J. H. SCHOTT.

ORE WASHING MACHINE.

APPLICATION FILED NOV. 27, 1916. RENEWED JUNE 3, 1918.

1,289,931. Patented Dec. 31, 1918.

2 SHEETS—SHEET 1.

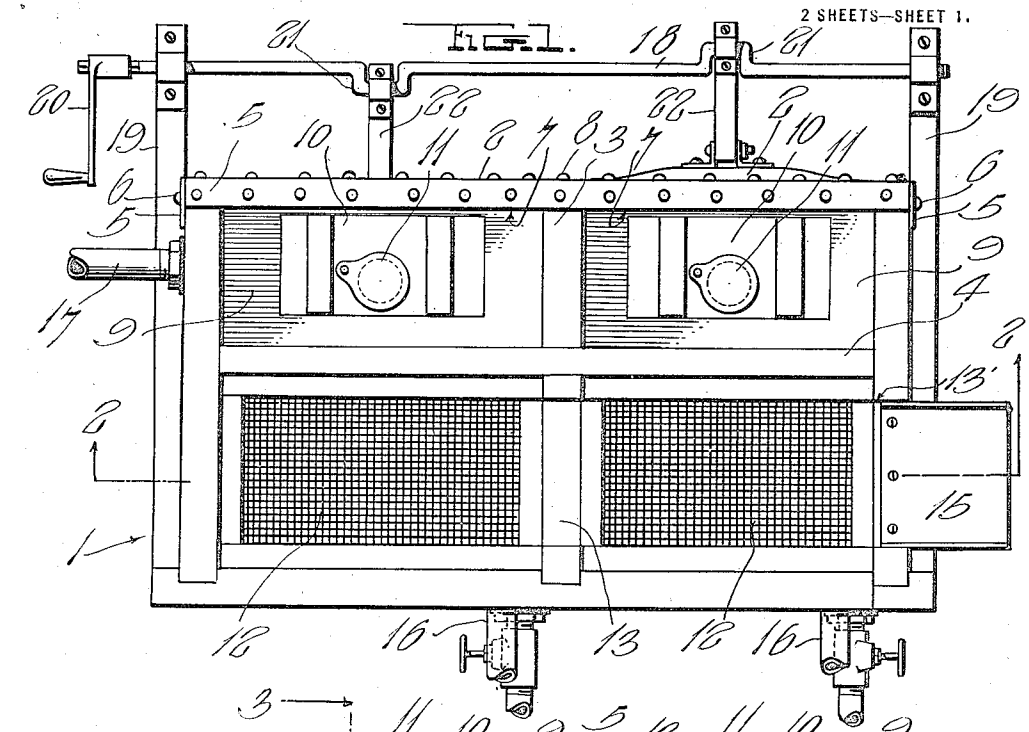


FIG. 1.

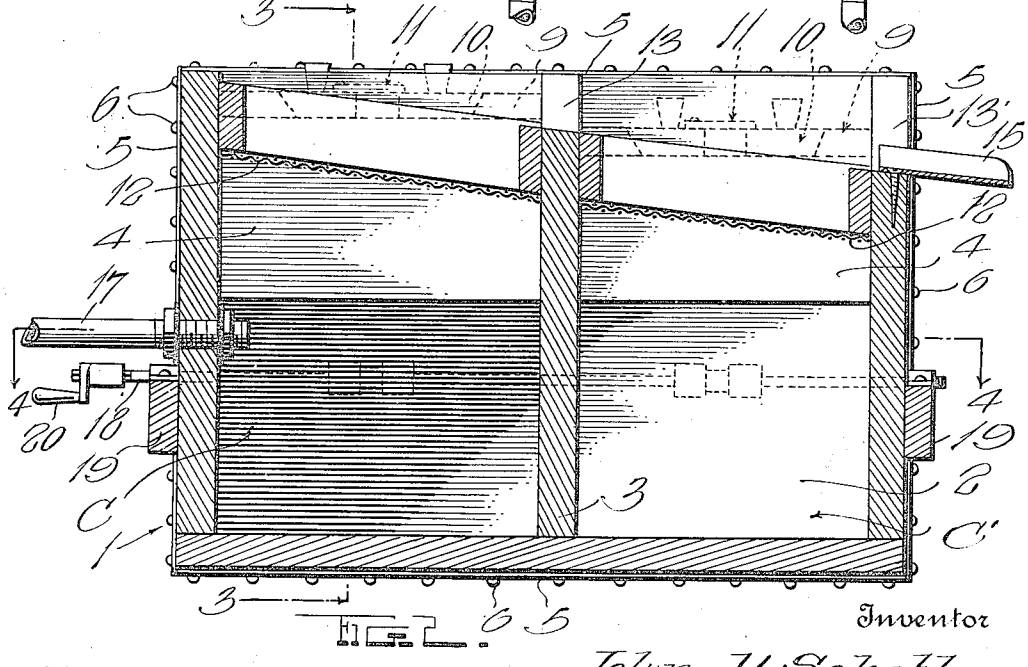


FIG. 2.

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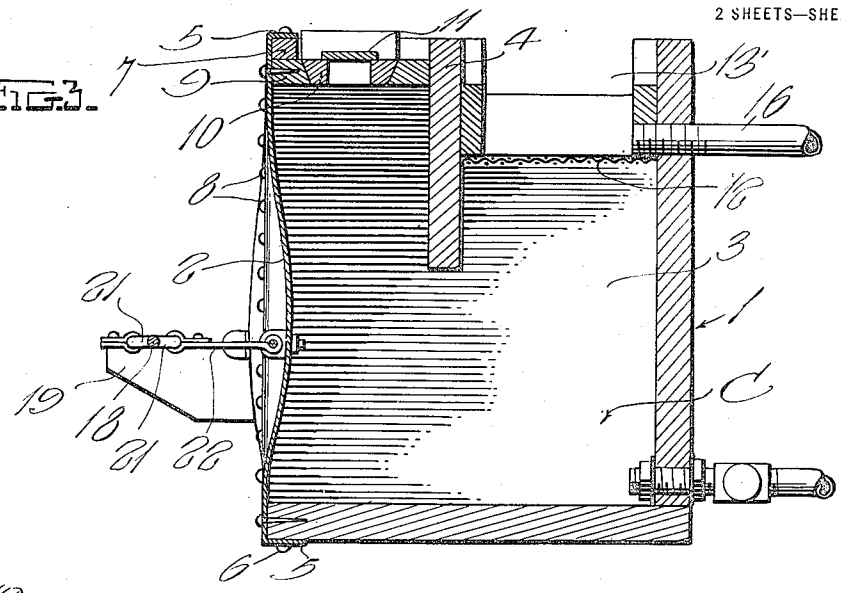
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2 SHEETS—SHEET 2.

FIG. 3.



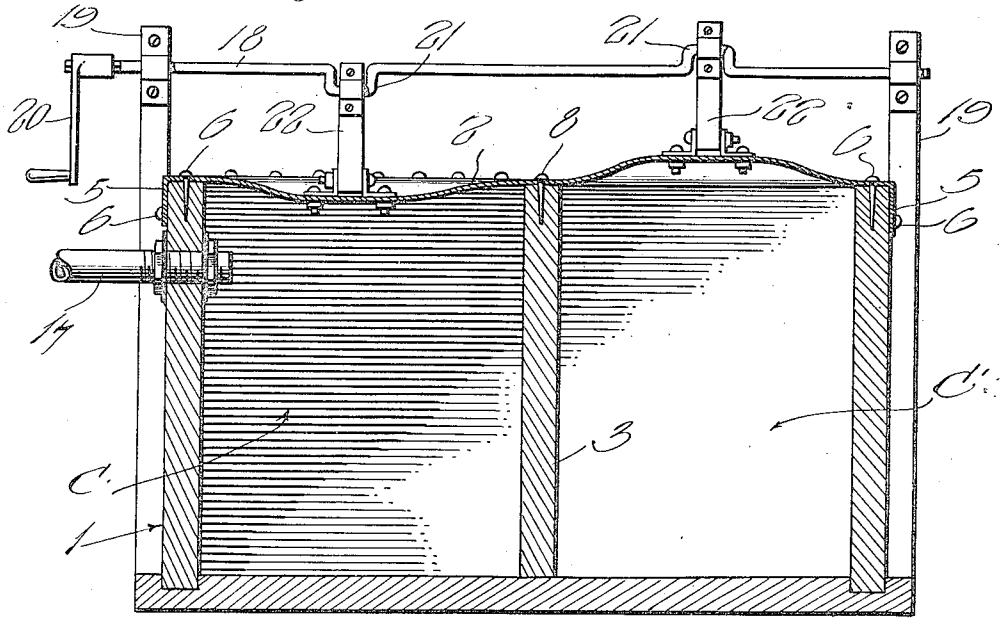




FIG. 4.

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# UNITED STATES PATENT OFFICE.

JOHN H. SCHOTT, OF BOULDER, COLORADO.

## ORE-WASHING MACHINE.

1,289,931. Specification of Letters Patent. Patented Dec. 31, 1918.

Application filed November 27, 1916, Serial No. 133,680. Renewed June 3, 1918. Serial No. 238,037.

*To all whom it may concern:*

Be it known that I, JOHN H. SCHOTT, a citizen of the United States, residing at Boulder, in the county of Boulder and State of Colorado, have invented certain new and useful Improvements in Ore-Washing Machines; and I 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.

My invention has for its object to provide an improved type of ore washing machine in which the water is moved through the ore supporting screens by pulsating one side of the water tank, said side being formed of flexible metal.

With the foregoing general object in view, the invention resides in certain novel features of construction and in unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which constitute a part of this application and in which:

Figure 1 is a top plan view of the improved machine;

Fig. 2 is a vertical longitudinal section on the plane of the line 2—2 of Fig. 1;

Fig. 3 is a vertical transverse section on the plane designated by the line 3—3 of Fig. 2; and,

Fig. 4 is a horizontal section on the plane designated by the line 4—4 of Fig. 2.

In the drawings above briefly described the numeral 1 designates an elongated rectangular water tank whose rear side 2 is formed of a flexible sheet of metal, said tank being divided into a pair of compartments C and C′ by a transverse partition 3 while the upper ends of both of these compartments are divided by longitudinal partitions 4. The four edges of the rear wall 2 are preferably bent forwardly to form flanges 5 secured by nails, screws or the like 6 to the ends and bottom of the tank and to bars 7 extending between the upper end of the partition 3 and the ends of the tank. Along its vertical center screws or the like 8 secure the wall 2 to the rear edge of the partition 3.

In rear of the partitions 4 closures 9 are provided for the compartments C and C′, said closures having manholes closed by doors 10 which are equipped with suitable valves 11 for admitting more or less air into the compartments. Pervious inclined screens 12 are disposed in the compartments C and C′ in advance of the partitions 4, the partition 3 and one end of the tank 1 having notches 13 and 13′ whose lower edges are spaced a suitable distance above the screens 12, a discharge chute 15 being preferably provided at the notch 13′. Ore outlets 16 lead from the lower ends of the screens 12 and a water supply pipe 17 discharges into the compartment C. By this arrangement the single pipe 17 supplies water to both compartments C and C′, it being obvious that this water will overflow through the notch 13.

A longitudinal shaft 18 is disposed in rear of the tank 1 and is rotatably supported upon suitable bracket arms 19 secured to the ends of said tank, said shaft being provided on one end with a crank or the like 20 by means of which it may be driven. It will be understood that if the machine is to be operated by any other means than hand power the crank 20 may be eliminated in favor of a pulley, sprocket or the like. The shaft 18 is provided with a pair of diametrically opposed cranks 21 connected by links 22 with the opposite halves of the flexible wall 2 so that as the shaft is rotated said wall will be pulsated to move the water upwardly and downwardly through the screens 12 to wash the ore fed to said screens in any suitable manner.

It is to be observed that when one-half of the wall 2 is flexed outwardly the other half thereof is similarly moved inwardly. This is highly important since it not only prevents excessive vibration of the machine but any tendency on the part of the outwardly moving half of the wall 2 to loosen the fasteners 8 is resisted by the other half which is simultaneously shifted inwardly.

From the foregoing taken in connection with the accompanying drawings the construction and manner of operation of the improved machine will be understood to those skilled in the art and it will be observed that although the apparatus is of comparatively simple nature it is highly efficient and durable. For these reasons the construction shown constitutes the preferred form of the machine but it is to be understood that within the scope of the inven-

tion as claimed numerous changes may be made without sacrificing the principal advantages.

I claim:

1. In an ore washing machine the combination of a water tank, a water agitator for said tank in the form of a flexible sheet of metal anchored along its center to a fixed part by driven fasteners, means operatively connected with one half of said sheet for alternately pushing it forwardly and pulling it rearwardly, and similar means operatively connected to the other half of said sheet, one of said means being opposed to the other, whereby any tendency of one half of the sheet to pull upon and withdraw said driven fasteners, is resisted by the other oppositely moving half of said sheet.

2. In an ore washing machine, the combination of a rectangular water tank divided by a transverse partition into a pair of compartments, the entire rear wall of said tank being formed of a single flexible sheet of metal having attaching flanges on its edges secured to fixed parts of the tank, driven fasteners extending through the vertical center of said sheet of metal into the rear edge of said partition, means operatively connected with one half of said sheet for alternately pushing it forwardly and pulling it rearwardly, and similar means operatively connected to the other half of said sheet, one of said means being opposed to the other, whereby any tendency of one half of the sheet to pull upon and withdraw said driven fasteners, is resisted by the other oppositely moving half of said sheet.

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

JOHN H. SCHOTT.

Witnesses:
F. W. CONRAD,
D. S. WHITE.