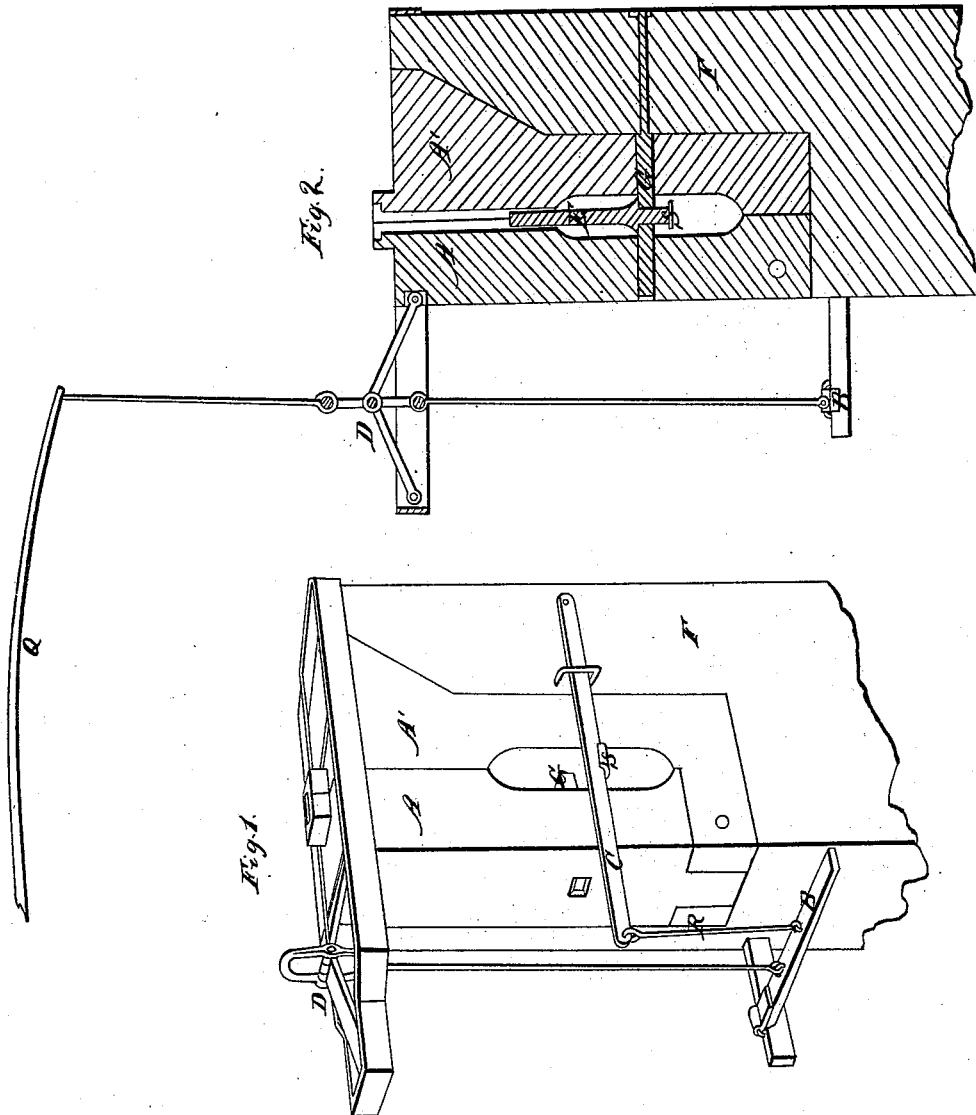


R. S. Harris.

Spike Machine.

N^o 1,948.

Patented Jan. 25, 1841.



UNITED STATES PATENT OFFICE.

ROBERT S. HARRIS, OF WILMINGTON, DELAWARE.

MACHINE FOR HEADING SPIKES.

Specification of Letters Patent No. 1,948, dated January 25, 1841.

To all whom it may concern:

Be it known that I, ROBERT S. HARRIS, of Wilmington, State of Delaware, have invented a new and useful Machine for Making the Heads of Spikes for Ships, Railroads, and other Purposes; and the following is a true and full description of the same, reference being had to the drawings, making part of this specification.

Figure 1 represents a perspective view of the machine showing the treadle, spring, lever and jaws. Fig. 2 section of the machine, showing the cast steel pin and the support and the jaws.

Similar letters refer to similar parts in the figures.

This machine is composed of the jaws A A', treadle B, the lever C, the toggle joint D and pin E, block of wood F, support G, spring Q, connecting rod R, and spring S. The jaws A A' are made of cast iron, fixed firmly to a block of wood F, the lower end of which is fixed in the ground. One side of the jaws A is movable in the manner of a hinge thus giving a space when the jaw is open, in which the spike is placed; on the inner side of each jaw a die is sunk in the form of a half spike. The spike when nearly in the shape of the die is placed in the jaws, when by means of a pressure on the treadle B, the toggle joint D is straightened and brought to bear upon the movable jaw, and the spike embraced by the jaws in a firm manner, after which the head of the spike is formed by hand with a hammer or sledge.

In casting the jaws, a space is left in the lower part as represented in the drawing for a horizontal support of wrought iron G and for the movement therein of the cast steel pin E. This support is firmly fixed, by being passed through the fixed jaw, and through the block of wood and secured by a nut. This is to form a secure bearing

for the pin E. In this support a hole is made, in which the pin is made to rise and fall of a limited length. The pin E is made of cast steel; the upper end for the spike to rest upon, and the lower end for one-fourth of its length being of a smaller diameter, and passing through a hole in the support G, and resting upon the spring S. At the point where the diameter of the pin changes, is a shoulder, which rests upon the support G when the jaws are closed. When the jaws are open, the spring S to straighten itself, forces up the pin E and throws out the spike at the same time. As soon as the head of the spike is finished, the treadle is left free, and by means of the spring Q which is then free, the toggle joint is bent, the jaws open, the spike is removed. The toggle joint D can be made to act with greater effect by a spring being attached to it from above; or by a cord passed over a pulley to which a weight is attached. The pin E is thrown up by the spring S for discharging the spike, which spring is pressed down to allow the pin to descend to its seat by a lever C attached to the treadle B by a connecting rod R. The spring is pressed down in the act of closing the jaws and it flies up when the foot is lifted from the treadle in the act of opening the jaws.

What I claim as my invention, and wish to secure by Letters Patent is—

The combination of the jaw A, toggle joint D, and spring Q, for the purpose of throwing open the jaws as described, and these parts thus combined I claim also in combination, with the treadle B, rest or support G, and pin E with their connections for the purpose and in the manner specified.

ROBERT S. HARRIS.

Witnesses:

WILLIAM IRELAN,
JOHN CODE.