

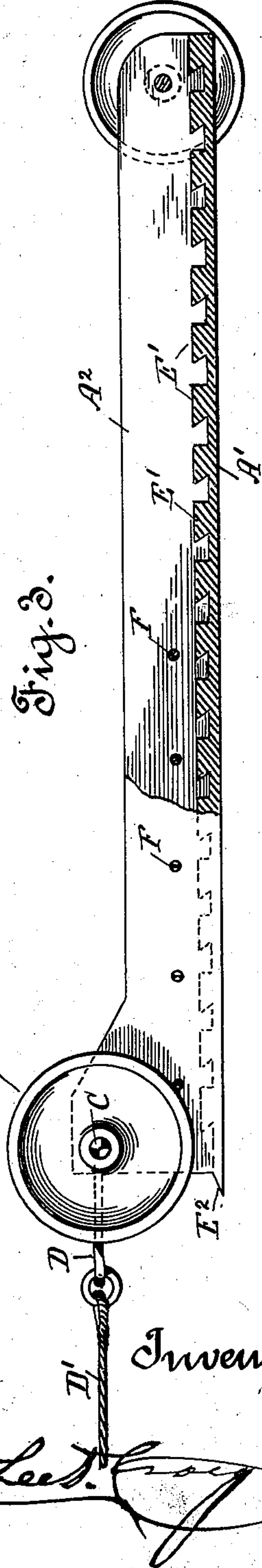
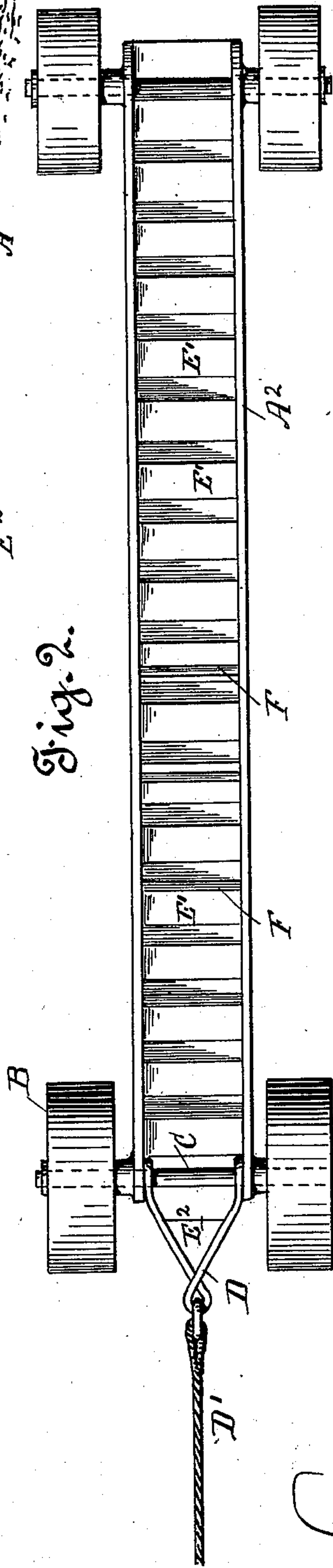
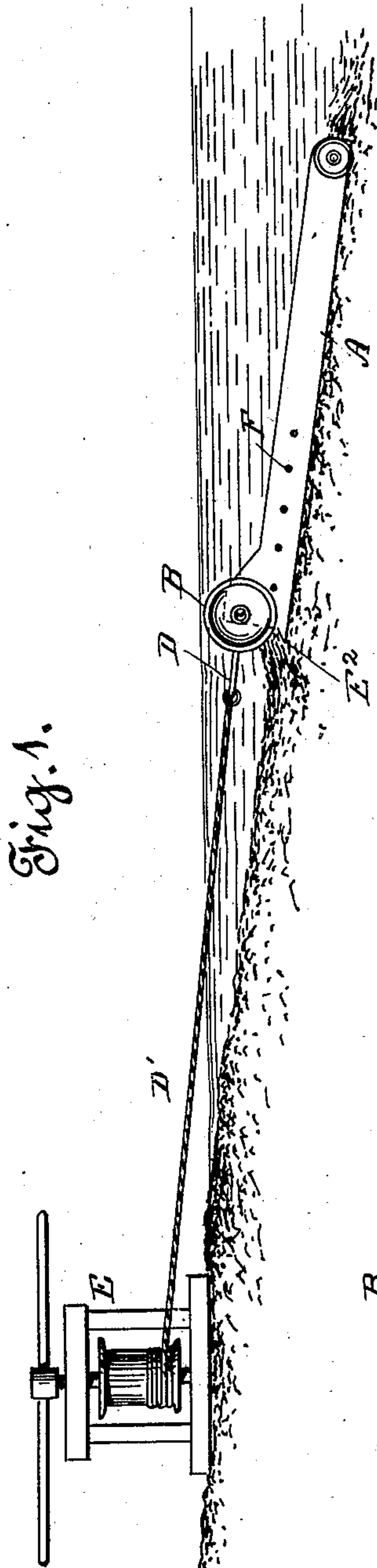
No. 698,105.

Patented Apr. 22, 1902.

L. D. CRAIG.
SUBMARINE GOLD SAVING DEVICE.

(Application filed Apr. 14, 1900.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

LEE D. CRAIG, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR, BY MESNE ASSIGNMENTS, TO SUB MARINE MINING COMPANY, OF SAN FRANCISCO, CALIFORNIA, A CORPORATION OF CALIFORNIA.

SUBMARINE GOLD-SAVING DEVICE.

SPECIFICATION forming part of Letters Patent No. 698,105, dated April 22, 1902.

Application filed April 14, 1900. Serial No. 12,819. (No model.)

To all whom it may concern:

Be it known that I, LEE D. CRAIG, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented certain new and useful Improvements in Submarine Gold-Saving Devices; and I do hereby declare the following to be a full, clear, and exact description of said invention, such as will enable others skilled in the art to make, use, and practice the same.

My invention relates to an improved device for working ocean, beach, lake, and river sands and extracting the gold and other precious metals therefrom by means of submarine sluices in which artificial currents are created sufficiently strong by moving the sluices forward and backward to wash the earth and sands as scooped up through the boxes, thus disintegrating the minerals from the earth or sand, so they will settle in the riffles, false bottoms, or on the amalgam plates in precisely the same manner as gold is now separated from the debris by means of a stream of running water in its passage through the stationary sluices in which auriferous earth is deposited for washing out the gold.

Figure 1 is a side elevation showing the manner of using my improved dredging-sluice on the shore of the sea. Fig. 2 shows a detail top plan of my device. Fig. 3 shows a detail, partly broken, of the same in side elevation.

In the drawings the letter A is used to designate the sluice-dredger, which consists of a narrow trough composed of the bottom A' and sides A². These sides are of suitable height, proportionate to the length of the sluice or trough, and within the same, at each end of the sluice or trough, work the axles or journals C. To these axles or journals are mounted the rollers or wheels B, which support the sluice-box or trough and enable it to be readily propelled upon the river-bottom. Preferably the forward axle or journal is above the line of the rear axle or journal in order to slightly elevate the supporting-wheels at this end of the sluice-box or trough, Fig. 3 of the drawings.

To the forward end of the sluice-box or

trough is attached a bail or handle D, to which is connected one end of a cable or haulage-rope D'. This chain, cable, or rope has its free end secured to the hoisting drum or whim E, which is located at any suitable point upon the line of shore.

Within the sluice-box or trough is located a series of riffles E', which extend throughout the length thereof. These riffles extend transversely of the trough or sluice-box and form a series of pockets into which the gold or heavier particles settle during the travel of the material through the trough or sluice-box. Above these riffles are located a series of transverse amalgamated rods or cross-bars F, which serve to obstruct or break the flow through the sluice-box or trough.

At the forward end of the sluice-box or trough there is attached the beveled projection or scoop E², which facilitates the cutting of the soil during the travel of the sluice-box or trough. Any suitable cutting device may be provided for this purpose, although I prefer the form of cutter illustrated.

The device is preferably operated through the medium of a hoisting-drum or whim, and the chain, cord, or rope connecting the sluice therewith, although it may be operated in any other suitable manner. The cable may be attached to each end of the sluice-box or trough and extended through an eye in an anchor located a distance from shore. Being operated by means of the hoisting-drum or whim E, the sluice-box or trough is drawn toward and from the anchor in accordance with the direction of its rotation.

In operating the invention the sluice-box or trough is first placed within the water at the desired distance from shore, Fig. 1 of the drawings, its wheels resting upon the river-bottom. The whim or hauling device is then turned so as to draw or roll the trough or sluice-box toward the shore-line. As thus moved or propelled the cutting edge E² plows up the material, which is drawn into the box or trough by the current of water flowing therethrough, which material is thoroughly broken up and disintegrated and the heavier or valuable particles settled within the pock-

ets formed by the riffles. The waste or valueless material is discharged at the rear end of the device, being carried off by the flow of water. The current of water thus created is
5 sufficient to wash all the material over the riffles as scooped up and to remove the debris, leaving only the gold and heavier particles within the pockets of the device to be removed upon the sluice-box or trough being
10 drawn out of the water.

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

1. A submarine mining-machine, comprising
15 an elongated open-ended sluice-box adapted to be dragged along a subaqueous bottom, means for operating the box, separating means within the box, and wheels at the respective ends of the box, the forward wheels occupy-

ing a somewhat-higher plane than the rear
20 wheels, substantially as described.

2. In a device for dredging, washing and separating auriferous material, the combination with an open trough, of a series of riffles
25 arranged transversely therein, the rods secured within the trough above the riffles, a cutter carried by the trough for separating the material during the movement of the trough and of means by which the trough is
30 propelled.

In testimony whereof I have hereunto subscribed my name, in the presence of two witnesses, this 28th day of March, A. D. 1900.

LEE D. CRAIG.

Witnesses:

CHAS. F. W. SMITH,
M. W. WESTON.