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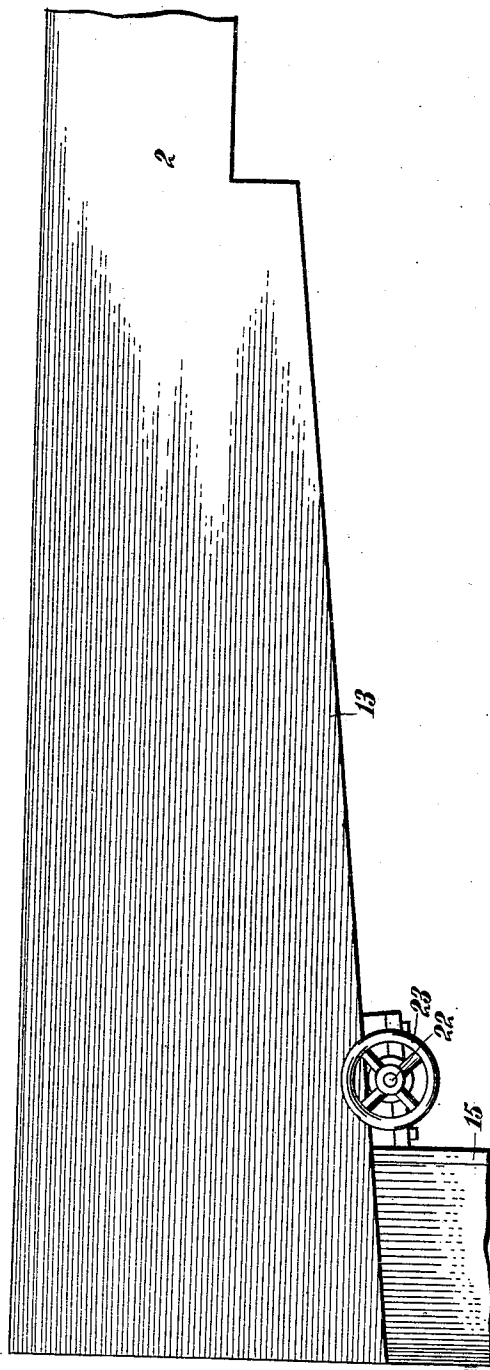
H. A. CORLISS.

GRIZZLY.

APPLICATION FILED SEPT. 30, 1909.

Patented Sept. 6, 1910.

2 SHEETS—SHEET 1.



WITNESSES

John A. Beightrow
H. Whiting

Fig. 1

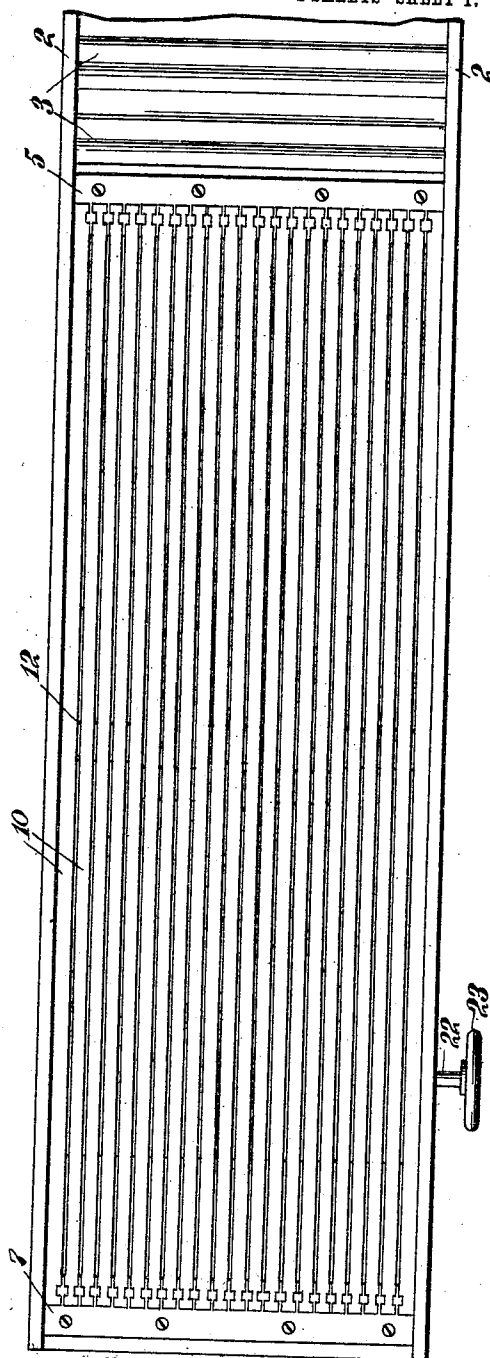


Fig. 2

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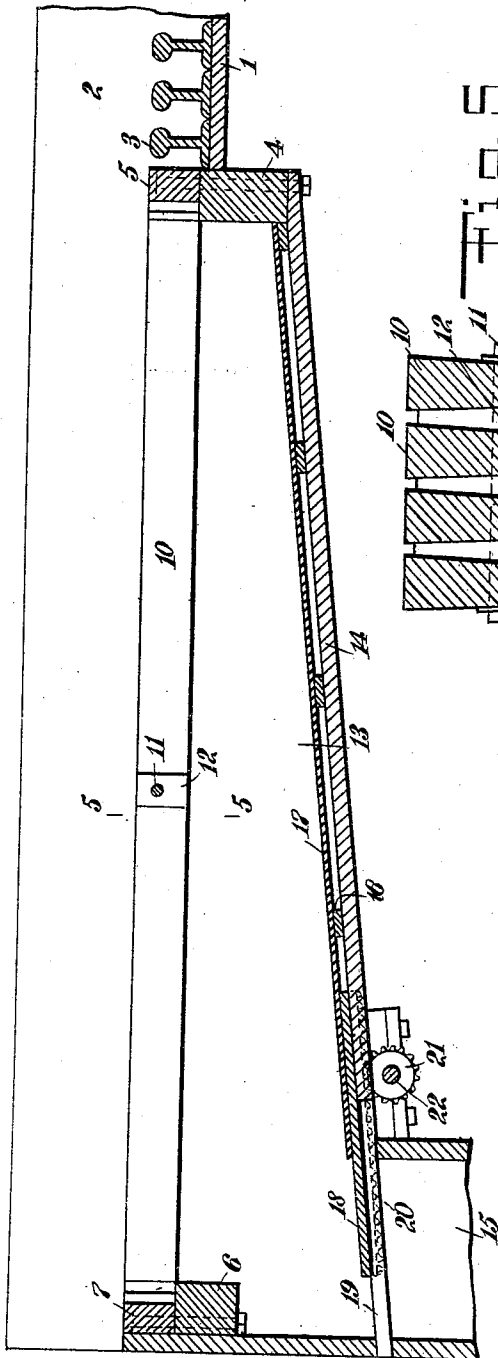
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WITNESSES

John Bergstrom
H. Whiting.

Fig. 3

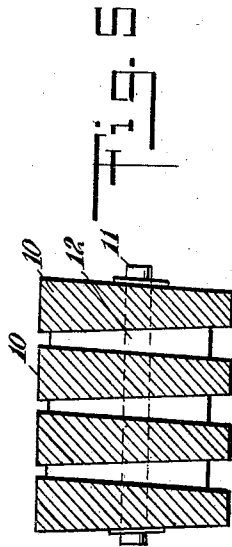


Fig. 5

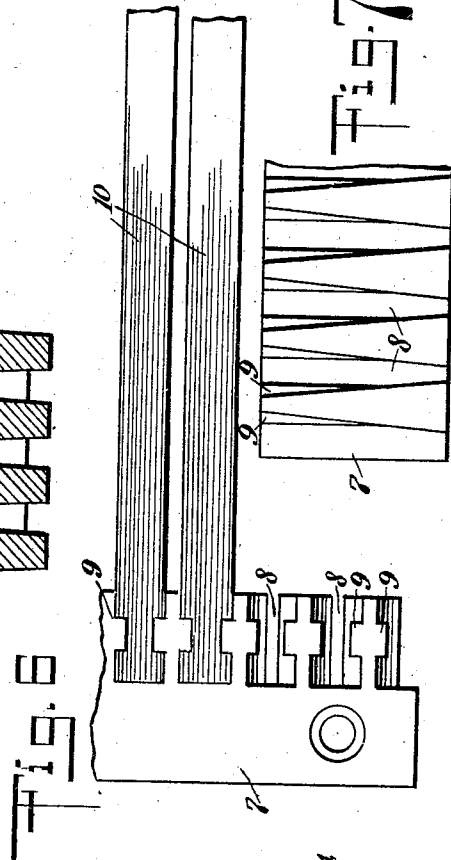


Fig. 6

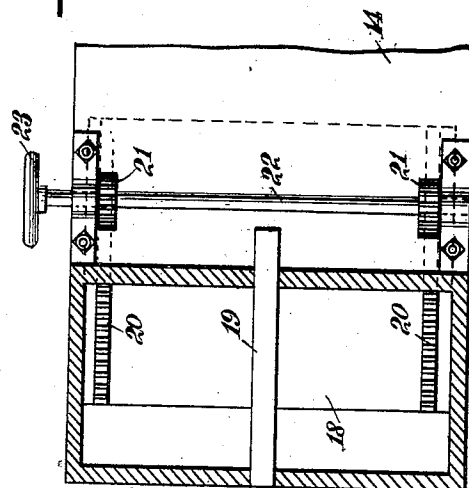


Fig. 4

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HERBERT A. CORLISS, OF GRANTS PASS, OREGON.

GRIZZLY.

969,603.

Specification of Letters Patent.

Patented Sept. 6, 1910.

Application filed September 30, 1909. Serial No. 520,254.

To all whom it may concern:

Be it known that I, HERBERT A. CORLISS, a citizen of the United States, and a resident of Grants Pass, in the county of Josephine and State of Oregon, have invented a new and Improved Grizzly, of which the following is a full, clear, and exact description.

This invention relates to an ore dressing device of a type which is adapted to separate heavy valuable particles of mineral, such as gold or platinum from the lighter gangue such as quartz. The device is adapted to be used in any flume, to extract the gold from the gold-bearing sands obtained from gold-bearing streams or the like.

An object of this invention is to provide a device which will be simple in construction, strong, durable and with the parts removable, so as to be easily replaced in case of breakage.

A further object of this invention is to provide a grizzly with means for adjusting the flow of material through the same.

These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a side view in elevation, of my device; Fig. 2 is a top plan view; Fig. 3 is a vertical longitudinal section; Fig. 4 is a bottom horizontal section; Fig. 5 is a vertical transverse section through a series of grizzly bars on the line 5—5 in Fig. 3; Fig. 6 is an enlarged fragmentary view showing the attachment of the grizzly bars to the support; and Fig. 7 is an enlarged fragmentary edge view of the support for the grizzly bars.

Referring more particularly to the separate parts of the device, 1 indicates the bottom of a flume, to which are secured suitable sides 2 to keep the material flowing in the flume therein. Located on the bottom 1 of the flume, there are provided cross riffles 3, which may be of any form suitable to catch the heavy particles of valuable mineral.

Supported in any suitable manner on a cross beam 4 which is located adjacent to the last of the riffles 3, there is provided a supporting member 5, which extends between the sides 2 of the flume. Opposite

to the supporting member 5 and supported on the same level in spaced relation therewith by means of a cross beam 6, there is provided a similar supporting member 7. The supporting members 5 and 7 are of a form which is clearly illustrated in Figs. 6 and 7, whereby they offer wedge-shaped channels 8 with lugs 9 extending into the channels, for the purpose of supporting and locking a plurality of grizzly bars 10, which extend between the members 5 and 7. The grizzly bars 10 are preferably constructed in groups of four, tied together by rods 11, and spaced apart by means of washers 12.

In order that the material that passes between the bars 10 may not collect between the bars and clog them up, these bars are formed with their thickest sides at the top, and their thinnest sides at the bottom, so as to provide openings between them, which gradually increase in size from the top toward the bottom. Thus, if a particle once gets in between the bars, it will be sure to fall through, and will not clog up the space between the bars.

Located beneath the grizzly bars 10, there is provided a receptacle 13, which has a bottom 14 that slopes from the end nearest the riffles 3 toward the opposite end, where it terminates at a hopper 15, through which the material collected in the receptacle 13 is adapted to pass. Located on the bottom 14, and spaced therefrom by means of members 16, there is provided a suitable sheet metal bottom 17, which is adapted to take the wear and form a smooth surface on which the ore will readily slide.

In order to control the flow of the ore in the receptacle 13 into the hopper 15, there is provided a suitable gate 18, which slides between the bottoms 14 and 17 on a guide strip 19. The gate 18 is provided on its under side with a pair of racks 20, which are engaged by pinions 21 on a shaft 22, which is operated by means of a hand wheel 23. By this means, the gate 18 may be opened more or less, and thereby vary the size of the opening between the receptacle 13 and the hopper 15.

The operation of the device will be readily understood from the above description. The mineral-bearing ores or sands coming down the flume pass over the riffles 3 and onto the grizzly bars, the light waste material and gangue passing on over the opposite end of the grizzly bars, while the heavy fine valu-

able minerals, such as gold and platinum, pass between the bars and into the receptacle 13 below. Some sand will necessarily pass through into the receptacle 13 with the
5 valuable minerals, and the part of the deposit collected in the receptacle which will pass into the hopper outlet 15 may be regulated by regulating the gate 18 which controls the entrance to the hopper 15. The
10 grizzly bars, as has been shown, are collected in groups of four, so that they may be readily handled.

The grizzly bars 10 have a dove-tailed connection with the supporting members 5
15 and 7, and are provided with notches which are engaged by the locking lugs 9 on the supporting members, so that endwise motion is absolutely prevented.

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

1. In a device of the class described, the combination with a grizzly, comprising supporting members and bars detachably attached to said supporting members in spaced
25 relation, of a receptacle underlying said grizzly, said receptacle having a main bottom and a false bottom spaced from said main bottom, a hopper connected to said receptacle, a gate sliding between said bot-

toms of said receptacle, and means for operating said gate to control the size of the opening between said receptacle and said hopper.

2. In a device of the class described, the
35 combination with a plurality of supporting members having wedge-shaped grooves therein, and also having vertical lugs projecting from each side of each groove into the interior thereof, of a plurality of bars
40 having wedge-shaped ends engaging said grooves, and also having vertical channels in each side thereof engaging said lugs.

3. In a device of the class described, the
45 combination with a plurality of supporting members having wedge-shaped grooves therein, and also having lugs projecting from each side of each groove into the interior thereof, of a plurality of bars detachably connected in groups, and having
50 wedge-shaped ends engaging said grooves, and also having channels in each side thereof engaging said lugs.

In testimony whereof I have signed my
55 name to this specification in the presence of two subscribing witnesses.

HERBERT A. CORLISS.

Witnesses:

WILLIAM T. PERRY,
MARCUS W. ROBBINS.