

(No Model.)

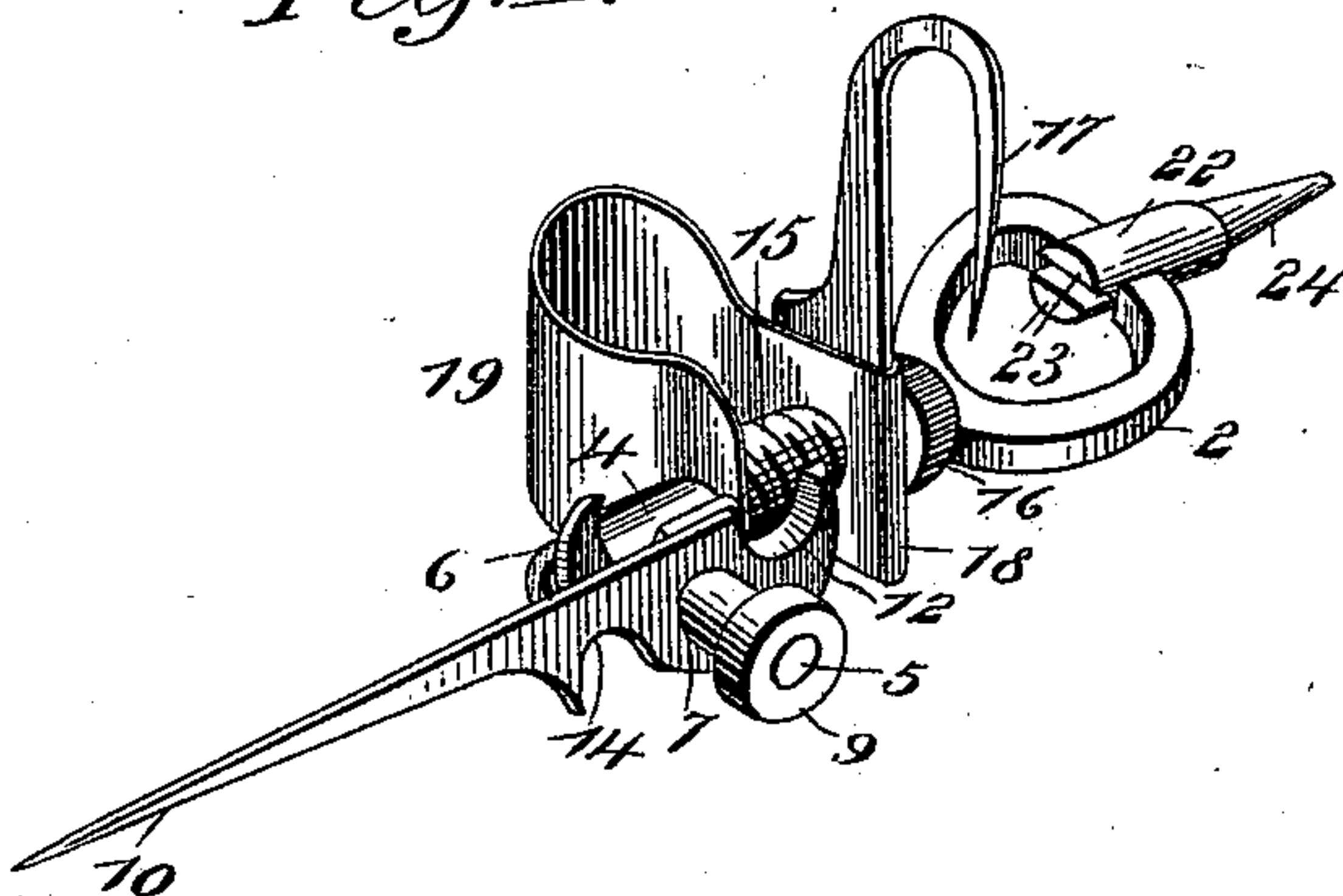
A. O. SJOHOLM.

COMBINED MINER'S TOOL AND CANDLESTICK.

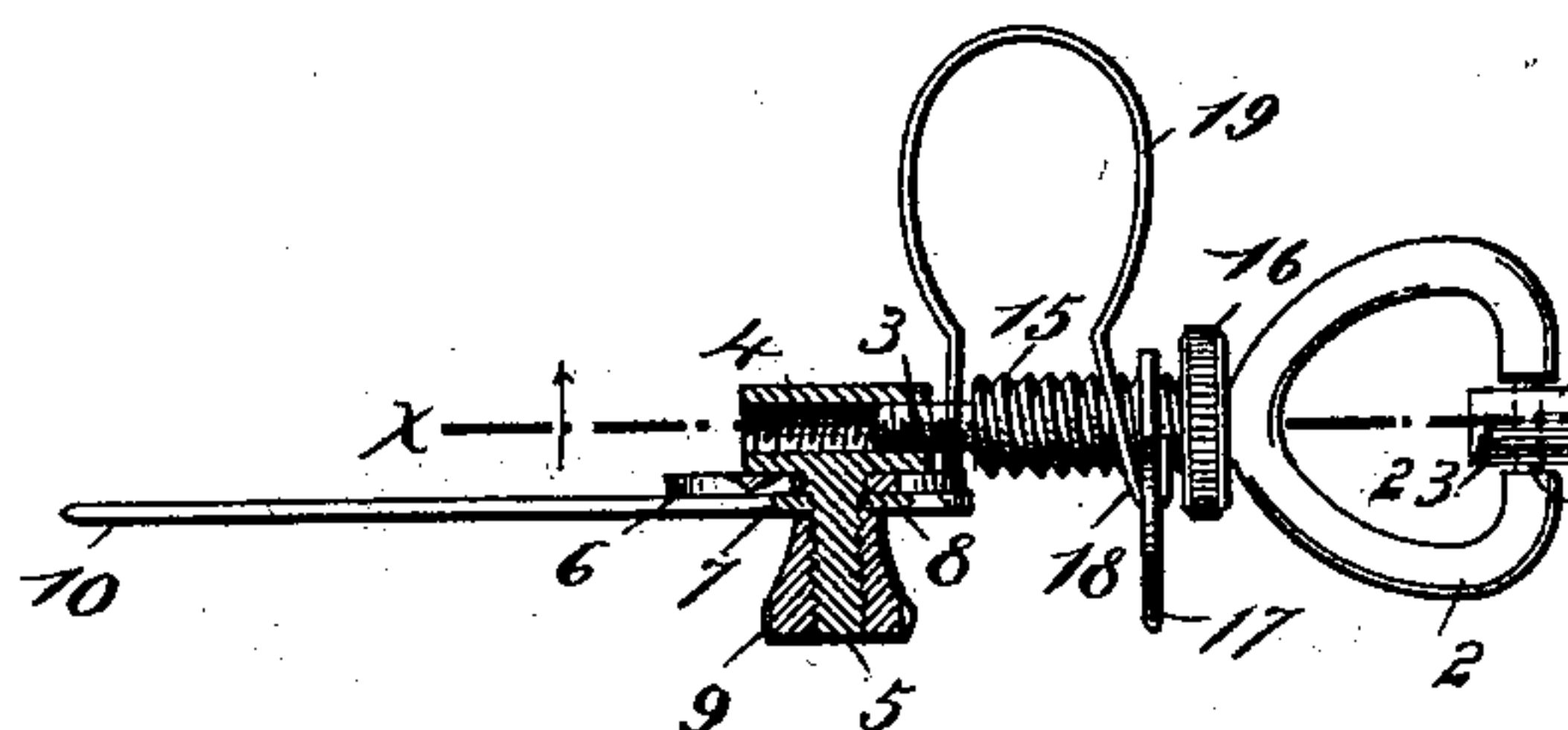
No. 554,546.

Patented Feb. 11, 1896.

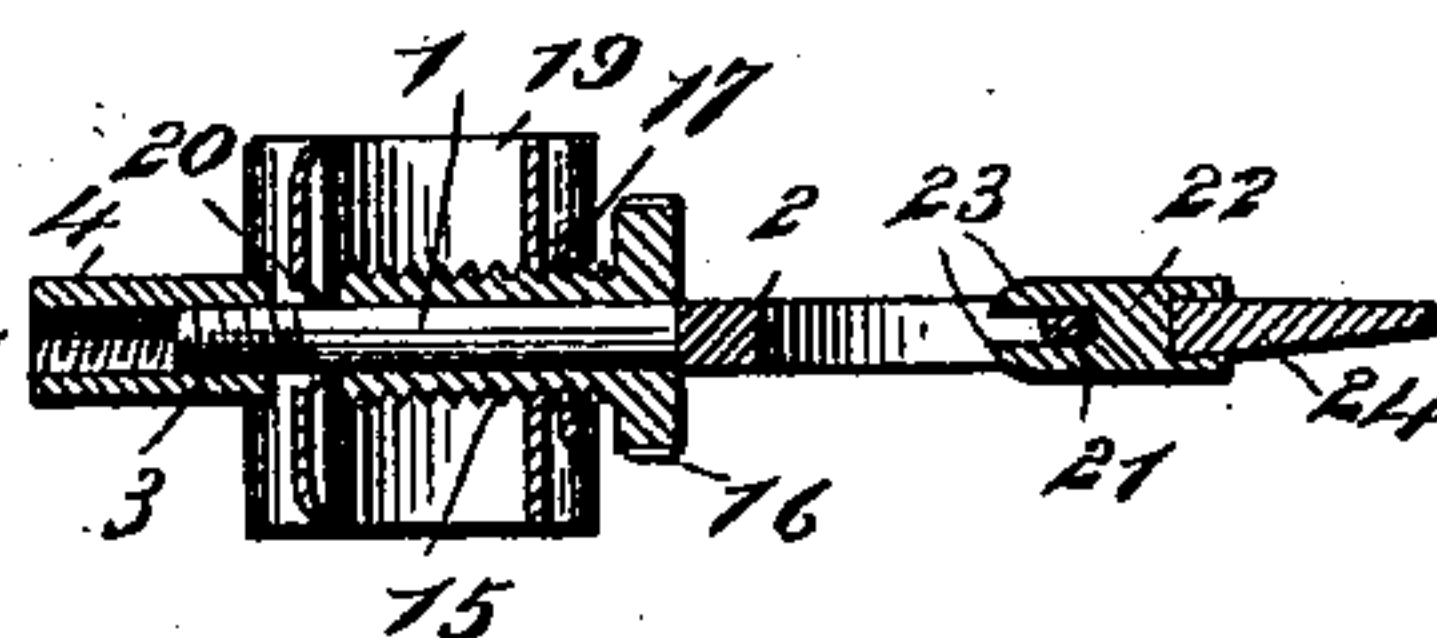
*Fig: 1.*



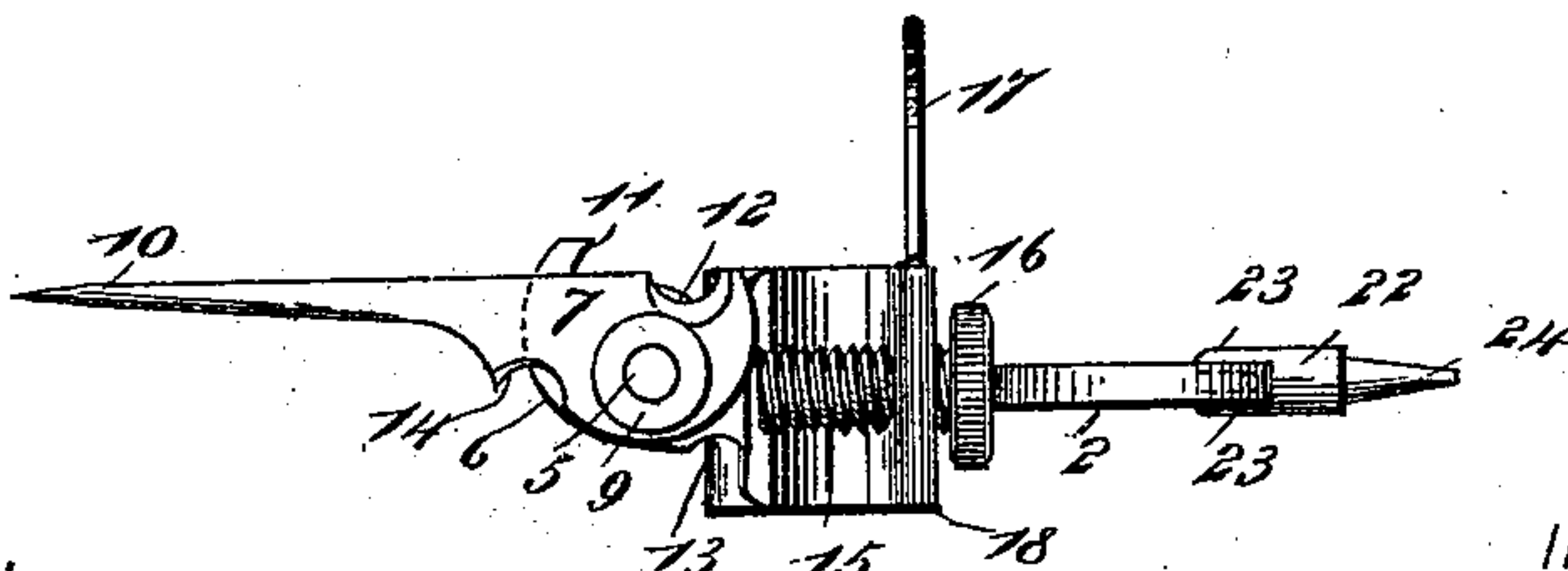
*Fig: 2.*



*Fig: 3.*



*Fig: 4.*



WITNESSES:

*John A. Rennie*  
*J. B. Springer*

INVENTOR

*A. O. Sjöholm*

BY

*Munn & Co*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

ADOLPH O. SJOHOLM, OF NEGAUNEE, MICHIGAN.

## COMBINED MINER'S TOOL AND CANDLESTICK.

SPECIFICATION forming part of Letters Patent No. 554,546, dated February 11, 1896.

Application filed June 4, 1895. Serial No. 551,654. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLPH O. SJOHOLM, of Negaunee, in the county of Marquette and State of Michigan, have invented a new and useful Combined Miner's Tool and Candlestick, of which the following is a full, clear, and exact description.

This invention relates to combined miners' tools and candlesticks and has for its object to provide a device of this character of a simple, inexpensive and durable construction, which shall be adapted for holding the miner's candle in place to the miner's cap or to the walls of the mine, the device being also adapted for convenient use in performing certain operations—such, for example, as cutting fuse, crimping cartridges and tamping blasts.

The invention consists of a frame having means for securing it to the miner's cap or to the walls of the mine and provided with an adjustable candle-holding device, a pivoted fuse-cutter and cartridge-crimper and a tamping-tool carried on said frame, the various devices being adapted for independent use, but being combined and constructed in such a way as to present certain features of novelty and advantages for use, all as will be hereinafter set forth.

The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the combined miner's tool and candlestick. Fig. 2 is a plan view of the same, one end being shown in section. Fig. 3 is a longitudinal vertical section taken through the device substantially in the plane indicated by the line  $x x$  in Fig. 2, and Fig. 4 is a side elevation of the device.

In the views, 1 represents the frame of the device, which is formed at one end with an open or annular handle 2, and said frame is in its body circular in cross-section, being formed with a screw-threaded end portion 3, as clearly seen in Figs. 2 and 3, adapted to receive a nut 4, one side of which is flattened and provided with a screw-threaded projection or stud 5, whereon is mounted the cartridge-crimper and fuse-cutter. The said car-

tridge-crimper and fuse-cutter is composed of two parts or members 6 and 7, the member 6 being provided with a squared recess or opening to receive a similarly-formed portion 8 at the base of the stud or projection 5, whereby said member is held against rotation, and the member 7 being rotatively mounted on the stud 5 outside the member 6 and being adapted to be clamped fast thereto by means of a milled thumb-nut 9 mounted on the end of said stud.

The member 7 of the fuse-cutter and cartridge-crimper is provided with a sharpened point 10 projecting from one side, adapted to be inserted in a crevice of the wall or in a timber in order to support the device, and when so employed the thumb-nut 9 will be manipulated so as to lock said projection securely in position. When not required for use, the member 7 is adapted to be swung on its pivotal point, so as to lie parallel to and opposite to the frame 1 of the device, and clamped in such folded position by means of said thumb-nut.

The members 6 and 7 are provided with concave beveled cutting-edges 11 and 12, respectively, adapted to correspond when the member 7 is swung on its pivot, so as to permit a fuse or the like to be passed between them and be severed by moving said edges past one another, and on their lower sides said members are formed with concaved jaws 13 and 14, also arranged to correspond when the member is swung on its pivot, so as to permit said jaws to be employed for crimping cartridges and the like.

Mounted loosely on the body 1 is an exteriorly-screw-threaded sleeve 15, having at one end a milled head or enlargement 16, adapted to be turned between the thumb and finger and arranged to abut against the inner end of the handle 2, and on said sleeve is mounted a hook 17, adapted to be inserted in the miner's cap or hat for supporting the device in place when used as a candlestick, the said hook 17 being held against swinging movement on said sleeve by engagement with the bent end 18 of a spring-metal band 19 of curved form, adapted to form a socket to receive a candle, the opposite end of said band 19 being provided with a perforation 20 to receive the body 1 of the device.

The central forward part of the handle is



provided with a reduced or cut-away portion, whereby a flattened pivot-pin 21 is formed, and in said cut-away portion of the handle is held a socket-piece 22, having a slotted end whereby elastic or spring forks 23 are formed, and said forks are made to embrace the flattened pivot 21, after which they are bent toward one another to prevent said socket-piece from being withdrawn from said pivot. The opposite end of the socket-piece 22 is provided with a socket or recess to receive a pin or peg 24, of wood or other soft material, to be used for tamping charges, &c. Said pin 24, being made of soft material, reduces the danger of explosions resulting from the use of metal tamping-pins.

In operation, when it is desired to use the device as a candlestick, the candle is inserted in the socket formed by the elastic or spring metal band 19 and is clamped therein by turning the sleeve 15 by means of its milled head 16, after which the candlestick may be carried by means of the handle 2 or may be supported by means of the hook 17 or point 10. The construction of the device as above described renders it adjustable, so that candles of different sizes may be securely held by the same candlestick.

When it is desired to use the device to cut fuses or crimp cartridges, the thumb-nut 9 is loosened, so as to permit the member 7 to be swung on its pivot-point, whereby the cutting-edges 11 and 12 may be caused to play over each other, so as to cut a fuse, or the jaws 13 and 14 may be employed to crimp a cartridge.

When it is desired to tamp a charge or to insert a cap in the powder or other explosive used, the pin or peg 24 is employed, being swung on its pivot to the position shown in the drawings, and when in this position it will be securely held by the engagement of the elastic or spring arms 23 with opposite sides of the flattened pivot 21. When not required for use, the wooden peg is adapted to be swung in the opposite direction, so as to be inclosed and guarded by the handle 2, and said peg will be securely held in this position also by the elastic arms 23.

The combined miner's candlestick and tool constructed as above described is extremely simple and inexpensive and is well adapted for use for various purposes for which separate instruments have been employed heretofore. Moreover, it is of an adjustable character, and is adapted when not in use to be compactly folded, so as to take up but little space, and when so folded may be conveniently carried in the pocket.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a miner's candlestick, the combination of a frame, a sleeve loosely mounted thereon and provided with exterior screw-threads, and a spring-metal band having one

end secured to said body and its opposite end arranged to engage the threads of said sleeve, substantially as set forth.

2. In a miner's candlestick, the combination of a frame, a sleeve loosely mounted thereon and provided with exterior screw-threads, a nut screwing on one end of the frame, and a spring-metal band having one end held on the frame between the sleeve and nut and having its other end arranged to engage the threads of said screw, substantially as set forth.

3. In a miner's candlestick, the combination of a frame, a sleeve loosely mounted thereon and provided with exterior screw-threads, a hook having a perforated end mounted on said sleeve, and a spring-metal band having one end secured to said body and having its opposite end bent to engage and hold the perforated end of the hook and adapted to engage the screw-threads of the sleeve, substantially as set forth.

4. In a device of the character described, the combination of a handle, a socket-piece thereon adapted to fold within said handle, and a tamping-peg of soft material carried by the socket-piece, substantially as set forth.

5. In a device of the character described, the combination of a frame having a point adapted for insertion in a crevice, a handle projecting from the frame, a socket-piece carried on the handle and adapted to fold within the same, and a tamping-peg of soft material secured to said socket-piece, substantially as set forth.

6. In a miner's candlestick, the combination of a frame having screw-threads, a nut screwing on the frame and having a screw-threaded projection at one side, two members one of which is secured to the nut and the other of which is perforated and arranged to swing on said projection, said members being provided with reciprocal engaging surfaces, and a nut screwing on said projection and arranged to lock the swinging member fast to the frame, substantially as set forth.

7. In a miner's candlestick, the combination of a frame, a spring-band having one end adjustably secured thereto and provided with a perforation in its other end, said frame having a screw-threaded portion arranged to pass through the perforated end of the band, a nut screwing on the frame outside the perforated end of the band and serving to hold the same in place, two members, one of which is secured to the nut and the other of which is mounted to swing on said nut, the said members being provided with reciprocal engaging surfaces, and means for locking the swinging member to the nut, substantially as set forth.

ADOLPH O. SJOHOLM.

Witnesses:

MAGNUS MATTSON,  
P. O. MATTSON.