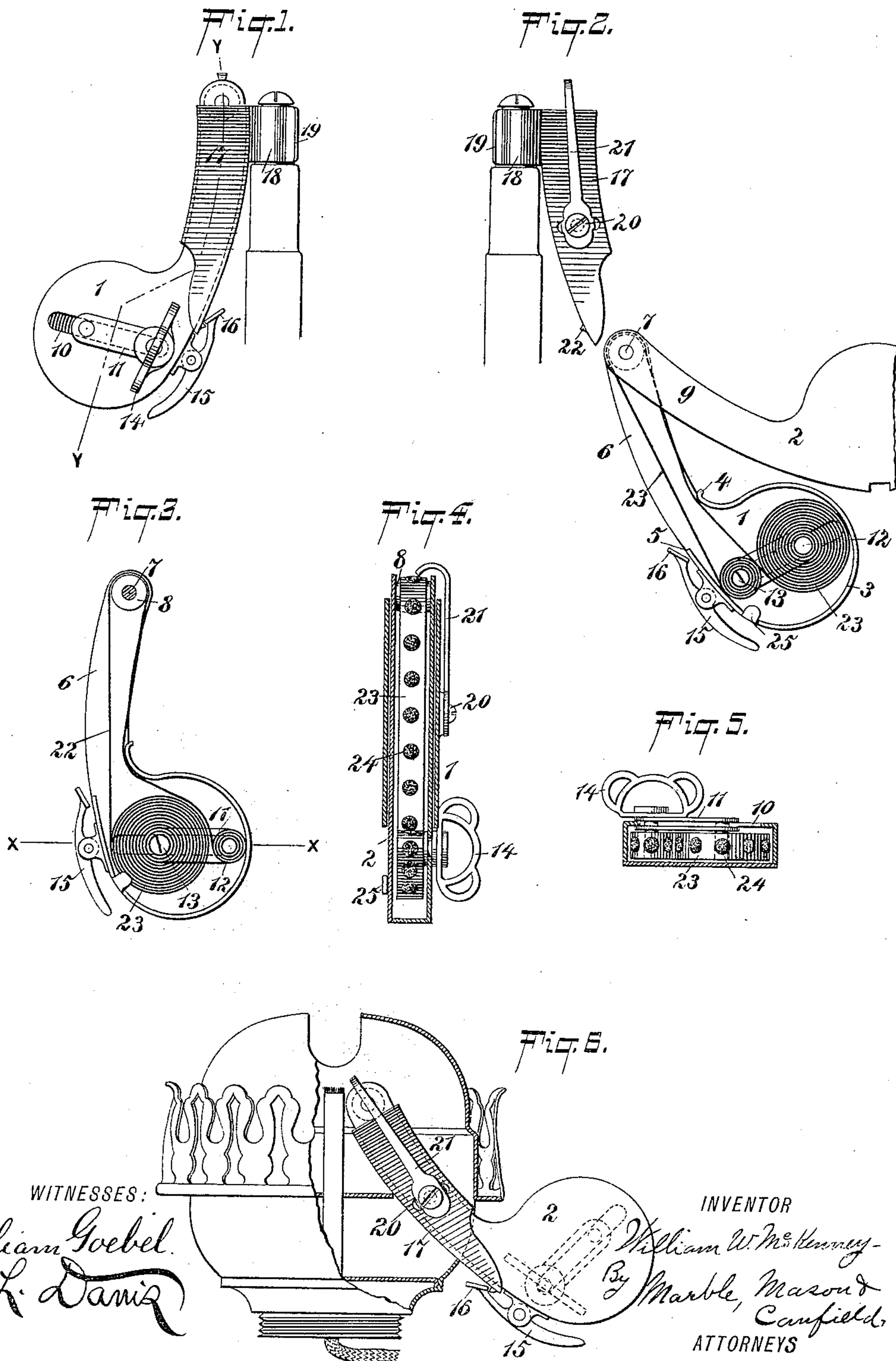


(No Model.)

W. W. McKENNEY.
LIGHTING DEVICE.

No. 480,207.

Patented Aug. 2, 1892.



UNITED STATES PATENT OFFICE.

WILLIAM W. MCKENNEY, OF NEW YORK, N. Y., ASSIGNOR TO THE MAGIC INTRODUCTION COMPANY, OF NEW JERSEY.

LIGHTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 480,207, dated August 2, 1892.

Application filed October 2, 1891. Serial No. 407,521. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. MCKENNEY, a citizen of the United States, and a resident of the city and county of New York, in the State of New York, have invented certain new and useful Improvements in Lighting Devices, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

The object of my invention is to provide a device adapted to be attached to lamps, gas-burners, &c., by which the same may be easily lighted without the use of matches, &c., and without the removal of the chimneys or globes usually used on such burners or lamps. This I accomplish by means of a device extremely simple of construction and easy of operation, which is fully disclosed in the following specification, of which the accompanying drawings form a part, wherein similar numerals of reference designate like or equivalent parts wherever found throughout the several views, and in which—

Figure 1 represents a back view of my improved lighting device attached to a gas-burner; Fig. 2, a front view of the same, showing the tape-carrying portion of the device removed from the sheath and having its cover swung open so as to show the tape-holding mechanism and the position of the parts thereof immediately after the insertion of a fresh roll of tape; Fig. 3, a view of the tape-carrying portion of the device with the cover removed, showing the position assumed by the tape-holding mechanism when the tape is nearly expended; Fig. 4, a sectional view of the device on the line *y y* of Fig. 1, and Fig. 5 a partial sectional view of the same on the line *x x* of Fig. 3, while Fig. 6 represents the device as attached to an ordinary kerosene-lamp burner.

Referring to the drawings, the reference-numeral 1 designates the back, 2 the hinged or pivoted cover, and 3 the circular band between the back and cover, these three parts constituting the casing or housing proper of the device. As shown in Fig. 2, the band 3, which forms the sides of the casing, terminates, preferably, at the points marked 4 and

5, and at the point marked 4 is preferably turned slightly outward, as shown. Beyond these points 4 and 5 the back 1 extends in the form of a neck or arm 6; the outer end of which is provided with a pin 7, secured thereto, on which is mounted a roller or support 8. The cover 2 is also provided with a neck or arm 9, similar to the neck or arm 6 on the back 1, and the outer extremity thereof is pivoted to the pin 7, on which the roller or support 8 is mounted, as shown in Fig. 2. The back 1 is provided with a straight slot 10, on each side of which (inside and outside of the back 1) is arranged a plate 11, and these plates cover the slot 10 and are held together by pins 12 and 13, one of which, preferably the one designated as 13, is revoluble and provided with a thumb-piece 14 on the outside of the casing, which is preferably hinged or pivoted to the head of the pin 13, which is also outside of the outer plate 11. As thus constructed, these pins slide freely in the slot 10, and the plates 11, being attached to or connected with the pins, also slide freely back and forth over said slot, the pin 13 being, as before stated, revolubly mounted, so as to be freely rotated by means of the thumb-piece 14 in whatever position the pin may be in said slot 10.

Pivoted to one side of the casing, preferably at the place and in the position shown, is a spring-pressure lever 15, provided with a head 16, which is designed to hold the tape-carrying portion of the device in position in the sheath or casing 17, which is adapted to be attached to a gas or other burner, as shown in Figs. 1, 2, and 6. This sheath 17 is attached to a gas-burner by means of a socket or tube 18, preferably also open at the side, as shown at 19, and when it is desired to use the device in connection with an oil-burner, as shown in Fig. 6, the socket 18 is omitted and the sheath 17 is inserted through the casing of the burner and held therein by means of solder or in any other manner desired.

Attached to the side of the sheath 17 by any desired means, but preferably by a screw-bolt 20, is a spring-scratcher 21, the free end of which is carried up and curved over, as shown in Fig. 4, so that the point thereof will come in contact, or nearly so, with the roller or

support 8 when the neck or arm of the casing is inserted in the sheath. The lower end of the sheath 17 is also provided with a shoulder or lug 22, over which the head 16 of the spring-lever 15 catches when the casing is inserted within the sheath, as shown in Figs. 1 and 6, by which means the parts are held securely together.

The operation of the device is as follows:
 10 The pivoted cover 2 being first swung into the position shown in Fig. 2, thus uncovering the tape-carrying mechanism, a roll or coil of tape 23, provided with fulminating pellets 24, is placed in position upon the pin 12, and the
 15 end thereof is carried up through the neck and passed over the roller or support 8, and then carried back and secured to the revolvable pin 13 by inserting the end thereof in a slit in the end of said pin. The hinged or
 20 pivoted cover 2 is then swung back into position, so as to cover the tape-chamber, where it may be held by friction or by a spring-lug 25, formed on the band 3, or by both. The
 25 arm or neck of the casing proper, composed of the extensions 6 and 9, of the back and cover, is then inserted within the sheath 17, as shown in Figs. 1 and 6, until the same is in position to be caught and held by the pressure-lever 15 and lug 22, in which position the
 30 end of the spring-scratcher 21 will press upon the fulminate tape 23. It being desired to ignite the burner to which the device is attached, it is only necessary to rotate the pin 13 by means of the thumb-piece 14, when the
 35 same will wind upon itself the tape 23, drawing the same over the support 8, when the fulminating pellets 24 will be exploded one by one as they are brought into contact with the
 40 scratcher 21, and this operation may be repeated until all the pellets upon the tape have been exploded.

It will be seen upon an examination of Figs. 2 and 3 that as the tape is rewound upon the spindle 13 and the coil thereon grows
 45 larger it presses against the band 3 of the casing, and thus forces the plates 11 and the spindles 12 and 13 along the slot 10, and that by reason of this sliding action of the mechanism for winding and holding the tape the
 50 same is rewound in practically the same space which it occupied when it was first inserted, and that by reason of such construction the device may be made much smaller than otherwise.

55 It is evident that the mechanism shown and described herein for rewinding the fulminating tape within the space originally occupied by it may also be used to advantage in pocket lighting devices; but I have not shown and
 60 claimed such device as adapted to pocket-lighters, nor, broadly, as adapted to any class of lighters, for the reason that I have so shown, described, and claimed the same in a separate application for Letters Patent thereon, filed
 65 simultaneously herewith.

Having now fully described my invention,

its construction and operation, what I claim, and desire to secure by Letters Patent, is—

1. In a lighting device for gas or other burners, the combination, with a casing adapted
 70 for holding and rewinding within itself a coil of fulminating tape and having an elongated neck or extension provided at its outer extremity with a roller or support over which
 75 the tape is drawn, of a sheath or casing into which the elongated neck or extension is inserted and held, means attached to the sheath for exploding the fulminating material upon
 the tape as the same is drawn over the roller or support, and means for attaching the sheath
 80 to the burner, substantially as shown and described.

2. In a lighting device for gas or other burners, the combination, with a casing adapted
 85 for holding and rewinding within itself a coil of fulminating tape and having an elongated neck or extension, of a roller or support over which the tape is drawn, located at the outer
 extremity of the elongated neck or extension of the casing, a sheath or casing into which
 90 such neck or extension is inserted, a scratcher secured to the sheath in such manner as to be in contact with the tape upon the roller or support when the neck is in position in the
 sheath, and means secured to the sheath for
 95 attaching the same to the burner, substantially as shown and described.

3. In a lighting device for gas or other burners, the combination, with a casing adapted
 100 for holding and rewinding within itself a coil of fulminating tape and having an elongated neck or extension, of a roller or support over which the tape is drawn, located at the outer
 extremity of the elongated neck or extension, a sheath or casing into which such neck or ex-
 105 tension is inserted, a scratcher secured to the sheath in such manner as to be in contact with the tape upon the roller or support when the neck is in position in the sheath, means
 secured to the sheath for attaching the same
 110 to the burner, and a spring-lever, as 15, which operates to hold the sheath and casing together when in position, substantially as shown and described.

4. In a lighting device for gas and other
 115 burners, the combination, with a casing provided with an elongated neck or extension, of a roller or support located at the outer extremity of such neck or extension, mechanism
 located within the casing for holding, draw-
 120 ing over the roller or support, and rewinding within the casing a coil of fulminating tape in such manner that the rewound coil shall occupy substantially the same space that such
 tape occupied when first inserted in the cas-
 125 ing, a sheath or casing adapted to receive and hold the neck or extension, and means attached to the sheath for exploding the fulminating material upon the tape as the same is
 drawn over the roller or support, substan-
 130 tially as shown and described.

5. In a lighting device for gas and other

burners, the combination, with a casing provided with an elongated neck or extension, of a roller or support located at the outer extremity of such neck or extension, mechanism
 5 located within the casing for holding, drawing over the roller or support, and rewinding within the casing a coil of fulminating tape in such manner that the rewound coil shall
 10 occupy substantially the same space that such tape occupied when first inserted in the casing, a sheath or casing adapted to receive and hold the neck or extension, means for securing the sheath to the burner attached thereto, and a scratcher secured to the sheath in such
 15 manner as to be in contact with the tape upon the roller or support when the neck is in position in the sheath, substantially as shown and described.

6. In a lighting device for gas and other
 20 burners, the combination, with a casing provided with an elongated neck or extension, of a roller or support located at the outer extremity of such neck or extension, a spindle adapted to receive a coil of fulminating tape
 25 located within the casing, a revoluble spindle adapted to draw over the roller or support and rewind upon itself the coil of tape upon the other spindle, the supporting-spindle being adapted to slide away from and the re-
 30 winding-spindle toward the center of the casing as the tape is rewound upon the rewinding-spindle, means for rotating the rewinding-spindle, a sheath or casing adapted to receive and hold the neck or extension, and means at-
 35 tached to the sheath for exploding the fulminating material upon the tape as the same is drawn over the roller or support, substantially as shown and described.

7. In a lighting device for gas or other burn-
 40 ers, the combination, with a casing provided with an elongated neck or extension, of a roller or support located at the outer extremity of such neck or extension, a spindle adapted to receive a coil of fulminating tape lo-
 45 cated within the casing, a revoluble spindle adapted to draw over the roller or support and rewind upon itself the coil of tape upon the other spindle, the supporting-spindle being adapted to slide away from and the re-
 50 winding-spindle toward the center of the casing as the tape is rewound upon the rewinding-spindle, means for rotating the rewinding-spindle, a sheath or casing adapted to receive and hold the neck or extension, and a scratcher
 55 secured to the sheath in such manner as to be

in contact with the fulminating tape upon the roller or support when the neck is in position in the sheath, substantially as shown and described.

8. In a lighting device for gas or other burn- 60
 ers, the combination, with a casing having an elongated neck or extension provided at its outer extremity with a roller or support, one side of said casing being pivoted near the
 65 outer extremity of the neck and being free to be swung aside so as to uncover the interior of the casing, of mechanism located within the casing for holding, drawing over the anvil or support, and rewinding within the casing a
 70 coil of fulminating tape in such manner that the rewound coil shall occupy substantially the same space that such tape occupied when first inserted in the casing, a sheath or casing adapted to receive and hold the neck or ex-
 75 tension, and a scratcher secured to the sheath in such manner as to be in contact with the fulminating tape upon the roller or support when the neck is in position in the sheath, substantially as shown and described.

9. In a lighting device for gas or other burn- 80
 ers, the combination, with a casing having an elongated neck or extension provided at its outer extremity with a roller or support, one side of said casing being pivoted near the
 85 outer extremity of the neck and being free to be swung aside so as to uncover the interior of the casing, of a spindle adapted to receive a coil of fulminating tape located within the casing, a revoluble spindle adapted to draw
 90 over the roller or support and rewind upon itself the coil of tape upon the other spindle, the supporting-spindle being adapted to slide away from and the rewinding-spindle toward the center of the casing as the tape is re-
 95 wound upon the rewinding-spindle, means for rotating the rewinding-spindle, a sheath or casing adapted to receive and hold the neck or extension, and means attached to the sheath for exploding the fulminating material upon
 100 the tape as the same is drawn over the roller or support, substantially as shown and described.

Signed at the city and county of New York, in the State of New York, this 30th day of September, A. D. 1891.

WILLIAM W. MCKENNEY.

Witnesses:

C. L. DAVIS,

RAYMOND BAYLIS.