

J. SZOMBATHY.
MINER'S SAFETY LAMP.
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973,234.

Patented Oct. 18, 1910.

Fig. I.

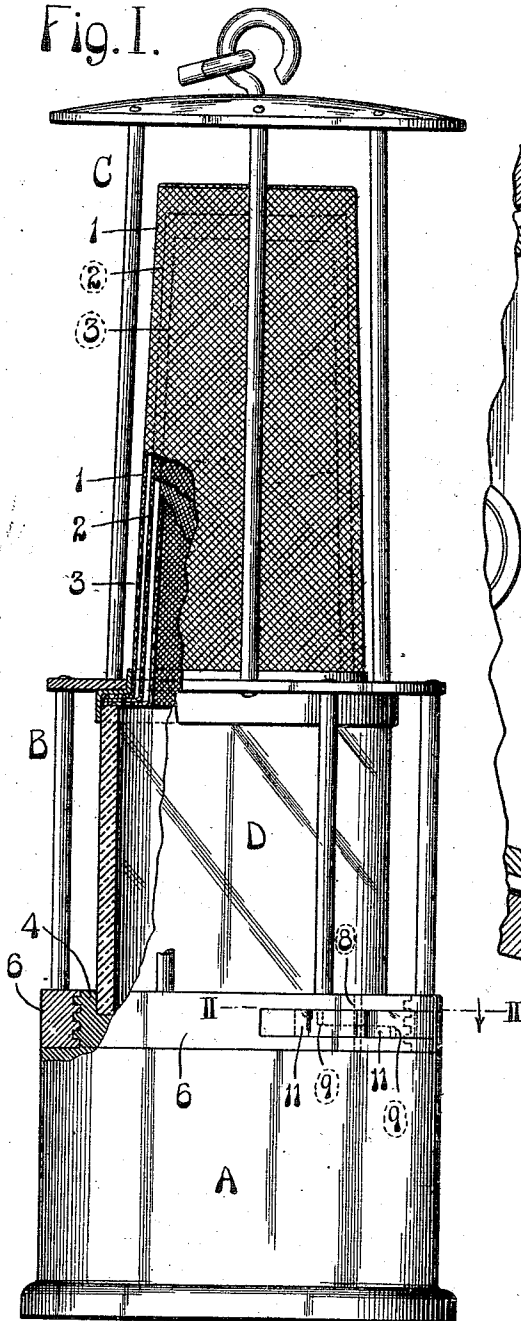
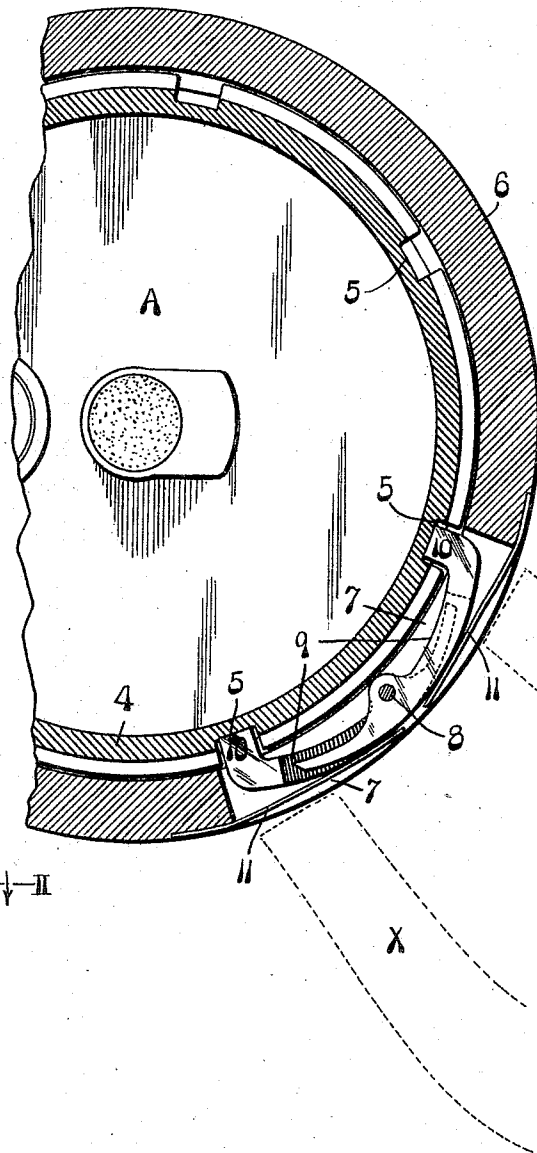


Fig. II



Attest
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JOSEF SZOMBATHY, OF ST. LOUIS, MISSOURI.

MINER'S SAFETY-LAMP.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOSEF SZOMBATHY, a citizen of the United States of America, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Miners' Safety-Lamps, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to a safety lamp for use by miners and it has for its objects: 1st, to provide more efficient protection against the access of mine gases to the flame of a miner's safety lamp to entirely eliminate the possibility of explosion due to ignition of such gases by access to the flame of the lamp. 2nd, to provide a secure fastening for connecting the upper members of the lamp to the oil pot that cannot be operated by the miner while in a mine, thereby preventing the miner from opening the lamp in the mine and exposing the flame burning therein to the mine gases, with the consequent possibility of causing an explosion.

Figure I is a view partly in elevation and partly in vertical section of my miner's safety lamp. Fig. II is an enlarged horizontal section taken on line II—II, Fig. I.

In the accompanying drawings:—A designates the oil pot of my miner's safety lamp, B the lower guard frame surmounting the oil pot and C the upper guard frame surmounting the lower guard frame. Within the lower guard frame B and resting upon the oil pot is a chimney D.

1 and 2 designate respectively protector caps of wire gauze located within the upper frame C and supported by the chimney D. These caps, known to be old, serve to partially exclude the entrance of mine gases into the chimney D when the lamp is in use in a mine, but they do not wholly exclude such passage in instances where there is a very large amount of mine gases. I therefore utilize in my lamp a third cap 3, of wire gauze, that is located within the cap 2, thereby providing a threefold protection against the entrance of gases into the lamp and completely overcoming the possibility of the occurrence of an explosion due to the contact of gas with a flame burning in the lamp while such lamp is in use.

The oil pot A of my lamp is provided with a screw threaded neck 4 and in this neck at its outer face are slots or recesses 5

adapted to receive fastening members to be presently described.

At the lower end of the lower frame B of my lamp is an internally threaded ring 6 that is adapted to be screwed onto the neck of the oil pot and is provided with a horizontal slot 7. 8 is a vertical pivot pin mounted in the guard frame ring 6 at the center of the slot 7, and 9 are latch dogs loosely fitted to said pivot pin and having arms extending in opposite directions from said pin. The arms just referred to terminate in fingers 10 that are adapted to enter the recesses 5 in the screw threaded neck of the oil pot and to provide for said fingers being held in said recesses I attach to the ring 6, springs 11, the free ends of which project into the slot, the springs being of widths corresponding to the width of the slot. The free ends of these springs bear against the arms of the latch dogs 9 and act to hold said arms pressed inwardly so that when the fingers of the arms have entered into recesses 5 of the oil pot neck, they will be held therein to prevent separation of the oil pot from the frame B; or, in other words, to prevent the opening of the lamp until the latch dogs have been moved to withdraw their fingers from the recesses.

The slot 7 in the ring 6 of my lamp is made of just the proper size to permit of the presence therein of the latch dogs 9 and their operation, without providing sufficient space for the insertion of any implement by which the latch dogs may be moved to release the dogs from the neck of the lamp pot, and the springs 11 sufficiently close said slot to prevent the miner from gaining access through the slots to the latch dogs to operate them in order that he may open the lamp.

To permit of the lamp being opened in order that it may be filled and cleaned, I use a magnet by which the arms of the latch dogs may be drawn outwardly to withdraw the fingers of these arms from the recesses in the neck of the oil pot. Such a magnet is partly indicated in dotted lines at X, Fig. II, and it will be readily understood that when this magnet is presented as is here shown, it will act to draw the arms of the latch dogs outwardly and hold them out of the recesses in the neck of the oil pot while the lamp is being opened. This magnet is also used to hold the dogs outwardly when the lamp is being again closed.

I claim: —

1. A miner's lamp, comprising an oil pot provided with a threaded neck having a plurality of recesses therein, a frame above
5 said oil pot having a threaded ring for engagement with the neck of said oil pot, the ring of said frame being provided with a slot, and a pair of latch dogs pivotally
10 mounted in said slot and having arms extending in opposite directions terminating in fingers for entrance into recesses in the neck of the oil pot.

2. A miner's lamp, comprising an oil pot provided with a threaded neck having a
15 plurality of recesses therein, a frame above said oil pot having a threaded ring for en-

gagement with the neck of said oil pot, the ring of said frame being provided with a slot, a pivot pin vertically arranged at the center of said slot, a pair of latch dogs
20 fitted to said pivot pin and having arms extending in opposite directions from the pivot pin terminating in fingers for entrance into recesses in the neck of said oil pot, and
25 springs carried by said ring extending into said slot and bearing against the arms of the latch dogs to hold their fingers in the recesses into which they enter.

JOSEF SZOMBATHY.

In the presence of—

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