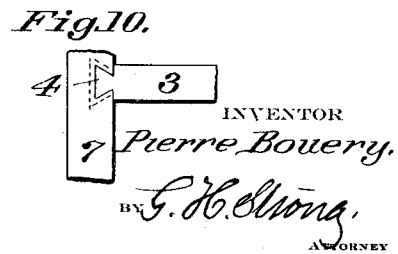
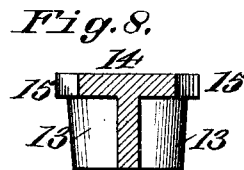
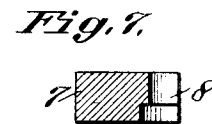
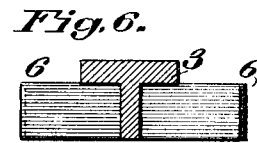
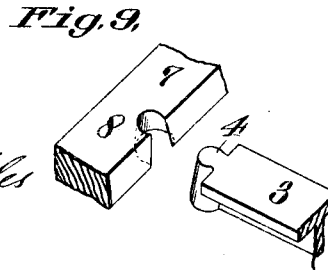
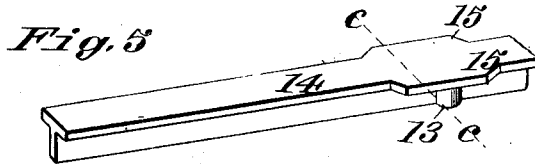
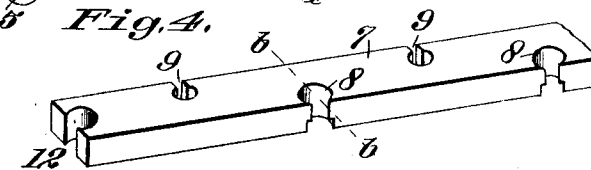
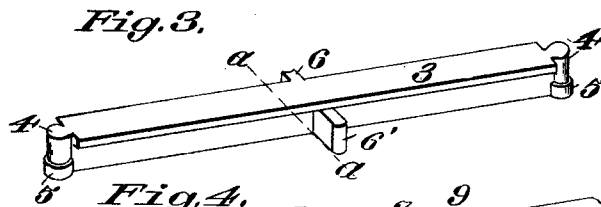
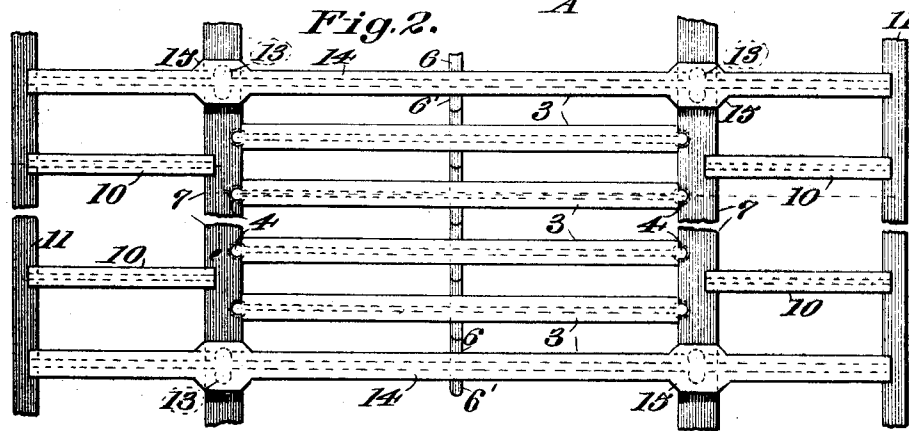
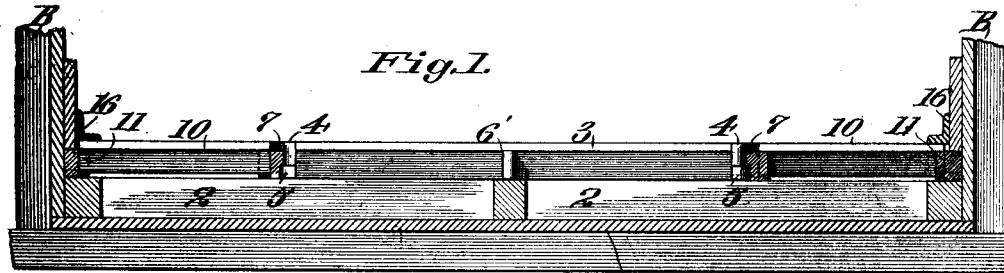


P. BOUERY.
MINING SLUICE.
APPLICATION FILED MAR. 10, 1913.

1,064,959.

Patented June 17, 1913.



WITNESSES:

Charles Rolles
R. S. Rogers

INVENTOR

Pierre Bouery.

BY *G. H. Strong*

ATTORNEY

UNITED STATES PATENT OFFICE.

PIERRE BOUERY, OF WEAVERVILLE, CALIFORNIA.

MINING-SLUICE.

1,064,959.

Specification of Letters Patent.

Patented June 17, 1913.

Application filed March 10, 1913. Serial No. 753,259.

To all whom it may concern:

Be it known that I, PIERRE BOUERY, a citizen of the United States, residing at Weaverville, in the county of Trinity and State of California, have invented new and useful Improvements in Mining-Sluices, of which the following is a specification.

This invention relates to improvements in mining sluices, and particularly pertains to improvements in that type of mining sluices shown in Patent No. 1,036,430, issued to me August 20, 1912.

It is the general object of this invention to provide a mining sluice for the purpose of saving valuable and precious minerals, while allowing the rocks, boulders, and various heavy materials to travel down the sluice and escape; and in which a series of horizontal bars are disposed transversely of the sluice, a short distance above the bottom thereof, to form a grating or grizzly.

The principal object of this invention is to provide a means for detachably mounting bars of the grizzly in the sluice box so that they may be removed and interchanged when worn or broken, and to provide means by which the bars may be interlocked and secured in place, to prevent their being maliciously removed.

Other objects will appear hereinafter.

The invention primarily resides in a series of horizontal transverse bars adapted to be spaced apart laterally of a sluice box, longitudinally extending bars engageable with the ends of the transverse bars from above to hold the latter in place, locking bars for engaging the ends of the longitudinal bars from above and adapted to be secured to the sides of the sluice, and a series of filler bars mounted between the longitudinal bars and the sides of the sluice.

The invention further consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a detail vertical section of a sluice box, showing the invention as applied. Fig. 2 is a fragmentary plan view of same. Fig. 3 is a detail perspective of one of the transverse bars. Fig. 4 is a detail perspective of one of the longitudinal locking bars. Fig. 5 is a detail in perspective of the end portion of the transverse locking bar. Fig. 6 is a section on the line *a-a* of Fig. 3. Fig. 7 is a section on the line *b-b* of Fig. 4.

Fig. 8 is a section on the line *c-c* of Fig. 5. Fig. 9 is a detail perspective of a modified form of the interlocking joint. Fig. 10 is a further modification of the interlocking joint.

In the drawings the sluice is shown as having a flat bottom A and approximately vertical sides B, which may be supported by stout sills or vertical timbers in the usual manner. Extending transversely across the bottom A are wooden riffles 2, which are made of any thickness and depth to form the necessary interspaces for the reception of material to be saved, and supported upon the tops of these riffles are iron bars 3, the construction of which is particularly shown in Figs. 3 and 6; the bars 3 being preferably T-shaped in cross-section and having their ends terminating in vertically extending ribs or projections 4. The ribs or projections 4 may be cylindrical in horizontal section with vertical walls and an enlarged offset portion at their lower ends, as shown in Fig. 3; or may be conical, as shown in Fig. 9; or in the shape of a dove-tail as shown in Fig. 10.

The bars 3 are designed to be disposed transversely across the center portion of the sluice and spaced a uniform distance apart; spacing webs 6 and 6' being formed on the vertical portions of the bars 3 and extending at right angles thereto, intermediate the ends of the bars, which are adapted to engage the ends of corresponding webs on adjacent bars to center the bars and space them equal distances apart. The outer end of the web 6 is formed with a vertically extending concave face, while the outer end of the web 6' is formed with a convex face which is adapted to extend into the concave face on the adjacent web, as shown in Fig. 2.

The bars 3, after being placed in position on the riffles 2, are secured together at their ends and are held in place by means of a longitudinal locking bar 7, which is formed with sockets 8 on one of its edges, which are adapted to be engaged with the vertical ribs or projections 4 on the ends of the bars 3, to form an interlocking connection between the transverse bars 3 and the longitudinal bars 7. The bars 7 are designed to extend parallel with the sides B of the sluice, and are spaced a short distance therefrom.

Formed on the outer faces of the longitudinal bars 7 are vertical notches 9, which are adapted to receive the vertical web portions of short filler bars 10, which extend

between the longitudinal bars 7 and the sides B of the sluice at right angles thereto, and have their outer ends engaged by notches formed in bars 11 arranged against the sides B of the sluice. The ends of the longitudinal locking bars 7 are formed with sockets 12, which are adapted to be engaged by projection 13, formed on the transverse locking bars 14, the projections 13 being insertible in the sockets 12 from above. The locking bars 14 are designed to extend approximately the full width of the sluice, and have their outer ends engaged in the notches of the bars 11. The transverse locking bars 14 serve to hold the longitudinal locking bars 7 in their interlocked engagement with the bars 3, and are provided with laterally extending flanges 15, which project over the projections 13 and extend over the ends of the bars 7, to prevent the latter being raised, and to close the joint between the projections 13 in the bars 14 and the sockets 12 on the bars 7. The locking bars 14 and the bars 10 are connected to the sides B of the sluice by means of angle irons 16, or other suitable members, which are bolted or otherwise attached to the sides of the sluice and extend over the ends of the bars 14 and 10, as shown in Fig. 1.

By the construction hereinbefore described, in order to obtain access to the material between the riffles 2, it is necessary to remove the angle irons 16 from the sides of the sluice, lift the filler bars 10 and the locking bars 14 out of engagement with the bars 7 and 11, and disconnect the longitudinal locking bars 7 from the transverse bars 3 by lifting the former clear of the latter.

The grating or grizzly formed by the transverse bars 3 and 10 and interlocked with the locking bars 7—14 and 11, is constructed in sections of any suitable length, and is adapted to be removed from the sluice and renewed as occasion may require.

By employing the interlocking connections between the ends of the bars 3 and the bars 7, and providing a similar connection between the ends of the bars 7 and the locking bars 14, the use of bolts or similar securing elements is dispensed with; this construction forming a rigid, interlocked structure which will be held in place in the sluice by side rails 16 detachably mounted on the sides of the sluice.

It will be seen from the foregoing, that

the bars 3 will be held in place on the riffles 2 by the bars 7 which must be moved vertically in and out of engagement with the bars 3, and that the bars 7 are held in engagement with the bars 3 by the bars 14 which must be moved vertically in and out of connection with the bars 7. It follows that by securing the ends of the bars 14 against upward movement, the bars 7 and the bars 3 will be rigidly secured against displacement.

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

1. The combination with a sluice, of a series of spaced T-bars, vertical projections on the ends of said bars, bars formed with notches adapted to be placed over the projections of the T-bars to engage the latter and hold the T-bars against upward movement, and transverse locking bars engageable with the ends of the notched bars to hold the latter in place on the T-bars.

2. In a sluice, a series of spaced transverse T-bars, a pair of longitudinal parallel bars; means for connecting the longitudinal bars to the ends of the T-bars from above to hold the latter against movement, transverse locking bars adapted to be engaged with the ends of the longitudinal bars from above, and means for securing the ends of the locking bars to the sluice.

3. A grating for sluices, comprising transverse bars, projections on the ends of said bars, spacing members on the sides of the bars engageable with spacing members on adjacent bars, longitudinal bars having notches engageable with the projections on the transverse bars from above, said notches and projections shaped to prevent the transverse bars being lifted out of engagement with the longitudinal bars, transverse locking bars, projections thereon engageable with notches on the longitudinal bars from above, flanges on the transverse locking bars projecting over the ends of the longitudinal bars, and means for securing the transverse locking bars to a sluice.

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

PIERRE BOUERY.

Witnesses:

JOHN H. HERRING,
W. W. HFALEY.