W. E. W. CHERRY.

STORE WINDOW.

APPLICATION FILED APR. 7, 1909.

943,812. Patented Dec. 21, 1909.

3 SHEETS—SHEET 1.

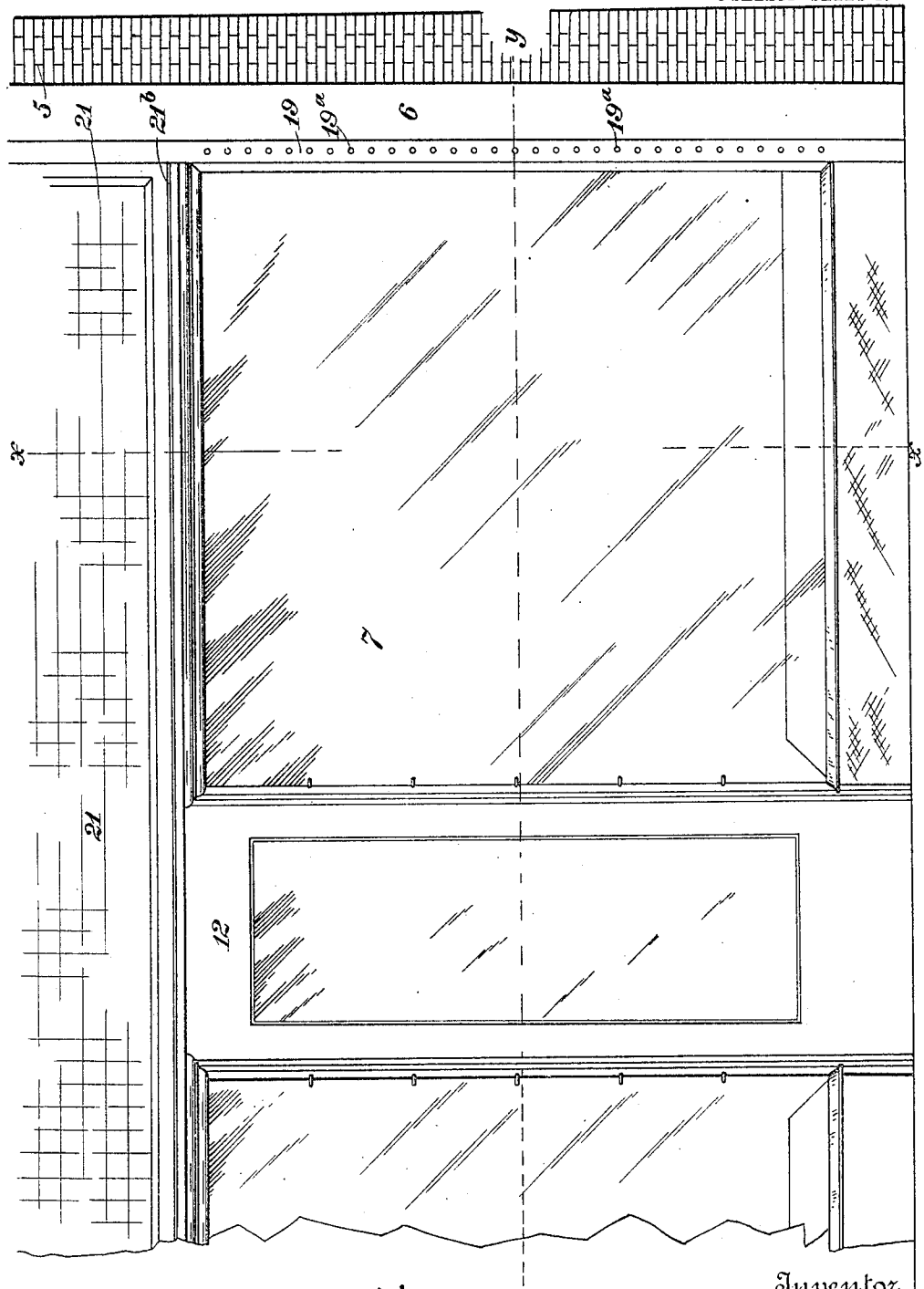

Fig. 1.

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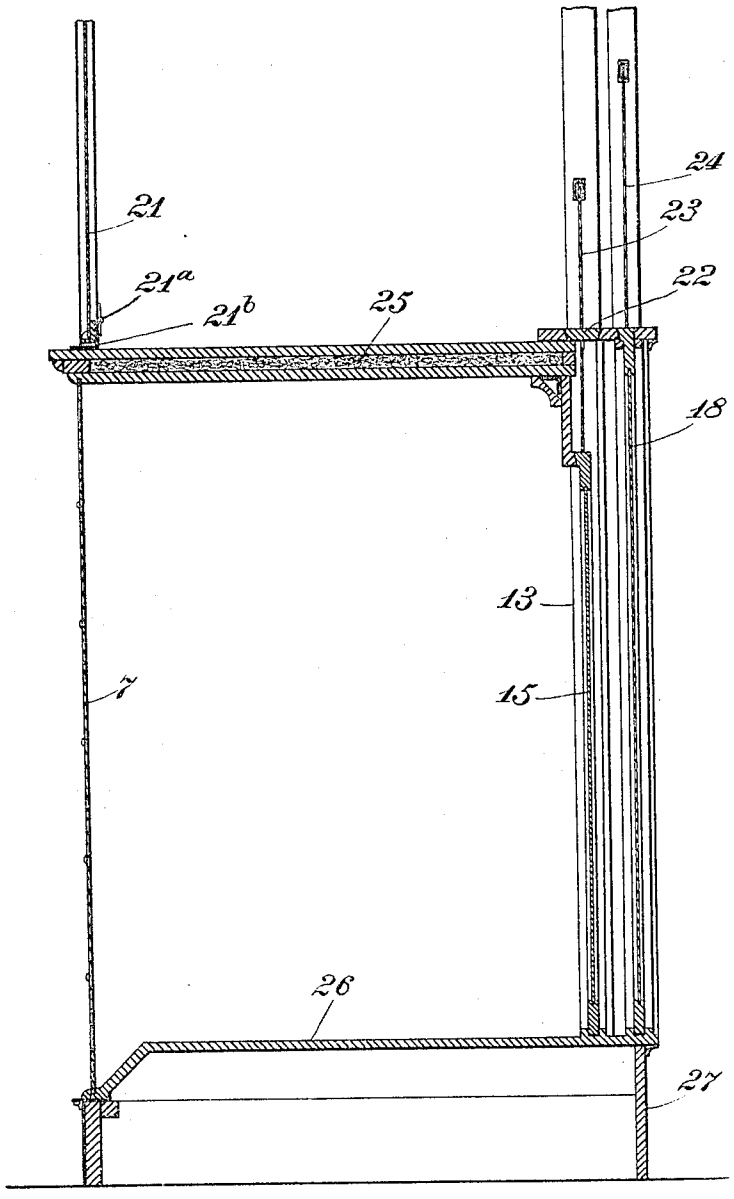

Fig. 2

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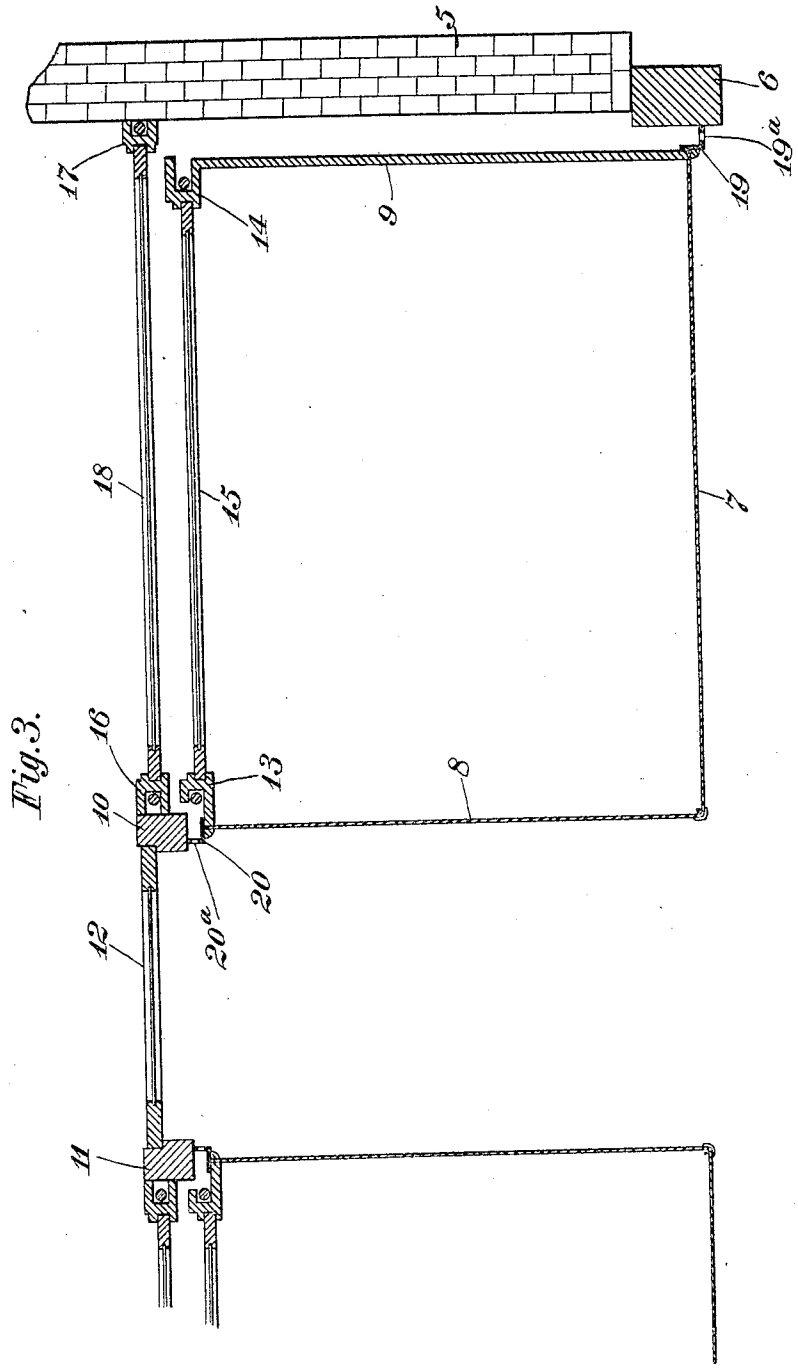

Fig. 3.

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UNITED STATES PATENT OFFICE.

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STORE-WINDOW.

943,812. Specification of Letters Patent. Patented Dec. 21, 1909.

Application filed April 7, 1909. Serial No. 488,356.

To all whom it may concern:

Be it known that I, WILLIAM E. W. CHERRY, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Store-Windows, of which the following is a specification.

The object of this invention is to provide a store window that shall not be subject to "frosting"—that is, to the freezing of moisture precipitated upon the glass—and shall at the same time be dust proof.

As I understand it "frosting" is due to considerable inequality between the temperature of the interior and that of exterior of the window. It has heretofore been proposed to keep the interior of a window at the street temperature by providing inclosed air spaces at the top, back and bottom of the window, said air spaces communicating with the air of the street and providing holes in the floor of the window to at all times admit street-air to the interior of the window. That such a construction is not dust-proof is quite apparent. In my invention I propose to use no orifices for admitting street or other air to the interior of the window after it is "dressed" and closed. I do not rely upon the admission to and circulation of street air in the window to maintain or assist in maintaining an equilibrium of temperature, but I employ an efficient insulation of a dust-tight structure and rely on conduction of heat from or to such a structure to maintain the desired equilibrium of temperature.

My invention is embodied in the construction herein shown, described and claimed, the invention not being confined to precisely the forms of the parts shown.

In the accompanying drawings—Figure 1 is an elevation of a store front as it appears from the street, a portion of the show window at one side of the doorway being omitted. Fig. 2 is a vertical section of the window or front on say line *x*—*x*, Fig. 1. Fig. 3 is a horizontal section on say line *y*—*y*, Fig. 1.

Like characters of reference in the several views designate corresponding parts.

The character 5 designates the side wall of the building, and 6, a column set into or against said wall. In the form of window shown there are in each large glass panes 7 and 8 set at angles to each other with their meeting edges secured together by any suitable well-known dust proof devices. Set off from the wall 5 so as to leave a vertical air space is a wall 9.

10 and 11 designate the vertical pieces of the door frame of the entrance to the store and 12 is the door hung in said frame.

13 and 14 designate vertical pieces of a frame to receive a vertically sliding door 15 constituting the back wall of the window, and 16 and 17 designate vertical pieces of a frame to receive a vertically sliding door 18. The panes are secured to the frame piece 13 and wall 9 with dust-tight joints, and the frame piece 14 is connected with the inner edge of the wall 9 with a dust tight joint. The sliding door 15 is fitted dust tightly in the frame pieces 13 and 14. The frame pieces 16 and 17 are set respectively against the door frame and wall 5 and sufficiently in the rear of the door 15 to leave an air space between the two doors, and the door 18 is designed to exclude cold air from the store room. The spaces between the sliding doors and the walls 5 and 9 are shown to communicate. There is an important advantage in setting the wall 9 off from the wall 5 so as to provide the vertical air space between them in that the heat of the wall 5 is not, especially in winter, transmitted to any considerable degree to the show window. Along the front of the air space between the walls 9 and 5 is secured an angle bar 19 having a series of air holes 19^a which can be screened, if desired, to prevent the admission of lighted matches &c. into the air spaces. Along the space between the frame pieces 10 and 13 is secured another similar angle bar 20 provided with air holes 20^a which can also be screened. It will therefore be observed that street air has free access to two vertical air spaces, the outer edges of which are provided with the perforated vertical angle bars, and that these vertical air spaces effectually insulate from the building the vertical inclosing walls at those sides of the show window nearest the heated parts of the building.

In the form of store window shown a transom glass for admitting light to the store is provided at the front of the building over the window as seen at 21. This transom window can be hinged as seen at 21^a. A single angle bar 21^b extending entirely across the top of both windows and the doorway furnishes a strong support for the transom.

Access to the window for the purpose of

"dressing" it can be provided for in any suitable way, but where sliding doors like those designated 15 and 18 are employed it is important that the opening at the upper portion of the air space between them be closed not only to prevent cold air from entering the store room but to prevent the heated air of the store room from heating the store window. I therefore provide at the upper end of said air space a cover piece 22 having beveled longitudinal edges to fit on a correspondingly beveled seat at the upper edge of the air space between the sliding doors. This cover piece fits at its ends in the grooves in which the door slides and is carried up and down by the door as it is raised and lowered. Each of the sliding doors can, if desired, be provided with counter-balancing weights, cords of which are shown at 23 and 24 respectively Fig. 2.

The roof of the show window can be insulated from the heat of the store by any suitable insulating material—asbestos or mineral wool, for example—as seen at 25. The joints of the glass panes with the roof are made dust proof, as is also the lap or bevel joint where the top of the sliding door 15 fits against the inside framing at or near the roof. The joint between the ceiling or roof of the window with the side wall 9 is also made dust tight.

The floor 26 of the show window is somewhat elevated above the floor of the store, as is the usual practice. Its underside is protected from access of heat from the store room by a wash board or wall 27. The joints of the glass panes with the floor are made dust tight as is also the joint of the floor with the wall 9. I obtain very satisfactory results without admitting street air below the floor of the window, although such air can be admitted by making suitable openings in the front and side bases of the structure. Floors, unless heated from below, are proverbially cold. Where the window 15 rests on the floor it can be provided with a strip of felt to keep out dust.

It will thus be observed that the store window was thus constructed is thoroughly insulated from the heat of the building and is surrounded on those sides nearest to and most likely to be heated by jackets of circulating street air and at the same time is dust proof at all points. The temperature of the interior of the show window varies with and always approximates to that of the street but not by reason of the access or circulation of the air of the street within the interior of the window but by reason of the conduction of heat through the various walls of the window to or from the air confined in the interior of the window. By this means much of the injury to or deterioration of valuable goods exhibited in show windows by reason of dust and smoke is avoided.

What I claim is:

1. In combination with a building having a vertical side or partition wall, 5, an inclosed window of dust-tight construction throughout built adjacent said side or partition wall, and means for insulating said window from the heat of the building including an inclosed air space between the said window and the side or partition wall, said air space communicating with the atmosphere.

2. In combination with a building having a vertical side or partition wall, 5, an inclosed window of dust-tight construction throughout built adjacent said side or partition wall, and means for insulating said window from the heat of the building including an inclosed air space between said window and said side or partition wall said air space communicating with the atmosphere, and an air space at the rear of the window, the latter communicating with the first mentioned air space.

3. In combination with a building having a vertical side or partition wall, 5, an inclosed window of dust-tight construction throughout built adjacent said side or partition wall, said window including the vertical wall, 9, insulatedly separated from the said side or partition wall.

4. A store window of dust tight construction having at its rear a double wall forming an air space and including an inner vertically sliding wall or door, means whereby street air is admitted to said space combined with a closure moved by the door to close the opening at the upper portion of said air space.

WILLIAM E W. CHERRY.

Witnesses:
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