E. C. MEISSNER.

FRICTION IGNITER FOR GAS LAMPS.

APPLICATION FILED JULY 21, 1913.

1,135,128. Patented Apr. 13, 1915.

Fig. I.

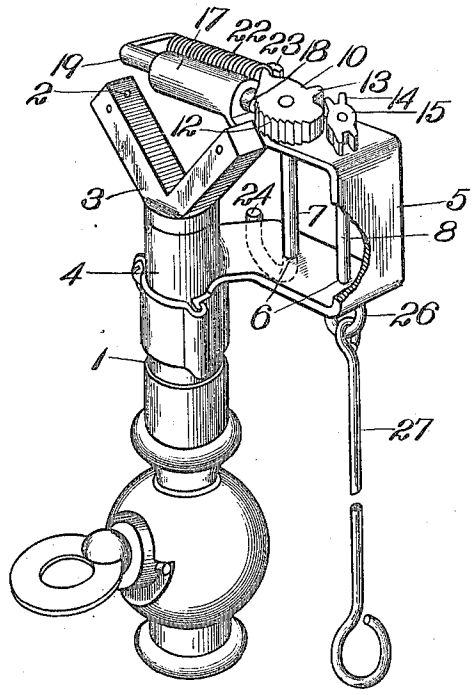


Fig. III.

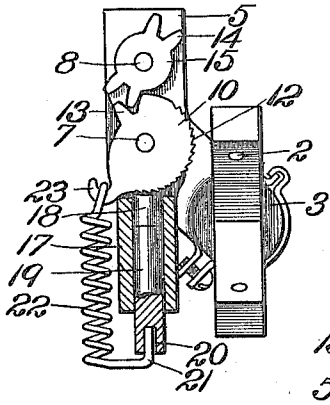


Fig. IV.

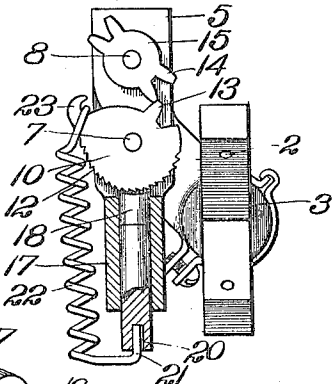
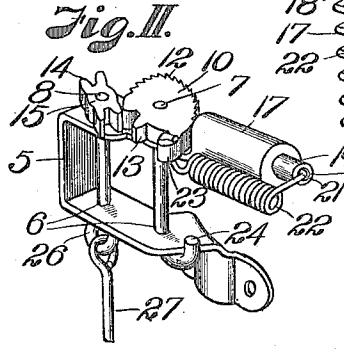


Fig. II.



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FRICTION-IGNITER FOR GAS-LAMPS.

1,135,128. Specification of Letters Patent. Patented Apr. 13, 1915.

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To all whom it may concern:

Be it known that I, EDWARD C. MEISSNER, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Friction-Igniters for Gas-Lamps; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a friction igniter for gas lamps, and more particularly to a device of that type whereby gas escaping from a jet may be ignited by a spark delivered from the lighter, the principal object of the present invention being to provide an igniter, which, due to its location and compact construction, will cast a minimum shadow when the lamp is burning, and which is so constructed and arranged as to eliminate strain on the burner or other part upon which it is mounted, when the igniter is operated. In accomplishing this object, I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein,

Figure I is a perspective view of an igniter constructed according to my invention, and illustrated in combination with an acetylene gas burner, although I do not wish to limit myself to the combination with a burner of any particular type. Fig. II is a perspective view of the opposite side of the device. Fig. III is a plan view of the igniter, with the plunger barrel in section to illustrate the construction and arrangement of the plunger and the sparker unit, the parts being in idle position. Fig. IV is a similar view showing the parts in operative position, with the striker about to be released.

Referring more in detail to the parts: 1 designates a gas burner, which may be of any suitable type, but is here illustrated as adapted for acetylene gas, and from which the gas is delivered through apertures 2 in the arms of the Y-shaped head 3.

Fixed on the burner standard 4 is a U-shaped bracket 5, having paired apertures 6 within which the posts 7—8 are revolubly mounted, both of the posts being extended above and below the bracket arms, for the purposes set forth. The upper end of post 7 carries a striker 10 in the shape of a cam, and having a serrated or ratchet-tooth section 12 on its periphery, the outer end of the striker having gear teeth 13 opposite the ratchet teeth, adapted for engagement by the gear teeth 14 on a double headed pawl 15 that is fixed on the upper end of the post 8.

Carried by, and preferably formed integral with the upper arms of the bracket 5, is a barrel 17, within which a sparker 18 of auermetal, or other suitable material, is slidably mounted. A plunger 19 is also slidably mounted in the barrel and projected from the outer end thereof, the outer end of the plunger being provided with a socket 20 for containing the shank 21 of a coil spring 22, which is connected with a hook 23 on the striker, and normally, yieldingly retains the striker in set position and the plunger projected into the barrel, so that the sparker is held in contact with the serrated edge of the striker, as illustrated most clearly in the sectional views; the lower end of the post 7 being provided with an upturned end 24 which is adapted to engage the edge of the lower arm of the bracket, in order to hold the parts in set position against the tension of the spring.

The lower end of the post 8 is provided with an eyelet 26 which carries a turning rod 27, whereby the parts may be revolved.

With the parts constructed and assembled, as described, the coil spring yieldingly retains the striker in its set position and the sparker projected forwardly into contact with the serrated edge of the striker. When the lamp is to be lighted, gas is turned on by actuating any suitable valve, and when gas is flowing from the burner, the rod 27 is turned to rotate the post 8. When the post is rotated, the gear teeth on one end of the double headed pawl engage the gear teeth on the striker and rotate the striker so that the spring is tensioned to retard travel of the striker and press the sparker forwardly to insure contact thereof with the serrated face of the striker. Continued rotation of the post 8 carries the pawl teeth over the last of the gear teeth on the striker, and as soon as the teeth pass, the striker is automatically returned to its first position under tension of the spring 22, the teeth being so arranged

that their sharp edges contact the sparker during the return travel and produce a spark, which is thrown into the column of gas delivered from the burner aperture and ignites the gas.

I have found that by arranging the igniter so that the spark is thrown directly toward the aperture in the burner rather than at a point across the column, the best results may be secured, although ignition will take place with the other arrangement.

It is also apparent that by providing a single spring for the striker and plunger, the device is rendered simple, compact and inexpensive of construction.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters-Patent, is:

1. The combination with a burner comprising a supporting standard and tip, of a bracket mounted on the standard, striker and actuating shafts revolubly mounted in the bracket, a striker fixed on its shaft, a sparker adapted for coöperation with the striker, an actuating member fixed on its shaft and adapted for coöperation with the striker, and a handle loosely connected with and depending from the actuating shaft.

2. The combination with a burner comprising a supporting standard and tip, of a bracket fixed on the standard, a post pivotally mounted on the bracket and having a stop at one end and a striker at the opposite end, a sparker, yielding means for revolving the striker in contact with the sparker, and a second shaft revolubly mounted in the bracket and having an actuating member at one end adapted for setting the striker against the tension of said yielding means.

3. The combination with a burner comprising a supporting standard and tip, of a bracket fixed on the standard and comprising spaced members, a shaft revolubly mounted in said spaced members and having an upturned lower end adapted for stopping engagement with the lower member, a sparker mounted on the upper member, a striker fixed on the upper end of said shaft, an actuating member adapted for moving the striker to set position and for automatically releasing the same at such position, and a spring for yieldingly returning the striker in contact with the sparker.

4. The combination with a burner, of a bracket fixed on said burner and comprising a barrel, a striker revolubly mounted on the bracket adjacent the barrel, means for turning the striker to set position, a sparker slidably mounted in the barrel, a plunger slidably mounted in the barrel back of the sparker, and common means for yieldingly forwarding the plunger and returning the striker.

5. The combination with a burner, of a bracket fixed on the burner, a sparker mounted on the bracket, a shaft revolubly mounted in the bracket, a striker fixed on the shaft and having a serrated section for engaging the sparker and a tooth opposite the serrated section, a second shaft revolubly mounted in the bracket, an actuating member fixed on the second shaft and having toothed portions at opposite sides for intermittently engaging the toothed portion of the striker, and yielding means for returning the striker in contact with the sparker.

6. The combination with a striker, of a sparker, common means for yieldingly tensioning the sparker toward the striker and for actuating the striker, a pawl for moving the striker to set position against the tension of said means, and means for actuating said pawl.

7. The combination with a serrated striker, of an actuating device for initially moving the striker to set position, a sparker, and common means for yieldingly tensioning the sparker toward the striker and for returning the striker to produce a spark.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD C. MEISSNER.

Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."