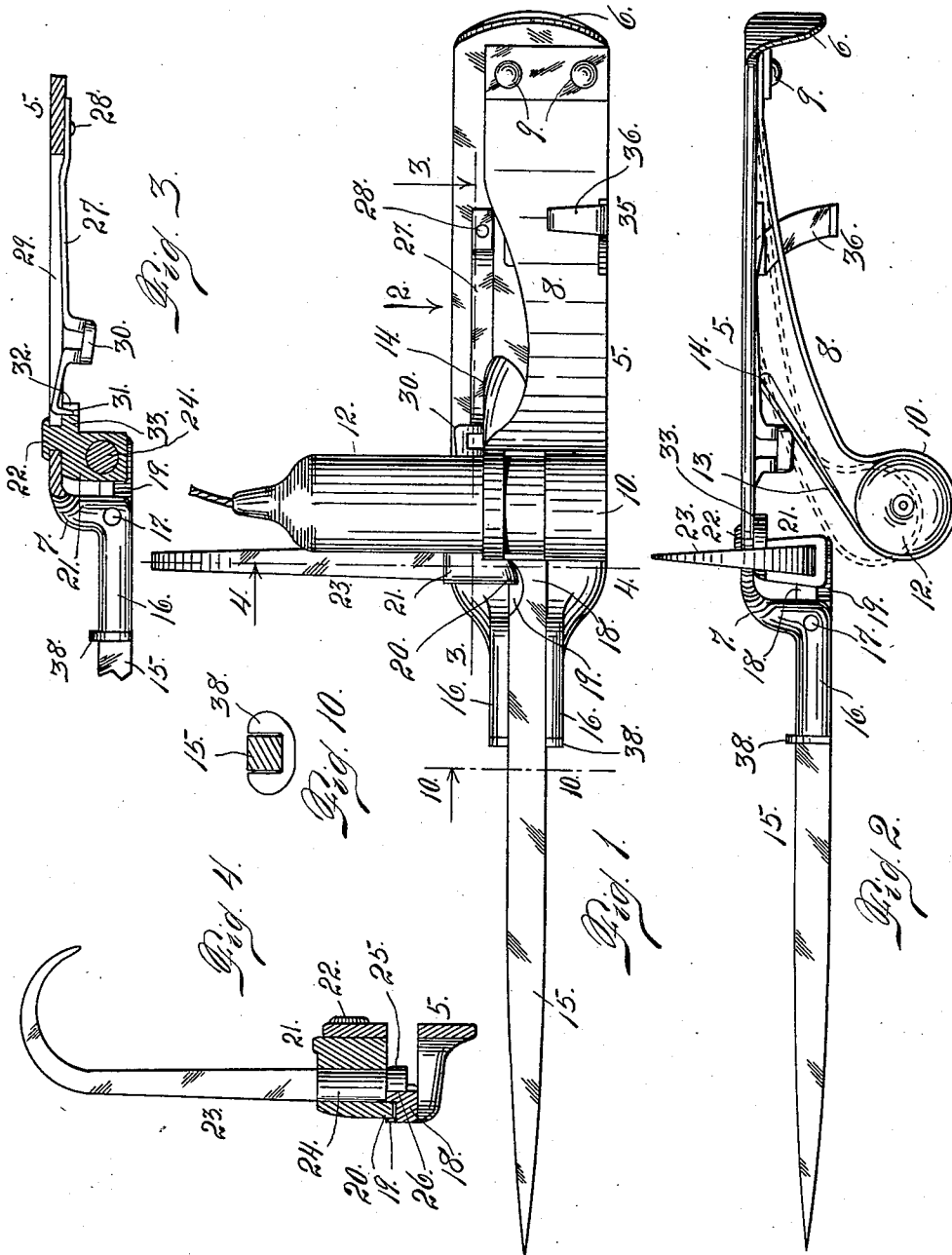


N. E. VARNEY.
MINER'S FOLDING CANDLESTICK.
APPLICATION FILED OCT. 17, 1910.

1,011,878.

Patented Dec. 12, 1911.

2 SHEETS-SHEET 1.



Witnesses
Otto E. Hoddick.
C. H. Rosner.

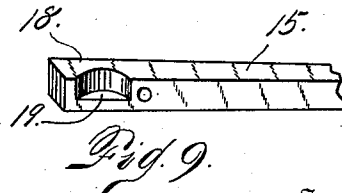
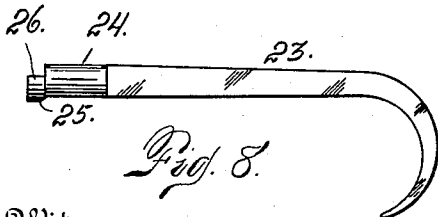
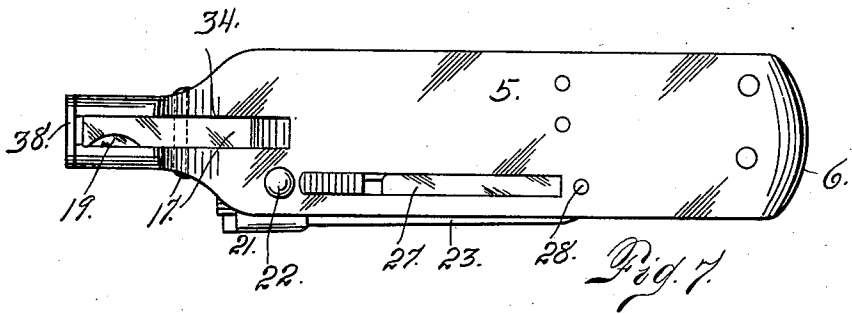
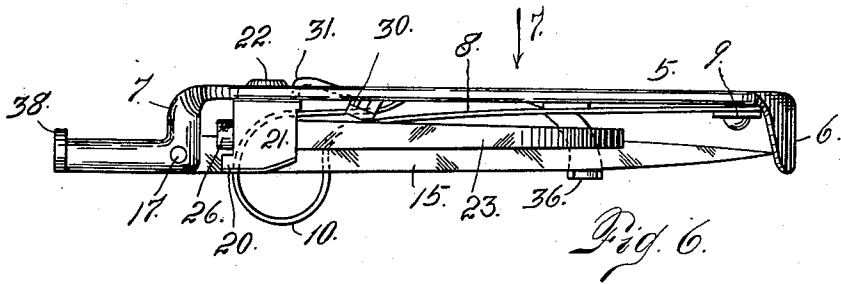
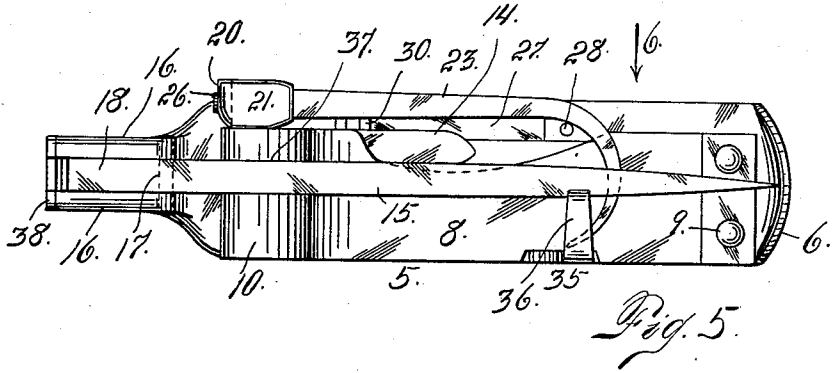
Inventor
Nathan E. Varney.
By C. J. O'Brien.
Attorney

N. E. VARNEY.
MINER'S FOLDING CANDLESTICK.
APPLICATION FILED OCT. 17, 1910.

1,011,878.

Patented Dec. 12, 1911.

2 SHEETS—SHEET 2.



Witnesses
Otto E. Haddock.
C. H. Rosner.

Inventor
Nathan E. Varney.
By *J. O'Brien.* Attorney

UNITED STATES PATENT OFFICE.

NATHAN E. VARNEY, OF DENVER, COLORADO.

MINER'S FOLDING CANDLESTICK.

1,011,878.

Specification of Letters Patent.

Patented Dec. 12, 1911.

Application filed October 17, 1910. Serial No. 587,591.

To all whom it may concern:

Be it known that I, NATHAN E. VARNEY, a citizen of the United States, residing in the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Miners' Folding Candlesticks; 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 characters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in miners' folding candlesticks, my object being to provide a device of this kind which while possessing all the facilities for supporting it upon the various objects accessible in a miner's work, shall at the same time be capable of being folded into small compass whereby it is adapted to be placed in the pocket of the owner and carried about with ease, the point of the spike and that of the hook being so concealed that they will not catch upon the garments nor interfere with the carrying of the device about in the pocket.

The invention possesses certain novel features of construction all of which will be fully understood by reference to the accompanying drawing, in which is illustrated an embodiment of the invention.

In this drawing: Figure 1 is a front elevation of the device with the candle in place. Fig. 2 is a top plan view of the same or a view looking in the direction of arrow 2 Fig. 1. Fig. 3 is a section taken on the line 3—3 Fig. 1, looking downwardly or in the direction of the arrow. Fig. 4 is a section taken on the line 4—4 Fig. 1, looking toward the right or in the direction of the arrow. Fig. 5 is a front view showing the device folded and ready to be inserted in the pocket. Fig. 6 is a top view of the same or a view looking in the direction of arrow 6 Fig. 5. Fig. 7 is a rear view or a view looking in the direction of arrow 7 Fig. 6. Fig. 8 is a detail view of the hook removed from its supporting hub. Fig. 9 is a perspective view in detail of the inner extremity of the spike. Fig. 10 is a section taken

on the line 10—10 Fig. 1, looking toward the right or in the direction of the arrow.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the body or handle of the device, which consists of a plate of metal bent laterally at its rear end as shown at 6, and in the same direction at its forward end as shown at 7. To the handle member is attached a spring 8, one extremity of which is secured to the member 5 near its rear extremity as shown at 9. Intermediate its extremities this spring plate is bent as shown at 10 to form a holder for a candle 12. Beyond the candle holder the spring extends rearwardly as shown at 13, its free end bearing against the member 5 as shown at 14. This spring plate 8 should be made of spring steel and is so constructed that the circular part 10 is normally sufficiently contracted to securely hold the candle. It may, however, be opened to allow the candle to enter easily, by pressing forwardly on the extremity 14 while the member 10 is moved outwardly. This allows the free extremity to be moved forwardly sufficiently for the purpose.

Pivotally connected with the forward extremity of the member 5 is the spike 15, which consists of a small metal bar having a sharp point adapted to enter a piece of wood or penetrate soft rock for the purpose of supporting the device in place in a mine. The forward extremity of the handle member where the spike is connected is offset from the body of the member 5 and is designated 16 in the drawing. This part 16 is slotted or bifurcated to receive the rear extremity of the spike, which is connected therewith by a pivot pin 17. The inner extremity of the spike projects rearwardly from the pivot pin 17 as shown at 18, this part of the spike being recessed as shown at 19 to receive a projection 20 formed on a sort of hub 21, which is pivotally connected with the handle member as shown at 22 and carries a hook 23. This hook is journaled in the pivoted hub as shown at 24, its inner extremity being upset as shown at 25 to retain the hook in place. This inner extremity protrudes through the hub far enough to engage the inner extremity of the spike be-

low the recess 19 as shown at 26. By virtue of this construction the inner extremities of the hook and the spike are arranged to interlock with each other when both are in position for use as illustrated in Figs. 1 and 2. This interlocking construction is illustrated in Fig. 4 of the drawing.

In order to lock the hub of the hook against turning when the parts are in the position shown in Figs. 1 and 2, a leaf spring 27 is employed. This spring is secured at its rear end to the handle as shown at 28 and is adapted to protrude through a slot 29 formed therein. Intermediate its extremities the spring is provided with a laterally projecting lug 30, to facilitate the movement of the spring by the pressure of the thumb of the user. The forward extremity of the spring is bent laterally as shown at 31 so that it normally occupies a recess 32 formed in a flange 33 with which the hub 21 is provided, thus locking the hub against turning, whereby the hook is maintained in the position for use or that illustrated in Figs. 1 and 2. This spring therefore indirectly locks the spike against turning on its pivot pin, since the spike being interlocked with the hook cannot fold until the latter is released by the unlocking of the hub. This is accomplished by pressing the forward extremity of the spring 27 into and through the slot 29 far enough to release the hub and when this is done, the hub may be turned so that the free extremity of the hook shall move rearwardly. As soon as the hook is disengaged from the spike by the turning of the hub in the direction just explained, the hook may turn freely in the hub and as soon as the hub is in such position, the hook is turned to cause its bent end to occupy a position parallel with the handle member. The hook may then be moved or folded to the position which it occupies when the device is in the form shown in Figs. 5, 6 and 7. When the hook is in this position, the spike may be turned freely upon its pivot pin 17 until it occupies the folded position shown in Figs. 5, 6 and 7. In order to allow the spike to fold, the forward part of the handle member is slotted as shown at 34. This is necessary because of the fact that the inner extremity 18 of the spike protrudes beyond its pivot and if it were not for the slot 34 this protruding end would engage the handle member and prevent the complete folding movement of the spike.

In order to lock the spike in the folded position, the member 5 is provided with a laterally projecting retaining device 35 which is angle-shaped, its outer extremity being bent parallel to the member 5 as shown at 36, forming a sort of hook underneath which the spike is allowed to pass

when completely folded, this being accomplished by giving the spike a slight lateral thrust. In order to permit the spike to fold to the position just explained, the candle-holding spring 8 is slotted as shown at 37, so that as the spike is folded it enters this slot. The spike also presses the spring toward the handle member, thus placing the spring under tension, whereby it has a tendency to press outwardly upon the spike and hold the latter tightly against the retaining device 35. The position of the candle-holding spring is best illustrated in Fig. 6. On the contrary when the device is in position for use and the candle in place, the candle holding portion of the spring is held outwardly away from the hook 23, a considerable distance as shown in Fig. 2. When the candle is removed from the spring, the latter occupies approximately the position shown by dotted lines in Fig. 2, that is to say, before the spike is folded. After the spike is folded the spring is thrust inwardly toward the handle to the position indicated in Fig. 6, thus indicating the degree of tension to which the spring is subjected by the folding of the spike. The rear laterally bent end 6 of the handle member is curved as shown at 4 where by the point of the spike when the latter is folded is better protected from possible contact with the clothing when the device is placed in the pocket.

In order to lock the spike against turning farther on its pivot pin 17 after it has reached the extended position shown in Figs. 1 and 2, the outer extremity of the part 16 is provided with a stop 38 which extends across the part 16 forward of its slot and in the path of the spike when the latter is moved to its extended position, thus forming a stop to prevent farther turning as heretofore explained. This device 38 as illustrated in the drawing consists of a small plate applied to the forward end of the bifurcated part 16, the plate being recessed to receive the spike when in the extended position, the part which forms the stop to the farther movement of the spike being offset sufficiently beyond the part 16 on one side to allow the spike to assume the proper extended position.

From the foregoing description the use and operation of my improved device will be readily understood. The object of the spike and the hook are the same, that is to say, both members are intended for use in supporting the device in such a position that the lighted extremity of the candle will be uppermost. Under some circumstances it will be more convenient to use the spike, while under other conditions the hook will form the better support for the tool. Where there are wood timbers in the mine the sharp

point of the spike may be made to penetrate the wood sufficiently to support the device in the proper position, while under other circumstances it will be more convenient to suspend the device by the use of the hook 23. However, when a flat support is affordable, the device may be placed thereon and will support the candle in the upright position without employing either the spike or the hook.

Attention is called to the fact that when the spring 27 is pressed to the hub-releasing position whereby the hook-carrying hub is allowed to turn, the flange 33 of the hub moves to a position which prevents the spring from again assuming the locking position until after the hook is returned to the position shown in Figs. 1 and 2. The recess 32 of the hub flange 33 is only of sufficient width to receive the locking extremity 31 of the spring and as soon as the said extremity is pressed to the position to release the hub, the turning of the latter to cause the hook to assume the folded position, causes the flange 33 to cover the forward extremity of the slot 29 and thus preventing the locking extremity 31 of the spring from resuming its normal position. Hence the hub when the hook is in the folded position may be turned to extend the hook without any movement of the locking spring 27. Attention is further called to the fact that in moving the hook from the folded position to the extended position it is first moved outwardly far enough from the handle to allow it to turn in the hub, after which it is turned to a position at right angles to the folded position. The outward movement may then be continued, since the inner extremity of the hook is then in position to interlock with the adjacent extremity of the spike. It will be understood that in unfolding the device, the spike must be first unfolded or extended, after which a corresponding movement is imparted to the hook.

Having thus described my invention, what I claim is:

1. A miner's candlestick, including a handle member, a hub pivotally mounted thereon and provided with an opening, a spring secured to the handle at one extremity, and provided with a projection at its opposite extremity adapted to enter the opening formed in the hub for locking the hub against turning, and a hook connected in operative relation with the hub, substantially as described.

2. A miner's candlestick, including a handle member, a hub pivotally mounted thereon, a spring secured to the handle and adapted to engage the hub for locking the same against turning, the handle being provided with a slot adjacent the spring, through which slot the spring is adapted to

be depressed for releasing the hub, and a hook journaled in the hub on an axis extending at right angles to the axis of the hub, substantially as described.

3. A miner's candlestick including a handle member, a hub pivotally mounted thereon and provided with a flange having a perforation, a spring member having a projection adapted to enter the said perforation to lock the hub against turning, a hook journaled in the hub on an axis extending at right angles to the axis of the hub, and a candle holding device also carried by the handle member, substantially as described.

4. A miner's candlestick, including a handle member, a hub pivotally mounted thereon and provided with a flange, a hook journaled in the hub on an axis at right angles to the axis of the hub, the inner extremity of the hook protruding beyond the hub, a spike also mounted on the handle member, its inner extremity protruding beyond the pivot, and recessed to receive the flange of the hub when the hook and spike are in position for use, the protruding extremity of the spike being also constructed to interlock with the adjacent extremity of the hook when the members are in position for use.

5. A miner's candlestick comprising a handle member, a hub pivotally mounted thereon, a hook carried by the hub, its inner extremity protruding beyond the hub, the latter also having a flange or projection extending beyond the body portion thereof, and a spike pivotally mounted on the handle member, its inner extremity protruding beyond the pivot and being recessed to receive the flange of the hub, while the protruding part of the hook also engages the protruding extremity of the spike which in this event has a part located between the flange of the hub and the protruding end of the hook, for the purpose set forth.

6. A miner's candlestick comprising a handle member, and a candle-holding part mounted thereon and composed of a spring having one extremity rigidly secured to the handle member and its opposite extremity free and engaging the handle, the spring being bent intermediate its extremities to form a loop, the loop being shaped to fit the candle.

7. A miner's candlestick including a handle member and a candle-holding part mounted thereon, and composed of a spring, one extremity of which is secured to the handle member, while the other extremity is free and bears against the handle member, the spring being shaped intermediate its extremities to receive and retain the candle, substantially as described.

8. A miner's candlestick including a handle member, a candle-holding device com-

prising a spring having one extremity secured to the handle member, while its other extremity is free and bears against the handle member, the spring being shaped intermediate its extremities to receive the candle, and a spike pivotally mounted on the handle member and adapted to fold against the candle-holding spring, the latter being slotted to receive the spike when in the folded position.

9. A miner's candlestick including a handle member, a candle-holding device mounted thereon and composed of a spring hav-

ing one extremity secured to the handle member, while the other extremity is free, and a spike pivotally mounted on the handle member and adapted to fold against the candle retaining spring, which is placed under tension by the spike when in the folded position, substantially as described.

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

NATHAN E. VARNEY.

Witnesses:

F. E. BOWEN,

A. EBERT O'BRIEN.

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