E. L. BARTLETT & M. O. EVANS.

Log-Boring Machine.

No. 221,209. Patented Nov. 4, 1879.

Fig. 1

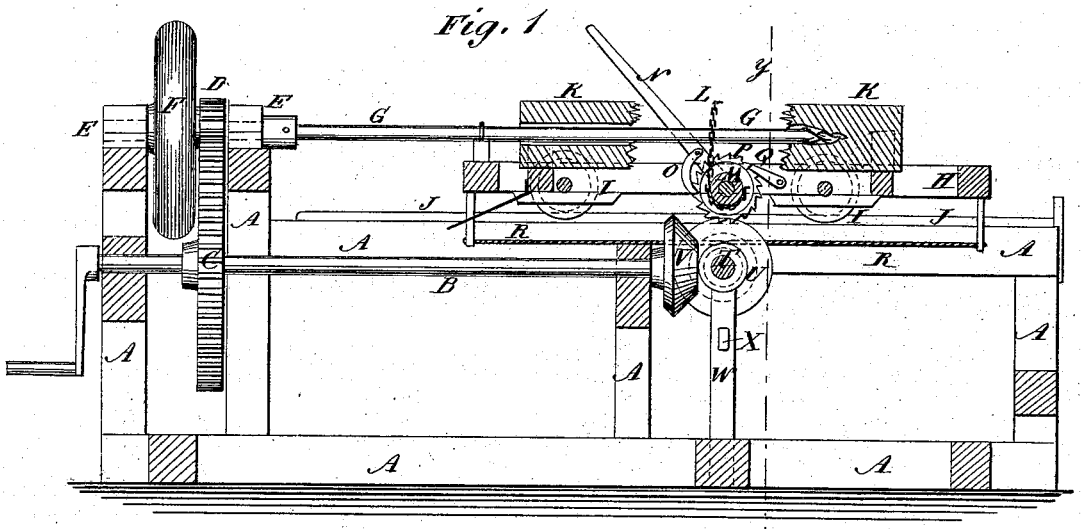


Fig. 2

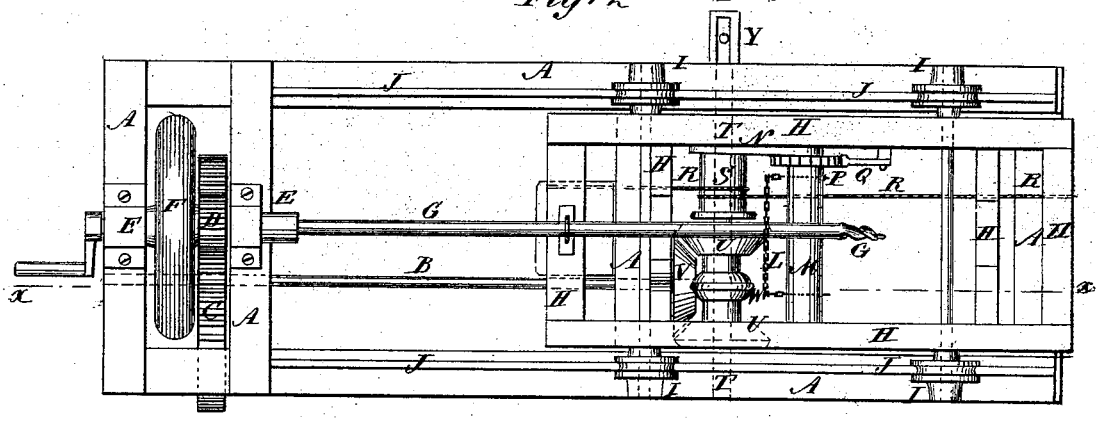
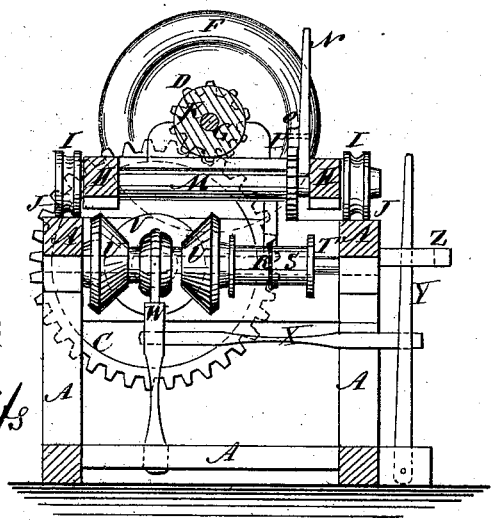


Fig. 3



WITNESSES:

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EDWARD L. BARTLETT, OF OLEAN, AND MOWBRY O. EVANS, OF PORTVILLE, NEW YORK.

IMPROVEMENT IN LOG-BORING MACHINES.

Specification forming part of Letters Patent No. **221,209**, dated November 4, 1879; application filed November 1, 1877.

To all whom it may concern:

Be it known that we, EDWARD L. BARTLETT, of Olean, in the county of Cattaraugus, and MOWBRY O. EVANS, of Portville, in the county of Cattaraugus and State of New York, have invented a new and useful Improvement in Log-Boring Machines, of which the following is a specification.

Figure 1 is a vertical longitudinal section of our improved machine, taken through the line *x x* of Fig. 2. Fig. 2 is a top view of the same. Fig. 3 is a cross-section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for boring logs for pumps and various other uses, which shall be simple in construction, convenient and effective in use, easily transported from place to place, and which may be driven by any ordinary power.

The invention consists in the combination of the gear-wheels, the short shaft, and the fly-wheel with the driving-shaft, the auger, and the frame, and in the combination of the rope, the drum, and the three bevel friction-wheels with the carriage, the sliding shaft, and the driving-shaft.

A represents the frame of the machine, in bearings in which revolves the driving-shaft B. Motion may be given to the shaft B from any convenient power, and to it, near its outer end, is attached a large gear-wheel, C, the teeth of which mesh into the teeth of a small gear-wheel, D, attached to the short shaft E.

The shaft E revolves in bearings attached to the top of the frame A, and to it is attached a fly-wheel, F, to give steadiness of motion to the auger G, which is secured in a holder attached to or formed upon the inner end of the said shaft E, and which revolves in a guide-bearing attached to the end of the carriage H.

To the side bars of the carriage H are pivoted wheels I, which roll along ways or rails J, attached to the top side bars of the frame A.

K represents the log to be bored, which is placed longitudinally upon the carriage H, and secured in place by the chain L, passed over it and attached at its ends to the shaft M.

The shaft M is turned to wind up the chain L and bind the log K in place by a lever, N, which is pivoted to the journal of the shaft M, and to which is pivoted a pawl, O.

The pawl O engages with the teeth of the ratchet-wheel P, attached to the shaft M.

The shaft M is kept from turning back when the lever N is released and when it is being moved back for another stroke by the holding-pawl Q, which is pivoted to the side bar of the carriage H and engages with the teeth of the ratchet-wheel P.

To the end bars of the carriage H, or to hangers attached to said end bars, are attached the ends of a rope, R, which makes one or more turns around a drum, S, attached to the shaft T, so that the carriage H may be moved forward and back by the forward and backward revolution of the shaft T.

To the shaft T are attached two bevel friction-wheels, U, at such a distance apart that a slight longitudinal movement of the shaft T will throw one or the other of said wheels U into gear with the bevel friction-wheel V, attached to the inner end of the driving-shaft B.

The shaft T revolves and slides in bearings attached to the frame A.

The shaft T, between the friction-wheels U, or a collar attached to said shaft, is grooved to receive the upper end of the spring W, the lower end of which is attached to a cross-bar of the frame A in such a position that when left free it will hold both of the friction-wheels U out of gear with the friction-wheel V.

To the spring W is attached the inner end of a bar, X, the outer end of which is attached to a lever, Y.

The lower end of the lever Y is pivoted to the lower part of the frame A, or to a bar or block attached to said frame, and its upper part passes through a guide-slot in a bar, Z, attached to the upper part of the frame.

By this construction the carriage H can be made to run forward or back, and its motion can be changed at any time by moving the upper end of the lever Y in or out, and its motion will be stopped by releasing the said lever Y.

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

1. The combination of the gear-wheels C D, the shaft E, and the fly-wheel F with the driving-shaft B, the auger G, and the frame A, substantially as herein shown and described.

2. The combination of the rope R, the drum S, and the three bevel friction-wheels U V U with the carriage H, the sliding shaft T, and the driving-shaft B, substantially as herein shown and described.

EDWARD LIVINGSTONE BARTLETT.
MOWBRY OWEN EVANS.

Witnesses:
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