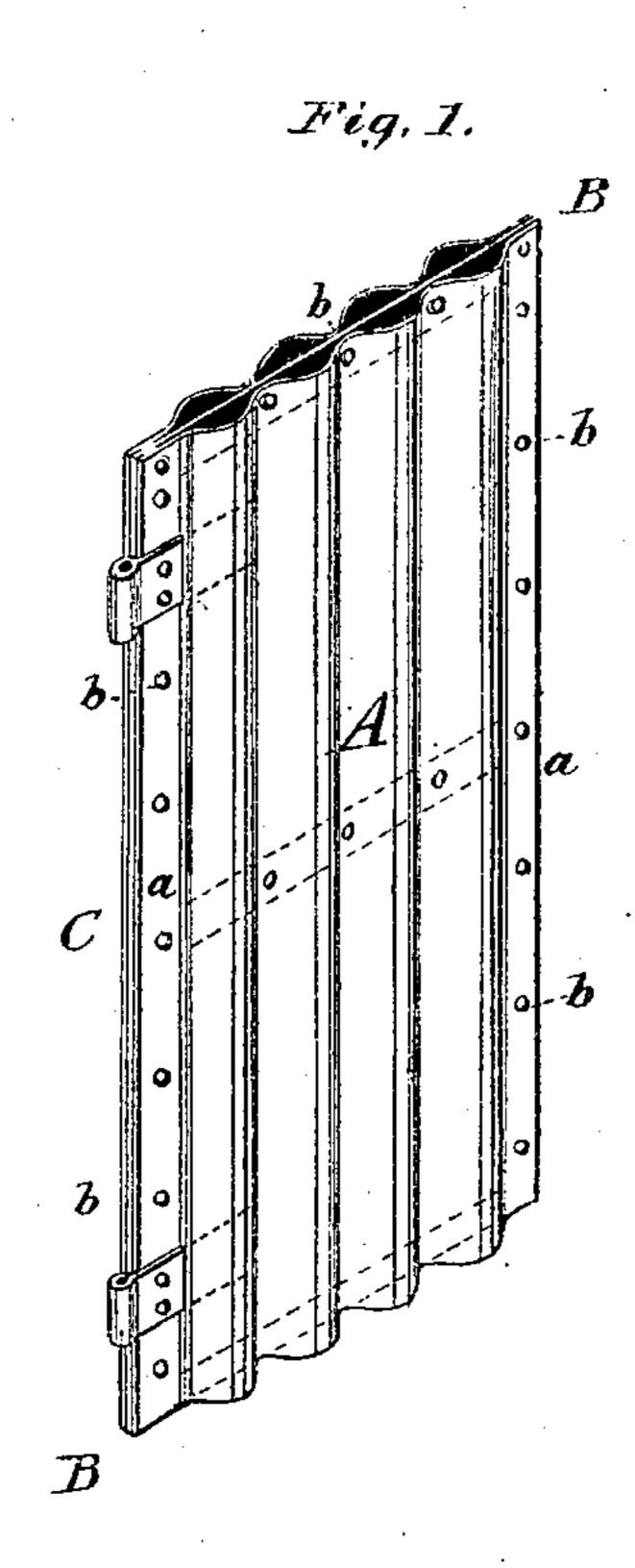
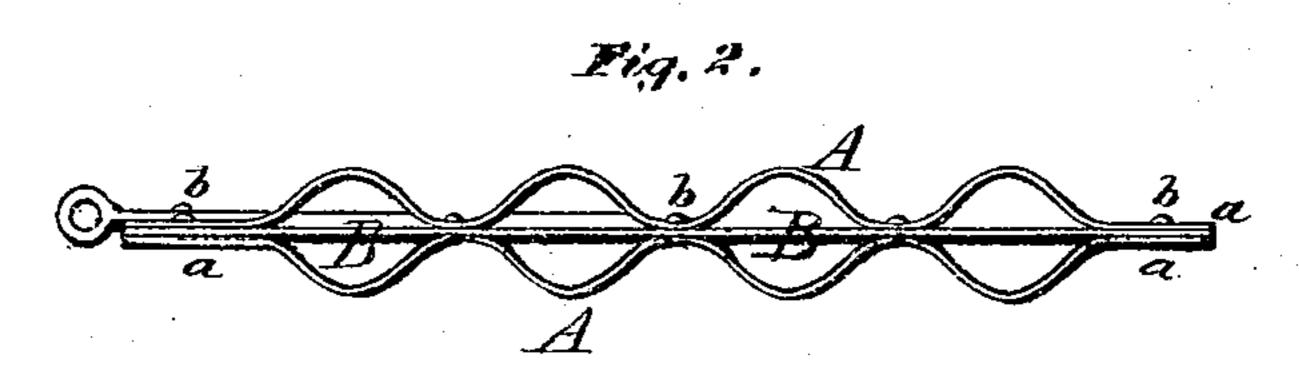
## S. B. MUNSON, Jr.

Improvement in Fire-Proof Shutters.

No. 132,683.

Patented Oct. 29, 1872.





Witnesses.

John R. Young

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## UNITED STATES PATENT OFFICE.

SAMUEL B. MUNSON, JR., OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN FIRE-PROOF SHUTTERS.

Specification forming part of Letters Patent No. 132,683, dated October 29, 1872.

To all whom it may concern:

Be it known that I, S. B. Munson, Jr., of Chicago, in the county of Cook and in the State of Illinois, have invented certain new and useful Improvements in Metal Shutters for Doors or Windows; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of a shutter constructed in accordance with my improved method; Fig. 2 is an enlarged end view of the same; and Fig. 3 is a like view of said device with the side plates arranged so as to change the relative positions of the corrugations.

Letters of like name and kind refer to like

parts in each of the figures.

My invention is an improvement in a class of metal shutters used for inclosing the windows of buildings and for affording exterior protection to the same against fire; and it consists in a shutter composed of two plates of corrugated iron combined with a central frame in such a manner as to form a series of vertical passages through which air may freely circulate, substantially as and for the purpose hereinafter specified.

In the annexed drawing, A and A represent two plates of sheet metal, corrugated transversely except at their sides where is left upon each a plane strip, a, that is in a line with the inner face of the plate, or rather with the prominent portions of its corrugations. A frame, B, formed of or from a plain sheet of metal that corresponds in size and exterior shape to the plates A, is placed between the same, and the whole firmly secured together by means

of a line of rivets, b, which pass through said parts just within their edges. If desired, the center of the plate B may be cut away just within its edge so as to leave a rectangular frame; in which event one or more central cross-bars, C, may be placed between the plates A at suitable points between their upper and lower ends, and a row of rivets, b, passed through said parts. The plates A are preferably placed so as to bring their corrugations opposite to each other, as seen in Figs. 1 and 2; but, if desired, said corrugations may be arranged in parallel lines, as seen in Fig. 3.

As thus constructed, it will be seen to be a distinctive feature that the corrugated plates form a series of passages, open at their upper and lower ends, through which air may freely circulate, by which means the interior space between said plates is kept at a much lower temperature than would be possible if the same were tightly inclosed and filled with "dead-air" only.

Having thus fully set forth the nature and merits of my invention, what I claim as new,

A window or door shutter, composed of corrugated plates combined together to form a series of vertical air-passages open at each end, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of September, 1872.

SAMUEL B. MUNSON, JR.

Witnesses:

PLATTE BURR, NORRIS C. NORTH.