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#### (54) Title: EYEWEAR WITH MAGNETIC TRACK FOR ELECTRONIC WEARABLE DEVICE

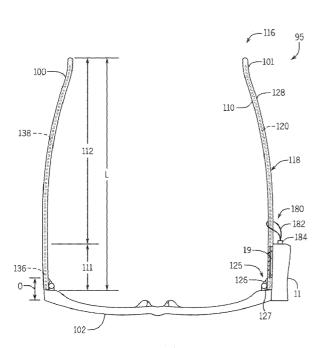


FIG. 2B

(57) Abstract: An eyewear system according to the present disclosure may include at least one temple, and a temple guide provided on the at least one temple, wherein the temple guide comprises a guide surface defined by a ferromagnetic material of the temple, and wherein the temple guide is configured to magnetically retain an electronic wearable device in slidable attachment therewith and to restrict lateral movement of the electronic wearable device relative to the temple when the electronic wearable device is engaged with the temple guide.



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## EYEWEAR WITH MAGNETIC TRACK FOR ELECTRONIC WEARABLE DEVICE EYEWEAR WITH MAGNETIC TRACK FOR ELECTRONIC WEARABLE DEVICE

## CROSS-REFERENCE TO RELATED APPLICATIONS

CROSS-REFERENCE TO RELATED APPLICATIONS This approance comes me occur unuer 30 0.0.C. 119 of the earlier filing date of [001] This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of U.S. Provisional Application No. E62/173,741 entitled "ROBUST EYEWEAR TRACK, WIRELESS ENLIGHT TRACK, AND AND ALLACHMENT MEANS FOR,

WIRELESS ENERGY TRANSFER SYSTEM AND ATTACHMENT MEANS FOR ELECTRONIC DEVICE, filed 06-10-2015. The aforementioned provisional application is hereby incorporated by reference in its entirety, for any purpose, hereby incorporated by reference in its entirety, for any purpose.

[2] This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of This application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Application No. 62/180 199 entitled "WIRELESS ENERGY TRANSFER U.S. Provisional Applicatio [002] [002]CAMERA SYSTEM", filed 06-16-2015. The aforementioned provisional application is The aforementioned provisional application is hereby incorporated by reference in its entirety, for any purpose.

- [003]<sup>3</sup>} This application claims the benefit under 35 U.S.C. 119 of the earlier filling date of U.S. Provisional Application No. 62/186,341 entitled "WIRELESS ENERGY TRANSFER CÂMERA SYSTEM", filed 06-29-2015. The aforementioned provisional application is hereby incorporated by reference in its entirety, for any purpose.
- [004|\$} This sapplication claims the benefit under 35 U.S.C. 1119 of the cearlier filing date of U.S.\$Provisional |Application | No. 62/246,803 entitled TEMPLE TRACK (COMPRISING A MAGNET: ATTRACTING: MATERIAL", filed 10-27-2015. The aforementioned provisional application is hereby incorporated by reference in its entirety, for any purpose.
- This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of  $[005]_{3}$ U.S. Provisional Application No. 62/249.839 entitled TEMPLE TRACK COMPRISING U.S. Provisional Application No. 62/249.839 entitled TEMPLE TRACK COMPRISING ELECTRONIC WEARABLE DEVICE AND A SAFETY CATCH", filed 11-02-2015. The ELECTRONIC WEARABLE DEVICE AND A SAFETY CATCH filed 11-02-2015. The aforementioned provisional application is hereby incorporated by reference in its entirety, for aforementioned provisional application is nereby incorporated by reference in its entirety, for any purpose. aný púrpose
- This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of U.S. Provisional Application No. 62/253,813 entitled "ENHANCED TEMPLE TRACK", [006] TIS Provisional Application No. 62/253 813 entitled "FNHANCED TEMPLE TRACK" filed 11-1 1-2015. The aforementioned provisional application is hereby incorporated by reference in its entirety, for any purpose.
- [007] refere This application claims the benefit under 35 U.S.C. 119 of the earlier filing date of Ü.S. Provisional Application No. 62/289,488 entitled "INSTRUMENT AND METHOD TO MEASURE THE MAGNETIC ATTRACTION FOR EYEWEAR", Filed 702-01-2016. The MEASURE THE MAGNETIC ATTRACTION FOR EYEWEAR", filed 02-01-2016. The

aforementioned provisional application is hereby incorporated by reference in its entirety, for aforementioned provisional application is hereby incorporated by reference in its entirety, for [000any purpose, application claims the benefit under 35 U.S.C. 119 of the earlier filing date of [000any purpose, application claims the benefit under 35 U.S.C. 119 of the earlier filing date of [000any purpose, application claims the benefit under 35 U.S.C. 119 rof the earlier filing date of U.S. Provisional Application No. 62/306,331 entitled "EYEWEAR WITH ADVANCED TRACK", filled 03-10-2016 The aforementioned provisional application is hereby incorporated by reference in its entirety, for any purpose.

# TECHNICAL FIELD TECHNICAL FIELD

[009] The present disclosure relates to eyewear systems including eyewear with magnetic The present disclosure relates to eyewear systems including eyewear with magnetic tracks for attachment of electronic wearable devices.

## BACKGROUND

The number and types of commercially available electronic wearable devices continues to expand. Forecasters are predicting that the electronic wearable devices market will have than quadruple in the next ten years. Some hurdles to realizing this growth remain. Two major hurdless are the cosmetics/aesthetics of existing electronic wearable devices and their limited battery life. Consumers typically desire electronic wearable devices to be small, less snoticeable, and require less frequent charging. The smaller the electronic wearable device, the more challenging it may be to removably attach the device to a wearable article, such as eyewear and further solutions in this area may thus be desirable.

#### SUMMARY,

An eyewear system according to some examples herein may include a frame including a lens-retaining portion comprising first and second end portions, and a pair of menaning a tens-retaining portion comprising first and second end portions, and a pair of temples, each connected to a respective one of the first and second end portions. Each of the temples may include a hinge portion and an insert extending from the hinge portion towards a temples may include a hinge portion and an insert extending from the hinge portion towards a distal end of the temple, wherein the insert is formed of a ferromagnetic material, and distal end of the temple, wherein the insert is formed of a ferromagnetic material, and wherein at least one of the temples in the pair comprises a track extending longitudinally along a length of the temple, wherein a base of the track is defined by the insert and wherein walls of the track are defined by a second material disposed around the insert. ert and wherein

[012] walls Anbeyewear system according another example of the present disclosure may include the least one temple, and a temple guide provided on the attleast of the temple, wherein the temple guide comprises a guide surface defined by a ferromagnetic material of the temple, temple guide comprises a guide surface defined by a ferromagnetic material of the temple,

and wherein the temple guide is configured to magnetically retain an electronic wearable and wherein the temple guide its configured to magnetically retain annelectronic wearable device tin slidable tattachment ether with and to restrict lateral movement of the aglectronic wearable device relative to the temple when the electronic wearable device is engaged with

[013] An eyewear system according to further examples herein may include an eyewear frame including at least one temple, a temple guide provided on the at least one temple, wherein the temple guide includes a guide surface defined by a ferromagnetic material of the temple, and an electronic wearable device configured to magnetically attach to the at least one temple, and an electronic wearable device configured to magnetically attach to the at least one temple via the temple guide, wherein the temple guide is configured to magnetically one temple via the temple guide, wherein the temple guide is configured to magnetically retain the electronic wearable device in slidable attachment therewith and to restrict lateral movement of the electronic wearable device in slidable attachment therewith and to restrict lateral movement of the electronic wearable device relative to the temple when the electronic wearable device relative to the temple when the electronic wearable device relative to the temple when the electronic wearable device relative to the temple when the electronic wearable device is engaged with the temple guide, and wherein the electronic wearable device is engaged with the temple guide, and wherein the electronic wearable device includes a magnet which attaches to the ferromagnetic material, and an additional member for securing the electronic wearable device to the eyewear.

[014] According to some examples herein, a wearable device adapter may include body of a stretchable material and configured to removably attach the adapter to an eyewear temple of any of fasplurality of differency shaped eyewear frames, and a magnetic feature attached to the body and configured for magnetically retaining an electronic wearable device in attachment with the adapter.

## BRIEF, DESCRIPTION, OF, THE DRAWINGS

Features, aspects and attendant advantages of the present invention will become apparent from the following detailed description of various embodiments, including the best mode presently contemplated of practicing the invention, when taken in conjunction with the mode presently contemplated of practicing the invention, when taken in conjunction with the accompanying drawings, in which:

accompanying drawings, in which:

[016] FIG. I shows a block diagram of an eyewear system in accordance with the present disclosure;

[017] disclosures. 2A-2D show isometric, top, side, and transvers cross-sectional views of an [017] eyewear system according to a first embodiment; and transvers cross-sectional views of an

[018] eyeweFIGS. 3A and 3B show a side and cross-sectional views of an insert in according to an

[019] embocFIG.14A shows artransverse cross-sectional view of a temple of an eyewear system [019] according to another embodiment; se cross-sectional view of a temple of an eyewear system according to another embodiment;

10201 FIG. 4B shows a partial plan cross-sectional view of the temple in FIG. 4A and an

- [020] electroFIG. 4B shows vacpartial plans cross-sectional view of the temple in FIG. 4A and an 102 electronic wearable device attached thereto; cross-sectional view of a temple and electronic
- [021] wearatFIG.: 4C. showsta transverse plan cross-sectional view of a temple and electronic
- 1022 wearable device according to another embodiment; ting to further embodiments;
- [022] FIGS. SA-5c shows evewear systems according to further embodiments;
  [023] FIG. 6 shows a simplified cross-sectional view of a temple and electronic wearable device attached to the temple according to another embodiment;
  [024] FIG. 7 shows a simplified cross-sectional view of a temple and electronic wearable for FIG. 7 shows a simplified cross-sectional view of a temple and electronic wearable device attached to the temple according to yet another embodiment;
  [024] FIG. 7 shows a simplified cross-sectional view of a temple and electronic wearable device attached to the temple according to yet another embodiment;
  [025] FIGS. 8A and 8B show partial side and cross-sectional views of a temple according to FIGS. 8A and 8B show partial side and cross-sectional views of a temple according to another embodiment;

- another embodiment; another embodiment;
- FIGS. 9A and 9B show partial cide and cross-sectional views of a temple according to [026] yet another embodiment;
- [027] FIG. 10 shows a simplified cross-sectional view of a temple and electronic wearable device attached to the temple according to yet another embodiment;
- FIG. 11 shows a view of an eyewear system according to a further embodiment; [028]3
- [029]}} FIGS. 12A-12C show views of a temple of the eyewear in FIG. 111;
- [030])} FIG.: 133shows; as view of an exemplary electronic wearable device; in the form of ta camera, which, includes, a device, guide in accordance with some examples herein;
- FIGS, 14A-14D show views of a thin eyewear temple with a temple guide according to another embodiment; and
- FIGS. 15A-15E-show views of an adapter in accordance with an embodiment of the present disclosure.
- FIGS. 16A-16B show views of an adapter in accordance with another embodiment of FIGS. 16A-16B show views of an adapter in accordance with another embodiment of the present disclosure.
- the present disclosure.

  1034] FIGS. 17A-17C show views of a camera with a device guide in accordance with an embodiment of the present disclosure.
- [035] embodiment of the present disclosure FIGS. 18A and 18B show views of a camera with a device guide in accordance with [035] FIGS 184 and 18B show views of a camera with a device guide in accordance with another embodiment of the present disclosure.
- [036] another FIG. bis is shows a review of disclosure with a device guide in accordance with an [03] Combodiment of the present disclosure, camera with a device guide in accordance with an embodiment of the present disclosure.

## **DETAILED DESCRIPTION**

103'DETAILED DESCRIPTION ion describes eyewear system which may include eyewear to [037] which The epresent application describes eyewear system which, may include eyewear to which an electronic wearable device, such as a wearable camera, may be movably (e.g., slidably) attached. In some examples, the electronic wearable device may be removably attached to the eyewear. To that end, the eyewear may be provided with a guide for engagement with the electronic wearable device. The guide may be configured to restrict engagement of the electronic wearable device. The guide may be configured to restrict movement of the electronic wearable device in one or more directions. In some examples, movement of the electronic wearable device in one or more directions. In some examples, the guide may steer the electronic device along a predetermined direction. The guide may be provided on the temple of the eyewear and may be referred to as temple guide. In some provided on the temple of the eyewear and may be referred to as temple guide. In some examples, the guide may be in the form of a magnetic track which may be provided on a examples, the guide may be in the form of a magnetic track, which may be provided on a examples, the guide may be in the form of a magnetic track, which may be provided on a temple of the eyewear, and may also be referred to as temple track. The guide may be temple of the eyewear, and may also be referred to as temple track. oriented along the length of the temple such that the electronic wearable device may be movable (e.g., slidable) between a forward position and an aft position along the length of the temple. The guide may be configured to restrict movement of the electronic wearable device in directions other than the direction defined between the forward and aft positions (e.g., longitudinal direction). The electronic wearable device may be removable from the guide for example by movement of the electronic wearable device in a direction substantially perpendicular to the longitudinal directions. The electronic wearable device, for example a camera, may include a device guide which is configured for cooperating fit with the guide on the eyewear (e.g., a temple guide). For examples, the device guide may be a male guide and the temple guide may be a female guide. In other examples, the device guide may be a

the temple guide may be a female guide. In other examples, the device guide may be a female guide and the temple guide may be a male guide.

[038] In some examples, the guide may be integral with the temple, e.g., not removable in some examples, the guide may be integral with the temple, e.g., not removable from the temple in the normal course of use of the eyewear. In other examples, the guide from the temple in the normal course of use of the eyewear. In other examples, the guide may be removably attached to the temple. For example, the guide may be incorporated into a guide adapter configured to engage the electronic wearable device. The guide adapter may be a universal adapter in that it may be configured for mounting to a variety of differently shaped pre-existing eyewear. In this manner, the guide adapter may enable pre-existing eyewear. In this manner, the guide adapter may enable pre-existing eyewear. In this manner, the guide adapter may enable pre-existing eyewear. In this manner, the guide adapter may enable pre-existing eyewear. In this manner, the guide adapter may enable pre-existing eyewear. In this manner, the guide adapter may enable pre-existing eyewear to be retrofitted for engagement with an electronic wearable device in accordance with the examples therein. For engagement with an electronic wearable device in accordance

[039] with tFIG.a Pshows a block diagram of an eyewear system 5, which includes eyewear 20 [039] and an electronic wearable device 10 rattached to the eyewear 520. It An eyewear frame 22 for the eyewear 20 includes at least one temple 124. Typically, the eyewear frame 22 may include the eyewear 20 includes at least one temple 24. Typically, the eyewear frame 22 may include

two temples, a left and a right temple configured for placement over a left and a right car, two stemples, a left and a wright stemple sconfigured for placement sover sa left and a right car, respectively, softanuser, when the revewear strame, 22 cisc worm, on The sevenear salsos typically includes, at least one lens or salpair of lenses, configured to be provided in the field of view of

[040] angaging with a guide 12 provided on the temple 24, also referred to as temple guide, for engaging with a guide 12 provided on the electronic wearable device 10, also referred to as engaging with a guide 12 provided on the electronic wearable device 10, also referred to as engaging with a guide 12 provided on the electronic wearable device 10, also referred to as every guide. The temple guide 30 and device guide 12 are configured to slidably engage such that the electronic wearable device may be retained in slidable attachment with the temple 24. The temple guide 30 may be configured to guide movement of the electronic temple 24. The temple guide 30 may be configured to guide movement of the electronic wearable device 10 along a sliding direction. In accordance with the examples herein, the temple guide 30 and device oude 12 may be configured to attach magnetically. In some temple guide 30 and device guide 12 may be configured to attach magnetically. In some examples, the device guide 12 may include one or more magnets 16. In some examples, the one of more magnets 16 may include a neodymium-type magnet, a permanent magnet, or magnet(s) comprised of ferromagnetic material. The guide 30 may include a neodymium-type magnet, a permanent magnet, or magnet(s) comprised of ferromagnetic material. The guide 30 may include a surface surface 32 which his configured for magnetic attraction with the device guide 112. In some examples, the squide surface 232 may/be defined by a ferromagnetic material of the temple such that the guide 30 may magnetically retain the electronic wearable device 110.

The guides \$30 and 12 may be configured such that relative llateral movement of the electronic wearable device 10 is restricted when the electronic wearable device 10 is engaged with the etemple guide 30. That is, the guides 30 and 12 may be configured such that movement of the electronic wearable device 10 in one or more directions other than the sliding direction is constrained.

FIGS. 2A-2D show isometric, top or plan, side, and transverse cross-sectional views from 2A-2D show isometric, up or plan, side, and transverse cross-sectional views of components of an eyewear system according to a first embodiment. Components of the eyewear system 95 may be used to implement components of the eyewear system 95 may be used to implement components of the eyewear system 5 in FIG. 1. Every example, the electronic wearable device 10 of FIG. 1 may be a camera 11 as illustrated in Fig. 2B, although the present disclosure is not limited only to a camera for the electronic wearable device, as will be further described.

[043] wearning the embodiment in FIGS. 2A-2D, the eyewear 100 includes a frame 101 configured lead to retain notice embodiment in FIGS. 2A-2D, the eyewear 100 includes a frame 101 configured leads to retain notice embodiment in FIGS. 2A-2D, the eyewear 100 includes a frame 101 configured leads of the least of the least expectation leads of the least end of the

(e.g., right temple). The first temple 110-1 is attached to the first end portion 104-1 and the (e.g., right temple). The first temple 110-1 is lattached to the first end portion 104-1 and the second temple 110-2 is attached to the second send portion (104-2). The eyewear 100 may be provided in an unfolded configuration as rillustrated in FIGS, 12A and 2B, i.e.g., 382 cmay the suitable when the eyewear 100 is worn in the attemples 110-1 at 10-2 are epivotally (attached to the end portions 104-1, 104-2. In the illustrated example, each of the temples 110-1, 110-2 and the temples 104-1, 104-2 (e.g., left and right things portions 125-1, 125-2, respectively), and the temples 110 are each attached to the lens-retaining portion 102 via their respective hinge portions 125-1, 125-2. In other examples, the temples 110 may be pivotally attached to the lens-retaining portion 102 via their respective hinge portions 125-1, 125-2. In other examples, the temples 110 may be pivotally attached to the lens-retaining portion using any other type of flexure (e.g., a living hinge), which may the lens-retaining portion using any other type of flexure (e.g., a living hinge), which may enable the frame 101 to be provided in a folded configuration when not worn.

The evewer 100 may include a guide 118 for attaching an electronic wearable device.

The eyewear 100 may include a guide 118 for attaching an electronic wearable device. The eyewear 100 may include a guide 118 for attaching an electronic wearable device. (& o\_camera 11) to the everyear. The mide 118 may be configured to magnetically retain the (e.g., camera 11) to the eyewear. The guide 118 may be configured to magnetically retain the electronic wearable device (e.g., camera 11) in attachment with the eyewear 100. In some examples, the electronic wearable device (e.g., camera) may be implemented in accordance with hanty of the examples in U.S. Patent Application No. 14/757,753 filed December 223, 2015, and titled "Wireless Camera Systems and Methods", which application is incorporated by reference cherein in its entirety for any purpose. The guide 1118 may be configured to magnetically vretain the electronic wearable device (e.g., camera 111) in gattachment with the eyewear 100.3 The guide 1183 may be configured to retain the electronic wearable device in slidable attachment, with, the eyewear 100. In other words, the electronic wearable adevice may be slidable or movable along a length of the guide while remaining in attachment with the eyewear 100. The guide 118 may be configured to restrict movement of the electronic wearable device in one or more directions with respect to the part of the frame to which the wearable device in one or more directions with respect to the part of the frame to which the electronic wearable device is attached. The guide 118 may be integrally formed with the electronic wearable device is attached. The guide 118 may be integrally formed with the frame 101 or may be irremovably attached (e.g., welded, bolted, bonded, etc.) to the frame frame 101. In some examples, the guide may be removably attachable to the frame such as to 101. In some examples, the guide may be removably attachable to the frame such as to enable removal of the guide from the frame during normal course of use. The guide 118 may enable removal of the guide from the frame during normal course of use. The guide 118 may be provided on the temple 110 and may thus be interchangeably referred to as temple guide. the provided on the temple 118 may be used to implement the temple guide 24 in FIG. 118 In some examples, a temple guide 118 may be provided on one of both of the temples 110-1, 170-2 examples, a temple guide 118 may be provided on one or both of the temples 110-1,

[045] 110-2 The eyewear system 95 may include an electronic wearable device (e.g., camera 11) [045] which is Tconfigured rto/attach and adetach from the temple vguide. The electronic neerable device (e.g., acamera 11) amay, include tail device guide n(e.g., gcamera Tguide c19 nas; shown for device (e.g., camera 11) may include a device guide (e.g., camera guide 19 as shown for

example in FIG. 2B) which may be configured to engage the guide 118 of eyewear 100. example innFIG.02B); which; maybe, configured ito engage the equide a k18 gof eyewear 1100. Further aspects of the device guide, will be describe with reference to camera guide 19 but it will be understood that these aspects may sapply to device guides on different types to electronic devices. The camera guide 19 is shaped for slidable engagement with the temple guide 118 of the eyewear 100. The camera guide 19 in this example is a male guide in the form of a protrusion attached to or integrally formed with the housing. The camera guide is configured to be inserted into a female guide (e.g., track 130) on the temple along a direction perpendicular to the base of the track. The camera guide 19 includes at least one magnet 16, e.g., as shown in FIG. 4B which illustrates further details of the camera 11. The one or more e.g., as shown in FIG. 4B which illustrates further details of the camera 11. The one or more magnets can be a rare each neodynium type magnet or other type of magnet. In the magnets can be a rare each neodynium type magnet or other type of magnet. In the illustrated example, the magnets are cylindrical (e.g., disc) magnets however other shapes and illustrated example, the magnets are evlindrical (e.g., disc) magnets however other shapes and illustrated example, the magnets are cylindrical (e.g., disc) magnets however other shapes and configurations may be used. Any number of magnets, for example one to six magnets, may configurations may be used. Any number of magnets, for example one to six magnets, may be used to provide sufficient force to retain the camera on the temple. The force of attraction between the magnets and ferromagnetic material of the guide surface, which can be defined based on a measured force required to pull the magnet off the magnet attracting surface (i.e., aspull force), may be tailored to provide enough force to maintain the camera in attachment with the temple without inhibiting the sliding of the magnet or otherwise affecting the optics of the eyewear. That is, the pull force may be sufficiently high to keep the camera attached to the temple while sliding yet low enough so as not to inhibit the movement of the camera and also to ensure that the temple, is not significantly deflected which may affect the optical performance of the eyewear and/or result in damage. In some examples, the pull force may range from about 0.5 Newtons to about 10 Newtons. In some examples, the pull force may range from about 1.5 Newtons to about 5 Newtons. That is, the magnet(s) may be attracted to range from about 1.5 Newtons to about 5 Newtons. That is, the magnet(s) may be attracted to the ferromagnetic material of the temple by a force within the range of about 1.5 Newtons to about 5 Newtons. In some examples, the pull force may be less than 0.5 Newtons or exceed about 5 Newtons. In some examples, the pull force may be less than 0.5 Newtons or exceed about 5 Newtons. In some examples, the pull force may be less than 0.5 Newtons or exceed 10 Newtons.

The number and size of magnets may be tailored. A relevant magnet property that [046] The number and size of magnets may be tailored. A relevant magnet property that may be taken into consideration is the maximum pull force. Also, pole orientation, magnetic direction, field shape and other properties of the magnets may be considered when tailoring the magnet configuration in the device guide. Also, although the examples herein describe temple guide and device guide that include a magnetic material and a magnet, respectively, it will be understood that this arrangement may be reversed, e.g., the magnet may be provided on the electronic wearable device, temple and the ferromagnetic material may be provided on the electronic wearable device.

10471 In some examples one or more bar magnets may be used, e.g., as in the examples [047] shownIngsömeSexamples Jone nor more ibar magnets Smay /be 'used, ne.g., gas ini then examples shown ring FIGS. 517-19. ic Ingthe rembodiment mine FIGS. 317A-17C, 6the reamera as Isla includes a camera guide 1619, which includes custom shaped bar magnet 1616. The bar magnet 1616 is T-shaped with the exposed side of the magnet being narrower than the side that closer to the camera body. That, is the magnet 1616 includes a wider bottom portion 1616-1 and a narrower top portion 1616-2. In one non-limiting embodiment, the magnet has a height of about 1.5mm a width at the narrow portion of about 2.0mm and a length of about 12mm. Other dimensions may be used as may be desired for a particular configuration of a device Other dimensions may be used as may be desired for a particular configuration of a device quide and corresponding temple guide. The slotted protrusion is similarly shaped having the width of the slot being wider at the bottom (e.g., closer to the camera body) and narrower at width of the slot being wider at the bottom (e.g., closer to the camera body) and narrower at the top. This arrangement mechanically retains the magnet within slotted protrusion such as the top. This arrangement mechanically retains the magnet within slotted protrusion such as the top. This arrangement mechanically retains the magnet within slotted protrusion such as when magnetic force is experienced due to attraction with the temple guide. During assembly, the magnet 1616 is inserted into the slotted protrusion 1620 to form the camera guide 1619. In some examples, the magnet 1616 may be additionally attached to the camera 11 for example using an adhesive of other conventional fastening technique. In other embodiments, the magnet may not be adhered to the camera by may instead be retain in the slotstviaaaasnap feature... As shown in cross-section in FIG. 117C, the walls of the solotted protrusion may include a lip 1622 at the open end (e.g., insertion cend) cof the soluted protrusion. The width of the slot at the lip W may be slightly less the width of the magnet W<sub>M</sub> such that the lip, 1622 is temporarily deformed during insertion of the magnet, such as along direction, 1624, and then returns to its nominal shape to retain the magnet in the slot. In

some examples, the exposed surface of the magnet may be flush (e.g., in plane) with the bottom surface of the protrusion, as shown in FIG. 17B. In other examples, as described herein, the magnet may be recessed from the bottom surface of the protrusion. as shown in FIG. 17B. In other examples, as described herein, the magnet may be recessed from the bottom surface of the protrusion.

[048] FIGS. 18A and 18B show another embodiment of a camera 11 with a device guide 1819 which is in the form of a male guide. The device guide 1819 includes a T-shaped bar magnet 1816 similar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 similar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 is milar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 is milar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 is milar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 is milar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 is milar to the bar magnet 1616 of the example in FIGS. 17A-17C. The wider magnet 1816 is retained in a slotted protrusion 1820 which is shorter in height than the magnet 1816. As such, the upper narrower upper portion 1816-2 is fully exposed and functions as the portion that is inserted into the temple guide. In other words, the height of the exposed magnet portion (e.g., upper portion 1816-2) is substantially the same as the width Word the track, portion (e.g., upper portion 1816-2) is substantially the same as the width Word the track, portion. In other examples, the retained in the slot of the protrusion 1820, e.g., aby, a Tip:portion. In other examples, the

magnet 1816 may be additionally or alternatively attached to the camera by an adhesive or magnet 1816 may be additionally or alternatively attached to the camera by an adhesive or [049] the forFIG. 19 shows yet another embodiment of a camera 11 with a device guide 1919 in [049] the forFIG. 19 shows yet another embodiment of a camera 11 with a device guide 1919 in the form of a magnet 1916 is configured for insertion into a temple track. Similar to the magnet 1816 of the previous example, the magnet 1916 includes a wider lower portion 1916-1 and a narrower upper portion 1916-2. The lower portion 1916 is enclosed by the retention plate 1920 which acts to attach the magnet 1916 to the camera 11. The upper portion 1916-2 is exposed and similarly configured as upper portion 1816 to function as the portion that is exposed and similarly configured as upper portion 1816 to function as the portion that is inserted into the temple guide. The retention plate 1920 may be laser welded to the camera via the bosses 1922 or otherwise attached such as with conventional fasteners (e.g., bolts, rivers, snap features, etc.).

Referring now back to FIGS. 2B-2D, the temples 110 may each include an insert 120. [050] The insert 120 may be a metal insert (also referred to as core wire or stiffener), which may function to structurally reinforce the temple 110. In the embodiment in FIGS. 22A-2D, the insert 1200 is formed of a ferromagnetic material, such as spring steel, stainless steel (e.g., AISI 420), core combinations thereof. In other examples, the insert may comprise AISI 301 steel, series \$400) stainless; steel, ferritic stainless steel, martensitic stainless steel, duplex stainless steel. In some examples, the ferromagnetic material may have magnetic permeability in the range of 1.3-700. In some examples, ferromagnetic material may have magnetic permeability in greater than 700. The insert 120 may be enclosed or substantially enclosed by a second material, 128 (also referred to as outer material) to form the temple, 110. The second material 128 may be different from the material from which the insert is formed. The second material 128 may be different from the material from which the insert is formed. The second material 128 may be different from the material from which the insert is formed.

For example, the second material 128 may be plastic, such as an injection molded plastic or for example, the second material 128 may be plastic, such as an injection molded plastic or acetate. In some examples, the second material 128 may be metal, e.g., a different metal than acetate. In some examples, the second material 128 may be metal, e.g., a different metal than that of the insert, such as a non-ferromagnetic metal. The insert 120 may extend from a hinge that of the insert, such as a non-ferromagnetic metal. The insert 120 may extend from a hinge portion 125 towards a distal end 116 of the temple 110. In some examples, the insert 120 may be connected to the hinge portion 125. For example, the temple 110 may include a hinge barrel 126 which is configured to receive a hinge bit 127 for pivotally securing the hinge portion 125 to the lens-retaining portion 102. hings one examples, the hinge barrel 126 may be metal and may be rigidly connect to (e.g., welded to or integrally formed with) the insert 120.0 In other examples, the insert may not be connected to the hinge portion, with the [051] insert In some examples, the temple guide \1118 may be implemented in the form of a female 105 guide (e.g., sastrack (130). ssIn other sexamples the temple guide 11 h 18 m à ý shave far different (shape guide (e.g., a track 130). In other examples the temple guide 118 may have a different shape

or configuration. For example, the temple guide may be in the form of a male guide (e.g., a orgconfiguration. 3fFor example, 2the stemple (guide may be singthe) form (of a) male guide) (e.g., 2a rail), jexamples of which will be described further with reference to FIGS 11-13. The temple guide 118 may include one or more guide surfaces, e.g., base, sidewalls, top surface, or other depending on the configuration of the guide. In the embodiment in FIGS. 2A-2D, the temple guide 118 is implemented in the form of a track 130, which is defined by a groove formed in the second factorial race has a option surface of base 131 and side was 133. The the second material, 128. The track has a bottom surface or base 131 and sidewalls 133. The track has a width W defined be the distance between the sidewalls 133. The track has a width W defined be the distance between the sidewalls 133. The track terminates at a forward end 135 defined by a forward end wall 136 and an aft end 137 defined by an aft end wall 138. The track extends to a depth D which exposes the insert 120. Thus, the insert end wall 138. The track extends to a depth D which exposes the insert 120. Thus, the insert 130 functions as both a stiffening member (e.g., core wire) for the temple and also provides a forward base for the track 130 for magnetically attaching an electronic wearable device ferromagnetic base for the track 130 for magnetically attaching an electronic wearable device ferromagnetic base for the track 130 for magnetically attaching an electronic wearable device thereto. In some examples, the width W may be constant along the length Loof the guide. In thereto. In some examples, the width W may be constant along the length Loof the guide. In other examples, the track may taper (e.g., the width W may narrow) towards the forward end 135, the aft end 137, of both. In some examples the track may be have an open forward end and/or ant open aftend and the taper may prevent the electronic wearable device from sliding out of the track. In some examples, the width W may be constant along the depth D, the track thereby having a generally rectangular cross section. In ssuch sexamples, the selectronic wearable edevice (e.g., camera, 11) may be attachable and removable from the track 130 by insertion nof the device, guide, (e.g., camera guide 19) into the track 1130 along audirection perpendicular to the base, 131 (e.g., a direction parallel with the Y direction).

In specific exemplary, but non-limiting embodiments, the width of the track may not exceed 2.5mm (e.g., the width W is about 2mm), the depth of the track may not exceed 1.5mm (e.g., the depth D is about 1.25mm), the forward end of the track may be located from 1.5mm (e.g., the depth D is about 1.25mm), the forward end of the track may be located from about 5mm to about 20mm distally from the hinge portion, plus or minus engineering about 5mm to about 20mm distally from the mage portion, plus or minus engineering tolerances (e.g., plus or minus 10-15% of the specified dimension based on the appropriate tolerances) and the track spans between about 45% to about 85% of the length L of the tolerances) and the track spans between about 45% to about 85% of the length L of the temple. In some embodiments, the length of the track may be less than 45% or greater than 85% the length of the temple.

[053] 85% the booth of the present invention may be implemented in temples having a less variety of shapes and size, for example temples having a relatively simple profile or the temples that contoured in one or more directions. For example, as illustrated in FIGS. 2A-2C, the temple Fio may follow a curved profile viewed in plan. That is, the temple Fio may include a generally flat portion 111 may extend from the hinge portion 125 to about 1/4 or 1/3 of the length L of the temple, lathough extend from the hinge portion 125 to about 1/4 or 1/3 of the length L of the temple, although

in other examples the flat portion 111 may be shorter than 1/4 of the length L of the temple or in other examples thet flat portion 111 kmay be shorter than 1/4 of the dength L of the temple for longer than 1/4 of the temple. The contoured portion 1/12 may extend from the flat portion (1/11 to the distal end 1/16. The contoured portion (1/12 may idefine a generally simple curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a C-shaped curve) for a more complex curve (e.g., a curve) for a more complex curve (e.g., a curve) for a curvature of the contoured portions 111 and 112. In such examples, the guide follows the curvature of the contoured portions 111 and 112. In such examples, the guide follows the curvature of the contoured portions 111 and 112. In such examples, the guide follows the curvature of the temple. In such examples, the curvature (e.g., minimum temple radius RMIN, see e.g., FIG. 48) may be selected to ensure that device guide remains in engagement with the temple guide along the full length of the temple guide. In some examples, the minimum temple radius may along the full length of the temple guide. In some examples, the minimum temple radius may be about 90cm. In other examples, the temple and may not include a flat portion 1111, and the curvature curvature (e.g., minimum) temple and may be contoured along substantially and length of the temple guide. In some examples, the full length of the temple guide. In some examples, the full length of the temple g

When a viewed from the side (see e.g., FIG. 2C), the temple 1410 may include an arm portion 113 and an earpiece portion 114. The arm portion 143 may extend generally straight aft from the hinge portion 125 towards the distal end 116 of the temple. The arm portion 113 may span more than half (e.g., 60%, 70%, 70%, 75%, 80% or other) of the length L of the temple 110. In some examples, the arm portion 113 may include part or all of the flat portion 111 and at least part of the contoured portion 112. The earpiece portion 114 may extend from a bend which is positionable over the wearer's ear to the distal end 116 of the temple. The earpiece portion 114 may curve downward such that the distal end 116 of the temple is carnece portion 114 may curve downward such that the distal end 116 of the temple is positionable behind the ear of the user, e.g., to secure the temples to the user's head when the positionable behind the ear of the user, e.g., to secure the temples to the user's head when the eyewear is worn. In accordance with the examples herein, the guide 118 may span one or more of the above described portions of the temple 110. The samples of the above described portions of the temple 110 may not extend along the earpiece portion and may thereby restrict movement to fithe electronic wearable device along the straight spath. dIn other examples, the guide 120 may span one of the second span of the sec

least partially along both of the arm and the earpiece portions 113 and 114, respectively, and least partially along both for the jarmhand the carpiece portions chalandald respectively, and the guide 118 may therefore guide the electronic wearable device along a curved path carable device. The temple and device guides may be configured such that the electronic wearable device is positionable substantially flush with a front face of the eyewear. For example, the forward end (135 of the track 130 may be spaced from a font face of the eyewear by an offset distance O (see e.g., FIG. 2B) substantially matching the distance between the forward face of the electronic wearable device and the forward end of the electronic wearable device and the forward and of the device guide.

forward end [135 of the track\_130 may be spaced from a font face of the eyewear by an offset distance O (see e.g., FIG. 2B) substantially matching the distance between the forward face of the electronic wearable device and the forward end of the device guide.

[056] In one specific embodiment the electronic device includes a parallity of cylindrical magnets (e.g., 1-6 magnets having a diameter of about 1/16 inches), each of which may be an magnets (e.g., 1-6 magnets having a diameter of about 1/16 inches), each of which may be an NdFeB with Ni plating axially magnetized with 0.12lbs pull force. The size and pull force of NdFeB with Ni plating axially magnetized with 0.12lbs pull force. The size and pull force of the magnets may be tailored taking into account the form factor of the electronic wearable device and the required force to maintain the electronic wearable device in magnetic attachment with the temple while still enabling the electronic wearable device in magnetic attachment with the temple while still enabling the electronic wearable device in magnetic attachment with the temple while still enabling the electronic wearable device in magnetically attached electronic wearable device is attached to the track. In some examples, the magnetic may be spaced from the base by agapt when the electronic wearable device is attached to the track. In such examples, the magnetically attached electronic wearable device is attached to the track. In such examples, the magnetically attached electronic wearable device with a factor of the electronic wearable device of the such as a such a

22 zinc, gold, silver, or combinations thereof.

1057] FIGS. 3A and 3B show an insert 220 prior to its assembly into a temple (e.g., temple 1057). The insert 220 may be a generally flat elongate member, which may be formed for example by stamping a thin metal strip in the desired shape (e.g., as shown in FIG. 3B) from bulk material such as stainless of spring steel sheet metal. In some examples, the insert 220 may be generally flat along the entire length of the insert. The insert may be made from steel, stainless steel, afor example steel alloy with minimum 10.5% chromium content by mass, or others. Solifferent alloys for steel may be used and relevant properties to be considered in determining assuitable alloy may include level of hardness (e.g., martensitic microstructure) determining a suitable alloy may include level of hardness (e.g., martensitic microstructure)

and nickel content. In some examples, the insert 220 or a portion thereof may be coated, for and anicked a content. Main some examples, athe insert 220 for apportion athereof, may be a coated, afor example a side of the insert that is exposed and provides a guide surface may be coated with a corrosion, resistant material, a friction reducing material, a colored material, such as paint which may be the same as the color of the other material or an accent color, or another type

of coating. In some examples, the insert 220 may be so coated before assembly into the temple. In other examples, only the exposed portion of the insert 220 may be coated after the insert has been assembled into the temple.

[058] The insert 220 may optionally include one or more grippers 216 configured to resist relative lengthwise movement between the insert 220 and the outer material enclosing the insert (e.g., second material 128). The grippers 216 may be implemented as textured portions which may increase the friction between the insert 220 and the outer material. The grippers which may increase the friction between the insert 220 and the outer material. The grippers which may increase the friction between the insert 220 and the outer material. The grippers 216 may be becaused at one or more locations along the length of the insert 220 for example at 216 may be located at one or more locations along the length of the insert 220 for example at 216 may be located at one or more locations along the length of the insert 220 for example at 216 may be located at one or more locations along the length of the insert 220 for example at [058] 216 may be located at one or more locations along the length of the insert 220, for example at 216 may be located at one or more locations along the length of the insert 220, for example at a forward end and/or at an intermediate location along the length of insert 220. Grippers may be provided along any surface of the insert 220. The insert 220 may include a forward portion 2233 and an after portion 222. The forward portion 223 may have a length selected to substantially correspond to the length of a straight portion of the temple ((e.g., straight portion 113).), The caft portion 2222 may have a length selected to substantially correspond stots the length of a curved portion of the temple (e.g., curved portion 1114). The forward portion 2223 may be wider, than the afterportion, 222. The forward portion 223 may be wide enough to serve as a base of the track. In other words, the width Wi of the forward portion 2223 may be greater than the width W of the track 130. The width of the insert may range from about 2.5mm to about 6mm or greater and the thickness Ti may range from about 3mm to about 1mm or greater depending on the geometry of the temple. In one specific non-limiting 1mm or greater depending on the geometry of the temple. In one specific non-limiting 1mm or greater depending on the geometry of the temple. In one specific non-limiting 1mm or greater depending on the geometry of the temple. In one specific non-limiting 1mm or greater depending on the geometry of the temple. In one specific non-limiting 1mm or greater depending on the geometry of the temple. In one specific non-limiting 1mm or greater depending on the geometry of about 4.8mm and a thickness T of about 0.6mm. Other dimensions may of course be used in other embodiments. In an exemplary 1.6mm. Other dimensions may of course be used in other embodiments. In an exemplary 1.6mm. Other dimensions may of course be used in other embodiments. In an exemplary 1.6mm, on-limiting embodiment, the width of the forward portion 223 may be from about 3.0mm to about 5mm, in some examples from about 3.5mm to about 4.8mm, although this width may 1.6mm in some examples from about 3.5mm to about 4.8mm, although this width may 1.6mm to 2.2mm to 2.2mm in some examples from about 3.5mm to about 4.8mm, although this width may 1.6mm to 2.2mm to 2. be half or less of the width of the forward portion 223. The aft portion may include one or more notches \$2.25 arranged along the lower side the aft portion 222, an upper side of the aft portion 222, or along both sides of the aft portion 222. The notches 225 may enable the aft portion 222 to be more easily deformed to a shape corresponding to the curved portion of the temple (e.g., as shown in FIG. 2C), as well as enable further adjustments of the shape of the temple (e.g., accurvature of the curved portion) to fitta particular juser ents of the shape of the temple (e.g., a curvature of the curved portion) to fit a particular user.

[059] The insert (e.g., core wire) may be attached (e.g., welded) to a hinge barrel inserted [059] into a The cinserta(e.g., core wire) may be attached (e.g., cwelded); to alhinge charrel inserted into a The cinserta (e.g., core wire) may be attached (e.g., cwelded); to alhinge charrel inserted into at softened injection molded plastic atemple. In plother, examples, the almost may abe insert molded around the core/wire, gwith the temple theing both shaped and attached ato the core wire during attached cooling/curing phase, the fundamental made insert is not final acsthetic look. The optional grippers, particularly in cases in which the insert is not attached to the hinge, may improve the attachment between outer material and insert. In some examples, the track may be formed in the temple after the temple and core wire have been assembled, e.g., by cutting, such as by laser cutting, a slot in the plastic material to a death that reaches the flat insert. In other examples, the track may be initially formed during the molding process, e.g., by using a mold or additional/removable inserts to define the shape of the track during the molding process.

In some examples, the evewear system may include a safety catch 180. The safety [0660] catch 1800 may be configured to prevent separation of the electronic wearable device (e.g., camera 11) from the eyewear 100 in the event that the electronic wearable device becomes inadvertently disengaged from the guide 118. The safety catch 1180 may include a strap 182 (e.g., assecuring gring, as lanyard, or another), which is secured to the selectronic wearable device (e.g., camera; \li) and the eyewear frame 101. In some examples, the strap \ 182 may be made from plastic, for example a flexible plastic material. In some examples, the strap 182 may be a securing ring, which encircles a cross section of the temple 110. The securing ring may be made from translucent or transparent material. In other examples, the strap 182 may be the same color as the color of the temple. In some examples, the securing ring may have a cross sectional core thickness of less than 1.5 mm. In some examples, the strap 182 may be cross sectional core thickness of less than 1.5 mm. In some examples, the strap 182 may be made from a monofilament strand or string of nylon, polyvinylidene fluoride (PVDF), made from a monofilament strand or string of nylon, polyvinylidene fluoride (PVDF), made from a monofilament strand or string of nylon, polyvinylidene fluoride (PVDF), polyethylene, DACRON, DYNEEMA, or others. In some examples, the strap 182 may be made from an elastic material such as rubber. For example, the strap 182 may be made from an elastic material such as rubber. For example, the strap 182 may be made from an elastic material such as rubber. For example, the strap 182 may be made from an elastomer such as silicon rubber. Other materials, such as natural fibers or synthetic materials may be used. The strap may be made from metal (e.g., single or multi-strand wire, materials may be used. The strap may be made from metal is a single or multi-strand wire a chain, or others). The strap 182 may be attached to a securing feature 184 provided on the electronic wearable device. "Other configurations may be used for the safety catch, examples of some of which are further described below with reference to FIGS. 5A-5C. atch, examples

[061] of son Referring how for FIGS. \$4A and \$4B, partial cross-sectional sviews of eyewear system [06] in accordance with another embodiment are shown. The temple 210 includes ya temple guide 120 in the form of a track 122 provided on an outside side 207 lof the temple 210. The temple 120 in the form of a track 122 provided on an outside side 207 of the temple 210. The temple

210 may include an insert 214 (e.g., a core wire), which increases the stiffness of the temple 210(mä\)\(\frac{1}{3}\)\(\frac{1}\)\(\frac{1}\)\(\frac{1}\)\(\frac{1}\)\(\frac{1}\)\(\frac{1}\)\ 210.1 The insert 214 need not be ferromagnetic as the insert in this embodiment does not form part of the magnetic track is In this embodiment, the additionally rincludes asstript 215 made from ferromagnetic material (also referred to day metal strip) arranged at the base of the temple guide 120. The strip 21S may be provided by depositing a layer of metallic material temple guide 120. The strip 21S may be provided by depositing a layer of metallic material onto a surface of the temple (e.g., along the base of the slot that defines the track) or by attaching (e.g., by bonding) a separate metallic strip to the base of the track. The strip 215 may rachinate the magnetic attraction between the temple guide 120 and a guide of an an electronic wearable device. The strip 215 may be spaced from the insert 214. The depth D of electronic wearable device. The strip 215 may be spaced from the insert 214. The depth D of the track 230 may be substantially the same in the embodiments in FIG. 1 and in FIG. 5, although a thickness T<sub>2</sub> of the temple 210 in this second embodiment may be greater than the although a thickness  $T_2$  of the temple 210 in this second embodiment may be greater than the although a thickness  $T_2$  of the temple 210 in this second embodiment may be greater than the thickness Ti of the temple 110 in the first embodiment where the insert provides the thickness Ti of the temple 110 in the first embodiment where the insert provides the functionality of both a stiffening core wire and a magnetic base of the track 230. In some examples, the insert may be omitted. In some examples, the depth D of the track 230 may be up to about 1 mm. In such examples, the temple may be made substantially from annonmetallic material (e.g., injection-moldable plastic or acetate) except for a think layer (e.g., a coating) of metallic material provided along the base of the track. Such sallayers may mot significantly increase; the stiffness, of the temple to act as a stiffener but would otherwise facilitate magnetic attraction, between the temple guide 120 and a guide of an electronic wearable device.

electronic wearable device (e.g., camera 11) attached to the temple 210. The camera 11 includes a device guide 212 which is configured to be received, at least partially, within the track 230. Track 230.

[063] FIG. 5 shows a partial plan cross-sectional view of a temple 310 and an exemplary electronic wearable device 10 attached to the temple 310 in accordance with another electronic wearable device 10 attached to the temple 310 in accordance with another electronic wearable device 10 attached to the temple 310 in accordance with another embodiment. In this illustrated embodiment, the electronic wearable device 10 includes a device guide 12 which is configured to be received, at least partially, within the track 330. The track 330 includes a base 331 which is defined by a ferromagnetic material of the temple (e.g., tan exposed surface of a ferromagnetic insert as in the example in FIG. 4A). The device guide 12 of the electronic wearable device guide 12 of the electronic wearable device in in this example in FIG. 4A). The device guide 12 of the electronic wearable device in in this example in FIG. 4A). The device guide 12 of the electronic wearable device in in this example in FIG. 4A). The device guide 12 of the electronic wearable device in in this example in FIG. 4A). The device guide 12 of the electronic wearable device in in the protrusion 370. The one for more magnets in the protrusion 370 or they may be embedded may be attached to corresponding recesses in the protrusion 370 or they may be embedded

within the protrusion 370 such that the surfaces of the magnets are not exposed. The within the protrusion a 370 such that the surfaces nof the magnets are not exposed of The protrusion 370 may have a top a surface 372, which may be defined by exposed surfaces of the one nor magnets tor. by daysurface of an enclosure, in the case, where the magnets are embedded. The magnets in the protrusion 370 is configured such that the top surface 372 does not contact the base 331, when the electronic wearable device 10 is attached to the temple 310. The gap G defined between opposing top surface 372 and base 331 when the electronic wearable device 10 is attached to the temple 310 may enable the electronic wearable device 10 is attached to the temple 310 may enable the electronic wearable device 10 is attached to the temple 310 may enable the electronic wearable device 10 to more easily slide along the guide 318 (e.g., float over the base 331 of the track). In some examples, the gap G may be less than 1 mm. In some examples the gap G may be less than 0.05mm, such as 0.04mm, 0.03mm or 0.01mm.

It will be understood that any of the embodiments of exewear systems may be less than 0.05mm, such as 0.04mm, 0.03mm or 0.01mm.

It will be understood that any of the embodiments of eyewear systems may be It will be understood that any of the embodiments of eyewear systems may be configured to include a gap G between the opposing and magnetically attracting faces of the device guide and temple guide. In other words, the camera 111 and temple guide 1188, for example, may be configured such that the bottom surface of the camera guide 19 and the base 131 of the track (130) do not contact during normal use. In some examples, the magnets specifically may be spaced apart from the temple surfaces such as to avoid rubbing of the magnets against any of the aesthetic surfaces of the temple. This spacing may be achieved by recessing ather magnet; below the bottom surface of the device guide ssuch that ather bottom surface of the device guide that may contact the base of the track while the magnet itself does not. The bottom surface of the device guide may be part of the housing or attached thereto and may be formed of a plastic material thus reducing the risk of damage to the temples. As will be appreciated, all exposed surfaces of the, such as on the outside side of the temple, will be appreciated, all exposed surfaces of the, such as on the outside side of the temple, will be appreciated, all exposed surfaces of the such as on the outside side of the teach, including the walls and base of the track, are finished surfaces (e.g., surfaces that function as part of the finished aesthetic look of the eyewear). In other words, the eyewear may be worn part of the timshed aesthetic look of the eyewear). In other words, the eyewear may be worn with or without an electronic wearable device attached thereto without diminishing the with or without an electronic wearable device attached thereto without diminishing the aesthetic look of the eyewear, and in some examples the aesthetic look of the eyewear may be enhanced by the presence of the track. As such, the attachment of an electronic wearable enhanced by the presence of the track. As such the attachment of an electronic wearable enhanced by the presence of the track. As such the attachment of an electronic wearable enhanced by the presence of the track. As such the attachment of an electronic wearable device to the temple is not a necessary condition for a wearer to enjoy the use of the eyewear, e.g., attaching an electronic wearable device of any other type of feature is not essential to provide a finished aesthetic look for the eyewear, any other type of feature is not essential to

[065] providFurther examples of safety catches of eyewear systems are described with reference to 1065 FIGS. 5A-5C. The safety catch 180 in FIG. 5A includes alanyard 182 which is attached to the temple 100 and a securing feature 184 attached to the canter at 11. Instead of being looped around the temple as securibed with reference of cFIG. 2B, the lanyard is attached to an around the temple as described with reference to FIG. 2B, the lanyard is attached to an

underside 103 of the temple 110. The lanyard includes a T-shaped fitting 186 which is underside 103 of the temple 110. ur The ilanyard oincludes 112 T-shaped in the includes 113 of the temple. In the ilanyard oincludes 114 The ilanyard includes 115 of the ilanyard in a T-shaped is on the underside 103 of the temple. In the ilanyard in a T-shaped is on the underside 103 of the temple. In the ilanyard in a T-shaped is on the underside 103 of the temple. In the ilanyard in a the ilanyard in a shaped is on the ilanyard in a shaped is on the ilanyard in a shaped is of the ilanyard in a shaped in the ilanyard in the ilan

when desired.

[1066] The safety catch 180" in FIG. 5B includes a lanyard 182 which is attached to the temple 110 and a securing feature 184 attached to the camera 11. Instead of being looped around the temple as described with reference to FIG. 2B, the lanyard is attached to a trolley around the temple as described with reference to FIG. 2B, the lanyard is attached to a trolley 188 which is also configured to slide along the guide 118. The trolley may be magnetically 188 which is also configured to slide along the guide 118. The trolley may be magnetically attached to the guide 118 in a manner similar to the device guide. In some examples, the trolley is configured to exhibit a stronger magnetic attraction with the temple guide as compared to the magnetic force between the device guide and the temple guide. In some examples, the examples, the stronger magnetic attraction with the temple guide as compared to the magnetic force between the device guide and the temple guide. In some examples, the examples, these temple guide magnetic force between the device guide and the temple guide. In some examples, the examples, these temple guide magnetic force between the device guide and the temple guide. In some examples, the

In the example in FIG. SC, the safety catch 180 includes a lanyard 182 which is irremovably attached attone; end to a fixture 187 disposed at the aftend of the guide 118 and at the copposite and to the securing feature 184. The length of the lanyard 182 is sufficient to allow, the camera to move from the aft end all the way to the forward end of the guide. In this manner, the safety catch 180 maintains the camera 11 tethered to the temple while allowing movement of the camera along the guide.

FIG. 6 illustrates a simplified cross-sectional view of another embodiment of an eyewear system 405. The eyewear system include a tempte 410 of an eyewear frame and electronic wearable device 411 (e.g., camera) attached to the tempte 410. The electronic delectronic wearable device 411 (e.g., camera) attached to the tempte 410. The electronic wearable device 411 includes a device guide 412. The device guide 412 may be provided on wearable device 411 includes a device guide 412. The device guide 412 may be provided on an arm 417. The arm 417 is configured to be positioned over a top side 409 of the temple 410. The arm 417 may be extendible (e.g., a telescoping arm) such that the electronic wearable device 411 may be extendible (e.g., a telescoping arm) such that the electronic 410. The arm 417 may be extendible (e.g., a telescoping arm) such that the electronic wearable device 411 may be attachable to temples of different thicknesses. The device guide 412 includes a magnet 416, attached to the arm. In some examples, a surface of the magnet may be exposed such that it contacts the temple when the electronic wearable device 411 may be attached to the arm. In some examples, a surface of the magnet attached thereto. In other examples, sin interface layer flay be provided between the magnet and temple surface for educe damage to the aesthetic surface of the expension the magnet slightly shelow the interface layer may be provided for example by embedding the magnet slightly below the interface layer may be provided for example by embedding the magnet slightly below the

contact surface of the arm or by a coating provided on the exposed surface of the magnet.

contact surface of the arm or by a coating provided on the exposed surface of the magnet.

[166] The coating may be friction reducing coating guide 418. The temple guide in this example is located on the temple 410 may, include a temple guide 418 guide is in the form of a female guide (e.g., track) which includes a ferromagnetic strip 429 provided at the base of the guide. The temple 410 may optionally include an insert 424, which may or may not be ferromagnetic, and an outer material 428 which encloses the insert. In accordance with the examples herein, the temple guide 418 includes guide surfaces (e.g., base 431 and sidewall 433), which constrain movement of the electronic wearable device 411 in one or more directions relative to the temple. At least one of the guide surfaces, in this example base 431, is defined by the ferromagnetic material of the strip 429. In other examples, the strip 429 may be arranged such that it defines the sidewall 433 instead of the base 431, such as by positioning the strip closer to the timple. The sidewall 433 instead of the base 431, such as by positioning the strip closer to the timple. The sidewall 433 instead of the base 431, such as by positioning the strip closer to the timple. The sidewall 433 instead of the base 431, such as by positioning the strip closer to the timple the sidewall 433 instead of the base 431, such as by positioning the strip closer to the timp closer to the sidewall 433 instead of the base 431, such as by positioning the strip closer to the timp closer to the sidewall 433 and the base 431, such as by positioning the strip closer to the time the sidewall 433 instead of the base 431, such as by positioning the strip closer to the time the sidewall 433 instead of the base 431, such as by positioning the strip closer to the time the sidewall 433 instead of the base 431, such as by positioning the strip closer to the control that it defines the sidewall 433 and the ba

eyewear system 305.. The: eyewear system includes a temple 510 and electronic wearable device 5:1 liattached to the yewear system includes a temple 510 and electronic wearable device 5:1 liattached to the yewear system includes a temple 510 and electronic wearable device 5:1 liattached to the yewear system includes a temple 510 and electronic wearable device 5:1. The device guide 512, which may be provided; along a side 513 of the electronic wearable device 5:1. The device guide 512 may, include a magnet 516 and optionally a guide protrusion 5:14 spaced from the magnet. The temple may be formed of a material 528 and may optionally include a core wire 524 embedded, in the material 528. The temple 5:10 may include a temple guide 5:18. The temple guide 5:18 may include a ferromagnetic strip 5:29 which may be flush with the outer surface of the material 5:28. The temple guide 5:18 may optionally include a groove 5:15 spaced from the strip 5:29 and shaped to receive the protrusion 5:14. The magnet 5:16 may be arranged to engage the strip 5:29 when the side 5:13 of the electronic wearable device 5:11 is positioned against the outside side 5:07 of the temple 5:10. The protrusion 5:14 and groove 5:15 may serve as locating and interlocking features, e.g., to position the electronic wearable device 5:11 is positioned against the outside side 5:07 of the temple 5:10. The protrusion 5:14 and groove 5:15 may serve as locating and interlocking features, e.g., to position the electronic wearable device 5:11 for engagement with the temple guide 5:18 and stipe to the temple 5:10 while the electronic wearable device 5:17 for engagement with the electronic strip and interlocking features, e.g., to position the electronic wearable device 5:15 is positioned spaced downward from the strip 5:29. In other examples the single groove 5:15 is provided 5:paced downward from the strip 5:29. In other examples the single groove 5:15 is provided 5:paced downward from the strip 5:29. In other examples the

strip may be different positioned and a different arrangement and number of grooves may be strip@may be different positioned and a different arrangement and number of grooves may be 107 used. For example, FIGS, 8A and 8B illustrate partial side and cross-sectional views of a [071] temple For (example, FIGS. 8A, and 8B, illustrate, partial side, and cross-sectional views of a temple 610 in accordance with another embodiment. The temple 610 may be formed of a material 628, such as plastic, and may optionally include a core wire 624 embedded in the material 628. The temple 610 includes a guide 618 that includes a ferromagnetic strip 629 positioned substantially flush with the outside side 607 of temple 610. One or more grooves positioned substantially flush with the outside side 607 of temple 610. One or more grooves of may be provided spaced apart from and extending along the length of the strip 629. Each of the grooves may be continued to engage a corresponding proposition on an electronic of the grooves may be configured to engage a corresponding protrusion on an electronic of the grooves may be configured to engage a corresponding protrusion on an electronic wearable device (not shown in this view). In this manner, the guide 618 may be configured wearable device (not shown in this view). In this manner, the guide 618 may be configured to magnetically retain the electronic wearable device in attachment (e.g., by magnetic to magnetically retain the electronic wearable device in attachment (e.g., by magnetic attraction) to the temple and may further function to restrain movement of the electronic wearable device in one or more directions (e.g., up and down, in-plane rotation, etc.) relative to the temple.

[072] In another example, as shown in FIGS. 9A and 9B, the temple 710 may similarly be formed of faa material 728, such as plastic, and may optionally include a core wire 7724 embedded sin the material 1728. The temple 610 may similarly include a squide 7718 that includes sagferromagnetic strip, 729 positioned substantially flush with the coutside side 7707 of temple 710. However, in this example, one or more grooves 715 may be provided in the strip 729.3 The groove 715; may be a generally rectangular channel open to the exposed surface of the strip 729 and extending along the length of the strip 729. The groove 715 may be configured to engage a corresponding protrusion on an electronic wearable device (not shown in this view). In this manner, the guide 718 may be configured to magnetically retain the in this view). In this manner, the guide 718 may be configured to magnetically retain the electronic wearable device in attachment (e.g., by magnetic attraction) to the temple and may electronic wearable device in attachment (e.g., oy magnetic attraction) to the temple and may further function to restrain movement of the electronic wearable device in one or more further function to restrain movement of the electronic wearable device in one or more directions (e.g., up and down, in-plane rotation, etc.) relative to the temple.

directions (e.g., up and down, in-plane rotation, etc.) relative to the temple.

FIG. 10 illustrates a simplified cross-sectional view of yet another embodiment of an

[073] 1073] FIG 10 illustrates a simplified cross-sectional view of yet another embodiment of an eyewear system 805. The eyewear system include a temple 810 of an eyewear frame and electronic wearable device 811 (e.g., camera) in engagement with the temple 810. The temple 810 is formed of a material 828, such as plastic, and includes an insert 820 made from a ferromagnetic material, e.g., stainless steel. The electronic wearable device 81 Pis slidably attached to the temple 810 via with a temple guide 818. The electronic wearable device 811 includes at device aguide \$12, which is provided to name \$17. The tarm \$17 is configured to bespositioned over gatop side 809 of the stemple 810.11 The arm, 817 may be extendible such as

to be positionable over temples of different thicknesses. The device guide is implemented as to be apositionable over temples of different; thicknesses, a The device guide is implemented as 1974 male guide (e.g., la protrusion; 870) and includes a magnet; 816 attached to the large seample guide (e.g., la protrusion; 870) and includes a magnet; 816 attached to the large seample guide (e.g., la protrusion; 870) and includes a magnet; 816 attached to the large seample guide (e.g., a track, 830). The temple 810 and is implemented, in the form of a female guide (e.g., a track, 830). The track is defined by a longitudinal slot formed in the temple (e.g., on the top side 809) and extending to a depth sufficient to expose the insert 820. The guide 818 includes one or more guide surfaces (e.g., base 831 and sidewalls 833 of track 830) which are operable to constrain movement of the electronic wearable device 811 in one or more directions relative to the temple 810. At least one of the guide surfaces, in this case or more directions relative to the temple 810. At least one of the guide surfaces, in this case the base 831, is defined by a ferromagnetic material of the temple (e.g., the insert). In some the base 831, is defined by a ferromagnetic material of the temple (e.g., the insert). In some examples, the magnet 816 may be exposed or embedded within the material forming the arm (e.g., a rigid plastic material), which may be the same material as used for the housing of the electronic wearable device 811. In other examples, the magnet 816 and he exposed or embedded within the material forming the arm (e.g., a rigid plastic material). The other examples, the magnet 816 and he exposed or embedded within the material forming the arm (e.g., a rigid plastic material). Which may be the same material as used for the housing of the electronic wearable device 811. In other examples, the magnet 816 and/or the bottom surface of the sprotrusion 870 floats; over the base; 831 of track 830 with a small gaparemaining between the facin

attachment and detachment of the electronic wearable device 811 by insertion of a portion of the electronic wearable device 811 by insertion of a portion of the electronic wearable device 811 by insertion of a portion of the electronic wearable device 811 (e.g., the protrusion 870) into the track 830 along a direction perpendicular to the base of the track. In this manner, attachment and detachment of the electronic wearable device 811 may be simplifies. Attachment may be achieved by simply placing the electronic wearable device 811 may be simplifies. Attachment may be achieved by simply placing the electronic wearable device 811 over the temple and allowing the magnetic simply placing the electronic wearable device 811 over the temple and allowing the magnetic attraction force to move the electronic wearable device 811 over the temple and allowing the magnetic simply placing the electronic wearable device 811 over the temple and allowing the magnetic simply placing the electronic wearable device 811 over the temple and allowing the magnetic simply placing the electronic wearable device 811 perpendicularly to the track to attraction force to move the electronic wearable device 811 perpendicularly to the track to snap the electronic wearable device 811 into engagement with the temple. As such, snap the electronic wearable device 811 into engagement with the temple. As such, snap the electronic wearable device 811 into engagement with the temple. As such attachment and detachment may not require manipulation of any miniaturized or intricate connection components in order to secure the electronic wearable device 811, which may improve the user experience. This functionality may of course apply to other embodiments described therein, such as a such embodiments describes in FIGS. 1-9 or any of the embodiments described further/below: embodiments describes in FIGS. 1-9 or any of the incombination with any other examples of the present disclosure. For example, any of the

temples described herein (e.g., temple 410, 510, 610, 710, 810, etc.) may be used to temples adescribed pherein ((e.g., temple 4410, f510, d610, 710, e810, etc.) dmáy2 be lused 2to implement the temple 24 of FIG. thand any of the device guides (e.g., guide, 412, 6512, 812, etc.) may be used to eimplement the device with reference to guide of FIG. FIG. ASAlso, one or more of the aspects of the eyewear systems described with reference to FIGS. 11-15 and also described 107 further below with reference to FIGS. 11-15 may be applied to the examples in FIGS. 6-10.

FIGS. 11-13 show components of an eyewear system according to another embodiment. The eyewear system includes a temple in the eyewear and an electronic wearable device (e.g., camera 1111). A temple guide 1118 is provided on the temple for attaching the electronic wearable device (e.g., camera 1111). A temple guide 1118 is provided on the temple for attaching the electronic wearable device (e.g., camera 1111) to the temple 1110. The temple guide 1118 is implemented as a male guide (e.g., a rail 1170). The rail 1170 protrudes from the outside side 1107 of the temple 1110. The temple 1110 includes an insert 1120 which may be embedded within an outer material 1128 (e.g., plastic) and may function to reinforce the temple 1110.

In some examples, the temple guide 1118 includes a ferromagnetic material (e.g., stainless steel). The ferromagnetic material may be provided as a coating on one examples, the stainless steel). The ferromagnetic material may be provided as a coating on one examples, the stainless steel). The ferromagnetic material may be provided as a coating on one examples, the stainless steel). In some examples, the stainless steel may be made from the ferromagnetic material. In some examples, the insert may be made from the same material and formed integrally with one another. As shown in the illustrated example, the insert and temple guide form a T-shaped beam (see, e.g., FIG.; 1ID) along a portion of the length of the temple. In other examples, the insert and rail may be formed of different material and joined together to form the T-shaped beam. Different arrangements, for example an insert and rail combination having a different cross-sectional geometry (e.g., an L-shaped beam, I-shaped beam, U-shaped beam, etc.) may be sectional geometry (e.g., an L-shaped beam, I-shaped beam, U-shaped beam, etc.) may be used. In the illustrated example, the rail is shorter than the length of the insert; however the length of the rail may be increased to provide a longer path for the camera. Of course, a length of the rail may be increased to provide a longer path for the camera. Of course, a shorter rail may also be used. In some specific non-limiting embodiments, the rail may be shorter rail may also be used. In some specific non-limiting embodiments, the rail may be about 55mm to about 100mm long, in some examples from about 75mm to about 85mm, in some examples from about 75mm to about 85mm, in some examples from about 75mm to about 85mm, in some examples from about 75mm to about 85mm, in some examples from about 75mm to about 85mm, in some examples from about 75mm to about 85mm, in

[079J Some The forward end 1135 of the rail 1170, the aft end 1137 of the rail 1170, or both, may 1079be beveled. In some examples, forward end f135, the aft end 1137, for both may include a hard stop, which prevent the camera from sliding off the rail along the rail direction. In the stails has far generally rectangular teross section and the camera 1111 kmay thereby be attached and removed from the trail in a direction perpendicular to the

rail (e.g., to top surface 1172). Other cross-sections for the rail may also be used. The rail rail (e.g., atoltop/surfacev 1172). at Other across-sections a for the rail may also be used. The rail 1170 may the saligned with a predetermined odirection (e.g., a centerline a of the temple of 110) and may thus function to align the orientation of the camera 1111 free. a fine of sight of the

[080] The camera 1111 hincludes a device guide 1112 which is configured to engage the temple guide 1118. The temple and device guides 1118 hincludes and device guides 1118 hincludes and device guides 1118. It respectively may be configured for slidably engagement with one another. In other words, the electronic wearable device (e.g., camera 1111) is slidable along the temple guide 1118 when the electronic device (e.g., camera 1111) is slidable along the temple guide 1118 when the electronic wearable device is attached to the temple. For example, the device guide 1112 may define a wearable device is attached to the temple. For example, the device guide 1112 may define a enide channel 1174 for receiving the rail 1170. In the specific illustrated embodiment, the device guide 1112 includes first and second guide members 1176 which define the channel 1174 therebetween. The guide members 1176 may be configured to each be provided on opposite side of the rail 1170 (e.g., adjacent the sidewalls 1171) to restrict movement of the camera 1110 along the direction defined by the rail 1170. The figuide members 1176 may be configured to each be provided on opposite side of the rail 1170 (e.g., adjacent the sidewalls 1171) to restrict movement of the camera 1111 along the direction defined by the rail 1170. The figuide members 1176 may be configured to each be provided on the schannel 1174 therebetween. The guide members 1176 may be configured to each be provided on the schannel 1174 the device guide 1112 includes a magnet 1178. The magnet 1178 insidisposed in the schannel 1174 the temple will the device guide includes a magnet 1178. The magnet 1178 is sidisposed in the schannel 1174 the tween the guide members 1176. In some examples, the temple and guide members 1178 in the figure of the rail 1170 and the depth of the channel 1174 may be selected such that a gap is maintained between the base of the channel and the top surface 1172 of the rail 1170 while magnet attraction between the magnet 1178 and ferromagnetic material of

magnetic attraction between the magnet 1178 and ferromagnetic material of rail 1170 magnetic attraction between the magnet 1178 and ferromagnetic material of rail 1170 maintains the camera 1111 attached to the temple.

FIGS. 14A-D shows an eyewear temple 1410 with a short temple guide in accordance with another embodiment. As illustrated in FIGS. 14A-D, a temple guide 1418 in accordance with another embodiment. As illustrated in FIGS. 14A-D, a temple guide 1418 in accordance with the present disclosure may be provided even on very thin temples, such as on thin metal with the present disclosure may be provided even on very thin temples, such as on thin metal temple also referred to as a wire temple. The temple guide 1418 may extend along only a small portion of the temple, e.g., less than about 50% of the length of the temple, and in some examples less than about 30% of the length of the temple. In some examples, the guide 1418 extends about 1/33 of the 3 length of the temple. In some examples, the guide 1418 extends about 1/33 of the 3 length of the 1 guide 1 may be under 1 m

portion of the temple. In some examples, the width W<sub>F</sub> of the temple at the forward portion portion of the temple. In some examples, the width W<sub>F</sub> of the temple in the forward portion may abe at least a three stimes greater whan a the width W<sub>F</sub> of the temple in the forward portion may abe at least a three stimes greater whan a the width W<sub>F</sub> of the temple in the forward portion and the width was the temple at the forward portion and the forward and embodiment of a temple with rectangular cross-sections, a the across-section of the forward and/or aft portions may be different the solution of the forward and the forward portion that the forward and the forward and the forward portion the solution and the forward portion the forward and the forward portion and the forward portion the forward portion the forward portion the forward and the forward portion the forward portion

[082] The guide 1418 may include one or more of the features of guides described herein.

For example, the guide 1418 may include one or more of the features of guides described herein.

For example, the guide 1418 may be in the form of a female guide (e.g., a track) formed in the tanding portion 1480 of the temple. The track may include a base 1431 comprising a the landing portion 1480 of the temple. The track may include a base 1431 comprising a ferromagnetic material. In some examples, the temple 1410 itself may be made from the ferromagnetic material and the onide may be implemented by a groove cut into the outside side 1407 of the temple, with the material of the temple providing the guide surface. In other examples, the temple 1410 of ferromagnetic material and the guide may be implemented by a groove cut into the outside side 1407 of the temple, with the material of the temple providing the guide surface. In other examples, the temple 1410 may include a layer of strip 1470 of ferromagnetic material provided at the base of a female guide 1418. In yet further examples, the squide 1418 may be a male guide which is simplemented by a groove cut into the outside provided at the base of a female guide 1418. In yet further examples, the squide 1418 may be a male guide which is simplemented in the form of a protrusion similar to the example in FIG.

In accordance swith some examples of the present disclosure, an adapter for attaching a awearable electronic device to an eyewear temple is described. The adapter may be configured to align the electronic wearable device in a predetermined orientation relative to the eyewear temple when the electronic wearable device is attached to the eyewear using the wearable device adapter. The adapter may be configured to position the electronic wearable device to an outside side of the temple when the electronic wearable device is attached to the eyewear using the wearable device adapter.

The adapter may include a body and a metallic feature. The body may be configured to removably attach the adapter to an eyewear temple of a plurality of differently shaped to removably attach the adapter to an eyewear temple of a plurality of differently shaped to removably attach the adapter to an eyewear temple of a plurality of differently shaped eyewear frames. In some examples, the body may be configured to be provided at least eyewear frames. In some examples, the body may be configured to be provided at least partially around an eyewear temple. For example, the body may define a passage through which the temple may be inserted to secure the adapter to the temple. In some examples, the body may be configured to be adjustable (e.g., stretchable of otherwise adjustable) for accommodate temples of different sizes. If hat g is, stretchable of otherwise adjustable from a nominal shape of size to another shape or size. For example, the body may be adjustable from a nominal shape of size to another shape or size. For example, the body may be formed of a stretchable material such as at stretchable plastic material. Pln some examples, the body may be formed of a material nincluding the polyvinyl schloride, acrylic meminated urethane polymer, polyurethane, material including polyvinyl chloride, acrylic minimated urethane polymer, polyurethane,

epoxyacrylate, epoxyurethane, polyethylene, polypropylene, polyethers, polyvinyl acetat, epoxyacrylate, sepoxyurethane, polyethylene, tholypropylene, apolyethers, apo

[085] FIG. IS illustrates an embodiment of an adapter 1700 for attaching a wearable device (e.g., a camera) to eyewear. The adapter 1700 includes a body 1702 and a magnetic feature (e.g., a camera) to eyewear. The adapter 1700 includes a body 1702 and a magnetic feature 1704. The body 1702 may be configured to removably attach the adapter 1700 to a variety of differently sized eyewear temples. The body 1702 may be in the form a tubular member (e.g., a sleeve) made from a stretchable material (e.g., urethane, rubber, stretchable cloth, or others). The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others). The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others). The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others. The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others. The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others. The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others. The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others. The body 1702 may be positionable around an eyewear temple, e.g., by insertion of others. The body 1702 may be circular, ovular, or differently shaped.

The magnetic feature 1704 may include a magnet of be attractable for a magnet. For example, the magnetic feature 1704 may be a strip 1706 of magnetic material ((e.g., ferromagnetic material). In yet further examples, the magnetic feature 1704 may binclude a stripp170660 f fron-ferromagnetic material provided with a llayer of imagnetic material contain exposed sides of fthe strip 1706. The strip 1706 may be provided between the body 1702 and an adapter plate 1708 which defines a groove 1712. In some examples, the strip 1706 may be attached (e.g., bonded, fastened) to the body 1702. In some examples, the strip 1706 sandwiched between the adapter plate 1708 and the body 1702 for sand the strip 1706 to the body 1702. In some examples, the strip 1706 sandwiched between the adapter plate 1708 and the body 1702. In some examples, the strip 1706 sandwiched between the adapter plate 1708 and the body 1702. In some examples, the strip 1706 may be secured (e.g., bonded) to the adapter plate 1708 and the body 1702. The adapter plate 1708 and strip contect) to the adapter plate 1708 but not to the body 1702. The adapter plate 1708 and strip 1706 may be removable from the body 1702 such that another adapter plate with a differently sized or shaped groove may be attached to me body 1702 to permit attachment with a different wearable device. In some examples, the device guides on a variety of wearable devices may be standardized such that one universal adapter may enable attached of any such wearable device with virtually any eyewear.

[087] weara The magnetic feature 1704 may be attached to an exterior side of the body, e.g., [087] centered Talong athe wall a 1716. 70th this manifer, when a the selectronic wearable device is attached to the seyewear temple via the adapter 1700, the electronic wearable device may be substantially taligned with the centerline of the temple. The body 1702 may be rotatable substantially aligned with the centerline of the temple. The body 1702 may be rotatable

around the longitudinal axis of the temple to enable adjustment of the orientation of the around the longitudinal axis iof the temple to enable adjustment lof the orientation of the [08te] extraction in the postion in the lectronic wearable device, which may enable the removable attachment as well as slidable engagement between the electronic wearable device and the temple. In such examples, the adapter may fix the orientation of the electronic wearable device on the temple. In other examples, the metallic features may be part of an attachment interface on the temple. In other examples, the metallic features may be part of an attachment interface configured to substantially fix both the position and orientation of the electronic wearable device with respect to the adapter. In such examples, the attachment interface configured to substantially fix both the position and orientation of the electronic wearable device with respect to the adapter. In such examples, the attachment interface configured to substantially fix both the position and orientation of the electronic wearable device with respect to the adapter. In such examples, the attachment interface may have a size and shape substantially corresponding to the size and shape of a device guide. The attachment interface may be configured to receive the size and shape of a device guide. The attachment interface may be configured to receive the device and restrain movement of the electronic wearable device in both the longitudinal and lateral directions (plus or minus slight movement in either direction as may be due to manufacturing tolerances). When the attachment interface and device guide are engaged in a cooperating strit the electronic wearable device may be fixed (e.g., fnon-movable) with respect to the adapter.

[089]}} FIGS. 163illustrate another embodiment of an adapter 11520 for sattaching as wearable device (e.g., ascamera) to eyewear (e.g., eyewear 1501). The adapter 1520 includes a body 15244andda magnetic feature 1522 attached to the body 1524. The body 1524 may be configured to removably attach, the adapter 1520 to a variety of differently sized eyewear temples. One or more flexible attachment portions 1528 extend from an interface portion 1530 of the body 1524. The flexible attachment portions 1528, the interface portion 1530, or both may be made from a stretchable material (e.g., a stretchable fabric). During use, the both may be made from a stretchable material (e.g., a stretchable fabric). flexible attachment portions 1528 may be folded over (e.g., as shown by arrows 1535) to be flexible attachment portions 1528 may be folded over (e.g., as shown by arrows 1535) to be wrapped around the temple and ends of the flexible attachment portions 1528 may be secured wrapped around the temple and ends of the flexible attachment portions 1528 may be secured to the interface portion, for example using an adhesive or a fastener, such that the body 1524 to the interface portion, for example using an adhesive or a fastener, such that the body 1524 encircles the temple 1510 (e.g., the body 1524 surrounds a cross-section of the temple 1510). encircles the temple 1510 (e.g., the body 1524 surrounds a cross-section of the temple 1510). In some examples, the flexible attachment portions 1528 and interface portion 1530 may be integrally formed, for example from a sheet of stretchable fabric which is able to adhere to itself without a tacky adhesive. For example, sthe flexible attachment's portions a 1528 and interface portion 1530 may be formed of self-adherent tape similar to that used in medical applications of or bandages or wraps. The fuse of self-adherent material that does not include tacky adhesives may prevent damage to the temples (e.g., marring aesthetic surfaces of the temple with tacky residue from lanadhesive). In other examples, ronly the end portions of the temple with tacky residue from an adhesive). In other examples, only the end portions of the

interface portion 1530 which underlie the flexible attachment portions 1528 when secured interface portion a 1530 which underlie ether flexible attachment portions a 1528 when secured thereto; may be formed from self-adherent material. In other examples, sother combinations of materials, and securing means dmay be used to renable the adapter at \$20 to be removably attached to any of a variety of dimple shapes. When attached to the temple, the adapter 1520 or at least a portion thereof may encircle the temple defining a passage similarly to adapter 1700. The adapter 1520 when attached to the temple defining a passage similarly to adapter 1700. The adapter 1520 when attached to the temple may be rotatable and/or movable along the temple to adjust a position, alignment or orientation of the wearable electronic device.

or at least a portion thereof may encircle the temple defining a passage similarly 30 adapter 1700. The adapter 1520 when attached to the temple may be rotatable and/or movable along the temple to adjust a position, alignment or orientation of the wearable electronic device.

[1990] The magnetic feature 1522 may be attached to the interface portion 1530 of the body 1524 for example using conventional techniques (e.g., adhesive, fasteners or via intermediate 1524 for example using conventional techniques (e.g., adhesive, fasteners or via intermediate 1524 for example using conventional techniques (e.g., adhesive, fasteners or via intermediate mechanical components, such as a clip or brackets). In some examples, the magnetic feature may be attached using an adapter plate 1526 which may be similar to the adapter plate 1708 and the previous example. The adapter plate 1526 which may be similar to the adapter plate 1708 of the previous example. The adapter plate 1526 may include a groove configured for cooperating fit with a device guide of an electronic wearable device. In some examples, the adapter plate 1500 may be similar to the adapter plate 1708 of the previous example. The adapter plate 1526 may include a groove configured for cooperating fit with a device guide of an electronic wearable device. In some examples, the adapter rand corresponding the groove find the previous example. The adapter plate 1526 may include a groove configured for cooperating shape or size to that of the protrusion of a device guide, such that when the protrusion missinserted in the groove the electronic wearable device is substantially sprevented from moving singthe longitudinal and lateral directions relative to the adapter sandissonly afree to move in adapter. In other examples, the groove may be longer to permit sliding engagement similar to a device as described herein.

Although the examples of guides and eyewear systems including such guides have been described herein with an exemplary electronic wearable device in the form of a camera, been described herein with an exemplary electronic wearable device in the form of a camera, the electronic wearable device 10 may be virtually any miniaturized electronic device, for the electronic wearable device 10 may be virtually any miniaturized electronic device, for example and without limitation a camera, image capture device, IR camera, still camera, example and without limitation a camera, image capture device, IR camera, still camera, video camera, image display system, image sensor, repeater, resonator, sensor, sound amplifier, directional microphone, eyewear supporting an electronic component, spectrometer, directional microphone, microphone, camera supporting an electronic component, spectrometer, directional microphone, microphone, camera system, infrared vision system, night vision aid, night elight, illumination system, sensor, pedometer, wireless cell phone, mobile phone, dwireless secommunication system, sprojector, elaser, holographic idevice, holographic electron, alertness monitor, geo-location, spulse detection, gaming, seye tracking, pupil monitoring, calarm, rair squality sensor, CO sensor, CO detector, CO2 sensor, CO2 pupil monitoring, alarm, air quality sensor, CO sensor, CO detector, CO2 sensor, CO2

detector, air particulate sensor, air particulate meter, UV sensor, HEV sensor, UV meter, IR detector, jairy particulate is sensor, yair particulate meter, UV sensor, HEV is sensor, CUV emeter, IR sensor<sub>8</sub>IR<sub>8</sub>meter,<sub>3</sub>thermal<sub>4</sub>sensor<sub>8</sub>thermal<sub>4</sub>meter,<sub>3</sub>poor<sub>3</sub>air<sub>4</sub>sensor<sub>8</sub>poor<sub>4</sub>air<sub>4</sub>monitor<sub>8</sub>bad<sub>8</sub>breath sensor, bad, breath, monitor, alcohol, sensor, alcohol, monitor, motion, sensor, motion, monitor, thermometer, smoke sensor, smoke detector, pill reminder, audio playback device, audio recorder, speaker, acoustic amplification device, acoustic canceling device, hearing aid, assisted hearing assisted device, informational earbuds, smart earbuds, smart ear-wearables, video playback device, video recorder device, image sensor, fan deuctor, alertness sensor, alertness monitor, information alert monitor, hearin sensor, health monitor, fitness sensor, alertness monitor, information alert monitor, hearin sensor, health monitor, fitness sensor, alertness monitor, physiology sensor, physiology sensor, monitor, monitor, physiology sensor, physiology sensor, monitor, monitor, stress, sensor, health monitor, fitness sensor, alertness monitor, physiology sensor, physiology sensor, monitor, monitor, physiology sensor, physiology sensor, monitor, monitor, physiology sensor, physiology monitor, monitor, monitor, physiology sensor, physiology monitor, monitor, monitor, physiology sensor, physiology sensor, physiology monitor, monitor, physiology sensor, p fitness monitor, physiology sensor, physiology monitor, mood sensor, mood monitor, stress fitness monitor, physiology sensor, physiology monitor, mood sensor, mood monitor, stress monitor, pedometer, motion detector, eeo-location, pulse detection, wireless communication monitor, pedometer, motion detector, geo-location, pulse detection, wireless communication device, caming device, eyewear comprising an electronic component augmented reality device, gaming device, eyewear comprising an electronic component, augmented reality system, virtual reality system, eye tracking device, pupil sensor, pupil monitor, automated system, virtual reality system, eye tracking device, pupil sensor, pupil monitor, automated reminder, light, alarm, cell phone device, phone, mobile communication device, poor air quality alert device, sleep detector, doziness detector, alcohol detector, thermometer, refractive effror measurement device, wave front measurement device, aberrometer, GPS system, smoke detector, pill reminder, speaker, kinetic energy source, microphone, projector, virtual keyboard, face: recognition device, voice recognition device, ssound recognition system, radioactive detector, radiation detector, radon detector, moisture detector, humidity detector, atmospheric pressure indicator, loudness indicator, noise indicator, acoustic sensor, range finder, laser system, topography sensor, motor, micro motor, mano motor, switch, battery, dynamo, thermal power source, fuel cell, solar cell, kinetic energy source, thermo electric power source, a blue tooth enabled communication device such as blue tooth headset, a hearing aid or an audio system. In some examples, the electronic device may be a smart in some examples, the electronic device may be a smart device.

Although the present disclosure includes, by way of example, illustration and description of some embodiments, it will be understood by those skilled in the art that several description of some embodiments, it will be understood by those skilled in the art that several modifications to the described embodiments, as well as other embodiments are possible without departing from the spirit and scope of the present invention. It will be appreciated that any of the components, features, or aspects from any of the disclosed embodiments may be used in combination with one another, without limitation, and without departing from the scopes of the present invention. It will be appreciated that any of the opposite of the another, without limitation, and without departing from the scopes of the present closed embodiments may be used in combination with one another, without limitation, and without departing from the scopes of the present closed embodiments may embodiments. It will also be understood one or more of illustration in the figures herein may embodiments. It will also be understood one or more of illustration in the figures herein may

not be to scale and certain features may be exaggerated for clarity to illustrate aspects of the notebertoiscale and certain features may be exaggerated for clarity to illustrate aspects of the present invention.

## **CLAIMS**

### **CLAIMS**

What is claimed is:

What is claimed is:

An eyewear system comprising:

1 An eyewear system comprising first and second end portions; a frame including a lens-retaining portion comprising first and second end portions; and

a pair of temples, each connected to a respective one of the first and second end a pair of temples, each connected to a respective one of the first and second end portions, each of the temples comprising a hinge portion and an insert extending from the portions, each of the temples comprising a hinge portion and an insert extending from the hinge portion towards a distal end of the temple, wherein the insert is formed of a hinge portion towards a distal end of the temple, wherein the insert is formed of a ferromagnetic material, and wherein at least one of the temples in the pair comprises a track ferromagnetic material, and wherein at least one of the temples in the pair comprises a track extending longitudinally along a length of the temple, wherein a base of the track is defined by the insert and wherein walls of the track are defined by a second material disposed around the insert.

- 22. The eyewear system of claim 1, wherein the track has a constant width along a depth of the track...
- 33 The eyewear system of claim 1, wherein the track has a constant width along a length of the track.
- The eyewear system of claim 1, wherein a width of the track is smaller than a width of the ferromagnetic insert.
- 5. The eyewear system of claim 1, wherein the width of the track does not exceed 3.0mm exceed 3.0mm
- 6. The eyewear system of claim 1, wherein the width of the track does not exceed 2.5mm

  The eyewear system of claim 1, wherein the width of the track does not exceed 2.5mm
- 7. The eyewear system of claim 1, wherein the depth of the track does not exceed 2.0mm. 7. The eyewear system of claim 1, wherein the depth of the track does not exceed 2.0mm.

8. The eyewear system of claim 1, wherein the depth of the track does not exceed 1.5mm8. The eyewear system of claim 1, wherein the depth of the track does not exceed 1.5mm.

- 9. The eyewear system of claim 1, wherein the forward end is located from 5mm to 20mm distally of the hinge portion.
  - 10. The eyewear system of claim 1, wherein the track is at least 15mm long.
  - 10. The eyewear system of claim 1, wherein the track is at least 15 mm long.
- The eyewear system of claim 1, wherein each of the temples comprises a track, track.
  - 12. The evewear system of claim 1, wherein the second material is plastic.
- The eyewear system of claim 1; wherein the insert comprises spring steel, stainless steel, or combinations thereof, and wherein the second material comprises acctate.
- 14.1. Thezeyewear system of claim 1, wherein an exposed surface of the insert sis coated with a corrosion resistant material.
- 15.3 The eyewear system of claim 1, wherein an exposed surface of the insert is coated with a colored material.
- 16. The eyewear system of claim 1, wherein an exposed surface of the insert is 16. The eyewear system of claim 1, wherein an exposed surface of the insert is coated with a low-friction material.
- 17. The eyewear system of claim 1, wherein the track is curved in plan view, and 17. The eyewear system of claim 1, wherein the track is curved in plan view, and wherein a radius of the track is 90cm or greater.

  wherein a radius of the track is 90cm or greater.
- The eyewear system of claim 1, wherein at least one of the temples of the pair comprises a arm portion and an earpiece portion connected at a bend configured to be positioned over a wearer's ears, and wherein the track spans more than 50% of a length of the arm portion.

19. An eyewear system comprising:

19.1 eye Angeyewear system comprising: temple; and

an eyewear frame including at least one temple; and mple, wherein the temple guide comprase temple dguide to magnetically retain an electronic wearable device, in slidable attachment therewith and to restrict lateral movement of the electronic wearable device relative to the temple when the electronic wearable device is engaged with the temple guide.

- 20. The eyewear system of claim 19, wherein the at least one temple comprises a ferromagnetic insert, wherein the temple guide comprises a track defined by a longitudinal ferromagnetic insert, wherein the temple guide comprises a track defined by a longitudinal slot in the temple to a depth extending to the insert, wherein the track comprises a base slot in the temple to a depth extending to the insert, wherein the track comprises a base defined by the insert, and wherein the guide surface is provided by the base of the track.
- The eyewear system of claim 19, wherein the temple guide comprises a track defined by a longitudinal slot in the temple, wherein the eyewear system further comprises the electronic wearable device, and wherein the electronic wearable device comprises a protrusion including attleast one magnet arranged in the protrusion to magnetically attract the ferromagnetic material of the temple when the protrusion is inserted, attleast partially, within the track.
- The eyewear system of claim 15, wherein the temple guide comprises a longitudinal track configured to enable attachment and removal of the electronic wearable device by insertion of a portion of the electronic wearable device by insertion of a portion of the electronic wearable device into the track along a direction perpendicular to a base of the track.
- 23. The eyewear system of claim 20, wherein the temple comprises a second 23. The eyewear system of claim 20, wherein the temple comprises a second material different from the ferromagnetic material, and wherein the second material encloses, material different from the ferromagnetic material, and wherein the second material encloses, at least partially, the ferromagnetic material.
- 24. The eyewear system of claim 23, wherein the second material is a metal different from the ferromagnetic material. Is a metal different from the ferromagnetic material.

The eyewear system of claim 23, wherein the second material is plastic.

25. The eyewear system of claim 23, wherein the second material is plastic.

26. The cyewear system of claim 19, wherein the at least one temple comprises an insert, 26 hereiTheieyewear system of claim 19, wherein the at least one temple comprises an insert, ewherein they temple guide textends filongitudinally calong an length to fitheir insert, and wherein a portion of the temple guide is defined by and integrally formed with the insert.

- 27. The eyewear system of claim 26, wherein the temple comprises a second material different from the ferromagnetic material, and wherein the temple guide comprises a material different from the ferromagnetic material, and wherein the temple guide comprises a rail protruding from a surface of the second material.
- 28. The eyewear system of claim 27, wherein the rail is integrally formed with the 28. The eyewear system of claim 27, wherein the rail is integrally formed with the insert to form a stiffener having a T-shaped transverse cross section at least along a portion of insert to form a stiffener having a T-shaped transverse cross section at least along a portion of the length of the stiffener.
- 29. The eyewear system of claim 26, wherein a length of the rail is shorter than a length of the insert.
- 30.) The eyewear system of claim 19, further comprising an electronic wearable device including and evice guide configured to magnetically attach to the temple, and wherein the electronic wearable device is slidable along the temple guide when the electronic wearable device is slidable along the temple guide when the electronic wearable device is sattached to the temple.
- 3.1. The eyewear system of claim 30, wherein the device guide comprises first and second guide members defining a channel therebetween and a magnet disposed in the channel between the guide members.
- 32. The eyewear system of claim 31, wherein the temple guide comprises a rail, 32. The eyewear system of claim 31, wherein the temple guide comprises a rail, wherein the device guide is configured such that a top of the rail is spaced apart from a surface of the magnet when the electronic wearable device is attached to the temple.
  - 33. An eyewear system comprising:
  - an eyewear frame including at least one temple;

autemple guide provided son the ameast pone temple, wherein the temple guide comprises a guide surface defined by a ferromagnetic material of the temple; and mple guide comprant selectronic wearable tevice configured to magnetically attach to the at least one temple via the temple guide, wherein the temple guide is configured to magnetically tretain temple via the temple guide, wherein the temple guide is configured to magnetically retain

the electronic wearable device in slidable attachment therewith and to restrict lateral theoelectronic wearable device esinabslidable eattachments therewith kandhato trestrict lateral movement of the electronic wearable device gelative to the temple when the electronic wearable device sis engaged with the temple guide, and wherein the electronic wearable device comprises: magnet which attaches to the ferromagnetic material; and

a magnet which attaches to the ferromagnetic material; and an additional member for securing the electronic wearable device to the eyewear.

- 34. The eyewear system of claim 33, wherein the temple guide comprises a temple 34. The eyewear system of claim 33, wherein the temple guide comprises a temple track comprising a floor and two walls. track comprising a floor and two walls.
- The eyewear system of claim 34, wherein the electronic wearable device is attachable to the att least one temple via magnetic attraction to the floor of the track and wherein the electronic wearable device is oriented by at least one wall of the track when attached to the attleast one temple.
  - 36.5. Thezeyewear-system of claim 33, wherein the temple is smade; of plastic.
  - 37.7 The eyewear system of claim 33, wherein the temple is made of metal.
- The eyewear system of claim 33, wherein the additional member is a securing ring, which encircles a cross section of the temple.
- 39. The eyewear system of claim 38, wherein the securing ring is translucent or transparent, transparent.
- 40. The eyewear system of claim 39, wherein the securing ring has a cross sectional core thickness of less than 1.5 mm.

  sectional core thickness of less than 1.5 mm.

41. The eyewear system of claim 33, wherein the magnet is attracted to the ferrors 41 netic Theteeyewear asysteme of yelaim 33, wherein the magneteis cattracted at obthe ferromagnetic materials of the stemple by lat least 0.5 Newtons when the electronic wearable device is attached to the at least one temple.

- 42. The eyewear system of claim 33, wherein the magnet is attracted to the ferromagnetic The eyewear system of claim 33, wherein the magnet is attracted to the ferromagnetic material of the temple by more than 10 Newtons when die electronic wearable device is attached to the at least one temple.
- 43. The eyewear system of claim 33, wherein the magnet is attracted to the 43. The eyewear system of claim 33, wherein the magnet is attracted to the ferromagnetic material of the temple within the range of 1.5 Newtons and 5 Newtons when ferromagnetic material of the temple within the range of 1.5 Newtons and 5 Newtons when the electronic wearable device is attached to the at least one temple.
  - 44. The eyewear system of claim 33, wherein die magnet is a bar magnet
  - 45.5. A'wearable device adapter comprising:

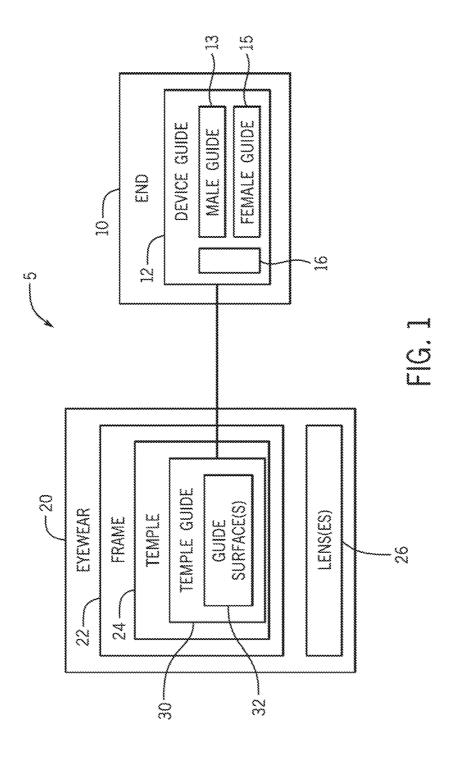
asbody/of astretchable material and configured to removably attacht die adapter to an eyewear temples of any/of asplurality of differently shaped eyewear frames; and

 $a_{\tilde{\epsilon}} magnetic_{\tilde{\epsilon}} feature_{\tilde{\epsilon}} attached to the body and configured for {\sharp} magnetically {\sharp} retaining_{\tilde{\epsilon}} an electronic_{\tilde{\epsilon}} we arable_{\tilde{\epsilon}} device_{\tilde{\epsilon}} in_{\tilde{\epsilon}} attachment with the adapter.$ 

- 46. The adapter of claim 45, wherein the magnetic feature comprises a magnet, a ferromagnetic metal, or combinations thereof.
- 47. The adapter of claim 46, wherein the stretchable material comprises urethane, the anapter of claim 40, wherein the stretchable material comprises arethane, plastic, rubber, fabric, or combinations thereof.
  - 48. The adapter of claim 45, further comprising the electronic wearable device.
  - 48. The adapter of claim 45, further comprising the electronic wearable device.
  - 49. The adapter of claim 48, wherein the electronic wearable device is a camera.
  - 49. The adapter of claim 48, wherein the electronic wearable device is a camera.
- 50. The adapter of claim 45, wherein the wearable device adapter is configured to align the electronic wearable device in a predetermined orientation relative to the seye wear temple when the relectronic wearable device is attached to the eyewear using the wearable device adapter the electronic wearable device is attached to the eyewear using the wearable device adapter.

51. The adapter of claim 45, wherein the wearable device adapter is rotatable relativSL3 a IcThenadapter iof sclaim 245, wherein the wearable, device adapter is rotatable relative to a longitudinal axis of the temple when attached thereto.

1/20



2 / 20

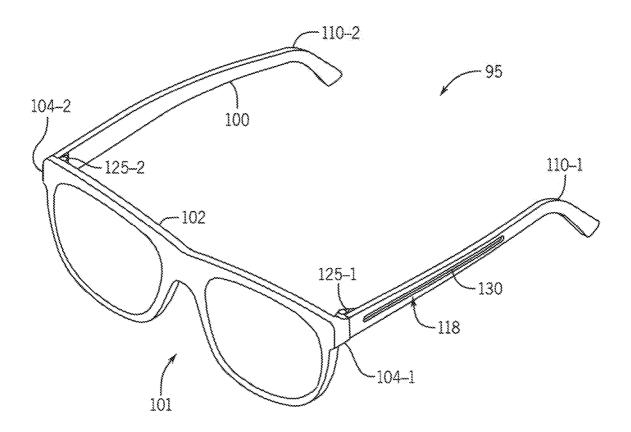


FIG. 2A

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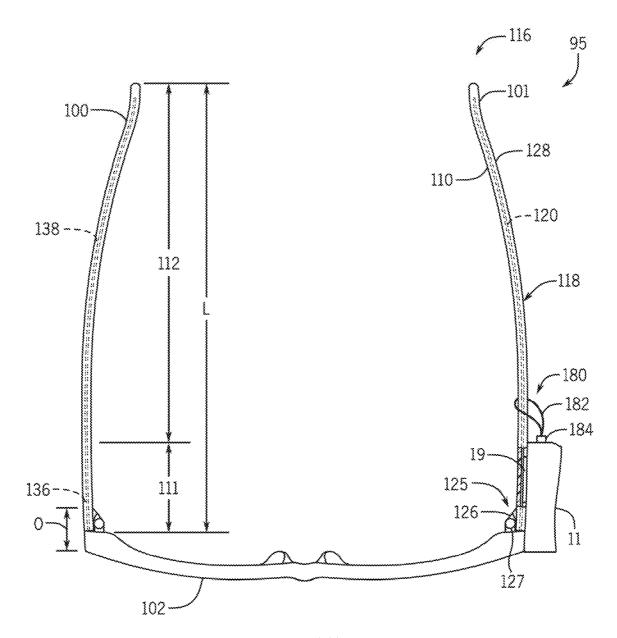
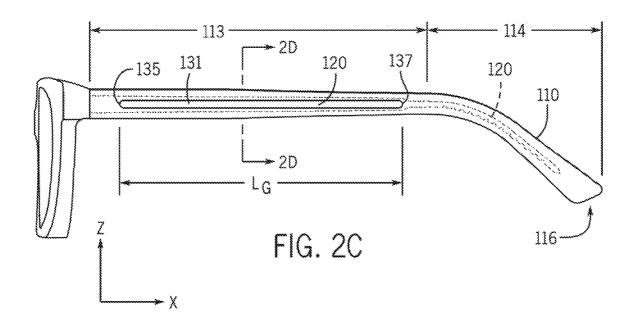
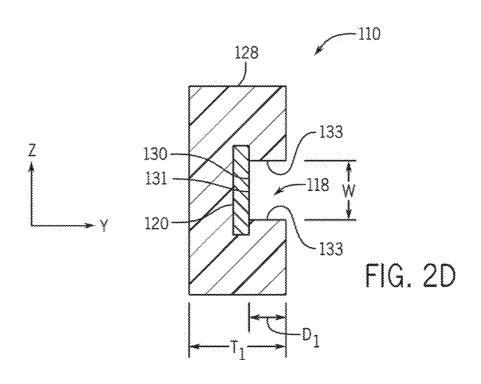
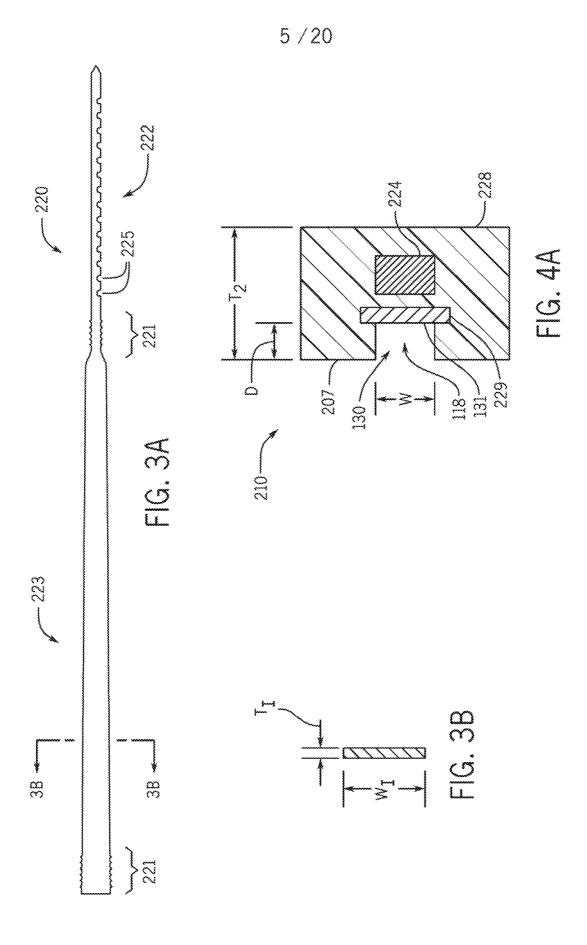


FIG. 2B

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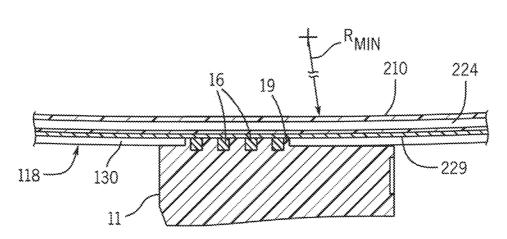


FIG. 4B

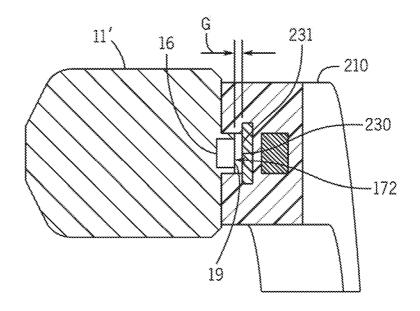
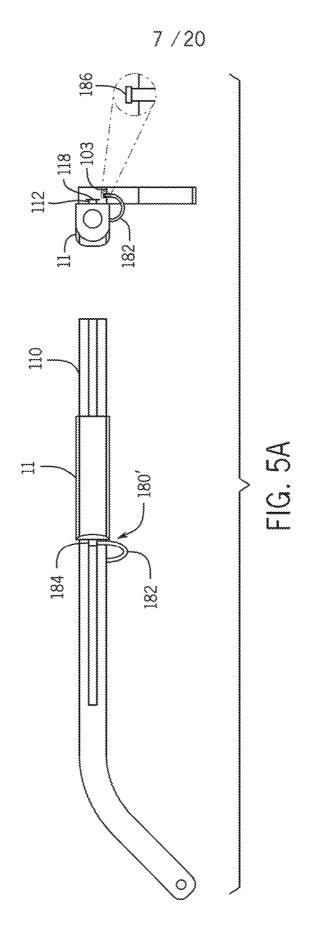
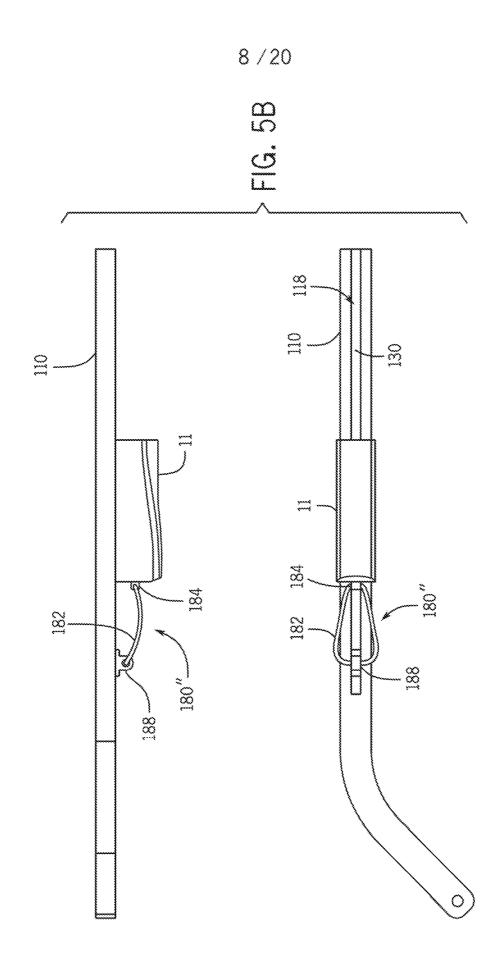
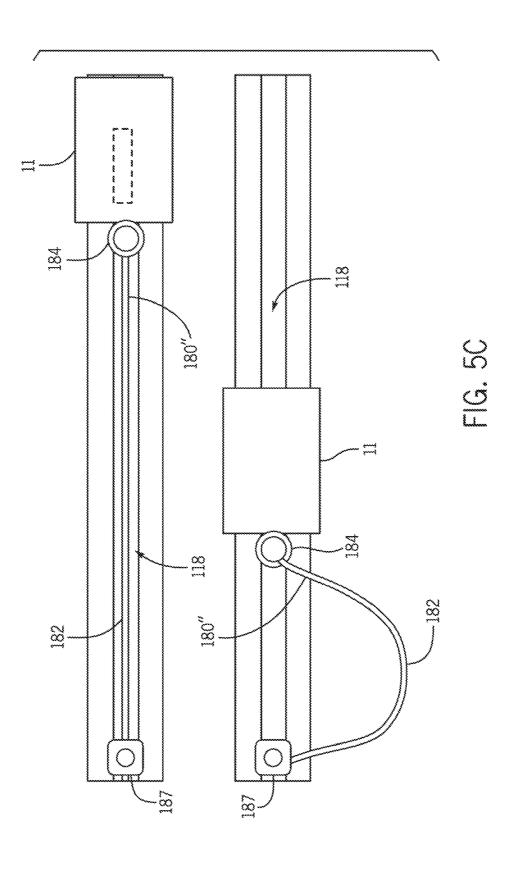


FIG. 4C

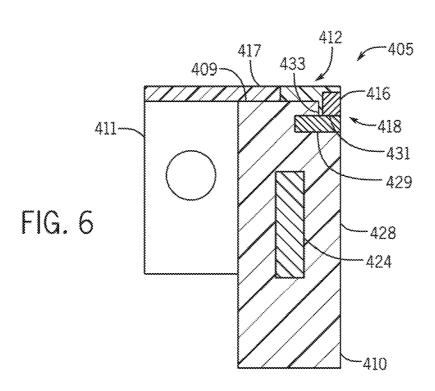


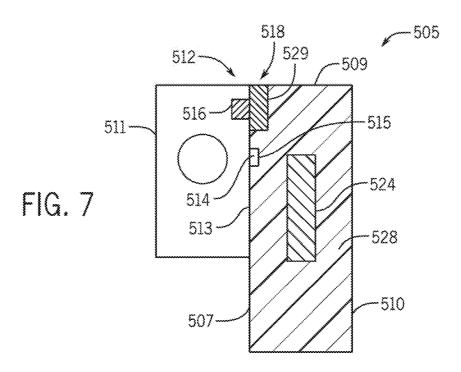


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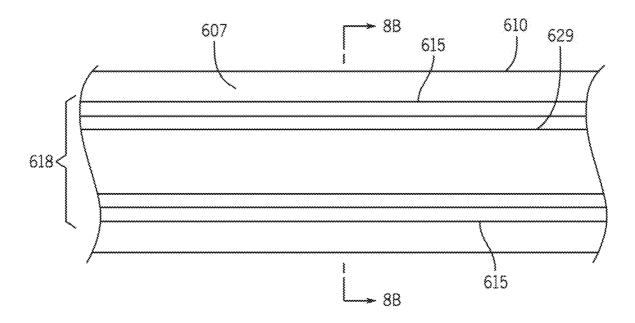


FIG. 8A

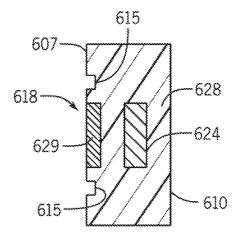


FIG. 8B

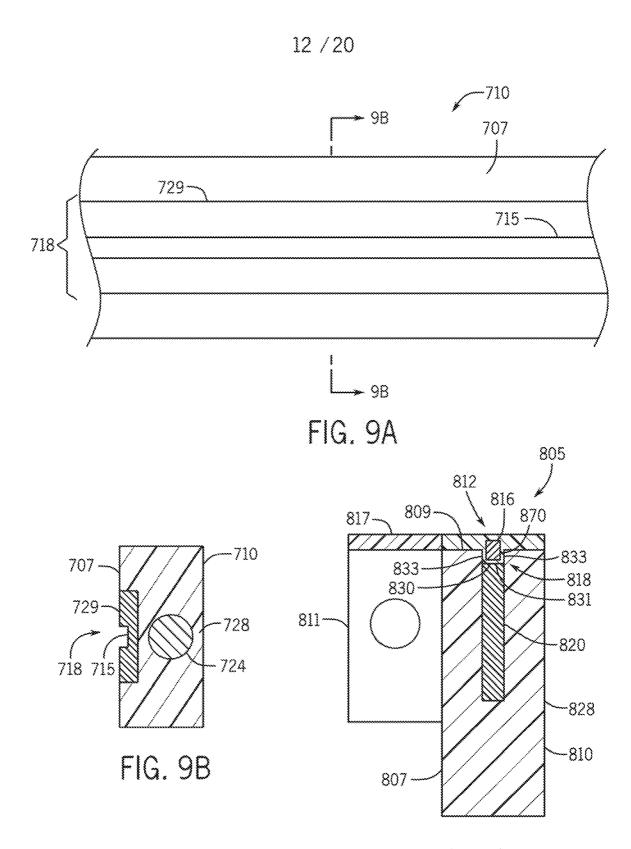
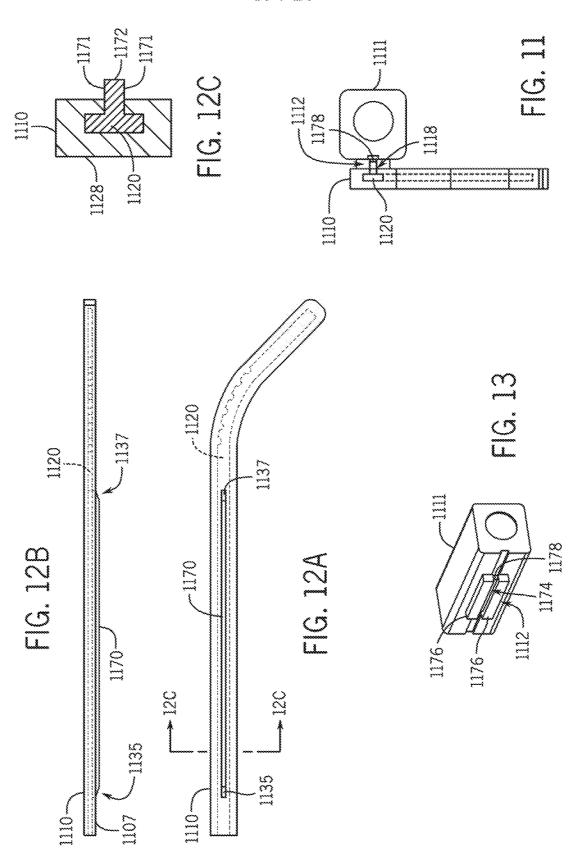
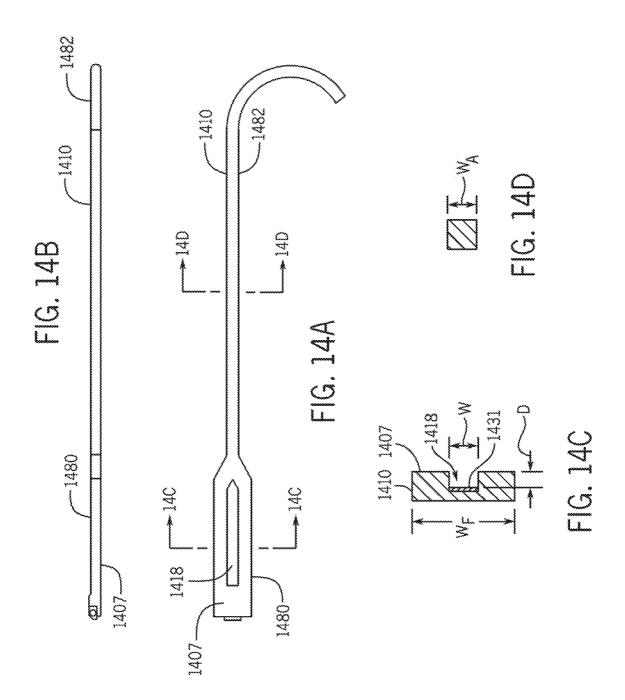
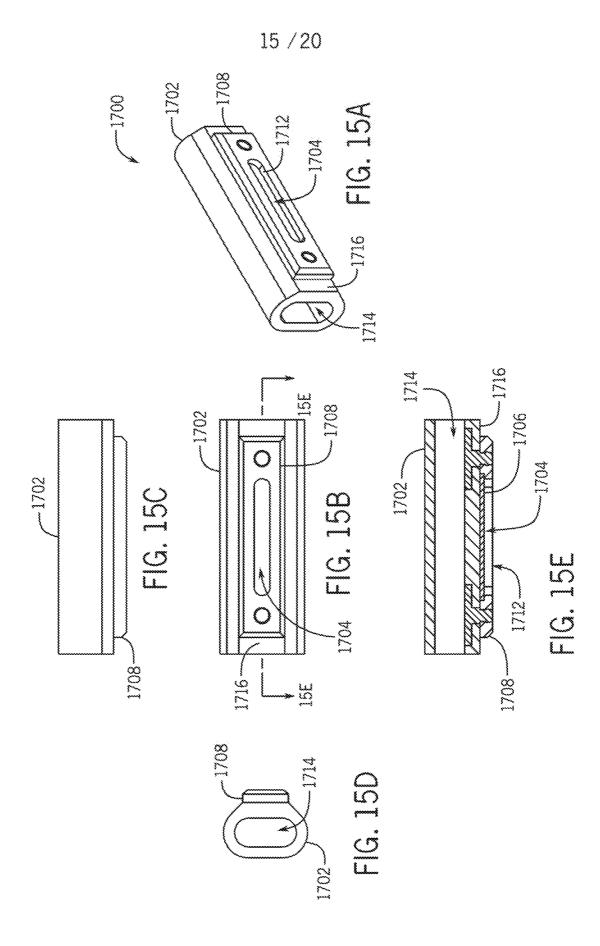


FIG. 10

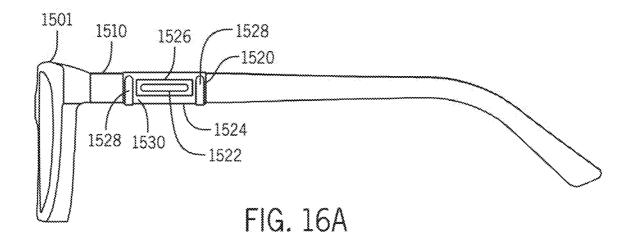


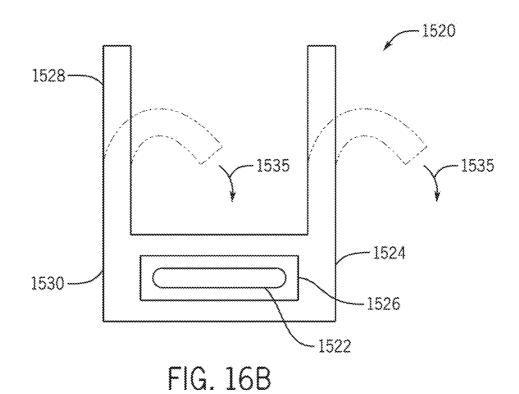




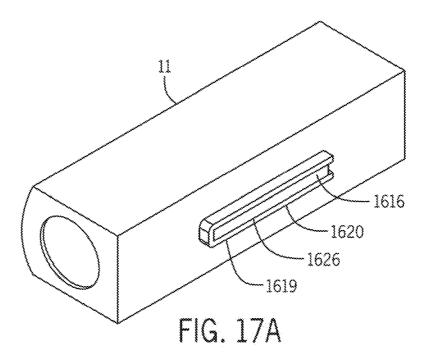


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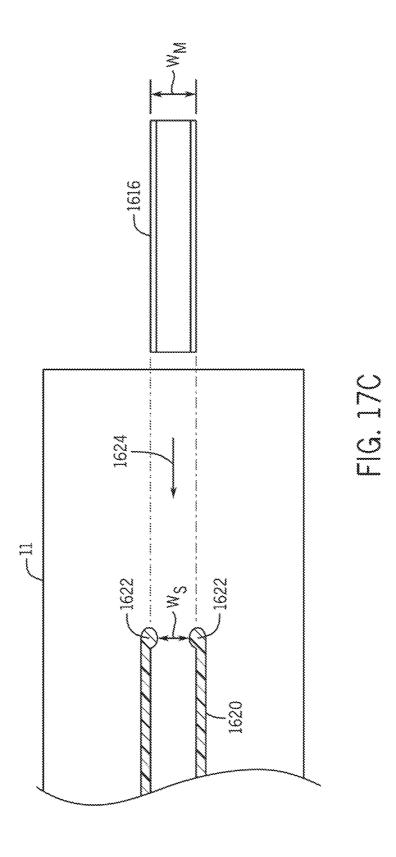
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FIG. 178





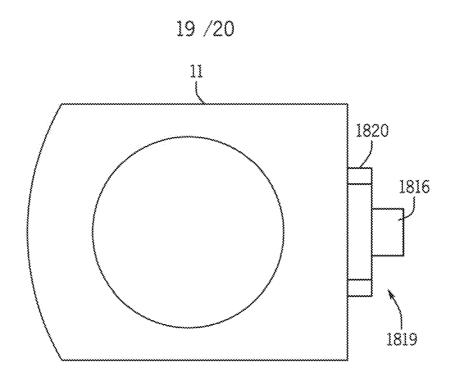
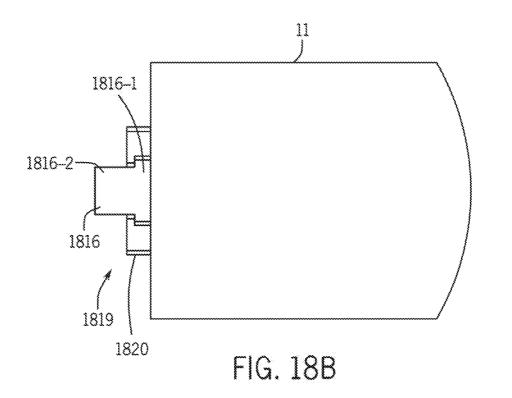


FIG. 18A



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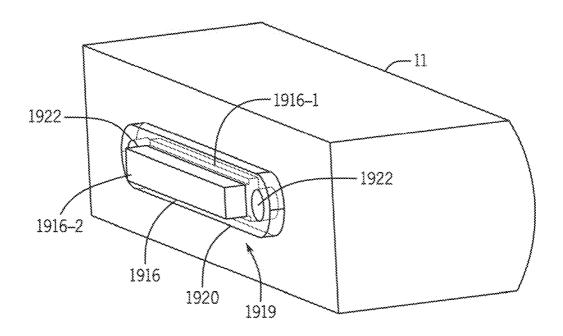


FIG. 19

## INTERNATIONAL SEARCH REPORT

International application No.
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CLASSIFICATION O F SUBJECT IPC(8) - G02C1 1/00, G02C5/14 (2016.01) CPC - G02C1 1/10, G02B27/0176, G02C1 1/02, G02C1 1/04 According to International Patent Classification (IPC) or to both national classification and IPC В. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC(8)- G02C1 1/00, G02C5/14 (2016.01 ) CPC-G02C1 1/10, G02B27/0176, G02C1 1/02, G02C1 1/04 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PatSeer (US, EP, WO, JP, DE, GB, CN, FR, KR, ES, AU, IN, CA, INPADOC Data); Google Scholar; EBSCO; PubMed; "eyewear system", "glasses', goggle", spectacles", safety glasses, frame", body", hous\*, scaffold", mounting", trim", guid", track", path", rail", groov", slot", recess", ferro\_magnet", magnet", rare\_earth magnet", iron", or nickel\* or, cobalt, temple", arm", head\_mount", electronic\* C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Category' Relevant to claim No. x US 2014/0313471 A1 (EUBANKS, C) 23 October 2014; Figure 1; paragraph [0032], [0033], 1-12, 18-20, 22, 23, 25-27, 29 [0034], [0038] Υ 13-17, 21, 24, 30 45, 46, 48, 50, 51 US 2013/0216085 A 1 (SNIK LLC) 22 August 2013: Figure 10B: paragraph [0086] 47, 49 x 33-35, 38, 44 US 2007/0013864 A1 (DIETZ. D) 18 January 2007: Figures 8A, 8B, 2A, 2B; paragraphs [0048]. 100501 36, 37, 39, 40, 41-43 39, 40 US 7,979,963 B2 (LEE-HOLOWKA et al., J) 19 July 201 1; Figure 2; column 5, lines 1-15 37 US 8.123.352 B2 (MATSUMOTO et al., S) 28 February 2012; Figure 1, column 2, lines 30-54; column 7, lines 4-15 US 2005/0046786 AI (SMITH, G) 03 March 2005; paragraphs [0034], [0050] 16 US 2008/0088791 A1 (SMITH, G) 17 April 2008; Figure 1; paragraphs [0103], [0194] 24 Further documents are listed in the continuation of Box C. ↓ ↓ See patent family annex. Special categories of cited documents: later document published after the international filing date or priority date and not in conflict with the application but cited to understand document defining the general state of the art which is not considered to be of particular relevance the principle or theory underlying the invention "E" earlier application or patent but published on or after the international " $\chi$ " document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive "L" step when the document is taken alone document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other document of particular relevance; the claimed invention cannot be special reason (as specified) considered to involve an inventive step when the document is document referring to an oral disclosure, use, exhibition or other combined with one or more other such documents, such combination being obvious to a person skilled in the art document published prior to the international filing date but later than "&" document member of the same patent family the priority date claimed Date of mailing of the international search report Date of the actual completion of the international search 06 August 2016 (06.08.2016) U8 SFP ?f)76 Name and mailing address of the ISA/ Authorized officer Mail Stop PCT, Attn: ISA/US, Commissioner for Patents Shane Thomas

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## INTERNATIONAL SEARCH REPORT

International application No.
PCT/US16/36940

C (Continua	tion). DOCUMENTS CONSIDERED TO BE RELEVANT	
C (Continua	LILION). DOCUMENTS CONSIDERED TO BE RELEVANT	
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
(	US 2010/0319096 A1 (SCOTT et al., M) 23 December 2010; Figure 13; paragraphs [0040], [0049], [0050], [0086]	47
(	US 2013/0229614 A1 (MARINI et al., S) 05 September 2013; Figure 2; paragraph [0038]	17
(	US 2013/0235332 A1 (E-VISION LLC) 12 September 2013; paragraphs [0063], [0075]	15
1	US 2014/0043580 A1 (STEELE, C) 13 February 2014; paragraph [0023]	41-43
1	US 2008/0231721 A1 (CHOU et al., F) 25 September 2008; paragraph [0017]	49
(	WO 201 1/041733 A1 (OAKLEY, INC) 07 April 201 1; paragraphs [0003], [0042], [0058]	21,30
(	WO 2014/012451 A1 (GALANT POINT LIMITED) 23 January 2014; paragraphs[0020], [0031], [0063]	13
<b>(</b>	WO 2013/1 18162 A 1 (AOYAMA OPTICAL CO., LTD) 15 August 2013; paragraphs [0006], [0027] [0047]; Figure 1	14
Υ	WO 92/08157 A1 (THE JOHNS HOPKINS UNIVERSITY) 14 May 1992; page 8, page 16; Figure 2	36