

E. VILLEROY.  
STONE CRUSHER.

No. 469,288.

Patented Feb. 23, 1892.

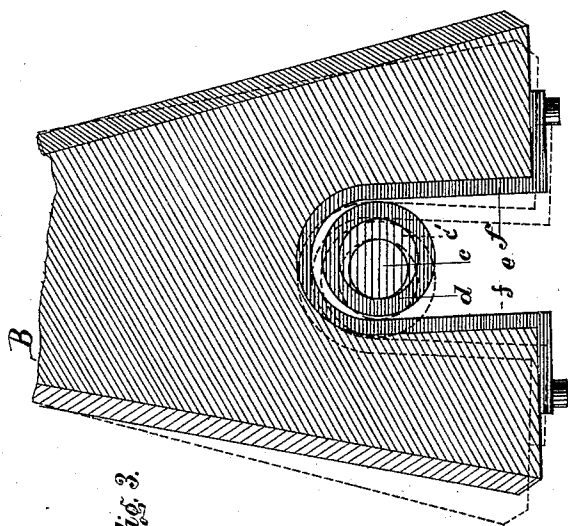


Fig. 3.

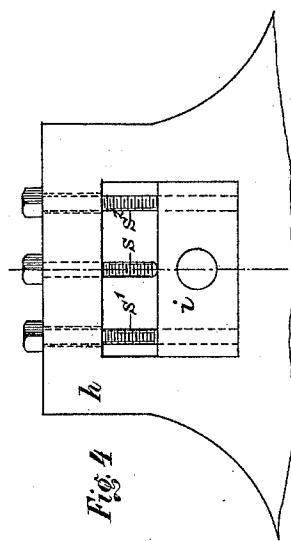


Fig. 4.

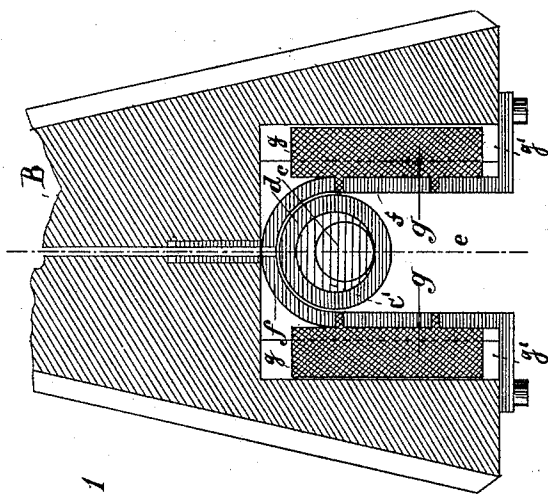


Fig. 1.

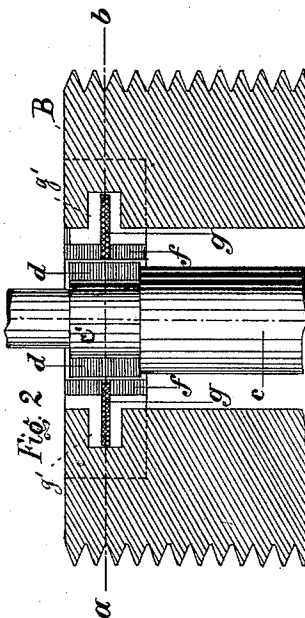


Fig. 2.

Witnesses:  
T. J. Loan.  
A. Goughman

Inventor:  
E. Villeroy  
by his attorneys  
Roeder & Briesen

(No Model.)

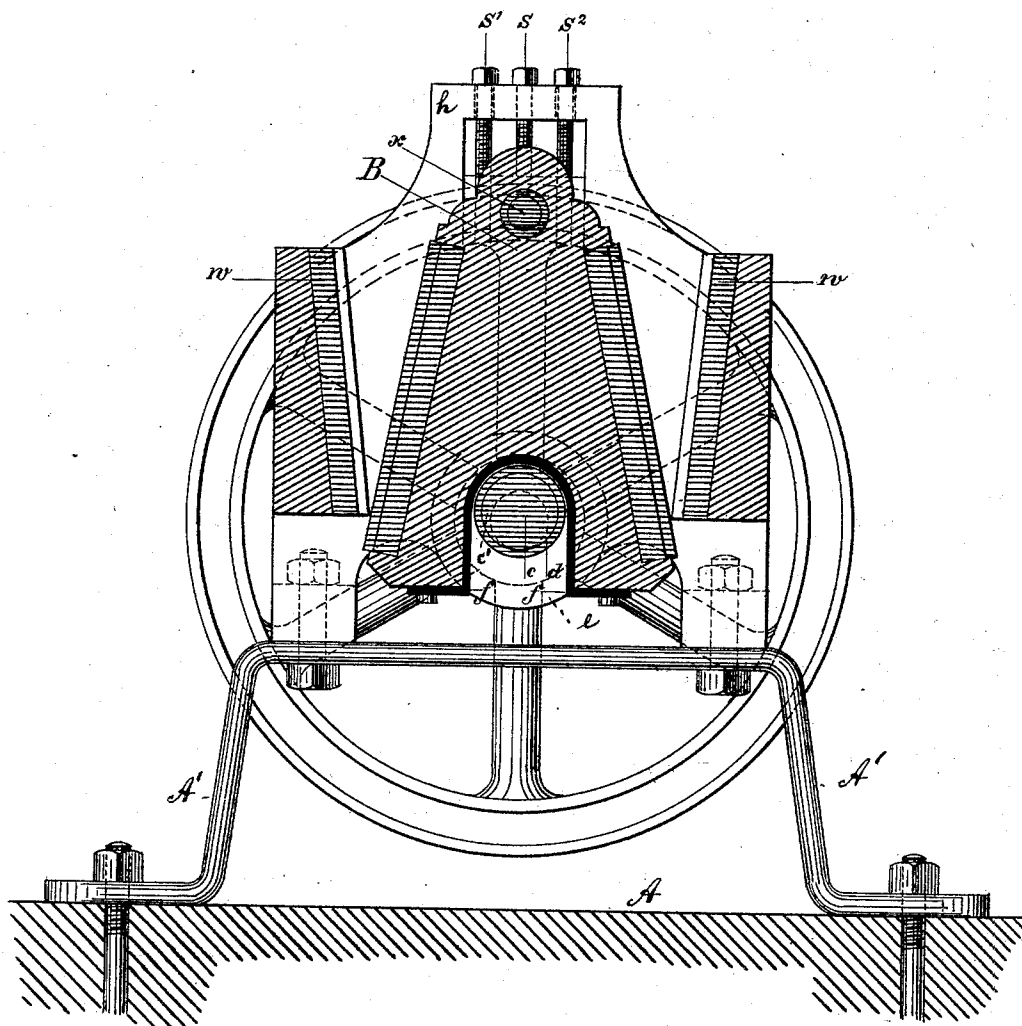
2 Sheets—Sheet 2.

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*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

EUGEN VILLEROY, OF SCHRAMBERG, GERMANY.

## STONE-CRUSHER.

SPECIFICATION forming part of Letters Patent No. 469,288, dated February 23, 1892.

Application filed February 25, 1891. Serial No. 382,757. (No model.)

*To all whom it may concern:*

Be it known that I, EUGEN VILLEROY, a resident of Schramberg, Württemberg, Germany, have invented certain new and useful Improvements in Stone-Crushers, of which the following is a specification.

This invention relates to a stone-crusher in which the movable jaw is made to oscillate between a pair of fixed jaws. In my machine a high degree of power may be imparted to the movable jaw, and the abrasion of the wearing-surfaces is but slight.

The invention consists in the various features of improvement more fully pointed out in the claim.

In the accompanying drawings, Figure 1 is a vertical section through the lower part of the movable jaw on line *a b*, Fig. 2. Fig. 2 is a longitudinal section through one end of such jaw; Fig. 3, a vertical central section of the lower part of the movable jaw, showing it inclined; Fig. 4, a side view of the bearing, and Fig. 5 a vertical central section through the entire machine.

The letter A represents a base-plate carrying bracket A', to which a pair of fixed jaws *w* are secured in suitable manner. These fixed jaws converge from top to bottom and their working faces are placed opposite to one another.

B is the movable jaw, turning on a shaft *a*, that is hung in adjustable bearings *i* centrally between the fixed jaws. The bearings *i* may be raised or lowered to raise or lower the movable jaw and to thus set the machine for coarse or fine work. The bearings *i* are adjusted in their supports *h* by the set-screws *s'* *s* *s*<sup>2</sup>, of which the screws *s'* and *s*<sup>2</sup> are tapped in the bearing, while the screw *s* is tapped in the support *h*.

In order to oscillate the jaw B, its lower face is provided with a central groove *e*, which receives the work-shaft *c*, journaled in the supports *h*. Near each end there is mounted upon this shaft an eccentric *c'*, surrounded by a steel packing-ring *d*. The rings *d* work against a pair of curved steel bearing-plates *f*, secured to the jaw B within groove *e*. As the shaft *c* is revolved the movable jaw is oscillated between the fixed jaws to break up the stones that are fed in on top between the jaws in suitable manner.

To prevent any unusual obstruction from injuring the machine, a narrow flexible or yielding plate *g* is interposed between the plates *f* and the inner face of the jaw B within groove *g'* at the right and left of shaft *c*. These plates *g* are of a strength to withstand ordinary pressure; but they will yield or bend under extraordinary pressure, and thus save the rest of the machine. When bent, the plates *g* are either straightened or replaced by new plates. The working faces of the jaws *w* B are preferably beveled to increase their efficiency.

What I claim is—

The combination of a pair of fixed jaws with an intermediate adjustable grooved jaw, a shaft received by the groove, eccentrics mounted upon the shaft, bearings *f* within the groove, against which the eccentrics work, and flexible plates *g*, that connect the bearings to the jaw, substantially as specified.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

E. VILLEROY.

Witnesses:

H. HINKEL,  
ALLIC RUTTER.