W. P. LEWIS.

PNEUMATIC TUBES FOR DREDGING.

No. 192,440. Patented June 26, 1877.

Fig. 1.

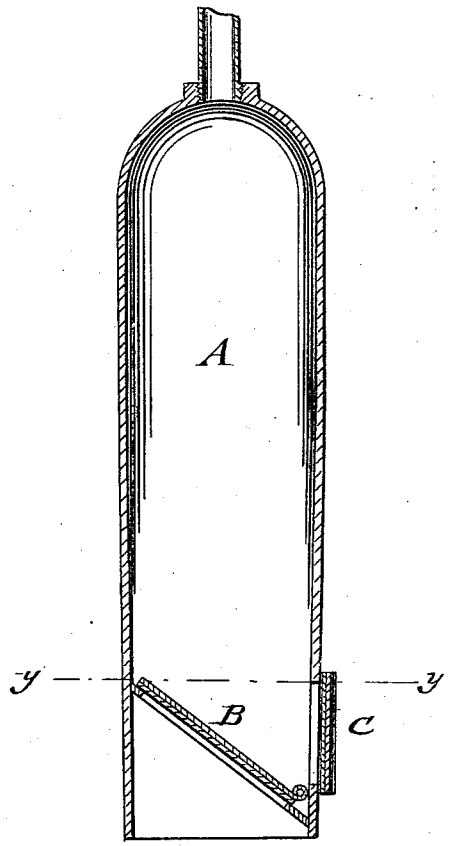
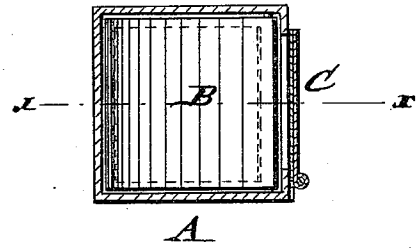


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM P. LEWIS, OF OROVILLE, CALIFORNIA.

IMPROVEMENT IN PNEUMATIC TUBES FOR DREDGING.

Specification forming part of Letters Patent No. **192,440**, dated June 26, 1877; application filed April 23, 1877.

To all whom it may concern:

Be it known that I, WILLIAM P. LEWIS, of Oroville, Butte county, California, have invented a new and Improved Pneumatic Tube for Hoisting Sand, &c., from River-Beds, of which the following is a specification:

Figure 1 represents a vertical central section on line *x x*, Fig. 2, of my improved pneumatic tube for hoisting dirt, &c., from river-beds; and Fig. 2 is a horizontal section of the same on line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

This invention is designed for the purpose of hoisting dirt, débris, &c., from river-beds, by creating a vacuum in the tube used for the purpose; and it consists of a tube having an inclined valve and side door, both being fitted in air-tight manner, and closed by steam admitted before sinking the tube, which, by condensation, creates a vacuum and draws in the sand, &c., that is finally discharged through the hinged side door on raising the tube.

In the drawing, A represents a tube, which is lowered to the bottom of the river, and charged with steam before being sunk for the purpose of keeping the hinged bottom valve B closed in perfect manner, so that no water can enter during the lowering of the tube.

The bottom valve B fits in perfectly air-tight manner to its seat, while a hinged side door, C, of the tube near the valve closes an opening of the tube in similar air-tight manner. The condensation of the steam in the tube creates a vacuum, which draws up the sand, débris, &c., by suction, the tube being then hoisted with the load and discharged by opening the side door C. The tube is again filled with steam, being closed tightly thereby, and then lowered, creating a suction by the vacuum produced, and so on, so as to form thus a rapidly-working pneumatic hoisting device for the gold-bearing sand of river-beds, and for other purposes.

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

A pneumatic tube for hoisting sand provided with an upwardly-inclined hinge-valve, B, and outwardly-opening door C near the bottom, as shown and described.

WILLIAM PERRY LEWIS.

Witnesses:

LEON D. FREER,

JOHN J. SMITH.