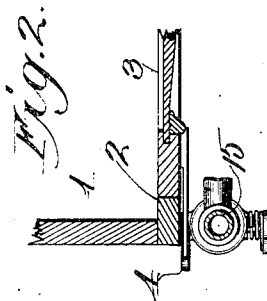
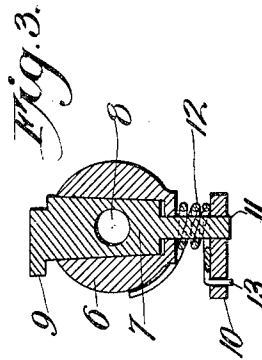
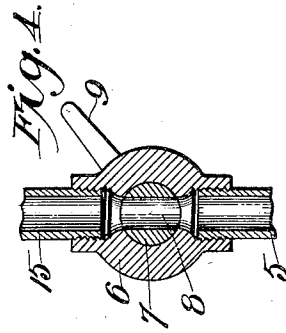
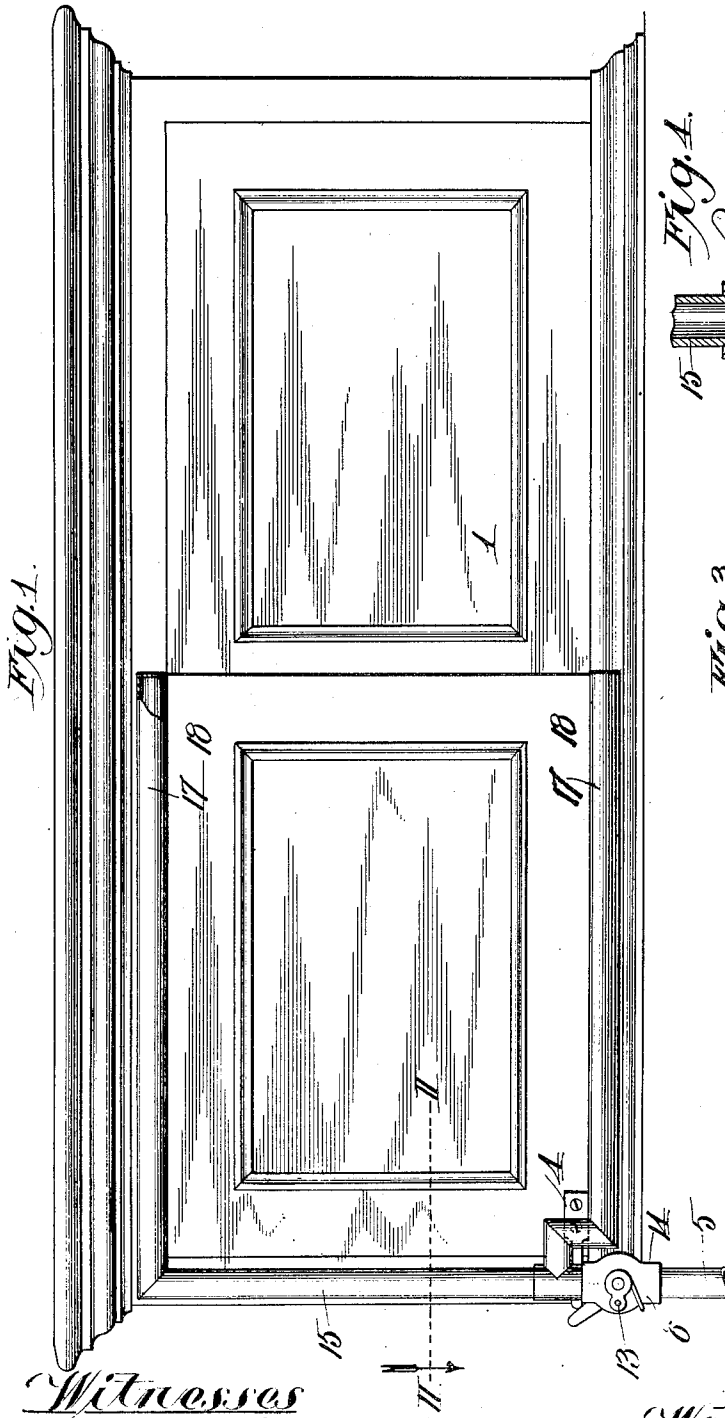


W. R. KIRK.
 FLY AND DUST PROOF SHOW CASE.
 APPLICATION FILED JAN. 11, 1909.

935,850.

Patented Oct. 5, 1909.

2 SHEETS—SHEET 1.



Witnesses
Frank R. Gore
H. Rodgers

By
Wm. H. Thorpe *att'y.*

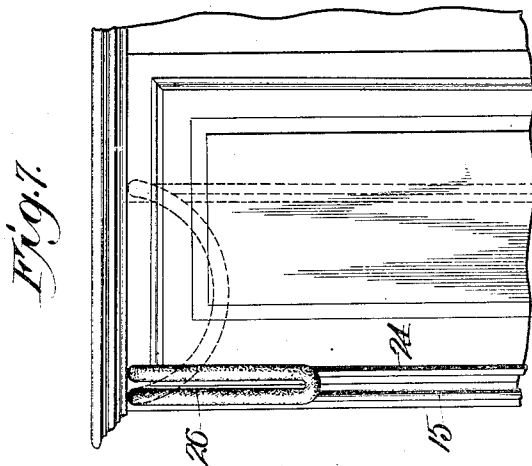
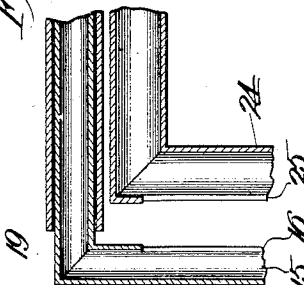
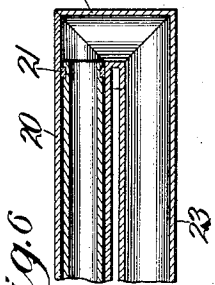
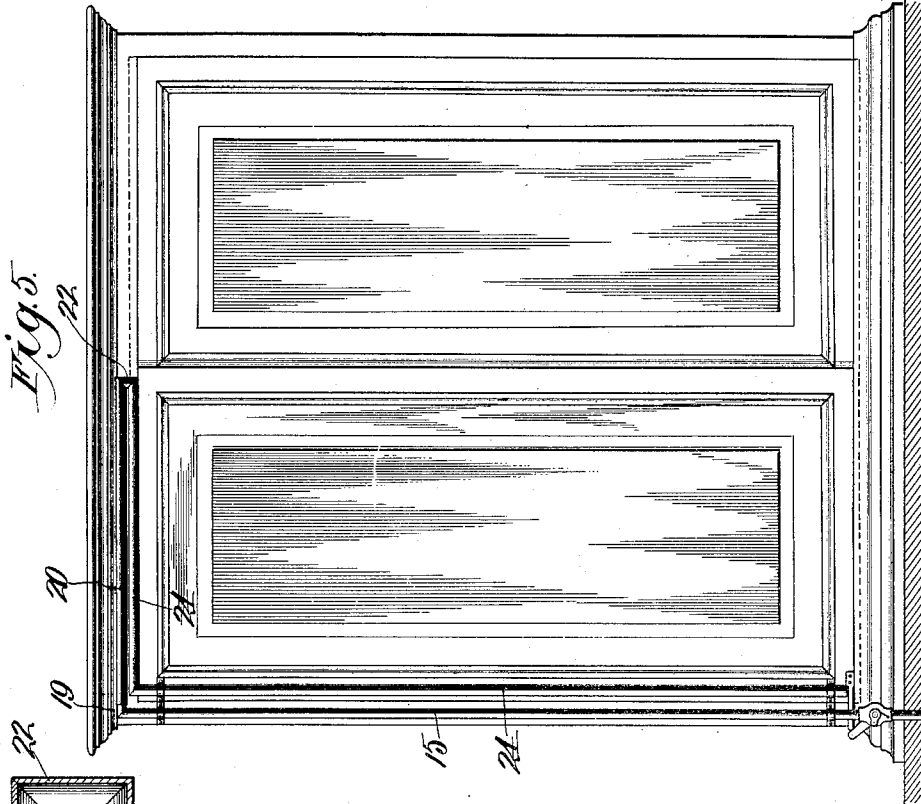
Inventor
Wallace R. Kirk

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2 SHEETS—SHEET 2.



Witnesses
Frank R. Gore
H. C. Rodgers.

Inventor
Wallace R. Kirk
By George G. Sharp Atty.

UNITED STATES PATENT OFFICE.

WALLACE R. KIRK, OF KANSAS CITY, MISSOURI.

FLY AND DUST PROOF SHOW-CASE.

935,850.

Specification of Letters Patent.

Patented Oct. 5, 1909.

Application filed January 11, 1909. Serial No. 471,801.

To all whom it may concern:

Be it known that I, WALLACE R. KIRK, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Fly and Dust Proof Show-Cases, of which the following is a specification.

This invention relates to fly and dust-proof show-cases and is designed more especially as an improvement on the similarly entitled device on which Patent No. 907609 was issued December 22, 1908 to myself and James C. Sanders, my special object in this connection being to produce a pipeway having a controlling valve adapted to open as the door of the case is opened and to close with the closure of the door.

A further object is to produce a structure of the character outlined in which the valve opens automatically and is closed through the instrumentality of the closing door.

A still further object is to produce an air-blast attachment for show-cases, of simple, strong, durable and inexpensive construction.

With these general objects in view, the invention consists in certain novel and peculiar features of construction and organization as hereinafter described and claimed; and in order that it may be fully understood reference is to be had to the accompanying drawings, in which:

Figure 1, is a rear view of a show-case embodying my invention. Fig. 2, is a horizontal section taken on the line II—II of Fig. 1. Fig. 3, is a horizontal section on an enlarged scale, of the valve and its casing. Fig. 4, is a vertical section of the valve and its casing. Fig. 5, is a rear view of a show-case of different style from that shown by Fig. 1, and equipped with a modified form of air-blast pipeway. Fig. 6, is a vertical section of the upper portion of said pipeway. Fig. 7, is a rear view of a portion of a show-case equipped with a second modified form of air-blast pipeway.

In the said drawings where like reference characters identify corresponding parts, 1 indicates a show-case equipped with an opening 2 and a slide-door 3 to cover or uncover said opening; said door having an arm 4 arranged by preference near and projecting from one of its lower corners.

5 indicates a pipeway for conducting air under pressure, from any suitable source of supply, and secured upon the upper end of

said pipeway is a valve-casing 6 equipped by preference with a rotatable plug-valve 7 having a passage 8 and a pair of crank-arms 9 and 10, the former being disposed in the vertical plane and path of arm 4 of the door. Arm 10 is secured on the opposite or reduced end 11 of the valve, which end projects through the rear wall of the casing, and mounted on said reduced end externally of the casing, is a helical spring 12 having one end secured as at 13 to arm 10 and its opposite end engaging the casing as at 14 so as to be incapable of movement, the tendency of said spring being to hold the valve open, as shown in Figs. 3 and 4.

15 indicates a pipe connected to the opposite end of the valve-casing from the supply pipe 5 and adjacent to one end of opening 2 of the casing and provided, in the construction shown by Figs. 5, 6 and 7, with an air-discharge passage 16 through which air may be forced adjacent to and in a direction substantially parallel with the plane of movement of the door. In Fig. 1, said pipe has no air-discharge passage 16 but is equipped at its ends with a pair of parallel pipes 17 having air-discharge passages 18 in their inner or adjacent faces, said passages extending for substantially the full length of said pipes 17 so as to be capable of discharging two thin sheets of air across the door opening from opposite sides thereof, to prevent flies or dust from entering the case through the door opening.

When the door is closed the arm 4 strikes valve-arm 9 and forces the same against the resistance of spring 12, from the position shown in Fig. 4 to the position shown in Fig. 1, in which latter position, the valve is closed and thus prevents air entering pipe 15 and its pipes 17. It will thus be seen that the valve begins to open simultaneously with the corresponding movement of the door so that the air-blast is produced as soon as the door begins to expose its opening, and that likewise, the air-blast continues until the door has completely bridged and covered the door opening.

Referring now particularly to Fig. 5, in which pipe 15 is provided in its side contiguous to the door, with an air-discharge passage 16, it will be seen that it is equipped at its upper end with a pipe 19 fitting telescopically in a pipe 20, a packing-ring 21 secured to pipe 19, engaging the inner surface of pipe 20 to establish an air-tight joint

between said pipes. Pipe 20 is connected by a tubular-joint 22 with a pipe 23 underlying pipe 20 and parallel therewith, and communicating with and depending from pipe 23 and secured by preference to the edge of the door adjacent to pipe 15, is a pipe 24 having an air-discharge passage 25 in its side adjacent to pipe 15. When the door is opened the valve, as hereinbefore described, opens also, and as a result air under pressure, enters pipe 15 and is discharged in a thin sheet toward and substantially parallel with the door opening. At the same time air passes around through pipes 19, 20, joint 22 and pipe 23 into pipe 24 and escapes from the passage of the latter in the opposite direction to the blast from pipe 15. It will thus be seen that as soon as the door starts to open the door opening is protected by the blasts of air from pipes 15 and 24.

In Fig. 7, the door is equipped as in Fig. 5, with a pipe 24 corresponding in all respects to pipe 24 of Figs. 5 and 6, but is connected at its upper end to pipe 15 by a flexible pipe 26 of sufficient length to extend in a substantially straight line when the door is fully opened. In a show-case where the door-opening is narrow, only one of the air-discharge pipes may be needed if the pressure is sufficient to cause the air-blast to completely bridge the opening when fully uncovered. Where the opening is wide however, it will be advisable to have air-blasts on both sides so that the two blasts together will completely cover or protect the opening, when fully exposed.

From the above description it will be apparent that I have produced a show-case embodying the desirable features of advantage enumerated in the statement of the object of the invention and which is susceptible of modification without departing from the spirit and scope of the appended claims.

Having thus described the invention what I claim as new and desire to secure by Letters-Patent, is:—

1. The combination with a show-case having an opening and a door to cover or expose said opening, of an air-supply pipeway, a valve controlling said pipeway, means whereby the closure of the door effects the closure of the valve, and an air-discharge pipe arranged adjacent to the door opening and adapted when the valve is opened, to discharge the air supplied by the pipeway, across and substantially parallel with the door opening.

2. The combination with a show-case having an opening and a door to cover or expose said opening, of an air-supply pipeway, a valve controlling said pipeway, means for opening the valve as the door is opened, and an air-discharge pipe connected to discharge the air supplied by the pipeway, across and substantially parallel with the door opening.

3. The combination of a show-case having an opening and a door to cover or expose said opening, an air-supply pipeway, a valve controlling the same, an air-discharge pipe to receive air when the valve is opened and discharge it across said opening, means for automatically opening the valve when the door is opened, and means movable with the door for closing and holding the valve closed when the door is closed.

4. The combination of a show-case having an opening and a door to cover or expose said opening, an air-supply pipeway, a valve controlling the same, a pair of air-discharge pipes arranged substantially parallel with two margins of the said opening and connected to receive air when the valve is open, yielding means for opening said valve when said door is opened, and means movable with the door, for closing said valve when the door is closed.

In testimony whereof I affix my signature, in the presence of two witnesses.

WALLACE R. KIRK.

Witnesses:

H. C. RODGERS,
G. Y. THORPE.