

(No Model.)

W. T. GREGG.
DOOR.

No. 473,625.

Patented Apr. 26, 1892.

FIG. 2-

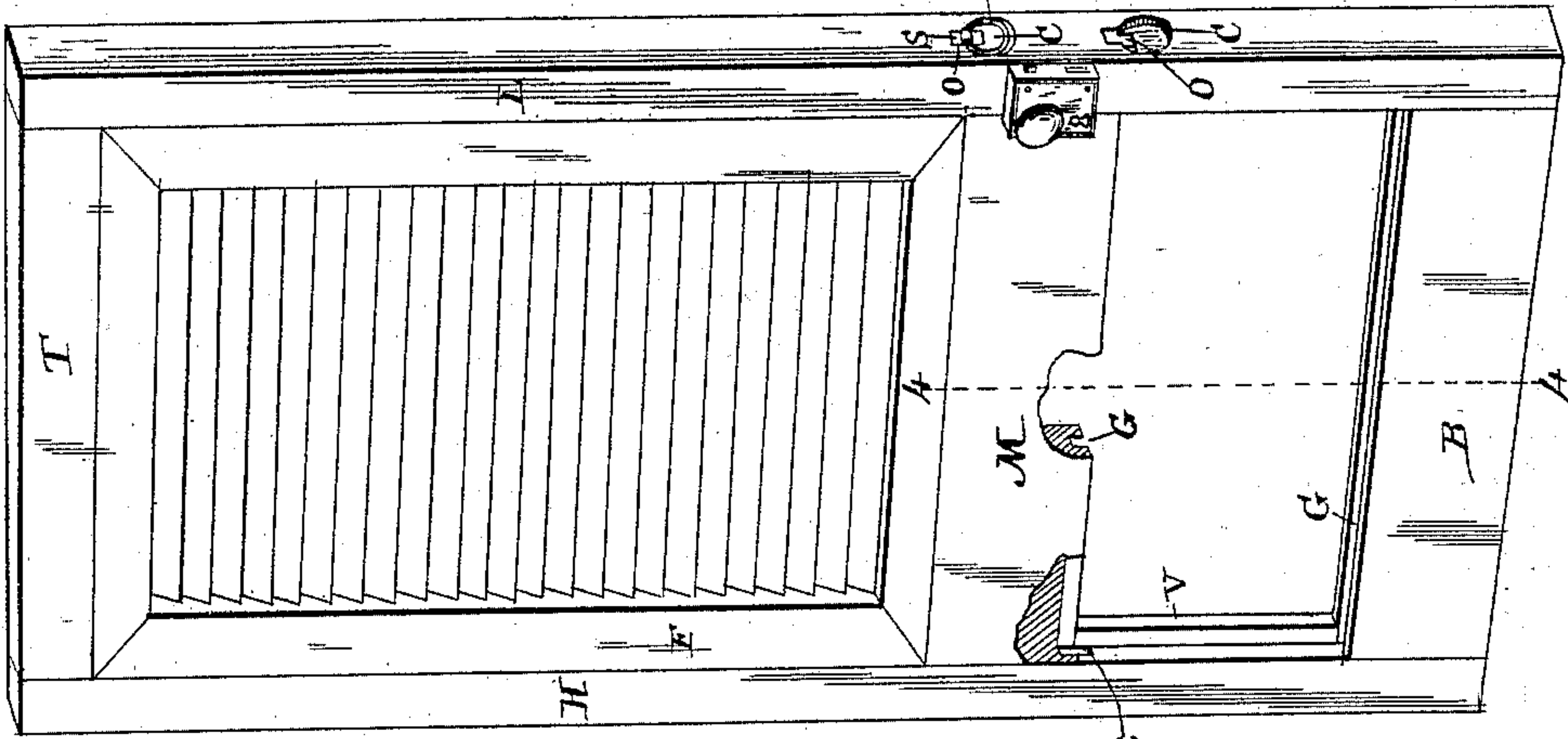


FIG. 3-

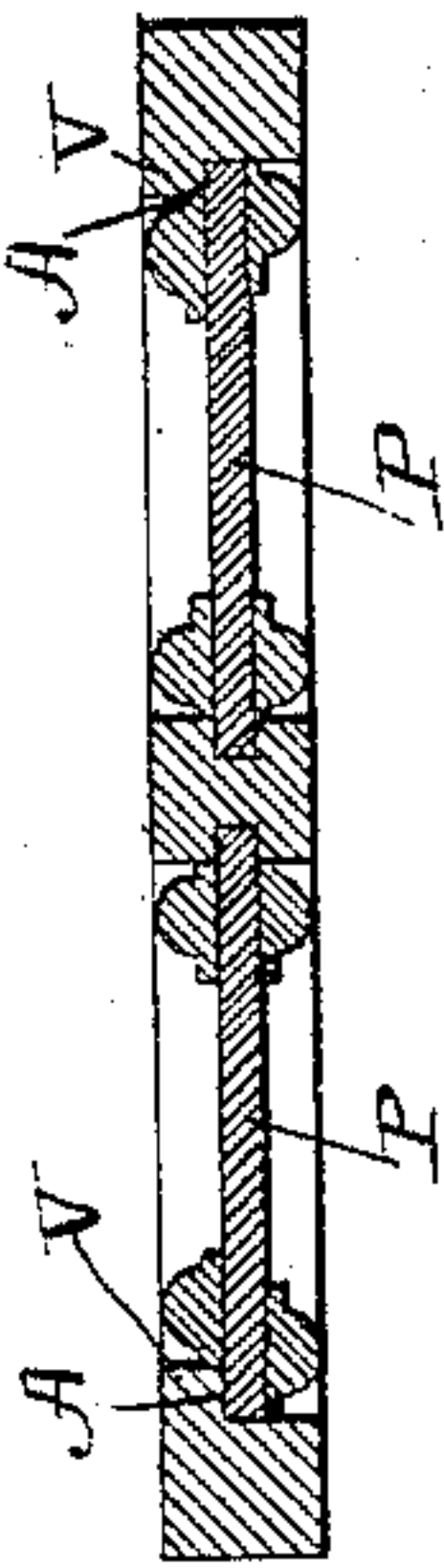


FIG. 4-

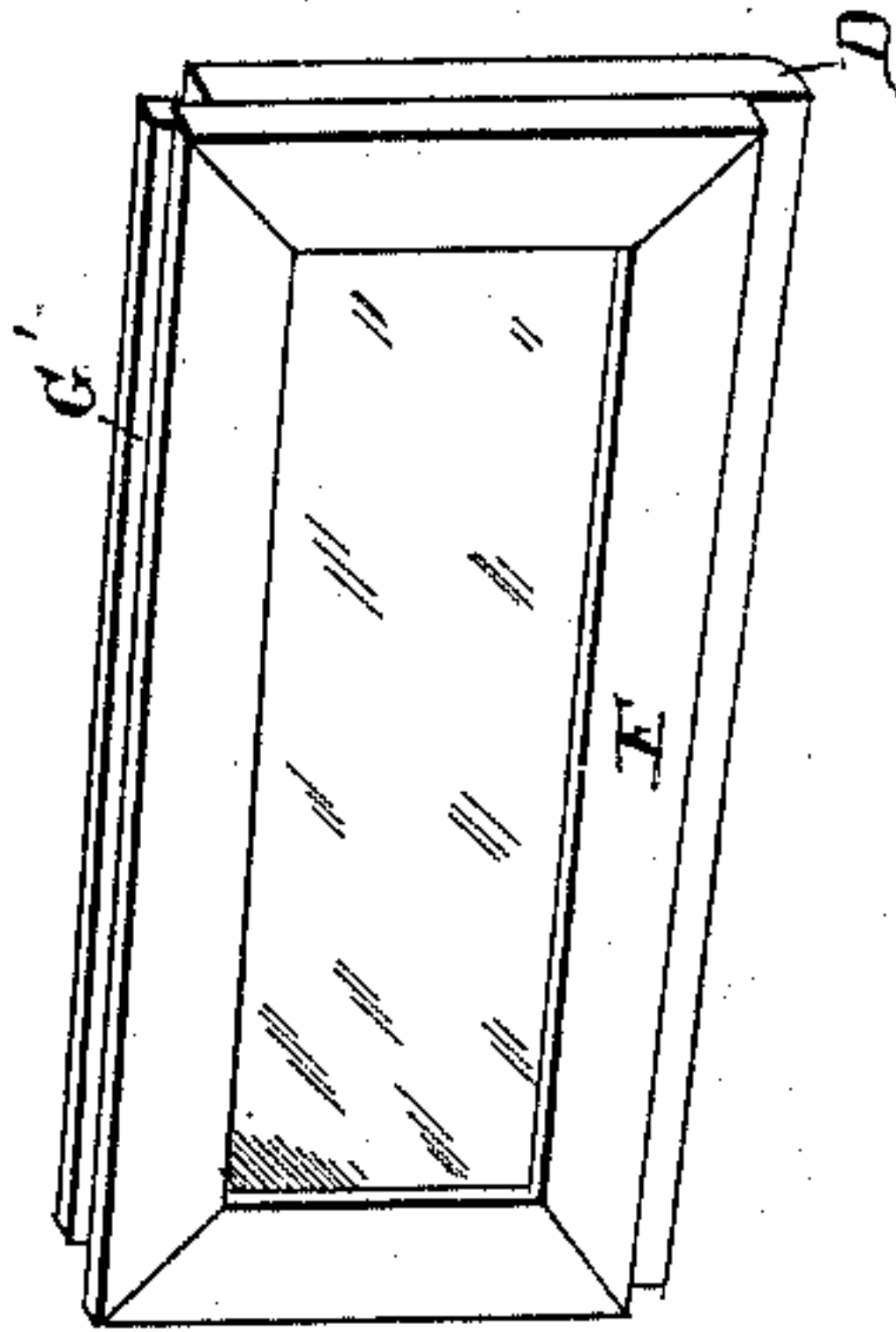
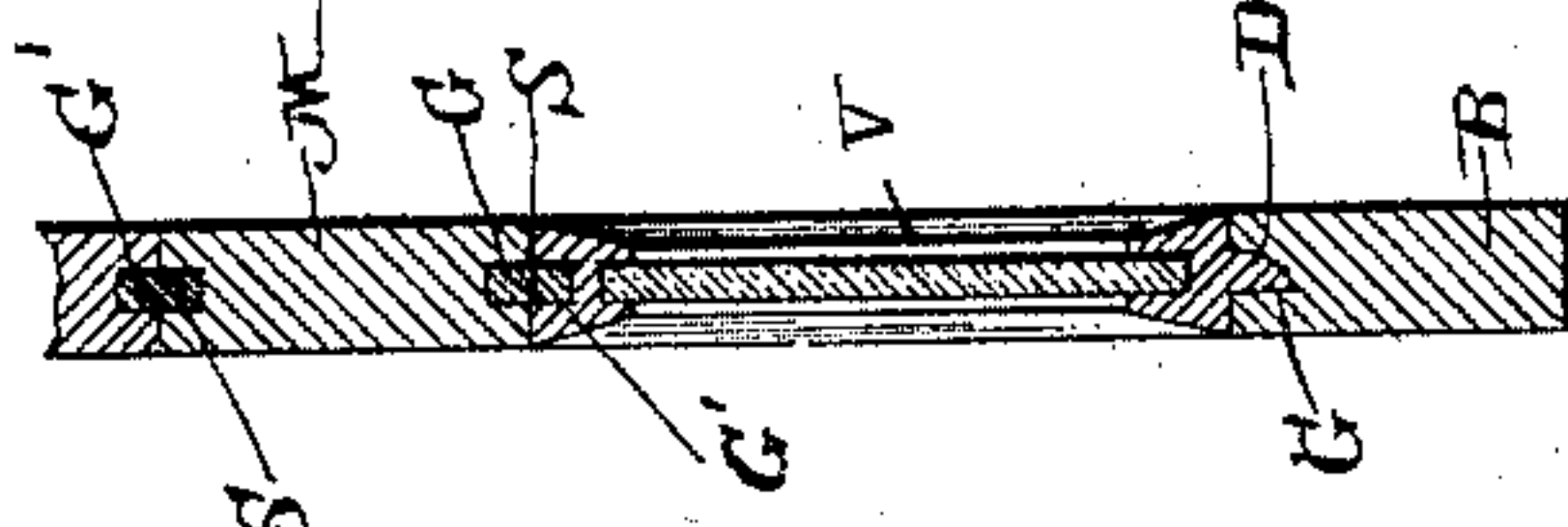
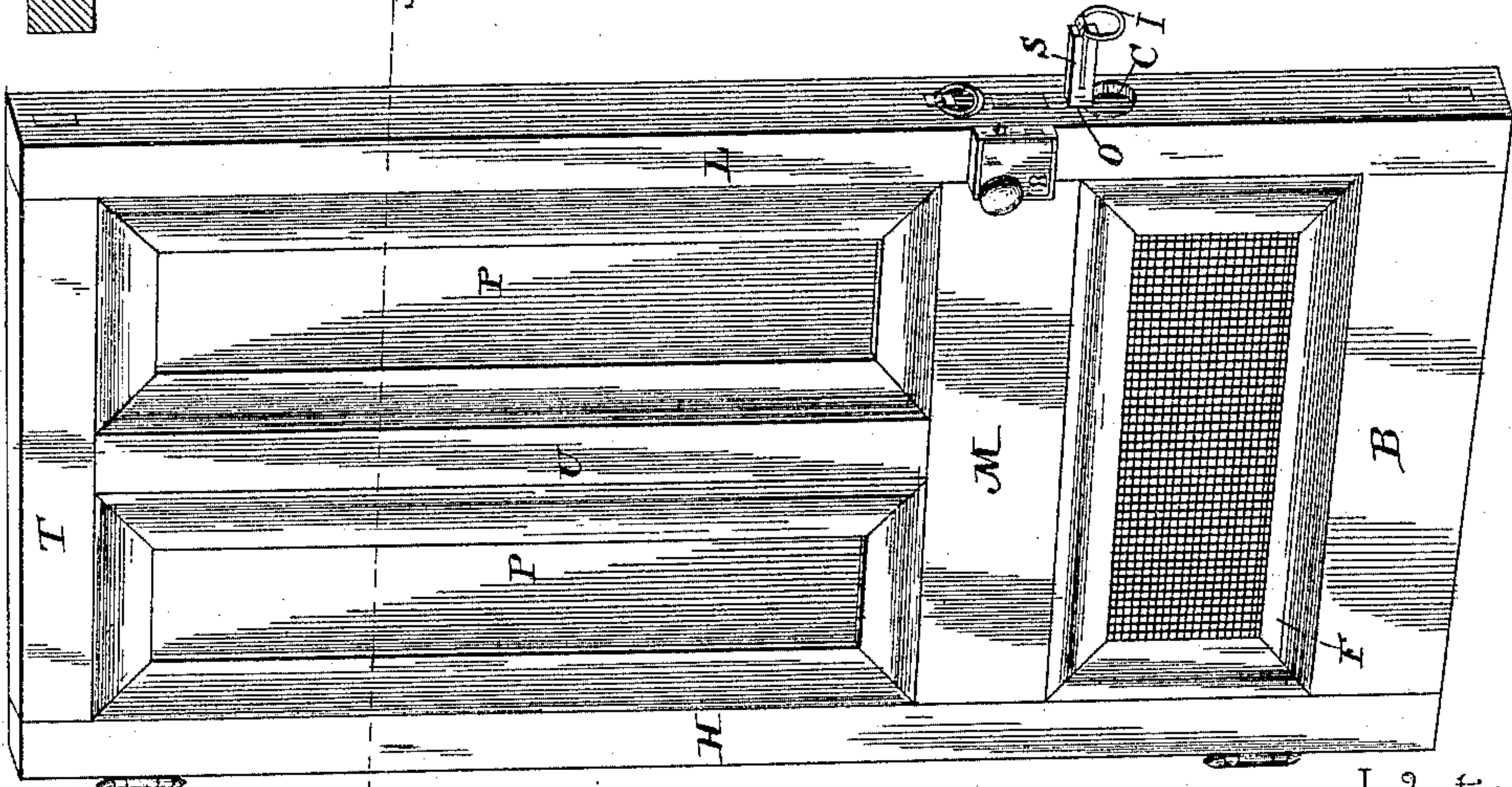


FIG. 1-



Witnesses

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Inventor

Jas. H. McLathran

By his Attorneys,

W. T. Gregg

A. J. Collamer

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM TURNER GREGG, OF LAKEPORT, CALIFORNIA.

DOOR.

SPECIFICATION forming part of Letters Patent No. 473,625, dated April 26, 1892.

Application filed July 14, 1891. Serial No. 399,482. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM TURNER GREGG, a citizen of the United States, residing at Lakeport, in the county of Lake and State of California, have invented a new and useful Door, of which the following is a specification.

This invention relates to doors; and the object of the same is to render the door convertible from its usual paneled construction into a glass, blind, or screen door.

To this end the invention consists in the construction hereinafter more fully described and claimed, and as illustrated on the accompanying sheet of drawings, wherein—

Figure 1 is a perspective view of this improved door, showing panels in its upper portion and a wire screen in its lower portion. Fig. 2 is a similar view showing slats in the upper portion and a glass panel removed from the lower portion and turned so as to exhibit the edge of the panel. Fig. 3 is a horizontal section on the line 3 3 of Fig. 1. Fig. 4 is a vertical section on the line 4 4 of Fig. 2.

Referring to the said drawings, the letters T, M, and B designate, respectively, the top, middle, and bottom rails of a door-frame, which are connected at their ends with the hanging-stile H and the lock-stile L, as is usual in the construction of doors, and above and below said middle rail are openings wherein the panels are usually inserted. Heretofore provision has been made for removing said panels and substituting therefor screens or blinds, securing the same removably in place by various means; and the present invention contemplates the provision of securing means for this purpose which cannot be manipulated to remove the panel, window, screen, or blind sections when the door is closed. At the sides of the said openings in the door-frame are vertical beads V, standing flush with the outer face of the frame. In both horizontal edges of each opening are grooves G.

R is a recess in the hanging-stile at the end of the groove G in each edge of the middle rail, and O are openings through the locking-stile opposite the other ends of these grooves, a cavity C being formed in the outer edge of said locking-stile just below each opening O.

The various sections which are adapted to be secured detachably in the openings in the

door-frame may be of glass, netting, panels, or stationary or movable slats, and they may be in one panel or more, in which latter case the muntin U is removable with the section, there being but two sections, as shown, one above and the other below the middle rail M. If the section contains panels P, it will have no frame; but if it contains anything else it will be provided with a frame F. This frame (or the sides of a paneled section) is of the following construction: Its vertical edges are cut away, as at A, so that when it is inserted in the door-frame the angles formed at these cut-away edges will strike the vertical beads V on the hanging and locking stiles, as seen in Fig. 3. At the lower edge of the frame is a depending tongue D, which fits the groove G in the bottom rail B, or this tongue D projects upwardly from the upper edge of the panel or section at the upper portion of the door and passes into the groove G in the top rail T. The other horizontal edge of the section—that is, the edge adjacent the middle rail M—is provided with a groove G', registering with that in the middle rail when the section is in place.

S is a locking bar or strip of rectangular cross-section, of a size adapted to pass through the opening O and to fit in the registering grooves G and G', and of such length that when its tip rests in the recess R in the hanging-stile its outer end will be flush with the outer edge of the locking-stile. To the outer end of this strip is hinged an eye or ring shaped handle I, which normally falls and stands in the cavity C.

To insert a section in this door-frame, the tongue D is inserted in the groove in the top or bottom rail, the grooved edge of the section then borne toward the door until its cut-away edges A strike the vertical strips V, and the locking-strip S then inserted from the swinging edge of the door. Obviously when the door is closed, as at night, this locking-strip cannot be withdrawn and a section removed even if a panel is cut or broken out, so that the arm or hand can be reached through the door.

From the above description and the drawings the principle of my invention will be apparent. Of course the form and size of parts may be altered at will and the grooves and

tongues faced with metal or changed to a considerable extent without departing from the spirit of the invention. Another form of handle could be used than that lettered I; but with the construction described the ring hangs nicely in the cavity and may be swung outwardly to put the finger through when it is desired to draw the locking-strip. The latter might be of other cross-section than that shown, and might even be of metal, or the two horizontally-arranged panels in a section might be independent of each other and locked by two locking-strips of half the length of the one shown and inserted through both edges of the door until their ends met at the center. However, I prefer the construction shown, because it absolutely prevents the lateral displacement of the locking-strip, as both its ends are held from lateral movement in every direction.

A door of this kind can be cheaply constructed and will be very serviceable in a dwelling-house, and by a slight change in the structure the ordinary doors now in use could be converted into the form of door shown. In winter the paneled or the glass section is inserted and in warmer weather the netting or the blind section, and in event of a sudden change of weather the sections could be replaced by others in a few minutes.

With the exceptions above noted the door is the same as those now manufactured, and its style, proportions, and configuration may of course be such as is desired and as conforms with the architecture of the building in which the door is employed.

If desired, the opening O and cavity C may be duplicated in the hanging-stile and the recess R omitted, in which case the strip could be withdrawn from either edge of the door and the latter could be hinged at either edge.

What is claimed as new is—

1. The combination, with a door-frame having an upper and a lower opening, the vertical sides of each opening being provided with beads flush with one face of the door and the horizontal sides of each opening being provided with grooves, that in the middle rail opening through the locking-stile of the door-frame, of paneled, glass, screen, and blind sections interchangeably fitting said openings, each section being cut away at its vertical edges, so as to engage said beads, having a groove in one edge adapted to register with that in the middle rail and having a tongue on its other edge adapted to fit the groove at the other vertical side of said opening, and a locking-strip removably inserted through the locking-stile and standing in said registering grooves, as and for the purpose set forth.

2. The combination, with a door-frame having an upper and a lower opening, the horizontal sides of each opening being provided with grooves, that in the middle rail extending through the locking-stile of the door-frame, of paneled, glass, screen, and blind sec-

tions interchangeably fitting said openings, each section having a groove in one edge adapted to register with that in the middle rail and a tongue on its other edge adapted to fit the groove at the opposite side of said opening, and a locking-strip removably inserted through the locking-stile and standing in said registering grooves, as and for the purpose set forth.

3. The combination, with a door-frame having an upper and a lower opening, the horizontal sides of each opening being provided with grooves, one end of the groove in the middle rail being continued into a recess in the hanging-stile and the other end being continued in an opening through the locking-stile, of paneled, glass, screen, and blind sections interchangeably fitting said openings, each section having a groove in one edge adapted to register with that in the middle rail and a tongue on its other edge adapted to fit the groove at the opposite side of said opening, and a locking-strip removably inserted through the locking-stile, its body standing in said registering grooves and its inner end in said recess, as and for the purpose set forth.

4. The combination, with a door-frame having an opening, the horizontal sides of such opening being provided with grooves, one of which extends through one of the stiles of the door-frame, of paneled, glass, screen, and blind sections interchangeably fitting said opening, each section having a groove in one edge adapted to register with said extended groove and a tongue on its other edge adapted to fit the opposite groove, a locking-strip removably inserted through said stile and standing in said registering grooves, and a handle at the outer end of said strip normally flush with the edge of said stile, as and for the purpose set forth.

5. The combination, with a door-frame having an opening, one horizontal side of such opening being provided with a groove which is continued through one of the stiles in the door-frame in an opening having a cavity around its outer end, of paneled, glass, screen, and blind sections interchangeably fitting said openings, each section having a groove in one edge adapted to register with that in the frame, detachable connections between its other edge and the opposite side of the opening, a locking-strip removably inserted through said stile, with its body standing in said registering grooves, and a handle connected to the outer end of said strip and normally standing in said cavity flush with the outer edge of said stile, as and for the purpose set forth.

6. The combination, with a door-frame having an upper and a lower opening, the horizontal sides of each opening being provided with grooves, one end of the groove in the middle rail being continued into a recess in one stile and the other end being continued through the opposite stile in an opening having a cavity around its outer end, of paneled, glass, screen, and blind sections interchange-

ably fitting said openings, each section having a groove in one edge adapted to register with that in the middle rail and a tongue on its other edge adapted to fit the groove at
5 the opposite side of the opening, a locking-strip removably inserted in said registering grooves, one end standing in said recess and the other end in said cavity, and a ring-shaped handle pivoted in said latter end and normally standing in the cavity flush with the
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edge of the stile, as and for the purpose hereinbefore set forth.

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

WILLIAM TURNER GREGG.

Witnesses:

L. H. BOGGS,

R. V. S. QUIGLEY.