(No Model.)

A. WERNER.

SLAG CART.

No. 343,783. Patented June 15, 1886.

Fig. 1

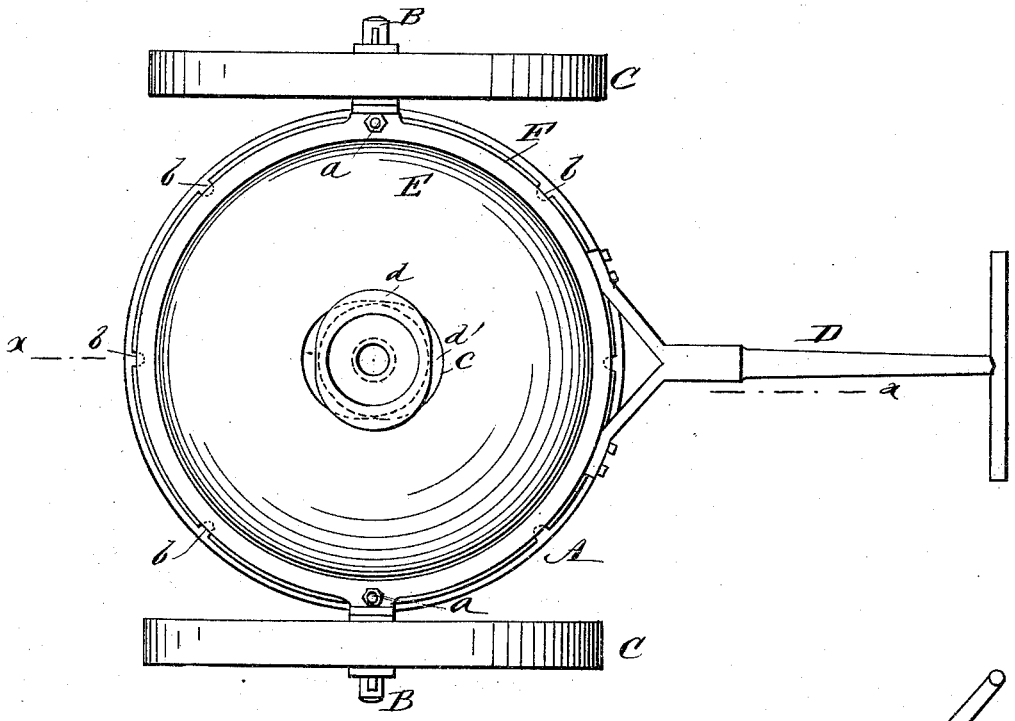
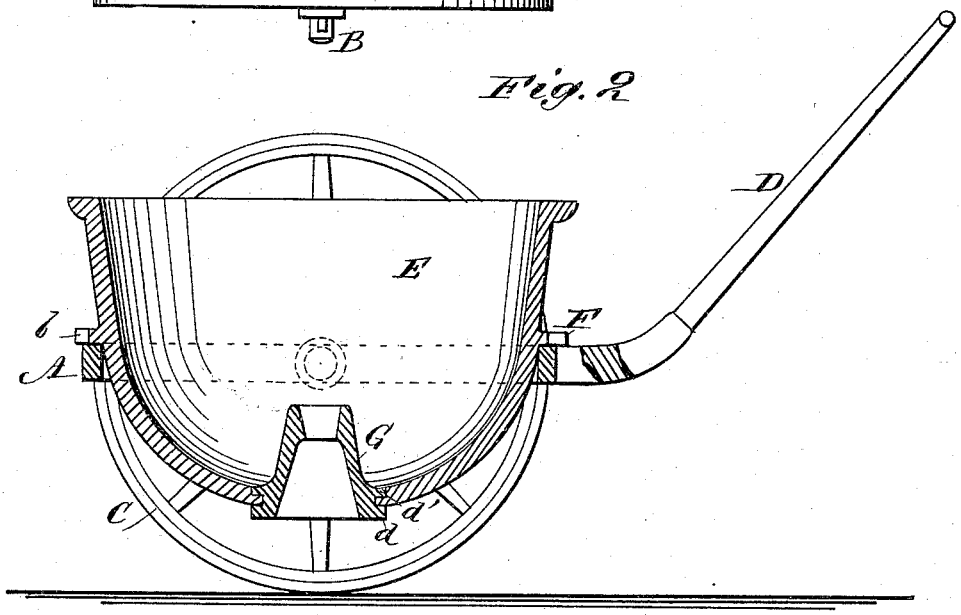


Fig. 2



WITNESSES:

C. Neveux

C. Sedgwick

INVENTOR:

A. Werner

BY Munn & Co

ATTORNEYS.

UNITED STATES PATENT OFFICE.

AUGUST WERNER, OF LEADVILLE, COLORADO.

SLAG-CART.

SPECIFICATION forming part of Letters Patent No. 343,783, dated June 15, 1886.

Application filed January 15, 1886. Serial No. 188,652. (No model.)

To all whom it may concern:

Be it known that I, AUGUST WERNER, of Leadville, in the county of Lake and State of Colorado, have invented a new and useful Improvement in Slag-Carts, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is an inverted plan view. Fig. 2 is a vertical transverse section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts in both figures of the drawings.

In the smelting of precious metals the slag, which is usually composed of quartz or silicious material and the residue of fuel, is lighter than the matte which bears the metal, therefore the tendency of the matte is to lodge at the bottom of the bowl or ladle into which the slag is discharged from the furnace.

The object of my invention is to separate the matte from the slag by the employment of a slag-cart adapted to the purpose.

The invention consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

The annular frame A, forming the body of the cart, is provided at diametrically-opposite sides with axles B, upon which are placed the supporting-wheels C. To one end of the annular frame, midway between the axles B, is secured a handle, D, for moving and dumping the cart. A bowl, E, provided with a flange, F, around the exterior thereof, is received in the annular frame A, its flange F resting upon the top of said frame, where it is secured by bolts *a*. At intervals around the periphery of the flange F there are notches *b*, which receive the bolts *a* when the bowl E is shifted or turned after being worn by continued use in one position. In the bottom of the bowl E there is an oblong opening, *c*, to which is fitted an inwardly-projecting conical discharge-nozzle, G, provided with oblong flanges *d d'*, between which the edges of the bowl E around the oblong openings *c* are received when the discharge-nozzle G is in its place in the bottom of the bowl. The discharge-nozzle G is made removable, to admit of replacing it by longer or shorter nozzles, according to the character of the slag to be received in the bowl E. The mouth of the nozzle G is made tapering or flaring, to receive and retain a clay stopper to prevent the escape of the contents of the bowl E. When the slag is drawn off from the furnace into the bowl E, it is allowed to remain for a sufficient time for the matte to subside, when the matte will rest in the bottom of the bowl below the mouth of the nozzle G, and by removing the clay stopper from the mouth of the nozzle the slag may be drawn from the bowl E without disturbing the matte. By allowing the slag to escape from the center of the bowl the cooler parts of the slag and matte are allowed to remain in contact with the walls of the bowl, while the more fluid parts of the slag are withdrawn through the nozzle. After the withdrawal of the slag from the bowl the matte is separated from the slag and rests in the bottom of the bowl and in contact with the walls thereof. It is discharged from the bowl by turning the frame A and the bowl E on the axles B as a pivot until the bowl is inverted, when the matte will drop out by its own gravity. When the quantity of matte as compared with the slag is considerable, a longer nozzle G will be inserted, and when the amount of matte is small a shorter nozzle G will be employed.

I am aware that a receiving-vessel having an inwardly-projecting nozzle in its bottom and provided with short axles projecting from its sides to receive the supporting-wheels is old, and I therefore do not claim such invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The herein-described slag-cart, consisting of the annular frame A, provided with the axles B and the handle D, the wheels C on the said axles, and the bowl E, having the removable nozzle G and detachably secured in the said frame, substantially as herein shown and described.

2. In a slag-cart, the combination, with the annular frame A, mounted on wheels and provided with the handle D, of the bowl E, provided with the flange F, having notches *b* for receiving fastening-bolts, substantially as and for the purpose set forth.

AUGUST WERNER.

Witnesses:

OTTO ANDRE,

A. L. ENGELBACH.