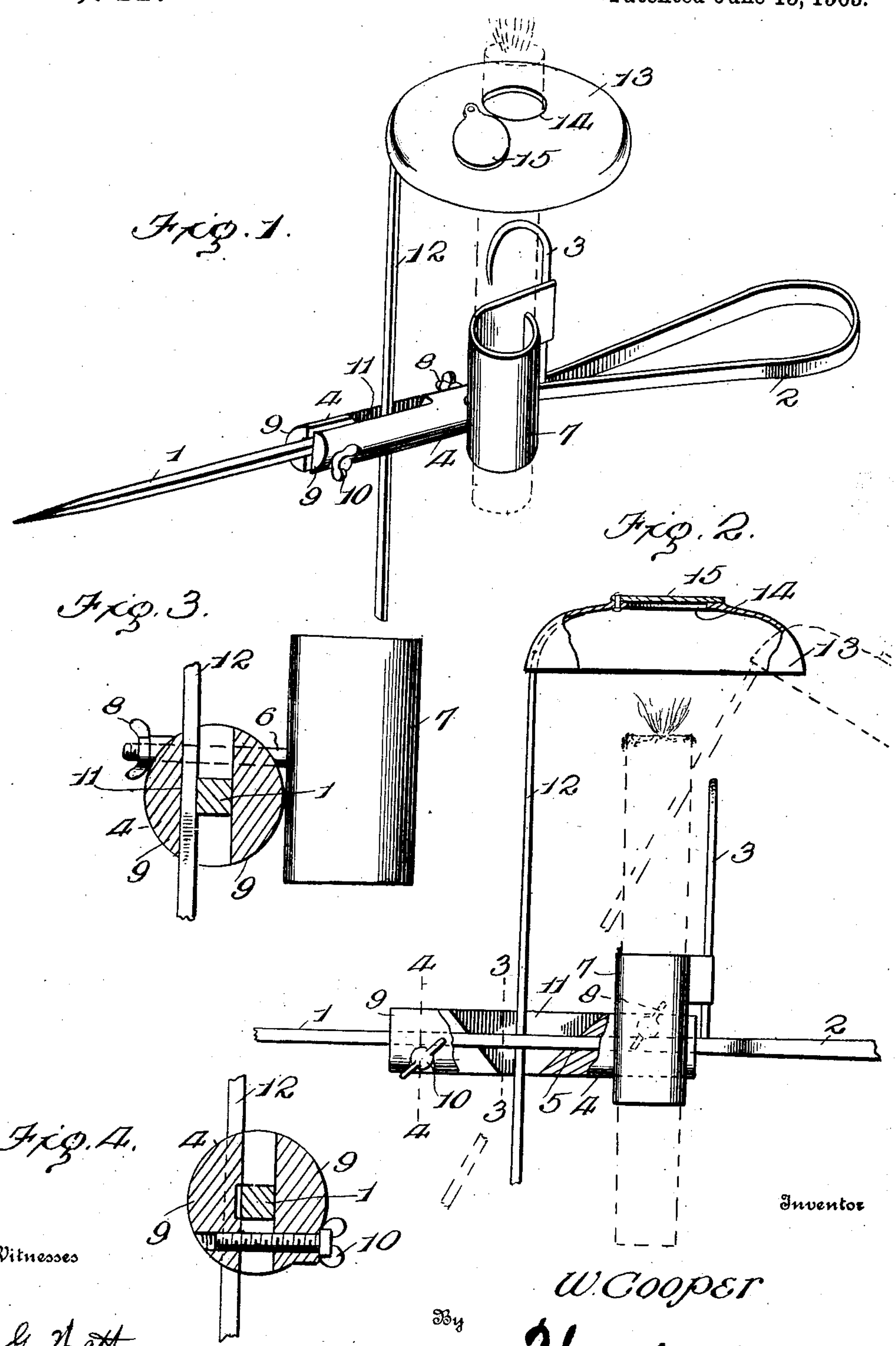


W. COOPER.
 MINER'S CANDLE PROTECTOR.
 APPLICATION FILED JUNE 1, 1908.

924,741.

Patented June 15, 1909.



Witnesses

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WILL COOPER, OF BLACK BEAR, IDAHO.

MINER'S CANDLE-PROTECTOR.

No. 924,741.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILL COOPER, citizen of the United States, residing at Black Bear, in the county of Shoshone and State of Idaho, have invented certain new and useful Improvements in Miners' Candle-Protectors, of which the following is a specification.

It is well known that chief among the hardships of miners is the difficulty experienced in maintaining a lighted candle while at work in the mines, because of the liability of the moisture dripping upon the candle to extinguish the same, and also because of the drafts in the mines created therein by the sudden explosions from blasting or the like, and also by the arrangement of the chutes which establish communication between the adjacent drifts or galleries.

The object of this invention is an improved device which is adapted to protect the candle from upward, downward or other drafts and from the moisture, thus maintaining a steady light and economizing in the number of candles used, and which may be readily adjusted to compensate for the diminution of the candle.

With this and other objects in view that will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements of the parts that I shall hereinafter fully describe, and then point out the novel features thereof, in the appended claims.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawing, in which:

Figure 1 is a perspective view of my improved device; Fig. 2 is a side elevation thereof, partly in section; Fig. 3 is an enlarged transverse section on the line 3—3 of Fig. 2; and, Fig. 4 is a similar view on the line 4—4 of Fig. 2.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing, by the same reference characters.

My improved device embodies a prong 1 which is looped at one end to constitute a handle 2 and which is preferably formed near the handle with an upwardly disposed downwardly facing hook 3 that is designed to be engaged with a suitable support to sustain the device in position when it is not conven-

ient to embed the prong in a timber or the like.

4 designates a slide which is formed with a longitudinal central opening 5, by means of which it is mounted for longitudinal movement upon the prong. This slide is formed at one end above the opening 5 with a transverse aperture in which is loosely mounted the shank 6 of an ordinary spring candle socket 7 to swivel the latter to the slide, the shank being preferably threaded and having a flanged nut 8 mounted upon its protruding extremity, so as to hold the candle socket at different inclinations relative to the slide. The other end of the slide is split longitudinally to constitute spaced jaws 9, and a clamping screw 10 is mounted in said jaws and is arranged to exert a tension thereupon to draw the jaws together and cause them to bind the prong so as to hold the slide in the desired adjusted position thereon. One of these jaws is formed in its inner face with a V-shaped recess 11 in which is loosely mounted a supporting rod 12 that is arranged to bind against the prong 1 when the jaws 9 are drawn together, so as to be sustained at the desired elevation. The upper end of this supporting rod is riveted or otherwise rigidly secured to a dome-like shade 13, and is adapted to support the latter in operative relation to the candle socket, said shade being formed with a central opening 14 arranged to permit the upper end of the candle to protrude there-through and being provided with a pivoted cover 15 adapted to be swung over the central opening to close the same.

In the practical use of my improved candle protector, the cover 15 is swung away from the opening 14, and the supporting rod 12 is adjusted so as to lower the shade 13 and cause the upper end of the candle to protrude through the opening 14, in which position the flame is obviously protected from any upward drafts. In order to protect the flame from downward drafts, the supporting rod 12 is adjusted to sustain the shade 13 above the candle, the opening 14 being closed by the cover 15. In this position, it is obvious that the shade effectually prevents the flame of the candle from becoming extinguished by moisture dripping thereupon. When the candle is subject to side drafts, the supporting rod is tilted from the latter position, as is permitted by the V-shaped formation of the recess 11, so as to

assume the position indicated in dotted lines in Fig. 2, to support the shade in an inclined position in the direction from which the draft proceeds.

5 It will be observed that, by adjustably connecting the candle socket with the slide 4, it is possible to maintain the candle in a vertical position and thus insure its burning evenly when the prong is embedded in timber
10 in an inclined position. It is also to be noted that by loosely and adjustably mounting the supporting rod 12 in the sleeve, the shade may always be kept in operative relation to the candle and may be readily adjusted to
15 compensate for the diminution of the latter.

Having thus described the invention, what I claim is:

1. In a miner's candlestick, the combination with a prong, of a slide mounted there-
20 upon, a candle socket swiveled to the slide, a supporting rod loosely mounted in the slide, a shade secured to the supporting rod and designed to extend over the candle socket, and means for adjusting the sup-
25 porting rod to hold the same in upright position irrespective of the position of the prong.

2. In a miner's candlestick, the combination with a prong, of a slide formed with a central opening by means of which it is
30 loosely mounted upon the prong, a candle socket carried at one end of the slide, said slide being split longitudinally to form spaced jaws, and means for exerting a tension upon said jaws to draw the same together and
35 clamp the slide in longitudinally adjusted position upon the prong.

3. The combination with a prong, of a slide formed with a central opening by means of which it is adjustably mounted
40 upon the prong, a candle socket carried at one end of the slide, the other end of the slide being split longitudinally to form spaced jaws, means for exerting a tension upon said jaws to draw the same together,
45 a supporting rod carried by the slide, and a shade secured to the supporting rod.

4. The combination with a prong, of a slide formed with a longitudinal opening by means of which it is mounted for longitu-
50 dinal movement upon the prong, a candle

socket carried at one end of the slide, the other end of the slide being split longitudinally to form spaced jaws, a clamping screw mounted in said jaws and adapted to draw the same together, one of said jaws being
55 formed in its inner face with a recess, a supporting rod mounted in the recess, and a shade secured to the supporting rod.

5. The combination with a prong, of a slide formed with a longitudinal opening by
60 means of which it is mounted upon the prong, a candle socket swiveled to the slide, one end of the slide being split longitudinally to form spaced jaws, a clamping screw mounted in said jaws and adapted to draw
65 the same together, one of said jaws being formed in its inner face with a substantially V-shaped recess, a supporting rod adjustably mounted in the V-shaped recess, and a shade secured to the supporting rod and designed
70 to project over the candle socket, as and for the purpose specified.

6. In a miner's candlestick, the combination with a prong, a support therefor, a shade formed with a perforation to permit
75 the upper end of the candle to fit therein and protrude therethrough above the shade, a rod secured to the shade and carried by the support, means for adjusting the rod to sustain the shade above the candle, and means
80 for closing the opening as and for the purpose specified.

7. In a miner's candlestick, the combination of a prong, of a slide loosely mounted thereon and carrying a candlestick, a shade
85 formed with a central perforation to permit the upper end of the candle to fit therein and protrude upwardly beyond the shade, a rod secured to the shade and carried by a slide, means for effecting the adjustment of
90 the rod to sustain the shade above the candle, and a cover pivotally connected to the shade and adapted to be swung over the opening.

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

WILL COOPER. [L. s.]

Witnesses:

ELMER SMITH,
H. O. DAHL.