

R. SOLLIDAY.

Ore-Washers.

No. 138,948.

Patented May 13, 1873.

FIG: 1

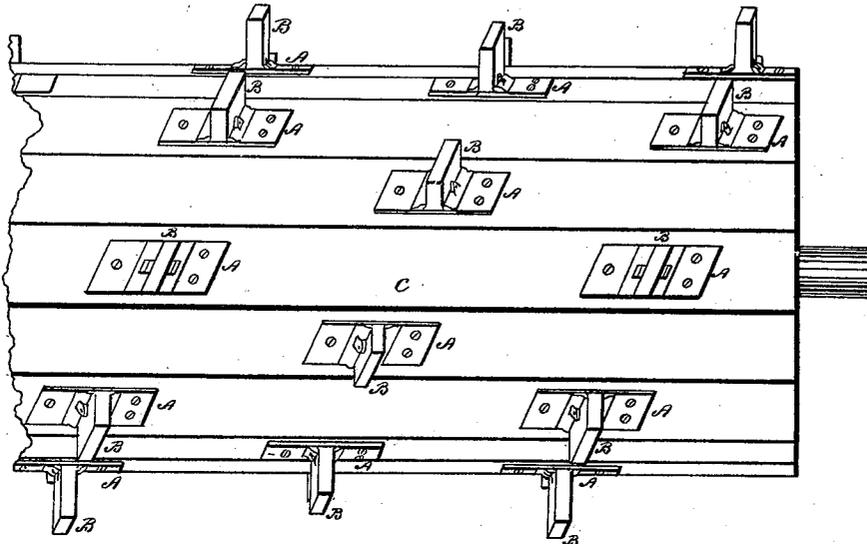


FIG: 2

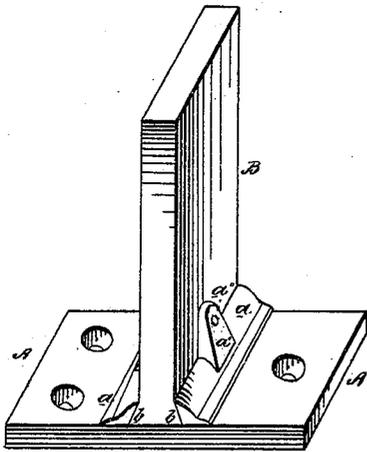
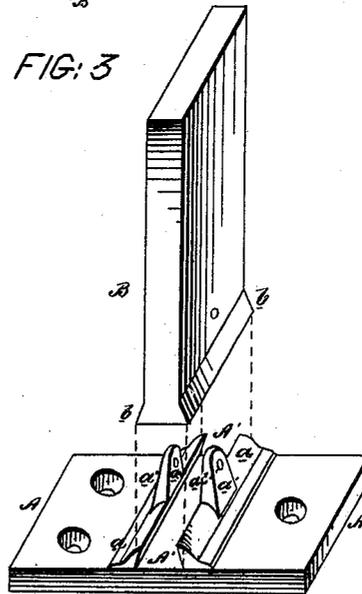


FIG: 3



WITNESSES.

*Wm W von Hofstetter*  
*John R. Young*

INVENTOR.

*Ruben Solliday, by*  
*Prindle and Co., his Attys.*

# UNITED STATES PATENT OFFICE.

REUBEN SOLLIDAY, OF ALLENTOWN, PENNSYLVANIA.

## IMPROVEMENT IN ORE-WASHERS.

Specification forming part of Letters Patent No. **138,948**, dated May 13, 1873; application filed January 23, 1873.

*To all whom it may concern:*

Be it known that I, REUBEN SOLLIDAY, of Allentown, in the county of Lehigh and in the State of Pennsylvania, have invented certain new and useful Improvements in Ore-Washers; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of a washing-cylinder having attached thereto my improved beater. Fig. 2 is an enlarged perspective view of said device detached from said cylinder; and Fig. 3 is a like view of the same, showing the fixed and removable parts separated.

Letters of like name and kind refer to like parts in each of the figures.

In the employment of ore-washers it is found that the largest item of expense arises from the necessity of the frequent renewal of the beaters, which usually wear out in from three to four days. To lessen the expense of such renewal is the object of my invention, which consists in constructing the blade of the device separate from its base, and in combining said parts, substantially as and for the purpose hereinafter specified.

In the annexed drawing, A represents the base and B the blade of the beater, which, as combined, have the same general exterior form of those commonly used. In order that the parts may be constructed separately and then easily and firmly united the blade D is provided upon each side, at its lower end, with an angular enlargement, *b*, which, in connection with the opposite enlargement, forms of said end a "dovetail" tenon. The base A is provided upon its upper side with two parallel cleats, *a*, between which is formed a mortise or groove, *A'*, that corresponds in size and shape to the tenoned end of the blade, and receives and contains the same when said parts are combined, which operation is performed by sliding said blade edgewise into said mortise. A lug, *a'*, extending upward from the longitudinal center of each cleat *a*, is provided with an opening, *a''*, which corresponds in po-

sition to the opening in the opposite lug and to a similar opening in the blade, and enables the latter to be locked in place, when desired, by means of a nail or wire passed through said parts.

As thus constructed the base is secured in position upon the cylinder C, and is only removed when, through accident, it becomes broken, while the blade, after having become worn out, is removed from said base and replaced by another blade, such a renewal costing but a trifle, either in time or material, in comparison with expense heretofore rendered necessary by the renewal of the entire beater.

The cylinder C is journaled within a suitable semicircular trough, which has such dimensions transversely as to leave a space of from two and one-half to three inches between the ends of the beater-blades and its walls, and by means of suitable mechanism is caused to rotate within said trough. The ore to be washed is now fed into one end of the trough and a stream of water caused to flow into the same, when, by the action of the beaters, said ore and water are so thoroughly agitated as to remove from the former all adhering soil. The angle occupied by the beater-blades, together with the spiral form in which the beaters are arranged upon or around the cylinder, causes the ore and water to be moved from the end of the trough at which they are supplied to the opposite end of said trough, where said articles are discharged through a suitable opening.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

The base A and blade B, constructed separately, and combined by means of the dovetailed groove and tenon, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 16th day of January, 1873.

REUBEN SOLLIDAY.

Witnesses:

GEO. S. PRINDLE,  
EDM. F. BROWN.