illustration in the drawing, a pair of plain side-hinged doors 10 and 11 are shown, although it is to be understood that the number
85 and character of the doors is immaterial.

At any suitable point in the garage wall, a ventilator, preferably a power-driven ventilator 12, may be mounted for exhausting air from the garage to the outside. A second ventilator, preferably a
90 non-power driven type, such as the ventilator 13, may be mounted in the garage wall on the opposite side of the garage in operative relation to the exhaust ventilator 12, so as to secure an air current between the two ventilators when the first
95 ventilator is set into operation, which air current will tend most effectively to draw out the exhaust gases of the automobile. To this end, the ventilators 12 and 13 are preferably arranged in alignment with the rear of the automobile 14.

Through the leads 15 and 16, the exhaust ventilator 12 and the operating circuit breakers are connected to any source of electrical circuit. One of the leads, as for instance the lead 15, may be directly connected to the ventilator 12, while the
105 other of said leads may be connected to said ventilator only through the series of circuit breakers.

Thus, according to my invention, I may provide suitably resilient electrical contacts 17 and 18, 110

suitably mounted upon the door jambs 19 and 20, respectively. These resilient contacts 17 and 18 may be in the form of resilient strips of metal anchored at one of their ends securely to the door jamb in suitably insulated relation thereto and having their free ends in operative juxtaposition to a pair of corresponding contacts 21 and 22 respectively, carried by the doors 10 and 11, respectively. The spring contacts 17 and 18 are preferably so arranged that they will spring out and thus follow the doors when the latter are swung open up to a certain point. Beyond this suitable point, the spring contacts 17 and 18 will not follow the door, so that their contact in relation with the contacts 21 and 22 respectively, will be broken when the doors are swung open beyond the particular point.

On one of the doors, any suitable lock 23 may be provided, including a bolt 24 which is adapted to be projected outwardly into a locking position only by means of a removable key 25 insertable into and operable from without. At a point in operative alignment with the bolt 24, on the other door 10, (or on the door jamb, in case a single door is used) any suitable circuit breaker 26 is provided, including a pair of stationary contacts 27 and 28, and a movable bridge contact 29 which is adapted to bridge the gap between said contacts 27 and 28 thereby to form a circuit therebetween. The movable bridge contact 29 is preferably carried upon a spring actuated rod 30, which is slidably mounted in the housing 31 of the circuit breaker 26 in any suitable manner, and the free end 32 of which projects outside of the housing and into operative juxtaposition to the lock-bolt 24. Any suitable spring or the like, as for instance the helical compression spring 33 may be operatively interposed between any suitable stationary spring seat 34 and the collar or flange 35 rigidly carried by the rod 30, thereby to exert a constant force upon the rod 30 and the bridge contact 29 tending to bring the latter into operative engagement with the stationary contacts 27 and 28. The relative length and position of the switch rod is so arranged, that when the lock-bolt 24 is in a retracted position, the bridge contact 29 will be firmly seated against the two contacts 27 and 28, while when the lock-bolt 24 is in the outer or locking position as indicated in Figure 24, the bridge contact 29 will be separated from the contacts 27 and 28, thereby breaking the electrical circuit therebetween.

I may also provide any suitable movable platform 36, resiliently mounted and supported upon any suitable springs 37 or the like, within any suitable pit 38 in the floor 9 of the garage, said platform 36 being so arranged and so supported as to be depressed to a suitably slight extent by the weight of the car exerted thereon either through 1, 2 or all of the wheels of the car. In the particular illustration shown in the drawing, the platform is shown to accommodate merely the two rear wheels of the automobile. A pair of any suitable contacts 39 and 40 may be mounted in operative alignment with each other;—one being carried rigidly by the stationary portions of the pit 38, and the other (40) being movably carried with respect thereto, by the platform 36.

One of the two leads, as for instance the lead 16 may be connected to one of the two contacts 39 and 40, as indicated particularly in Figure 2, while the other of said contacts is then connected to a suitable connection 41, to the spring contact 18. The contact 22 is in turn connected through any suitable connection 42 to a permanent or

hinged type of electrical connection intermediate the door jamb and the door, as for instance the hinge connection 43, which if desired, may also be the door supporting hinge.

The circuit is then continued from the hinge connection 43 to a similar hinge connection 44 intermediate the other door and jamb, by any suitable connection 45. Any suitable electrical connection 46 then connects the hinge connection 44 with one of the two stationary contacts in the circuit breaker 26, as for instance the stationary contact 28 thereof. The other stationary contact 27 of the circuit breaker 26 is then connected through the electrical connection 47 with the contact 21 carried by the door 10. The spring contacts 17 carried by the door jamb 19 in operative alignment with the contact 21 is then connected through any suitable connection 48 with the other side of the ventilator 12.

By this means, an electrical circuit is provided in connection with the electrically operable ventilator 12, which may be an ordinary motor driven ventilator, which is rendered operative only by the concurrence or coincidence of several conditions. Thus the automobile 14 must be within the garage so as to close the otherwise open contacts 39 and 40, and the doors of the garage must be closed beyond a given point, and the lock 23 kept unlocked. If the car is placed within the garage and the door is closed, and then locked from without, the ventilator is again rendered inoperative, but so long as the doors are closed or substantially closed while the car is within the garage and the garage is not locked from without, the ventilator will operate to exhaust all poisonous gases from the garage and thereby prevent asphyxiation of any person who might be in the garage. It is to be understood that the electrical contacts are suitably insulated from the supporting doors, and jambs, etc., and that the electrical connections between the various contacts are any suitable permanent electrical wiring preferably concealed and also suitably insulated from the supporting structure.

It is also to be understood that the circuit breakers operated by the door or doors may be otherwise arranged, depending upon the character or type of door;—said circuit breaker or circuit breakers merely being so arranged that they will follow the door or doors into a partly open position so that said circuit breakers would not be opened by merely a slight opening of the doors but would be opened by such a substantial opening of the door or doors as will effect sufficient natural ventilation.

So too, the key controlled circuit breaker 26 may also be otherwise arranged depending upon the character or type of door.

I am aware that the invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof, and I therefore desire the present embodiments to be considered in all respects as illustrative and not restrictive, reference being had to the appended claims rather than to the foregoing description to indicate the scope of the invention.

I claim:

1. A safety garage including a door through which an automobile is adapted to pass, a safety device including a ventilator capable of being operative and inoperative respectively, and ventilator control means for rendering said ventilator operative and inoperative respectively; said control means including locking means capable of being locked only from without in the closed

condition of the door to render said ventilator inoperative.

2. A safety garage including a door through which an automobile is adapted to pass, a safety device including a ventilator capable of being operative and inoperative respectively, and ventilator control means for rendering said ventilator operative and inoperative, respectively; said control means including means operable by an automobile housed in said garage for rendering said ventilator operative and locking means capable of being locked only from without in the closed condition of the door to render said ventilator inoperative.

3. A safety garage including a door through which an automobile is adapted to pass, a safety device including a ventilator, a door and lock operated means adapted to set the ventilator into operation when the door is closed and not locked from the outside and to render the ventilator inoperative when the door is either open or locked from the outside, said lock-operated means including a lock adapted to lock a door of the garage and capable of being locked only from without the garage.

4. In combination with a garage including a door, of a safety device therefor including an electrically operative ventilator for exhausting

air from the garage, an electrical circuit including a source of electrical current supply, and said ventilator, and including also in series a door-operated circuit breaker adapted to be closed by the closing of the door beyond a suitable point, a lock adapted to lock a door of the garage, and capable of being locked only from without the garage and a key-controlled circuit breaker adapted to be operated by said lock locking said door so as to be operatively opened only when said door is locked by key from without.

5. In combination with a garage including a door, of a safety device therefor including an electrically operated ventilator for exhausting air from the garage, an electrical circuit including a source of electrical current supply, and said ventilator, and including also in series a door-operated circuit breaker adapted to be closed by the closing of the door beyond a suitable point, a lock adapted to lock a door of the garage, and capable of being locked only from without the garage, a key-controlled circuit breaker adapted to be operated by said lock locking said door so as to be operatively opened only when said door is locked by key from without, and a car controlled circuit breaker normally open and adapted to be closed by the weight of the car.

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