Z. WOODWORTH.

APPARATUS FOR LIGHTING GAS, &c.

No. 169,879. Patented Nov. 9, 1875.

Fig. 1.

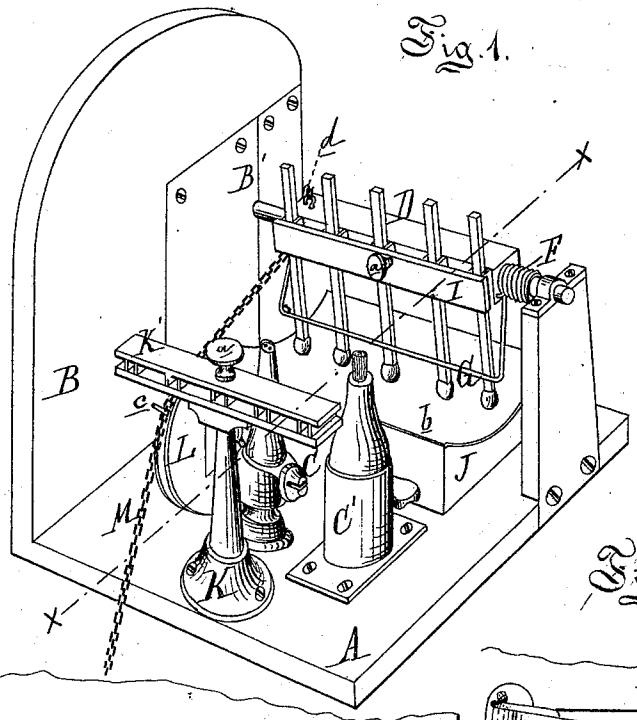


Fig. 2.

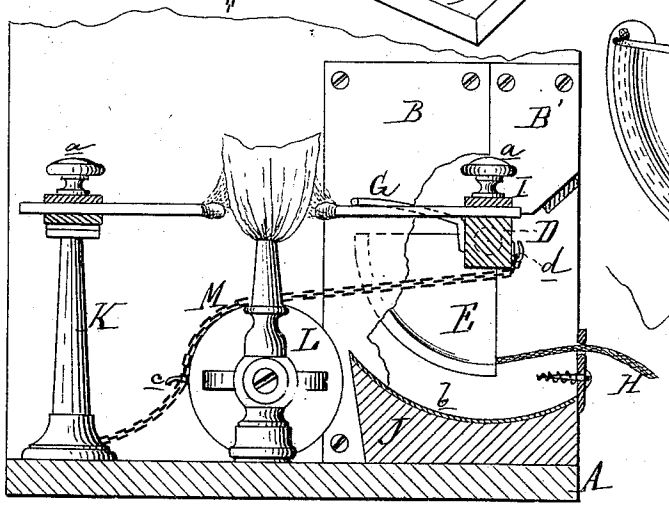
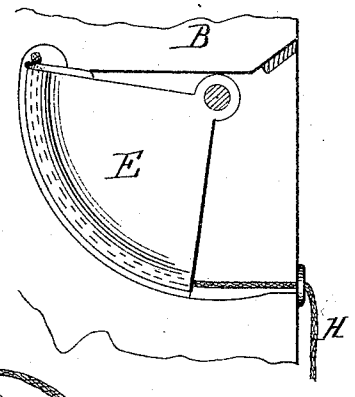


Fig. 3



Witnesses:
Edward Barthel
Thos. S. Day

Inventor:
Z. Woodworth
By Atty
Thos. S. Sprague

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ZACHARY WOODWORTH, OF SPRINGWELLS, MICHIGAN.

IMPROVEMENT IN APPARATUS FOR LIGHTING GAS, &c.

Specification forming part of Letters Patent No. **169,879**, dated November 9, 1875; application filed October 19, 1875.

To all whom it may concern:

Be it known that I, ZACHARY WOODWORTH, of Springwells, in the county of Wayne and State of Michigan, have invented an Improvement in Apparatus for Lighting Gas-Burners, Lamps, or Candles, of which the following is a specification:

The object of my invention is to furnish a device by means of which the occupant of a room may suddenly turn on and light the gas, or a lamp or candle, without leaving his bed, by simply pulling a cord hanging within convenient reaching distance; and it consists, first, in a peculiar rock-shaft and clamps for holding matches, the said rock-shaft being oscillated in one direction by a cord attached to a quadrant at one end, and in a reverse direction by a spring, whereby the matches are carried twice across the surface of sand-paper or other material to ignite them, returning them to their normal position at the plane of the tip of a gas-burner, or the wick of a lamp or candle; secondly, in combination with the foregoing, a second match-clamp, to insure the lighting of the gas, lamp, or candle; and, thirdly, in a device for turning on the gas when the matches are lighted.

Figure 1 is a perspective view. Fig. 2 is transverse vertical section at *x x*. Fig. 3 is an elevation of the quadrant at the inner end of the rock-shaft, the plates on the bracket-back being removed to show it.

In the drawing, A represents a shelf or bracket mounted on a bracket-back, B, which may be secured to the wall, and a gas-burner, C, brought up through the shelf; or a candle-socket, C′, may be placed thereon. D is a rock-shaft, having its front end journaled in a standard rising from the front edge of the shelf, and its rear end in a bearing in the bracket-back. At the neck of the inner journal is secured a quadrant, E, grooved at its periphery, which quadrant oscillates in a recess cut in the bracket-back, and is concealed by sheet-metal back-plates B′. At the outer end there is a spring, F, spirally coiled about the neck of the shaft, so as to throw it up to bring a bale, G, attached thereto in a horizontal position, as seen in Fig. 2. H is a cord, having one end secured to the inner corner of the quadrant, and is led through guides to the bed-side, or within easy reach of the occupant of the bed, who, by pulling on it, will rotate the rock-shaft a quarter-turn, when the spring will throw it back to its normal position.

The body of the rock-shaft is square, and is provided with several transverse sockets, each designed to receive the butt of a match-splint. The matches are kept in place by a clamping-plate, I, laid over them, and forced down by a set-screw, *a*.

The igniting ends of the matches are to be ranged in line, passing under the bale, which presses them down when the shaft is turned, bringing them into contact with a concave block, J, below, the said block being faced with sand-paper *b*, or other rough material, which will cause the matches to ignite as they sweep back and forth over it, to, in turn, light the gas issuing from the burner, or the wick of a lamp or candle; but, to insure certainty of ignition, I erect on the shelf a stationary match-holding post, K, having a T-head, with transverse match-receptacles, in which the splints are held by a clamp, K′, as on the rock-shaft. These matches are held by their clamps so as to project between those of the rock-shaft, and be ignited thereby, so as to make a continuous sheet of flame across the burner or wick, and thus render its lighting certain.

To turn the gas at the same time the matches are ignited, a grooved pulley, L, is secured to the key of the burner with a chain, M, secured to its periphery by a pin, *c*. The other end of the chain is secured to the farther face of the rock-shaft by a hook, *d*, so that when the rock-shaft is rotated by pulling the cord the chain will pull over the pulley, and thus turn the pulley to open the key.

What I claim as my invention is—

1. The rock-shaft D, quadrant E, spring F, bale G, cord H, clamp I, and rubbing-

block J, in combination with the shelf A, bracket-back B, and a gas-burner, lamp, or candle, substantially as and for the purpose set forth.

2. The match-holding post and clamp K K′, in combination wiih the primary match-igniting apparatus, as and for the purpose set forth.

3. The pulley L and chain M, in combination with the rock-shaft and the key of a gas-burner, as and for the purpose set forth.

ZACHARY WOODWORTH.

Witnesses:
H. S. SPRAGUE,
THEO. S. DAY.