A. Dietz,

Ore Crusher.

No. 112,560. Patented Mar. 14. 1871.

Fig. 1.

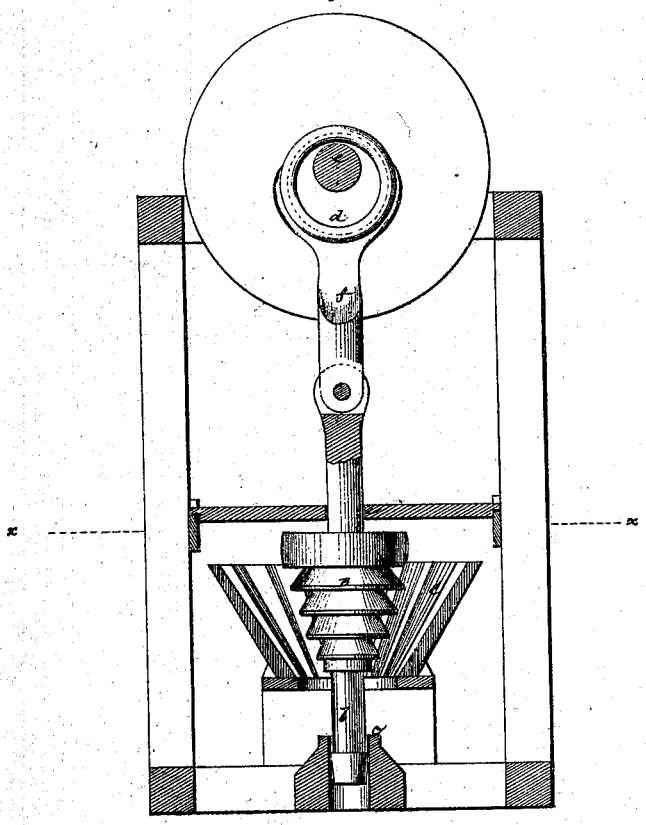
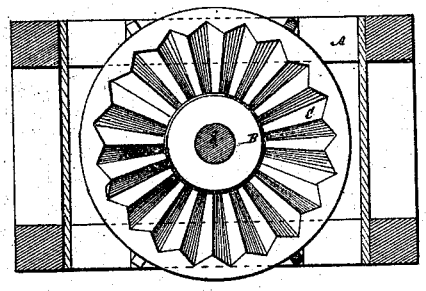


Fig. 2.



Witnesses.
Fred. Haynes
R. H. Rabeau

Andrew Dietz

United States Patent Office.

ANDREW DIETZ, OF NEW YORK, N. Y.

Letters Patent No. 112,560, dated March 14, 1871.

IMPROVEMENT IN STONE-CRUSHERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ANDREW DIETZ, of the city, county, and State of New York, have invented a new and useful Improvement in Crushers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing forming part of this specification, and in which—

Figure 1 represents a sectional elevation of a crusher constructed in accordance with my invention, and

Figure 2, a horizontal section through the line *x x* in fig. 1.

Similar letters of reference indicate corresponding parts.

My invention relates to machines for breaking stones and other substances, and will be found advantageously applicable to breaking or reducing brick-bats for the purpose of utilizing the same by their remanufacture into brick.

The invention consists in a certain combination and arrangement of a reciprocating tapering breaker having teeth or ribs on its side or sides, a revolving crank or eccentric and rod for operating the breaker, and a toothed or ribbed fixed surface or surfaces also set tapering or oblique to the line of the breaker's motion, but at a different angle to the ribbed surface of the latter, so that it will form a diminishing space or channel in a downward direction between it and the breaker.

Referring to the accompanying drawing—

A represents the frame of the machine.

B is the breaker, which, as also the crushing-receptacle C in which it works, is here shown as of circular form in its transverse section, for the purpose of obtaining a breaking surface or surfaces all around or on every side of the breaker; but the same principle of action holds good where the breaking surfaces are restricted to one side only.

Said breaker B, which is suitably steadied or guided, as by a central rod, *b*, and guide-ways *c*, has an up-and-down motion communicated to it by means of a crank or eccentric, *d*, on an upper revolving shaft, *e*, and eccentric-rod *f*.

The breaker B is of tapering configuration on its side or sides, conveying in a downward direction toward its axis or general line of motion, and being stepped, toothed, or ribbed, preferably in directions at right angles, or thereabout, to the length of the breaker.

The crushing-receptacle C, in which the breaker works, is also made tapering on its inside face or faces, converging in a downward direction toward the axis of the breaker, but at a different angle to the ribbed surface of the latter, so as to form a wider space at top than below between the breaker and receptacle, which latter is likewise toothed or ribbed internally, and is open above and below to receive and discharge the material under operation.

To break or crush the stone, brick, or other substance, it is only necessary to feed or throw the same into the receptacle at the top, when the reciprocating action of the toothed breaker, acting in concert with the toothed receptacle or stationary surface, both set tapering or obliquely in relation to each other and the line of the breaker's motion, as described, will cause the substance to be gradually broken smaller and smaller, each successive stamping action of the breaker as produced by its tapering side or sides in opposition to the tapering side or sides of the receptacle, and the breaker in its ascent readily freeing itself and allowing of the easy feed or drop of the substance down the crushing-receptacle.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination and arrangement of the reciprocating tapering and toothed or ribbed breaker B, the crank or eccentric *d* on the revolving shaft *e*, the rod *f*, and the stationary tapering and toothed or ribbed outer surface or receptacle C, substantially as shown and described.

ANDREW DIETZ.

Witnesses:
FRED. HAYNES,
R. E. RABEAU.