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# CERTIFICATE OF GRANT INNOVATION PATENT

**Patent number:** 2021105809

The Commissioner of Patents has granted the above patent on 6 October 2021, and certifies that the below particulars have been registered in the Register of Patents.

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**Title of invention:**

SMART SPECTACLES WITH DISPLAY AND REMINDER TECHNIQUES

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**Term of Patent:**

Eight years from 18 August 2021



Dated this 6<sup>th</sup> day of October 2021

Commissioner of Patents

**PATENTS ACT 1990**

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



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NOTE: This Innovation Patent cannot be enforced unless and until it has been examined by the Commissioner of Patents and a Certificate of Examination has been issued. See sections 120(1A) and 129A of the Patents Act 1990, set out on the reverse of this document.



Dated this 6<sup>th</sup> day of October 2021

Commissioner of Patents

## PATENTS ACT 1990

The Australian Patents Register is the official record and should be referred to for the full details pertaining to this IP Right.



**Sect 120(1A)** Infringement proceedings in respect of an innovation patent cannot be started unless the patent has been certified.

- (1) Where a person, by means of circulars, advertisements or otherwise, threatens a person with infringement proceedings or other similar proceedings a person aggrieved may apply to a prescribed court, or to another court having jurisdiction to hear and determine the application, for:
  - (a) a declaration that the threats are unjustifiable; and
  - (b) an injunction against the continuance of the threats; and
  - (c) the recovery of any damages sustained by the applicant as a result of the threats.
- (2) Subsection (1) applies whether or not the person who made the threats is entitled to, or interested in, the patent or a patent application.

*Certain threats of infringement proceedings are always unjustifiable.*

- (1) If:
- (a) a person:
    - (i) has applied for an innovation patent, but the application has not been determined; or
    - (ii) has an innovation patent that has not been certified; and
  - (b) the person, by means of circulars, advertisements or otherwise, threatens a person with infringement proceedings or other similar proceedings in respect of the patent applied for, or the patent, as the case may be;
- then, for the purposes of an application for relief under section 128 by the person threatened, the threats are unjustifiable.

(2) If an application under section 128 for relief relates to threats made in respect of an innovation patent that has not been certified or an application for an innovation patent, the court may grant the application the relief applied for.

(3) If an application under section 128 for relief relates to threats made in respect of a certified innovation patent, the court may grant the applicant the relief applied for unless the respondent satisfies the court that the acts about which the threats were made infringed, or would infringe, a claim that is not shown by the applicant to be invalid.

**certified**, in respect of an innovation patent other than in section 19, means a certificate of examination issued by the Commissioner under paragraph 101E(e) in respect of the patent

## **SMART SPECTACLES WITH DISPLAY AND REMINDER TECHNIQUES**

### **FIELD OF INVENTION**

The present invention relates to wearable devices and in particular to wearable devices for display and reminder techniques.

The invention has been developed primarily for use as a smart spectacle system with display and reminder techniques, and will be described hereinafter with reference to this application. However, it will be appreciated that the invention is not limited to this particular field of use.

### **BACKGROUND OF INVENTION**

Background description includes information that may be useful in understanding the present invention. It is not an admission that any of the information provided herein is prior art or relevant to the presently claimed invention, or that any publication specifically or implicitly referenced is prior art.

Spectacles are important costume or wearable that has become part of a human body that is used for various reasons irrespective of age factors. The purpose for using spectacles or goggles may be different that varies from person to person. Most of them use them because of eyesight issues i.e., either long sight or short sight whereas others may use it to protect the harmful rays of monitor screens, laptops, etc. There are also spectacles available in the market for the purpose of riding to safeguard the eyes from dust or small insects that disturb the rider while riding or drive while driving.

A spectacle is an important object that will carried by a person almost all the time since they are working as a part of accessory that is very essential to give them a clear vision. Thus, it is better to design the spectacles in a smarter way with IOT techniques embedded into them

so that they can act as a guide or caretaker by reminding them regarding the important things that have to be carried out by them like taking tablets at right time, findings things that are connected to them via Bluetooth etc.

A number of different types of eyewear glasses and spectacles that are known in the prior art. For example, the following patents are provided for their supportive teachings and are all incorporated by reference.

WO2015172418A1 Disclosed are smart glasses for a blind person, comprising: a front portion of the frame; lenses arranged in the front portion of the frame; and legs of the glasses hinged with both ends of the front portion of the frame. The smart glasses for a blind person further comprise: a sensor assembly disposed of in at least one of the following: the front portion of the frame, the lenses, and the legs of the glasses, wherein the sensor assembly is used for detecting the state parameters of the smart glasses for a blind person; and a control module provided in any one of the following: the front a portion of the frame, the lenses, and the legs of the glasses, wherein the control module is used to perform the present decision-making mechanism based on the detected state parameters by the sensor assembly status. The implementation of the present invention has the advantages of a reasonable structure set, small size, lightweight, convenience for use, and strong practicability, thereby improving the user experience when guiding a blind person.

US20100309427A1 A microphone, transmitter, speaker, receiver, and power source, all mounted to an eyeglasses frame, for sending and receiving signals wirelessly to and from a remote cell phone or another electronic device. The microphone and the transmitter can be mounted to extension arms that can be extended, pivoted, or otherwise moved to a position for use, and then moved to a stored position when not in use. Alternatively, the microphone, transmitter, speaker, receiver, and the power source can be mounted onto a clip-on or

another attachment member that mounts onto a conventional eyeglasses frame, or to a hat or other article worn on the head.

US20130044042A1 An electronic device including a frame configured to be worn on the head of a user is disclosed. The frame can include a bridge configured to be supported on the nose of the user and a brow portion coupled to and extending away from the bridge and configured to be positioned over a side of the brow of the user. The frame can further include an arm coupled to the brow portion and extending to a free end. The first arm can be positionable over a temple of the user with the free end disposed near the ear of the user. The device can also include a transparent display affixed to the frame adjacent to the brow portion and an input affixed to the frame and configured for receiving from the user an input associated with a function. Information related to the function can be presentable on the display.

The proposed technology is a smart spectacle-based IOT, that acts as a guide for the person wearing it. The spectacle will be designed by keeping in mind elderly persons as well as young ones to help find their tablets and things respectively. The smart spectacles are Bluetooth enabled that will display the list of tablets that has to be taken at that particular time in a prescribed manner. The proposed smart spectacle will be a caretaker for especially elderly persons with amnesia.

Above information is presented as background information only to assist with an understanding of the present disclosure. No determination has been made, no assertion is made, and as to whether any of the above might be applicable as prior art with regard to the present invention.

In the view of the foregoing disadvantages inherent in the known types of eyewear glasses or spectacles now present in the prior art, the present invention provides an improved system. As such, the general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new and the improved smart spectacle that is user-friendly, cost-effective based on IOT which has all the advantages of the prior art and none of the disadvantages.

## **SUMMARY OF INVENTION**

It is an object of the present invention to overcome or ameliorate at least one of the disadvantages of the prior art, or to provide a useful alternative.

It is an object of the invention in its preferred form to provide a smart spectacle system with display and reminder techniques.

The present technology relates to smart spectacles which come along with the display and alert mechanism that alarms the user regarding the medicines as well as other important notes. The proposed technology will be useful for proposed elderly persons since they suffer from memory loss due to the aging factor.

According to an aspect of the invention in a preferred form, there is provided a smart spectacle system for display and reminder techniques, the spectacles including: a sensor module; a short-range communication module; a trigger module; a wide-range mobile communication device; and a projector.

Preferably, the sensor module is adapted to initiate the trigger module and projector when there is a need for their operation.

Preferably, the short-range communication module is switched on using the button present in smart spectacle 100, and adapted to establish connectivity with peripheral devices and modules via Bluetooth protocols.

Preferably, the wide-range mobile communication device is in the form of a mobile phone, smartphone or similar electronic gadget, and adapted to receive alert messages.

Preferably, the projector is adapted to project the tablet prescription on an object the user is viewing, so that user can take the right tablets at the correct time

In the view of the foregoing disadvantages inherent in the known types of smart spectacles or glasses now present in the prior art, the present technology provides an improved and cost-effective IOT based smart spectacles. As such, the general purpose of the present technology, which will be described subsequently in greater detail is to provide a new and improved smart spectacle with a reminder techniques which have all the advantages of the prior art and none of the disadvantages.

The aspect of the proposed technology is to design and implement a smart spectacle that is based on IOT, embedded with reminder techniques. The technology focuses on vision eyewear glasses. Whereas designed especially to act as a guardian or caretaker for elderly persons suffering from amnesia.

Yet another aspect of the proposed technology is that the spectacle is pre-programmed with the sensor. The sensor is switched on using the switch present on the spectacle handle. The switch initiates the sensor and Bluetooth. The Bluetooth tries to establish a connection with paired smart devices such as the mobile phone of the user.



Yet another aspect of the proposed technology is that the trigger will be activated at regular intervals to trigger the projector. The projector displays the medicine prescription so that ever can take tablets at right time and thus acting as a caretaker. The spectacle also helps to find the lost things if they are paired with spectacles.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the following description or illustrated in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of description and should not be regarded as limiting.

These together with other objects of the invention, along with the various features of novelty which characterizes the invention, are pointed out with particularity in the disclosure. For a better understanding of the invention, its operating advantages and the specific objects attained by its uses, reference should be had to the accompanying drawings and descriptive matter in which there are illustrated preferred embodiments of the invention.

## **BRIEF DESCRIPTION OF DRAWINGS**

The invention will be better understood and objects other than those set forth above will become apparent when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawings wherein:

FIG. 1 illustrates the schematic view of smart spectacles with display and reminder techniques, according to the embodiment herein; and

FIG. 2 illustrates the flow diagram of smart spectacles with display and reminder techniques, according to the embodiment herein.

## **DETAILED DESCRIPTION OF INVENTION**

In the following detailed description, reference is made to the accompanying drawings which form a part hereof, and in which is shown by way of illustration specific embodiments in which the invention may be practiced. These embodiments are described in sufficient detail to enable those skilled in the art to practice the invention, and it is to be understood that the embodiments may be combined, or that other embodiments may be utilized and that structural and logical changes may be made without departing from the spirit and scope of the present invention. The following detailed description is, therefore, not to be taken in a limiting sense, and the scope of the present invention is defined by the appended claims and their equivalents.

While the present invention is described herein by way of example using several embodiments and illustrative drawings, those skilled in the art will recognize that the invention is neither intended to be limited to the embodiments of drawing or drawings described, nor intended to represent the scale of the various components. Further, some components that may form a part of the invention may not be illustrated in certain figures, for ease of illustration, and such omissions do not limit the embodiments outlined in any way. It should be understood that the drawings and detailed description thereto are not intended to limit the invention to the particular form disclosed but on the contrary, the invention covers all modification/s, equivalents and alternatives falling within the spirit and scope of the present invention as defined by the appended claims. The headings are used for organizational purposes only and are not meant to limit the scope of the description or the claims. As used throughout In this description, the word "may" be used in a permissive

sense (i.e., meaning having the potential to), rather than the mandatory sense (i.e., meaning must). Further, the words "a" or "an" mean "at least one" and the word "plurality" means one or more, unless otherwise mentioned. Furthermore, the terminology and phraseology used herein is solely used for descriptive purposes and should not be construed as limiting in scope. Language such as "including," "comprising," "having," "containing," or "involving," and variations thereof is intended to be broad and encompass the subject matter listed thereafter, equivalents, and any additional subject matter not recited, and is not intended to exclude any other additives, components, integers or steps. Likewise, the term "comprising" is considered synonymous with the terms "including" or "containing" for applicable legal purposes. Any discussion of documents, acts, materials, devices, articles and the like are included in the specification solely for the purpose of providing a context for the present invention.

In this disclosure, whenever an element or a group of elements is preceded with the transitional phrase "comprising", it is understood that we also contemplate the same element or group of elements with transitional phrases "consisting essentially of," "consisting of," "selected from the group consisting of", "including", or "is" preceding the recitation of the element or group of elements and vice versa.

Glasses also known as spectacles are vision eyewear that can be used for or her purposes too so much as cosmetic purposes. Safety glasses provide protection against flying debris and are also used in sports such as squash. People used in likely to wear glasses the older they get 93% of people between the ages of 65 and 75 wear corrective lenses. It has become more common for consumers to purchase eyewear with clear, non-prescription lenses illustrating glasses that are no longer a social stigma but a fashionable accessory.

Apart from their uses specified above, there is a need for designing spectacles that are smarter enough to help elderly persons to remind them regarding their tablet dosages and also help them into things through Bluetooth. Thus, the proposed technology acts as a guide or a caretaker, wherein the proposed smart spectacle is based on IOT and preprogrammed to serve the purpose.

Reference will now be made in detail to the exemplary embodiment of the present disclosure. Before describing the detailed embodiments that are in accordance with the present disclosure, it should be observed that the embodiment resides primarily in combinations arrangement of the system according to an embodiment herein and as exemplified in FIG. 1

FIG. 1 illustrates the schematic view of a smart spectacle with display and reminder techniques. The smart spectacle 100 includes a projector 104 that will display 105 the prescription of the tablet which has to be taken at that particular point of time. Trigger 104 will trigger 104 the projector 104 at regular intervals. Sensor 102 is connected to trigger 104 & projector to initiate them in the right situation. The mobile phone 106 is connected to smart spectacle 100 through Bluetooth 103.

FIG. 2 illustrates the flow diagram of a smart spectacle with display and reminder techniques. Smart spectacle 100 whenever the user wears the spectacle, has to just switch on the Bluetooth 103 to help it connect with peripheral devices. The Bluetooth 103 once switched on will also initiate the activation of various sensors 102 triggers 104 & projector 104. The trigger 104 will be activated by sensor 107 at regular intervals when the time for tablets consumption arrivals. The projector 104 will display the prescription on the lens and the person can consume the tablet accordingly.

In the following description, for the purpose of explanation, numerous specific details are set forth in order to provide a thorough understanding of the arrangement of the system according to an embodiment herein. It will be apparent, however, to one skilled in the art that the present embodiment can be practiced without these specific details. In other instances, structures are shown in block diagram form only in order to avoid obscuring the present invention.

## **WE CLAIM**

1. A smart spectacle system for display and reminder techniques, the spectacles including:
  - a sensor module;
  - a short-range communication module;
  - a trigger module;
  - a wide-range mobile communication device; and
  - a projector.
2. The system according to claim 1, wherein the sensor module is adapted to initiate the trigger module and projector when there is a need for their operation.
3. The system according to any one of the preceding claims, wherein the short-range communication module is switched on using the button present in smart spectacle 100, and adapted to establish connectivity with peripheral devices and modules via Bluetooth protocols.
4. The system according to any one of the preceding claims, wherein the wide-range mobile communication device is in the form of a mobile phone, smartphone or similar electronic gadget, and adapted to receive alert messages.
5. The system according to any one of the preceding claims, wherein the projector is adapted to project the tablet prescription on an object the user is viewing, so that user can take the right tablets at the correct time.



## **ABSTRACT**

Smart spectacles with display and reminder techniques can assist the elderly persons to find their things and get reminder alerts. The spectacles are based on IOT techniques that enable connection with electronic gadgets or smartphone. The reminder alerts can be presented to users of the smart spectacles to take their medicines at right time and acts as a guardian for elderly persons with amnesia. The smart spectacle system includes: a sensor module; a short-range communication module; a trigger module; a wide-range mobile communication device; and a projector.

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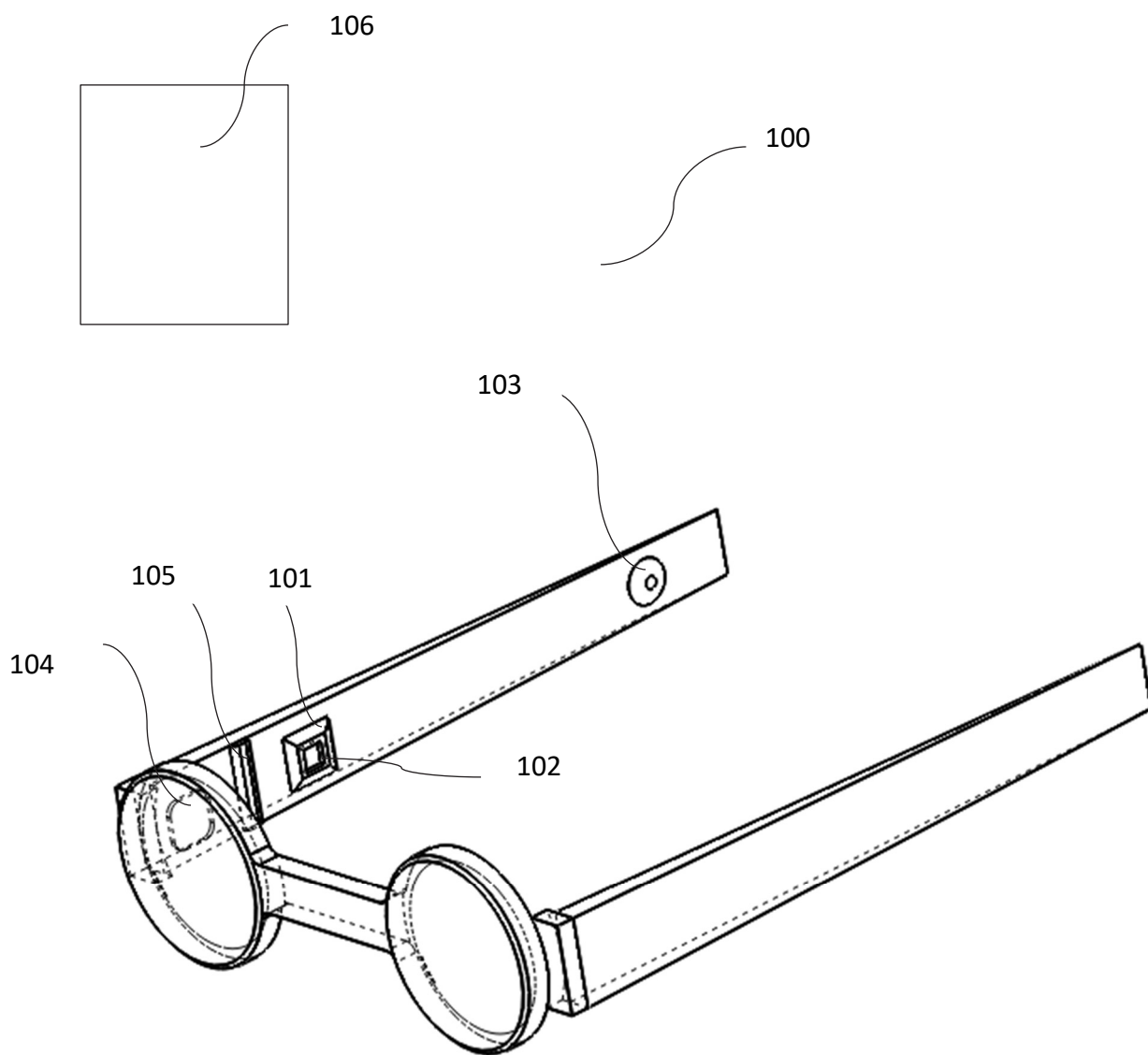
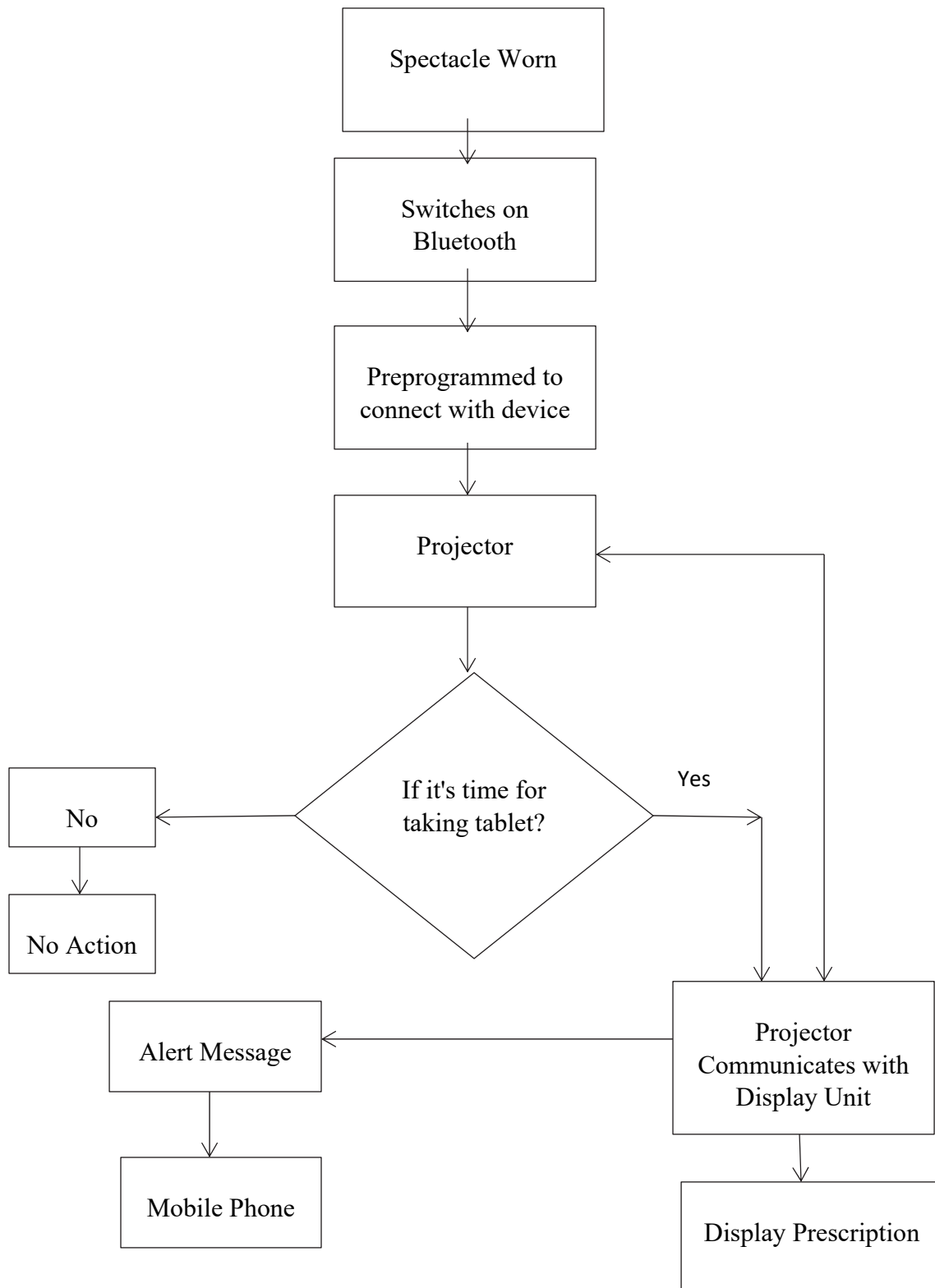


FIG. 1

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**FIG. 2**