J. R. McDONALD.

SCREEN.

APPLICATION FILED SEPT. 22, 1910.

990,578. Patented Apr. 25, 1911.

Fig. 1.

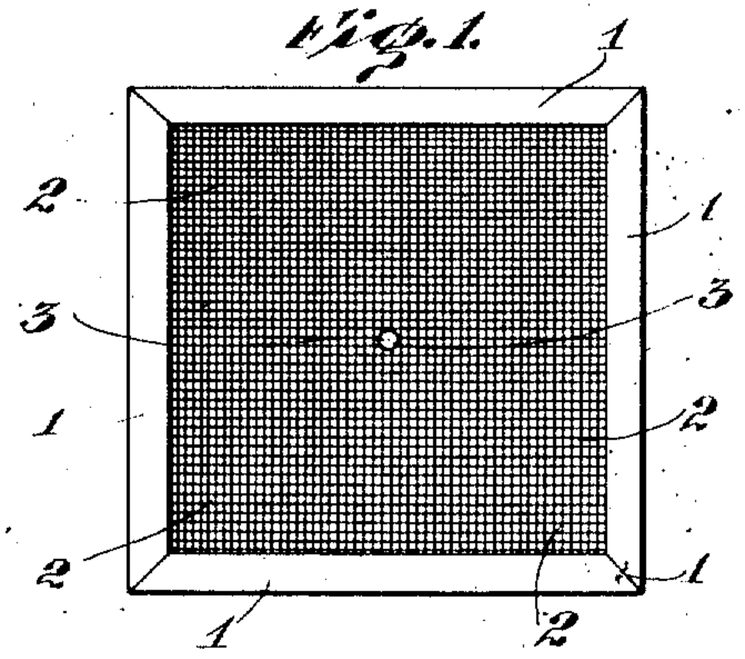


Fig. 2.

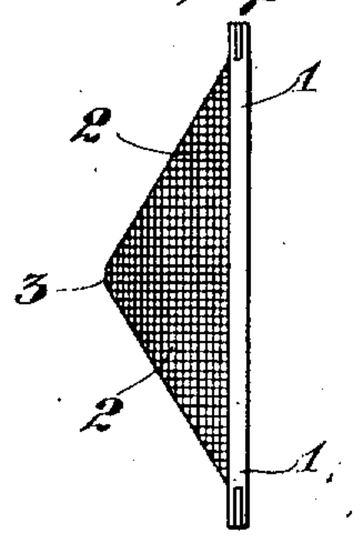


Fig. 3.

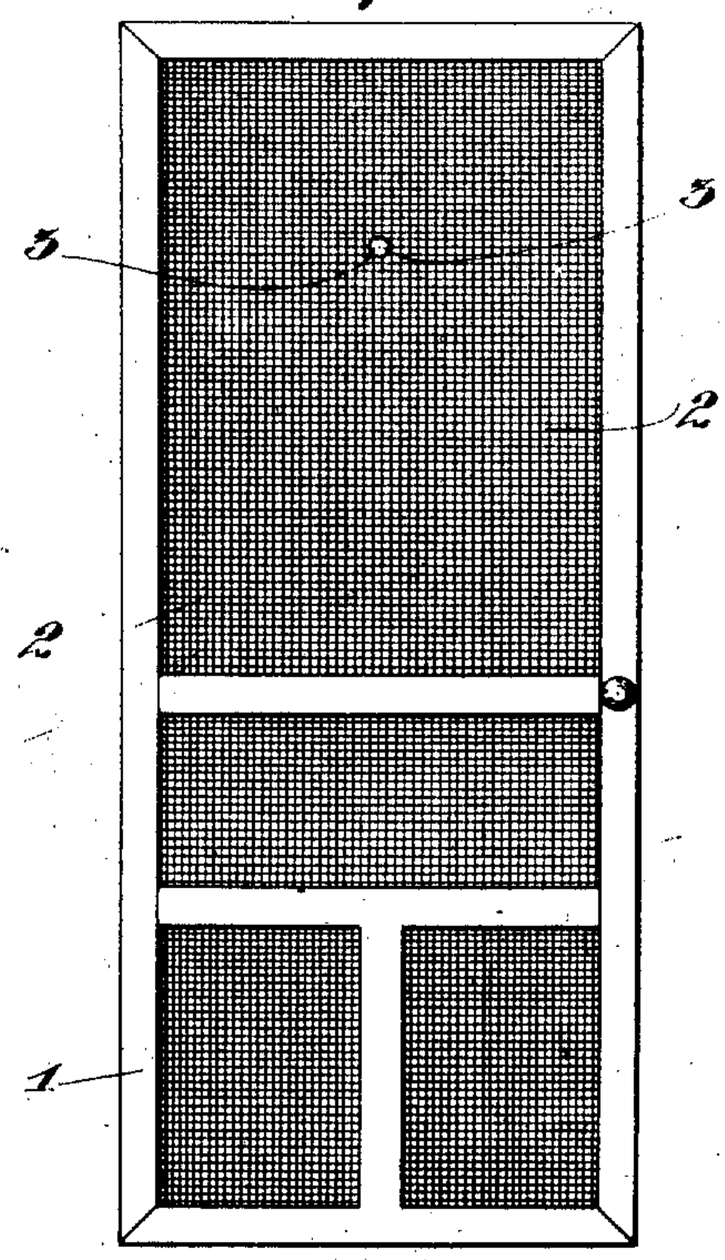
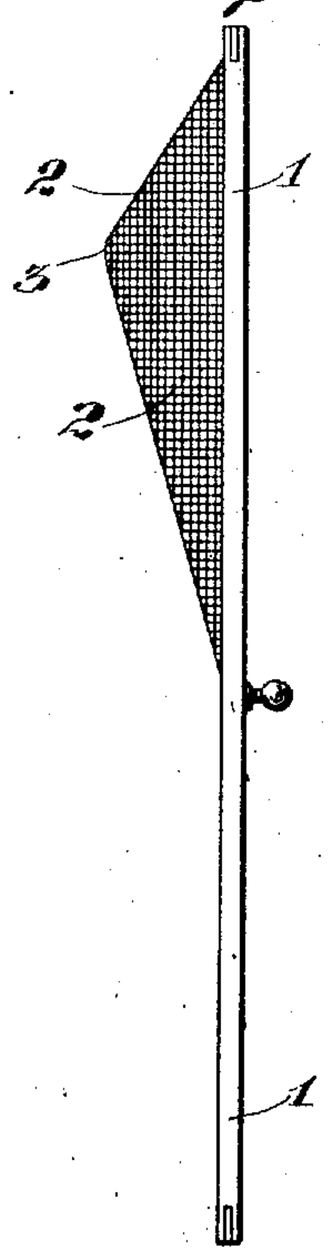


Fig. 4.



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SCREEN.

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To all whom it may concern:

Be it known that I, JOHN R. McDONALD, a citizen of the United States, and a resident of Circle, in the county of Fremont and State of Wyoming, have invented certain new and useful Improvements in Screens, of which the following is a clear, full, and exact disclosure.

My invention relates to screens used for protecting rooms, refrigerators, or other inclosed or partly inclosed spaces from flies or other insects. I have observed that when insects light on screens they are usually trying to either escape or enter the screened compartment and will readily be guided by a slight inclination of the screen.

One object of my invention is to take advantage of this observation and to provide a screen which can be cheaply made and which will facilitate all insects lighting on its inner surface to escape and at the same time will prevent insects from entering.

A further object of my invention is to so construct the screen that it will not obstruct the view of persons looking through it at an angle to the screened opening as is the case with screens of ordinary construction.

Referring to the drawing accompanying and forming a part of this specification, Figure 1 is a front elevation of a screen embodying my improvements. Fig. 2 is a side elevation of the same. Fig. 3 is an elevation of a door in which is fixed a modified form of screen embodying my invention. Fig. 4 is a side elevation of the same.

Referring in detail to the structure shown in Figs. 1 and 2, numeral 1 designates a frame of any approved construction suitable in size to fit the opening to be screened and in which is secured the screen 2. The latter is made preferably of wire gauze and is concave or bulged outwardly from the chamber to be protected and has a hole 3 at the apex. For common house flies this hole should be about three-eighths of an inch in size, while for other insects its size may be varied with the size of the insect. The inclination of the surface of the screen on its inner side, due to its conical or concave form on that side, guides the flies or insects toward the hole in the center through which they can readily pass, while the inclination of the screen on the outside guides them away from the opening. I have found an inclination of about thirty degrees for the screen surface to be satisfactory, though larger or smaller angles may be employed. It will be seen that with this construction, the insects wherever they light on the inner surface of the screen, are induced by the inclining surface to pass along the screen in the direction of and through the opening without being made to change their course or encountering projections, obstructions or angles of any kind which would divert them from their course. It will also be observed that a person on the inside of the screen, owing to its bulged construction, can see through it in all directions and it is not necessary to raise the screen in order to observe objects at one side of the screen. The screen 2 in the door shown in Figs. 3 and 4 is the same as that above described, except that the exit opening 3 is located near the upper side of the screen, which arrangement is an advantage in some cases due to the tendency of insects to travel toward the upper side of the screen after lighting. This form is also desirable in some cases because the bulged or projecting part of the screen is raised so high that it will not inconvenience users of the door. In some cases where long horizontal openings such as transoms are to be screened, a plurality of screens such as that shown in Fig. 1 may be placed side by side or a single screen may be formed with a plurality of bulges and corresponding openings.

While I have illustrated and described a screen made of wire gauze, it is obvious that it may be made of other material such as sheet metal or even of glass and may be perforated or solid.

It will be observed that my screen can be formed by stamping or otherwise out of a single sheet of gauze and may be secured in a frame of ordinary construction and is free of complicated parts and unsightly attachments.

Other modifications may be made in my improved screen without departing from the spirit of my invention or the scope of my claims.

What I claim is:

1. A device of the kind described, comprising a frame, a screen secured therein bulged outwardly, with an opening at the apex of the bulge, the inner surface of the screen being unobstructed and inclined out-

wardly from the sides of the frame to the opening, substantially as described.

2. A device of the kind described, comprising a frame, a cone-shaped screen secured therein with an opening at the apex, the inner surface of the screen being unobstructed and inclined outwardly from the sides of the frame to the opening, substantially as described.

JOHN R. McDONALD.

Witnesses:
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