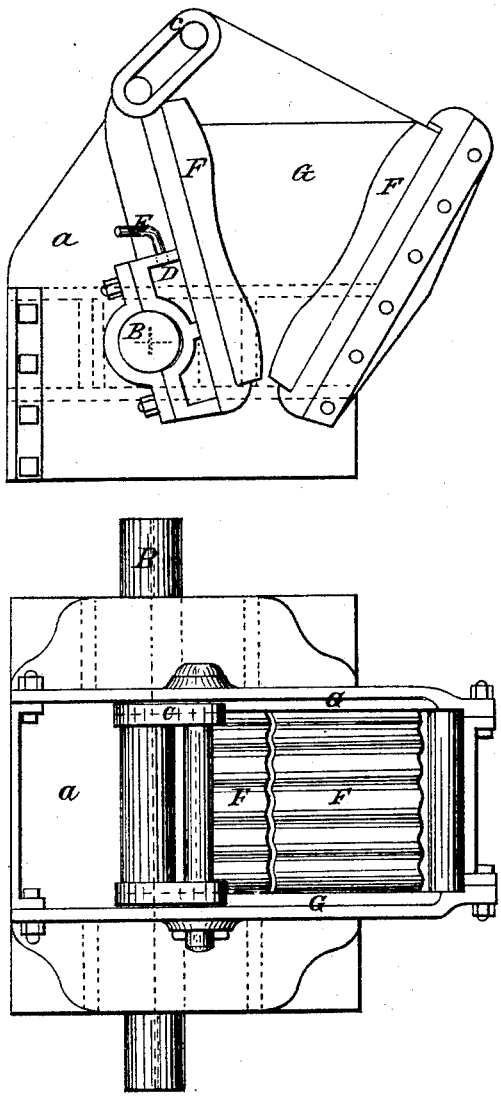
J. BRODIE.

Ore Crusher.

No. 45,582. Patented Dec. 27. 1864.



Witnesses:

Wm Radcliff

Geo. E. Black

Inventor:

James Brodie

UNITED STATES PATENT OFFICE.

JAMES BRODIE, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN ROCK OR ORE CRUSHERS.

Specification forming part of Letters Patent No. **45,582**, dated December 27, 1864.

To all whom it may concern:

Be it known that I, JAMES BRODIE, of the city and county of San Francisco, State of California, have invented a new and useful machine for the purpose of crushing rock or ores to prepare the rock or ores for stamp-mills, arastras, or other pulverizing machines, and known as "Brodie's Rock-Crushing Machine;" and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Letters A A exhibit plan and sectional elevation of the machine.

Letter B is an eccentric shaft, by which the crushing and grinding motion is given to the machine.

Letter C is a link to connect the upper end of movable jaw to produce an oscillating, in connection with the eccentric, motion, thereby giving the machine a double crushing and grinding action on the rock or ore being crushed

Letter D is a reservoir to contain water to keep the journals and other parts of the machine cool while at work.

Letters E E are pipes connected with the reservoir D to permit a stream of water to pass through said reservoir.

Letters F F are shoes or dies that can be reversed to use both ends, and can be replaced promptly when worn out.

Letters G G are side dies to protect the sides of the machine from being exposed to the action of the rock or ores.

What I claim is—

1. The eccentric applied direct to the movable jaw, when connected with the link C, thereby giving the crusher an oscillating and eccentric motion.

2. The water-chambers between the eccentric and the movable jaw, as described.

JAMES BRODIE.

Witnesses:

C. M. RADCLIFF,

GEO. E. BLACK.