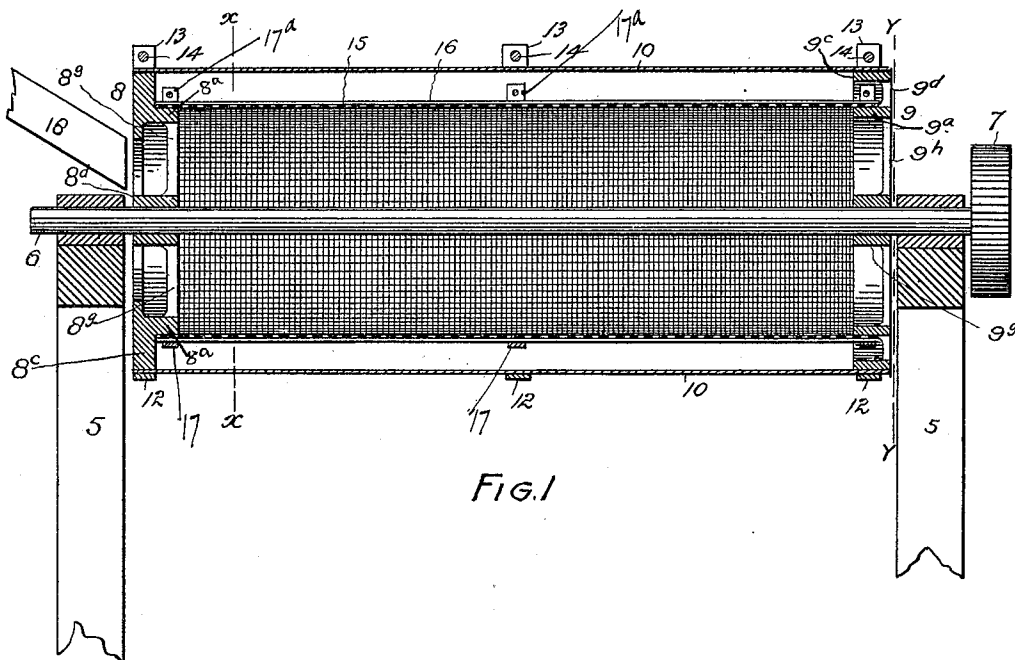


(No Model)

L. BAUDENDISTLE & J. A. DINGLEY.
AMALGAMATOR.

No. 582,596.

Patented May 11, 1897.



UNITED STATES PATENT OFFICE.

LAFAYETTE BAUDENDISTLE AND JULIEN A. DINGLEY, OF DENVER,
COLORADO; SAID DINGLEY ASSIGNOR TO SAID BAUDENDISTLE
AND PETER F. BAUDENDISTLE, OF SAME PLACE.

AMALGAMATOR.

SPECIFICATION forming part of Letters Patent No. 582,596, dated May 11, 1897.

Application filed July 31, 1896. Serial No. 601,278. (No model.)

To all whom it may concern:

Be it known that we, LAFAYETTE BAUDENDISTLE and JULIEN A. DINGLEY, citizens of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Amalgamators; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in amalgamators; and it consists of the features, arrangements, and combinations hereinafter described and claimed, all of which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a longitudinal vertical section taken through the apparatus. Fig. 2 is a section taken on the line *xx*, Fig. 1. Fig. 3 is a section taken on the line *yy*, Fig. 1.

Similar reference-characters indicating corresponding parts in these views, let the numeral 5 designate a suitable frame, in which is journaled a shaft 6, having a fast pulley 7 at one extremity. To the extremities of the shaft, just within the journals, are made fast the heads 8 and 9, respectively. To these heads are applied an amalgamated plate 10, composed of a rectangular sheet of copper, which is bent around the heads, its longitudinal edges being overlapped, as shown at 10^a. This plate is locked in place by metal straps 12, whose extremities are provided with apertured flanges 13, secured by fastening-bolts 14. As shown in the drawings, three of these straps are employed, one being placed at each extremity of the plate and the other in the middle.

The heads 8 and 9 are provided with annular flanges 8^a and 9^a, respectively, located a short distance from the extremities of the plate 10. To these flanges are applied a cylindrical screen 15, which is locked in place

by longitudinal metal straps 16, applied to the outer surface of the screen and held in place by circular straps 17, surrounding the screen and secured by fastening-bolts passed through apertured flanges 17^a, formed on the extremities of the straps. The head 8 is closed between the plate 10 and the screen 15, as shown at 8^c, while between the flange 8^a and the collar 8^d, surrounding the shaft, the head is open to receive the pulp, which is fed into the machine from a chute or sluice 18, which discharges the material to be treated through the annular opening in the head. The collar 8^d is connected with the annular flange 8^a by the spider-arms 8^e. The head 9 is open and is provided with an outer flange 9^c, which the plate 10 engages. The two flanges 9^a and 9^c are connected by narrow webs 9^d, while the flange 9^a is connected with the collar 9^e, by spider-arms 9^h.

The apparatus comprising the shaft, the heads, the amalgamating-plate, and the screen are rotated by connecting the pulley on the shaft with any suitable motor.

The pulp is fed into the cylindrical screen, which is of suitable mesh to reject the coarser gangue, which is discharged from the screen through the opposite head 9, while the finer material and that containing the values passes through the screen to the amalgamated plate 10, and as the apparatus is rotated the mineral particles are brought into contact with the said plate and saved, while the balance of the gangue is discharged from the machine between the flanges 9^a and 9^c of the head 9.

In cleaning up it is only necessary to unfasten the straps 12 and remove the plate 10. The latter may then be spread out and the amalgam removed from its inner surface, after which the plate is replaced and fastened as before.

This apparatus may be used in connection with a sluice, as in placer-mining, or in connection with stamp-mills, or in any other relation where an amalgamator is desired.

Having thus described our invention, what we claim is—

In an amalgamator, the combination with a suitable frame, of the horizontal shaft jour-

naled therein, the two open heads 8 and 9
having collars surrounding and made fast to
the shaft, said heads having annular flanges
8^a and 9^a located at a suitable distance from
5 their peripheries, the detachable amalgamat-
ing-plate applied to the peripheries of the
heads and having its longitudinal edges over-
lapped, fastening - straps surrounding said
plate and having flanges connected by suit-
10 able fastening devices, a detachable cylin-
drical screen whose extremities are applied
to the flanges 8^a and 9^a of the heads 8 and 9,
longitudinal strips engaging said screen on
the outside, fastening-strapssurrounding said

strips and having flanges connected by suit- 15
able fastening devices, the head 8 being closed
between the flange 8^a and its periphery, while
the corresponding portion of the head 9 is
open, and suitable means for rotating the
shaft and its attachments, substantially as de- 20
scribed.

In testimony whereof we affix our signa-
tures in presence of two witnesses.

LAFAYETTE BAUDENDISTLE.

JULIEN A. DINGLEY.

Witnesses:

G. J. ROLLANDET,

ALFRED J. O'BRIEN.