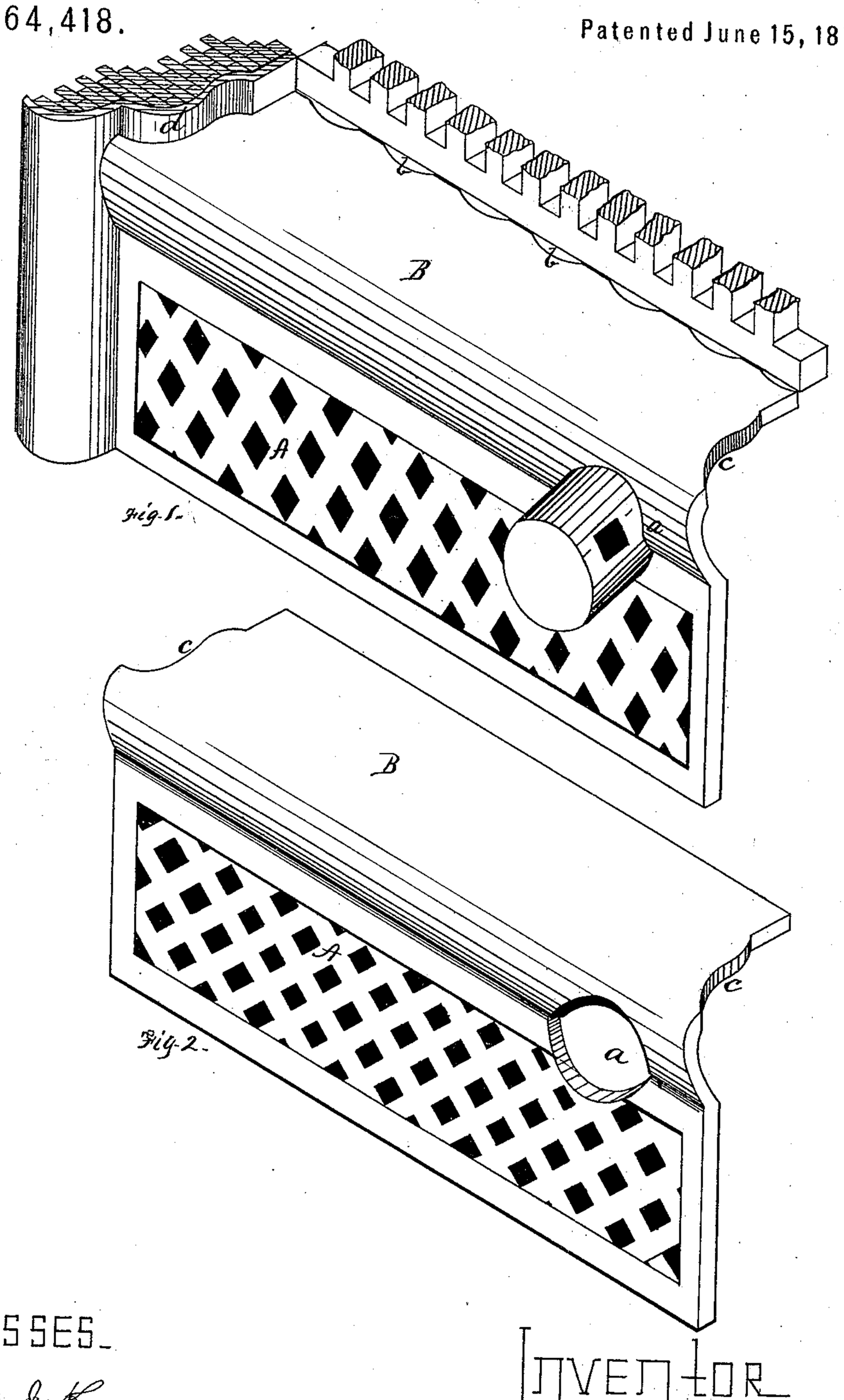
F. S. BISSELL.

Shutter for Grates.

No. 164,418. Patented June 15, 1875.



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FRANK S. BISSELL, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN SHUTTERS FOR GRATES.

Specification forming part of Letters Patent No. **164,418**, dated June 15, 1875; application filed April 24, 1875.

To all whom it may concern:

Be it known that I, FRANK S. BISSELL, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Shutters or Ash-Screens for Grates; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a perspective view of my improved combined shutter or ash-screen and guard-plate, so much of a grate as is necessary to illustrate the position of the shutter when in use. Fig. 2 is a perspective of the shutter and plate detached.

Like letters refer to like parts wherever they occur.

My invention relates to the construction of shutters and guard-plates for open fire-places, grates, or Franklin stoves, &c.; and it consists in combining a guard-plate and shutter or ash-screen, the parts being so connected or joined that one will act to sustain the other when in use, and also to prevent or correct any warping or tendency to warp which might occur in the parts if separately employed.

Heretofore, whenever a shutter or ash-screen has been employed with the open or fire-place grate, or with an open Franklin grate, it has simply rested against the jambs, closing the ash-pit and reaching to the height of the basket-front, and sometimes, when the basket-front set back, or was not flush with the jambs, a second piece, termed a guard-plate, has been employed, which capped the ash-screen and completed the front finish or fittings.

To such a construction several objections exist—first, the liability of the screen or shutter to fall whenever the grate is shaken or raked; second, the necessity of devices for securing the separate parts in position; thirdly, the necessity of removing the parts separately when the ash-pit and grate are to be reached; and, fourthly, the liability of their castings warping.

The object of the present invention is to obviate the objection above specified, which I do by joining or connecting the several parts.

I will now proceed to describe my invention so that others skilled in the art to which it appertains may apply the same.

In the drawings, A indicates the ash-screen or shutter proper, which may be formed with open or closed work, in any desired pattern, and, in cases where used with an agitating-grate, is provided with an opening, *a*, for the passage of the shaking-bar. B is the guard-plate, which may have the usual notches *b b*, to allow the escape of any ashes falling forward from the basket, and is shaped at the ends *c c* so as to conform to the jamb-pieces *d d*. The guard-plate B may curve or slope as shown in the drawing, or may project from the shutter A at any desired angle. The two parts A and B are joined or connected, and are preferably formed by casting in one piece, though it is evident the two pieces might be cast separately, and afterward fitted and joined by bolting, or otherwise forming one piece, practically, for some of the objects to be obtained; but such a connection is not desirable.

In Fig. 2 of the drawing is illustrated the manner in which the combined shutter and guard-plate are held in position when in use, the portion B entering between the jamb-pieces *d d*, or resting forward upon or against the basket-front, thus bracing or wedging so that the combined shutter and guard-plate will at all times retain its proper position.

The guard-plate B will, in addition to its usual functions, also brace the shutter or ash-screen, so that all tendency of the casting to warp in cooling is obviated; consequently, it will be evident that the width of the portion B, in this regard, is, to a certain extent, immaterial, as a half-inch band would accomplish the result.

The advantages of my improvement may be stated as follows: First, owing to its form, the casting is not liable to warp out of shape; secondly, the combined shutter and guard-plate are more easily and accurately fitted; thirdly, they are not liable to be displaced by the shaking of the grate; fourthly, the guard-plate, being wedged in at the ends, sustains the shutter or screen in its proper position without requiring other fastenings; and, fifthly, the shutter and guard-plate are easily and readily removed when access to the ash-pit is desired.

Having thus described the nature and advantages of my invention, what I claim, and desire to secure by Letters Patent, is—

1. In combination with the vertical ash-screen or shutter A, a flange projecting at an angle therefrom, and formed substantially as described, to wedge with the jambs and to brace and retain the screen in position.

2. In combination with the vertical ash-screen A, the guard-plate B, secured to the screen, substantially as described.

In testimony whereof I, the said FRANK S. BISSELL, have hereunto set my hand.

FRANK S. BISSELL.

Witnesses:
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