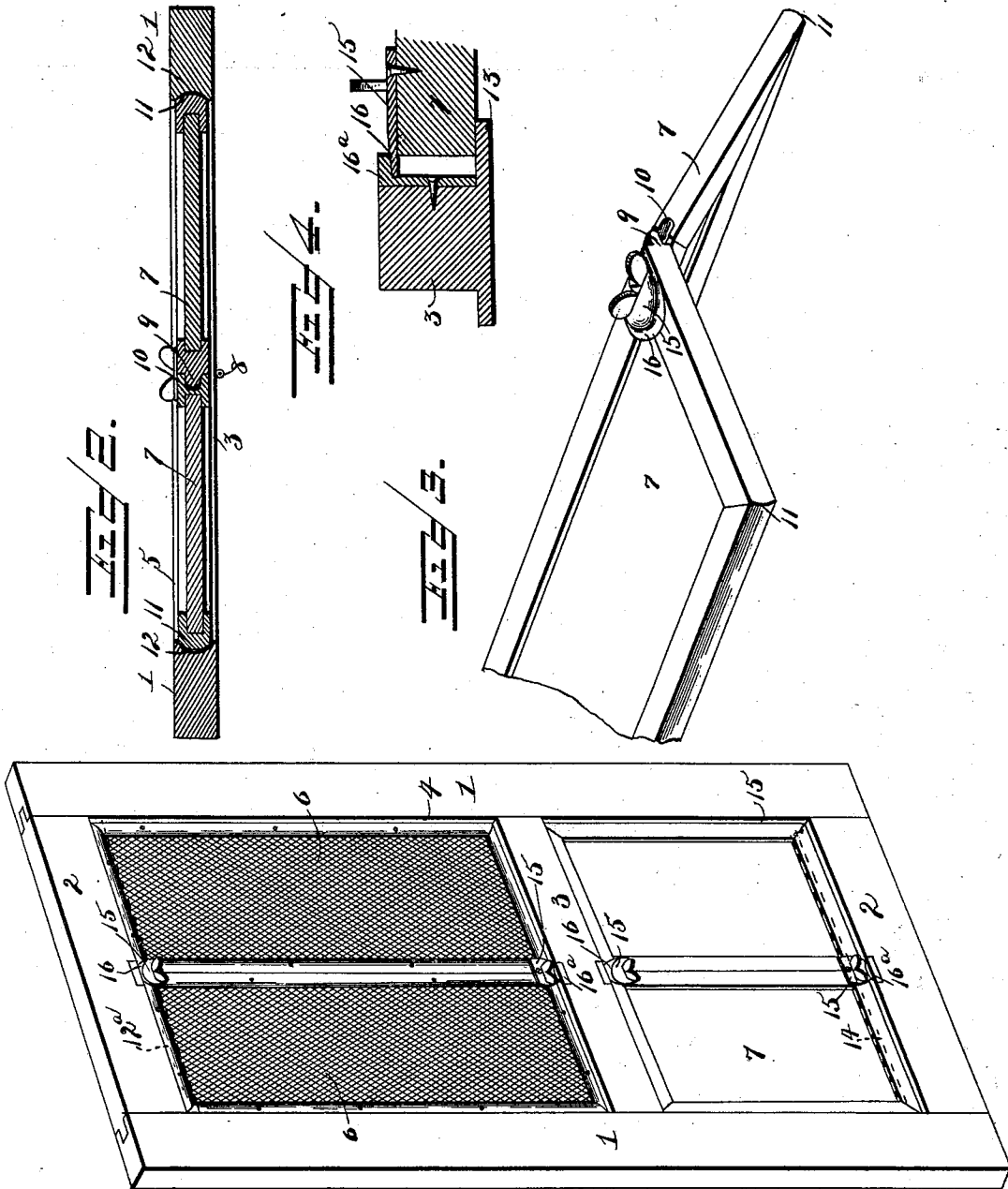


(No Model.)

C. R. MOORE.
COMBINED SCREEN AND STORM DOOR.

No. 507,151.

Patented Oct. 24, 1893.



Witnesses

W. O. Schneider
N. H. Riley

Inventor
Charles R. Moore.

By his Attorneys,

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UNITED STATES PATENT OFFICE.

CHARLES R. MOORE, OF NEWPORT, VERMONT, ASSIGNOR OF ONE-HALF TO
OREM NEWCOMB, OF SAME PLACE.

COMBINED SCREEN AND STORM DOOR.

SPECIFICATION forming part of Letters Patent No. 507,151, dated October 24, 1893.

Application filed March 3, 1893. Serial No. 464,488. (No model.)

To all whom it may concern:

Be it known that I, CHARLES R. MOORE, a citizen of the United States, residing at Newport, in the county of Orleans and State of Vermont, have invented a new and useful Combined Screen and Storm Door, of which the following is a specification.

The invention relates to improvements in doors.

The object of the present invention is to provide a simple and inexpensive door, which may be readily converted into a screen door for summer, and a storm door for winter, and from which the screens will be entirely removed when used as a storm door.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended.

In the drawings—Figure 1 is a perspective view of a door constructed in accordance with this invention, the screen panels being shown at the top of the door and the solid or storm panels being in position at the lower portion of the door. Fig. 2 is a transverse sectional view. Fig. 3 is a detail perspective view of a pair of panels. Fig. 4 is a detail sectional view showing the catch.

Like numerals of reference indicate corresponding parts in all the figures of the drawings.

1, 1 designate side bars of a door frame, which is composed of the said side bars 1, top and bottom bars 2 and a transverse bar or muntin 3, and which forms upper and lower rectangular panel openings 4 and 5, adapted for the reception of hinged screen panels 6 and solid or storm panels 7, whereby the door may be converted into a storm door for winter and into a screen door for summer. In the accompanying drawings, Fig. 1 shows solid panels at the bottom and screen panels at the top, but in practice the door will preferably have all screen or solid panels; and this construction enables all evidences of a screen door to be removed for winter and to avoid exposing the screen when not in actual use. Each set of panels is connected at the adjacent edges of the panels by hinges 8 and has the adjacent edges, which meet when the

panels are in position, provided with a tongue 9 and a groove 10, the tongue being preferably of less depth than the groove to provide an air space. The outer edges 11 of the panels of each set are rounded and are adapted to fit in curved grooves 12 of the sides 1 of the door frame; and the top and bottom edges of the panels are straight and fit against flat faces of the top, bottom and transverse bars which are provided with flanges 12^a, 13, and 14. The grooves 12 are preferably struck on a greater curve than the edges 11 of the panels, and the parts are proportioned so that the panels have to be inserted at a slight angle to each other, and require to be forced in alignment and in position to effect a tight joint. The panels are locked in position at the top and bottom by a segmental cam plate 15, which is provided with a rounded beveled edge 16, and which is adapted to engage an oppositely beveled keeper 16^a. When the pivoted plate or catch 15 is in engagement with the keeper 16, it extends over a portion of both of the panels of the set and secures them in alignment at the same time securing the panels in the door frame. The oppositely beveled inner face of the keeper 16 acts like a wedge and forces the panels tightly in position.

It will be seen that the door is simple and inexpensive in construction, that the panels are adapted to be readily changed to convert the door either into a screen or storm door, and that when used as a storm door the screens are entirely removed to prevent exposure to weather.

Changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

1. In a door, the combination of a frame composed of sides provided at their inner edges with curved grooves, top and bottom pieces provided respectively at their lower and upper edges with flanges and a transverse piece forming upper and lower panel openings and provided with flanges arranged at its upper and lower edges, the sets of panels having their inner edges hinged together and

provided with outer rounded edges to fit said curved grooves and engaging said flanges, keepers arranged on the frame at the tops and bottoms of the panels at the hinged edges thereof, and fastening devices arranged at the ends of the panels at the hinged edges thereof and engaging both panels of each set and the adjacent keepers, substantially as described.

2. In a door, the combination of a frame having a panel opening, a set of panels having their adjacent edges hinged together and adapted to fit in the panel opening, a keeper arranged on the frame adjacent to the hinged edges of the panels, and a plate pivoted to the inner edge of one of the panels and engaging the keeper and extending over the adjacent panel, substantially as described.

3. In a door, the combination of a frame having a panel opening, a set of panels having their adjacent edges hinged together and adapted to fit in the panel opening, a keeper arranged on the frame adjacent to the hinged

edges of the panels and having its inner face oppositely beveled, and a plate pivoted to one of the panels at the hinged edge thereof and having a curved beveled edge engaging the keeper, said plate extending over the adjacent panel, substantially as described.

4. In a door, the combination of a frame having a panel opening, a set of panels having their adjacent edges hinged together, a keeper arranged on the frame adjacent to the hinged edges of the panels and having its inner face oppositely beveled, and a segmental plate pivoted to one of the panels and extending over the adjacent panel and having its curved edge beveled to engage the keeper, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CHARLES R. MOORE.

Witnesses:

F. E. BEMIS,
GEO. F. ROOT.