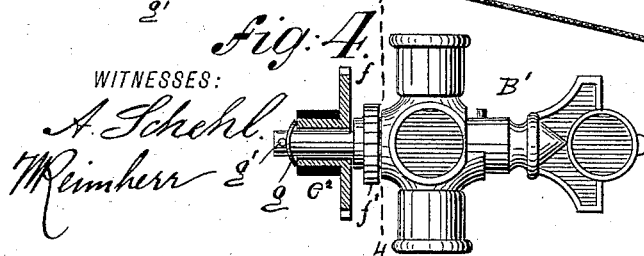
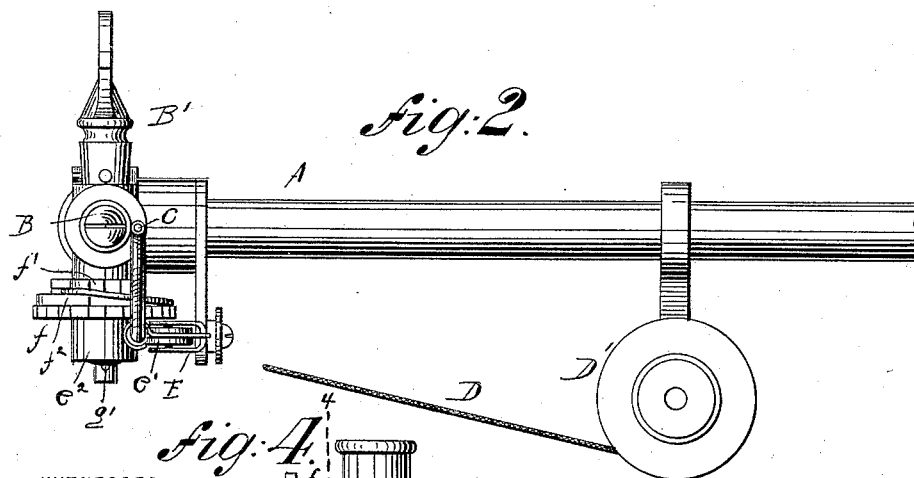
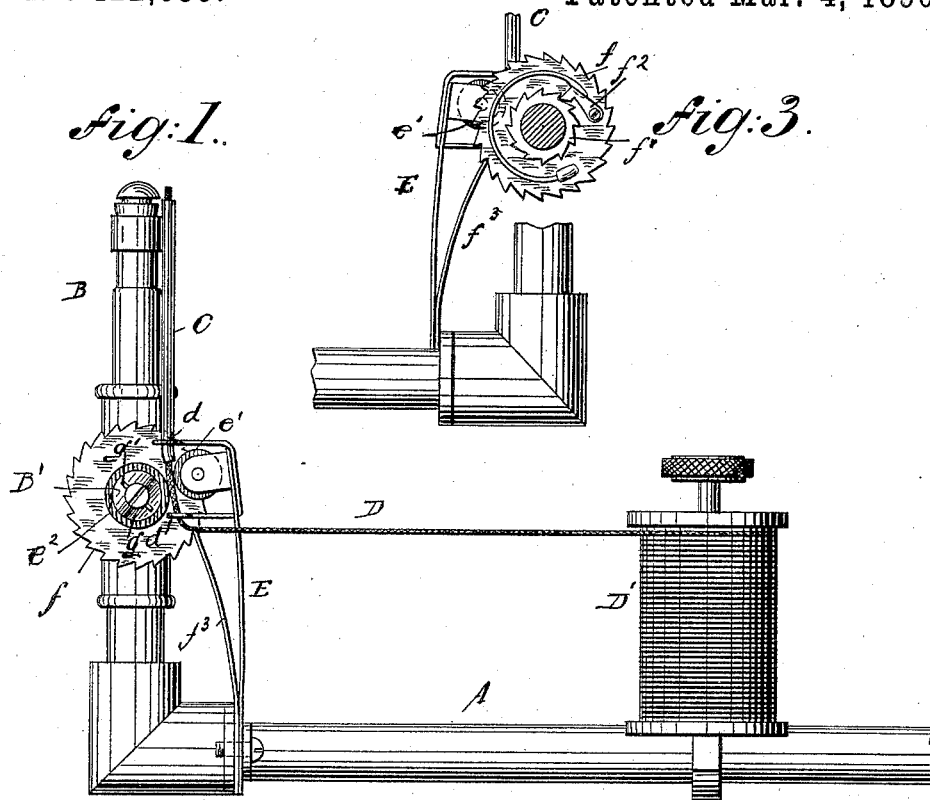


(No Model.)

F. THIELE.
DEVICE FOR LIGHTING GAS BURNERS.

No. 422,659.

Patented Mar. 4, 1890.



WITNESSES:

A. Schehl.
Reimherr & Co.

INVENTOR
Felix Thiele
BY Loepel & Naegler
ATTORNEY.

UNITED STATES PATENT OFFICE.

FELIX THIELE, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO WILLIAM C. CONRAD, OF SAME PLACE.

DEVICE FOR LIGHTING GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 422,659, dated March 4, 1890.

Application filed September 9, 1889. Serial No. 323,404. (No model.)

To all whom it may concern:

Be it known that I, FELIX THIELE, of the city, county, and State of New York, a citizen of the United States, have invented certain new and useful Improvements in Devices for Lighting Gas-Burners, of which the following is a specification.

This invention relates to an improved device for lighting gas simultaneously with turning on the same; and the invention consists of a guide-tube supported sidewise of the burner for guiding a tinder-thread that is so prepared that it will become incandescent and light the burner when the gas is turned on, a feed device for feeding said thread forward, said feed device being operated by the spindle of a gas-cock, and a spool attached to the bracket-arm, on which spool the tinder-thread is wound.

In the accompanying drawings, Figure 1 represents a side elevation of my improved gas-lighter, shown as applied to the arm and burner of a gas-bracket. Fig. 2 is a plan of Fig. 1. Fig. 3 is a vertical transverse section on line 4 4, Fig. 4, showing the pawl-and-ratchet mechanism for operating the feed device for the tinder-thread; and Fig. 4 is a vertical section of the feed device, shown as operated from the spindle of the gas-cock.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the arm of a gas-bracket or other fixture; B, the burner, and C a small guide-tube, which extends from the burner downward for the purpose of guiding a tinder-thread D, wound upon a spool D', that is supported on a standard attached to the gas-bracket A. The tinder-thread is prepared in such a manner that when the end next to the burner is subjected to the action of the gas escaping from the same it becomes incandescent, and thereby lights the gas. The tinder-thread and its manufacture form the subject-matter of a concurrent application, filed at the same date herewith. The tinder-thread is guided in eyes *d* below the guide-tube C, which eyes are supported on a spring-arm E, that is attached to the gas-arm A, which spring-arm is also provided with lugs that support a feed-roller *e'*, which bears on a soft-rubber sleeve *e''*, that is

mounted on the hub of a ratchet-wheel *f*, which is placed loosely on the spindle of the gas-cock B'. The tinder-thread is guided between the roller *e'* and the elastic sleeve *e''* to the guide-tube C, and fed forward by said rollers *e'* and sleeve *e''* with each turning of the gas-cock. The roller *e'* presses the tinder-thread on the sleeve *e''*, owing to the tension of the spring-arm E, on which the roller *e'* is supported.

To the spindle of the gas-cock B' is applied a fixed ratchet-wheel *f'*, the teeth of which are inclined in opposite directions to that of the ratchet-wheel *f*. A spring-actuated pawl *f''*, which is pivoted to the larger ratchet-wheel *f*, engages the teeth of the smaller ratchet-wheel *f'* and takes the loose ratchet-wheel *f* along when the stop-cock is turned in open position. The spring-check pawl *f'''* engages the teeth of the loose ratchet-wheel *f* and prevents the same from turning when the gas-cock is turned, so as to shut off the gas. The loose ratchet-wheel *f* is retained on the spindle of the stop-cock B' by a convex or concave washer *g* and the transverse pin or key *g'*, that holds the said washer in position.

When the gas-cock D' is opened, the elastic sleeve *e''* is turned, with the ratchet *f*, by the action of the fixed ratchet *f'*, attached to the spindle of the stop-cock on the pawl *f''*. A forward motion is thereby imparted to the tinder-thread, which is held between the elastic sleeve *e''* and the guide-roller *e'*, so that the required length of tinder-thread is fed above the burner, and thereby subjected to the action of the escaping gas, which tinder-thread is, by the action of the gas, brought to incandescence, so as to light the gas. When turning off the gas, the loose ratchet is not turned with the spindle of the stop-cock, as the same is held by the check-pawl *f'''*, so that the feed device is not actuated and the tinder-thread retained in position.

As the tinder-thread can be manufactured at comparatively small expense, and the mechanism for feeding the same in connection with the gas-cock is comparatively simple, a convenient gas-lighting device is furnished which can be readily applied to gas-brackets, chandeliers, and all gas-fixtures by which the gas can be ignited in a quick and convenient

manner without the use of matches or electric or other lighting devices.

Having thus described my invention, I claim as new and desire to secure by Letters
5 Patent—

1. The combination, with a gas-arm, stop-cock, and burner, of a tinder-thread guide-tube arranged alongside of the burner, and a tinder-thread feed device operated by the
10 stop-cock to feed the tinder-thread forward alongside of the burner when the gas is turned on, but retain the same in a stationary position when the gas is shut off, substantially as set forth.

15 2. The combination, with a gas-arm and gas-burner, of a tinder-thread guide-tube arranged alongside of the burner, a spool for the tinder-thread, feed-rollers between which said tinder-thread is guided to the guide-tube,
20 and a pawl-and-ratchet mechanism operated by the stop-cock, whereby the tinder-thread is fed toward the burner when the cock is

turned for letting on the gas, but retained in stationary position when shutting off the gas, substantially as set forth.

25 3. The combination, with a gas-burner, of a tinder-thread guide-tube supported alongside of the same, a feed-roller for the tinder-thread supported on a spring-arm, a guide-eye for the tinder-thread supported on said
30 arm, an elastic sleeve on a loose ratchet-wheel of the spindle of the stop-cock, and a pawl-and-ratchet mechanism operated by said spindle when the same is turned in one direction, so as to feed the tinder-thread toward the
35 burner, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

FELIX THIELE.

Witnesses:

W. REIMHERR,
JOHN ALONZO STRALEY.