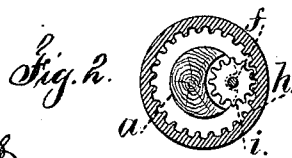
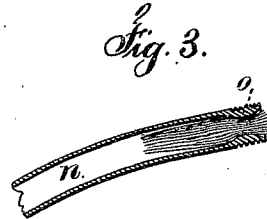
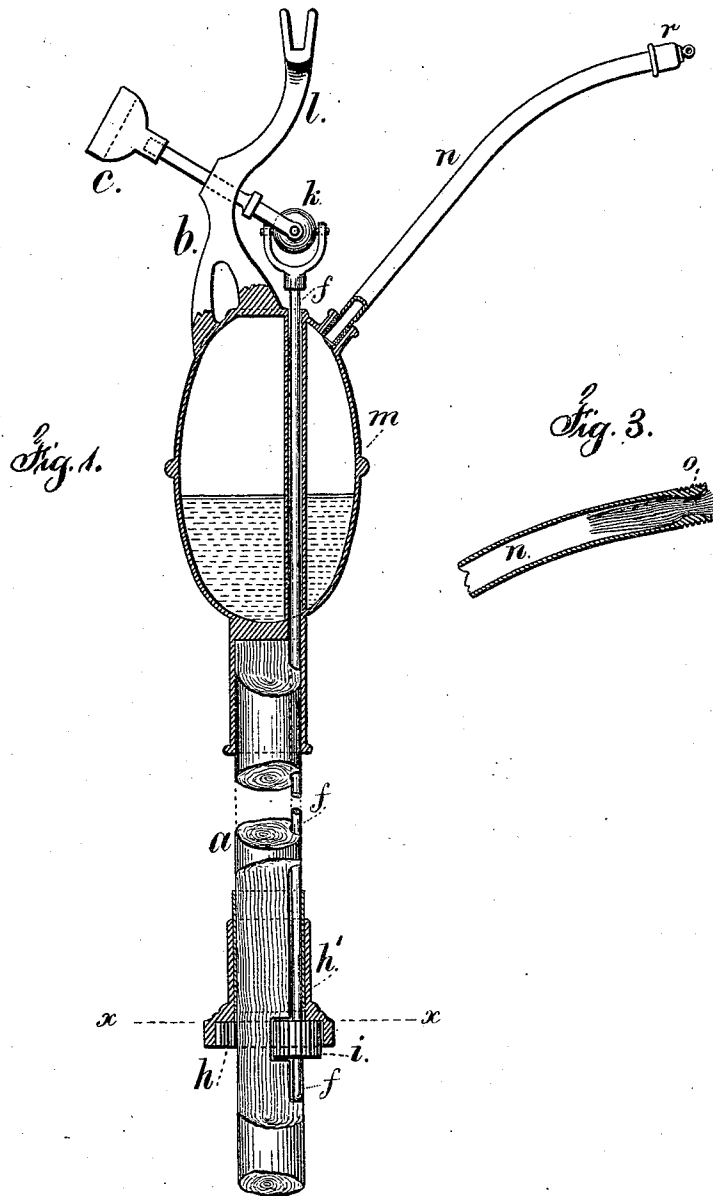


L. STIERINGER.

KEY TURNERS AND LIGHTERS FOR GAS.

No. 184,439.

Patented Nov. 14, 1876.



Witnesses,
Chas. H. Smith
Geo. D. Pinckney

Inventor,
Luther Stieringer.
per Lemuel W. Terrell
att'y.

UNITED STATES PATENT OFFICE.

LUTHER STIERINGER, OF NEW YORK, N. Y.

IMPROVEMENT IN KEY-TURNERS AND LIGHTERS FOR GAS.

Specification forming part of Letters Patent No. **184,439**, dated November 14, 1876; application filed August 21, 1876.

To all whom it may concern:

Be it known that I, LUTHER STIERINGER, of the city and State of New York, have invented an Improvement in Key-Turners and Lighters for Gas, of which the following is a specification:

Gas-keys upon chandeliers are often in a horizontal position, and this is generally the case with glass-chandeliers, where great care in the use of the key-turner is necessary. Efforts have been made to operate a nearly-horizontal key by a nearly-vertical rod, but the device did not work easily, and the turner could not be entirely revolved.

My present invention relates to the combination, with an inclined key-turner and a vertical rod or handle, of a universal joint and a rod running along said handle, and constructed, so that it can be revolved. I also apply with the key-turner a peculiarly-constructed device for operating the longitudinal rod, and also a lighter that is adapted to igniting the gas when flowing through the burner.

In the drawing, Figure 1 is an elevation of the key-turner partially in section. Fig. 2 is a sectional plan at the line *x x*, and Fig. 3 is a section of the wick-tube of the lighter.

The handle *a* is provided at its end with the bearing or support *b* for the inclined gas-key turner *c*. This turner *c* is notched or forked at the end, so as to be adapted to grasp and act upon the ordinary gas cocks or keys of glass or other chandeliers or gas-fixtures, and the key *c* is free to be rotated in its bearings *b*.

Along or through the handle *a* extends a rod, *f*, that is connected with the key *c* by the universal joint *k*, that is made as a ball with the pairs of pivot-pins at right angles connecting with the forks at the ends of the turner and rod, respectively, so that the turner may be rotated by revolving the rod *f*.

The lower end of the rod *f* is provided with a means for revolving the same by hand, so as to turn the gas-key with facility.

The pinion *i*, at the lower end of the rod *f*, gears into the internal gear-wheel *h* that is formed with a sleeve and ring, *h'*, surrounding the handle *a*, so that the pinion *i*, rod *f*,

universal joint *k*, and turner *c* are revolved together with the gas-key, to which the turner is applied, and it can be moved in either direction, according to the way in which the ring *h'* is turned.

The support or bearing *b* is continued, as at *l*, to form a stationary key or turner that may be used in the ordinary way.

A lighter is employed upon the handle *a*. It may be adapted to a taper, but I prefer and use a vessel, *m*, for holding alcohol, and from this the wick-tube *n* extends, and near the end thereof is a contraction or neck, *o*, that is introduced for confining the wick at this point, the object being to prevent two difficulties that arise with the alcohol-torches heretofore employed, the first of said difficulties being to introduce a wick through a long tube sufficiently tight to prevent the wick dropping back or drawing out, and the second being to prevent the alcohol running through the wick, or else the wick becoming too dry. By the present improvement the wick can be introduced freely and drawn through the neck sufficiently tight to prevent the wick slipping either way, and the alcohol can run down to the neck and easily saturate the wick when the torch is inverted, and the alcohol will not drop from the wick when on fire. The cap *r* is to be screwed to the end of the torch.

I claim as my invention—

1. The combination, with the inclined turner *c*, support *b*, and handle *a*, of the universal joint *k*, and rod *f*, substantially as set forth.

2. The internal gear *h*, sleeve *h'*, and pinion *i*, in combination with the rod *f*, handle *a*, universal joint *k*, and turner *c*, substantially as set forth.

3. In an alcohol-torch, a contracted neck within the tube containing the ordinary wick, and near the end thereof, whereby the outer end of the wick is confined, for the purposes and as set forth.

Signed by me this 14th day of August, A. D. 1876.

LUTHER STIERINGER.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.