

W. W. BATCHELDER.  
 Apparatus for Lighting Cigars, Pipes, &c.  
 No. 215,261.                      Patented May 13, 1879.

Fig. 1.

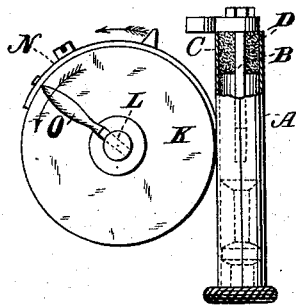


Fig. 2.

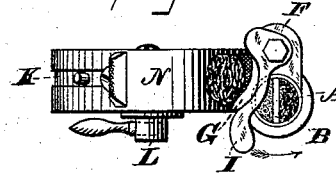


Fig. 3.

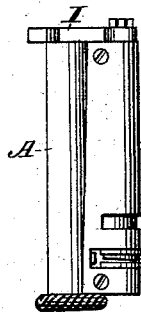


Fig. 4.

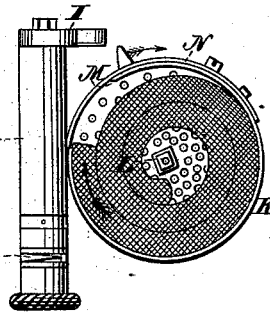


Fig. 5.

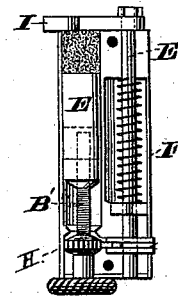


Fig. 6.

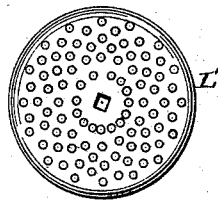
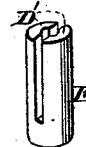


Fig. 7.



Fig. 8.



WITNESSES

James Hutchinson.  
 J. A. Rutherford

INVENTOR

William W. Batchelder.  
 by James L. Norris.  
 Attorney.

# UNITED STATES PATENT OFFICE.

WILLIAM W. BATCHELDER, OF NEW YORK, N. Y.

IMPROVEMENT IN APPARATUS FOR LIGHTING CIGARS, PIPES, &c.

Specification forming part of Letters Patent No. **215,261**, dated May 13, 1879; application filed March 21, 1879.

## *To all whom it may concern:*

Be it known that I, WILLIAM W. BATCHELDER, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Apparatus for Lighting Cigars, Pipes, &c., of which the following is a specification.

This invention relates to certain improvements in that class of igniters for smokers' use in which a fuse is mounted upon a rotating reel attached to a casing provided with igniting material, with mechanism for igniting the same, in such manner that the fuse may be projected and ignited.

In this class of apparatus, as heretofore constructed, much difficulty has been experienced in confining the fuse to the reel, so as to insure its delivery and to draw it back.

The object of my invention is to obviate these defects; and to this end the invention consists, first, in the combination, with the casing containing the igniting material and the mechanism for feeding and igniting the same, of a reel mounted upon a shaft journaled in a suitable receptacle, said reel consisting of two wheels or disks, perforated, roughened, ribbed, or corrugated, for the purpose of taking hold on opposite sides of a tinder coil wound between them, so that by the turning of the reel the said coil will be fed forward directly and smoothly, instead of being wrinkled, crimped, or jammed to one side, as is liable to be the case when feeding devices take hold of but one side of a fibrous coil or wick; second, in the combination, with the casing containing the igniting material and the operating mechanism, of a reel consisting of two perforated or roughened concavo-convex disks, mounted on a central shaft at a distance apart to admit of the coiling of a tinder coil between them, for the purpose of holding the tinder coil and delivering it directly and smoothly toward the periphery, as more fully hereinafter specified.

In the drawings, Figure 1 represents a side elevation of my improved igniter, showing a portion broken away. Fig. 2 is a top view of the igniter. Fig. 3 is a detached view of the casing containing the igniting material. Fig. 4 is a side elevation of the igniter with the cover of the reel-casing removed. Fig. 5 is a longitudinal section through the casings containing

the igniting material and rock-shaft. Fig. 6 is a detached view of one of the perforated sides of the reel; Fig. 7, an edge view of said sides, and Fig. 8 a detached view of the carrier and followers.

The letter A represents a cylindrical casing, having a longitudinal partition, B, by which it is divided into two semi-cylindrical chambers, C D, for the reception of the igniting material. Said tube is provided with a screw-threaded shaft, B, passing into its rear end, on which is mounted a carriage, E, provided with followers D', which are adapted to be projected into the chambers C and D and feed the igniting material forward.

The letter E' represents a rock-shaft journaled in a casing, F, attached to and parallel with the casing A. Its forward end projects from the casing, and is provided with a scraper, G, which is adapted to traverse the end of the casing A and mix and rub together the igniting materials to ignite the same.

The screw-shaft is provided at its rear end, which projects through the rear of the casing, with a milled button, by means of which it can be operated to retract the follower or carrier to make room in the chamber for a fresh charge of igniting material. Said screw-shaft is also provided with a ratchet, H, which is operated by a pawl on the shaft E', by means of which it is automatically rotated to feed the material forward at each oscillation of said shaft E'. The scraper is provided with a thumb-lever, I, by means of which it can be actuated to ignite the igniting material.

The letter K represents a casing attached to the casings A and F, its periphery being in a plane parallel with the said casings A and F. Said casing is provided with a reel, L', mounted on a central shaft, L. Said reel is composed of two concavo-convex disks, mounted on rectangular seats on said shaft, so as to turn securely with it. The convex sides of said disks face each other, and the said disks are perforated or are roughened, ribbed, corrugated, or provided with corrugations on their convex surfaces, which adapt the reel to take hold of a tinder coil and carry it positively in either direction, so as to insure the winding and unwinding of the same.

The cylindrical casing is provided with an

opening, M, immediately under the front end of the casing A, through which the end of the fuse may be projected by rotating the reel when it is desired to set fire to the same. The disks of the reel take hold on opposite sides of the coil, and thus guide it surely and in a smooth condition through the opening M, so that its end will always come into proper position to be ignited by the flash from the igniting devices, and prevented from swerving to one side or bending or being crimped or jammed within the casing, as would be the case were but one feeding-disk used and the coil taken hold of thereby on but one side. Said opening is provided with a movable cover, N, adapted to close and uncloze the opening.

The central shaft, L, is provided with a crank, O, or other suitable means, on one end, which projects through the casing, by which the reel may be rotated. One of the sides of the casing is made removable, in order that it may be detached to insert the fuse.

By reason of the concavo-convex form of the disks, a tendency is given to throw the coil outwardly to the periphery of the reel, in order to insure its delivery through the opening.

The operation of my invention is as follows: The fuse being properly secured to the reel, upon uncovering the opening and rotating the disk in the proper direction, the end of the coil will be projected through the opening. Upon operating the scraper, the igniting material will be ignited and the flash or flame projected upon the end of the fuse, lighting the same.

When it is required to extinguish the fuse, it is only necessary to rotate the reel in a reverse direction, so as to coil the tinder coil in the receptacle, after which the opening is closed to extinguish the coil and protect the same.

What I claim is—

1. The combination, with the casing containing the igniting material and the mechanism for feeding and igniting the same, of a reel mounted upon a shaft journaled in a suitable receptacle, said reel consisting of two wheels or disks, perforated, roughened, ribbed, or corrugated, and secured upon the shaft at a distance apart to permit the coiling of a tinder coil between them, for the purpose of taking hold of and carrying the tinder coil smoothly and directly forward, substantially as specified.

2. In combination with the casing containing the igniting material and the operating mechanism, of a reel consisting of two perforated or roughened concavo-convex disks, mounted on a central shaft at a distance apart to admit of the coiling of a tinder coil between them, for the purpose of holding the coil and delivering it directly and smoothly toward the periphery, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of the subscribing witnesses.

W. W. BATCHELDER.

Witnesses:

JAMES L. NORRIS,  
JAMES A. RUTHERFORD.