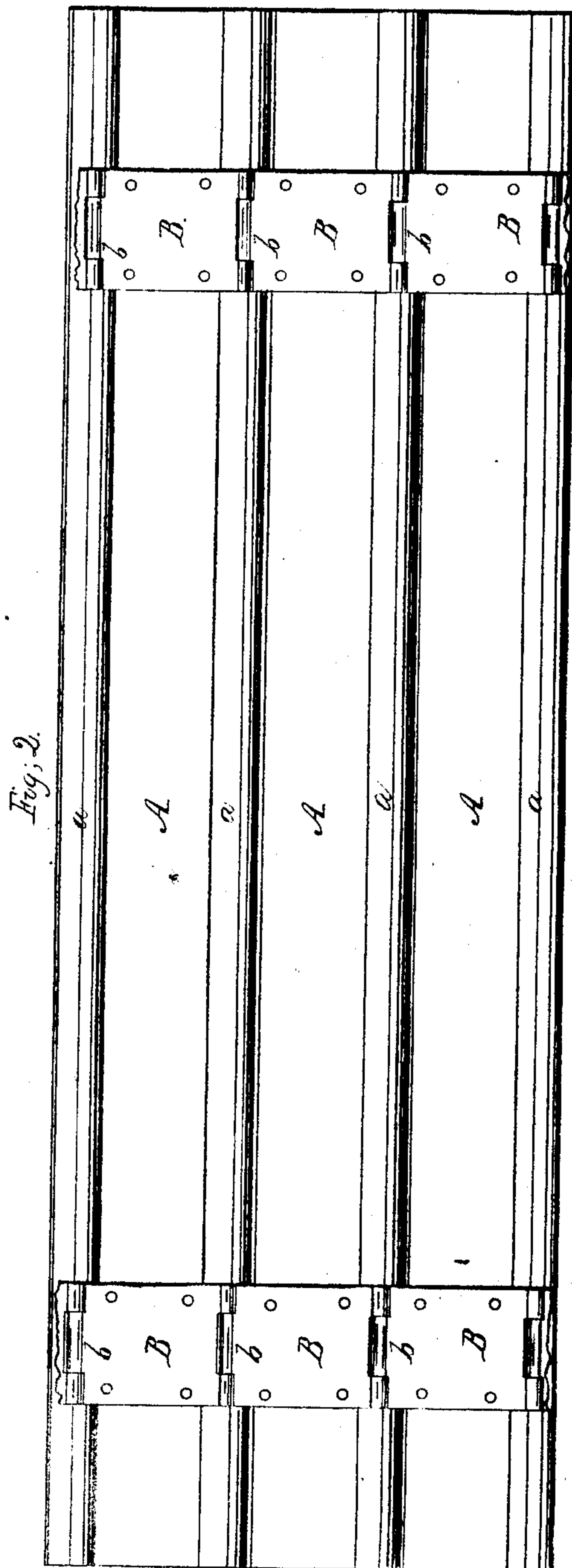
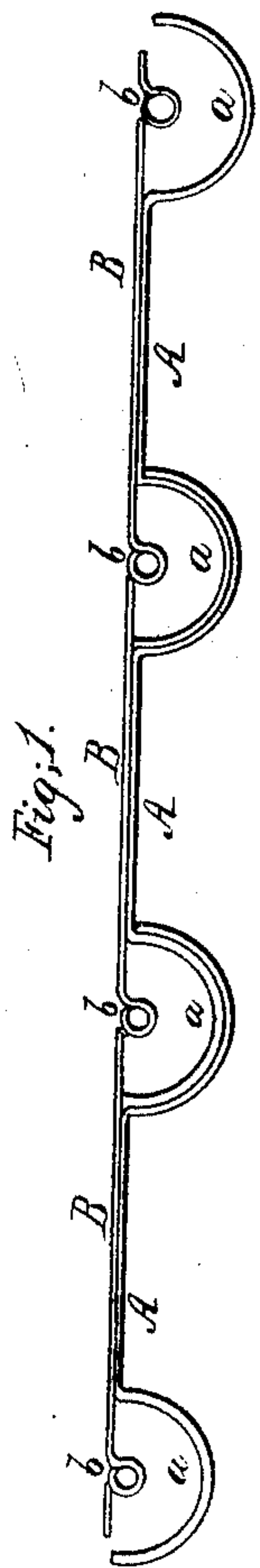


J. B. CORNELL.  
METALLIC SLAT SHUTTER.

No. 11,663.

Patented Sept. 12, 1854.



# UNITED STATES PATENT OFFICE.

JOHN B. CORNELL, OF NEW YORK, N. Y.

## METALLIC SLAT-SHUTTER.

Specification of Letters Patent No. 11,663, dated September 12, 1854.

*To all whom it may concern:*

Be it known that I, JOHN B. CORNELL, of the city, county, and State of New York, have invented a new and Improved Metallic Slat-Shutter; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, Figure 1 being an edge view of a portion of a shutter, and Fig. 2 a front or side view of the same on a smaller scale.

Like letters designate corresponding parts in both figures.

The nature of my invention consists in the improved manner of uniting the sheet metal slats of the shutter, viz:—by swaging the edges of the slats into forms of corresponding segments of circles, and connecting them by means of hinged bars combined with said slats and arranged in such a manner that the pivots of said hinges will be concentric with the segmental curves of the edges of the slats, and also cause the flat portions of said slats, when the shutter is open, to be directly in line with each other, substantially in the manner and for the purposes hereinafter set forth.

The several slats A, A, &c., which compose the shutter, have their adjacent edges swaged into forms of semicircles *a, a, &c.*, or, if desired, other arcs of circles, greater or less than semicircles; said corrugations being of a convenient diameter, (say, half an inch,) and arranged so that one half of them will respectively fit into the corresponding corrugations of the adjacent slats, as represented in Fig. 1. These slats are united by means of two series of sheet metal links, or bars, B, B, &c., riveted to their flat portions, and connected with one another by hinges *b, b, &c.*, precisely concentric with the corrugations *a, a, &c.*, of the slats; so that, as the slats turn on said hinges, each corrugation will slide freely on its fellow and, at the same time, retain a close joint therewith. The links or bars, and their pivots, are so arranged that the flat surfaces of all the slats shall, when the shutter is open, or extended, lie in the same

plane, as represented. The terminating edges of the corrugations of the slats are also arranged so that they will just allow the shutter to be opened to a straight line, and then abut against the adjacent slats, or against the links B, B, &c., so as to prevent any further bending in that direction, as shown in Fig. 1. But in the other direction the slats will turn sufficiently to allow the shutter to be rolled or folded together compactly.

My improved shutter, as above described, possesses the following advantages over any other sheet metal shutter:—first, all the corrugations *a, a, &c.*, being on one side, and the flat portions of the slats, when spread out, being in the same plane, the shutter, when open, presents a plane surface on one side, so that it will fit closely against any window, or door, frame, while the corrugations projecting at regular distances on the outside thereof, not only cause no inconvenience, but give an ornamental appearance to the shutter. Secondly, the slats turn more freely on the hinges thus arranged, and at the same time, possess closer and firmer joints.

What I claim as my invention and desire to secure by Letters Patent, is—

The improved manner of uniting the sheet metal slats of the shutter, viz:—by swaging the edges of the slats into forms of corresponding segments of circles, and connecting them by means of hinged bars combined with said slats and arranged in such a manner that the pivots of said hinges will be concentric with the segmental curves of the edges of the slats, and also cause the flat portions of said slats, when the shutter is open, to be directly in line with each other, substantially in the manner and for the purposes herein set forth.

The above specification of my improved metallic slat shutter, signed and witnessed this 13th day of April 1854.

JOHN B. CORNELL.

Witnesses:

R. S. FOSTER,  
J. S. BROWN.