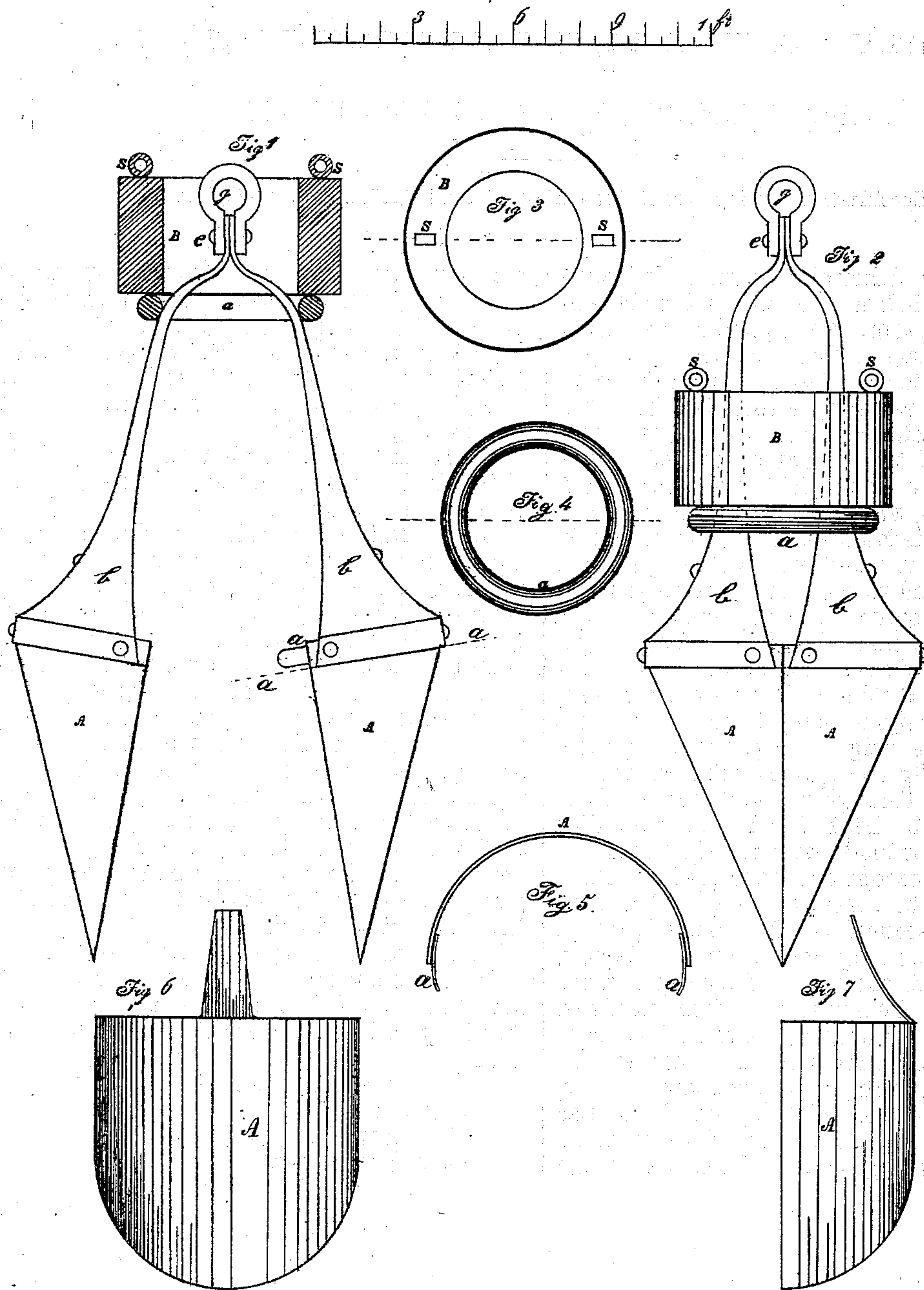


N. A. WILLIAMS.

Improvement in Dredging-Machines.

No. 127,397.

Patented May 28, 1872.



Witnesses

Horace N. Foster
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Inventor

Nehemiah A. Williams

UNITED STATES PATENT OFFICE.

NEHEMIAH A. WILLIAMS, OF WARWICK, RHODE ISLAND.

IMPROVEMENT IN DREDGING-MACHINES.

Specification forming part of Letters Patent No. 127,397, dated May 28, 1872.

Specification describing certain Improvements in "Well-Dredges," invented by NEHEMIAH A. WILLIAMS, of Warwick, in the county of Kent and State of Rhode Island.

This dredge is intended to be used in cleaning out and deepening wells, also for other dredging, especially in deep water; and consists mainly of two scoops or curved blades attached to two arms which are secured to a rope at the top, where they meet. A ring and weight, which is fastened to another rope, surrounds the arms and forces the scoops down into the dirt and closes them together, as will be more fully explained hereinafter.

Figure 1 is a side elevation of the dredge, the ring and weight being shown in cross-section. Fig. 2 is a side view of the same closed, the ring and weight being down. Fig. 3 is a top view of the weight. Fig. 4 is a top view of the ring. Fig. 5 is a cross-section of a scoop or blade taken through in the direction of the line *x x*, Fig. 1. Figs. 6 and 7 show another form of scoop or blade with rounded end.

A A are the scoops or blades, made of sheet metal swaged into a curved form, and riveted or otherwise secured to the arms *b b*, which extend up to the ring-clasp *g*, where a bolt, *e*, passing through the ears of the clasp and the upper ends of the arms, hold them in place. *a* is a ring placed around the arms *b b*. *B* is a weight made with a hole in its center and placed above the ring *a*. It has two ears, *s s*, to which a rope is attached by which to raise and lower it. The upper ends of the arms *b b* are made to spring so as to hold the dredge

open; or they may be made to swing on a pivot in the clasp *g*, and have a spring put in between them to keep the dredge open. *o o* are projections on one part of the dredge, intended to shut into the other part to make them shut together properly. The lower ends of the dredge may be made of a round shape for soft dirt and more pointed for hard soil, or with points or teeth to take up stones, &c., in the bottom of the well.

The operation is as follows: The dredge is lowered into the well by a rope attached to the ring-clasp *g*, and also by a rope attached to the weight, which is kept raised, as shown in Fig. 1, until the dredge reaches the bottom of the well or rests on it, when, by letting the weight down, the lower parts of the dredge will be driven into the dirt, and, at the same time, forced together by the pressure upon the arms *b b*, so as to inclose a portion of the dirt between them. If it is necessary, repeated blows can be given by raising and lowering the weight until the dredge is forced into the dirt sufficiently, when the whole may be raised by the rope attached to the ring-bolt *g* and the dirt discharged from the dredge.

What I claim as my invention is—

The combination of the dredge-scoops *A A* with the arms *b b* and ring-weights *B* substantially as described, and for the purpose set forth.

NEHEMIAH A. WILLIAMS.

Witnesses:

HORACE N. FOSTER,
JOHN E. BAKER.