Jan. 14, 1930. W. GOSMANN ET AL 1,743,540

ACCUMULATOR FOR MINERS' ELECTRICAL LAMPS.

Filed Sept. 15, 1927

Fig.2.

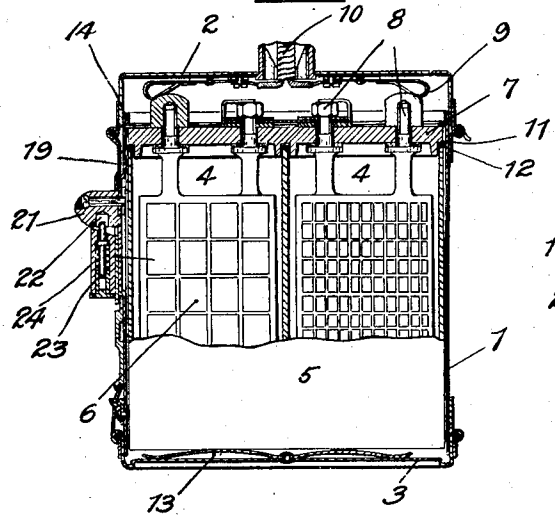
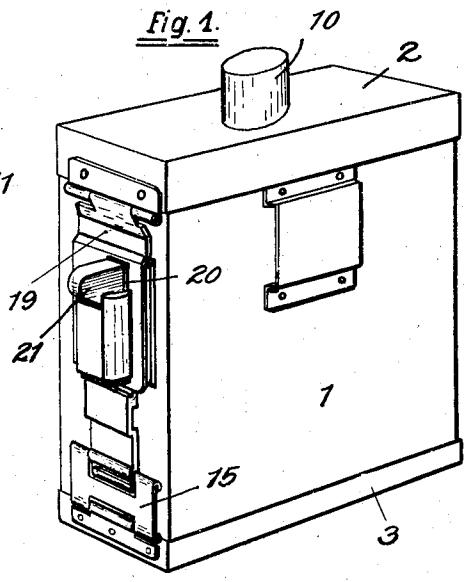


Fig.1.



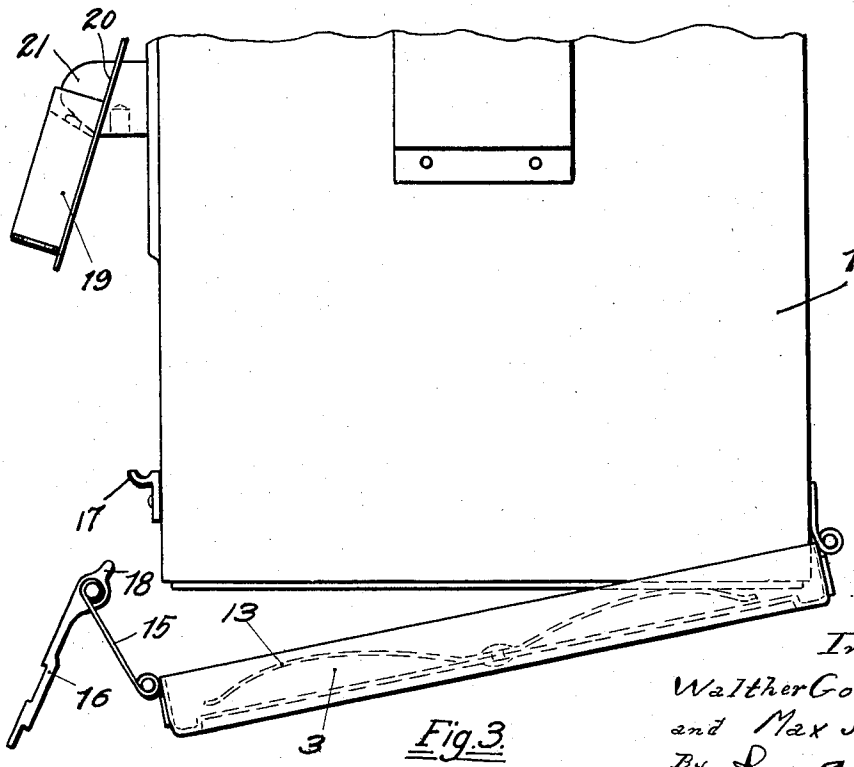


Fig.3.

Inventors:
Walther Gosmann
and Max Stoeck
By Lüdwig Quinckhe
Attorney.

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UNITED STATES PATENT OFFICE

WALTHER GOSMANN AND MAX STOECK, OF DORTMUND, GERMANY

ACCUMULATOR FOR MINERS' ELECTRICAL LAMPS

Application filed September 15, 1927. Serial No. 219,695.

Our invention relates to a container for a miner's electric lamp and particularly to a casing suitable for holding an accumulator for feeding the electric lamp which may be connected directly with the casing or with said accumulator by means of insulated wires.

An object of our invention comprises a device for locking the receptacle for holding the electrolytic fluid and the electrodes of the battery by means of a cover to which said electrodes are attached, said locking device at the same time securing the battery in the casing. It consists of a hinged cover on the casing having a projecting edge against which the sealing edge of the battery receptacle in the casing is pressed, and a movable bottom hinged to the casing, and leaf springs or the like inside this bottom by which the battery receptacle and its sealing edge is pressed against the flange inside the cover at the upper end of the casing when the swingable bottom, which serves for inserting the battery in the casing, is closed.

A further object of our invention resides in a locking device for the cover of the receptacle which may consist of a magnet lock, and may be so arranged that it secures the lock of the hinged bottom at the same time.

The present invention is embodied by way of example in a miner's electric lamp shown in the accompanying drawing, in which:—

Figure 1 is a perspective view of the casing for holding the battery,

Fig. 2 is a vertical section of the casing with battery contained therein, and

Fig. 3 represents, on an enlarged scale, the bottom of the casing half opened.

The casing or box 1, which may be of wood or metal, is provided with a cover 2 and a bottom 3 attached to the box or casing by hinges. The box serves for holding an accumulator or a battery 4 consisting of a receptacle or container 5 for the electrolytic fluid and the electrodes 6 suspended from the lid 7 of the battery receptacle in such a manner that the terminals 8 pass through the sealing lid, and are connected by conductors, which may consist of springs 9, as commonly used in the art, connected to the cable 10 which may be secured to the cover 2.

The lid 7 of the battery 4 is provided with a recess 11 at its edge in which packing 12 of rubber or other suitable material is laid, and which is pressed on to the upper edge of the battery casing 5 when the battery is inserted in the box, and the bottom cover is closed. The battery is thereby pressed upwards by springs 13, and the lid 7 rests on a flange 14 provided inside the casing cover 2.

A member 15, which is hinged to the bottom 3, and a lever 16, pivoted to the member 15, serve for holding the bottom 3 in the closed position.

A nose 17, grooved at the top, is provided on the casing 1, and when the shorter arm 18 of the lever 16 engages with the groove, and the longer arm of the lever 16 is turned upwards, it exerts a strong pressure on the bottom 3 through the member 15 against the pressure of the flat spring 13 arranged inside the bottom 3.

The cover 2 is held in the closed position by a locking device 19 hinged to the front edge of the cover 2, and provided with an opening 20 by means of which it can be slipped over a projection or a nose 21 attached to the box 1 when it is turned downwards. The nose 21 is provided with a bore 22 on the underside, and when the locking member is pressed against the wall of the box, a pin 23, which is actuated by a spring 24, and slidably guided in a bushing at the front side of the locking member 19, slips into the bore. The box can only be opened by withdrawing the pin 23 against the pressure of the spring by means of a strong magnet, as generally known in the art.

When the magnet lock is in the locked position, the member 19 presses against the lever 16, thus preventing both the cover 2 and the bottom 3 from being opened, and the battery from being taken out and damaged by unauthorized persons.

On the other hand, after opening the bottom member 3 the battery may easily be taken out for the purpose of being charged, or for replenishing the electrolvtic fluid after removing the lid 7.

We claim as our invention:—

A locking device for the top and bottom

hinged covers of battery containers for miner's electric lamps or the like comprising a projection provided on the side of the container; a nose on the side of the container; a member hinged at one end on the bottom cover; a plate-shaped lever hinged on the other end of the member and having a short arm adapted to fit into the nose on the container to hold the lever against the side of the container in clamped position and the bottom cover in closed position; and a magnet lock member hinged to the top cover adapted to fit over and lock itself on the projection to secure the top cover in closed position, said lock member in locked position fitting over and on the lever.

In testimony whereof we affix our signatures.

WALTHER GOSMANN.
MAX STOECK.