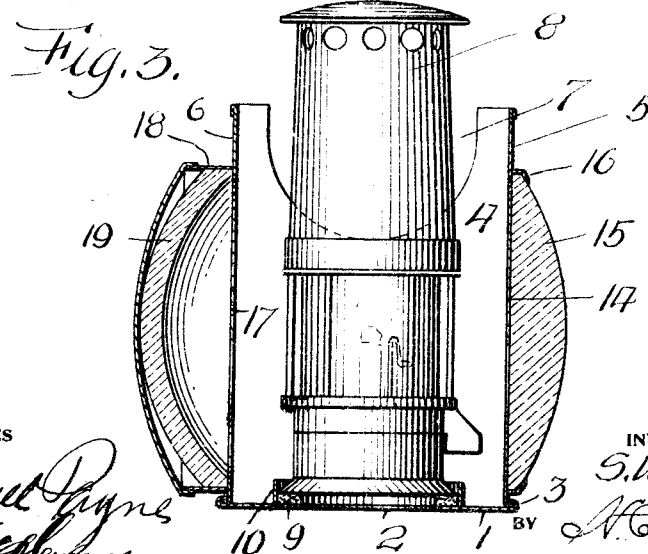
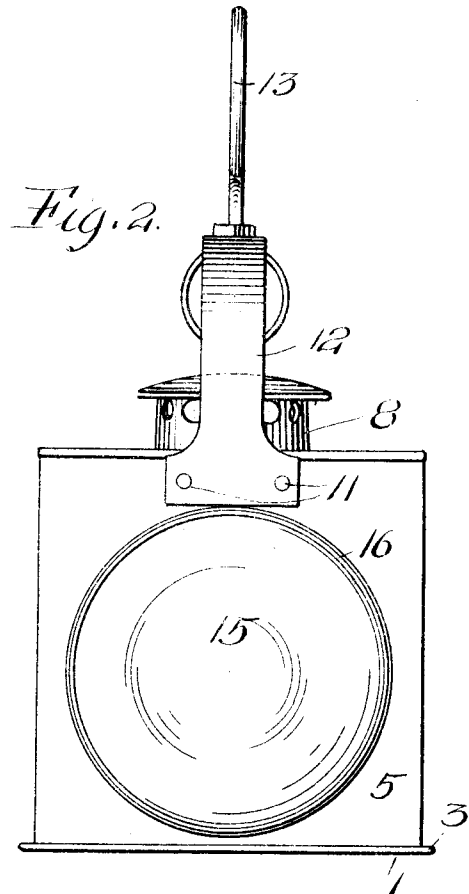
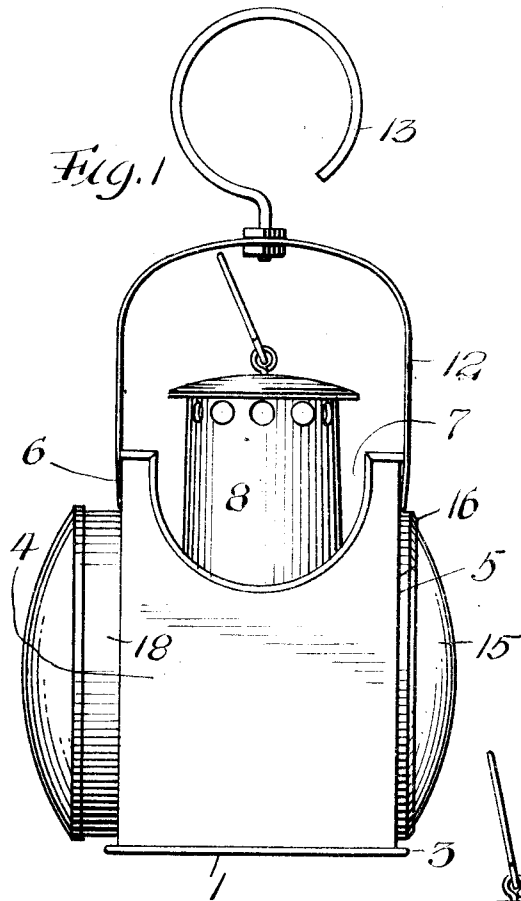


S. W. METZ.
 MINER'S LAMP.
 APPLICATION FILED DEC. 9, 1911.

1,038,930.

Patented Sept. 17, 1912.



WITNESSES

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UNITED STATES PATENT OFFICE.

SILAS W. METZ, OF BEAVER FALLS, PENNSYLVANIA.

MINER'S LAMP.

1,038,930.

Specification of Letters Patent.

Patented Sept. 17, 1912.

Application filed December 9, 1911. Serial No. 664,727.

To all whom it may concern:

Be it known that I, SILAS W. METZ, a citizen of the United States of America, residing at Beaver Falls, in the county of Beaver and State of Pennsylvania, have invented certain new and useful Improvements in Miners' Lamps, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to miners' lamps, and the primary object of my invention is to provide a novel housing for an ordinary miner's lamp that will increase the efficiency of the lamp for lighting purposes, the housing being provided with a reflector and a lens that not only increases the penetrating properties of the rays of light, but projects the rays of light to that extent as to illuminate a large area.

20 Another object of this invention is to provide a lamp housing that can be used in connection with various types of miners' lamps for safely carrying the same.

25 A further object of this invention is to accomplish the above results by a mechanical construction that is simple, durable, inexpensive to manufacture and highly efficient for the purposes for which it is intended.

30 With the above and other objects in view the invention resides in the novel construction, combination and arrangement of parts to be hereinafter specifically described and then claimed.

35 Reference will now be had to the drawing, wherein:—

40 Figure 1 is a side elevation of the lamp housing. Fig. 2 is a front elevation of the same, and Fig. 3 is a longitudinal sectional view of the lamp housing.

A lamp housing in accordance with this invention comprises a bottom plate 1 that is rectangular in plan and provided with a central opening or air vent 2. The edges of the bottom plate 1 are flanged, as at 3 and secured to the lower edges of vertical side walls 4, a front wall 5 and a rear wall 6. The side walls 4 have the upper edges thereof cut away, as at 7 whereby a miner's lamp 8 can be placed in the housing and seated upon a cushion 9 carried by the bottom plate 1 and surrounding the opening 2. The bottom of the lamp 8 is further held by a collar 10 carried by the bottom plate 1.

55 Riveted or otherwise connected, as at 11 to the front and rear walls 5 and 6, at the

upper edges thereof, is a bail 12 having the top thereof provided with a hook 13, whereby the housing can be easily carried and suspended from a suitable support.

60 The front wall 5 has a circular opening 14 closed by a lens 15 held by a lens holder 16 connected to the front wall 5. The inner side of the lens is flat and the outer side convex, said lens causing a concentration of the rays of light from the lamp 8.

70 The rear wall 6 has a circular opening 17 and a reflector holder 18 for the concave-convexo reflector 19 that reflects the rays of light emitted by the rear side of the lamp to the lens 15, thereby increasing the efficiency of the lamp and concentrating the rays of light in one direction, producing a greater penetration than if the rays of light were permitted to spread in all directions.

75 From the foregoing it will be observed that I have devised a lamp housing that increases the efficiency of an ordinary miner's safety lamp and prevents the lamp from being injured by pieces of coal, stone or debris. The housing can be made of light and durable metal and of various sizes.

80 While in the drawing there is illustrated a preferred embodiment of the invention, it is to be understood that the structural elements are susceptible to such changes as fall within the scope of the appended claims.

What I claim is:—

1. A housing for supporting a miner's lamp, said housing having an open top and having its front and rear walls provided with openings, the bottom of said housing supporting the lamp, a lens arranged in and projecting from the opening in the front wall of the housing, a reflector arranged at the opening in the rear wall of the housing, said housing having its side walls cut away to provide a convenient insertion of a lamp.

2. A housing for supporting a miner's lamp, said housing having an open top and having its front and rear walls provided with openings, the bottom of said housing supporting the lamp; a lens arranged in and projecting from the opening in the front wall of the housing, a reflector arranged at the opening in the rear wall of the housing, said housing having its side walls cut away to provide a convenient insertion of a lamp, and suspension means for said housing.

3. A housing for supporting a miner's lamp, said housing having an open top and its front and rear walls provided with open-

ings, a lens holder carried by and project-
ing from the front wall of said housing, a
lens mounted in said holder and positioned
in operative relation with respect to the
5 opening in said front wall, a reflector holder
carried by the rear wall of said housing, a
reflector mounted in said holder and po-
sitioned in operative position with respect
to the opening in said rear wall, and sus-
10 pension means for said housing connected
to the front and rear walls thereof.

4. A housing for supporting a miner's
lamp, said housing having an open top and
its front and rear walls provided with open-
15 ings, a lens holder carried by and project-
ing from the front wall of said housing, a

lens mounted in said holder and positioned
in operative relation with respect to the open-
ing in said front wall, a reflector holder car- 20
ried by the rear wall of said housing, a re-
flector mounted in said holder and posi-
tioned in operative position with respect to
the opening in said rear wall, and said side
walls of said housing cut away to facilitate
the entrance of a lamp to be supported. 25

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

SILAS W. METZ.

Witnesses:

MAX H. SROLOVITZ,
CHRISTINA T. HOOD.