

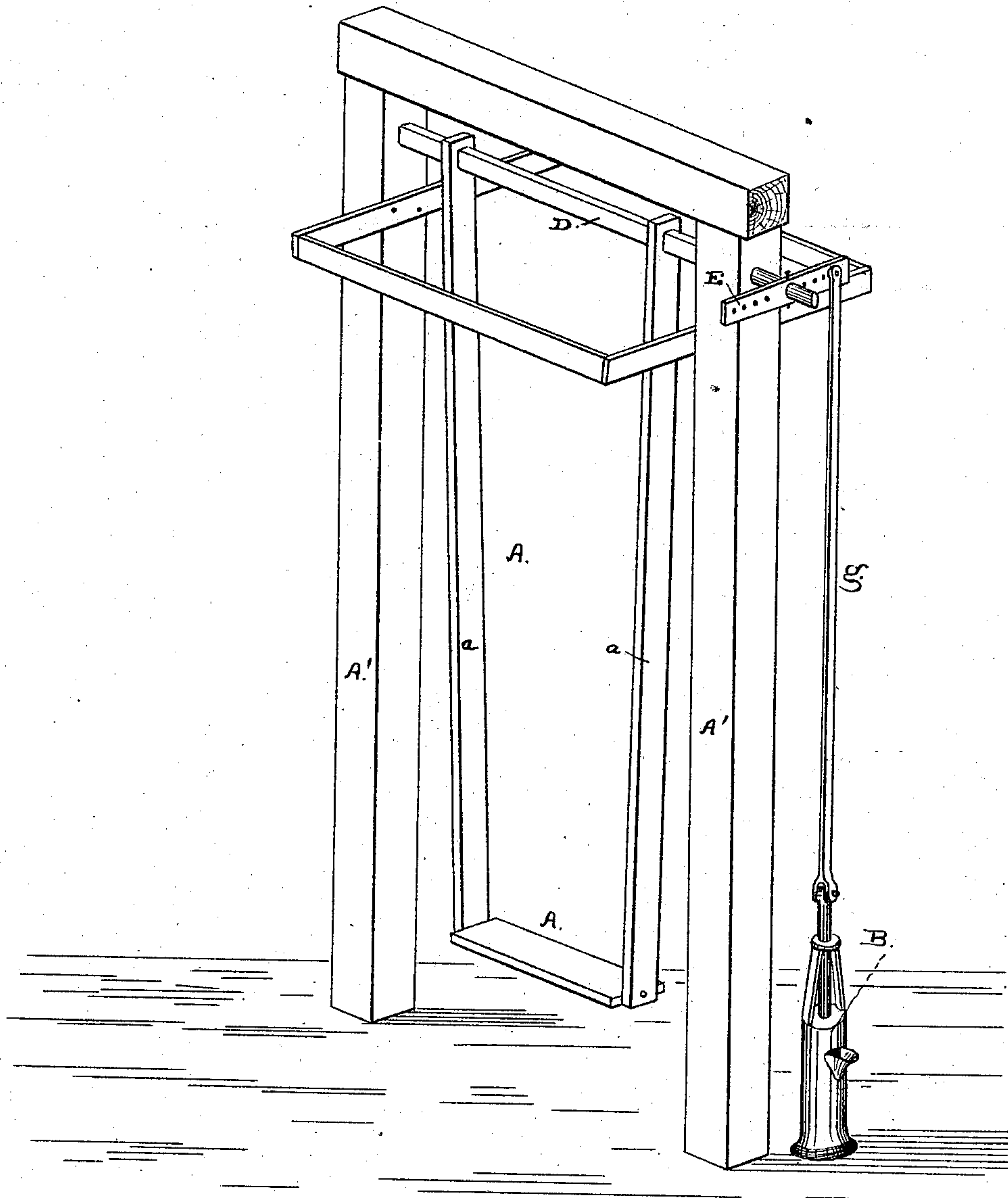
(No Model.)

H. MELDE.

MOTOR FOR OPERATING PUMPS.

No. 287,950.

Patented Nov. 6, 1883.



Witnesses:

Geo. A. Nickson
J. W. Emerson

Inventor:

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by
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UNITED STATES PATENT OFFICE.

HENRY MELDE, OF SAN FRANCISCO, CALIFORNIA.

MOTOR FOR OPERATING PUMPS.

SPECIFICATION forming part of Letters Patent No. 287,950, dated November 6, 1883.

Application filed September 15, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY MELDE, a citizen of the United States, residing in the city and county of San Francisco, in the State of California, have invented certain new and useful Improvements in Mechanical Motors for Operating Pumps; and I do hereby declare that the following is a full, clear, and exact description of the same, the accompanying drawing being referred to as part of the specification.

The object of my invention is to utilize the hitherto waste energy developed by the motions of a swing by applying it to work a pump.

The manner in which I proceed to employ, carry out, construct, and apply my said improvement is as follows, the said drawing being referred to by letters.

The figure represents a perspective view of the device.

I construct a swing, as A, with rods or rigid suspensions *a a*, to take the seat A, and with a rock-shaft, *d*, at the top, to which the said rods or suspensions are fixed in such manner that oscillation of the swing will move the rock-shaft. Connection of this rock-shaft with a pump-rod is made by means of a lever fixed on the outer end of the shaft, and a reciprocating movement of the pump-rod is obtained from the oscillating motion of the swing.

In suitable supports, A' A', I mount a rock-shaft, *d*, at required height from the ground, and to this shaft I secure the ends of two stiff rods or rigid suspensions, *a a*, at a short distance apart, so that a space between their lower ends is afforded for a seat or platform, A. The shaft *d* forms the center of motion for the swing, and is supported in bearings of such character that friction is avoided or reduced as much as practicable. The height of the bearings from the ground is governed by

the length of the swing and the amount of power required for the size of pump to be operated.

One end of the shaft *d* is carried outside of the frame to take the lever E, which, being fixed to the shaft, is moved regularly up and down at its outer end as the shaft rocks in its bearings. Connection of the outer end of the lever is made with the rod *g* of a pump, B, several holes being provided along the lever at different points between the center of motion and the outer end, to permit the connection to be adjusted for a greater or less length of leverage, as may be desired.

In such manner I adapt a swing to work a pump, so that while being used for purposes of recreation the swinging may be utilized as a motive power, and whatever energy is developed by the momentum of the weight carried on the seat may be put to a practical purpose.

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

1. The combination, with the oscillating swing A, rock-shaft *d*, lever E, and rod *g*, of a pump, B, substantially as hereinbefore described, to operate as set forth.

2. The combination of a suitable support, A', a rock-shaft, *d*, rigid rods or suspensions *a*, adapted to carry a weight at the lower end, and by the oscillations of which to move the rock-shaft, the lever E, and the connecting-rod *g*, for transmitting the movements of said lever to a machine, substantially as hereinbefore described.

In witness whereof I hereunto set my hand.

HENRY MELDE.

Witnesses:

EDWARD E. OSBORN,
G. W. EMERSON.