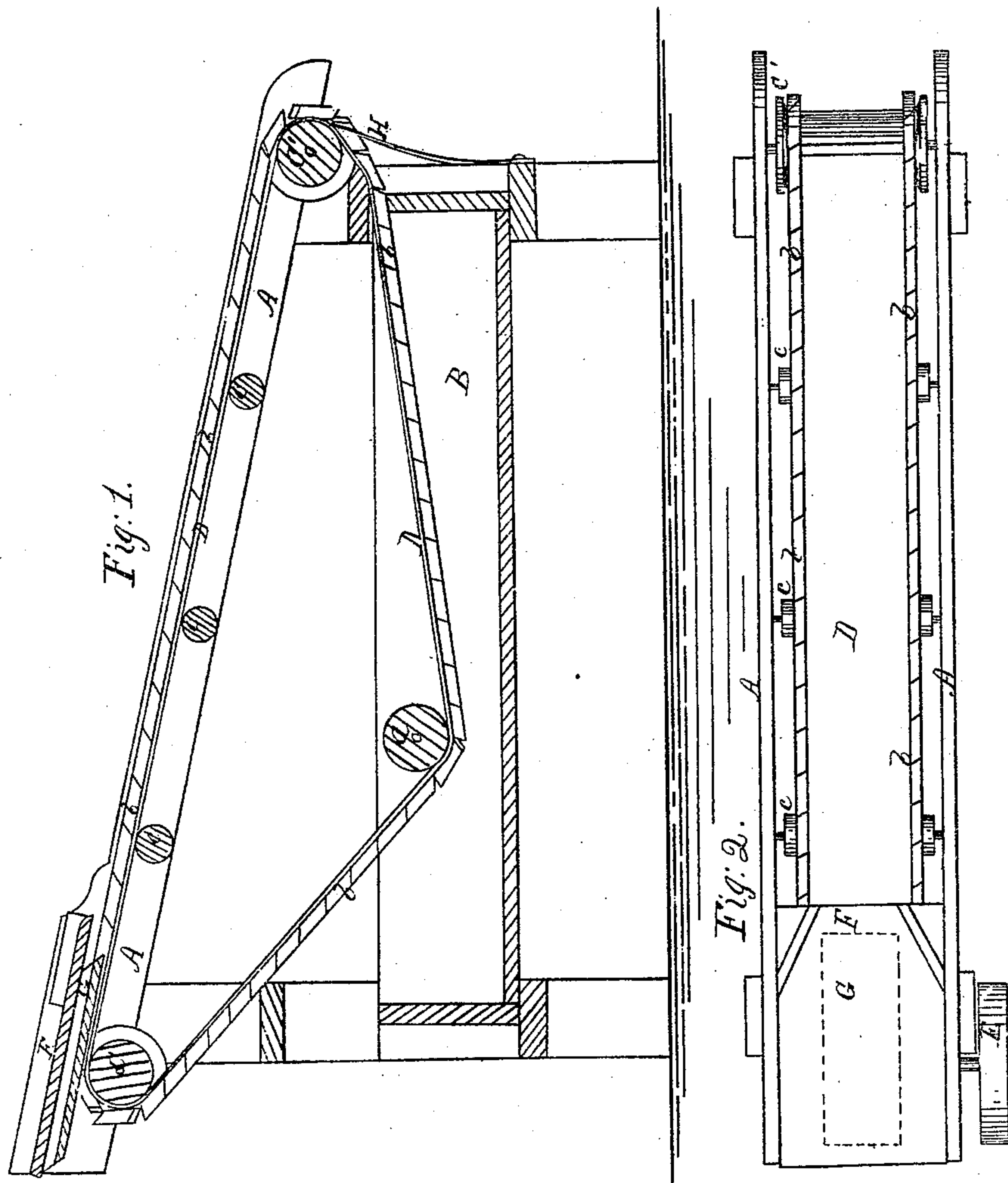


T. D & W. A. Hedger.

Revolving Sluice for Saving Metals.

N^o 61426

Patented Jan. 22, 1867



Inventors

*T. D. Hedger, By his Atty
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Witnesses

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THOMAS D. AND WILLIAM A. HEDGER, OF MEADOW LAKE, CALIFORNIA.

Letters Patent No. 61,426, dated January 22, 1867.

IMPROVED REVOLVING SLUICES FOR SAVING METALS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, THOMAS DENISON HEDGER and WILLIAM ARTHUR HEDGER, of Meadow Lake, Nevada county, State of California, have invented certain new and useful improvements in "Sluices" for Saving Metals; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains, to make and use our said invention, without further invention or experiment.

The nature of our invention relates to a "revolving sluice" for separating from the pulp, ground ore, or sand, the refuse particles or debris, and saving the valuable portion, such as the gold, silver, quicksilver, or sulphurets; and consists in providing a suitable frame, placed at an incline, across which are placed rollers. Around these rollers is placed an endless belt, with sides of wood or metal segments lapping upon each other so as to pass around the drums or rollers, forming a continuous channel. Our invention also relates to a mouth-piece or opening for conveying water beneath and into the pulp through a different channel than that by which the ore is conveyed to the belt; also to a box or tank underneath the sluice, containing water through which the belt is passed, and to an upright scraper to prevent the sand from entering the tank when the machine is in operation.

In order to more fully describe our invention, reference is had to the accompanying drawings, and letters marked thereon, in which—

Figure 1 represents a side sectional elevation of our sluice.

Figure 2, a top view.

Similar letters indicate like parts in each of the figures.

A A is a framework placed at an incline. Longitudinally with this frame we construct a tank, B, resting on cross-pieces. At the ends of the frame we place drums, C and C', around which is stretched the endless belt D, and passing down into the tank at an incline, where it is kept in place by a roller, *a*, which revolves upon the belt. The belt consists of canvas, or any suitable material sufficiently rough to retain the heavy particles of ore or metal. At the edge of each side of the belt we attach segments of wood or metal, *b b b*, etc., overlapping each other and forming continuous chains or side pieces. These are fastened to the belt by bolting or any other means, so that when the belt passes around the drums these segments will open and close, forming flexible joints retaining the water and material in the channel. Rollers, *c c*, are placed transversely with the upper portion of the frame, which support the belt between the drums, so that when loaded it will not press down too far in the centre.

For operating our machine, motion is imparted by the pulley E, carrying the belt up the incline; and the pulp or material for working is introduced upon the platform F, at the top of the sluice. Underneath this platform is an opening or mouth-piece, G, through which clean water is constantly passing on to the belt, carrying, by its force, the lighter particles of sand and debris down the incline to the foot of the sluice, while the heavier and valuable portion is carried up the incline belt and around into the tank, to be freed from the belt by coming in contact with the water. At the lower end of the belt is an upright tail-board, H, which prevents the waste sand from passing into the tank.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A sluice with revolving belt, D, so constructed that the sides will form flexible joints, *b b*, in passing around the drums, closing up and forming close joints while passing up and down the incline, forming a sufficient channel between them for the purpose described, substantially as set forth.
2. The mouth-piece or opening, G, beneath the platform, so that the sand or pulp which is fed to the machine may enter a sufficient distance below to give action and force to the water introduced through the opening G, to sweep down the incline and carry with it the sand and debris, substantially as described for the purpose set forth.
3. Separating the ore by passing the valuable portions up the incline and the debris down to the foot as waste matter, as described.

In witness whereof we have hereunto set our hands and seals.

W. A. HEDGER, [L. s.]
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Witnesses:

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