

UNITED STATES PATENT OFFICE.

EDWARD RAYE, OF NEVADA, IOWA.

APPARATUS FOR HANDLING DRAIN-TILE.

No. 896,758.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD RAYE, a citizen of the United States, residing at Nevada, in the county of Story and State of Iowa, have invented a new and useful Apparatus for Handling Drain-Tile, of which the following is a specification.

My object is to provide improved means for seizing, lifting and handling drain tile and the like by means of machinery as required for placing tile in a ditch, loading them on a wagon or moving them from one place to another whenever desired.

My invention consists in an apparatus specially adapted to relieve persons from the tedious manual labor heretofore required in taking hold of tile with the hands to lift them and move them from one place to another and the apparatus is composed of a movable derrick adapted to be used as a capstan and a hook connected with the capstan and adapted to engage tile as hereinafter set forth pointed out in my claims and illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the hook and Fig. 2 shows the hook and the derrick or capstan combined as required for practical use.

The numeral 10 designates the hook. It is made of a single metal rod formed into an oblong frame and the frame then doubled at its center and the two end portions and mating parts of the frame thus brought into parallel position in such a manner that the lower part *a* can be readily slipped into the opening of a tile as indicated by dotted lines in Fig. 2.

To the upper part *b* and end of the hook is pivotally connected a straight metal link *c* and to the other end portion of the upper part *b* two links *d* and the three links are pivotally connected with a ring *f* to serve as hangers for suspending the hook as shown in Fig. 2.

A light strong durable and efficient hook of skeleton form is thus produced that will engage the inside face of a tile along two distinct lines, that are separated at some distance from each other and the tile will by such separate lines of engagement be less liable to turn or slip on the hook when extended and handled by means of the skeleton hook.

The numerals 12 designate the parallel base piece of the derrick and are adapted to serve as runners to facilitate moving the derrick on the ground. Four uprights 13 are fixed to the base pieces 12 in inclined position and rigidly connected by cross pieces 14 and 15 and braces 16 and 17 and 18 and 19 and 20 and 21, as shown in Fig. 2, or in any suitable way.

An upright 22 is fixed to the cross pieces 14 and 15 and a bearing 23 is fixed to the upright and a corresponding bearing 24 is fixed to one of the corner uprights 13 to support a winch 25 that has a handle 26 for manually operating the winch.

A ratchet wheel 27 on the end of the winch and a gravitating pawl 28 pivoted to the upright 13 serve for locking the winch.

To the top of the derrick is fixed a hook 29 and to the hook is detachably connected a hoisting tackle by means of a sheave 30 for supporting a rope 31 that is fixed to and winds on and off the winch 25 and extends over a sheave 32 pivotally and detachably connected with the ring *f* and hook 12 as shown in Fig. 2 and as required for raising and lowering the hook and lifting and handling a tile on the hook.

For adapting the derrick to be used as a capstan and advancing it astride of a ditch in which tile have been laid a second winch 33 is mounted on two corner uprights 13 to extend at right angles to the winch 25. On one end of the winch 33 is a handle 34 and to the upright 13 is pivoted a gravitating pawl 35 for locking the winch. To the lower end of the upright 13 is fixed a hook 36. A rope 37 is fixed to the winch 33 and extended over sheaves 38 and 39. The sheave 38 is detachably connected with a fixed stake 40 by means of a rope or chain 41 and the sheave 39 is detachably connected with the hook 36 by a rope 42. By the tackle thus produced and applied the derrick and hoisting machinery can be readily and advantageously advanced by means of the winch 33 and the tackle connected therewith as required in laying tile in a ditch by means of the apparatus.

Having thus set forth the purposes of my invention and the manner of its construction and use the practical operation and advantages thereof will be obvious.

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

In an apparatus for handling tile and the like, a skeleton hook consisting of an oblong
5 upper part and a mating lower part united at one end and the two parts extended in parallel planes, links connected with the upper

part of the hook and with each other for suspending the hook and means for suspending the hook to operate as set forth.

EDWARD RAYE.

Witnesses:

JOHN W. COOK,
D. J. BISHOP.