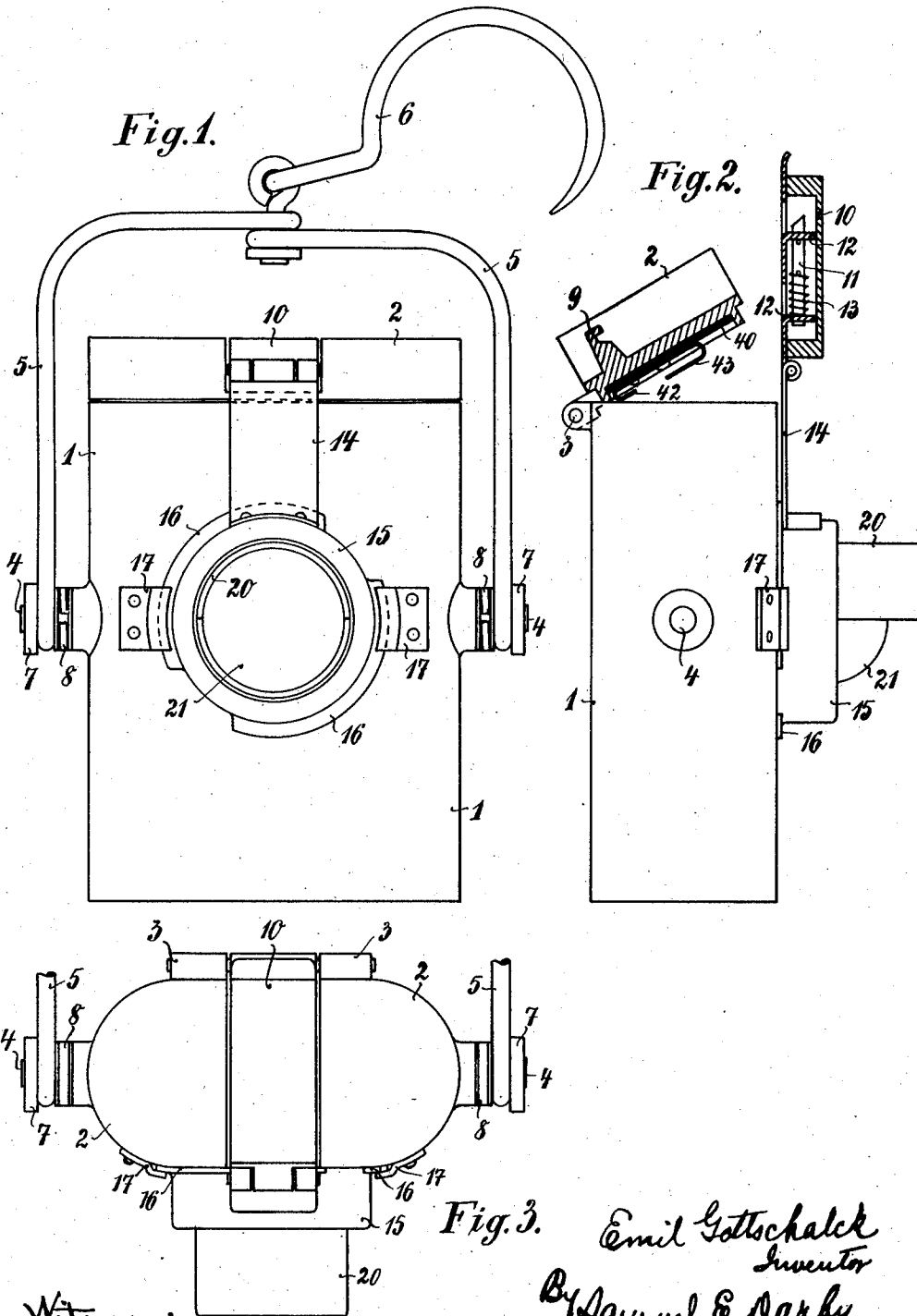


E. GOTTSCHALCK.
 PORTABLE ELECTRIC LAMP.
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1,025,394.

Patented May 7, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

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PORTABLE ELECTRIC LAMP.

1,025,394.

Specification of Letters Patent.

Patented May 7, 1912.

Application filed November 15, 1909. Serial No. 528,246.

To all whom it may concern:

Be it known that I, EMIL GOTTSCHALCK, engineer, a citizen of Germany, residing at Berlin, Germany, have invented new and useful Improvements in Portable Electric Lamps, of which the following is a specification.

My invention relates to a portable electric lamp, especially designed for use in coal mines, where explosive gases occur. The lamp is so constructed that an ignition of these gases is effectively avoided which otherwise would take place when the lamp is opened or when the bulb of the lamp is broken.

To the accomplishment of the aforesaid objects, my lamp provides special arrangements and combination of parts which will be hereinafter described, reference being had to the accompanying drawings forming a part hereof.

In the drawings, Figures 1, 2 and 3 represent front, side and top views of the lamp, Fig. 2 shows the opened cover and the magnetic lock in section.

The casing 1 and the cover 2 of the lamp are made of a light metal, as for instance aluminum and are connected by hinges 3. The casing has two lateral studs 4 for attaching the hoop 5 carrying the customary hook 6. The ends of the hoop are secured in place by means of nuts 7. Between the ends of the hoop and the casing 1 slotted disks 8 are provided, which tend to expand laterally, thus tending to hold the hoop firmly in an angular position with respect to the casing.

The cover 2 has a central groove for the reception of a magnetic lock, and from the bottom of said groove extends upwardly a hook 9 shown in Fig. 2. The magnetic lock illustrated in Fig. 2 in section, comprises a lid containing an iron latch 11. The latter is guided between two members 12 within the lid 10 and is normally pressed into its locking position by a spring 13 so that the hook 9 grips over its outer end when the cover 2 and the lid 10 are depressed. (Figs. 1, 3). In this position the lid 10 can only be lifted and the cover 2 can only be opened, after the latch 11 has been retracted by a magnet. To the lid 10 is hinged a metal strip 14 provided with a ring 15. The latter

has two flanges 16 each extending underneath of clamping pieces 17 secured upon the casing 1. The ring 15 and also the lid 10 can thus be only removed from the casing by turning them until the flanges 16 come free of the clamps 17. The ring 15 serves to hold the shade 20 and the lens 21 in position. The shade 20 has a circular flange (not shown) positioned within the ring 15 so that it may be freely turned. The shade 20 itself has the form of a half hollow cylinder and allows the light to be so directed, that it is thrown only in the place where it is needed, while it does not blind the miner.

The interior of the casing 1 is adapted to receive an electric battery (not shown), preferably two dry cells. The cover 2 has on its underside a sheet 40 of insulating material carrying flat contact springs 41, 42, 43, which close the circuit of the battery only when the cover 2 is turned down. As the latter can not be opened by the miner himself, but only after applying a strong magnet, no danger exists that sparks may be generated within the mine by opening the cover, which may have disastrous consequences for the life and health of those employed in a mine and may cause considerable destruction of property.

Having thus described my invention, what I claim is:

1. In a portable electric lamp, the combination of a metallic casing having a hinged cover, a magnetic lock comprising a lid provided with a spring actuated latch, normally engaging said cover for keeping the lamp closed, said latch being adapted to be retracted by a magnet, a lamp, a protecting lens therefor, a metal strip hinged to said lid, and means to interlock said metal strip with the lens for the purpose of making the removal of said interlocking means dependent upon the opening of said magnetic lock.

2. In a portable electric lamp, the combination of a metallic casing having a hinged cover provided with a central groove, a magnetic lock for said cover comprising a lid, provided with a spring actuated latch, normally engaging a hook within said central groove of the cover for keeping the lamp closed and adapted to be retracted by a magnet, a lamp, a protecting lens there-

for, a metal strip hinged to said lid, means
to hold the lens upon the casing, and a
bayonet coupling connected to said strip and
said holding means for the lens for the pur-
5 pose of making the removal of said bayonet
coupling dependent upon the opening of
said magnetic lock.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

EMIL GOTTSCHALCK.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.

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