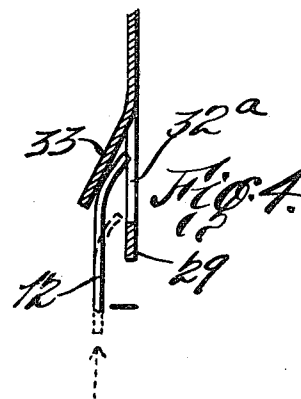
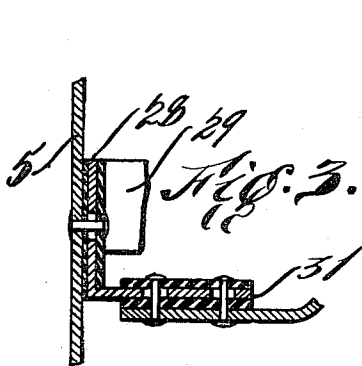
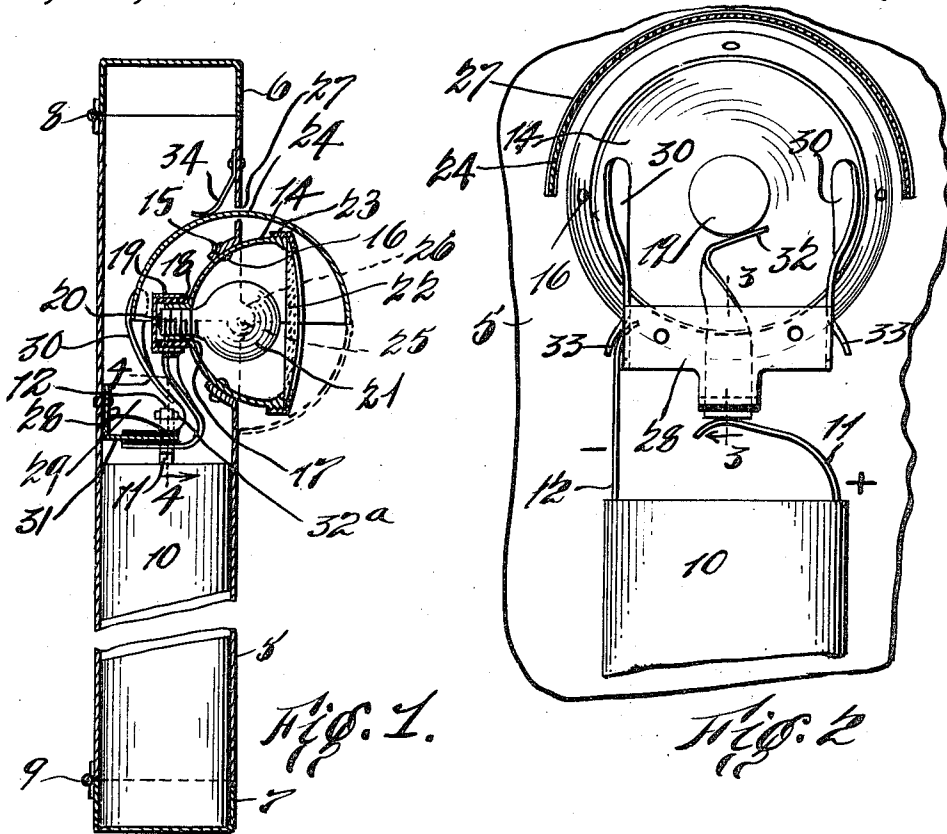


A. JANOVSKY.
TRENCH FLASH LIGHT.
APPLICATION FILED SEPT. 11, 1917.

1,272,808.

Patented July 16, 1918.



Inventor
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By his Attorney
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UNITED STATES PATENT OFFICE.

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TRENCH FLASH-LIGHT.

1,272,808.

Specification of Letters Patent.

Patented July 16, 1918.

Application filed September 11, 1917. Serial No. 190,704.

To all whom it may concern:

Be it known that I, ARNOST JANOVSKY, a citizen of the United States of America, residing at Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Trench Flash-Lights, of which the following is a full, clear, and exact description.

This invention relates to flashlights, more particularly those designed for use in trenches, the object being to provide such a device constructed so as to cast the rays of light downward, special means being provided to prevent any of the light rays from being cast upward which would reveal to the enemy the location of the entrenched men.

I will now proceed to describe my invention in detail, the novel features of which I will point out in the appended claims, reference being had to the accompanying drawing, forming part hereof, wherein:—

Figure 1 is a vertical sectional view of an embodiment of my invention;

Fig. 2 is an enlarged fragmentary vertical sectional view, looking from the left in Fig. 1;

Fig. 3 is an enlarged sectional detail view, the section being taken on a line 3—3 in Fig. 2; and

Fig. 4 is a similar view, the section being taken on a line 4—4 in Fig. 1.

As herein embodied, my invention comprises a casing 5 having end caps 6 and 7 hinged thereto at 8 and 9. The casing 5 is arranged to retain a battery 10 having yieldable or flexible terminals or pole-pieces 11 and 12, such batteries being commonly known and used. The casing 5 carries a reflector 14 which is riveted to a flange 15 surrounding an opening in one wall of the casing 5. The opening is filled by the reflector 14, said reflector being riveted to the flange 15 as at 16. The inner end of the reflector is provided with a neck 17 carrying a bushing 18 of insulating material. Upon the bushing 18, I place a metal cap 19 against which the inner end 20 of an electric light bulb 21 is caused to contact when the bulb 21 is screwed into the neck 17, which is threaded to receive the threaded shank of the said bulb. The reflector supports the usual lens 22 and lens-retaining ring 23.

A further element of the device consists of a semispherical shutter 24 pivoted cen-

trally thereof, as at 25, to ears 26 carried by the casing 5, only one of said ears being indicated in Fig. 1.

The casing 5 is slotted as at 27 to receive the shell or cover 24, as can be seen in Fig. 2. The shell or cover 24 performs the function of completely covering the bulb, to protect same when not in use, as shown by dotted lines in Fig. 1, and also acts as a shield to prevent rays of light from passing upwardly when the light is in use; it also acts as a switch for the circuit for the lamp when the lamp is to be used.

The cover or shell 24 can be moved upon its pivots 25 from the position shown by dotted lines to the position shown by full lines in Fig. 1.

A further feature of the device consists of a novel arrangement of contacts to form a connection between the battery 10 and bulb 21.

The connection between the battery and bulb consists of a bridge formed out of a strip of metal 28 bent outwardly at 29, then upwardly at 30 to form yieldable arms or contacts for the shell 24 to impinge upon. A portion of the strip 28 is bent at a right angle to form a bracket 31 to which is secured a contact 32. The contact 32 is insulated from the bracket 31, as shown in Fig. 3. Each bent out portion or arm 29 is slotted as at 32^a (see Fig. 4) and bent outwardly as at 33 to form secondary contacts for the yieldable pole-piece 12 of the battery 10, which I will assume is the negative contact. The positive pole-piece 11 contacts with the contact 32, which in turn is connected to the cap 19, being preferably soldered thereto. When set up, the bridge consisting of the contacts 30 and 32 will be secured to the casing 5, the contact 32, as has been stated, being preferably soldered to the cap 19. The function of the contacts 30 is to close the circuit for the bulb when the cover or shell 24 is moved to uncover the bulb, said contacts 30 being in circuit with the negative side of the circuit; the contact 32 being in circuit with the positive side of the circuit. When the shell or cover is moved back upon its pivots to completely uncover the bulb, it will contact or strike one or both of the contact-fingers 30, thereby completing the circuit, and the bulb will glow. The rays of light cast out will be

thrown downwardly by the cover or shell 24, which acts as a reflector, but none of the rays of light will be cast upwardly; hence the location of the user of the lamp will not be revealed when the lamp is used in a trench.

The supplemental contacts or guides 33 are designed to receive the negative pole-piece 12, and as there are two of such guides it makes no difference which way the battery is inserted into the casing. The positive pole-piece 11 will always strike the contact finger 32. The terms positive and negative, as herein used, are for illustration only, as the finger 30 could be positive and the finger 32 negative.

To insure perfect contact between the casing 5 and cover or shell 24, I provide a yieldable finger 34 which is carried by the casing and bears upon such shell. The purpose of providing the two contacts 30 is to make positive or certain the closing of the circuit between the shell 24 and said contact 30.

What I claim is:

1. In a pocket-flashlight, a casing, a plurality of contacts within the same comprising a bridge-piece consisting of a metallic strip bent over at a right angle at each end thereof, each bent over portion being bent upwardly to form yieldable contacts, a third contact carried by the said strip but insulated therefrom, a battery in circuit with said contact, a lamp carried by the casing, and means to close the circuit between the lamp and said contacts.

2. In a device as described, in combination, a metallic casing, a lamp reflector fitted in a wall thereof so as to contact the same, a neck formed on said reflector, an electric bulb screwed into the neck of said reflector, a cap supported by said reflector and electrically engaged by said bulb, a battery in said casing, an upstanding yieldable contact arm electrically connected to one pole of said battery, an upstanding yieldable contact arm engaging said cap and electrically connected to the other pole of said battery and a shutter mounted in said casing adapted to cover said reflector and to contact said first-yieldable contact so as to close the battery circuit.

3. In a device as described, in combination, a metallic casing, a battery fitting snugly in the bottom thereof, a bridge secured to said casing above said battery, an electric bulb carried by said casing above said bridge, a yieldable contact arm supported on said bridge, and extending vertically therefrom, a contact insulatedly supported upon said bridge and electrically connected to said electric bulb, a pole-piece extending upwardly from said battery and engaging said contact, a vertical pole-piece leading from said battery and engageable with said

bridge, and a shutter mounted on said casing adapted to cover said reflector and to contact said first yieldable contact so as to close the battery circuit.

4. In a device as described, in combination, a casing, a battery fitting snugly in the bottom thereof, an electric lamp carried by said casing above said battery, a bridge secured to said casing, a contact insulatedly supported upon said bridge and engaging said electric lamp, guides being formed upon said bridge, a vertical pole-piece on one side of said battery adapted to contact either of said guides, and a curved pole-piece on the other side of said battery and terminating in the curved portion so disposed as to engage said contact when the other pole-piece engages with either guide.

5. In a device as described, in combination, a casing, a semi-spherical shutter trunnioned therein so as to project partially inside and outside said casing in a horizontal plane, a bridge secured to said casing, a yieldable contact projecting upwardly from said bridge, a lamp reflector projecting outwardly of the front wall of said casing, said shutter being movable downwardly so as to project outside said casing and engage the front wall thereof so as to completely cover said reflector, a lamp bulb in said reflector, a battery in said casing and electrically connected to said bridge, an electrical connection from said battery to said bulb, said yieldable contact serving as a contact maker and circuit maker and breaker and adapted to close the battery circuit when engaged by said cover.

6. In a device as described, in combination, a casing having a lamp reflector projecting forwardly thereof, an electric bulb projecting with said reflector into said casing, a semi-spherical cover trunnioned in said casing and adapted when horizontally disposed to project down in back of said bulb but movable downwardly so as to completely cover said reflector, a battery in said casing, a contact device interposed between said bulb and said battery, a contact device interposed between said battery and said cover and engaged by the latter for the purpose of closing the battery circuit.

7. In a device as described, in combination, a casing, a battery disposed in the bottom thereof, a lamp reflector projecting externally of said casing, said casing having a slot upon its front side, a semi-spherical shutter trunnioned upon said casing so as to slidably cover said reflector, a contact finger on said casing against which said cover slidably rubs, a lamp in said reflector, a contact device connecting said reflector lamp and said battery, and a contact device electrically connected with said battery and including a yieldable contact, said shutter serving as a switch and adapted to move

to horizontal position to uncover the lower portion of said reflector, to simultaneously engage the last-named yieldable contact.

5 8. In a device as described, in combination, a casing having a lamp reflector projecting therefrom, a shutter movably mounted upon said casing, a lamp bulb in back of said reflector, a pair of vertical yieldable contacts disposed on either side of said bulb,
10 a contact bridge secured to said casing and carrying said yieldable contacts, guides carried by said contact bridge, a contact centrally thereof and insulatedly connected

thereto, said contact being electrically connected to said bulb, a pole-piece on one side 15 of said battery engageable with said contact, and a vertical pole-piece on said battery engageable with either guide as the other battery pole-piece engages said contact.

Signed at New York city, N. Y., this 5th 20 day of September, 1917.

ARNOST JANOVSKY.

Witnesses:

ALBERT A. LUSTIG,
I. H. SHAPERO.