H. R. MARSDEN.

Stone-Crushers.

No. 137,939. Patented April 15, 1873.

fig. 1

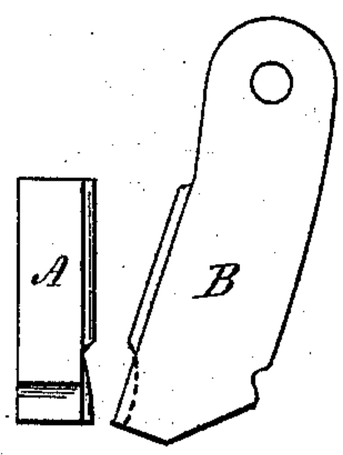


fig. 2

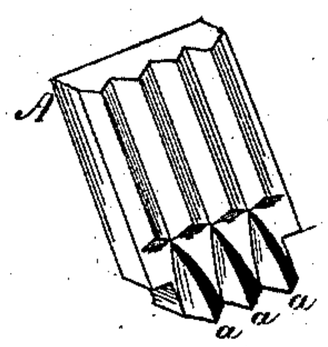
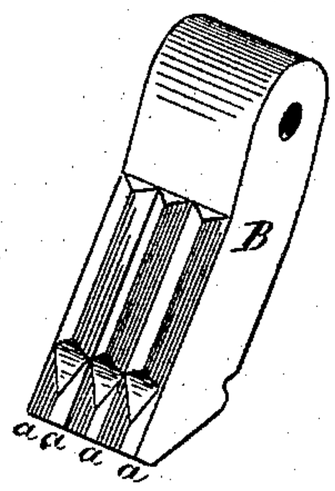


fig. 3



Witnesses.

H. C. Shumway

A. J. Tibbetts

Henry R. Marsden
Inventor

By Atty.

John E. Earle

UNITED STATES PATENT OFFICE.

HENRY R. MARSDEN, OF LEEDS, ENGLAND, ASSIGNOR TO "THE BLAKE CRUSHER COMPANY" AND ELI W. BLAKE, OF NEW HAVEN, CONN.

IMPROVEMENT IN STONE-CRUSHERS.

Specification forming part of Letters Patent No. **137,939**, dated April 15, 1873; application filed March 26, 1873.

CASE B.

To all whom it may concern:

Be it known that I, HENRY R. MARSDEN, of Leeds, in the county of York, in England, have invented a new Improvement in Stone-Crusher; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a side view of the fixed and movable jaws; Fig. 2, a perspective view of the fixed jaw, showing its face; and in Fig. 3, a perspective view of the movable jaw, showing its face.

This invention relates to an improvement in the machine for crushing stone and other material known as the Blake stone-crusher, patented to Eli W. Blake, June 15, 1858, and April 17, 1860. In some classes of stone, particularly that of a slaty character, it is found that some pieces in crushing split so thin that they will pass edgewise from the jaws without being broken transversely; hence larger pieces of stone escape from the crusher than is intended or desirable. The object of this invention is to overcome this difficulty and insure the breaking of such thin pieces; and it consists in forming the faces of the jaws in two or more sections of corrugations, the second being intermediate with the first—that is to say, that a projection will occur in the second section where a recess is in the first, and the corrugations of one jaw correspond to the corrugations of the other, so that the projections of one jaw come opposite, or nearly so, to the recess in the other jaw.

A is the fixed jaw; B, the movable jaw. As here represented, the upper portion of the jaws is corrugated in a vertical line, the corrugations being substantially of **V** shape, as seen in Figs. 2 and 3, and these extend down about two-thirds the length of the working-surface. At that point the first section terminates, and below these new corrugations commence, making projections, *a*, on the fixed jaw, these projections being in line, or nearly so, with the center of the recess above, and dying out at the termination of the recesses in the upper section, as shown in Figs. 2 and 3. Hence, in working, the upper section crushes the material, so that it will pass down between the jaws through this first section into the second. Then, the corrugations changing, the second section will act upon such pieces as may pass between the upper sections, the relative position of these sections to each other being, as seen in Fig. 1, such that should a flat or thin piece escape the upper section it must be crushed as it passes the second section.

While designing this improvement with special reference to the Blake crusher, it will be evident to those familiar with crushing-machines that this improvement may be applied to other crushers. Therefore, in describing these jaws as one movable and the other fixed, I wish to be understood as including the faces of jaws of crushing-machines generally.

I have represented two sections of corrugations on the face of the jaws, but the faces may be made in more sections, if desirable. Two as described will, I believe, best accomplish the result.

I claim as my invention—

The faces of the jaws of a crushing-machine, constructed in two or more sections of corrugations, the sections being in the relative position to each other substantially as described.

HENRY ROWLAND MARSDEN.

Witnesses:

JOHN THORNTON,
Clerk to the Justices,
Borough of Leeds, England.

FRED. RHODES,
Clerk to Messrs. Middleton & Sons, Solicitors, Leeds, England.