(No Model.)

W. H. WOOD.

DREDGING BUCKET.

No. 268,345. Patented Nov. 28, 1882.

Fig. 1

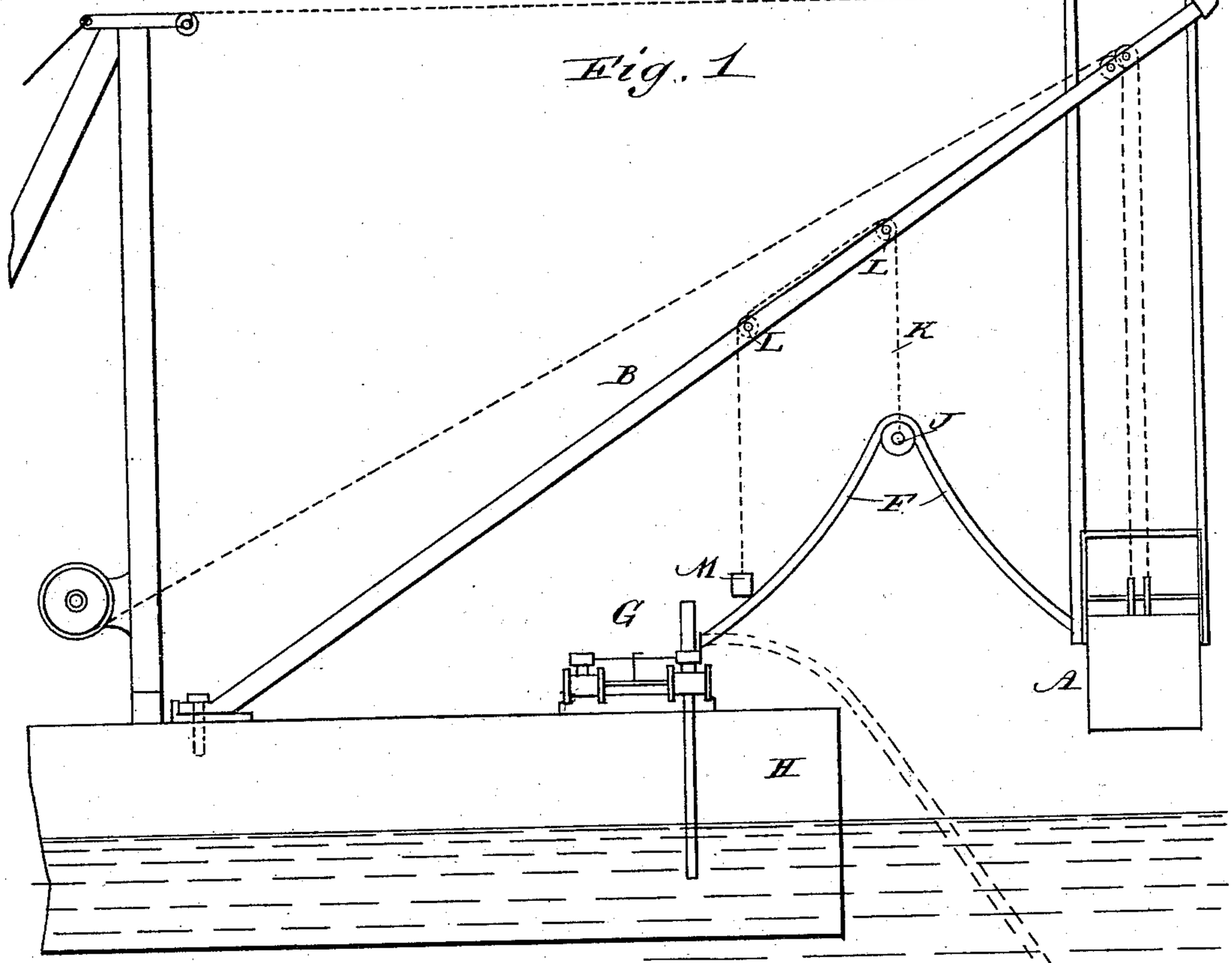


Fig. 3

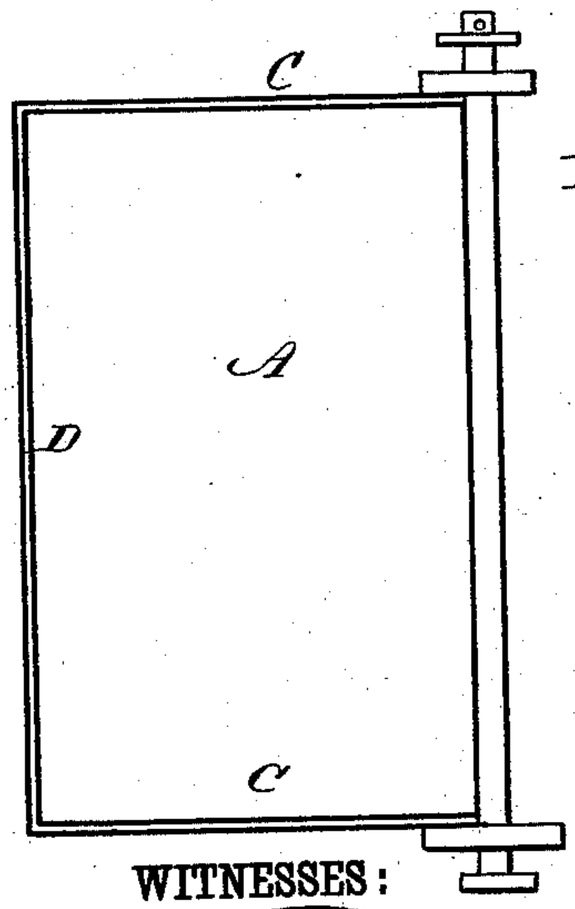
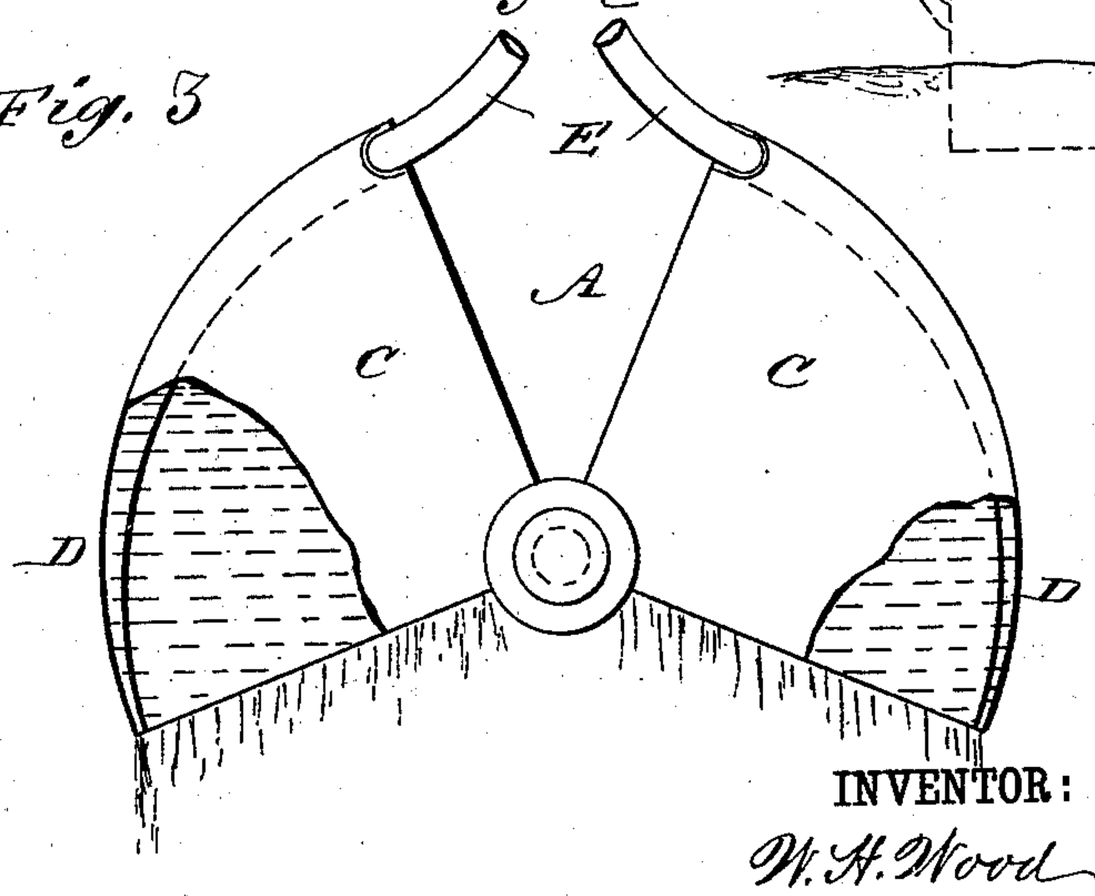


Fig. 2



WITNESSES:

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WILLIAM H. WOOD, OF NEW YORK, N. Y.

DREDGING-BUCKET.

SPECIFICATION forming part of Letters Patent No. 268,345, dated November 28, 1882.

Application filed May 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WOOD, of the city, county, and State of New York, have invented a new and Improved Dredging-Bucket, of which the following is a full, clear, and exact description.

The object of my invention is to facilitate the entrance of dredging-buckets into sand, clay, and other hard and resisting bottoms.

The invention consists in a dredging-bucket having double sides and ends, forming water-spaces in the ends and sides, into which spaces water is forced by a suitable pump when the bucket cuts into the bottom, which water issues from the openings of the water-spaces and loosens the bottom, into which the bucket enters.

The invention also consists in a pulley, chain, and balancing-weight for automatically raising and lowering, with the bucket, the hose conducting the water into the spaces in the bucket.

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

Figure 1 is a longitudinal elevation of part of a dredging-scow provided with my improved bucket. Fig. 2 is an end elevation of the bucket, parts being broken out and the bucket shown partly open. Fig. 3 is a bottom plan view of one of the sections of the bucket.

The dredging-bucket A, which is of the clam-shell pattern, is suspended by means of chains from a derrick arm or beam, B, in the usual manner, and is also operated in the usual manner. The ends C and the curved side D of each section of the bucket are made double, so that a water-jacket will be formed on the curved sides and the ends of the sections. The water-spaces thus formed are open at the lower edges of the ends and the curved sides of the sections, and the width of these spaces increases toward the upper parts of the bucket-sections. A flexible tube or hose, E, is attached to each bucket-section at the wider end of one of the water-spaces in the sides, and these tubes E both lead to a flexible tube or hose, F, connected with a pump, G, on the scow H. The hose F passes over a pulley, J, suspended from a chain or rope, K, passing over rollers or pulleys L on the beam or arm B, and which rope or chain has a balancing-weight, M, suspended from its other end.

It will be observed that the open ends or parts of the water-spaces are along the cutting-edges of the bucket.

The bucket is lowered in the usual manner, and when its edges begin to cut into the bottom water is forced into the water-spaces in the bucket, and this water, in issuing from the openings along the cutting-edges, loosens the bottom, into which the bucket-sections cut, and thereby greatly facilitates the entrance of the bucket into the bottom, especially if the dredger is operating in sand, clay, or other bottoms that offer considerable resistance.

It frequently happens that clay, &c., cling to the sides of the bucket and will not drop out of it. If parts of the openings in the longitudinal edges are slightly raised, the water issuing from these edges washes into the bucket and loosens its contents.

The pump G is only to be operated when the bucket is cutting into the bottom, or when the bucket is raised and the contents are to be loosened.

The balance-weight M holds the hose taut and permits the hose to rise and descend with the bucket.

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

1. A dredging-bucket constructed substantially as herein shown and described, with devices for forcing jets of water from the cutting-edges of the bucket, as set forth.

2. A dredging-bucket of the character herein set forth, constructed with double walls, forming water-spaces in the sides and ends of the bucket, substantially as herein shown and described, and for the purpose set forth.

3. The combination, with a dredging-bucket constructed as herein shown, having water-spaces formed in the sides and ends, of a pump and a tube for conducting water from the pump into the water-spaces in the bucket, substantially as herein shown and described, and for the purpose set forth.

4. The combination, with the beam B and the clam-shell dredging-bucket A, having water-spaces in the sides and ends, of the hose E

and F and the pump G, substantially as herein shown and described, and for the purpose set forth.

5. The combination, with the beam B and the dredging-bucket A, having water-spaces in the sides and ends, of the hose F, the pulley J, the rope or chain K, the balancing-weight M, and the pump G, substantially as herein shown and described, and for the purpose set forth.

6. The combination, with a clam-shell dredging-bucket having water-spaces formed in the sides and ends, of a pump, a tube for conducting water from the pump into the spaces in the bucket, and devices for closing this bucket, substantially as herein shown and described.

WILLIAM H. WOOD.

Witnesses:
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