May 21, 1929. W. A. SCHOLLMEYER 1,713,558

STORAGE VAULT

Filed Aug. 5, 1927

Fig. 1,

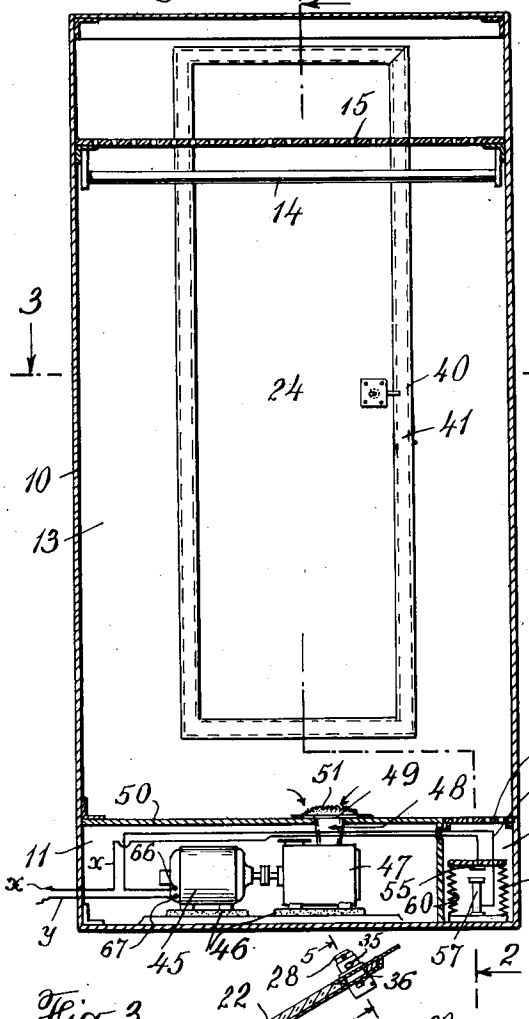


Fig. 2,

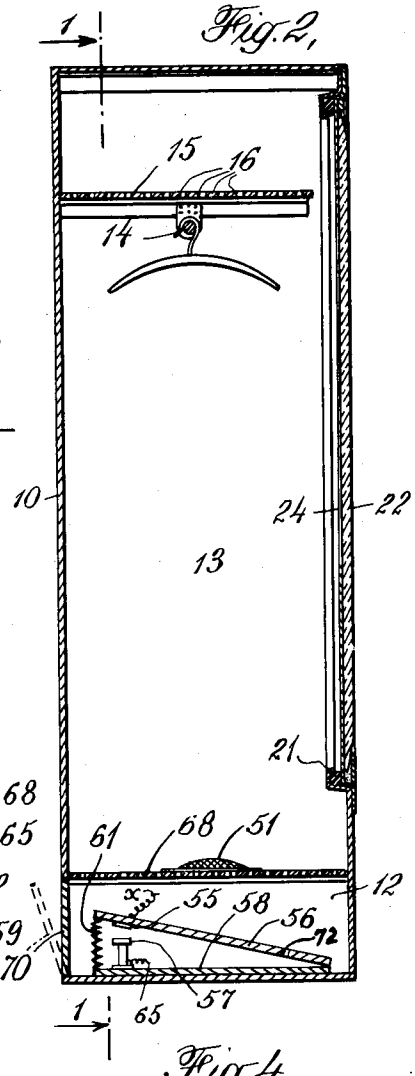


Fig. 3,

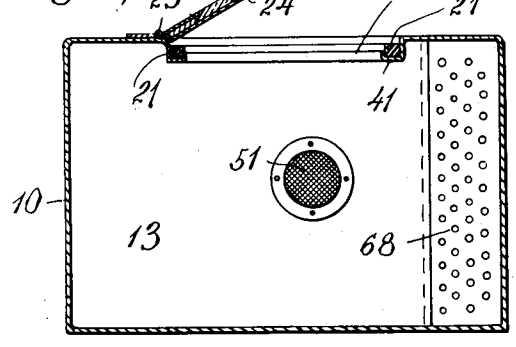


Fig. 4,

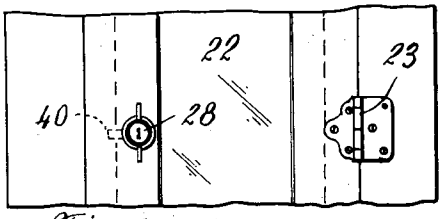
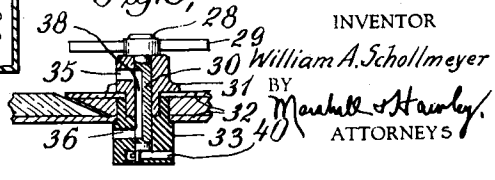


Fig. 5,



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UNITED STATES PATENT OFFICE.

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STORAGE VAULT.

Application filed August 5, 1927. Serial No. 210,857.

This invention relates to storage vaults or storage receptacles for garments such as furs, clothing, or other articles.

It is a self-evident fact that insects, such as moths or other living organisms, cannot live without air. Therefore, if a storage receptacle or vault can be exhausted and a vacuum can be maintained therein damage to the garments or other articles within the vault will be entirely eliminated.

This invention has for its salient object to provide a storage receptacle or vault having means for exhausting the air therefrom and for maintaining a vacuum therein.

Further objects of the invention will appear from the following specification taken in connection with the drawings, which form a part of this application, and in which

Fig. 1 is a vertical sectional elevation of a receptacle or vault constructed in accordance with the invention;

Fig. 2 is a sectional elevation taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a sectional elevation taken substantially on line 3—3 of Fig. 1;

Fig. 4 is an elevational view partly broken away showing a portion of the door and the combination lock and air valve for securing the door in closed position; and

Fig. 5 is an enlarged sectional elevation showing the details of the lock and air valve.

The invention briefly described consists of a storage receptacle or vault so constructed that the vault can be closed and sealed against the admission of air and having means for exhausting the air therefrom. Furthermore, there is provided an automatic control device whereby the desired degree of vacuum can be maintained in the vault. The door of the vault is provided with a locking member so constructed that when the locking member is turned in a direction to unlock the door air will be admitted to the vault, thus permitting the door to open.

Further details of the invention will appear from the following description.

In the particular form of the invention illustrated there is shown a receptacle or vault 10 having a compartment 11 extending partially accross the bottom thereof and a second compartment 12 also disposed at the bottom of the receptacle or vault.

The main storage chamber 13 is preferably provided with a rod 14 for supporting hangers and with a shelf 15 perforated as shown at 16.

Access to the chamber 13 may be had through an opening 20 having a packing or sealing strip 21 of suitable material disposed at the border of the opening. A door 22 is hinged at 23 and has an inwardly projecting portion 24 adapted at its outer edge to engage the packing or sealing strip 21 and seal the chamber.

The door is provided with a lock 28 having handles or arms 29 extending laterally therefrom and having a shank 30 extending through an apertured bos 31 through the wall 32 of the door and through an apertured boss 33 disposed within the door.

The boss 31 has a lateral opening 35 and boss 33 also has a lateral opening 36. The shank 30 of the lock has a longitudinal recess 38 adapted in one position of the shank to establish communication between the opening 36 in the boss 33 and the opening 35 in the boss 31.

The shank 30 also has formed on or secured to the inner end thereof a laterally projecting lug 40 adapted to extend behind the inner surface of the portion 41 of the receptacle wall, thereby locking the door in closed position.

The compartment 11 at the bottom of the casing has mounted therein a motor 45 preferably supported on a base 46 of resilient or cushioning material. The motor is connected to an exhaust pump 47, the intake of the pump having connected thereto an inlet pipe 48 which extends upwardly and communicates with an opening 49 in the upper wall 50 of the compartment 11. A screen 51 is preferably mounted over the opening 49. The pump 47 is also preferably supported on a base 46 of resilient or cushioning material.

In order to insure the maintaining of a vacuum within the receptacle or vault, means is provided for closing the motor circuit and operating the exhaust pump in case the proper degree of vacuum has not been maintained. In the form of the invention illustrated this means consists of a switch having one contact member 55 carried by a hinged plate 56 and another contact member 57 carried by the base 58 to which the plate or cover 56 is hinged. The member 56 has a vent or bleed hole 72 therein. The hinged member 56 and the base 58 are connected by flexible

sides 59 and 60 and by a flexible end 61. As shown in Fig. 1, one side of the power lead *x* is connected to the contact 55 and the other contact 57 is connected by a wire 65 to one of the motor terminals 66. The other side of the power lead *y* is connected to the other motor terminal 67.

The compartment 12 has a perforated cover 68 and communicates through the perforations with the chamber of the receptacle or vault. Access to the compartment 12 is provided for by a hinged door 70 so constructed that the door will seal the compartment against the admission of air. The door 22 may, if desired, be provided with a mirror as shown.

When the articles to be stored have been placed in the receptacle or vault, the door 22 is closed and the locking member 28 is turned so that communication between the openings 35 and 36 will be closed and the lug 40 will lock the door in closed position against the sealing or packing strip 21. The motor is then started, operating the pump and causing the air to be exhausted from the chamber 13. After the chamber has been exhausted the motor is stopped and will not operate again until sufficient air has leaked into the chamber and through the perforations in the cover 68 of the compartment 12 to cause the hinged member 56 to move downwardly a sufficient extent to engage the contact 55 with the contact 57. Movement of the hinged member 56 is permitted by reason of the bleed valve or opening 72. The motor will then be set in operation and will operate until the chamber has again been exhausted to such an extent that the hinged member 56 will rise, breaking the contacts 55 and 57. In this manner a vacuum will be maintained in the chamber, thereby insuring the garments or other articles therein against damage from moths, insects or other living organisms. Furthermore, since the locking member may be provided with any desired form of lock, the articles within the chamber or vault are insured against theft. The vault or receptacle is preferably formed of sheet steel or similar material, thus protecting the contents in case of fire.

Although one specific embodiment of the invention has been particularly shown and described, it will be understood that the invention is capable of modification and that changes in the construction and in the arrangement of the various cooperating parts may be made without departing from the spirit or scope of the invention, as expressed in the following claims.

What I claim is:

1. A storage receptacle having an opening to give access thereto, means for sealing said opening, a motor, an exhaust pump having an intake conduit communicating with the interior of said receptacle, a chamber communicating freely with the interior of said receptacle and having substantially the same pressure condition as the interior of the receptacle, and means including a motor circuit switch in said chamber responsive to the degree of vacuum therein for closing the motor circuit and starting the motor.

2. A storage receptacle having an opening to give access thereto, means for sealing said opening, a motor, an exhaust pump having an intake conduit communicating with the interior of said receptacle, a chamber communicating freely with the interior of said receptacle and having the same pressure condition as in said receptacle, and means including a motor circuit switch in said chamber responsive to the degree of vacuum therein for closing the motor circuit and starting the motor, said switch comprising a bellows having a movable leaf, a contact mounted on said leaf and a contact engageable therewith fixedly mounted relative to said leaf, said leaf being movable by pressure conditions in said chamber.

In witness whereof, I have hereunto set my hand this 2nd day of August, 1927.

WILLIAM A. SCHOLLMEYER.