No. 619,647. Patented Feb. 14, 1899.

G. WETHERBY.

APPARATUS FOR PLACER MINING.

(Application filed Feb. 1, 1898.)

(No Model.)

Fig. 1.

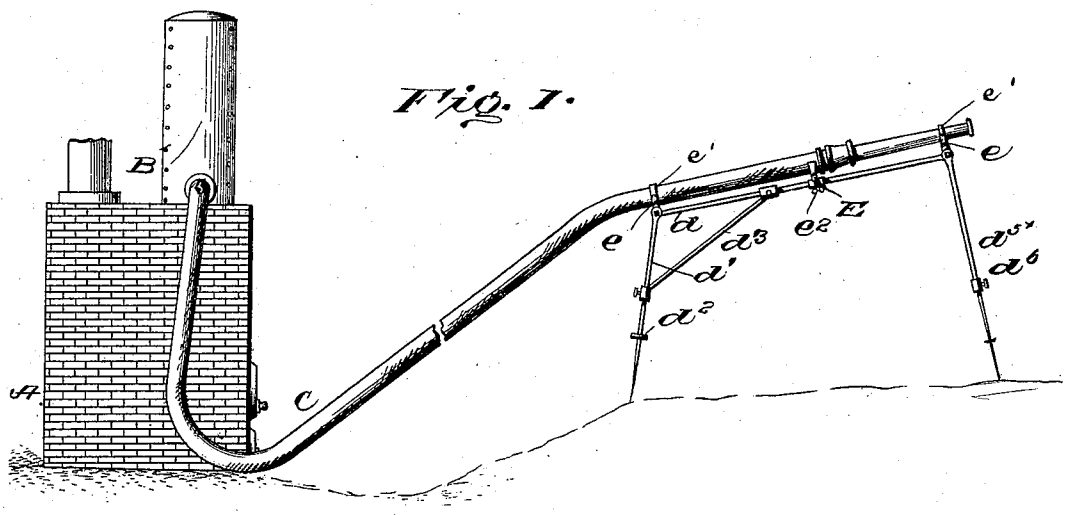


Fig. 2.

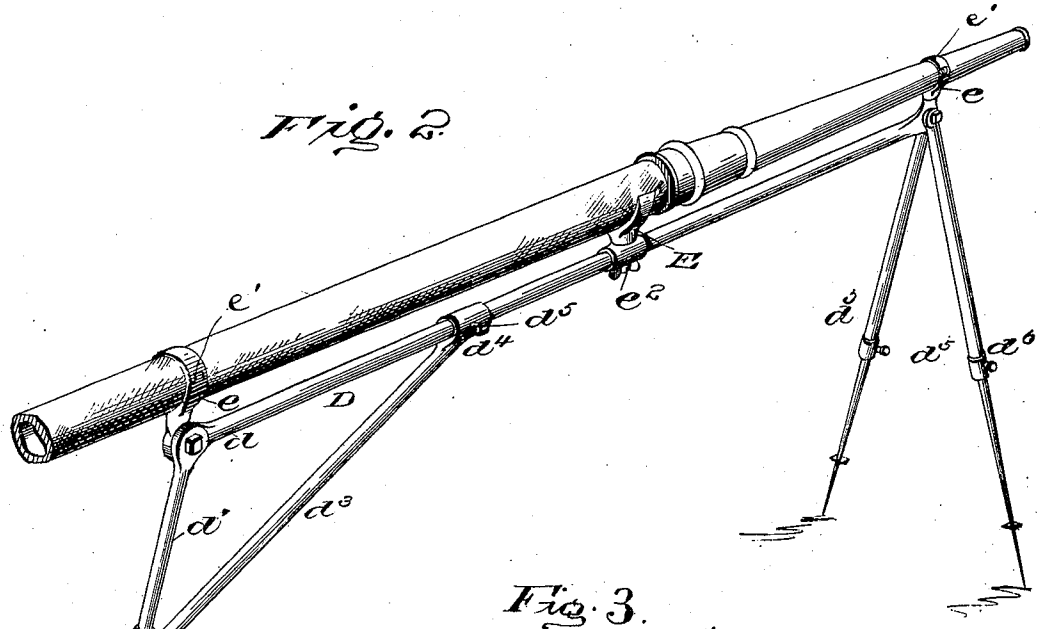
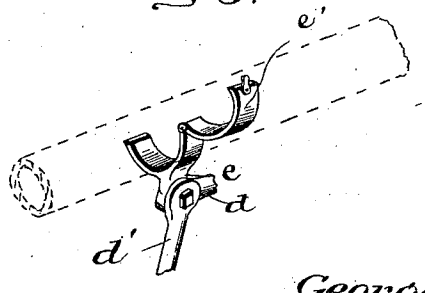


Fig. 3.



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UNITED STATES PATENT OFFICE.

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APPARATUS FOR PLACER-MINING.

SPECIFICATION forming part of Letters Patent No. 619,647, dated February 14, 1899.

Application filed February 1, 1898. Serial No. 668,777. (No model.)

To all whom it may concern:

Be it known that I, GEORGE WETHERBY, a citizen of the United States, residing at the city of Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Apparatus for Use in Placer-Mining; and I do hereby declare that the following is a full, clear, and exact description of the same, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in apparatus for use in placer-mining; and it consists, essentially, of a steam-boiler, a steam-conveyer, and a rack or holder therefor.

The invention further consists in a hose or steam-conveyer extending from a source of steam-supply to the point at which the steam is to be applied to the frozen material for the purpose of disintegrating the same and a suitable mechanical means whereby the said hose is held in position during the operation and can be moved or adjusted to bring the said hose to different positions for use.

The invention further consists in the novel construction and arrangement of the parts hereinafter described, illustrated in the drawings, and more particularly pointed out in the claim hereunto appended.

In the drawings, Figure 1 is an elevation of my invention, showing the manner of arranging the same for use. Fig. 2 is a detail of the hose-supporting bracket, showing the hose and nozzle mounted thereon. Fig. 3 is a detail.

Similar letters of reference indicate corresponding parts in all the figures.

Referring to the drawings by letters, A indicates a furnace, and B a boiler thereon.

C is a flexible hose or steam-conveyer provided with a suitable nozzle and adapted to convey steam from the boiler to the point where it is to be used upon hard or frozen earth. D is a suitable bracket or holder adapted to hold the end of said hose or conveyer up to the point of its work, and consists of a rod d, having connected therewith a rod d', having its lower end forked and provided just above said forks with a plate or stop d^2 for the purpose of preventing said rod d' sinking too deep into the ground.

d^3 is a brace-rod secured upon the rod d' at about the middle of its length and having its other end connected to the rod d by a sliding collar d^4 and jam-nut d^5, whereby said sliding collar may be set at any desired point on the rod and locked. Secured to the forward end of the rod d are legs d^5 d^5. Each of these legs d^5 consists of two parts joined together by a sliding collar d^6 for the purpose of permitting the lengthening or shortening thereof, as may be desired. At the rear and forward ends of the rod d are semicircular holders e e, secured thereto for the purpose of receiving and holding the hose and nozzle. e' e' are straps secured at one side of the semicircular holders e e and adapted to pass over the hose when placed therein and to be fastened to the opposite side thereof for the purpose of holding said hose or conveyer to the bracket and in working position. E is a sliding semicircular holder adapted to slide along said rod d to support the hose at different points, as may be desired. This sliding semicircular holder is provided with a suitable jam-nut e^2 for the purpose of securing or locking the same to the rod d, as is apparent.

The operation of my device is as follows: Fire having been started in the furnace and steam gotten up, the hose is connected with the boiler and carried to the point where it is desired to loosen up and disintegrate the frozen earth. It is then placed upon the bracket D and secured thereon, the bracket being adjusted to the proper position. When everything is in readiness, the steam is turned on from the boiler, passing through said hose or conveyer and out against the frozen earth, heating the same and causing it to expand and disintegrate.

This invention is designed for use when mining in hillsides, banks of earth, &c., and is found to be admirably adapted for such purposes.

Having described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

In an apparatus for use in placer-mining

for loosening dirt or disintegrating hard or frozen earth by means of steam, the combination of a suitable steam-supply and a conveyer or hose for delivering said steam to the desired point, with a hose-support consisting of a rod d having at each end thereof semicircular holders e, e, a forked leg d' and a sliding brace d^3 connecting said rod d and leg d', and the extensible legs d^5, d^5, as set forth.

GEORGE WETHERBY.

In presence of—
GEO. F. DAVIS,
J. A. PAYNE.