

No. 829,761.

PATENTED AUG. 28, 1906.

R. BLUMENFELD.
IGNITER FOR GAS LAMPS.
APPLICATION FILED APR. 14, 1906.

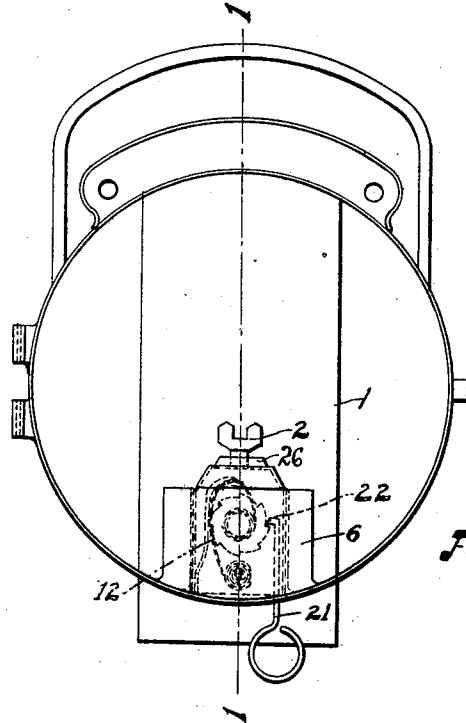


Fig. 1.

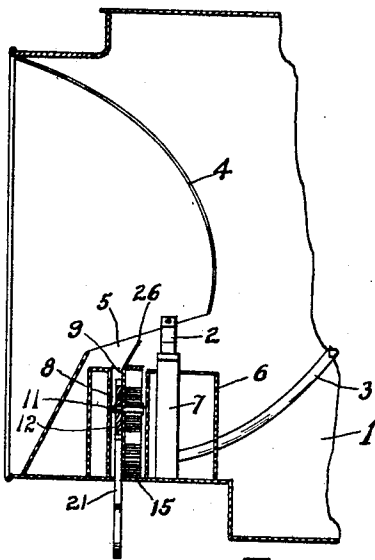


Fig. 2.

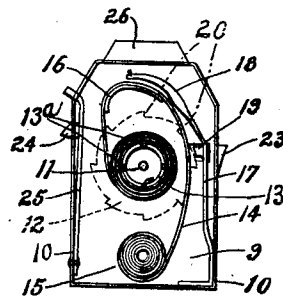


Fig. 3.

Witnesses

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RUDOLF BLUMENFELD, OF CLEVELAND, OHIO.

IGNITER FOR GAS-LAMPS.

No. 829,761.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed April 14, 1906. Serial No. 311,633.

To all whom it may concern:

Be it known that I, RUDOLF BLUMENFELD, a citizen of Austria-Hungary, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Igniters for Gas-Lamps, of which the following is a specification.

My invention relates to improvements in igniters for gas-lamps, and is especially designed for use in connection with carbide, acetylene, and other gas-lamps used in connection with automobiles and other vehicles.

The primary object of my invention is to enable such lamps to be ignited by means of simple and efficient mechanism without the use of matches, &c., which require the opening of the lamp for such purpose.

With this end in view the invention consists in the novel construction, arrangement, and combination of parts hereinafter described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims.

Referring now to the drawings, forming a part of this specification, Figure 1 is a front elevation of an ordinary lamp of this class equipped with my improved igniter with the glass and reflector of the lamp removed. Fig. 2 is a longitudinal sectional view taken through line 1 1 of Fig. 1 with removable reflector inserted in the lamp. Fig. 3 is a detailed view of the rear portion of the removable igniting mechanism.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

Referring now to the drawings, 1 designates the body of an ordinary lamp of this class provided with a burner-head 2 and the usual connecting gas-tube 3. The removable reflector 4 is provided with an opening 5 to receive the burner-head 2, and a cylindrical cup or body 6 is mounted about the upwardly-extending shank portion 7 of the burner formed at the front portion of the lamp, and said cup portion 6 is provided with a housing 8 in front of said shank portion 7 and is adapted to receive and contain the removable igniting mechanism, consisting of a main body portion or plate 9, provided with integral side walls or flanges 10. The main body portion or plate 9 is provided with an opening adapted to receive and contain a stem portion 11, carrying at one end a ratchet-wheel 12, suitably secured thereto,

and provided at its other end with a peripherally-flanged disk 13, having a series of longitudinally-extending recesses or slots 13^a. (See Fig. 3).

A narrow paper band 14 is wound about a pin 15, mounted beneath the disk 13, and said paper band 14 is provided with a series of percussion-caps and extends upwardly and over and about a fixed plate or anvil 16, and thence downwardly and wound over and about the flanged portion of the disk 13, one end of the paper strip being secured in one of the slots or recesses 13 therein, as shown most clearly in Fig. 3 of the drawings.

A spring-arm 17 is secured at its lower end to the side walls or flanges 10 and is provided at its upper end with an elongated striking-arm or hammer-head 18 adapted to strike down upon and explode the percussion-caps of the paper strip 14 when the latter is moved over the fixed plate or anvil 16, as hereinafter described. The spring-arm 17 is provided at its side with a short arm or flange 19, adapted to rest upon and be moved by a series of teeth 20 of the ratchet-wheel 12.

The ratchet-wheel 12 is moved by means of a vertically-arranged sliding arm 21, provided at its upper end with a hooked arm 22, adapted when pulled downwardly to engage one of the teeth 20 of the ratchet-wheel, whereby the revolution of the same will cause one of the other teeth of the ratchet-wheel to depress the spring-arm 17, as shown in Fig. 3, so that when the vertically-arranged arm 21 is pulled down it will move the ratchet-wheel so as to move a tooth of the ratchet-wheel past the flange 19 of the spring-arm 17, whereby the elongated arm or hammer-head 18 will explode the percussion-cap as it springs down upon the fixed plate or anvil 16.

The plate or main body portion 9 of the igniting mechanism is removably secured within the housing 8 of the cup portion 6 by means of a fixed shoulder 23 at one side thereof and at the other by means of a shoulder 24, secured to the free end of the vertically-arranged spring-arm 25, having its lower or base end secured to the side wall or flange 10 of said plate. When the fixed plate 9 is placed in position in the housing 8, the shoulders 23 and 24 are adapted to take under and engage the top of the cup portion 6, and as a further means of directing the sparks arising from the percussion of the cap toward the gas surrounding the burner-head

2 a deflector-plate 26 may be formed at the upper portion of the plate 9, as shown most clearly in Fig. 2 of the drawings.

The distance apart of the percussion-caps on the paper strip should correspond substantially with the distance apart of the teeth of the ratchet-wheel, and it will be observed that in order to provide for insuring the ignition of the percussion-caps at all times that the fixed plate or anvil 16 and hammer-head 18 are elongated, so as to provide a long striking-surface on the paper strip.

Having thus described my invention without having attempted to set forth all the forms in which it may be made or all the modes of its use, I declare that what I claim, and desire to secure by Letters Patent, is—

1. An igniter for gas-lamps, consisting of an upwardly-extending shank portion provided with a burner-head, a cylindrical cup or body portion mounted about said upwardly-extending shank portion, a housing formed in said cylindrical cup or body portion in front of said upwardly-extending shank portion, a plate provided with integral side walls or flanges removably secured within said housing and provided with an opening, a stem portion mounted in said opening, and provided with a ratchet-wheel, a peripherally-flanged disk secured to said stem portion, a spring-arm provided with an elongated hammer arm or head and adapted to be moved by said ratchet-wheel, a fixed plate mounted above said peripherally-flanged disk, a pin mounted beneath said peripherally-flanged disk, and a paper band provided with a series of percussion-caps wound about said fixed pin and carried up over and about said fixed plate and thence down and wound about said peripherally-flanged disk.

2. An igniter for gas-lamps, consisting of a cylindrical cup or body portion surrounding the shank portion of the burner thereof and provided with a housing, a plate mounted in said housing and provided with a stem portion carrying a ratchet-wheel and peripherally-flanged disk, a fixed plate or anvil mounted on said plate, a spring-arm suitably secured and provided with an elongated striker-arm or hammer-head mounted above said fixed plate or anvil and adapted to be manipulated by said ratchet-wheel, a pin mounted beneath said peripherally-flanged disk and carrying a coiled paper band extended about said fixed plate or anvil and having one end secured to said peripherally-flanged disk and adapted to be wound about the same, and means for revolving said ratchet-wheel.

3. In an igniter for gas-lamps, the combination with a cup or body portion mounted about the upwardly-extending portion of the burner thereof and provided with a housing; of a plate carrying a peripherally-flanged disk and ratchet-wheel mounted in said housing, a

spring-arm or hammer secured to said plate and adapted to be manipulated by said ratchet-wheel, a fixed plate or anvil suitably mounted above said peripherally-flanged disk, a paper band provided with a series of percussion-caps passing over said fixed plate or anvil and adapted to be wound about said peripherally-flanged disk, and means for revolving said peripherally-flanged disk and ratchet-wheel.

4. In an igniter for gas-lamps, a plate or main body portion suitably mounted adjacent to the burner thereof and provided with an opening and a fixed shoulder on one side and a spring-resisted shoulder on the other adapted to retain the same in position, a stem portion provided with a ratchet-wheel mounted in said opening, a peripherally-flanged disk secured to said stem, a fixed plate or anvil suitably mounted above said peripherally-flanged disk, a spring-arm provided with a striking-arm suitably secured to said main body portion or plate and adapted to be manipulated by said ratchet-wheel, a paper band provided with a series of percussion-caps having one end secured to said peripherally-flanged disk and adapted to be moved over said fixed plate or anvil when the disk is revolved, and means for engaging and moving said ratchet-wheel.

5. In an igniter for gas-lamps, the combination with an upwardly-extending shank portion provided with a burner-head, a cylindrical cup or body portion mounted about said upwardly-extending shank portion, and a housing formed in said cylindrical cup or body portion; of a plate removably secured within said housing, a fixed shoulder formed at one side of said plate and adapted to take under a projecting edge about said housing, and a vertically-arranged spring-arm having its lower or base end secured to the opposite side of said plate and provided at its upper or free end with a shoulder adapted to take under said projecting edge about said housing.

6. In an igniter for gas-lamps, the combination with a cup or body portion mounted about the upwardly-extending portion of the burner thereof and provided with a housing; of a plate provided at its top with a deflector-plate mounted within said housing, means secured to the sides of said plate for securing the same within said housing, a revoluble disk provided with a ratchet-wheel mounted in said plate, a spring-arm and hammer-head mounted in said plate and provided at its side with a short arm adapted to be engaged by said ratchet-wheel, an anvil secured to said plate below said hammer-head, a strip provided with percussion-caps secured at one end to said disk and carried over said anvil, and a vertically-arranged sliding arm having a hooked arm adapted to engage the teeth of said ratchet-wheel.

7. In an igniter for gas-lamps, the combination with a cup or body portion mounted about the upwardly-extending portion of the burner thereof and provided with a housing;
5 of a plate mounted within said housing and provided with a deflector-plate adjacent to said burner, a fixed shoulder formed at one side of said plate and taking under a projecting edge about said housing, a vertically-
10 arranged spring-arm secured to the other side thereof and provided at its free end with a shoulder adapted to take under the opposite side of said projecting edge, a revoluble disk provided with a ratchet-wheel carried
15 by said plate, and a vertically-arranged sliding arm mounted in said cup or body portion and having its upper end bent over to form a hook adapted to engage the teeth of said ratchet-wheel.

20 8. In an igniter for gas-lamps, in combination, an upwardly-extending shank portion provided with a burner-head, a cylindrical cup or body portion mounted about said upwardly-extending shank portion, a housing
25 formed in said cylindrical body portion in front of said shank portion, a plate provided with flanges removably secured within said housing, a fixed shoulder formed at one side

of said plate and taking under a projecting edge about said housing, a vertically - ar- 30
ranged spring-arm having its lower end secured to a flange at the opposite side of said plate and provided at its upper end with a shoulder taking under said projecting edge
about said housing, a peripherally-flanged 35
disk provided with a stem portion and a ratchet-wheel carried by said plate, a spring-arm mounted on said plate and provided with an elongated striker - arm, an anvil
40 mounted on said plate beneath said striker-arm, a flange formed at the side of said spring-arm and adapted to be moved by said ratchet-wheel, a strip carrying a series of per-
cussion-caps secured to said peripherally-
45 flanged disk and moving over said anvil, and a vertically-arranged sliding arm having a hooked arm adapted to engage the teeth of said ratchet-wheel.

In testimony whereof I have signed my name to this specification in the presence of 50
two subscribing witnesses.

RUDOLF BLUMENFELD.

Witnesses:

O. C. BILLMAN,
C. H. KILBY.