

(No Model.)

J. E. GIBBS & M. S. NELSON.
FIRE LIGHTER.

No. 568,674.

Patented Sept. 29, 1896.

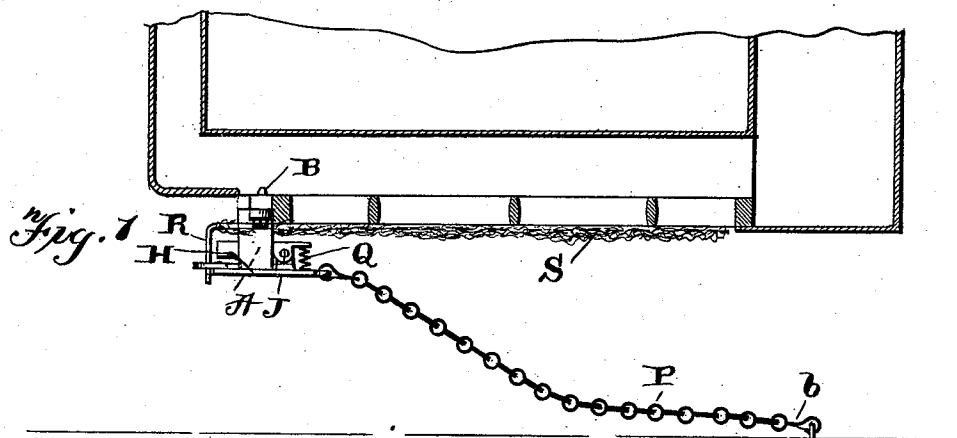


Fig. 2.

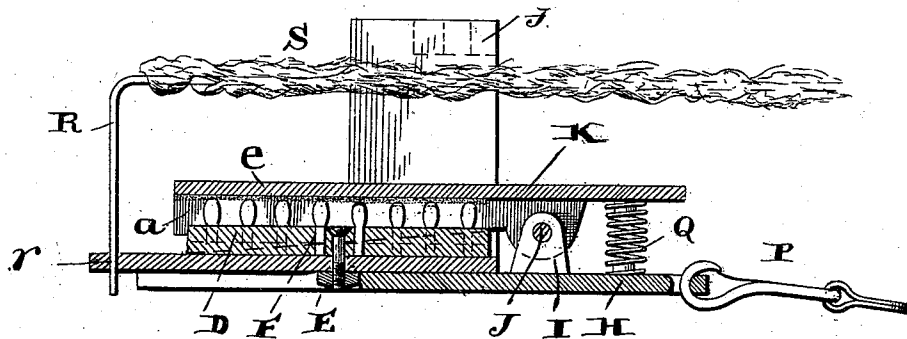


Fig. 3.

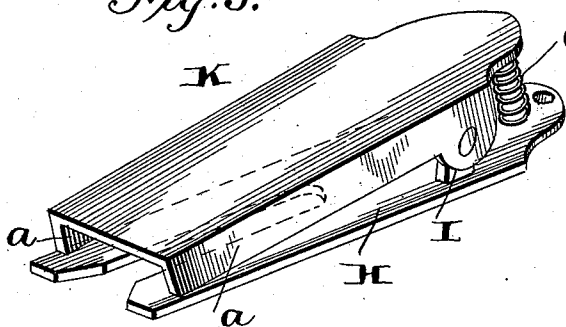
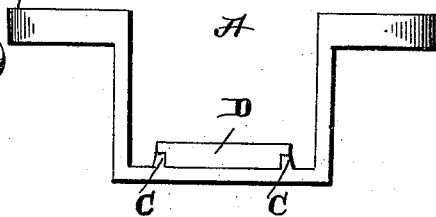


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN E. GIBBS AND MARTIN S. NELSON, OF NEW BEDFORD, MASSACHUSETTS.

FIRE-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 568,674, dated September 29, 1896.

Application filed November 29, 1895. Serial No. 570,466. (No model.)

To all whom it may concern:

Be it known that we, JOHN E. GIBBS and MARTIN S. NELSON, of New Bedford, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Fire-Lighters; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Our invention has relation to improvements in fire-lighters for use more particularly in connection with fire-engines.

The object of our invention is to produce a fire-lighter adapted to be connected beneath the grate of a fire-engine, having a movable igniting device, which ignites by friction one or a series of matches when the engine is drawn from its position in the fire-engine house, the same being automatic in its action.

In the accompanying drawings, Figure 1 is a sectional view of a fire-engine grate with our lighter attached. Fig. 2 is a sectional view taken longitudinally of the sliding block. Fig. 3 is an enlarged detached perspective view of the sliding igniting-block. Fig. 4 is an end view of the U-shaped frame or yoke.

Reference being had to the accompanying drawings, A indicates a yoke or U-shaped frame having at its upper ends laterally-extending ears adapting it to be connected to the grate of a fire-engine through the medium of the clamping-bolts B. This U-shaped or yoke portion A has its lower or bottom portion extended outward beyond the width of the said yoke and provided between the arms thereof with the ribs C, between which is seated a block D, held therein by means of a bolt and nut E. This block is provided with a series of openings F to receive a number of matches, as shown, with their igniting ends upward.

The igniting device consists of a sliding block H, having at one end the ears I, and a spring portion K, pivoted to the ears I through the medium of a pivotal rod J. The spring portion K has the depending flanges a at its sides and is of such size, preferably,

as to inclose the block D therein when in the position shown in Fig. 2. The under side of the spring portion is provided with a coating of emery e, which is in contact with the matches in the block D. The under portion of the sliding block H is held upward against the under side of the lower portion of the yoke A by means of a spring Q, and a chain P has one end connected with the sliding block and the other end provided with a snap or other hook b to be attached to the floor or other stationary portion of the engine-house.

The device being charged with matches and the sliding block placed in position, the sliding block is moved across the matches when the engine is taken from the engine-house, owing to one end of the chain P being connected to the floor thereof. A movement of this sliding block over the matches ignites them, as will be readily understood, thus causing a flame through the grate-bars of the engine to the combustible material above.

From the above description it will be seen that we have produced a cheap and very reliable automatic lighter for fire-engines which is operated by the movement of the engine from its position in the house.

We preferably use a torch composed of a wire R, wound with waste S, saturated with oil, placed over the match-block within the flame produced thereby. This produces a torch, insuring a positive lighting of the combustible material above the grate.

This lighter can be used to light the fire when the steamer or engine is on the road by unsnapping and taking into the fire-box.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. A fire-lighter consisting of a frame having a depending portion, with its upper end adapted to be attached to a grate, the lower end having a laterally-extending elongated web or horizontal portion, a spring-clasp entirely independent of the said frame, the said clasp consisting of two plates pivoted to each other near one end, and a spring for holding their free ends normally together, whereby their free ends are adapted to span the laterally-extending web of the frame, and a connection having one end attached

to the pivoted end of the clasp and the opposite end to a stationary object, the said web of the frame adapted to carry an igniting material to be engaged by one part of the
5 free ends of the clasp, substantially as described.

2. A fire-igniter comprising a frame having a depending portion, its upper end adapted to be connected with a grate, the lower
10 end of the frame having a laterally-extending elongated web or horizontal portion, a spring-clasp adapted to span the said web longitudinally of the elongation, the free end of the clasp being shorter than the elon-

gated horizontal portion of the frame, the
15 said elongated horizontal portion carrying an igniting material, a torch connected to the end of the elongated portion of the frame opposite to the clasp and extending upward and inward over the clasp, substantially as
20 described.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN E. GIBBS.

MARTIN S. NELSON.

Witnesses:

MARTIN BLANCHARD,

THOMAS H. FORBES.