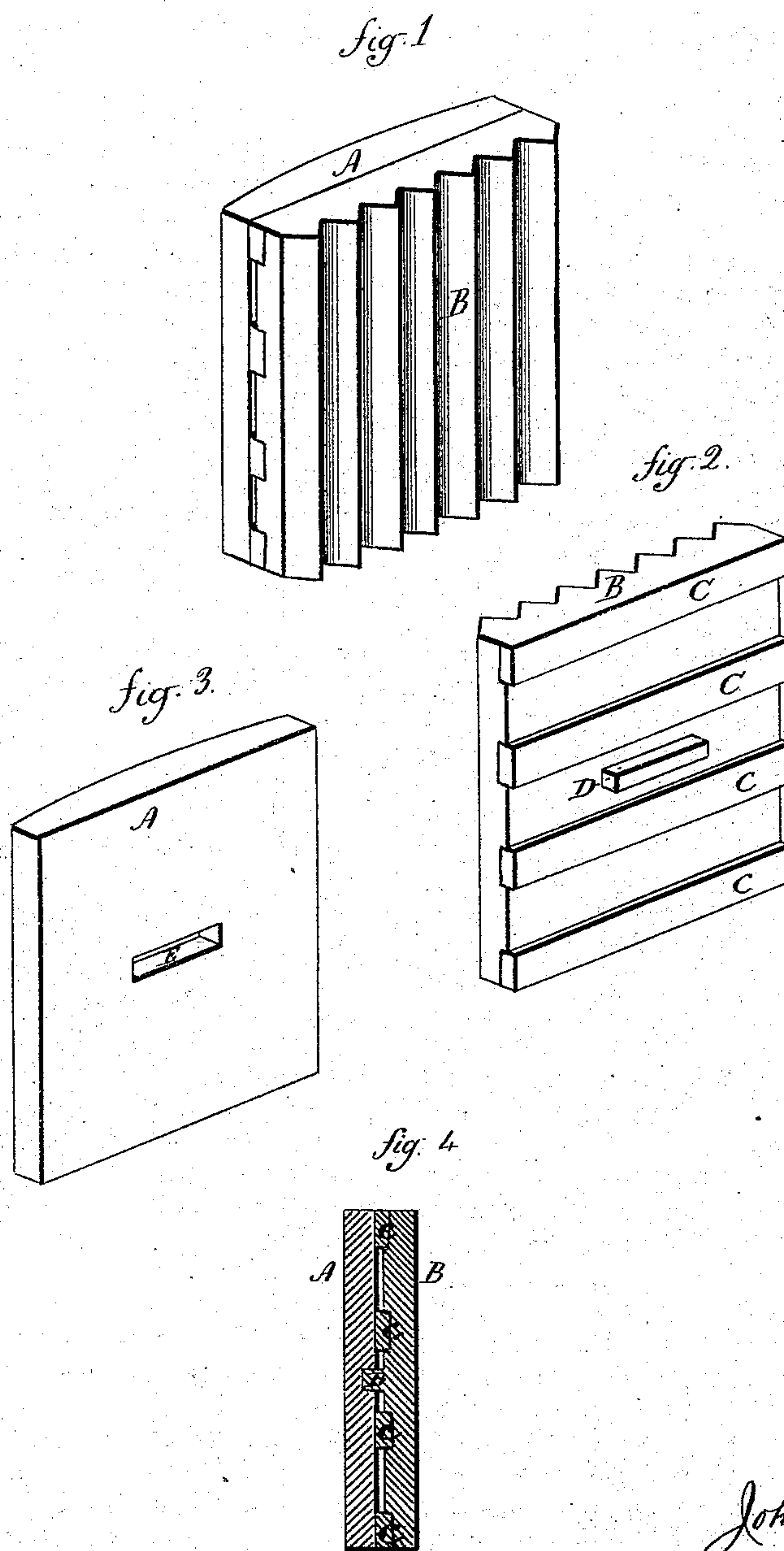


J. A. BLAKE.  
Stone-Breakers.

No. 156,757.

Patented Nov. 10, 1874.



Witnesses.  
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# UNITED STATES PATENT OFFICE.

JOHN A. BLAKE, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO THE BLAKE CRUSHER COMPANY, OF SAME PLACE.

## IMPROVEMENT IN STONE-BREAKERS.

Specification forming part of Letters Patent No. **156,757**, dated November 10, 1874; application filed April 2, 1874.

*To all whom it may concern:*

Be it known that I, JOHN A. BLAKE, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Stone-Breaker; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view, showing the working-face of the jaw-plate; Fig. 2, a perspective view of the rear face of the jaw-plate; Fig. 3, a perspective view of the back or base; and, in Fig. 4, a vertical central section through the jaw-plates and back.

This invention relates to an improvement in what is known as the "Blake stone-crusher," but applicable to other stone-crushers.

The working surface of the stationary jaw, or jaw-plate, as it is called, is cast in a chill, that it may be sufficiently hard for service. These jaw-plates must be fitted to the back or frame so as to take a firm and even bearing thereon; and to this end the rear surface must be dressed to a greater or less extent, and unless the jaw-plate is made very thick the chilling of the face will so harden the metal through as to make the fitting or dressing of the rear surface extremely difficult.

To overcome this difficulty is the object of the first part of my invention; and it consists in placing in that part of the mold which is to form the rear surface of the jaw-plate several bars of wrought metal, then pouring the molten iron into the mold around these bars, so that these bars are firmly united to, and become a part of, the jaw-plate, and upon these bars the chilling of the face has no effect, as they come from the mold soft and are easily dressed; also, in the employment of a back or base, independent of the frame, upon which to fit the jaw-plate.

A is the back or base upon which the jaw-plate B is set. This is cast-iron, its rear surface corresponding substantially to the bearing-surface of the frame. It is planed or dressed upon the surface to receive the jaw-

plate, and is then set into the frame and firmly secured therein. The jaw-plate is constructed with the usual corrugated face. Upon the rear are several bars, C, more or less in number. These bars are made from wrought metal and laid into recesses in the mold prepared for casting the jaw-plate, and the metal flows around the bars, so that when cool the jaw-plate and bars are firmly united, the bars projecting more or less from the surface. The usual "chill" is employed to harden the face, but this has no effect upon the bars, and while the jaw-plate or body may be exceedingly hard, the bars will remain soft and afford a surface or bearings easy to fit, so as to insure a firm seat for the jaw-plate upon the base. On the rear of the jaw-plate a central projecting lug, D, is formed, and a corresponding recess, E, in the base A to receive the said projection. This being central, the jaw-plate may be set upon the base either end up, or at any time reversed, and always in the same relative position.

More than one projecting lug may be made, but corresponding recesses must be made, and all in such relative position that the projection or projections will enter a corresponding recess when the jaw-plate is in its proper relative position—that is to say, if one projection on the jaw-plate be made out of the center, then a corresponding recess must be made upon opposite sides of the center, if the jaw is to be reversed, so that one end up the projection would enter one recess, and reversed would enter the other.

While preferring to form the projection on the jaw-plate and the recess in the base, this order may be reversed with substantially the same result—that is, to properly locate and hold the jaw-plate in its proper relative position vertically.

I claim as my invention—

The jaw-plate for stone-breakers made of cast-iron with wrought-metal bars upon the rear surface, substantially as described.

JOHN A. BLAKE.

Witnesses:

GEO. A. BLAKE,  
GEO. SHERMAN.