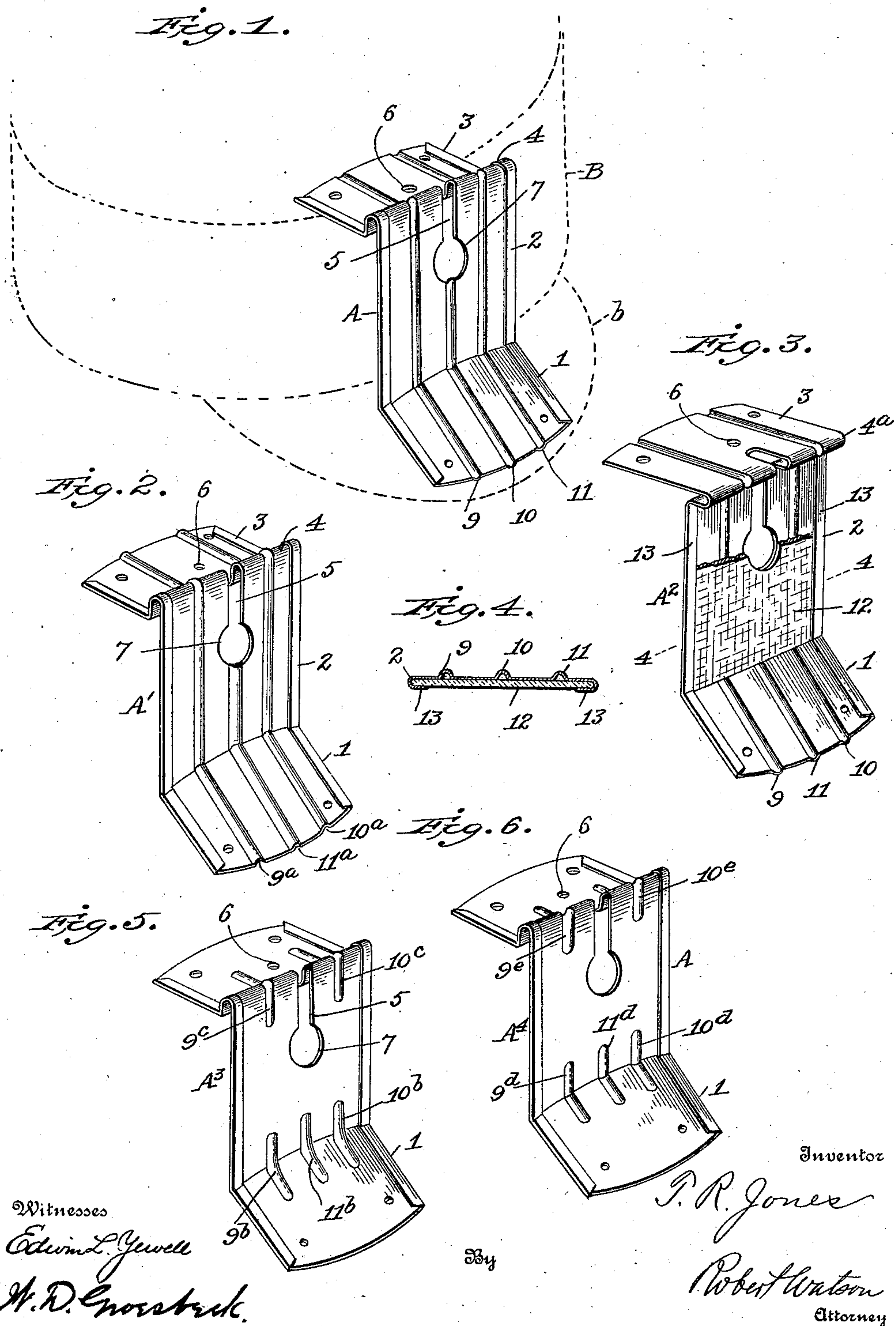


No. 860,097.

PATENTED JULY 16, 1907.

T. R. JONES.  
MINER'S LANTERN HOLDER.  
APPLICATION FILED APR. 17, 1906.





# UNITED STATES PATENT OFFICE.

THOMAS R. JONES, OF WILKES-BARRE, PENNSYLVANIA.

## MINER'S-LANTERN HOLDER.

No. 860,097.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed April 17, 1906. Serial No. 312,164.

*To all whom it may concern:*

Be it known that I, THOMAS R. JONES, a citizen of the United States, residing at Wilkes-Barre, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in Miner's-Lantern Holders, of which the following is a specification.

This invention relates to certain improvements in lantern holding attachments for miners' caps, the details and advantages of which will be pointed out in the following specification taken in connection with the accompanying drawing, in which,

Figure 1 is a perspective view of a sheet metal lantern holder grooved longitudinally on its front or exposed side and having ribs on its rear side, the holder being shown in position upon a cap front, which is indicated in dotted lines. Fig. 2 is a similar view showing a holder grooved on its rear side and having ribs on its front side; Fig. 3 is a similar view of a holder of slightly different form, grooved on its front face and having a fiber plate upon the front piece, the latter being shown partly broken away; Fig. 4 is a section on the line 4-4 of Fig. 3; Fig. 5 is a perspective view of a holder having ribs upon its front face at the bends in the holder, and Fig. 6 is a similar view of a holder having grooves on the front side and ribs on the rear side at the bends.

In Fig. 1, A indicates a sheet metal holder of the kind illustrated in my patent No. 629,692, dated July 25, 1899, having a base piece 1 adapted to be secured to the peak or vizer *b* of the cap B, an upright support or front piece 2 projecting upwardly from the rear end of the base piece, and a rearwardly projecting top piece 3 connected to the front piece by a bent or beaded portion 4 which curves rearwardly and downwardly from the upper end of the front piece. A vertical slot 5 is located centrally in the upper part of the front piece and extends through the bend 4, this slot being for the purpose of guiding the shank of the lamp hook. An eye 6 is located in the top piece, in line with the slot, for the purpose of receiving the free end of the lamp hook, and a guide opening 7 is arranged at the lower end of the slot for the free end of the hook to swing through when the lantern holder is tilted forward.

In the patent referred to the lantern holder is shown as being constructed of flat sheet metal, or tin plate, which cannot be very thick for the reason that the holder must be light in weight in order to be practicable. It is customary, in order to make the holder substantial, to reinforce the holder with a stiff plate of hard fiber, which is light in weight, and which is secured to the front piece of the holder by flanging over the edges of the latter. This, however, adds expense to the holder and while it stiffens the front piece and prevents it from buckling when the holder strikes an object, such as the wall or roof of a mine, it adds nothing

to the strength of the holder at the bends between the front piece and the top and base pieces. If extended around these bends, the fiber being somewhat brittle, cracks and is easily broken at the bends. 60

In practice the sheet metal holders, and the composite holders of metal and fiber are frequently bent and distorted at the bend 4 between the front piece and top piece and also at the bend 8 between the base piece and front piece, by reason of the top of the holder or the vizer of the cap being struck against the roof or wall of the mine or other object while the miner is at work. This damage to the top of the holder is apt to throw the walls of the slot 5 which guide the lamp hook, out of alinement, or to otherwise distort the holder at the juncture of the front and top pieces. 70

The peak or vizer of the cap is frequently bent up or down by being brought into contact with objects, while in use, thus causing the holder to bend at the juncture of the base and front pieces, and causing the base piece to buckle. The cap with the lamp upon it is usually handled by grasping the vizer, and this also strains the holder at the bend between the base and front pieces. At this point the tin, not infrequently, breaks off. In order to overcome these difficulties without adding appreciably to the weight of the sheet metal holder, I groove the holder longitudinally on one side at the bends in the holder, thus producing ribs on the opposite side which strengthen the holder at what otherwise would be its weakest points. These grooves and ribs may extend through the entire length of the holder, thus strengthening the holder all over, but the grooves and ribs strengthen the holder more at the bends where strength is needed, than at any other part. The entire holder is strengthened so that it may be used without the hard fiber stiffening plate, although such plate may be used, if desired. 80

In Fig. 1 of the drawing, grooves 9 and 10 extend from end to end of the holder on its front or exposed face, midway between the slot 5 and the lateral edges of the holder, and a groove 11 extends from the bottom of the guide opening 7 to the forward end of the base piece. These grooves are made by pressing the metal inward, thus forming corresponding ridges on the rear side or face of the holder. In Fig. 2, the grooves are upon the rear side of the holder, A', and the ridges 9<sup>a</sup>, 10<sup>a</sup> and 11<sup>a</sup> appear upon the front face of the holder. These grooves and ridges extend around the bends in the holder and strengthen the holder throughout and particularly at the bends and at each side of the vertical slot. Where it is also desired to add the strengthening plate of fiber or a facing of softer material to deaden the sound caused by movements of the lamp, the holder having the ridges at the rear side is preferred. 110

In Fig. 3 I have shown a holder, A<sup>2</sup> in which the bent or beaded portion 4<sup>a</sup> extends forwardly from the



front piece, as illustrated in my Patent 640,387, dated January 2, 1900. In this view the grooves are in the front face of the holder and the ridges are at the rear, and a fiber plate 12 is shown upon the front piece of the holder, being held in position by the overturned lateral edges 13 of the holder.

The holder is shown in cross section in Fig. 4 and it will be noted that the fiber plate rests flat against the face of the holder the ridges being at the rear.

In Figs. 5 and 6 holders are shown in which the grooves and ribs do not extend throughout the holder but are located only at the bends in the holder. In Fig. 5 the holder A<sup>3</sup>, is grooved on the rear side at the bends, thus producing ribs 9<sup>b</sup>, 10<sup>b</sup> and 11<sup>b</sup> on the front side of the holder at the angle between the base and front pieces and similar ribs 9<sup>c</sup>, and 10<sup>c</sup> extend around the bend 4 at opposite sides of the vertical slot 5. In Fig. 6 the holder, A<sup>4</sup>, is grooved on its front side at the bends only, as indicated by the numerals 9<sup>d</sup>, 10<sup>d</sup> and 11<sup>d</sup> and 9<sup>e</sup> and 10<sup>e</sup>, the corresponding ribs being at the rear side of the holder.

In the holders which are provided with ribs or grooves extending longitudinally of the base piece and front piece, these ribs or grooves in addition to

strengthening the parts, serve to conduct any oil which may be spilled from the lamp to the front of the vizor.

What I claim is—

1. A miner's lantern holder comprising sheet metal base and front pieces, and a top piece, said base and front pieces having ribs pressed out from the body of the metal and extending longitudinally of the holder at the angle between said base and front pieces, and between the lateral edges of the holder. 30
2. A miner's lantern holder comprising a front piece and a top piece connected by a sheet metal bent portion having a central slot therethrough, said bent portion having ribs pressed out from the body of the metal and extending lengthwise of the holder between its lateral edges and said slot. 35 40
3. A miner's lantern holder comprising sheet metal base and front pieces, and a top piece, said base and front pieces having their front faces indented or grooved longitudinally, and having corresponding ribs at the rear side of the holder. 45

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

THOMAS R. JONES.

Witnesses:

WM. N. REYNOLDS, Jr.,  
M. E. STOUT.