(No Model.)

A. MESIA DE LA CERDA.

ORE WASHER.

No. 265,766. Patented Oct. 10, 1882.

FIG. 1

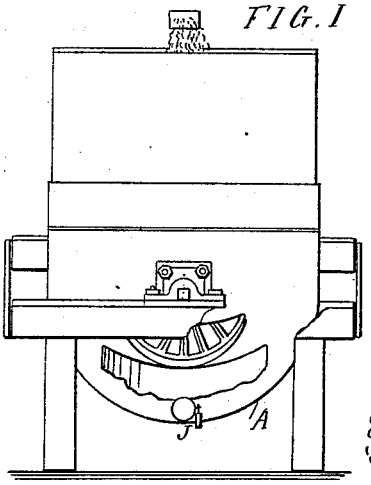


FIG. 2.

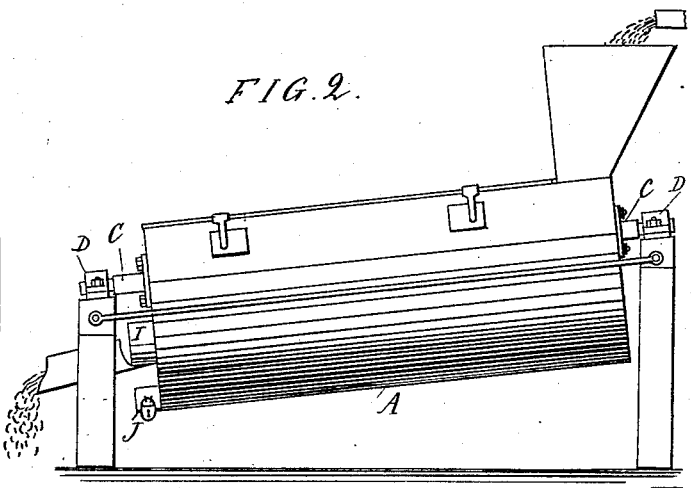


FIG. 4.

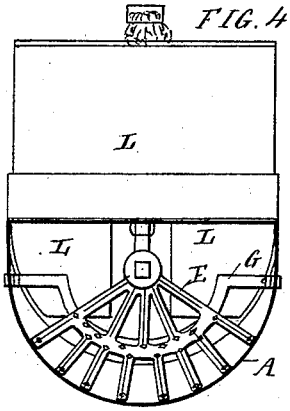


FIG. 3.

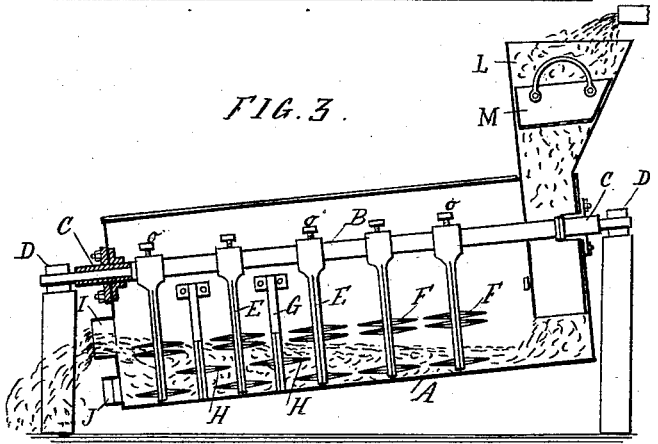
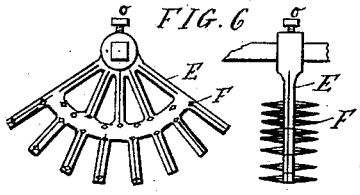


FIG. 6



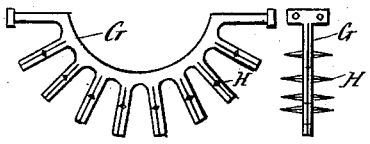
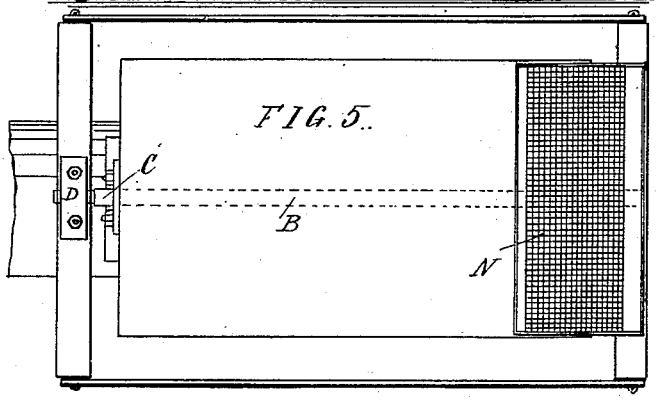


FIG. 5.



Witnesses

H. Bonneville

G. Lombard

Inventor

A. Mesia de la Cerda

UNITED STATES PATENT OFFICE.

ALONZO MESIA DE LA CERDA, OF MADRID, SPAIN.

ORE-WASHER.

SPECIFICATION forming part of Letters Patent No. 265,766, dated October 10, 1882.

Application filed September 24, 1881. (No model.) Patented in Spain May 19, 1879, No. 184.

To all whom it may concern:

Be it known that I, ALONZO MESIA DE LA CERDA, a citizen of Spain, residing at Madrid, in the Kingdom of Spain, have invented a new and useful Improvement in Ore-Washers, (for which I have obtained a patent in Spain, dated May 19, 1879, No. 184,) of which the following is a specification.

This invention consists in an ore-washer wherein are combined a longitudinally-inclined cradle having two openings at the lower end thereof—one next to the bottom for discharging the ore and the other above the bottom for discharging the sand and water—either or both openings being adapted to be closed at will, a fixed shaft extending longitudinally through the cradle and having the latter arranged to rock thereon, and ore-agitators fixed to the cradle and shaft, respectively, to co-operate with each other; also, in the combination, with the foregoing, of a bifurcated hopper which extends into the cradle, at the upper end thereof, and straddles the shaft, bringing the delivery end of the hopper below it.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents an end view. Fig. 2 is a side elevation. Fig. 3 is a vertical longitudnal section. Fig. 4 is a vertical cross-section. Fig. 5 is a plan or top view. Fig. 6 illustrates details of construction.

Similar letters indicate corresponding parts.

The letter A designates the cradle; B, the shaft; E G, the ore-agitators, and L the hopper.

The cradle A has an approximately semi-cylindrical shape, and the flat top is hinged and locked to the round bottom or body thereof for convenient access to its interior, the whole being inclined longitudinally. At the lower end of the cradle A are two openings, I J, one of which is immediately next to the bottom or shallow part thereof, while the other is above such bottom, and either or both of which are adapted to be closed by suitable covers. (Not shown.)

The shaft B is polygonal at its opposite ends, where it rests in bearings D, applied to a suitable frame, so that it occupies a fixed position, and the shaft extends longitudinally through the cradle above its center of gravity, while those portions of the shaft at or opposite the ends of the cradle are rounded, the cradle being provided with bearings C therefor, whereby the cradle is adapted to rock on the shaft. This shaft B is placed in an inclined position for the purpose of bringing the cradle into the desired plane.

The agitators E are fixed to the shaft B, as by means of set-screws *o*, and consist of segmental spiders terminating near the bottom of the cradle A, and having laterally-projecting spurs F.

The agitators G are fixed to the cradle A by bolts or other suitable means, and alternate with the agitators E, while they are composed, like the latter, of segmental spiders having laterally-projecting spurs H, which are between those of the agitators E, allowing the agitators to pass and repass each other.

The hopper L extends into the cradle A, at the upper end thereof, through a suitable opening, and it is bifurcated at the lower end, as indicated in Fig. 4, to straddle the shaft B, so that the delivery end of the hopper is brought below the shaft and near the bottom of the cradle.

In the upper part of the hopper N is a riddle, M, which is removable, being provided with suitable handles.

In applying the apparatus to use the opening J is closed and the ore is introduced into the hopper L, together with a suitable quantity of water, thence passing into the cradle A, while at the same time a rocking motion is imparted to the cradle, so that as the ore descends on the bottom thereof by its inherent gravity it is subjected to the action of the agitators E G. In this manner the ore is divided and washed, and the heavy or metallic particles are allowed to collect on the bottom of the cradle at or upward from its lower end, while the water overflows through the upper opening, I, carrying with it the sand or earth.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, substantially as hereinbefore described, of the longitudinally-inclined cradle having two openings at the lower end thereof—one next to the bottom for discharging the ore and the other above the bottom for discharging the sand and water—the fixed shaft extending longitudinally through the cradle

and having the latter arranged to rock thereon, and the ore-agitators fixed to the cradle and shaft, respectively.

2. The combination, substantially as hereinbefore set forth, of the longitudinally-inclined cradle having two openings at the lower end thereof—one next to the bottom for discharging the ore and the other above the bottom for discharging the sand and water—the fixed shaft extending longitudinally through the cradle and having the latter arranged to rock thereon, the ore-agitators fixed to the cradle and shaft, respectively, and the bifurcated hopper extending into the cradle, at the upper end thereof, and straddling the shaft.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

A. MESIA DE LA CERDA.

Witnesses:

H. BONNEVILLE,

G. LOMBARD.