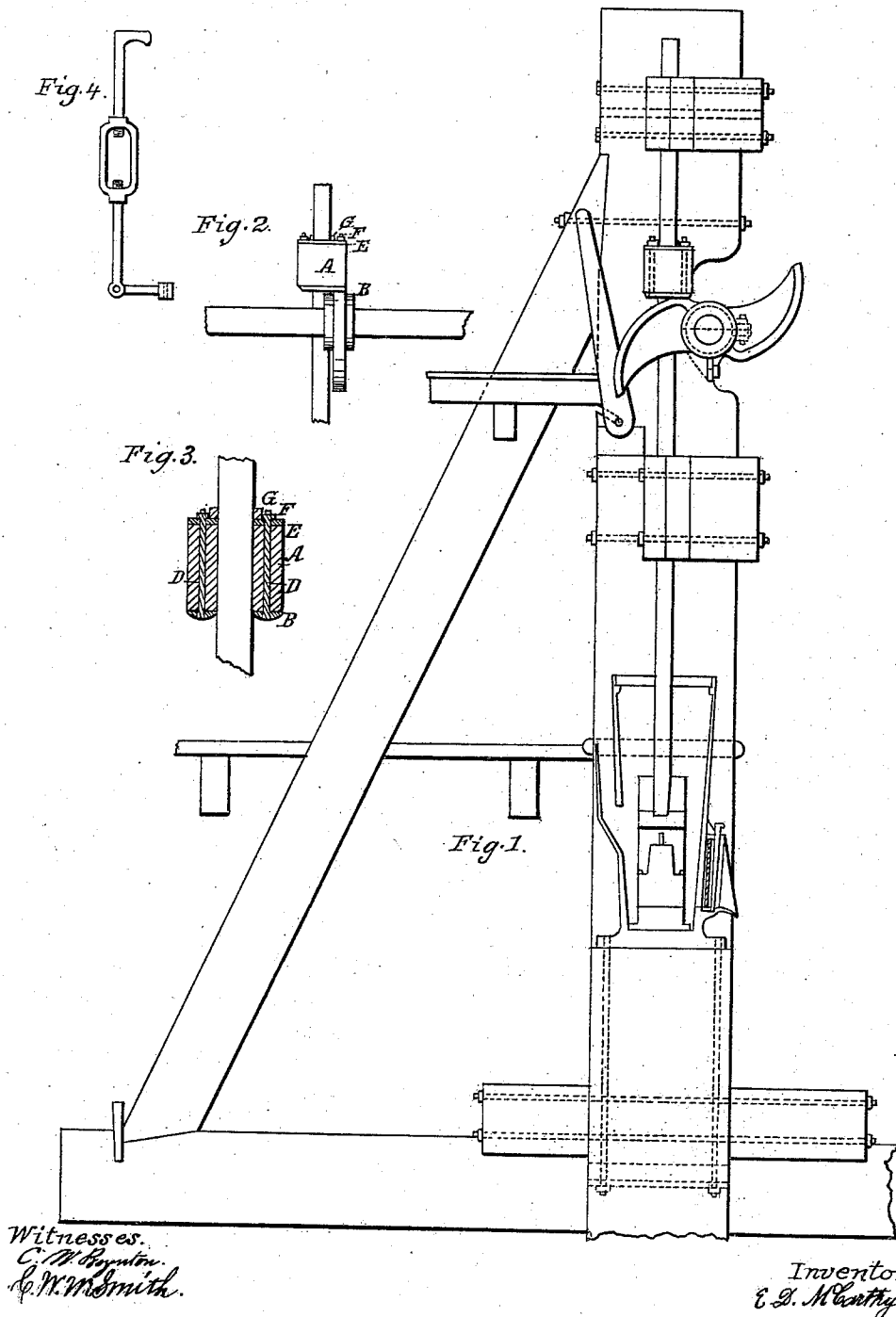


E. D. McCARTHY.

Quartz Crusher.

No. 58,116.

Patented Sept. 18, 1866.



UNITED STATES PATENT OFFICE.

E. P. MCCARTHY, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN ORE OR QUARTZ CRUSHERS.

Specification forming part of Letters Patent No. 58,116, dated September 18, 1866.

To all whom it may concern:

Be it known that I, EDMUND PATRICK MCCARTHY, of the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Tappets for Stamps used in Quartz-Mills, &c., called "McCarthy's Noiseless Tappets," of which the following is a specification.

The nature of my improvement consists in making a tappet of vulcanized rubber, its lower face having a steel plate bolted to it. The tappet being forced onto the stamp-stem, the bolts pass through the steel plate, tappet, and upper plate or washer, and are secured above the latter by nuts.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation, referring to the drawings making a part of this specification.

A is a vulcanized-rubber tappet of the form of a hollow cylinder, to be forced upon the stamp-stem.

B is a hardened-steel plate of the form shown, with two bolts, D D, having countersunk heads let into the plate B, and passing through an iron washer of plate E, and secured above it by nuts F F.

The steel plate B has its lower surface rounded in the manner shown in the drawings, to afford less surface of adhesion to the face of the cam, and enable the stamp to be turned with greater facility and diminish the friction.

A collar, G, with set-screw fitting upon the stamp-stem, is put on just above the iron plate E, the head of the set-screw passing between the nuts F F.

The top of the stamp-stem is tapered for the purpose of enabling the tappet A to be forced on, which is accomplished by a screw prepared by means of the machine represented in Figure 4, which machine also admits of raising the tappets as the stamp-shoes wear.

The advantages of my improved tappet are, first, in diminishing the jar upon the battery consequent upon the material of which the tappet is composed, in the fact that it is held simply by the elastic force of the rubber, thus requiring no keys, set-screws, or other fastening; second, in case of the engine by which stamps are usually driven becoming suddenly reversed and the cams thrown forcibly against the iron tappets now in use, the stamp-stem, cams, or some portion of the machinery are liable to be broken; but by the use of my improved tappet the cams, when reversed, come in contact with an elastic substance without injury to the machinery.

Having thus described my improved tappet, I will now proceed to state what I claim and desire to secure by Letters Patent—that is to say:

The use of a rubber tappet, A, steel-shod, the steel shoe B, plate E, and bolts F F, combined in the manner and for the purposes set forth.

In witness whereof I have hereunto set my hand and seal this 9th day of November, A. D. 1865.

E. P. MCCARTHY. [L. S.]

Witnesses:

C. W. BOYNTON,
C. W. M. SMITH.