

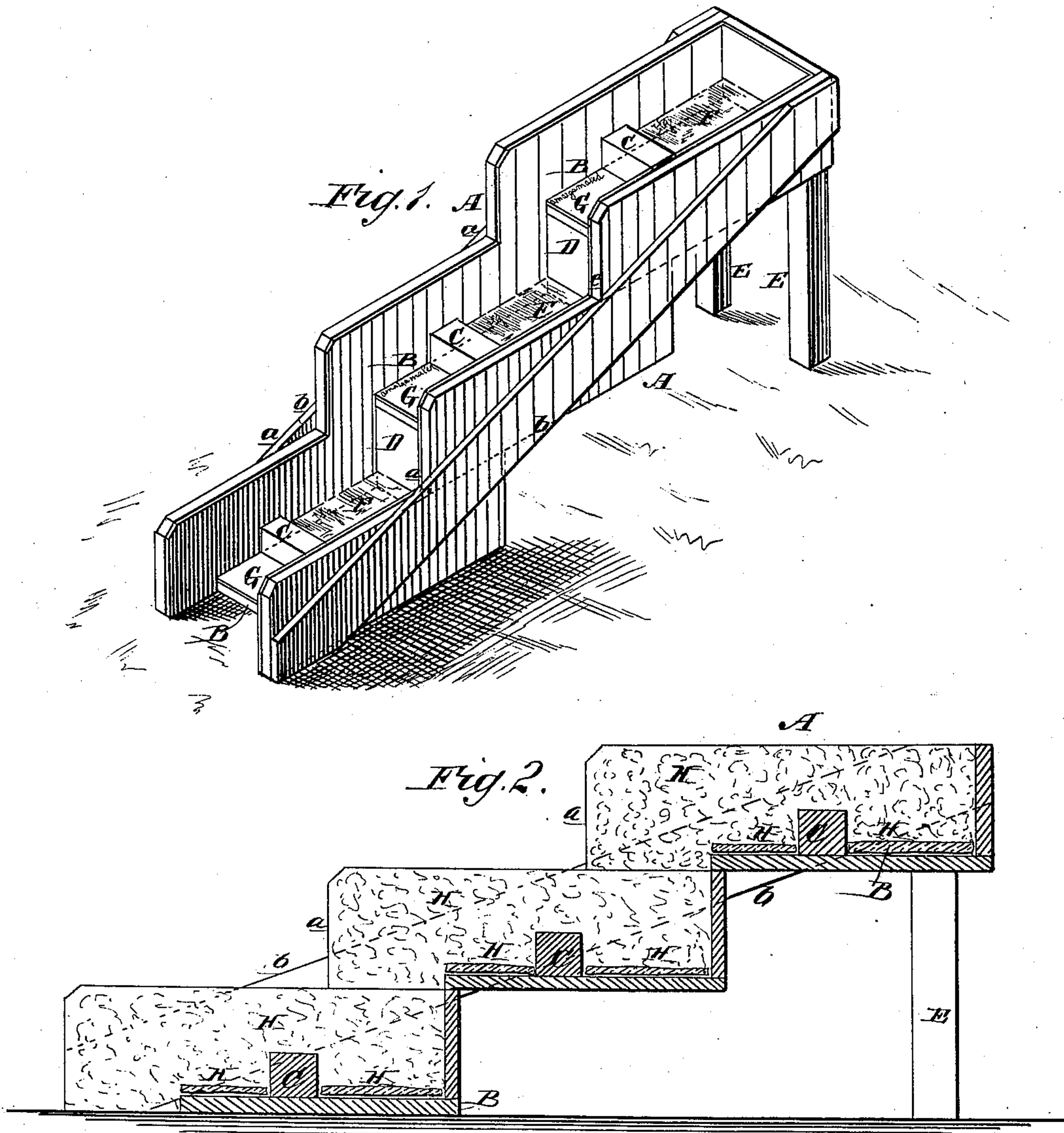
(No Model.)

C. DRISCOLL.

SLUICE BOX.

No. 251,534.

Patented Dec. 27, 1881.



WITNESSES:

Francis M. Ardet
C. Seagwick

INVENTOR:

C. Driscoll
BY *Munn & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

CORNELIUS DRISCOLL, OF PIOCHE, NEVADA.

SLUICE-BOX.

SPECIFICATION forming part of Letters Patent No. 251,534, dated December 27, 1881.

Application filed September 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, CORNELIUS DRISCOLL, of Pioche, in the county of Lincoln and State of Nevada, have invented a new and Improved Sluice-Box, of which the following is a full, clear, and exact description.

The object of this invention is to provide an improved device for use in placer-mining and for working tailings from quartz-mills.

10 The invention consists of a box containing a series of connected steps or platforms, rising one above another in horizontal planes, and provided with transverse stops or riffles, the said box being provided with a partial or complete lining of sheet-copper or blankets, according to the use to which it is applied.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts.

Figure 1 is a perspective view of the device arranged for placer-mining. Fig. 2 is a longitudinal elevation of the device arranged for working tailings.

25 In the drawings, A A represent the sides of the box stepped, as shown at *a*, to conform with steps or platforms B, held between them, and preferably strengthened by outside braces, *b*.

30 B B represent the steps or platforms, secured between the sides A, and arranged in horizontal planes one above another, and having secured across them, near their edges, riffles C.

D are the risers of the steps or platforms B B.

35 Standards or legs E E support the upper end of the sluice-box in such a position that the steps B shall be in horizontal planes.

When the sluice-box is designed to be used for placer-mining, a quantity of quicksilver is placed on each step B above the riffle C, as shown at F, and below the riffles C said steps are covered with amalgamated copper plates G, as shown in Fig. 1. Then the placer gravel or sand is introduced into the upper end of the sluice-box, together with a sufficient supply of water. The larger particles of gold, from their superior gravity, falling upon the

quicksilver, penetrate therein and are amalgamated, and the scale-gold, floating in the water, is arrested on contact with the amalgamated copper plates G, and at the same time the gravel and sand is carried off by the current of water introduced with them. In passing over the edges of the steps B the gold, being the heavier, will fall nearly perpendicular into the quicksilver F, while the water and gravel, being of less specific gravity, will fall at a greater inclination and strike nearly in front of the riffles C, and, as it were, boil over them, leaving most of the gold in the quicksilver.

When the sluice is designed to be used for working tailings, instead of quicksilver and copper plates, blankets are used, the sides A A of the box and the steps B being respectively lined and covered therewith, as shown at H. Then the tailings are introduced with a sufficient supply of water, and the amalgam and free gold are caught and retained in the blankets H, while the water and sand flow off, and when the said blankets H are well filled with the amalgam or metal they are removed and others are substituted for them.

These sluice-boxes may be constructed of any required capacity, are cheap and effective, and require no machinery to operate them.

I am aware that a series of boxes provided with mercury-coated plates, riffles, vanes, and reacting surfaces have been arranged one above the other in the same horizontal plane, and I therefore do not claim such; but

What I do claim, and desire to secure by Letters Patent, is—

An improved sluice-box, composed of a series of platforms arranged one above the other in the same horizontal plane, and each provided with a riffle near its edge, and a quicksilver bath above and a copper plate below the said riffle, substantially as and for the purpose set forth.

CORNELIUS DRISCOLL.

Witnesses:

JAMES H. GOODRICH,
J. C. HENDERSON.