

PATENTS EXAMINATION BOARD

PRACTICAL LEGAL PROBLEMS

EXAMINATION PAPER: SEPTEMBER 2020

EXAMINERS: J WHITTAKER

D DOHMEN

MODERATOR: H MOUBRAY

DURATION: READING TIME:	1 HOUR
EXAMINATION TIME:	4 HOURS
TOTAL:	5 HOURS

NOTES TO CANDIDATES:

1. Attached to the paper are copies of the following documents:
 - (i) A copy of the Patents Act No. 57 of 1978;
 - (ii) A copy of the Patent Regulations 1978; and
 - (iii) A copy of the Uniform Rules of the High Court under the Superior Courts Act 10 of 2013 (Rules 6, 14, 17, 18, 19, 21, 22, 23, 24, 25, 30, 35, 36 and 37).

2. Each candidate is also allowed access to one dictionary during the Exam.

3. This paper consists of 20 pages in total and includes the following documents:
 - (i) Questions 1 to 3 (100 marks) - (Pages 3 to 7);
 - (ii) Document A – (Pages 8 to 14);
 - (iii) Document B – (Pages 15 to 17); and
 - (iv) Document C – (Pages 18 to 20).

4. Prior to the hand out of the answer papers, candidates will have an opportunity to read the above documents and make notes for 60 minutes.

5. Where appropriate, reference should be made to case law, and conclusions should be supported by reasons and arguments.

A new client writes to you as follows:

"Dear Sirs,

I am the managing director of a company called "Framex (Pty) Ltd" which manufactures and supplies frames for spectacles. I started this company about seven years ago, and it has grown into a substantial operation.

Earlier this year, I came across an electroluminescent light source in the form of a longitudinally extending flexible cable incorporating a pair of electrodes twisted into a helix and covered with a layer of insulating lacquer. Helical hollows formed between the twisted electrodes are filled with an electroluminescent material dispersed in an epoxy resin.

I decided to use this type of light source on a spectacle frame as a means of illuminating a space in front of the spectacles for reading in low ambient light. Below are drawings of reading glasses (the Framex Readers) incorporating the electroluminescent light source, in which FIG. 1 shows a perspective view of the Framex Readers, and FIGS. 2 and 3 show cross-sectional views along lines 2-2 in FIG. 1 and 3-3 in FIG. 2, respectively.

As can be seen from the drawings, a frame 10 includes a lens carrying portion 20 and two side temples 30 and 32. These components are preferably formed from a plastics material. The lens carrying portion 20 includes a nose bridge section 22 and a lens 24. Although a single lens is shown in the drawings, a separate lens may be provided for each eye, depending on the design of the lens carrying portion 20.

The side temples 30 and 32 have elongate portions 31 and 33 which terminate at the rear in curved ear engaging portions 35 and 37.

An electroluminescent light source 40 extends along, and is preferably embedded within, an upper section 23 of the lens carrying portion 20, as shown in FIG. 1. As mentioned above, the light source 40 is in the form of a longitudinally extending flexible cable incorporating a

pair of twisted electrodes 41 and 43 (see FIGS. 2 and 3) formed from copper wire having a diameter of between 0.1 mm and 0.3 mm. The electrodes 41 and 43 are covered with a layer of insulating lacquer 44 (see FIG. 3), and the helical hollows formed between these electrodes are filled with an electroluminescent material 45 comprising an electroluminophor powder dispersed in epoxy resin. A flexible transparent layer 46 encases the light source 40, resulting in an elongated product that is compact, flexible and easily shaped into different configurations.

A battery 50 provides electrical power to the light source 40 via a conductor and an inverter/switch combination 55. With the inverter/switch combination 55 in an "on" condition, the electroluminescent light source 40 is luminescent, providing a continuous light along, and coextensive with, the upper section 23 of the lens carrying portion 20.

Although not shown, the lens carrying portion 20 may include a reflective surface in the form of a mirror coating or metallic foil. The reflective surface is positioned so as to reflect rays from the light source 40 which are directed rearwards from the lens carrying portion 20, thereby to augment the forwardly directed rays from the light source 40. In this way, the reflective surface increases the illumination provided by the light source 40 to further assist with night time reading, or reading in dim conditions, while also directing rays away from the wearer's face.

We have been selling the Framex Readers for about four months. Over that time, we have seen sales of this product increase to such an extent that we are now considering using the electroluminescent light source with a whole range of different spectacle frame designs.

However, yesterday I received a letter from Ruthless Attorneys, Inc. relating to infringement of a South African patent. A copy of this letter is attached.

Please advise us as to our position and how we should respond to the letter.

Yours faithfully,

Framex (Pty) Ltd"

DRAWINGS OF THE FRAMEX READERS

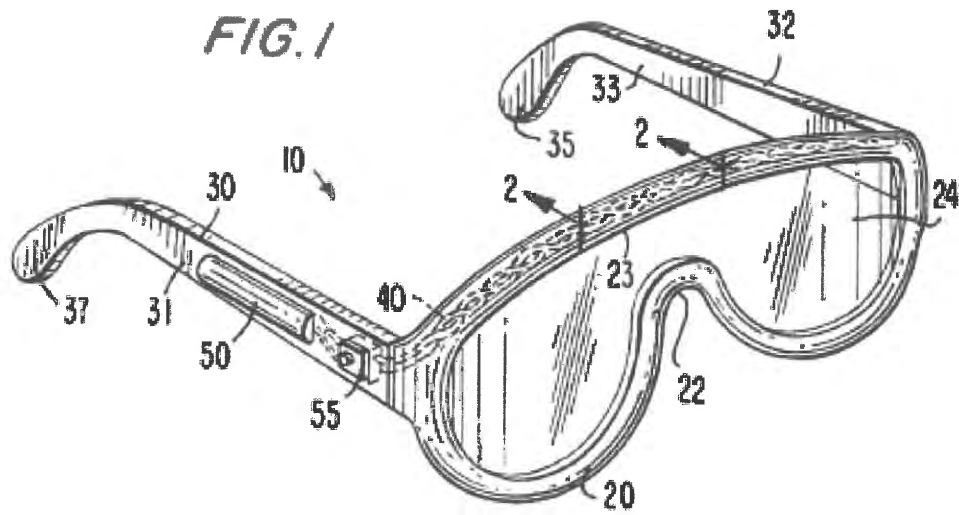


FIG. 2

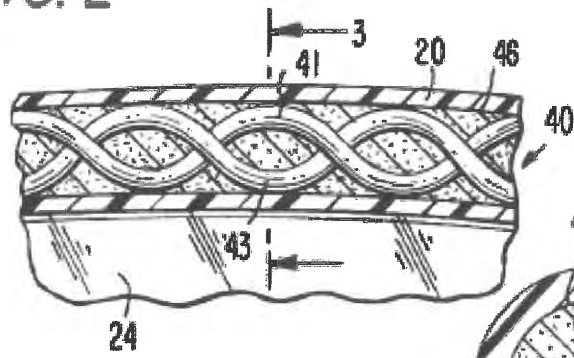
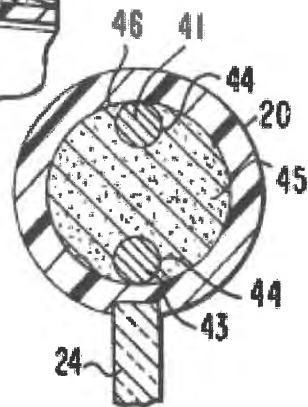


FIG. 3



LETTER OF DEMAND

Ruthless Attorneys, Inc.
PRETORIA

Framex (Pty) Ltd
Johannesburg

Our Ref: LIT 0574
Date: 1 September 2020

Dear Sirs

Infringement of South African Patent 2010/01234

We write to you on behalf of our client, Design Specs (Pty) Ltd, the proprietor of the above South African patent.

A copy of the patent specification is attached marked Document A.

The patent is in full force and effect and our client relies upon it for the protection of its rights.

We are advised by our client that you are manufacturing, offering for sale, and selling reading glasses under the name "Framex Readers", which fall within the scope of the patent. We have been provided with one of your Framex Readers, from which it is clear that your product (hereinafter referred to as "**the infringing product**") falls within the scope of the claims of our client's patent. As such, we have been instructed to demand from you, as we now do, that:

1. You immediately stop manufacturing, offering for sale and/or selling the infringing product;
2. You hand over to us under oath for destruction all infringing products still in your possession or under your control;
3. You furnish our client with a written undertaking not to infringe its patent rights again in the future;
4. You pay our client such damages as may be due; and
5. You pay our client's legal costs.

If we do not receive compliance with the demands set out above within two weeks of the date of this letter, we hold instructions to institute legal proceeding against you without further notice to you.

Yours faithfully

Ruthless Attorneys, Inc.

You conduct some background checks and establish that:

- (a) ZA 2010/01234 [Document A] was filed on 30 February 2010 claiming priority from an earlier South African patent application which was filed on 2 March 2009;
- (b) All formalities in respect of ZA 2010/01234 were correctly complied with; and
- (c) ZA 2010/01234 is currently in force.

You also conduct a prior art search which locates the following documents:

- (i) US 2,904,670 [Document B]; and
- (ii) US 2,638,532 [Document C].

QUESTION 1

(35 marks)

Please provide your client with detailed advice on whether or not the manufacture and sale of your client's Framex Readers amounts to infringement of the claims of ZA 2010/01234.

QUESTION 2

(35 marks)

Please provide your client with detailed advice on the validity of ZA 2010/01234 in light of US 2,904,670 and US 2,638,532.

QUESTION 3

(30 marks)

Please advise your client on the best way forward, and provide your client with a draft response to the letter from Ruthless Attorneys, Inc.

READING GLASSES

BACKGROUND OF THE INVENTION

This invention relates to reading glasses.

A challenge often facing readers of printed material is providing temporary, portable lighting for reading in a dark or dimly lit place such as, for example, while traveling in a car at night or in the presence of someone trying to fall asleep. In these situations, it is desirable to have a light source that does not require use of the reader's hands so that the reader may use both hands to hold the book being read.

SUMMARY OF THE INVENTION

According to the invention, there is provided reading glasses including:

- a frame for holding one or more lenses for the reading glasses;
- a pair of earpieces connected to the frame, each of the earpieces having a proximal end located adjacent the frame and a distal end disposed so as to be located adjacent an ear of a user when the reading glasses are worn;
- at least one light source for illuminating a space in front of the lenses;
- a battery compartment on at least one of the earpieces; and
- a switch for selectively providing electrical connection between a battery in the battery compartment and the at least one light source.

Further features of the reading glasses according to the invention are defined in the claims.

A preferred embodiment of the invention is described in detail below and illustrated in the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of reading glasses according to the invention in an open or unfolded condition;

FIG. 2 is a perspective view of the reading glasses of the invention in a closed or folded condition; and

FIGS. 3 and 4 are enlarged cross-sectional fragmentary views of a portion of the reading glasses shown in FIGS. 1 and 2, illustrating an automatic on/off switching mechanism and wiring.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

With reference to FIG. 1 of the drawings, reading glasses according to the invention include a frame 10 and two earpieces 12. Each of the earpieces 12 has a proximal (front) end located adjacent the frame 10 and a distal (rear) end disposed so as to be located adjacent an ear of a user when the reading glasses are worn. The front end of each of the earpieces 12 is pivotally connected to lateral sides of the frame 10 in a manner which is described in more detail below.

In the illustrated embodiment, the frame 10 includes three separate portions, i.e. a central portion 14 and two side portions 16 and 18. A pair of lenses 20 are attached to the frame 10, as shown. While the lenses 20 in this embodiment are reading (magnifying) lenses, it will be appreciated that the lenses could also comprise other types of lenses such as, for example, prescription lenses. Also, although the frame 10 is illustrated as three separate portions 14, 16 and 18, the frame could also take on other forms (not illustrated), such as a single piece frame defining a pair of openings for the lenses 20.

The frame 10 and the earpieces 12 are formed from a suitable non-electrically conductive material, such as a polymer. Each of the side portions 16 and 18 of the frame 10 is provided with a light source 22 which, in this embodiment, comprises a solid state light emitting diode (LED). A battery compartment 24 is provided at the rear end of each earpiece 12 for holding a battery 26. The batteries 26 serve as power sources for the LEDs 22, and are electrically connected to these LEDs by conductors 28 embedded within the earpieces 12, and switches 30 and 32. In the preferred embodiment of the invention, the LEDs 22 are super bright (high intensity) white LEDs, which generate little heat and are energy-efficient. Such LEDs are capable of providing a relatively narrow, conical-shaped beam of light that can be well focused in a particular direction. It is useful for the LEDs to have a relatively narrow viewing angle of approximately 20 degrees, but other angles, as well as other beam shapes (besides conical), may be employed. However, the use of super bright white LEDs and a viewing angle of approximately 20 degrees can result in a highly focused beam of light providing high intensity illumination of a relatively small space on which the user's eyes focus when reading.

The batteries 26 may be coin cell batteries, as shown, but other batteries, including rechargeable batteries, may also be used. In the illustrated embodiment, each battery compartment 24 has a removable closure member (not shown) which allows for the replacement of the batteries 26, as required.

The switches 30 and 32 on each of the earpieces 12 are provided in series along the conductor 28 for selectively connecting one of the batteries 26 to one of the LEDs 22. In this embodiment, each switch 30 is a manually operated switch, with at least a part of the switching mechanism enclosed within the earpiece 12 to eliminate a potentially unattractive design aspect. As shown in FIGS. 1 and 2, each switch 30 may be provided as a slide

actuator having a projecting portion arranged to slide along the length of a slot between an "on" position at one end of the slot and an "off" position at the other end. These types of switches are well known in the art and will therefore not be described in any further detail.

The switches 32 on the earpieces 12 are automatic switches, and are described in more detail with reference also to FIGS. 3 and 4 of the drawings. As can be seen, the front end of each earpiece 12 terminates in a hinge member 36, and each side of the frame 10 defines a hinge member 38. A hinge pin 40 is inserted into a through hole in the hinge member 36 and a through hole in the hinge member 38 to permit the earpiece 12 to pivot relative to the frame 10, about the hinge pin 40, between a first position, in which the reading glasses are in an open, unfolded condition as illustrated in FIG. 1, and a second position, in which the reading glasses are in a closed, folded condition as illustrated in FIG. 2.

Each conductor 28 is bent around one of the hinge members 36 as shown in FIGS. 3 and 4 of the drawings. Also, a lead wire 42 of each LED 22 extends on the frame 10 as shown in FIGS. 3 and 4. When each earpiece 12 is in the first position (see FIG. 3), the conductor 28 contacts the lead wire 42 to form an electrical connection between the battery 26 and the LED 22, and thereby causes illumination of the LED. However, when each earpiece 12 is rotated into the second position (see FIG. 4), the conductor 28 is displaced from the lead wire 42 to form a break in the electrical connection between the battery 26 and the LED 22, and thereby prevents illumination of the LED.

The hinged connection between each earpiece 12 and the frame 10 may be provided with a spring, a latching mechanism, or the like (not shown) to hold each earpiece 12 securely in the first position so as to retain proper electrical contact between the conductors 28 and the lead wires 42 of the LEDs 22, during use.

Both switches 30 and 32 must be "on" in order to complete the electrical connection between the relevant battery 26 and its corresponding LED 22. When the switches 30 are "on", each automatic switch 32 operates such that, with the relevant earpiece 12 in the position illustrated in FIG. 1, i.e. in the open or unfolded condition of the reading glasses, an electrical connection is established between the relevant battery 26 and its associated LED 22, causing illumination of that LED, and with the earpiece 12 in the position illustrated in FIG. 2, i.e. in the closed or folded condition of the reading glasses, the relevant battery 26 is electrically disconnected from its associated LED 22, preventing illumination of that LED.

The automatic switching feature has the advantage of avoiding inadvertent use of energy by ensuring that the LEDs are illuminated only when the reading glasses are in the open, unfolded condition for reading, and thereby serves to lengthen the life of the batteries 26. In other words, the design ensures that the LEDs will be "off" when the reading glasses are not in use, i.e. when they are in the closed, folded condition. This advantage is improved upon

by the manual switching feature, which permits a user to selectively turn off the LEDs while wearing the glasses, for example when there is sufficient ambient light and the user does not need the LEDs.

CLAIMS

1. Reading glasses including:

a frame for holding one or more lenses for the reading glasses;

a pair of earpieces connected to the frame, each of the earpieces having a proximal end located adjacent the frame and a distal end disposed so as to be located adjacent an ear of a user when the reading glasses are worn;

at least one light source for illuminating a space in front of the lenses;

a battery compartment on at least one of the earpieces; and

a switch for selectively providing electrical connection between a battery in the battery compartment and the at least one light source.

2. Reading glasses according to claim 1, wherein the frame carries two light sources, and each earpiece includes a battery compartment for housing a battery, and a switch for selectively providing electrical connection between the battery and one of the light sources.
3. Reading glasses according to claim 2, wherein each light source comprises a solid state light emitting diode (LED) which is mounted in the frame to provide a beam of light that is focused in a particular direction.
4. Reading glasses according to claim 3, wherein each LED provides a conical shaped beam of light having a viewing angle of 20 degrees.
5. Reading glasses according to any one of claims 2 to 4, wherein each of the earpieces includes a first switch, which is manually operable to switch between an "on" condition and an "off" condition, and a second, automatic switch.
6. Reading glasses according to claim 5, wherein the earpieces are displaceable between a first position, with the reading glasses in an open, unfolded condition, and a second position, with the reading glasses in a closed, folded condition, wherein the automatic switch is switched to an "on" condition automatically when the earpieces are displaced into the first position, and wherein the automatic switch is switched to an "off" condition automatically when the earpieces are displaced into the second position.

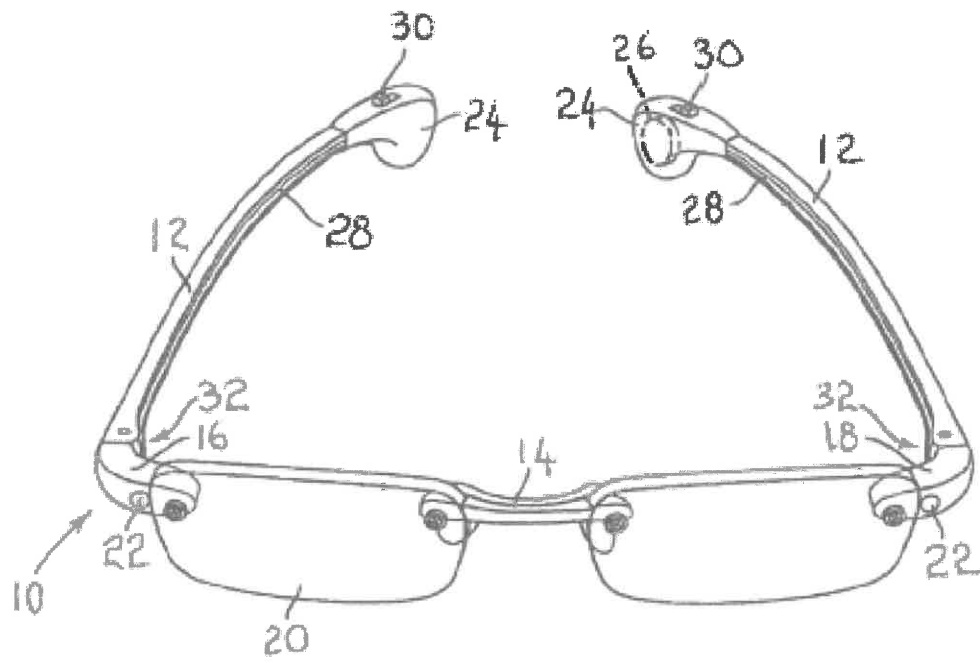


FIG. 1

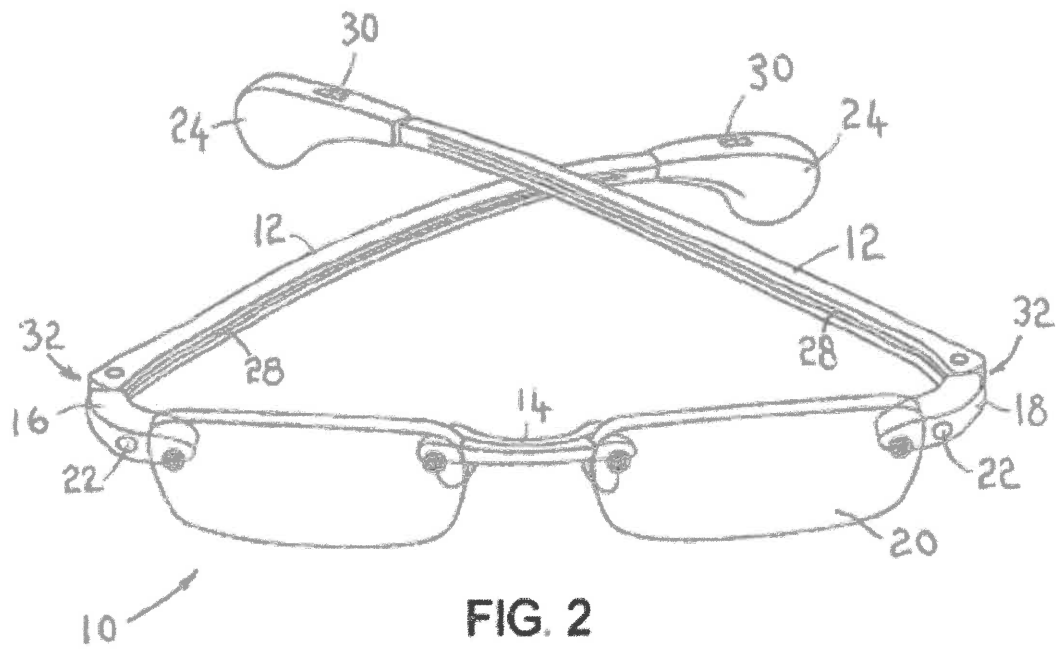
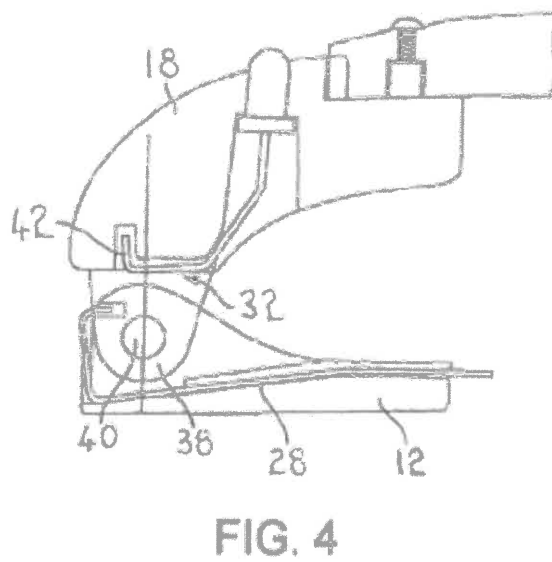
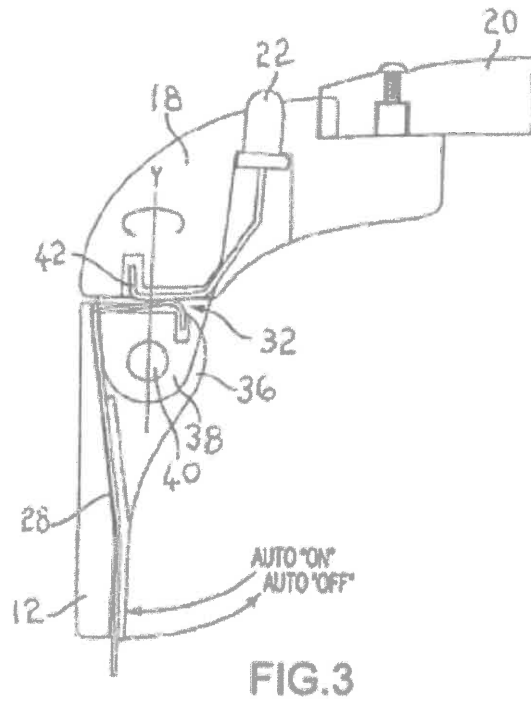


FIG. 2



Sept. 15, 1959

A. CALMES

2,904,670

ILLUMINATING SPECTACLES

Filed Dec. 9, 1957

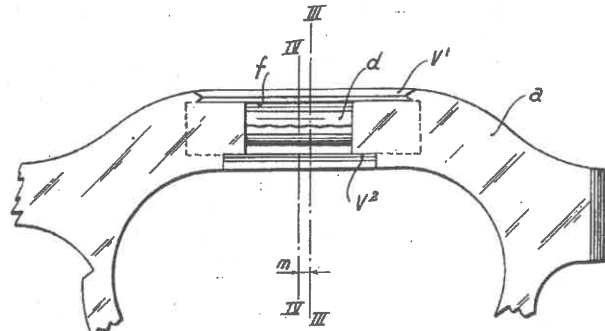


Fig. 1

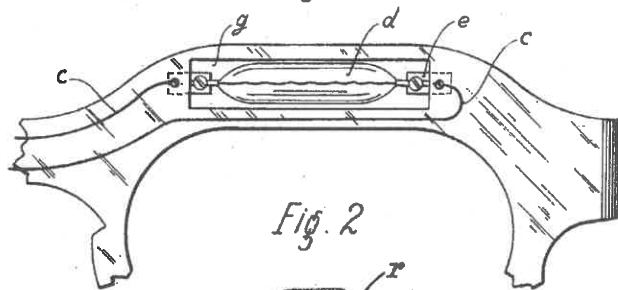


Fig. 2

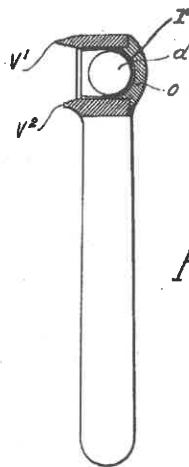


Fig. 3

INVENTOR.
ANDRE' CALMES
BY
Irwin D. Thompson
ATTY.

United States Patent Office

2,904,670

Patented Sept. 15, 1959

1

2,904,670

ILLUMINATING SPECTACLES

André Calmes, Nice, France

Application December 9, 1957, Serial No. 701,510

Claims priority, application France April 12, 1957

5 Claims. (Cl. 240—2)

The present invention has reference generally to illuminating spectacles of the type comprising small electric lamps fed by an independent source of current such as a battery which may be carried in a pocket of the user's garment and accommodated in recesses formed in the frame of the spectacles, thereby permitting the user to have a clear view of objects situated at a small distance from his eyes, for example a clear view of a printed sheet which he wishes to read or of a plain sheet on which he wishes to write or to do a similar work without having to resort to normal illumination and without disturbing neighboring persons while doing such work.

An object of the invention is to improve this kind of spectacles in several respects particularly with regard to the arrangement of the lamp-receiving recesses, the leads feeding the lamps with electric current and also in connection with proper definition of the light beams emitted by said lamps so as to ensure a more accurate direction and a better focussed field while at the same time concealing the said leads and the lamp terminals.

Another object of the invention is to provide illuminating spectacles of the aforesaid type wherein the recess formed in the frame for receiving the lamp is open both forwardly and rearwardly, the rearward opening of said recess having a sufficient size for permitting the lamp to be introduced and fixed in proper position (preferably by means of small screws) to terminals connected in turn to the source of electricity, while the forward opening of said recess has a size smaller than that of the lamp for preventing any undue escape of the lamp therethrough after it has been introduced into said recess, said rearward opening of the lamp-receiving recess being closed by an opaque cover which may be frictionally engaged along its periphery or removably slid into side grooves formed in the rear portion of the spectacles frame.

A further object of the invention is to provide spectacles of this type wherein the edges of the lamp-receiving recess are so arranged as to conceal the extremities of the lamp and its terminals, also for properly defining widthwise and heightwise the light beam emitted by said lamp, the middle plane of each recess being offset inwardly i.e. towards the nose of the spectacles' wearer with respect to the middle plane of the ocular portion of the frame for imparting convergence to the two light beams emitted by the lamps.

A still further object of the invention is to provide spectacles as aforesaid, wherein the leads through which the electric current flows toward the lamps are imbedded in the material of which the spectacles frame is made and extend adjacent its rear face so as not to show through the frame when looking at it from some distance off its front face, the lamp or each lamp being preferably provided with a small reflector extending along its rear face e.g. along the back face of the bulb, said reflector being held in position by being trapped between the lid that closes the recess rearwardly and the neighboring parts of the frame which flank the lamp-receiving recess on the front face of the frame.

2

With these and such other objects in view as will incidentally appear hereafter, the invention comprises the novel construction and combination of parts that will now be described with reference to the accompanying drawing:

Figure 1 is a fragmentary elevational view partly broken away of the part of the spectacles frame corresponding to the left eye of the wearer, said frame being seen from its front face.

Figure 2 is a view similar to Fig. 1 but showing the part of the spectacles frame corresponding to the right eye of the wearer, said frame being seen from its rear face.

Figure 3 is a sectional view on the line III—III of Fig. 1.

In the constructional embodiment shown in the drawing, the spectacles frame comprises in its portion overlying each of the wearer's eyes a recess *g* (Fig. 2) in which a small electric lamp *d* is accommodated. Said lamp is connected by suitable terminals to contacts *e* which are held in position by small screws to which leads *c* are connected, said leads being imbedded in the material (for example a plastic material) of which the frame is made and being connected at their remote end (not shown) to a suitable source of electric current such as a small dry or rechargeable battery which may be located for example in one of the pockets of the garment worn by the wearer.

The recess *g* is constituted by a cavity open both at its front end and at its rear end and having a sufficient size at its rear end for permitting the lamp or bulb *d* to be readily inserted into said cavity but a sufficiently restricted size at said front end for preventing said lamp *d* from slipping out in use once it has been properly inserted and positioned between the contacts *e*. The rear end of the lamp-receiving recess or cavity *g* is closed by a lid *o* advantageously of curved shape as shown in Fig. 3 which may be held either by being forced into position and maintained by frictional contact or by being slid with more or less frictional resistance through side grooves (not visible in the drawing but obvious to anyone skilled in the art) formed in the adjacent material of the spectacles frame.

This arrangement ensures complete safety for the lamp *d* since the back lid *o* rests against the brow ridge and cannot unduly escape, while permitting the lamp *d* to be readily replaced when necessary.

The front end or mouth *f* of the recess or cavity *g* is of rectangular shape in the illustrated embodiment, its length being smaller than the length of the lamp itself so that the latter cannot escape and its ends and the contacts *e* are concealed. The front mouth *f* of the lamp-receiving cavity is provided with an upper vizor *v*¹ and a lower vizor *v*² which are suitably positioned and shaped for guiding the beam of light emitted by the lamp *d*. The lower vizor *v*² protects the wearer's eye from direct light rays emitted by the lamp *d*.

Advantageously the front end or mouth *f* of the lamp-receiving recess or cavity *g* has its middle transverse plane IV—IV (Fig. 1) slightly offset inwardly by a distance *m* from the middle plane of symmetry III—III of the corresponding ocular portion. By "inwardly" is meant here that the plane IV—IV is closer to the wearer's nose than the plane III—III. Owing to this arrangement, the two beams of light emitted by the two lamps *d* respectively adjacent the wearer's eyes are caused to converge forwardly towards the object (for instance a sheet of printed paper) being examined and illuminated by said lamps.

Advantageously also the current-carrying leads *e* are imbedded in that portion of the material of which the spectacles frame is made which is situated rearwardly so as not to show through said frame when the frame is looked at from a position situated some distance off its

2,904,670

3

front face. Obviously the leads *e* are connected by further leads also imbedded in one of the temples of the spectacles frame to the source of electric current as above stated.

Just behind the lamp *d* is arranged a reflector *r* of similar shape made for example of a polished metal blade which may advantageously have a U shape for encompassing the lamp *d* on three sides, namely on its upper side, on its back said and on its lower side. Said reflector *r* has substantially the same length as the recess *g* and is locked in position by having its end abutted against the side flanks of the opening *f*.

It will be seen from the foregoing that the lamps *d* are held in their recesses *g* under secure conditions, their terminals being concealed and invisible from the outside, the light beams emitted by said lamps being sharply defined by the outlines of the front openings of said recesses, while the convergence or squinting effect imparted to said light beams increases the illumination furnished by these spectacles.

Minor constructional details may be varied without departing from the scope of the subjoined claims.

What is claimed is:

1. Illuminating spectacles comprising a frame, a pair of recesses formed in the portions of said frame overlying the ocular portions, said recesses being open at their front and rear ends, an elongated electric lamp accommodated in each of said recesses, holding and connecting means for said lamps in said recesses, leads connected to said means and imbedded in the material of which the frame is made, said leads being connectable to a source of electric current, opaque lid means for removably closing the rear end of each of said recesses, the front end of each recess being shorter than the lamp so that the peripheral portion of said front end conceals said holding and connecting means, the light rays from the lamps freely passing through said front ends of the recesses.

2. Illuminating spectacles comprising a frame, a pair of recesses formed in the portions of said frame overlying the ocular portions, said recesses being open at their front and rear ends, an electric lamp accommodated in each of said recesses, holding and connecting means for said lamps in said recesses, leads connected to said holding means and imbedded in the material of which the frame is made, said leads being connectable to a source of electric current, opaque lid means removably engaged in the periphery of the rear end of each recess for closing it, the front end of each recess being smaller than the lamp so that the peripheral portion of said front end conceals said holding and connecting means, the middle vertical plane of each recess being inwardly offset with respect to the middle vertical plane of the corresponding ocular portion so as to provide overlapping of the light beams emitted from said lamps.

3. Illuminating spectacles comprising a frame, a pair of elongated recesses formed in the portions of said frame overlying the ocular portions, said recesses being open at their front and rear ends, an electric lamp accommodated in each of said recesses, holding and connecting means for said lamps in the sides of said recesses, leads connected to said holding means and imbedded in the material of the frame, said leads being connectable to a

4

source of electric current, side grooves formed in the periphery of the rear end of each recess, an opaque lid removably engaged in said side grooves for closing the recess, the front end of each recess being smaller than the lamp for preventing it from slipping out while concealing said holding and connecting means, the middle vertical plane of each recess being inwardly offset with respect to the middle vertical plane of the corresponding ocular portion to provide overlapping of the light beams from the lamps.

4. Illuminating spectacles comprising a frame, a pair of elongated recesses formed in the portions of said frame overlying the ocular portions, said recesses being open at their front and rear ends, an electric lamp accommodated in each of said recesses, holding and connecting means for said lamps in the sides of said recesses, leads connected to said holding means and imbedded in the material of the inward portion of the frame, said leads being connectable to a source of electric current, an opaque lid removably held by the periphery of the rear end of said recess for closing it, a reflector interposed between said lid and said lamp in each recess, the front end of each recess being smaller than the lamp for preventing it from slipping out while concealing said holding and connecting means, the middle plane of each recess being offset inwardly toward the wearer's nose with respect to the middle vertical plane of the corresponding ocular portion to provide overlapping of the light beams emitted by said lamps.

5. Illuminating spectacles comprising a frame having temples, a pair of elongated recesses formed in the portions of said frame overlying the ocular portions, said recesses being open at their front and rear ends, an electric lamp accommodated in each of said recesses, the rear ends of the recesses being of such a size as readily to allow of insertion of the lamp, holding and connecting means for the lamps in the sides of said recesses, leads connected to said holding means and imbedded in the material of the inward portion of the frame and in at least one of its temples, said leads being connectable to a source of electric current, an opaque lid of inwardly curved outline removably held by the periphery of the rear end of said recess for closing it, a U-shaped reflector interposed between said lid and said lamp in each recess, the sides of the reflector being held and concealed under the frame material at the opposite ends of said recess, the front end of each recess being shorter than the lamp for holding the same securely in the recess while concealing said holding and connecting means, the middle vertical plane of each recess being offset inwardly toward the wearer's nose with respect to the middle vertical plane of the corresponding ocular portion to provide overlapping of the light beams emitted by said lamps, each recess being bordered by upper and lower vizors.

References Cited in the file of this patent

FOREIGN PATENTS

235,202	Great Britain	Feb. 4, 1926
361,177	Great Britain	Nov. 19, 1931
748,733	France	Apr. 25, 1933
500,398	Belgium	Jan. 31, 1951

May 12, 1953

T. L. BRADY

2,638,532

COMBINED SPECTACLE FRAME AND LIGHT

Filed March 23, 1949

Fig. 1.

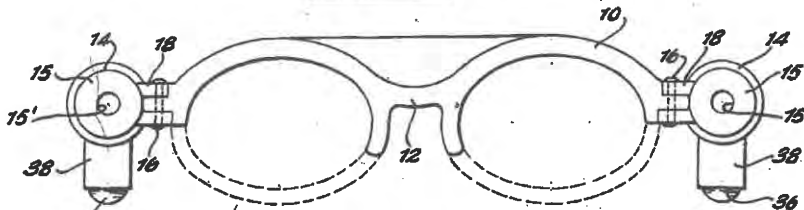


Fig. 2.

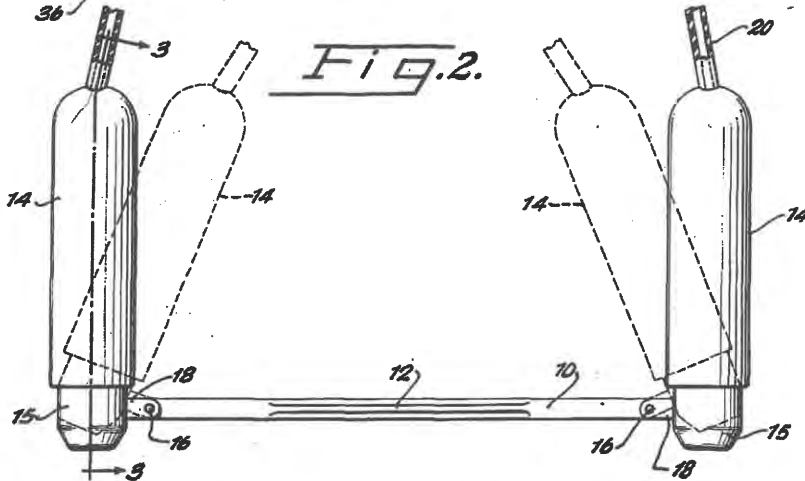


Fig. 3.

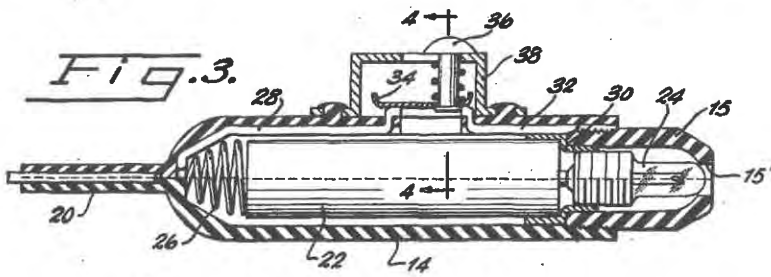
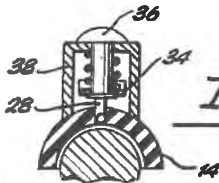


Fig. 4.



Inventor

THOMAS L. BRADY.

BY

H. H. Hodges

ATTORNEY

Patented May 12, 1953

2,638,532

UNITED STATES PATENT OFFICE

2,638,532

COMBINED SPECTACLE FRAME AND LIGHT

Thomas L. Brady, Henderson City, Ky.

Application March 23, 1949, Serial No. 82,951

1 Claim. (Cl. 240—59)

1

Innumerable individuals desire to read after they have retired. Very often two individuals use the same bedroom, and one of these people may find it difficult to relax and sleep if a light is ignited while the other is relaxing and reading. Also, a person may desire to arise during the night consequently needing illumination, but not wanting to disturb the other individual using the same room.

An object of my invention is to provide a light suspending spectacle frame which may be used by one person directing light rays in a manner which will not interfere with another person.

A further object is to provide a light suspending spectacle frame which is adapted to direct light rays to one point and not diffuse these rays throughout a large area.

A still further object is to provide a light suspending spectacle frame which is adapted to direct light rays to a desired focal point and not to permit these rays to be diffused to cover a broad area.

An additional object is to provide a light suspending spectacle frame provided with a plurality of individually controlled electric light bulbs.

In the drawings:

Fig. 1 is a view in front elevation;

Fig. 2 is a view in top plan;

Fig. 3 is a vertical cross-section on the line 3—3 of Fig. 2; and

Fig. 4 is a vertical cross-section on the line 4—4 of Fig. 3.

In Figure 1, I have disclosed a light suspending spectacle frame which, in full lines, represents a frame adapted to suspend suitable electric light bulbs and which may have, as disclosed in dotted lines, a complete frame whereby prescribed lenses may be properly positioned in the frame for the use of an individual requiring prescription lenses for proper vision.

The frame 10 is provided with a nose bridge section 12, positioned and centered between two portions of the frame 10 which preferably bow upwardly so that they will not be in the wearer's line of vision. To the ends of the frame 10, I suitably secure by rivets or the like, a bulb and battery holder 14 by means of the conventional rivets 16. The rivets 16 preferably are provided with peened ends to avoid any rough edges which might prove to be inconvenient or annoying.

The bulb and battery holder 14 is sufficiently spaced apart from the pivot point by extended hinge links 18 of sufficient length so that when the light suspending spectacle frame is not in

2

use, the bulb and battery holding case 14 may be folded back to lie in planes approximately parallel with the plane on the frame 10. To the end of the bulb and battery holder 14, remote from the frame 10, I suitably attach conventional temple end pieces 20 which may be designed to have loops bent to extend over the wearer's ears or may be provided in the form of a relatively flat bar to suitably press against the wearer's head for the purpose of holding the spectacle frame in a properly adjusted position.

The bulb and battery holder 14 is suitably shaped so that it may properly hold an electric battery 22, having one terminal positioned to contact the central terminal of an electric light bulb 24. The other terminal, or casing of the battery being in contact with a suitable spring 28 which completes an electric contact with a conduit 28, and urges the battery toward the light bulb. The bulb 24 is screw-threaded within a metal ferrel 30 which frictionally contacts a conventional insulating case, enclosing the battery 22. The ferrel 30 is in electric contact with a conduit 32 which extends between the surface of the battery and the case 14 to a point spaced apart from the end of a conduit 28 which electrically contacts the outside electrode of the electric battery 22.

As disclosed more clearly in Figs. 3 and 4, it will be noted that a sliding contact 34 is provided to bridge the spaced apart distance between the conduits 28 and 32 when desired. An electric contact therebetween may be closed or opened by a conventional switch comprising a spring urged rivet 36 extending through the housing 38 and loosely affixed to the sliding contact 34. When the rivet 36 and the sliding contact 24 are advanced to the position in which they are shown in Fig. 3, proper electric contact is made between the battery 22 and the bulb 24. By retracting the rivet 36 and the sliding contact 34 (to the left as viewed in Fig. 3), the circuit will be opened between the conduits 28 and 32.

When the switch is advanced a circuit is complete from the outside casing of the battery 22, through the conduit 32, the ferrel 30 to the outside pole of the light bulb 24; the other pole which is in contact with its central pole of the battery 22.

The electric bulb 24 is adapted to fit snugly within the ferrel 30 as well as within a cap 18 which preferably is screw-threaded to the internal screw-threads of the case 14. Thus, in assembling the battery and light, it will be obvious that the battery 22 will be inserted in the casing

2,638,532

14, subsequently the bulb 24 will be placed within the cap 15; after it has been positioned and frictionally held by the ferrel 30 to afford an electric contact between the ferrel and the external electrode of the bulb 24. Subsequently, by engaging the screw-threads provided on the cap 15 with the internal screw-threads in the end of the casing 14, the bulb 24, and the ferrel 30 will be urged to the position in which they are most clearly shown in Fig. 3. In this manner, the bulb 24 is held in electric circuit with the ferrel 30 and the central pole to the battery 22, the ferrel 30 extending over the insulating covering conventionally provided on the battery. Obviously, the cap 15 is provided at its end remote from the screw-threads thereon with an aperture 15' through which light rays from the bulb 24 may readily pass.

With the foregoing described light suspending spectacle frame, it will be obvious that by advancing the sliding contact 34 into the position in which it is shown in Fig. 3, an electric circuit will be made between the battery 22 and the electric bulb 24, so that light rays may pass directly through the aperture 15'. With this arrangement, it may be readily understood that the wearer of the light suspending spectacle frame, may when desired, direct light rays onto any desired area close to the wearer without the rays being diffused throughout any substantial area. Thus, an individual wanting to read after he has retired, may be readily provided with a sufficient amount of light, the rays of which will be directed on the reading matter he may wish to hold relatively close to his eyes, yet these rays will not be diffused to disturb another person who may be in the near vicinity.

It will be obvious that the light suspending spectacle frame is provided with two electric batteries and light bulbs, both being relatively close to the wearer's eyes. An individual may readily control the intensity of the light rays by using either one of the lights or both. Also in view of the fact that the light bulbs are wholly contained within the caps 15, the rays thereof protruding through the aperture 15', no direct light rays will reach the eyes of the wearer, as they will be focused on the material he desires to see.

I claim:

A light suspending apparatus including a spectacle frame, temple-ends hinged to the said frame, a battery and light enclosing container forming a part of the said temple-ends, and a cap enclosing the said light, the said cap being screw-threaded to the battery container and having a hinge link extending to the said spectacle frame.

THOMAS L. BRADY.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
D. 117,127	Pike	Oct. 10, 1939
1,615,087	Boerman	Jan. 18, 1927
2,166,282	Benjafield	July 18, 1939
2,203,469	Mesch	June 4, 1940
2,503,850	Smith et al.	Apr. 11, 1950

FOREIGN PATENTS

Number	Country	Date
403,046	England	Dec. 14, 1933
491,677	England	Sept. 7, 1938