

C. K. Marshall.
Metallic Doors & Shutters.
N^o 78218 *Patented May 26, 1868.*

Fig. 1.

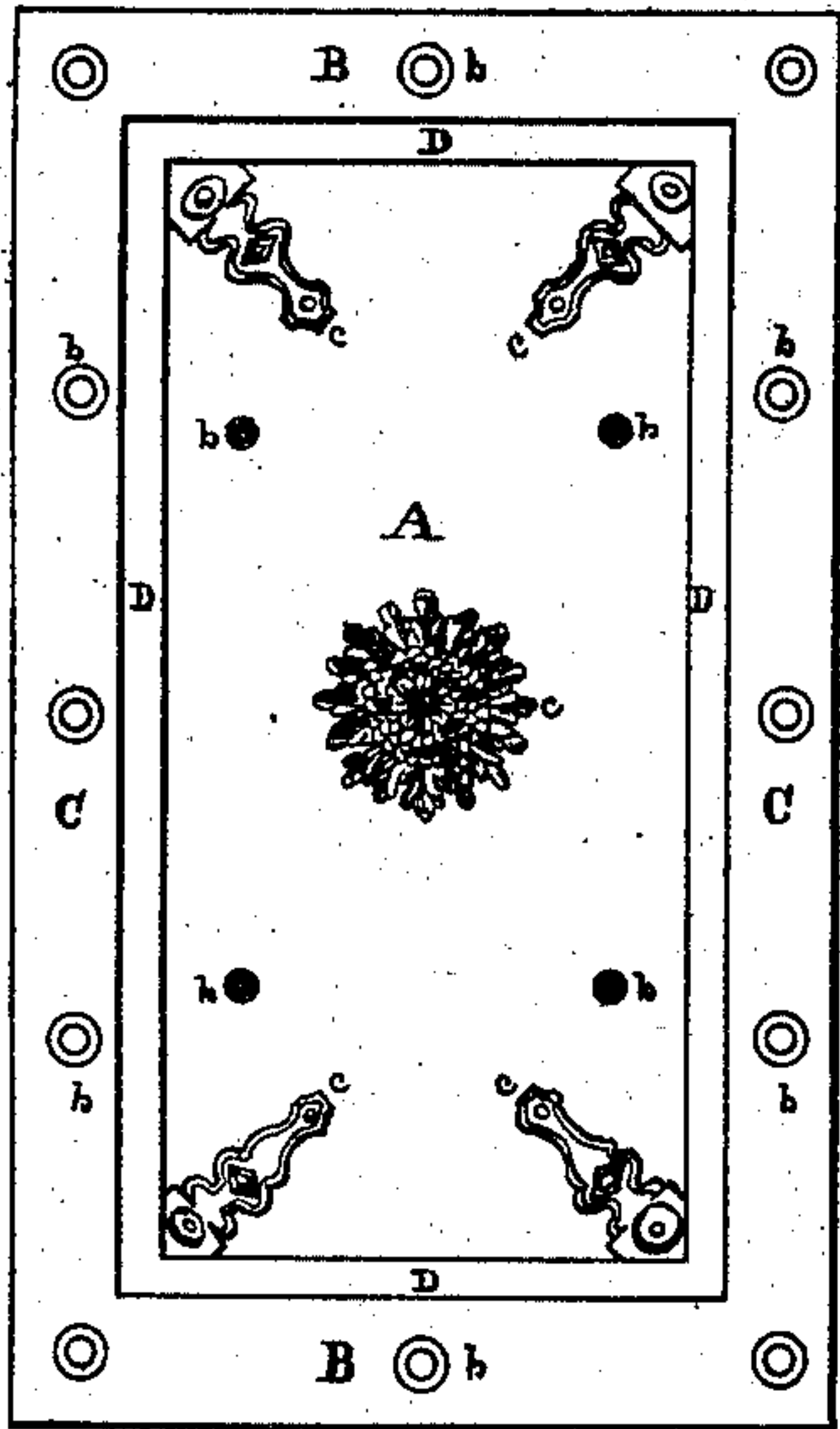


Fig. 2.



Fig. 3.

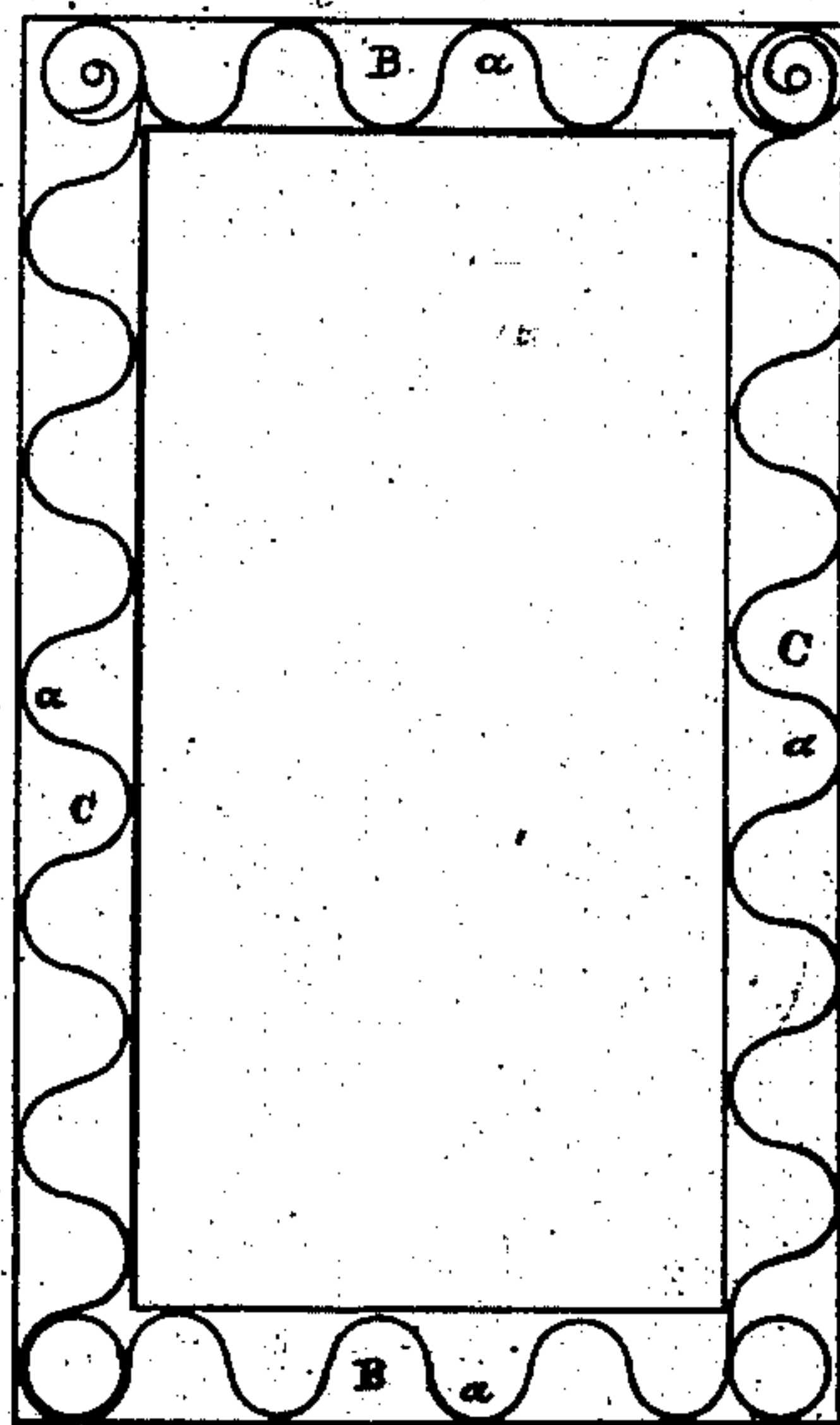


Fig. 4.

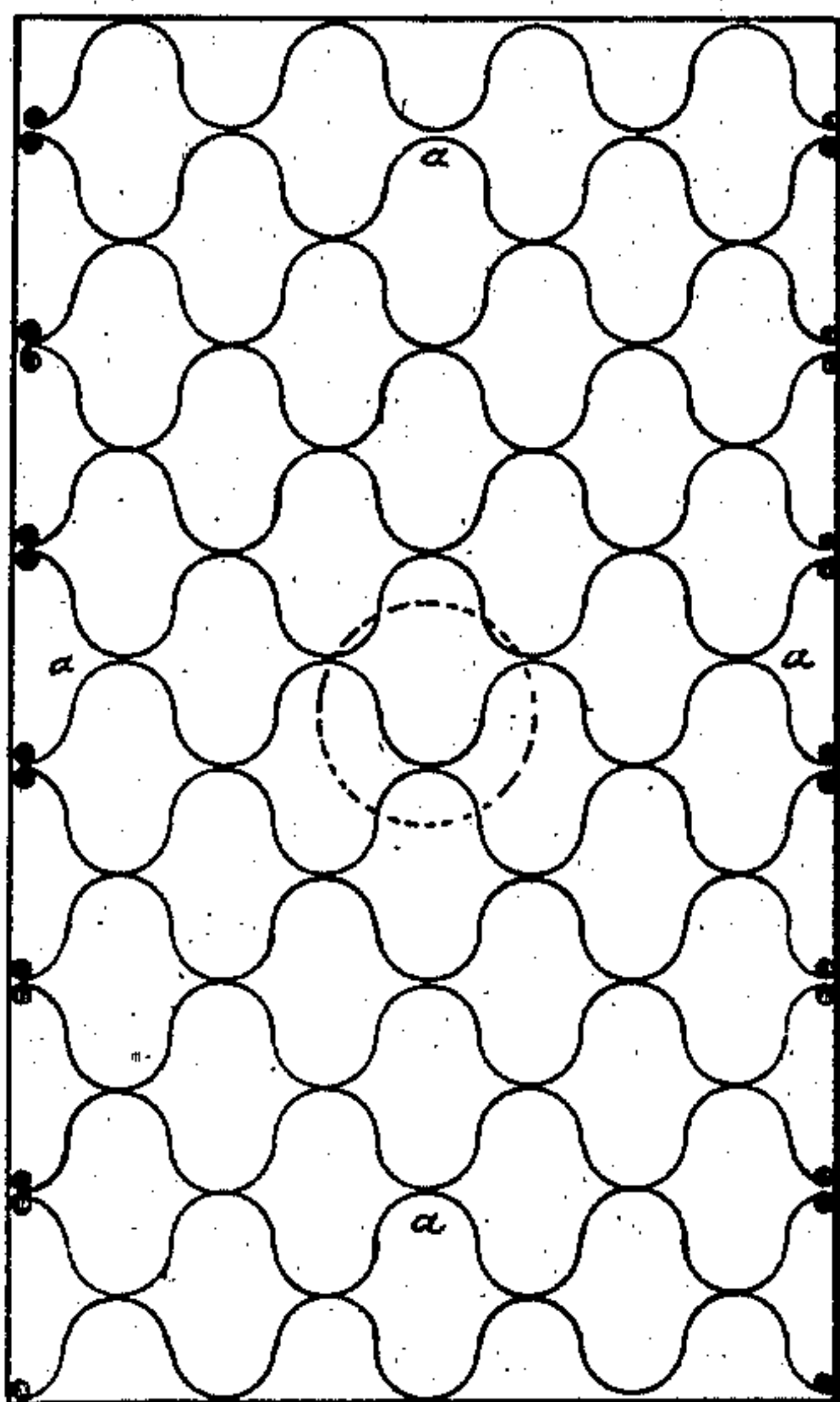


Fig. 5.



Fig. 6.



Fig. 7.

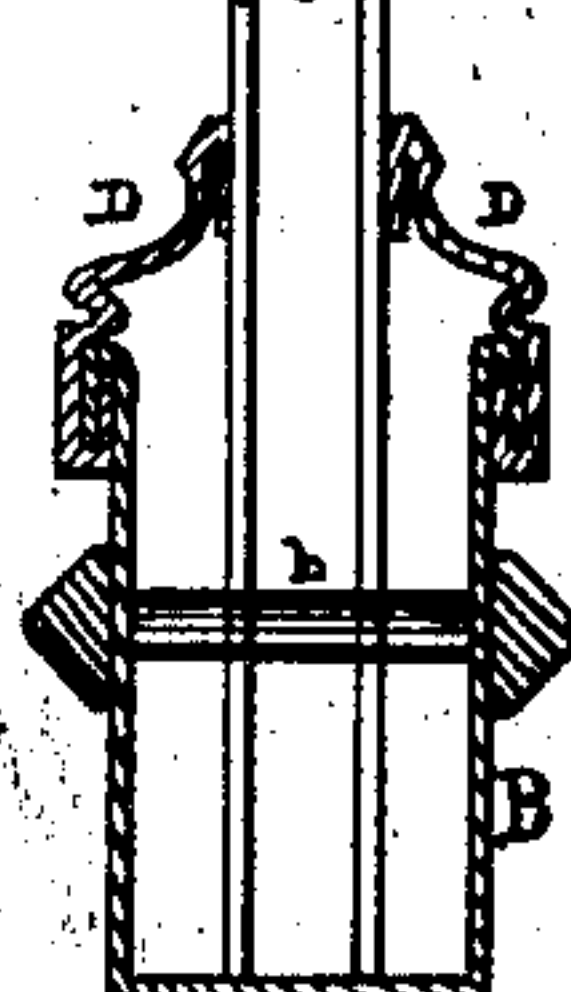
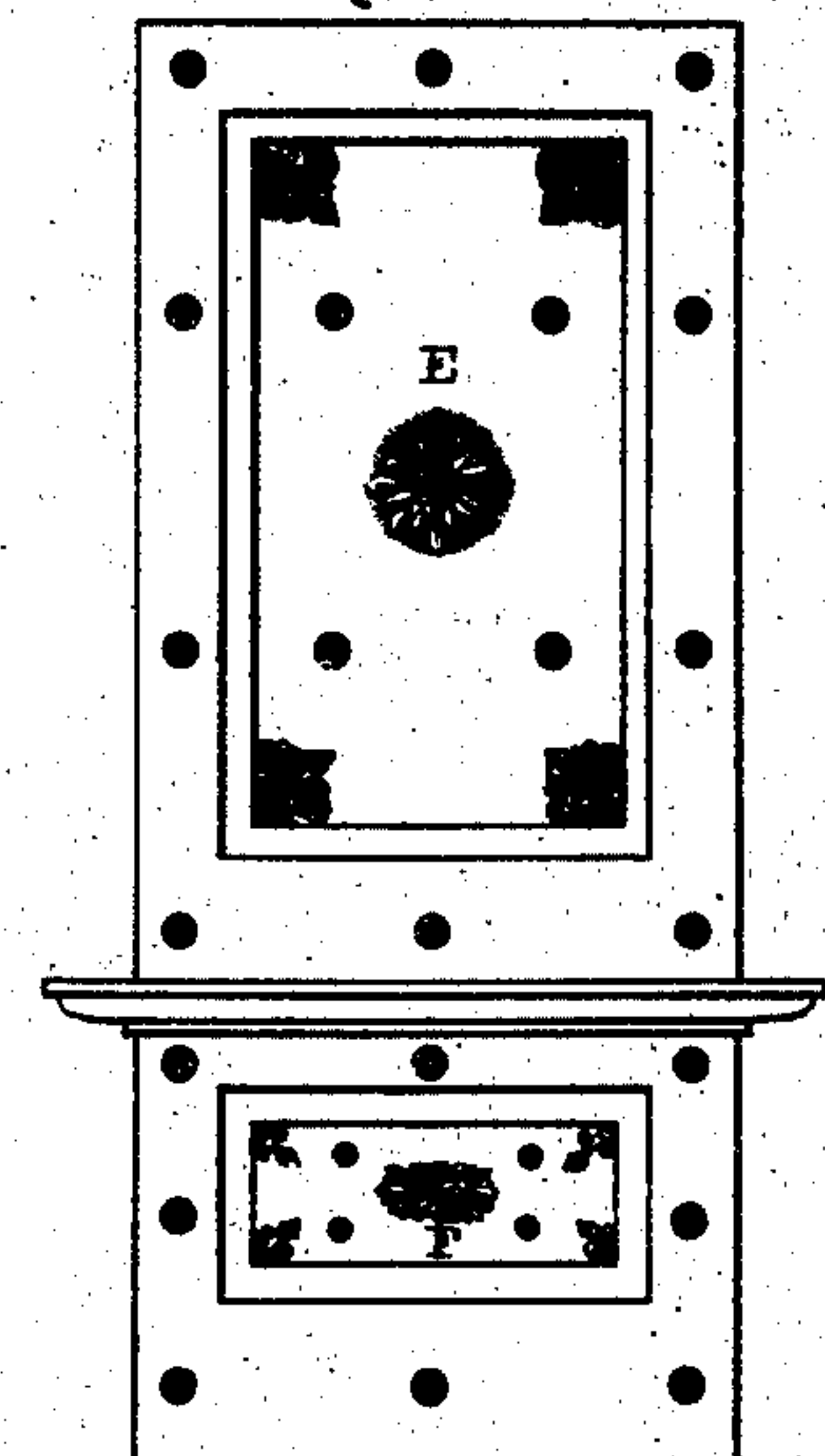


Fig. 8.



Witnesses
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C. K. MARSHALL, OF NEW ORLEANS, LOUISIANA.

Letters Patent No. 78,218, dated May 26, 1868; antedated May 14, 1868.

IMPROVED METALLIC DOORS AND SHUTTERS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, C. K. MARSHALL, of New Orleans, parish of Orleans, and State of Louisiana, have invented certain new and useful Improvements in the Construction of Metallic Doors, Shutters, Base-Panels for Windows, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, making part of this specification, in which—

Figure 1 is a front view of door, showing ornamentation.

Figure 2, vertical section, showing arrangement of plates, stiles, and rails.

Figure 3 shows an interior view of frame, showing the corrugated braces in the stiles and rails.

Figure 4, interior view of panel, showing the arrangement of the corrugated braces.

Figure 5, vertical section, showing the corrugated plate of panel on one side and plain plate on the reverse.

Figure 6 exhibits a section of rail or stile, showing the mode of connecting the rail or stile-plate with the panel-plate.

Figure 7 represents fig. 6 in another form.

Figure 8, front elevation of a shop-window, showing shutter above and base-panel below.

My invention consists in constructing a metallic door, shutter, or base-panels for windows of two or more sheets of metal, either plain or corrugated, which are bolted, riveted, screwed, soldered, or seamed together. In order to separate properly the sheets, so that they may not only be held apart, but at the same time be exactly parallel to each other, I introduce, between the sheets, braces. These braces I usually form of narrow strips of sheet metal, placed on their edges, and running the entire length of the plate, but coils of wire or metallic tubing may be used with equal advantage. When the sheets of metal used are corrugated, in some instances the braces may be dispensed with. When this is done, however, care should be taken so that the grooves formed by the corrugation of one of the sheets shall exactly correspond with the grooves of the other sheet, so that when the sheets are brought together, for the purpose of being permanently united, the corrugations of one sheet will be directly opposite those of the other, forming, as it were, a series of tubes between the panels, which extend the entire length of the inner surface of the sheets, thus affording suitable channels for the introduction of air, &c., should the same be deemed desirable.

To the upper and lower portion of these panel-plates or sheets I attach rails, and to their sides stiles, by means of rivets, bolts, screws, solder, or seaming. Between the panel-plates and the rails and stiles I insert braces similar in every style to those which are introduced between the panel-plates.

The open space (which is exactly the width of the brace) which exists between the face of the panel-plate and the rails and stiles, I close by a suitable moulding or cornice. This moulding or cornice may be manufactured in long sheets, or it may be "struck up" in the machine that forms the rails and stiles.

Another feature of my invention consists in the system of ornamenting the panel-plate, which gives to the door or shutter a rich and beautiful appearance.

I have only shown in the drawings one method of ornamentation, viz, attaching raised metallic designs by means of secret rivets. This I have done simply to illustrate the principle of ornamentation; for it will readily occur to any one skilled in the art that, while the designs from which selections for ornamenting the door are almost endless, they are scarcely more numerous than are the various metals by which they can be produced. For instance, they may be attached to the panel by rivets, bolts, screws, or solder. They may be made to represent any scene the taste of the purchaser may suggest. When the doors or windows are intended for a private residence, you may have a landscape, a hunting-scene, a water-view, with boats, &c., or any other class of representation desired. When the doors or windows are intended for warehouses and stores, the design or designs may be such as are indicative of the business. Signs are often placed in the base-panel of windows, bearing the name of the merchant or some prominent article of merchandise. Now, by my plan the outer sheet can be so worked, by well-known machinery, that this lettering can all be "struck up," so as to leave the inner

in alto-relievo. We constantly see buildings erected of solid masonry, stone sills for the windows and doors, and with metallic roofs, all bespeaking security; still, we find the doors and shutters of wood. So long as this is the case, it is idle, no matter how massive and well built the structure may be, to pretend that it is either fire or burglar-proof; for the burglar in a few moments cuts out one of the panels of the door and enters the building, or a fire in an adjoining house or across the street will soon so intensely heat the door or shutter, when made of wood, as is often the case, especially in our large cities, that ere you are cognizant of the fact the building is in flames.

I am aware that metallic doors have been used, but they are such heavy, ungainly things, that, whenever seen, the mind instantly and instinctively associates them with either a vault, a tomb, or prison.

The object of my invention is to furnish the market with a double-cased, raised, and ornamented metallic door or shutter, burglar and fire-proof, cheap and light, neat and ornamental, and such as can be painted so as to represent any kind of wood, and, if desired, any kind of carving.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A is the panel, and may be made of any kind of sheet metal suited to the purpose, and may be either plain, as shown in fig. 1, or corrugated, as shown in fig. 5. Between the panels A A, I introduce braces *a a*, running in zigzag lines or curves, as shown in fig. 4. These braces, *a a*, may be formed of narrow strips of sheet metal, of coils of wire, or of metallic tubes. These braces are to be sufficient in number properly to hold the panels apart, and always to retain the same in a parallel position. The braces having been properly arranged and attached to the panels, the latter are firmly united together, which can be done by means of rivets, bolts, screws *b b*, or they may be soldered or seamed. B B are rails, which enclose the upper and lower portion of the panels, and C C are stiles, which enclose their sides. These rails and stiles are united to the panels by bolts or rivets, *b b*, as clearly shown in figs. 6 and 7. Between the panel A A and the rail and stile B C there is necessarily left an opening, the width of the brace *a*. This opening is closed by a moulding, D, which may be made in sheets, and soldered, as shown in fig. 2, or seamed, as shown in fig. 7, or it may be "struck up" with the rails and stiles, as shown in fig. 6. These mouldings may be made in any form desired; care, however, should be taken that they conform as far as possible to the architectural style of the building for which the doors and shutters are intended. This can readily be done, and will add much to the symmetrical beauty and harmony of the whole. *c c* are ornaments, which may be made of metal or other material, and suitably attached to one or both panels. When constructed of metal, they may be "struck up" in the plate, so as to leave them, as it were, in alto-relievo, or they may be embossed or cast, as shown in the drawings. When the designs are cast, they can be secured by secret rivets, or bolts with ornamental heads, and attached to the panels before they are put together, so that they can be properly secured on the inner side. E is a shutter, and F is the base-panel of a window constructed in every particular exactly like the door. The doors may be made folding, hung on hinges, or may be made to slide.

Having thus fully described my invention, what I claim therein as new, and desire to secure by Letters Patent, is—

A double-cased and double-panelled metallic door or shutter, when the same is constructed and arranged substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

C. K. MARSHALL.

Witnesses:

JOHN D. BLOOR,

JOHN S. HOLLINGSHEAD.