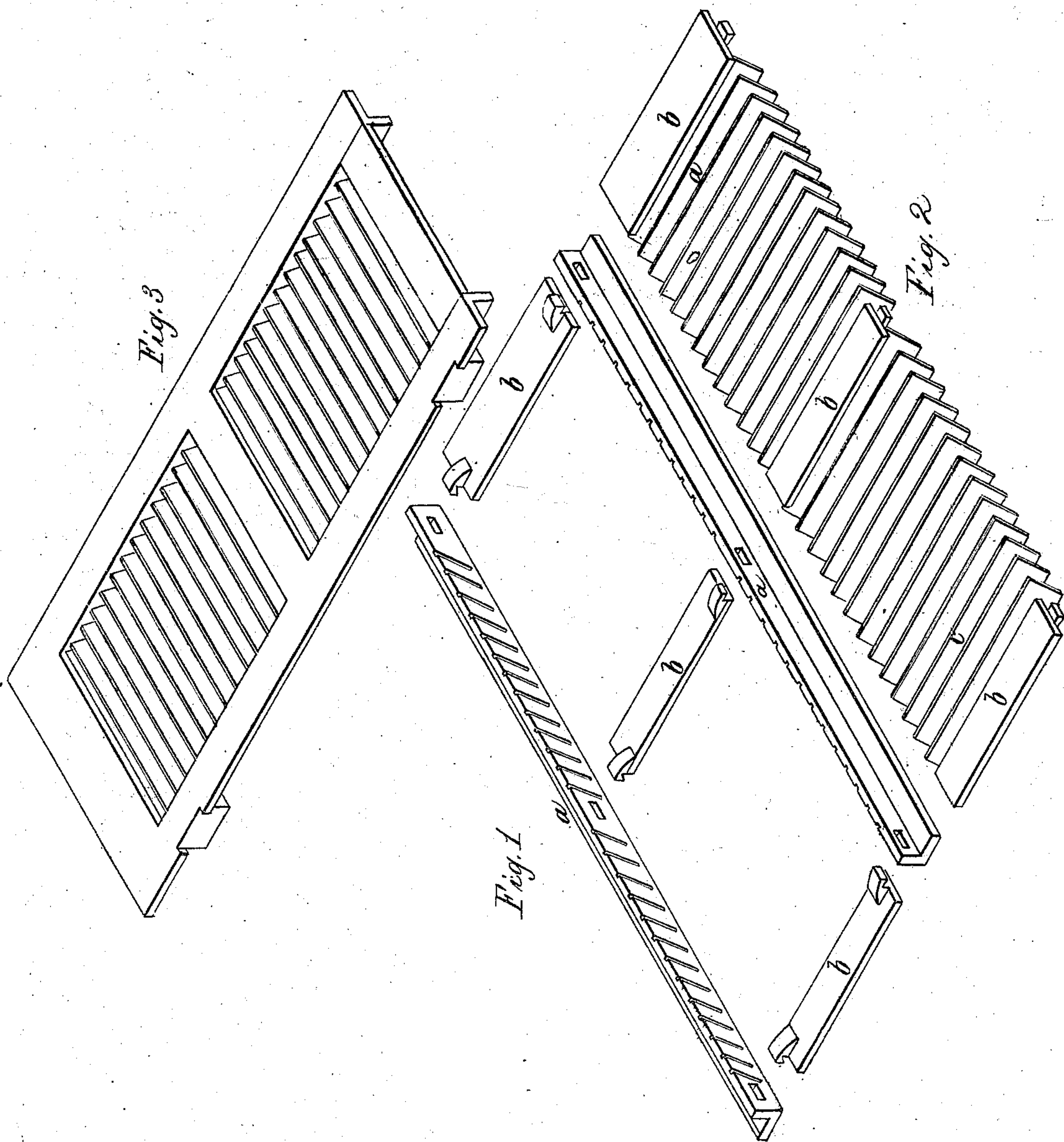


R. WHITE.  
WROUGHT AND CAST IRON SHUTTER.

No. 8,679.

Patented Jan. 20, 1852.





# UNITED STATES PATENT OFFICE.

ROBERT WHITE, OF WASHINGTON, DISTRICT OF COLUMBIA.

## CAST AND WROUGHT METAL BLIND.

Specification of Letters Patent No. 8,679, dated January 20, 1852.

*To all whom it may concern:*

Be it known that I, ROBERT WHITE, of Washington, in the county of Washington and District of Columbia, have invented certain new and useful Improvements in the Method or Manner of Manufacturing Window Blinds, Shutters, Doors, &c., of Wrought and Cast Iron, constituting a new and useful product or article of manufacture; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1, represents the patterns, and the top, center, and bottom plates forming the frame of a shutter; Fig. 2, the top, center, bottom plates, and the wrought iron slats with the patterns removed just as they are placed in the flask, and Fig. 3, the shutter completed.

The main feature and novelty of my invention consists, in casting the top, center, and bottom plates first, and separately, and forming the slats of wrought iron in order to give them strength and lightness, and these I place in the flasks as represented in Fig. 2, and by aid of the patterns form the mold for the side plates; the top, center, and bottom plates have dovetailed projections on their ends, which are embedded with the projecting slats in the side plates in the process of casting. By thus combining the wrought and cast iron, casting the center, top, and bottom plates first, and separately, and running the metal around them to form the sides of the shutter I prevent the contraction of the metal in cooling from warping the slats and produce a cheap, strong, durable, and light article of manufacture which is applicable to the windows and doors of private as well as other dwelling houses.

The mold can be formed by the patterns in several ways and I deem it necessary to describe but one of them. I fit my patterns (*a a*) to a board and place the previously cast top, center, and bottom plates (*b b b*) and the wrought iron slats (*c*) in the patterns. I then make a parting over the slats and plates and place on the board one part of the flask, and fill up compactly with sand. I then lift it off from the parting,

draw out part of the pattern, place it on again, turn it over and make another parting; I then put on the remaining part of the flask and set the gates, fill up compactly with sand and lift it off from the parting; I then draw the other part of my pattern, cut the gates and fasten the flasks together. The mold is now ready to receive melted metal which is run in at the gates on each side of the flask, casting one side plate at a time. The melted metal running around the projecting dovetails on the plates, and the projecting ends of the slats, secures them firmly to the side plates. The patterns I make longer than the intended or desired shutters in order to allow for the contraction of the metal in cooling, and as the contraction of any consequence being only lengthwise, and both side plates contracting alike the slats are not warped, and the top, center, and bottom plates, are retained straight and in their places, whereas if the center, top, and bottom plates, were not cast first and separately from the side plates, the contraction of the metal would warp and distort the slats, and the whole shutter could not be cast well together, for to give the slats the desired strength would make them too heavy and not at all adapted to the purpose intended.

I do not claim the combining cast and wrought iron nor do I claim to be the first to have cast metal around cold metal and joining the same by that means, but

What I do claim as new, and desire to secure by Letters Patent is—

Producing a new product or article of manufacture for shutters, doors, &c., whereby I am enabled to use wrought iron slats, and prevent the contraction of the metal in cooling from warping the same by casting the top, center, and bottom plates, separately and distinct from the side plates, and running the side plates to the slats and plates substantially as herein set forth.

In testimony whereof he has hereunto signed his name before two subscribing witnesses.

ROBERT WHITE.

Witnesses:

CHAS. DONOHO,  
GEO. R. WEST.