March 25, 1924. 1,488,085

L. ZACHARA

ELECTRIC SPECTACLE, GOGGLE, OR MASK LIGHT

Filed March 12, 1920

Fig. 1.

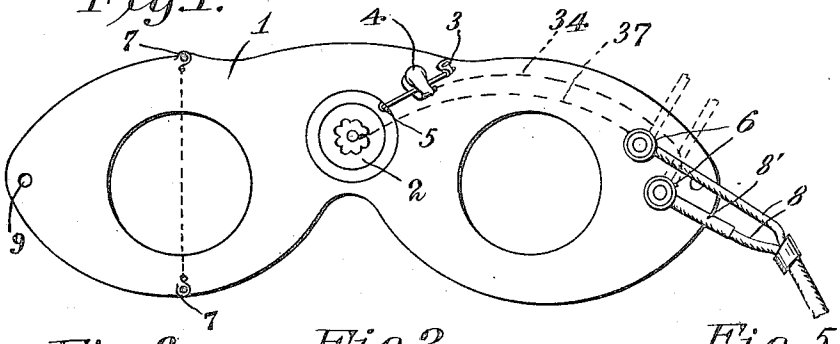


Fig. 8.

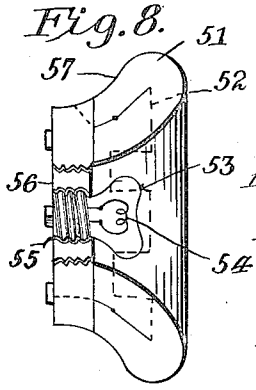


Fig. 2.

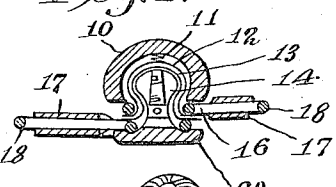


Fig. 3.



Fig. 4.



Fig. 5.

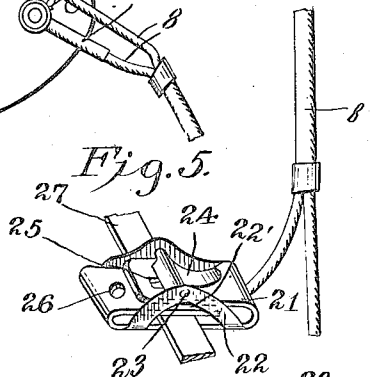


Fig. 6.

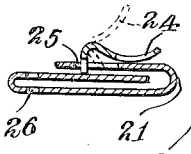


Fig. 7.

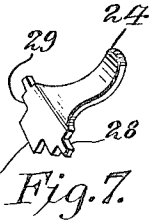


Fig. 9.

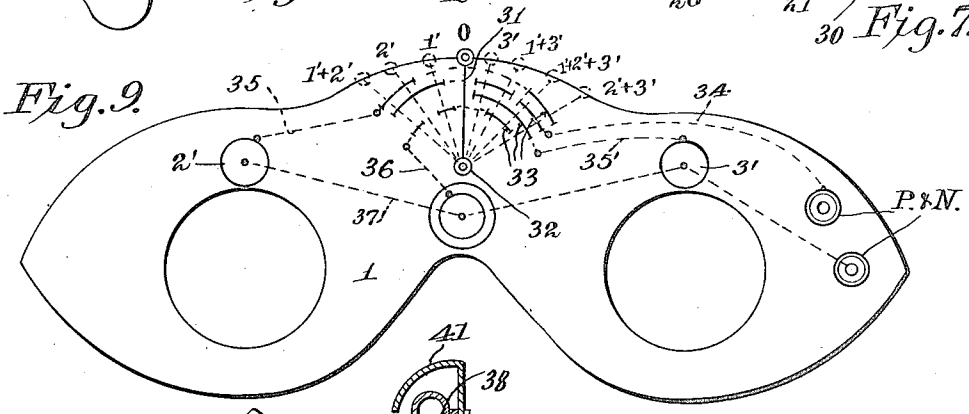


Fig. 12.

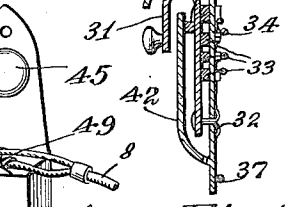


Fig. 11.

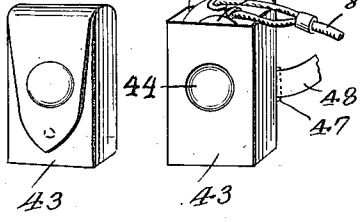


Fig. 10.

Fig. 14.

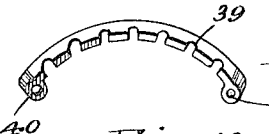
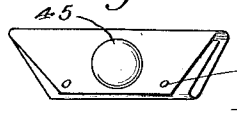


Fig. 13.



Inventor.

Ladislaus Zachara

Patented Mar. 25, 1924. 1,488,085

UNITED STATES PATENT OFFICE.

LADISLAUS ZACHARA, OF BREMERTON, WASHINGTON.

ELECTRIC SPECTACLE, GOGGLE, OR MASK LIGHT.

Application filed March 12, 1920. Serial No. 365,200½.

REISSUED

To all whom it may concern:

Be it known that I, LADISLAUS ZACHARA, a citizen of the United States, residing in Bremerton, in the county of Kitsap and State of Washington, have invented a new and useful Improvement in Electric Spectacle, Goggle, or Mask Lights, of which the following is a specification.

My invention relates to new and useful improvements in electric spectacle, goggle or mask lights, and the objects of my improvements are, first: to provide means for electric snap button contact and coupling joints, which can be used in any position and moved in radius around itself, and be quickly coupled together, and forming continuous contact, one part of one conductor with the other part of the conductor, and be just as quickly discoupled and disconnected.

Second: To provide a switch on a spectacle, goggle or mask for breaking the electrical current whenever wanted, as to economy and convenience. For instance a lamp being placed between the eyes or on forehead having single switch.

Third: To provide elastic flexible spring frame which is also stiffening around the edges of a spectacle, goggle or mask so that it will hold shape when soft, loose material is used, and being pliable in every direction.

Fourth: To have clamps on the other end of the feeding electrical cord conductors so that it will hold securely on battery plates, posts or wires and form uninterrupted continuous contact.

Fifth: To have a multiple combination bar switch on a spectacle, goggle or mask to enable the user to light any desired lamp individually, or together with the certain lamps as may be wanted. Naturally the rays of the lamps follow the vision lines and where the light is wanted most, the lamp can be lighted, also colors on the lamps can be used, as for instance signaling purposes.

Sixth: To have a casing over the switch in such a form as to prevent water running over the switch board, the switch board having also stops supported thereon, or on the casing for stopping the switch bar.

Seventh: To have a small lamp bulb inside of the passage of a two wall incandescent lamp where the two wall lamp forms also reflector for the lamp bulb, this arrangement will give the result of large increase of light and the light can be modified by applying coloring on the outside wall of the outside lamp.

Eighth: To have carrying case for electric spectacle or goggle. This carrying case can be used as a lantern being equipped with opening in the front wall for the spectacle or goggle lamp light and an opening in the lid for a glass lens.

In the accompnying drawing—

Figure 1. is a front view of a spectacle, goggle or part of a mask with attached snap button contact and coupling, and a single switch, and elastic spring stretching frame.

Fig. 2. is a snap button contact and coupling with the conductor between these flanges and insulation.

Fig. 3. is the receiving half of the electric snap button contact coupling with the flanges on it to receive a conductor between them.

Fig. 4. is the spring head half of the electric snap button contact coupling with the flanges on it to receive the other part of the conductor.

Fig. 5. is a perspective view of a clamp made out of one piece of metal, three layers where the top layer has a slot in it and lever resting on top of it, the second layer has a hole for battery post, the third layer has a corresponding hole, and a wall on the side with an arch in it, and a hole in the back of the bend for the cord conductor.

Fig. 6. is the same as Fig. 5, showing sectional view.

Fig. 7. is a lever of the clamp shown separately.

Fig. 8. is a sectional view of a two wall incandescent lamp and a lamp bulb where the lamp bulb is placed in the passage of the two wall lamp, the outside lamp forming also reflector for the lamp bulb.

Fig. 9. is a front view of electric spectacle, goggle or upper part of a mask with the multiple bar switch.

Fig. 10. is a sectional view of the multiple bar switch with its casing.

Fig. 11. is a perspective view of the carrying case for spectacle or goggle with lens.

Fig. 12. is the same case as Fig. 11, in open

position showing the opening in the front wall, the lens in the lid, the spectacle placed in the case, and carrying belt attached.

Fig. 13. shows another form of carrying or covering case.

Fig. 14. is a stopping device for the bar of the multiple combination switch.

As shown in Figs. 1, 2, 3, 4, of the drawing, the electric spectacle, goggle or mask is provided with electric snap button contact coupling 6, this coupling is in a form of a button from the outside appearance, and having insulation on the cap 10, and insulation on the bottom 20, inside the cap is a hollow space narrow in the entrance and wide in the middle and round to the top, inside of the hollow space is a lining 12, of conductive material, this lining is turned to a flange 16, from the inside to the outside, and runs around the edge of the cap, inside of the first lining is a second lining 13, this lining runs parallel with the first lining and with spaced interwall between the first flange it is turned to a parallel flange same as the first lining.

Fig. 3. F. has between these two flanges one end of the conductor 18, placed in and tightened, and 17, is insulation for conductors 18, this shows the securing of the conductor to the one half of the contact coupling button.

Fig. 4. receives the conductor the same way as Fig. 3 and forms the second half of the coupling; detaching one section of the button from the other section will break the electrical function. The feature of second half of the button is a hollow bowl like stem 15, which branch out to leaves or plates 19, these forming springs and when the crown is to pass the narrow part of the contrary half, the plates straighten out and pass into the hollow of the first half of the button and take their original position, the flange 16, or F. come to rest against the other flange. The same feature applies to 14, which fits tight into 15, and receives a conductor 18, between these two flanges which are conductors also; to secure these features an impression is made on the lower part of the stem above the second flange, a little spring 11, will press against the top of the crown and form continuous contact. A small rubber tubing 8, prevents the cord conductor from short bending and breaking.

A single switch 3, is provided to bring the electrical energy to the socket 2, and movably mounted to the socket flange with rivet 5, one of the conductors leads to eye hook 4, and the switch bar rests in the mouth of the hook and forming contact, to disconnect the light, the bar is moved out of the contact position.

When loose material is used for the frame, an elastic stiffening frame 7 is placed all around the edges or part of them to hold the shape of the spectacle, goggle or part of mask, for support band a hole 9, is provided.

Fig. 5 shows a clamp for electric contacts and 21 shows a plate of conductive material twice folded forming three spaced layers; the bottom layer has a wall 22, turned up and an arch 22′ therein, and a hole 23 for the tenon of the lever 24. Between the bottom layer and the middle layer inside the arch a plate 27, is received and pressed down with the lever and forming perfect electric contact, also wire and other conductors can be placed there, the arch preventing the plate 27, slipping sideways. The first layer has a slot 25, through its own thickness for the tongue of the lever, the middle layer and the bottom layer have a round corresponding hole 26, thru each of their thicknesses to receive a battery post which will be fastened with screw nut on the top.

Fig. 6 shows the same clamp in sectional view.

Fig. 7. shows the lever separately and 28 shows the tenon for the hole 23. The shoulder 29, which presses on the top of the first or top layer and the tongue that presses from the top of the second layer and so the electrical contact plates are fastened between the second and third layers and make perfect contact.

Fig. 8 shows how one lamp is placed in another lamp and 51, presenting a two wall incandescent lamp with passage in the center and filament 52, between these two walls and a small lamp bulb 53, with the filament 54, between the inside wall, so that both of these lamps can burn at the same time or individually. The supplying of the current is made through their bases and sockets 55, a bushing 56, can be inserted and made to fit the lamp bulb.

To modify the rays a coloring can be applied on the outside or inside wall 57 which will reflect to the front and back, and limit the glaring rays of the light. If glare light is wanted, glare appliance like mirroring may be used on the outside lamp. If the lamp is burned out it still may be used as a reflector. This feature may be of great advantage when the light is placed on a forehead or between the eyes throwing more light from one place.

Fig. 9. shows a multiple combination bar switch on a spectacle, goggle or mask, and 1′ 2′ 3′ showing position of the lamps which will burn each individually, or one with the other, or all together just as desired or needed, the conductor 37, connecting all these lamps in the center of their sockets; 36 connects socket flange to switch board, route one (counted from top down), 35 connects socket flange to switch board route three, 36 connects socket flange to route four, and

34 is a live conductor and delivers the current to route two, the switch bar 31 is moveably mounted with a rivet 32 and has no direct electrical contact to any of the lamps, the switch bar itself forms the connection of the one conductor only, and if one lamp as marked 1′ is wanted to burn, the switch lever bar is placed on 1′ and the live conductor 34, is connected with the conductor 36, and lamp one will burn alone, if lamp 1′ and 2′ shall burn the switch bar must be placed on 1 and 2 and the lamps 1′ and 2′ will burn and so forth. The heavy lines 33, show where the conductors are projecting and make their contacts, P. and N. showing the coupling contacts.

Fig. 10 shows sectional view of the switch board and its casing where 31 shows the returned bend of the switch lever and the projecting hood over the lower casing, both features prevent the running of water down to the switch board. 38 shows the stop bar fastened to the casing, it can be also fastened to the switch board itself, 41 is the upper part or hood of the casing, 42 is the lower part of the casing and does not project as far out as the upper part. In the Fig. 14 is shown the stop bar for the switch lever and 39 are stop insertions for the switch lever, and 40 are holes where the bar may be fastened, the stopping bar has the shape of the switchboard.

Fig. 11. shows a carrying case for electric spectacle or goggle, used as a lantern that light is furnished from the spectacle or goggle and lights through the opening in the front wall of the case and the lens in the lid.

Fig. 12. shows the carrying case in open position and 44 is the opening in the front wall through which a light from an electric spectacle or goggle may be exposed. 45 is an opening in the lid 46, in which opening a lens is placed. 49 shows the electric spectacle placed in that case and the feeding conductors resting on the side wall 43, a support 47, on the back of the case is provided for the carrying belt 48, and so created that case lantern may be carried on the user.

Fig. 13 is another form of such carrying case; fasteners 50 keep the case closed.

Fig. 14. shows the stopping device which has the shape of the multiple switch itself with insertions 39 thereon for the switch lever, which insertions correspond with numbers of the combination on the switch board; holes 40 are provided for support of the device itself.

What I claim is:

1. An electric spectacle, goggle or mask having on its surface two combined lamps for lighting, one being inside the other, the outside lamp formed to constitute a reflector for the inside lamp, the outside lamp having coloring applied thereto to eliminate glare, or mirroring to increase the light from inside walls or outside walls of the outside lamp.

2. A spectacle, goggle or mask having thereon a plurality of lamps, and a multiple or single electrical switch, said switch comprising a casing having a rear wall and a front wall spaced therefrom and joining the rear wall at its lower edge, the upper edge of the front wall being spaced from and terminating short of the rear wall, a pivoted switch bar lever extending from the interior of the casing to the exterior thereof and bent around the free edge of the front wall, a stop bar within the housing having means to retain the switch bar lever in any desired contact position, contacts within the housing adapted to be engaged by the switch bar lever to energize the lamps singly or in combination, electrical connections from the contacts to the lamps, a hood extending from the rear wall of the switch housing over and above the switch bar lever.

3. A spectacle, goggle or mask having for electrical function snap button contact coupling secured to the spectacle and to the feeding cord, said snap button couplings consist of a male and female parts, and to each of these parts electrical wires are secured, the male part being branched out to leaves which leaves rest against the walls of the recess of the female part forming electrical contact, the female part has a spring in its recess pressing continuously against said leaves and forming continuous contact. The feeding cord having on its surface rubber tubing toward its ends to prevent the short bending and breaking of the cord conductors.

4. A spectacle, goggle or mask having for electrical function snap button contact coupling secured to the spectacle, goggle or mask and to the feeding cord, the feeding cord to the contact clamps, said electrical contact clamp being three spaced layers of one piece conductive material, the lowest layer having side walls with an arch therein through which an electric supplying plate is to be passed into the space between the second and the lowest layer and be pressed down with the lever, the second and the lowest layer has also corresponding holes to receive battery post with screws, the top layer has a slot to allow the lever tongue passing back and forth.

5. Combination of an electric spectacle or goggle provided with lamp and case therefor, said case having an opening in its front wall, and a lens carried by the lid, said lens alining with the said opening when the lid is closed the opening and lens allowing the light from the the lamp to be projected there through.

LADISLAUS ZACHARA.