

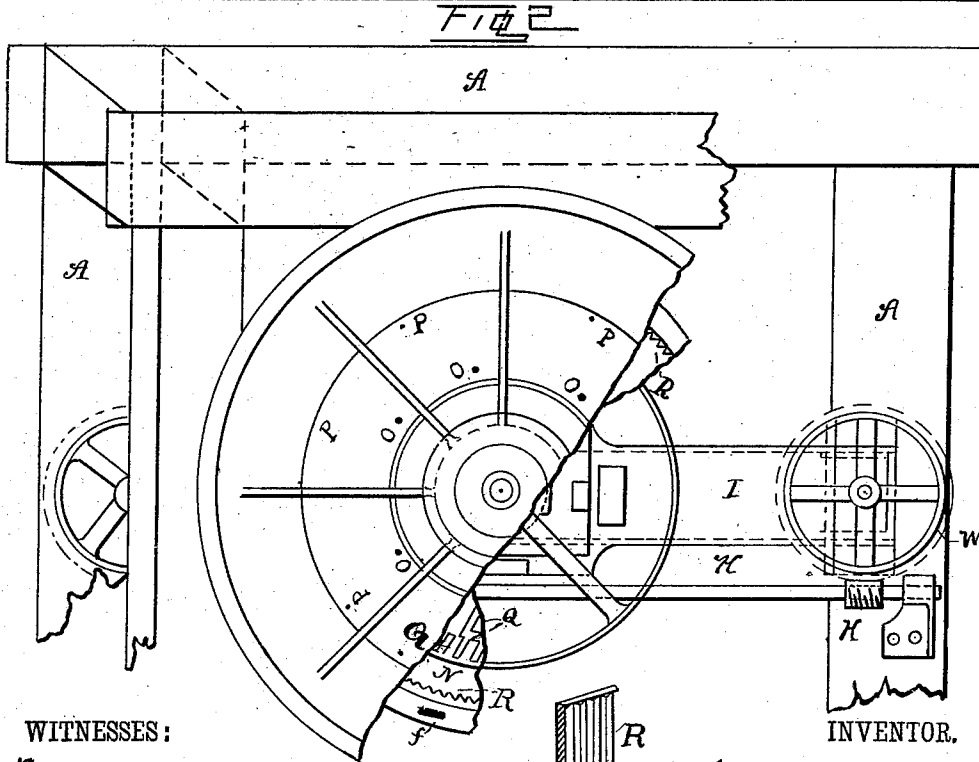
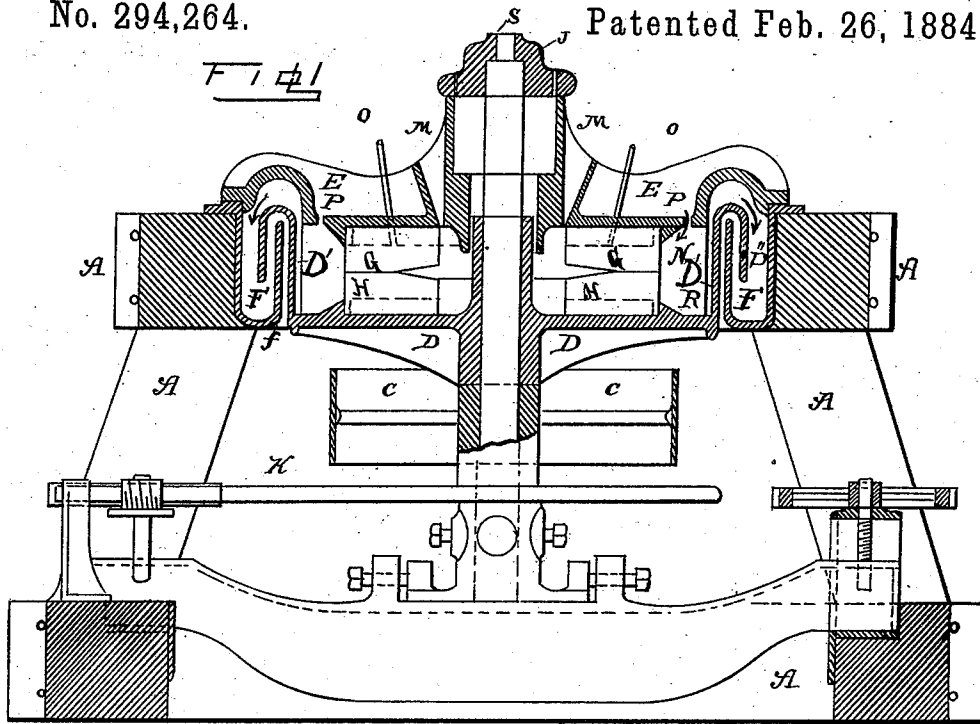
(No Model.)

A. B. PAIGE.

AMALGAMATOR.

No. 294,264.

Patented Feb. 26, 1884.



WITNESSES:

And S. Dietrich.
H. Kuntzmann

INVENTOR.

Austin B. Paige
By Daniel Breed ATTORNEY.

UNITED STATES PATENT OFFICE.

AUSTIN B. PAIGE, OF CHICAGO, ILLINOIS.

AMALGAMATOR.

SPECIFICATION forming part of Letters Patent No. 294,264, dated February 26, 1884.

Application filed July 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN B. PAIGE, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful

5 Improvements in Revolving Amalgamators, of which the following is a specification, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 My invention consists of a novel construction of amalgamator to be operated in connection with an ore-grinding mill, which will be fully understood by the following description and claim.

15 In the accompanying drawings, Figure 1 is a vertical central section of my improved amalgamator and my mill connected therewith. Fig. 2 is a plan view, partly in section, or with some of the upper devices cut away,

20 better to show the other devices.

As I have made application for a patent for my ore-mill shown in the accompanying drawings, I do not here go into a description of the mill proper, but refer to the patent based on

25 said description, and here describe the amalgamator.

The runner D of my ore-mill is cast with an outer rim, D', Fig. 1, having a discharging-lip, D'', both rim and lip being outside of the

30 annular amalgamating-chamber N, Fig. 1, which chamber completely surrounds the grinding-plates of the mill. The ground ore from the mill is discharged into this chamber N, which is to be supplied with water through

35 a series of holes, P, Figs. 1 and 2. These currents of water not only wet the ore as it is being ground, but they wash the pulp or powdered ore from the grinding-plates G H into the chamber N of the amalgamator, which is

40 supplied with mercury, and afterward wash off the refuse and lighter portions or particles from the amalgamating-chamber, leaving only the amalgamated metal behind.

Cut or cast on the inside of the rim D' of the

runner or amalgamating-chamber thereof is a 45 series of recesses, R, Fig. 2; completely surrounding said chamber and extending to the top of said rim. These recesses keep the mercury evenly distributed all around the circumference of the chamber, and thus prevent the 50 mercury from massing on one side. The revolution of this chamber N with the runner of the mill gives a centrifugal force or motion to the mercury and drives it up or makes it climb the recesses R nearly to the top of the rim D', 55 and thus hold the mercury in an almost vertical and continuous sheet, presenting a broad amalgamating-surface, against which the pulp is driven by the sling of the runner and amalgamating-chamber. After the amalgamation 60 is completed, the waste from the pulp and the overflow of water are discharged from the amalgamator over the drooping lip D'' into the gutter F, as indicated by arrows in Fig. 1.

The operation of my amalgamator is simultaneous or continuous with the grinding of 65 the ore in the mill shown in the drawings, but not here fully described, the same being covered by a separate application for a patent filed April 18, 1883. 70

I do not broadly claim the corrugations R above described; but,

Having fully described my invention, what I claim is—

As an improvement in amalgamators, the 75 revolving chamber N, surrounding the grinding-plates G and H, and provided with recesses R, in combination with the water-inlets P and overhanging lip D'', substantially as and for the purposes set forth. 80

In testimony that I claim the above as my own invention I hereto subscribe my name in the presence of two witnesses.

AUSTIN B. PAIGE.

Witnesses:

JOSEPH KNOTTS,
H. C. SIGLER.