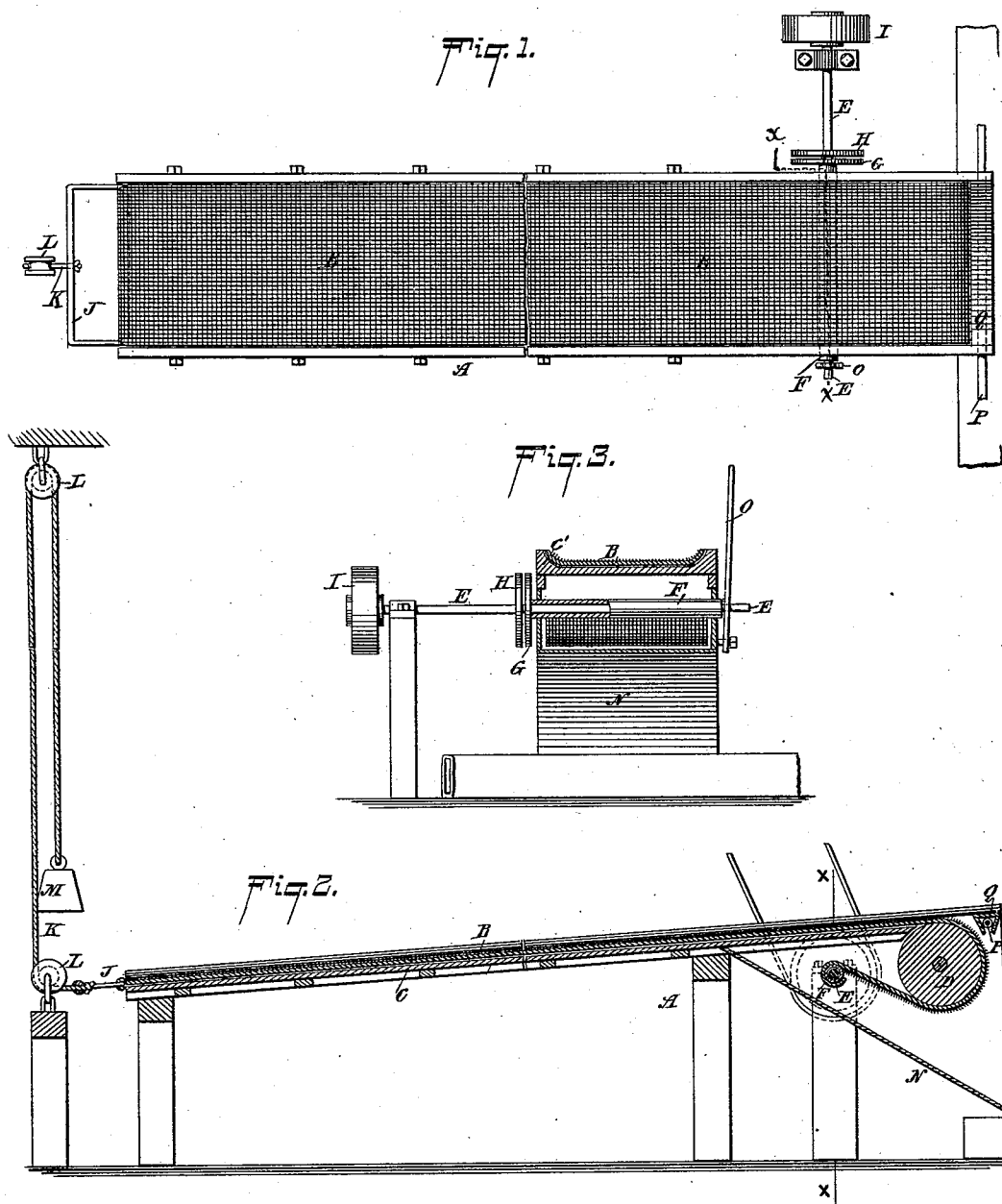


(No Model.)

G. L. CUDNER.
ORE CONCENTRATOR.

No. 469,202.

Patented Feb. 16, 1892.



WITNESSES:

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GUSTAVIS LORRIMER CUDNER, OF NEW YORK, N. Y.

ORE-CONCENTRATOR.

SPECIFICATION forming part of Letters Patent No. 469,202, dated February 16, 1892.

Application filed May 14, 1891. Serial No. 392,672. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVIS LORRIMER CUDNER, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ore-Concentrators, of which the following is a specification.

My invention relates to an improved ore-concentrator in which a sluiceway is provided, upon which a rep cloth is so arranged that it may be rolled and unrolled on a drum at one end and the other is fastened to a weight so that the rep may be rolled and unrolled for the purpose of cleaning it.

In the drawings, Figure 1 is a top view. Fig. 2 is a longitudinal vertical section. Fig. 3 is a cross-section on the line X X, Fig. 1.

A represents the body of the machine.

B represents the rep cloth.

C represents the top of the platform.

D is a drum, over which the rep passes, and is provided for the purpose of facilitating the rolling of the rep upon the hollow shaft F and also to open the fissure of the rep, and thus to facilitate the removal of the concentrates that may have lodged there.

F is a hollow shaft, upon which the weight is wound. The shaft may be turned by a crank or by hand or by a pulley, as shown in Figs. 1 and 2. On the end of the hollow shaft F is a friction-wheel G. The shaft E also is provided with a friction-wheel H and a driving-pulley I. These friction-wheels are brought into play by means of the lever O.

J is a bar fastened to the end of the rep B, that is provided for the purpose of stretching and drawing the rep and also to attach the rope K of the weight, which is intended to pull the rep down the sluiceway.

L L are pulleys over which the rope passes.

M is a weight of sufficient weight to draw down the rep.

O is the lever by means of which the friction-wheels are brought together.

Q is a triangular water-distributor open at the bottom and having inserted through its length a perforated pipe P, and is set in such position that when the water is turned on in pipe P a strong thin sheet of water is forced onto the rep where it passes over the drum D and dislodges all matter that may be held by the fissures of the rep on the apron N, washing it down into the vessel setting underneath

it and provided for the purpose of receiving the matter discharged from the rep. The sluiceway C is flat-bottomed with the edges turned up, so that when the rep is drawn over it the edges curl up, thus forming a gutter and preventing the dislodgment of any matter from the sides of the rep.

I use this machine in connection with a placer, disintegrating, and amalgamating machine, for which I have applied for a patent simultaneously herewith.

In operation this concentrator is set, in connection with the placer, disintegrator, and amalgamator before mentioned, so that the matter discharged from the machine will fall on the rep at a point over the drum D of the concentrator, during which operation, however, the rep is spread over the full length of the sluiceway C. When it is desired to clean the rep, it is slowly wound up by means of the friction-gearing and the water in the distributor Q and P turned on in the pipe P, and the water forces away or dislodges all matter that may have settled in the fissure of the rep. After the same is cleaned up, by slacking the pressure on the lever O, the friction-wheels are released and the weight M draws the rep back in its normal position, and the ore-pulp is then turned on again to undergo the same operation.

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

In an ore-concentrator, the combination of the platform A, having the sluiceway C, the edges of which are turned upwardly, the drum D, the hollow shaft F, provided at one end with the friction-wheel G and at the other end with the lever O, the shaft E, with a friction-wheel H and a driving-pulley I, the rep B, fixed at one end of the shaft F and passed over the drum D and having attached to its other end the bar J, and the rope K, which passes over the pulleys L L and to the end of which rope is attached the weight M, all constructed and operated substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 22d day of April, A. D. 1891.

GUSTAVIS LORRIMER CUDNER.

Witnesses:

GEO. E. METZ,

REUBEN S. LIND.