O. B. Latham,

Rope-Guard for Artesian Well Drills.

No. 55,506. Patented June 12, 1866.

Fig: 1.

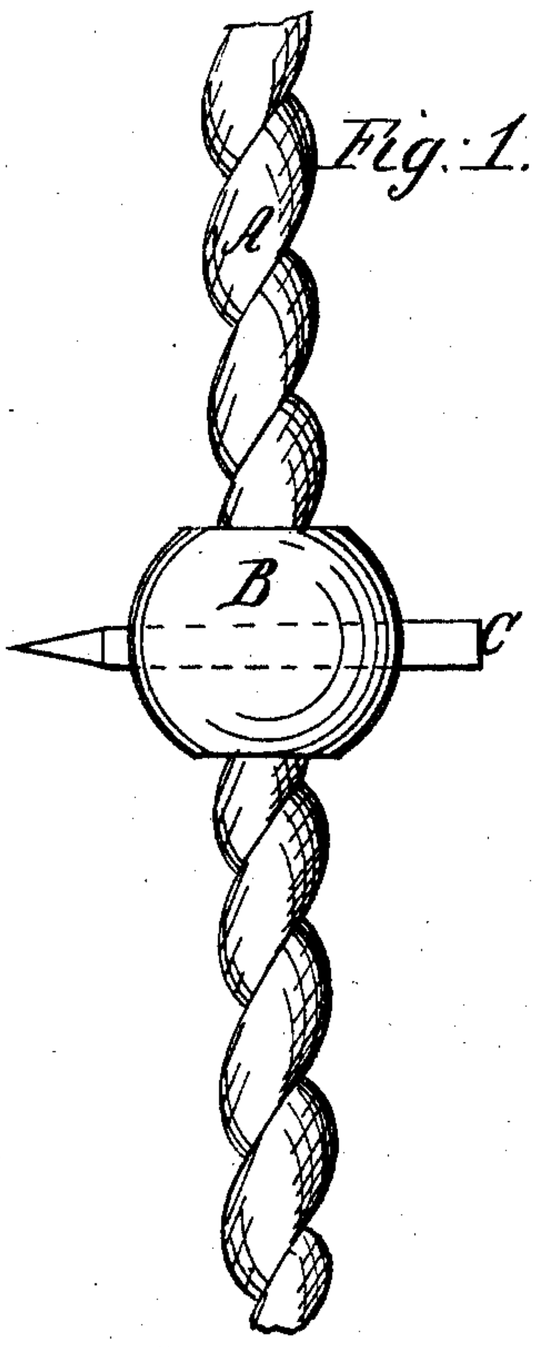
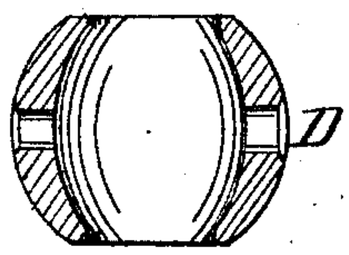


Fig: 2.



Witnesses;
Geo. E. Brown
Frank Smith.

Inventor;
O. B. Latham

UNITED STATES PATENT OFFICE.

OBADIAH B. LATHAM, OF SENECA FALLS, NEW YORK.

IMPROVED ROPE-GUARD.

Specification forming part of Letters Patent No. **55,506,** dated June 12, 1866.

To all whom it may concern:

Be it known that I, O. B. LATHAM, of Seneca Falls, Senaca county, State of New York, have invented a new and useful Rope-Guard; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

The nature of my invention and improvements consists in protecting a rope, of whatever material composed, whether used in sinking Artesian wells or for any other analogous purpose, from friction by means of oblate spheroids, composed of any suitable material whatsoever, constructed and used as hereinafter described.

A represents the rope. B is the rope-guard—a hollow knob, made usually of chilled cast-iron. It may be made of any other suitable material. The orifice through the center of the knob for the passage of the rope is made with concave sides, as shown in Figure 2, for the purpose of affording space for the enlargement of the rope, occasioned by its being penetrated by the pin C, or by its becoming wet, when manila or hemp is used, and for molten lead, zinc, &c., to flow around the metal when wire rope is used.

D is an orifice made horizontally through the knob for the passage of the pin C. This pin is made sharply pointed at one end, in order that it may pass through the rope easily and without breaking any of the fibers thereof. After it has passed through the rope, the ends are cut off and riveted against the outer surface of the knob, which is countersunk to receive the rivet-heads. When wire-rope is used the orifice D affords space in which the molten material used for the purpose of attaching the knob to the rope may form tenons, which add to the security of the fastening.

It is designed to place these knobs at intervals of about ten feet upon the rope. They may be placed at intervals of exactly ten or any other desired number of feet, and marked with figures designating feet, so that they will indicate exactly the depth of the well at any time.

The edges of the orifice at the top and bottom of the knob are rounded off, as shown in Fig. 2, for the purpose of preventing them from cutting the rope when wound round a cylinder or passed over pulleys.

In case the drill-rope breaks, as it often does, it will be seen that the knobs greatly facilitate the process of making fast to the rope by grappling-tongs, for the purpose of withdrawing that part below the fracture.

In sinking deep wells it is always necessary to increase the weight of the drilling-tools, in order to compensate for the tension of the rope and its friction in the water, which always fills the well, and this increase of weight must be proportionate to the increase of depth; otherwise the progress of the work is proportionately diminished. It is contemplated to make the knobs of such weight as will effect the desired end, and thus obviate the necessity of a change from lighter to heavier tools.

What I claim as new, and desire to secure by Letters Patent, is—

The combination of a metallic knob with a rope, of whatever material composed, such knob being concave on its inner surface to allow for the expansion of the rope fastened and operated in the manner described.

O. B. LATHAM.

Witnesses:

GEO. E. BROWN,

A. MOORE.