W. D. SMITH.

Fire-Proof Shutter.

No. 223,401. Patented Jan. 6, 1880.

Fig. 1.

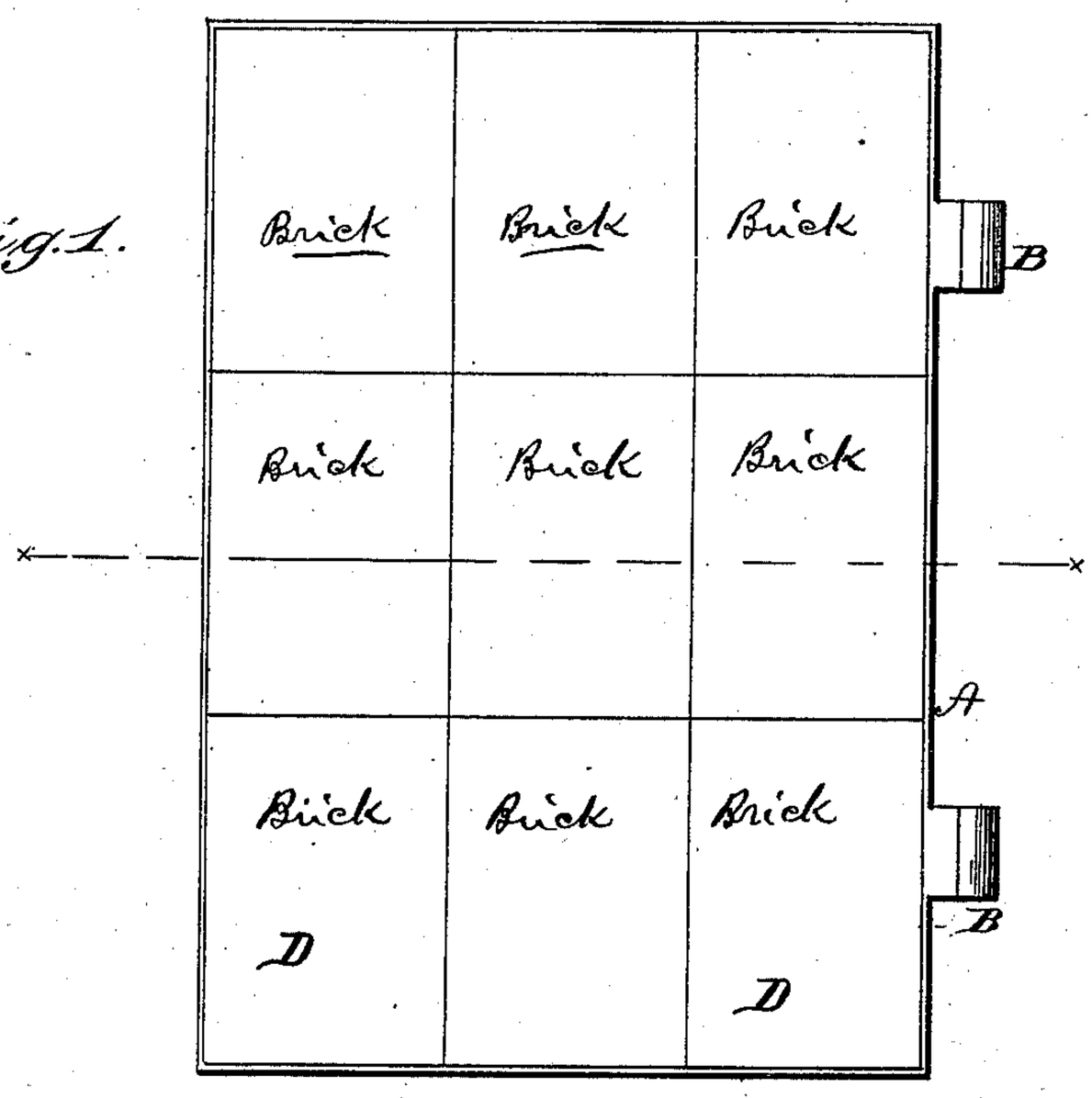
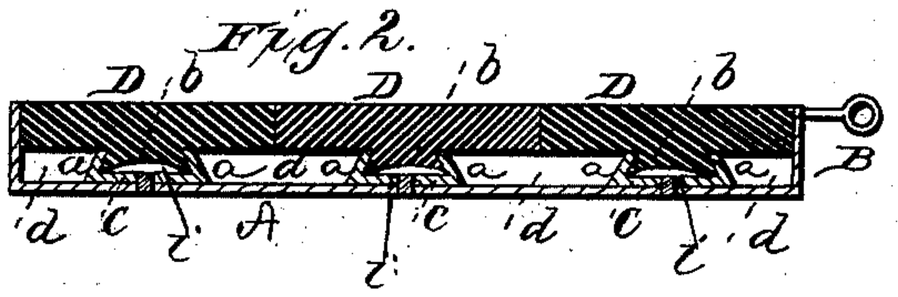


Fig. 2.



WITNESSES

Frank L. Ourand

J. J. McCarthy.

INVENTOR

Walton Duane Smith

By his Attorneys Alexander Thomson

UNITED STATES PATENT OFFICE.

WALTON D. SMITH, OF PROPHETSTOWN, ILLINOIS, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO HENRY R. KENT, OF SAME PLACE.

FIRE-PROOF SHUTTER.

SPECIFICATION forming part of Letters Patent No. 223,401, dated January 6, 1880.

Application filed September 25, 1878.

To all whom it may concern:

Be it known that I, WALTON DUANE SMITH, of Prophetstown, in the county of Whiteside, and in the State of Illinois, have invented certain new and useful Improvements in Fire-Proof Shutters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention relates to fire-proof shutters; and it consists in constructing the same of iron and brick, in the manner as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a plan view. Fig. 2 is a section through *x x*, Fig. 1.

A represents the body of the shutter, made of sheet-iron in any suitable manner, and having the hinges B B formed with or attached to it.

On the outside of the shutter A are fastened sheet-metal strips C C, running the entire length of the shutter and at suitable distances apart. These strips have their edges turned outward to form dovetailed flanges *a a*, or, rather, inclined flanges forming dovetailed grooves.

D D represent bricks, made of any known refractory material, and these bricks are built into the shutter A so as to fill the entire outer face thereof, the edges of the shutter being turned to hold the bricks, as shown.

Each brick D is formed with a longitudinal dovetailed tongue, *b*, to fit in the dovetailed groove formed by the side flanges, *a a*, of the strip C.

It will be noticed that longitudinal air-chambers *d* are formed between the shutter A and bricks D, between the strips C C; and additional air-chambers *i* are formed in the strips C by the tongues *b* of the bricks being made concave, as shown. These concavities also allow the bricks to pass the rivet-heads by which the strips are fastened to the sheet-metal body A.

When the shutter is closed the bricks are on the outside, thus presenting to the fire a surface of brick instead of iron.

These shutters are applicable to both windows and doors.

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

The combination of the iron body A, flanged strips C C, and the bricks D D, provided with the concave dovetailed tongues *b*, forming air-chambers *d* and *i* between the bricks and the iron, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of September, 1878.

WALTON DUANE SMITH.

Witnesses:
CYRUS EMERY,
JAMES SCARRITT.