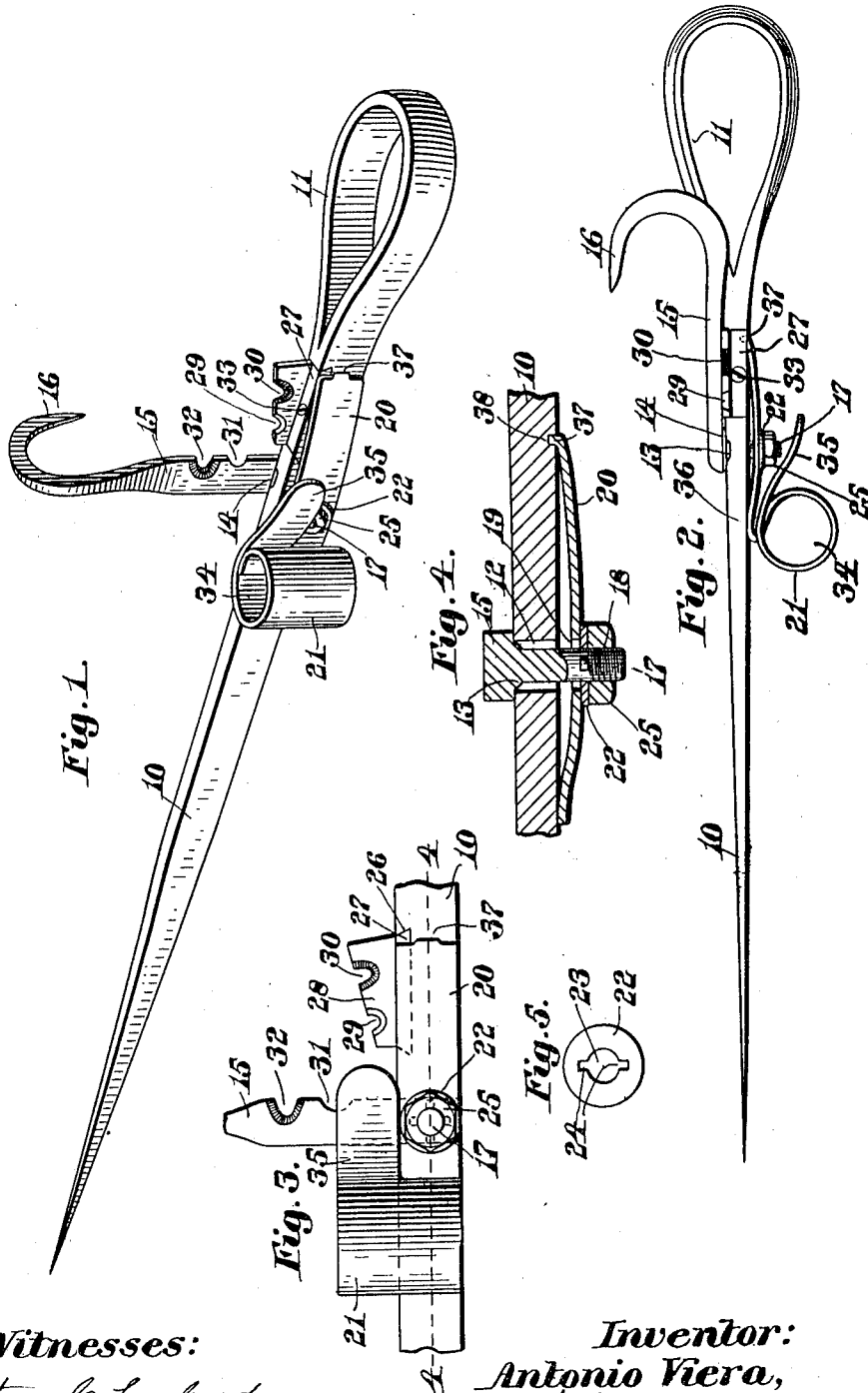


A. VIERA.
MINER'S CANDLESTICK.
APPLICATION FILED MAR. 20, 1911.

1,020,332.

Patented Mar. 12, 1912.



Witnesses:

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UNITED STATES PATENT OFFICE.

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MINER'S CANDLESTICK.

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Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed March 20, 1911. Serial No. 616,048.

To all whom it may concern:

Be it known that I, ANTONIO VIERA, a citizen of the United States of America, and a resident of Ray, in the county of Pinal and State of Arizona, have invented certain new and useful Improvements in Miners' Candlesticks, of which the following is a specification.

This invention relates to candle-sticks adapted especially for the use of miners, and has for its object the production of a device of this class the various members of which may be locked together readily, and are easily unlocked whenever it is desired to repair or sharpen any of the parts forming the completed candle-stick.

The present invention is an improvement upon the invention set forth and described in Letters Patent No. 974,316, issued to me November 1st, 1910. Its principal object is to provide a better bearing surface between the pivotal connections together with means for preventing the accidental separation of the various members forming the candle-stick.

The invention further consists in certain novel features in construction and arrangement of parts which will be readily understood by reference to the description of the drawings and to the claims hereinafter given.

Of the drawings: Figure 1 represents a perspective view of a candle-stick for the use of miners embodying the features of the present invention. Fig. 2 represents a plan of the same. Fig. 3 represents an elevation of a portion of the same showing means for locking the socket and hook members to the spike member. Fig. 4 represents a section of the same, the cutting plane being on line 4-4 on Fig. 3, and Fig. 5 represents an elevation of the washer.

Similar characters designate like parts throughout the several figures of the drawings.

In the drawings, 10 represents a spike provided with a handle 11, preferably formed integrally therewith. The spike 10 is provided with a longitudinal slot 12 extending transversely therewith and in the same plane with said slot 12 one face of said spike hav-

ing a shallow groove 13 extending at right angles to said longitudinal slot. This groove 13 has rounded or inclined walls as indicated in Fig. 4, and is of the same width as the lateral projection 14 formed upon the base portion of a hook member 15. When this hook member 15 is in use, the projection 14 is positioned within the groove 13. The outer end of the hook member 15 is provided with a hook 16, by which the candle-stick may be hung from any suitable projecting ledge or other member. The member 15 is provided with a lateral shank 17, having thereon oppositely disposed winged projections 18, said projections being adapted to pass through the slot 12 in the spike 10 and through a longitudinal slot 19 in a spring projection 20 formed upon the socket member 21. The shank 17, with its winged projections 18 thereon, is passed through the slot 12 in the spike portion and through the slot 19 in the spring projection 20, while the hook member 15 is in a position with its hook end extending toward the point of the spike 10, the spring projection 20 being pressed sufficiently during this operation to permit the winged projections 18 to pass through said opening 19 and to be turned so that the projection will engage the outer face of the spring projection 20. When this has been accomplished the tension of the spring 20 will hold the hook member 15 firmly against the face of the spike member 10. When the hook member is in the position shown in Fig. 1, the tension of the spring 20 will draw the projection 14 on said hook member 15 into the groove 13 and prevent its further movement about the axis of the shank 17, unless considerable force is applied thereto to flatten the spring 20 and permit the abutting shoulders of the projection 14 and groove 13 to pass one another. This is done when it is not desired to use the hook 16 and the candle-stick is to be used by forcing the point of the spike 10 into a timber or other similar supporting member. When the candle-stick is thus used, the hook member is turned down into the position shown in Fig. 2 of the drawings, and when in this position the wings 18 of the shank 17 will still be in engagement with

the outer face of the socket member, thus still locking the socket member and hook member to the spike.

It has been found in practice that the wings 18 do not afford sufficient bearing surface against the face of the spring projection 20 to effect a proper operation of the device, and as a consequence the wings 18 become worn in a short time, so that the various parts of the candlestick are liable to become accidentally separated. To overcome this objection and provide for means whereby this accidental separation is wholly obviated and better bearing surface between the pivotal connections is secured, a washer 22 is provided. This washer has an opening 23 therein, adapted to fit over the shank 17, and extending from its opening 23 are the oppositely disposed radial slots 24 adapted to receive the winged projections 18. This washer 23 is placed upon the shank 17 so that the winged projections 18 enter the radial slots 24, and the washer is retained in the same plane with these winged projections 18 by means of the nut 25 threaded to the outer end of the shank 17. It is obvious, however, that in lieu of the nut 25 threaded to the shank 17 any other construction may be used whereby a threaded member secured to the shank 17 will retain the washer 22 in the same plane with the winged projections 18. By this construction a greatly enlarged bearing surface is provided at all times for the pivotal shank 17 of the hook member 15, and when this hook member is moved about the axis of the shank 17 the winged projections are prevented from becoming worn. By removing the nut 25, however, the shank 17 is free to be moved about its axis, so that the winged projections 18 will be moved into a position opposite the longitudinal slot 19 in the spring projection 20 so that they may pass through said slot and permit the separation of the various parts of the spike whenever it is desired to sharpen any of the members or substitute others therefor. This makes a very convenient form of connection between the hook member, the socket portion 21, and the spike portion of the candle-stick. In the upper face of the spike portion 10 is a transverse dovetailed groove 26, to which is fitted the member 27 having an upwardly extending flange 28, this flange being provided with a cutting edge 29 and a crimping recess 30. The cutting edge 29 is adapted to co-act with a similar cutting edge 31 on the hook member 15, while the crimping recess 30 is adapted to co-act with a similar crimping recess 32 on said hook member 15.

When it is desired to cut the fuse the hook member 15 is moved into a position shown in Fig. 2, when the cutting edges 29 and 31 will co-act to accomplish this pur-

pose. When it is desired to tighten the cap upon the fuse by crimping it, the hook member is moved into the same position as indicated in Fig. 2, and the crimping recesses 30 and 32 will co-act to crimp the cap.

The removable member 27 is held in position in the dovetailed groove 26 by means of the screw 33. This removable member 27 is made of hardened steel and may be removed at will for the purpose of sharpening. When the edges become too worn to be sharpened or when the member becomes broken, it may be removed and discarded and a new member substituted therefor. The socket portion 21 is peculiarly constructed of flat spring metal, the main portion of which is spirally wound to form a candle receiving pocket 34, the upper portion of which is provided with an extending tongue 35, which may be pressed by the thumb of the operator to enlarge the candle receiving pocket 34 for the reception of a new candle, or the displacement of the remains of a burned out candle. The spring projection 20 is connected to the other end of the candle receiving portion by a reverse band 36 bearing against the face of the spike 10, the opposite end of the spring member 20 being provided with an intumed lip or ear 37 adapted to engage a notch or recess 38 in the face of the spike 10.

By this construction a candle-stick for the use of miners is produced having great strength, the various parts of which may be readily locked together or separated from one another when any part becomes injured or unserviceable and it becomes necessary to repair or replace one of the parts or sharpen the hook or the point of the spike member.

It is believed that from the foregoing the operation and many advantages of the invention will be fully understood without further explanation.

Having thus described my invention, I claim:

1. In a device of the class described, the combination of a spike provided with a handle; a candle socket provided with a flat spring projection having a longitudinal slot therethrough; a hook member provided with a winged shank adapted to pass through said spike and through the opening in said socket projection to lock the socket to said spike; a slotted washer surrounding said shank in the same plane with the wings thereon; and means for retaining said washer in position.

2. In a device of the class described, the combination of a spike provided with a handle; a candle socket provided with a flat spring projection having a longitudinal slot therethrough; a member pivotally mounted in said spike and extending

through said longitudinal opening; means
for oscillating said member; projections on
said oscillating member normally adapted
to lock said socket to said spike; a washer
5 fitting over said projections and in the
same plane therewith; and means for re-
taining said washer in position.

Signed by me at Ray, Pinal county, Ari-
zona this second day of February 1911.

ANTONIO VIERA.

Witnesses:

FRANCISCO B. OCHOA,
M. B. LUTFY.

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