

SPECTACLES WITH DETACHABLE SUNGLASSES**DESCRIPTION****1. ABSTRACT**

A type of spectacles clip-on device that includes a pair of spectacles and a pair of clip-on sunglasses. The said clip-on device is fitted at a suitable position on the spectacles and the bridge of the clip-on sunglasses, which allows the clip-on sunglasses to be fitted onto the outer surfaces of the spectacles, thereby forming a pair of sunglasses. The said pair of spectacles comes with a pair of lenses. The two lenses will be joined at the middle by a bridge with two nose pads. A butt-strap will be firmly fixed on the lateral surface of each of the lenses, the end of the butt-strap is joined to the earpiece. The bridge is joined to each of the two nose pads by a pad arm. One retaining ring is fitted on each of the two pad arms and a magnet will be inserted in the middle of each retaining ring. The pair of clip-on sunglasses comes with a pair of lenses, and the two lenses are joined by a bridge. A pair of retaining rings will be fitted on the bridge. A magnet will be inserted in the middle of each of the two retaining rings. This device, making use of the retaining rings on the clip-on sunglasses, allows the clip-on sunglasses to be fitted onto the bridge of the spectacles. The two magnets on the clip-on sunglasses will be correspondingly attracted to the two magnets behind the spectacles bridge, thereby securing the position of the clip-on sunglasses.

2. DESIGNATED DRAWINGS

- (1) The drawing designated for this product is : Drawing No. 1
- (2) A simple illustration on the component code for this drawing :-

10	Spectacles	11	Lens
12	Nosepad	13	Bridge
14	Butt-strap	15	Earpiece
16	Pad arm	17	Retaining Ring
18	Magnet		

20	Clip-on Sunglasses		
21	Lens	22	Bridge
23	Retaining Ring	24	Magnet

3. DESCRIPTION

THE TECHNOLOGICAL DOMAIN WHICH THE NEW MODEL COMES UNDER

This creation is a spectacle clip-on device. The design is such that magnets are placed on the pad arm behind the spectacles bridge while another pair of magnets will be placed at corresponding positions on the bridge the of the clip-on sunglasses. This allows the clip-on sunglasses to be fitted onto the outer surface of the spectacles, thereby forming a pair of sunglasses. This spectacles clip-on device comes under the technological domain where space is sufficiently made use of through simplifying the components.

PREVIOUS TECHNOLOGY

Most of the traditional and commonly seen clip-on sunglasses apply the magnetic theory by placing magnets at appropriate positions on the outer frame of the spectacles and at corresponding positions on the frame of the clip-on sunglasses. By using the magnetic theory in this manner, the clip-on sunglasses will be fitted onto the surface of the spectacles. Its main characteristic is the convenience of changing clip-on sunglasses of different colours at anytime.

As the magnets must be placed at fixed positions and since only the frame is able to provide such a position for normal spectacles, the traditional design referred to above can only be used on spectacles with frame. Such a function cannot be applied to rimless spectacles.

Another drawback of the traditional design referred to above is the fact that for frames with magnets, the magnets must be put onto the spectacles frame during the making of the frame and the magnets cannot be removed or changed. This is more troublesome in terms of

the making of the frame and cost is also higher. Also, the spectacles must be replaced if the magnet is damaged or malfunctions. In addition, the clip-on sunglasses cannot be used on frames that do not come with magnets, the frame must be changed into one that comes with magnets in order to use the clip-on sunglasses. The user has to incur additional cost and market competitiveness is lacking in this case.

THE NEW MODEL

In view of the above, this creation has effectively overcome the drawbacks and inconvenience of the traditional design by providing a spectacle clip-on device.

The main purpose of this creation is to provide a type of spectacle clip-on device. The design is such that a magnet is placed on each of the pad arm behind the spectacles bridge, with another pair of magnets placed at corresponding positions on the bridge of the clip-on sunglasses. This enables the clip-on sunglasses to be fitted onto the outer surfaces of the spectacles, thereby forming a pair of sunglasses.

This creation referred to above makes use of the changeable bridge on the spectacles by placing magnets on unutilized space on the bridge. The spectacles are thus equipped with magnets function without any additional work being done, which in turns reduces production costs.

In view of the above, the best part about this creation is the inclusion of a pair of spectacles and a pair of clip-on sunglasses. The said pair of spectacles comes with a pair of lenses and the two lenses are joined at the middle by a bridge with two nose pads. A butt-strap is firmly positioned on the lateral surface of each of the lenses while the end of the butt-strap is joined to the earpiece. The bridge is joined to each of the two nose pads by a pad arm. One retaining ring is positioned on each of the pad arm and a piece of magnet is inserted in the middle of each retaining ring.

The pair of clip-on sunglasses comes with a pair of lenses; a bridge will be positioned between the lenses to join them together. A pair of retaining rings will be firmly fixed onto the bridge and a piece of magnet will be inserted between each of the two retaining rings.

The pair of clip-on sunglasses is fitted onto the bridge of the spectacles by making use of the retaining rings on it. The magnets on the clip-on sunglasses will be correspondingly attracted to the two magnets behind the spectacle bridge. The pair of clip-on sunglasses is thus firmly positioned onto the spectacles due to magnetic forces.

Another purpose of this creation is the provision of a spectacles clip-on device as the spectacles bridge is a changeable component. The magnets that are positioned on the bridge in this creation may be changed anytime when necessary. Such a design is economic and practical as it is not necessary to replace the old spectacles with a new one.

If this creation is to be used on rimless spectacles with a bridge, it will be suitably fitted onto the lateral surface of the lenses because the magnets are positioned on the pad arms at the back of the bridge. This helps to provide a firm grip between the bridge and lenses.

If this creation is to be used on normal spectacles (with frame) with a changeable bridge, the magnets will be positioned on the pad arms behind the bridge. This creation helps to reduce the production costs of a pair of normal spectacles (with frame) as there is no need to carry out additional work by placing magnets on the spectacle frame.

Further illustrations, accompanied by drawings, about the structure, functions and characteristics about this creation will be given as follows :-

AN ILLUSTRATION OF HOW THE CREATION WORKS

As shown in the annexed Drawing No. (1), the spectacles clip-on device in this creation comes with pair of spectacles 10 (a pair of rimless spectacles as shown in the drawing) and a pair of clip-on sunglasses 20. This clip-on device is placed at a suitable position on the

spectacle 10 and bridge of the clip-on sunglasses 20 which allows the clip-on sunglasses 20 to be fitted onto the surface of the spectacles 10, thus forming a pair of sunglasses.

As shown in Drawing No. (1), the pair of spectacles 10 referred to above comes with a pair of lenses 11, it has a bridge 13 with a pair of detachable nose pads 12 firmly positioned between the two lenses 11, a butt-strap 14 is firmly fitted onto the lateral surface of each lens 11 with the end of each butt-strap 14 joined to a earpiece 15.

Drawing No. (3) is the magnified drawing of the spectacle bridge 13.

As shown in Drawing No. (3), which shows the bridge, the bridge 13 is joined to each of the two nose pads 12 by a pad arm 16. One retaining ring 17 is positioned near the bridge 13 on each of the two pad arms 16 and a magnet 18 is inserted in the middle of the retaining ring 17. The relative positions of the bridge 13, pad arm 16, retaining ring 17 and magnet 18 can be seen in Drawing No. (4) which is the lateral sectional drawing of the bridge 13.

As shown in Drawing Nos. (1) and (2), the clip-on sunglasses 20 referred to above comes with a pair of lenses 21 that are joined by a bridge 22. One retaining ring 23 is placed at each of the two sides behind the bridge 22. In addition, a magnet 24 will be inserted between each of the two retaining rings 23.

Drawing No. (5) is the lateral view of the sectional profile of this creation. The drawing shows the clip-on sunglasses 20 before it is being fitted onto the spectacles 10.

As shown in Drawing Nos. (1) and (5), the two magnets 18 positioned on the spectacles bridge 13 and the two magnets 24 positioned on the clip-on sunglasses bridge 22 are placed facing each other. The continuous movement showing the bridge 22 of the clip-on sunglasses 20 being fitted onto the bridge 13 of the spectacle 10 are as shown in Drawing Nos. (5), (6) and (7). The two magnets 24 on the bridge 22 of the clip-on sunglasses will come into contact with the magnet 18 on the pad arm 16, thereby holding the two tightly together. The clip-on sunglasses 20 will then be firmly positioned on the spectacles 10, thus forming a pair of sunglasses.

If you want to change the colour of the clip-on sunglasses 20, all you have to do is to follow the movements as shown in Drawing Nos. (5), (6) and (7) in reverse order to remove the clip-on sunglasses 20 and replace it with a different clip-on sunglasses 20.

Since the spectacle 10 bridge 13 in this creation is a detachable and changeable component that is firmly positioned between the two lenses 11, spectacles without the magnetic function can have the clip-on sunglasses 20 fitted onto it by changing the bridge 13 of this creation rather than replacing the spectacles.

The magnets positioned at the bridge 13 in this creation may be replaced at anytime without have to replace the spectacles in the event the magnets malfunctioned.

In addition, as the magnet 18 in this creation is positioned on the pad arm 16 behind the bridge 13, the limited space on the spectacles is being fully made use of; the retaining ring 17 and the magnet 18 on the pad arm 16 will come into contact and hold on to the lateral surface of the lens 11 as shown in Drawing No. (1). Such a design is similar to the convex edges found on the bridge of ordinary rimless spectacles that hold onto the lenses, the design thus provides a firmer grip between the bridge 13 and the lenses 11.

If this creation is used on ordinary spectacles (with frame) that comes with a changeable bridge, it is not necessary to carry out additional work by placing magnets on other parts of the frame as the magnet 18 is positioned on the pad arm 16 behind the bridge. This will in turn help to reduce the production cost of ordinary spectacles (with frame).

Simply put, the design of this creation is such that one magnet 18 is placed on each of the pad arm 16 behind the spectacle bridge 13, and by coming into contact with a pair of magnets 24 placed at corresponding positions on the bridge 22 of the clip-on sunglasses, the clip-on sunglasses will be fitted onto the surface of the spectacles, thus forming a pair of sunglasses. This has creation fully made use of limited space and simplified the structure of the clip-on device, thereby attaining the objective of being both economic and practical as mentioned above.

In conclusion, this creation is able to attain its desired functions, and the illustrations given are so detailed that first time users will have no problem using the device. But it must be pointed out that the examples listed above are for illustrations only, all changes made to similar structures and amendments that do not differ from the principle of this creation shall come under the domain of this creation.

For this reason, patent application is hereby submitted pursuant to the law. Please look into our application and grant the patent in this matter as soon as possible.

Thank you.

DRAWINGS**SIMPLE NOTES ABOUT THE DRAWINGS**

Drawing No. (1) shows the appearance of this creation. In the drawings, the clip-on sunglasses have not been fitted onto the spectacles.

Drawing No. (2) is a dissection of the components of the clip-on sunglasses in this creation. The positions of the bridge and magnets are shown in this drawing.

Drawing No. (3) is the magnified drawing of the spectacles bridge in this creation.

Drawing No. (4) is the sideview sectional drawing of the spectacles bridge in this creation. It shows the positions of the bridge, pad arm and magnet.

Drawing No. (5) is part of a sideview sectional drawing. In the drawing, the clip-on sunglasses have not been fitted onto the spectacles.

Drawing No. (6) is the continuous movement drawing that comes after Drawing No. (5).

Drawing No. (7) is a continuous movement drawing that comes after Drawing No. (6). The clip-on sunglasses have already been fitted onto the spectacles in this drawing.

EXPLANATORY NOTES FOR NUMBERS ON THE DRAWINGS

10	Spectacles	11	Lens
12	Nosepads	13	Bridge
14	Butt-straps	15	Earpiece
16	Pad Arm	17	Retaining Ring
19	Magnet		
22	Clip-on Sunglasses		
23	Lens	22	Bridge
23	Retaining Rings	24	Magnet

SCOPE OF PATENT APPLICATION – CLAIM

1. A type of spectacle clip-on device that includes the following :-

A pair of spectacles that comes with a pair of lenses, it has a bridge with a pair of detachable nose pads firmly positioned between the two lenses, a butt-strap is firmly fitted onto the lateral surface of each lens, the end of each butt-strap is joined to a earpiece by an axle. The bridge and each of the two nose pads are joined by pad arms, one retaining ring is fitted onto each of the two pad arms at a position near to the bridge. A piece of magnet is inserted in the middle of each retaining ring.

At least a pair of clip-on sunglasses that comes with a pair of lenses. The two lenses are joined by a bridge, retaining rings will be fitted on the bridge, and a magnet will be inserted in the middle of each of the retaining rings.

The bridge of the clip-on sunglasses can be fitted onto the bridge of the spectacles, thereby enabling the two magnets on the bridge of the clip-on sunglasses to come into contact with the magnets on the pad arms of the spectacles. The two will then be firmly fitted together.