

## G02C

**SPECTACLES; SUNGLASSES OR GOGGLES INsofar AS THEY HAVE THE SAME FEATURES AS SPECTACLES; CONTACT LENSES** (trial frames for testing the eyes [A61B 3/04](#); goggles or eyeshields not having the same features as spectacles [A61F 9/00](#))

### Definition statement

*This place covers:*

Ophthalmic devices intended to be worn or supported by the user, either in front of the eyes or placed in contact with the eyes: spectacles (eyeglasses), contact lenses, sunglasses, goggles insofar as they have the same features as spectacles.

Optical parts of eyewear and methods of their design, e.g. lenses, filters, polarizers, mirrors, prisms, obturators, shields, auxiliary lenses.

Mechanical parts of eyewear (Means to support the optical parts) e.g. spectacle frames, bridges, nose pads, side-members.

Means to attach auxiliary optical parts to eyewear.

Means for supporting eyewear e.g. retainers, headbands.

Non-optical adjuncts to eyewear, e.g. ornaments, illumination, hearing aids and other electronic means, anti-misting means.

Assembling, repairing and cleaning of spectacles and contact lenses.

Measuring geometrical parameters for fitting or during assembling spectacles.

### Relationships with other classification places

This subclass concerns only extracorporal ophthalmic devices. Owing to their medical nature, implanted devices such as intraocular lenses and corneal implants are classified in [A61F 2/00](#), as well as ophthalmologic instruments in [A61B 3/00](#)(diagnostic) and [A61F 9/00](#)(therapeutic).

This subclass covers spectacles or goggles insofar they have features of vision correction or protection. Sunglasses are covered by this subclass insofar they protect the eye against high levels of visible and ultraviolet light. Groups [A61F 9/02](#) and [A61F 9/04](#) cover goggles or eye-masks (eye-shields) as forms of protective eyewear worn to prevent particulates or chemicals from striking the eyes, and not having the features of vision correction or protection against high levels of visible and ultraviolet light, which are normally associated to spectacles. Typical examples of goggles covered by these groups are goggles worn while welding, drilling or sawing. Goggles for swimming are covered by [A63B 33/00](#), whereas diving masks are covered by [B63C 11/12](#).

### References

#### Limiting references

*This place does not cover:*

|  |   |
|--|---|
| Trial frames and lenses for testing the eyes     | <a href="#">A61B 3/04</a>                             |
| Lenses implantable into the eye                  | <a href="#">A61F 2/14</a> , <a href="#">A61F 2/16</a> |
| Optical elements characterized by their material | <a href="#">G02B 1/00</a>                             |
| Using polarisation multiplexing                  | <a href="#">H04N 13/337</a>                           |

**Informative references**

Attention is drawn to the following places, which may be of interest for search:

|  |   |
|--|---|
| Visors for helmets                                 | <a href="#">A42B 3/22</a>                               |
| Instruments for examining the eye                  | <a href="#">A61B 3/00</a>                               |
| Lenses implantable into the eye                    | <a href="#">A61F 2/14</a> , <a href="#">A61F 2/16</a>   |
| Instruments for treating the eye                   | <a href="#">A61F 9/00</a> - <a href="#">A61F 9/0136</a> |
| Goggles not having the same features as spectacles | <a href="#">A61F 9/02</a>                               |
| Swimming goggles                                   | <a href="#">A63B 33/002</a>                             |
| Diving masks                                       | <a href="#">B63C 11/12</a>                              |
| Instruments for testing optical devices            | <a href="#">G01M 11/00</a>                              |
| Optical systems in general                         | <a href="#">G02B</a>                                    |
| Simple or compound lenses                          | <a href="#">G02B 3/00</a>                               |

**Special rules of classification**

Generally, more than one subgroup should be assigned whenever applicable.

Further detail not provided for in any of the main groups is provided for in the subgroups of [G02C 2200/00](#) representing information orthogonal to one or to more than one of the groups [G02C 1/00](#) - [G02C 13/00](#) and their subgroups

symbols of the type [G02C 2200/00](#) cover mechanical features (frame)

symbols of the type [G02C 2202/00](#) cover optical features (lenses).

**G02C 1/00****Assemblies of lenses with bridges or browbars****Definition statement**

*This place covers:*

All aspects of mounting the lenses to the frame front:

front portions of the spectacle frames to which the lenses are mounted;

assemblies of lenses with bridges or browbars and other fixing parts

Frame front types: rimless, half-rim, full-rim, split-rim.

Means for mounting: types of grooves, mounting threads, closure means of split frames.

Half lens spectacles.

Frame and lenses integrally formed .

**Special rules of classification**

Frame front portions enabling easy exchange of lenses: add [G02C 2200/08](#)

**G02C 1/02****Bridge or browbar secured to lenses without the use of rims****Definition statement**

*This place covers:*

Rimless spectacles, e.g. with or without holes, recesses or slits in the lenses.

means for securing: screws, nuts, washers, stems, rods, dowels.

Holes or slits provided in axial direction or in the peripheral surface of the lens (recesses).

**G02C 1/023**

**{with lenses secured to the fixing parts by clamping, luting, soldering, gluing without holes or recesses in the lenses ([G02C 1/04](#) - [G02C 1/08](#) take precedence)}**

**Definition statement**

*This place covers:*

Rimless spectacles without holes, recesses or slits in the lenses.

**References****Limiting references**

*This place does not cover:*

|  |                           |
|--|---------------------------|
| Bridges and browbars secured or integral with partial rims         | <a href="#">G02C 1/04</a> |
| Bridge or browbar secured or integral with closed rigid rims       | <a href="#">G02C 1/06</a> |
| The rims being transversely split and provided with securing means | <a href="#">G02C 1/08</a> |

**G02C 1/026**

**{with auxiliary bars ([G02C 1/04](#) - [G02C 1/08](#) take precedence)}**

**Definition statement**

*This place covers:*

Rimless spectacles with additional bar not directly fixed to the lenses. e.g. second bridge

**References****Limiting references**

*This place does not cover:*

|  |                           |
|--|---------------------------|
| Bridges and browbars secured or integral with partial rims         | <a href="#">G02C 1/04</a> |
| Bridge or browbar secured or integral with closed rigid rims       | <a href="#">G02C 1/06</a> |
| The rims being transversely split and provided with securing means | <a href="#">G02C 1/08</a> |

**G02C 1/04**

**Bridge or browbar secured to or integral with partial rims, e.g. with partially-flexible rim for holding lens**

**Definition statement**

*This place covers:*

Front frames having only an upper portion or only a lower portion.

Front frames having two halves of different material, frequently a rigid (upper) portion and a soft (lower) portion, the top portion frequently comprising a groove, the lower portion being constituted by a (nylon) thread.

**G02C 1/06**

**Bridge or browbar secured to or integral with closed rigid rims for the lenses**

**Definition statement**

*This place covers:*

Closed rims (frequently from plastics material) comprising a groove in which the lenses are held.

**G02C 1/08**

**the rims being transversely split and provided with securing means**

**Definition statement**

*This place covers:*

Rims (frequently made from metal) split (opened) for inserting the lens,

frames split at temporal or nasal side or any other location,

means for closing the split frame portions for securing the lens:

- Blocks and screw.
- Split bridge.
- Combined closing means and front hinge element ("split hinge").
- Various special closing means.

**Special rules of classification**

Combined closing means and front hinge element: add [G02C 5/22](#) or subgroup.

**G02C 1/10**

**{Special mounting grooves in the rim or on the lens}**

**Definition statement**

*This place covers:*

Groove profiles other than V-grooves such as (semi-) circular, rectangular, asymmetric.

Profile varying or being interrupted along the perimeter of the rim.

## G02C 3/00

**Special supporting arrangements for lens assemblies or monacles (lenses therefor [G02C 7/00](#); by walking-sticks [A45B 3/00](#))**

### Definition statement

*This place covers:*

Supporting lenses, front frames or spectacles on the head by other means than temples, bridge or nose pads or in addition thereto.

Supporting lenses and spectacles by neck, headgear, garment or other articles (e.g. lorgnons).

### Relationships with other classification places

[G02C 3/00](#) and subgroups concern devices for supporting spectacles.

[G02C 11/00](#) and subgroups concern devices supported by spectacles.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |                           |
|---|---------------------------|
| Lenses therefor   | <a href="#">G02C 7/00</a> |
| Lens assemblies or monacles supported by walking-sticks | <a href="#">A45B 3/00</a> |

### Special rules of classification

If specially adapted frame portions (e.g. temple ends) are required: add respective sub-group (e.g. [G02C 5/143](#)).

## G02C 3/003

**{Arrangements for fitting and securing to the head in the position of use}**

### Definition statement

*This place covers:*

Retainers (straps, cords, chains, bands) for spectacles in front of the eyes:

straps, cords, chains, bands replacing the temples or in addition to temples.

Lenses or spectacle parts fixed to the face by piercings.

Means for preventing spectacles from slipping.

Means for reducing weight or pressure on the nose or on the ears, balancing the weight of the spectacles.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                              |
|--|------------------------------|
| Jewellery holding or retaining articles, e.g. spectacles | <a href="#">A44C 15/003</a>  |
| Piercing type jewellery                                  | <a href="#">A44C 15/0035</a> |

|  |                            |
|--|----------------------------|
| Straps, buckles, attachment of headbands for goggles | <a href="#">A61F 9/027</a> |
|--|----------------------------|

## G02C 3/006

{Arrangements for fitting and securing to the head or neck not in the position of use}

### Definition statement

*This place covers:*

Retainers for spectacles (straps, cords, chains, bands) to be worn around the neck when the spectacles are not in use.

### Special rules of classification

Only if the retainer has a special (support) function when the spectacles are worn in front of the eyes: add [G02C 3/003](#).

## G02C 3/02

Arrangements for supporting by headgear

### Definition statement

*This place covers:*

Devices for mounting spectacles to hats, caps, sun shields, helmets, etc.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |                            |
|---|----------------------------|
| Securing spectacles or goggles on helmet shells | <a href="#">A42B 3/185</a> |
|---|----------------------------|

## G02C 3/04

Arrangements for supporting by hand, e.g. lorgnette, Arrangements for supporting by articles (by walking-sticks [A45B 3/00](#))

### Definition statement

*This place covers:*

Lorgnon, lorgnette.

Holding devices for spectacles e.g. on garment, clothes, in cars, on belts etc.

combination of spectacles and cases.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|                           |                            |
|---------------------------|----------------------------|
| Support by walking sticks | <a href="#">A45B 3/00</a>  |
| Spectacle cases           | <a href="#">A45C 11/04</a> |

|                                   |  |
|-----------------------------------|--|
| Fastening articles to the garment | <a href="#">A45F 5/02</a>  |
| Supporting spectacles in vehicles | <a href="#">B60R 7/082</a>   |
| (Hand held) magnifying glasses    | <a href="#">G02B 25/002</a> ,<br><a href="#">G02B 25/008</a> ,<br><a href="#">G02B 25/02</a> |

## **G02C 5/00**

### **Constructions of non-optical parts**

#### **Definition statement**

*This place covers:*

Mechanical parts of spectacles such as bridges, nose pads, hinges, temples.

Frame (parts) made from special materials.

Frames having special properties or functions other than supporting lenses

mounting details.

#### **References**

##### **Limiting references**

*This place does not cover:*

|                                |                           |
|--------------------------------|---------------------------|
| Spectacle frame front portions | <a href="#">G02C 1/00</a> |
|--------------------------------|---------------------------|

#### **Special rules of classification**

Modular frames or frames comprising easily exchangeable elements: add [G02C 2200/08](#).

## **G02C 5/001**

**{specially adapted for particular purposes, not otherwise provided for or not fully classifiable according to technical characteristics, e.g. therapeutic glasses}**

#### **Definition statement**

*This place covers:*

Frames having special properties or functions other or in addition to holding lenses.

Spectacle frames lacking conventional parts:

Spectacles having only one or no temple, having no bridge, only one rim.

Unconventional shape or use:

Asymmetric frames, attachment of the temples at the underside of the frame,

temple(s) pivotable to the front side of the frame front, convertible, reversible spectacles (front/back, up/down).

Spectacles for specially shaped faces (e.g. babies, Down-syndrome patients);

Fully individual adaption of the shape of frame portion e.g. by molding etc.

Special construction to protect the lenses when laying down the glasses.

## References

### Limiting references

*This place does not cover:*

|  |                            |
|--|----------------------------|
| Half-lens spectacles and frames therefor | <a href="#">G02C 1/00</a>  |
| Lorgnons                                 | <a href="#">G02C 3/04</a>  |
| Pince-nez                                | <a href="#">G02C 5/128</a> |

## Special rules of classification

Add group symbol relating to the feature providing the unconventional function, e.g. [G02C 5/12](#), [G02C 5/14](#), [G02C 5/22](#).

## G02C 5/003

### {Shooting or aiming glasses}

#### Definition statement

*This place covers:*

Spectacle frames for shooting glasses.

Glasses for sports requiring aiming, e.g. golf, frequently with means for adjusting the aiming elements (pin holes, cross lines).

## References

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|                            |                            |
|----------------------------|----------------------------|
| Lenses comprising markings | <a href="#">G02C 7/021</a> |
| Shields, shades obturators | <a href="#">G02C 7/16</a>  |

## G02C 5/005

### {Glasses allowing access to one eye, e.g. for make-up application}

#### Definition statement

*This place covers:*

Spectacles comprising individually pivotable (vertically, horizontally) rims.

## References

### Limiting references

*This place does not cover:*

|   |                           |
|---|---------------------------|
| Pivotaly arranged auxiliary lenses, clipons | <a href="#">G02C 9/02</a> |
|---|---------------------------|



## G02C 5/006

### {Collapsible frames}

#### Definition statement

*This place covers:*

Frames having multiple possibilities to be folded (other than just the conventional opening and closing of the temples or in addition thereto).

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |   |
|---|---|
| Hinges in the middle of the temple; or bridge | <a href="#">G02C 5/20</a> ; <a href="#">G02C 5/08</a> |
|---|---|

#### Special rules of classification

Add subgroup relating to the elements involved in the collapsing action, e.g. [G02C 5/22](#), [G02C 5/20](#), [G02C 5/08](#).

## G02C 5/008

### {Spectacles frames characterized by their material, material structure and material properties}

#### Definition statement

*This place covers:*

Frames made from metal, polymers, horn, wood, shape memory alloy, superelastic materials, etc.

Structure of the material: layered, compound, wire, sheet type material, credit-card shaped spectacles, spectacles made from card board (e.g. polarizing stereo).

Properties of the frame resulting from materials (e.g. floating, particularly soft).

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |  |
|--|--|
| Production of spectacle frames from metal (wire) | <a href="#">B21F 45/002</a>                |
| Shape memory alloys, super elastic metals per se | <a href="#">C22C 19/00</a>                 |
| Double, galvanic layers, corrosion resistance    | <a href="#">C23</a> , <a href="#">C25D</a> |

#### Special rules of classification

As for the material per se, use this sub-group only if the material is essential to achieve a particular functionality or property (e.g. floating spectacles, super elastic temples) or requires special assembly or treatment techniques (e.g. wood or horn frames).

Add one of [G02C 2200/10](#) - [G02C 2200/16](#) if applicable.

## G02C 5/02

### Bridges; Browbars; Intermediate bars (nose engaging-surfaces [G02C 5/12](#))

#### Definition statement

*This place covers:*

Elements joining the two rims or lenses.

Spectacles detachable or detached at the location of the bridge.

Double bridge, reinforced bridge.

Horizontally or vertically split bridge.

Special bridge for mounting nose-pad arms, pads or other nose engaging surfaces.

Bridge specially adapted for mounting decorative elements.

Bridge adapted for holding temples when closed, e.g. with magnetic means.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|                        |                           |
|------------------------|---------------------------|
| Nose engaging surfaces | <a href="#">G02C 5/12</a> |
|------------------------|---------------------------|

#### Special rules of classification

Horizontally split bridges: add [G02C 1/08](#).

Special bridge for mounting pad arms, pads etc.: add [G02C 5/12](#) or subgroup.

## G02C 5/08

### foldable

#### Definition statement

*This place covers:*

Hinge or other element enabling folding on the bridge.

## G02C 5/10

### Intermediate bars or bars between bridge and side-members

#### Definition statement

*This place covers:*

Individual parts between front frame and hinge, not generally present in all kinds of frames.

**G02C 5/12****Nose pads; Nose-engaging surfaces of bridges or rims****Definition statement**

*This place covers:*

Nose pads, elements for mounting and retaining nose pads.

Bridge type pads, bridge saddle, two individual pads, twinned pads

mounted to the bridge or to the rims.

Pads integral with rims.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|   |                            |
|---|----------------------------|
| Protection of the nose                              | <a href="#">G02C 11/00</a> |
| Paddings, cushions, fitting to the face for goggles | <a href="#">A61F 9/026</a> |

**G02C 5/122****{with adjustable means}****Definition statement**

*This place covers:*

Adjustable and resilient mounting of nose pads and other nose engaging elements.

**G02C 5/124****{for vertically varying the position of the lenses}****Definition statement**

*This place covers:*

Can be achieved by vertical or horizontal adjustment of the pads.

**G02C 5/126****{exchangeable or otherwise fitted to the shape of the nose}****Definition statement**

*This place covers:*

Exchangeable pads or pads providing particular fit and comfort.

**G02C 5/128****{Pince-nez}****Definition statement***This place covers:*

Spectacles comprising a front frame only comprising clamping nose pads or other nose clamping functionality.

**Special rules of classification**

Use this class also in absence of (special) nose pads or pad mounting.

**G02C 5/14****Side-members****Definition statement***This place covers:*

Temples, rigid side members rearwards from the hinge or directly attached to the front frame (no hinge).

Special temples for receiving non optical adjuncts.

Special temples acting as case for the front and the lenses.

Adjustable, reinforced, resilient, shortened temples.

**References****Limiting references***This place does not cover:*

|  |                            |
|--|----------------------------|
| Side members other than temples, e.g. straps, head bands | <a href="#">G02C 3/003</a> |
| Spectacles having only one temple                        | <a href="#">G02C 5/001</a> |

**Informative references***Attention is drawn to the following places, which may be of interest for search:*

|  |                            |
|--|----------------------------|
| Non-optical adjuncts: decorative, hearing aids, illumination, etc. | <a href="#">G02C 11/00</a> |
|--|----------------------------|

**G02C 5/143****{having special ear pieces}****Definition statement***This place covers:*

Special temple ends: individual, wired, securing means.

Temples having no ear piece (shortened temples).

**G02C 5/146****{having special front end}****Definition statement***This place covers:*

Special temple front ends, e.g. split front ends requiring two hinges,  
front end particularly constructed for fixing the hinge or a non-optical adjunct.

**G02C 5/16****resilient or with resilient parts****Definition statement***This place covers:*

Resiliently deformable temple or temple parts.

**G02C 5/18****reinforced****Definition statement***This place covers:*

Temple reinforced, e.g. by a metal core.

**G02C 5/20****adjustable, e.g. telescopic****Definition statement***This place covers:*

Temples having adjustable length, self adjusting length.

Temples having adjustable inclination and/or opening angle.

Foldable temples, temples having a hinge.

Temple rotatable about its longitudinal axis

**Special rules of classification**

If adjustable inclination and opening angle is enabled by features of the hinge, only use [G02C 5/22](#) or subgroups.

Foldable temples having a hinge: add [G02C 5/22](#) or subgroup.

**G02C 5/22****Hinges (pivotal connection in general [F16C 11/00](#))****Definition statement**

*This place covers:*

Junctions between elements of the spectacles frame:

(front frame - temple, rim - temple, intermediate portion - temple

bridge - bridge, temple - temple).

Pivotal junctions comprising or not comprising well-defined pivot axis

Elements combining hinge (front portion) and securing means for closing a rim of the front frame (split hinge).

Details of the pivot or bearing.

Special hinge screws.

Elastic hinges comprising coil springs or other springs.

Composite hinges allowing multiple axis rotation.

Hinges having an oblique axis.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|                               |                            |
|-------------------------------|----------------------------|
| Pivotal connection in general | <a href="#">F16C 11/00</a> |
|-------------------------------|----------------------------|

**Special rules of classification**

Combined closing means and front hinge element ("split hinge"): add [G02C 1/08](#).

**G02C 5/2209****{Pivot bearings and hinge bolts other than screws}****Definition statement**

*This place covers:*

Hinges comprising means for providing pivotal connections other than screws, screwless hinges.

**G02C 5/2218****{Resilient hinges}****Definition statement**

*This place covers:*

Hinge comprising elastic means urging the temple towards at least one predetermined angular position (opened and/or closed position), frequently following overextension beyond the normal open position of use.

## References

### Limiting references

*This place does not cover:*

|                               |                             |
|-------------------------------|-----------------------------|
| Resilient hingeless junctions | <a href="#">G02C 5/2272</a> |
|-------------------------------|-----------------------------|

## Special rules of classification

If applicable add suitable subgroup of [G02C 2200/00](#).

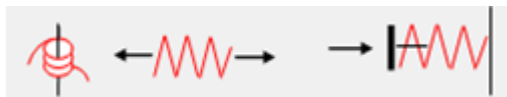
### G02C 5/2227

{comprising a fixed hinge member and a coil spring}

#### Definition statement

*This place covers:*

Both hinge members are fixed with respect to the front frame and the temple; a coil is used for the overextension, the eyelets (or the coil) are fixed to front frame and temple. Illustrative example:



### G02C 5/2236

{comprising a sliding hinge member and a coil spring}

#### Definition statement

*This place covers:*

At least one hinge member slidingly connected to temple or front frame, coil actuated by piston or housed in a sliding box. Illustrative example:



### G02C 5/2245

{comprising a sliding box containing a spring}

#### Definition statement

*This place covers:*

Hinge comprising a slidingly arranged box shaped element housing (and actuating) a coil spring.

### G02C 5/2254

{comprising elastic means other than coil spring}

#### Definition statement

*This place covers:*

Resilient part other than a coil spring generating an elastic effect

e.g. leaf spring, rubber, elastic wire.

## **G02C 5/2263**

**{Composite hinges, e.g. for varying the inclination of the lenses}**

### **Definition statement**

*This place covers:*

Hinges allowing multiple axis rotation.

Hinges allowing variation of inclination of the front frame.

Hinges allowing 180° folding of temples.

Hinges allowing temples to be rotated about their longitudinal axis.

Connected hinges cooperating to open both temples using one hand only.

## **G02C 5/2272**

**{Hinges without well-defined pivot axis}**

### **Definition statement**

*This place covers:*

Pivotal movement of the temples achieved e.g. by a bending portion, "hingeless articulations".

## **G02C 5/2281**

**{Special hinge screws}**

### **Definition statement**

*This place covers:*

Special screws comprising e.g. blocking means, two (different) threads, special slit, cone-shape or otherwise varying cross-section, special nuts and other special elements cooperating with screws.

## **G02C 5/229**

**{Oblique hinge axis}**

### **Definition statement**

*This place covers:*

Hinge comprising an oblique (not vertical) axis for enabling special folding movement of the temples, e.g. to the top or bottom of the frame rather than to the rear side.

## **G02C 7/00**

**Optical parts (characterised by the material [G02B 1/00](#))**

### **Definition statement**

*This place covers:*

Elements arranged in the optical path of the eye and serving for ophthalmic purposes:

Lenses, auxiliary lenses, light deflecting elements, filters, apertures, occluders.



## Definition statement

Design of optical elements.

### Relationships with other classification places

Only optical elements worn in front of or on the eye are contained in this group. Optical elements implanted into the eye (intra-ocular lenses, corneal inlays) requiring surgical interventions are classified in [A61F 2/14](#) and [A61F 2/16](#).

### References

#### Informative references

Attention is drawn to the following places, which may be of interest for search:

|  |                           |
|--|---------------------------|
| Optical elements in general                      | <a href="#">G02B</a>      |
| Optical elements characterized by their material | <a href="#">G02B 1/00</a> |

## G02C 7/02

### Lenses; Lens systems {; Methods of designing lenses}

#### Definition statement

*This place covers:*

Ophthalmic lenses and their design, such as e.g.

spectacle lenses, contact lenses, multifocal lenses (including bifocal, trifocal and progressive power lenses).

Methods of designing ophthalmic lenses, e.g. individual lens design

high power ophthalmic lenses, lenticular lenses

high curvature lenses.

Lenses for correcting of higher order aberrations, e.g. spherical aberration

diffractive and Fresnel ophthalmic lenses.

Lenses for inhibiting myopia progression

Mislocation tolerant ophthalmic lenses.

Lenses comprising decentered structures.

Series of ophthalmic lenses.

Semifinished ophthalmic lenses, lens blanks.

Lenses for low vision and visual disorders other than refractive errors.

Individual lens design for impaired vision, e.g. macula degeneration.

Ophthalmic lenses having features achieved by their material or material Structure (only if specific to ophthalmic lenses):

laminated lenses, gradient index, hybrid material, photorefractive material;

mathematical description of lens surfaces e.g. spheric, aspheric, toric, atoric, by conicals, polynomials, Zernicke polynomials.

## Definition statement

Ophthalmic lenses having technical markings,

Patterned lenses (cosmetic contact lenses).

Ophthalmic lenses having special protective or antireflective coatings.

## References

### Limiting references

*This place does not cover:*

|   |                           |
|---|---------------------------|
| Specially edged lenses for half-lens spectacles | <a href="#">G02C 1/00</a> |
|---|---------------------------|

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |   |
|---|---|
| Ophthalmic filters, sun protection  | <a href="#">G02C 7/10</a>                               |
| Polarizers  | <a href="#">G02C 7/12</a>                               |
| Edging of lenses, drilling holes, cutting recesses and instruments therefor | <a href="#">B24B 9/14</a>                               |
| Positioning or marking of lenses (in preparation of grinding)               | <a href="#">B24B 13/005</a>                             |
| Tools for grinding lenses (surface)   | <a href="#">B24B 13/02</a> - <a href="#">B24B 13/06</a> |
| Manufacture of plastics lenses  | <a href="#">B29D 11/00009</a>                           |
| Applying coatings on optical elements                                       | <a href="#">B29D 11/00865</a>                           |
| Surface treatment of glass  | <a href="#">C03C 15/00</a>                              |
| Lenses made of organic material   | <a href="#">G02B 1/041</a>                              |
| Optical coatings  | <a href="#">G02B 1/10</a>                               |
| Anti-reflection coatings  | <a href="#">G02B 1/11</a>                               |
| Optical coatings by surface treatment                                       | <a href="#">G02B 1/12</a>                               |
| Simple lenses per se  | <a href="#">G02B 3/00</a>                               |
| Lenses per se defined by analytical functions                               | <a href="#">G02B 3/0081</a>                             |
| Lenses per se having non-spherical surfaces                                 | <a href="#">G02B 3/02</a>                               |
| Lenses per se having cylindrical or toric surfaces                          | <a href="#">G02B 3/06</a>                               |
| Lenses per se having discontinuous surfaces, e.g. Fresnel                   | <a href="#">G02B 3/08</a>                               |
| Diffraction elements per se   | <a href="#">G02B 5/18</a>                               |
| Optical systems for correcting aberrations                                  | <a href="#">G02B 27/0025</a>                            |
| Diffraction optics in general   | <a href="#">G02B 27/42</a>                              |

### Special rules of classification

Add suitable sub-group of [G02C 2202/00](#)

## G02C 7/021

{with pattern for identification or with cosmetic or therapeutic effects (methods and processes take preference, e.g. printing, marking or copying processes [B41M](#); identification in general [G09F 3/00](#); producing decorative effects in general [B44C](#); surface treatment of glass [C03C 15/00](#) - [C03C 23/00](#); positioning or marking of lenses [B24B 13/0055](#))}

### Definition statement

*This place covers:*

Markings or patterns having no effect on spectral transmission or optical properties of the lens.

Markings for technical (identification or alignment) or non-technical (decorative) purposes.

Markings on progressive lenses, fitting cross, far-, near reference point

name or symbol of manufacturer, cross-hairs for aiming.

### References

#### Limiting references

*This place does not cover:*

|  |                            |
|--|----------------------------|
| Contact lenses comprising iris pattern or (printed) pin hole | <a href="#">G02C 7/046</a> |
|--|----------------------------|

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |   |
|---|---|
| Coloring having influence on spectral transmission, filters | <a href="#">G02C 7/10</a>                               |
| Pin-holes and other kind of apertures formed on the lens    | <a href="#">G02C 7/16</a>                               |
| Positioning or marking of lenses                            | <a href="#">B24B 13/0055</a>                            |
| Printing, marking or copying processes                      | <a href="#">B41M</a>                                    |
| Marking by laser  | <a href="#">B41M 5/24</a> , <a href="#">B41M 5/26</a>   |
| Producing decorative effects in general                     | <a href="#">B44C</a>                                    |
| Surface treatment of glass                                  | <a href="#">C03C 15/00</a> - <a href="#">C03C 23/00</a> |
| Identification in general                                   | <a href="#">G09F 3/00</a>                               |

## G02C 7/022

{Ophthalmic lenses having special refractive features achieved by special materials or material structures ([G02C 7/049](#) takes precedence)}

### Definition statement

*This place covers:*

Lenses essentially requiring particular materials and material structures to achieve their special refractive properties:

Locally varying refractive index (index gradient, GRIN-lenses),

photorefractive materials (refractive index can be modified by illumination),

laminated lens structure.

Cellular lens surface structure.

## References

### Limiting references

*This place does not cover:*

|   |                            |
|---|----------------------------|
| Contact lenses having special fitting or structural features achieved by their material | <a href="#">G02C 7/049</a> |
|---|----------------------------|

## Special rules of classification

Add one of [G02C 2202/12](#) - [G02C 2202/18](#) if applicable.

## G02C 7/024

### {Methods of designing ophthalmic lenses}

#### Definition statement

*This place covers:*

Methods of designing lenses:

For individuals or for standard user or standard situation,

considering conditions related to the viewed object, i.e. the environment in which the lenses are intended to be used,

considering conditions related to the user,

special mathematical methods and interactive techniques.

## Special rules of classification

Add sub-group symbol relating to the specific type of ophthalmic lens to be designed ([G02C 7/02](#), [G02C 7/061](#), [G02C 7/04](#) and sub-groups).

## G02C 7/025

### {considering parameters of the viewed object}

#### Definition statement

*This place covers:*

Adapting the design and optical properties of the lens to the environment in which the lenses are intended to be used such as office, car, outdoor, particular professional environments, etc.

Generalized definition of the viewed object by defining an object distance for each direction of gaze ("Ergorama", "Objektabstandsfunktion").

**G02C 7/027****{considering wearer's parameters}****Definition statement**

*This place covers:*

- Considering wearing parameters determined by the spectacles frame used for mounting the lenses to be designed and by the position of the frame as worn by the user, such as pupillary distance, inclination, wrap angle, vertex distance, position on the face, centre of rotation, eye-length.
- User dependent determination of reference points (F, N, O) on the lens.
- Matching properties in corresponding points on the lenses in binocular use.
- Considering the user's eye and/or head movement, choice of design dependent thereon (e.g. hard/soft design in progressive lenses).
- Considering special ophthalmological conditions (not simple ametropia) such as higher order aberrations of the eye, visual performance, different cylindrical correction in far and near zones required (cylindrical addition and Listing's rule), magnification differences due to (considerably) different refraction of the two eyes, wearer's tolerance to imaging errors (distorsion, unwanted astigmatism, different magnification R/L).
- Considering different correction goals for the two eyes ("monovision") such as different correction far/near, different colour filters, arrangement of far and near zones different in left and right contact lenses.

**G02C 7/028****{Special mathematical design techniques}****Definition statement**

*This place covers:*

- Special mathematical tools and techniques:
- definition of boundary conditions for optimization and calculation,
- specific type of error function, choice of coordinate systems, superposition of surfaces and techniques therefor, power vector, mathematical representation of astigmatism, ray tracing and wavefront calculation techniques.
- Interactive design methods.
- Simulation of the view through lenses.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|   |   |
|---|---|
| Optical design, e.g. procedures, algorithms, optimization | <a href="#">G02B 27/0012</a>                            |
| Complex mathematical operations                           | <a href="#">G06F 17/10</a>                              |
| Computer aided design                                     | <a href="#">G06F 30/00</a>                              |
| 3D modelling, simulation                                  | <a href="#">G06T 17/20</a> , <a href="#">G06T 17/30</a> |

## G02C 7/04

### Contact lenses for the eyes (disinfection or sterilisation of contact lenses [A61L 12/00](#))

#### Definition statement

*This place covers:*

Lenses worn on the cornea or on the cornea and sclera of the eye,  
corneal contact lenses (CLs), scleral contact lenses,  
soft (including silicone hydrogels), rigid and combinations,  
CLs for modifying the shape of the cornea, orthokeratology lenses,  
CLs for inhibiting progression or development of myopia,  
means for rotational and translational stability and control (ballast, slab-off),  
CLs having decentered optical axis,  
CLs having optical features providing tolerance to mislocation (angular),  
CLs for imaging "around" a retinal skotom,  
diffractive CLs,  
CLs providing chromatic correction,  
contact lenses suitable for containing (but not containing) medical preparations, drug delivery CLs,  
cosmetic CLs,  
CLs having grooves, holes for tear exchange,  
CLs having specific optical or topological properties or features essentially achieved by their material.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |  |
|---|--|
| Technical marks on CLs  | <a href="#">G02C 7/021</a>                                   |
| Different correction for the two eyes, monovision                         | <a href="#">G02C 7/028</a>                                   |
| Cleaning devices for contact lenses                                       | <a href="#">G02C 13/008</a>                                  |
| Cases for contact lenses  | <a href="#">A45C 11/005</a>                                  |
| Diagnostic measuring using contact lenses (e.g. glucose sensors)          | <a href="#">A61B 5/14532</a> ,<br><a href="#">A61B 3/101</a> |
| Therapeutic contact lenses without optical function (e.g. bandages)       | <a href="#">A61F 2/14</a>                                    |
| Artificial corneae and corneal implants                                   | <a href="#">A61F 2/142</a>                                   |
| Intraocular lenses (multifocal, diffractive, higher order etc.            | <a href="#">A61F 2/16</a>                                    |
| Methods or devices for treatment of the eyes                              | <a href="#">A61F 9/00</a>                                    |
| Devices for treatment of the eyes, implantable or in contact with the eye | <a href="#">A61F 9/0017</a>                                  |
| Devices for putting in contact lenses                                     | <a href="#">A61F 9/0061</a>                                  |

|   |  |
|---|--|
| Refractive cornea treatment using laser (e.g. LASIK, ablation, disruption)  | <a href="#">A61F 9/00804</a> ,<br><a href="#">A61F 9/00827</a> |
| Refractive cornea treatment using other instruments   | <a href="#">A61F 9/013</a>                                     |
| Ocular implants or inserts (e.g. CLs) containing (!) medical preparations to be delivered to the ocular tissue, e.g. in combination with orthokeratologic treatment, (galenics) | <a href="#">A61K 9/0048</a>                                    |
| Disinfection or sterilisation of contact lenses   | <a href="#">A61L 12/00</a>                                     |
| Manufacture of contact lenses   | <a href="#">B29D 11/00038</a>                                  |
| Packaging of contact lenses   | <a href="#">B65B 25/008</a>                                    |
| Cleaning agents for contact lenses  | <a href="#">C11D 3/0078</a>                                    |
| Contact lenses characterized by their material only   | <a href="#">G02B 1/043</a>                                     |

**G02C 7/041****{bifocal; multifocal}****Definition statement***This place covers:*

Contact Lenses providing bifocal, trifocal or progressively varying power:

- simultaneous or translating type.
- annular or sectorial configuration of the viewing zones.
- special transition zone between viewing zones.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

|   |                             |
|---|-----------------------------|
| Multifocal spectacle lenses                                   | <a href="#">G02C 7/06</a>   |
| Intraocular lenses having special configuration, e.g. bifocal | <a href="#">A61F 2/1613</a> |

**G02C 7/042****{Simultaneous type}****Definition statement***This place covers:*

Multiple differently focussed images on the retina simultaneously formed by different regions (far/near/intermediate) of the lens.

**G02C 7/043****{Translating type}****Definition statement***This place covers:*

Lens translating on the cornea generating a single image pushed by the lid(s).

Translating = bivisual = alternating.

## G02C 7/044

**{Annular configuration, e.g. pupil tuned}**

### Definition statement

*This place covers:*

Far and near portions annularly (concentrically) arranged, amount of light in near or far focus determined by pupil size (pupil tuning).

## G02C 7/045

**{Sectorial configuration}**

### Definition statement

*This place covers:*

Far and near portions shaped as sectors.

## G02C 7/046

**{Contact lenses having an iris pattern}**

### Definition statement

*This place covers:*

Contact lenses having a (cosmetic) iris pattern.

CLs having a pinhole ("artificial pupil").

Spectral transmission in the pupil area unaffected.

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                               |
|--|-------------------------------|
| Technical markings on the lens                     | <a href="#">G02C 7/021</a>    |
| Coloring having influence on spectral transmission | <a href="#">G02C 7/10</a>     |
| Manufacture of marked or patterned contact lenses  | <a href="#">B29D 11/00317</a> |

### Special rules of classification

CLs having a pinhole: add [G02C 7/16](#)



**G02C 7/047**

**{Contact lens fitting; Contact lenses for orthokeratology; Contact lenses for specially shaped corneae}**

**Definition statement**

*This place covers:*

Adaption of the posterior lens surface to the cornea, particular posterior surfaces, e.g. ellipsoid surfaces,

individually designed CLs, methods of fitting and designing CLs,

trial contact lenses,

CLs for keratoconus, flat and irregular corneae

orthokeratology contact lenses: CLs having a rear surface shaped for controllably deforming the cornea to reduce ametropia (frequently myopia) or inhibit its development or progression,

CL design processes considering shrink and dwelling after production.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|  |                            |
|--|----------------------------|
| Apparatuses and methods for measuring the topography (curvature) of the cornea | <a href="#">A61B 3/107</a> |
|--|----------------------------|

**G02C 7/048**

**{Means for stabilising the orientation of lenses in the eye}**

**Definition statement**

*This place covers:*

Means for stabilizing the angular position of the contact lens (rotational stabilisation) on the cornea:

prism, slab-off, particular thickness profile, ridge, etc.

particularly relevant in translating bifocal CLs and toric CLs.

**G02C 7/049**

**{Contact lenses having special fitting or structural features achieved by special materials or material structures}**

**Definition statement**

*This place covers:*

CLs essentially requiring special (e.g. rigid or soft) material to achieve specific optical or topological properties or features.

## References

### Limiting references

*This place does not cover:*

|   |                           |
|---|---------------------------|
| Contact lenses characterized by their material only | <a href="#">G02B 1/04</a> |
|---|---------------------------|

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                     |
|--|---------------------|
| Contact lens materials in general (polymers) | <a href="#">C08</a> |
|--|---------------------|

## G02C 7/06

**bifocal; multifocal {; progressive ([G02C 7/041](#) takes precedence)}**

### Definition statement

*This place covers:*

Spectacle lenses having more than one focal power, e.g. bifocal, trifocal, progressive lenses.

## References

### Limiting references

*This place does not cover:*

|  |                            |
|--|----------------------------|
| Bi- multifocal, progressive contact lenses | <a href="#">G02C 7/041</a> |
|--|----------------------------|

## G02C 7/061

**{Spectacle lenses with progressively varying focal power}**

### Definition statement

*This place covers:*

Lenses having a power varying (in vertical direction along a principal line) from a far vision zone along a progressive zone to a near vision zone.

Progressive lenses characterized by:

- The shape of the progressive surface (e.g. distribution of unwanted astigmatism),
- The properties on the principal line
- The particular shape and location of the viewing zones
- Special properties achieved by the cooperation of the two lens surfaces

## References

### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                            |
|--|----------------------------|
| Methods for designing (progressive) lenses | <a href="#">G02C 7/024</a> |
| Progressive contact lenses                 | <a href="#">G02C 7/041</a> |

## G02C 7/063

### {Shape of the progressive surface}

#### Definition statement

*This place covers:*

Progressive lenses characterized by general aspects:

- Distribution of unwanted astigmatism in general (Minkwitz' rule).
- Distribution of other parameters (power, derivatives of astigmatism and spherical power, axis of astigmatism).
- Shape of zones such as channel length and width (in general) if not determined by particular viewing task.
- Properties on the principal line.
- Shape size and location of the viewing zones.
- Mutual dependence of the above properties.
- Combination (fusion) of progressive property with other corrective surface properties (e.g. toric) on the same (!) surface
- Hard / soft design and combinations, superpositions thereof on one lens surface.

## G02C 7/065

### {Properties on the principal line}

#### Definition statement

*This place covers:*

Progressive spectacle lenses characterized by properties on the principal line:

- Umbilic line.
- Non-umbilic principal line, astigmatism on principal line accepted.
- (mean spherical) power distribution on the principal line.
- Run of the principal line, nasal inset, unconventional run.
- Symmetry issues with respect to the principal line.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                            |
|--|----------------------------|
| Astigmatism vertically changing for correction purposes (cylindrical addition, near astigmatism) | <a href="#">G02C 7/027</a> |
|--|----------------------------|

## G02C 7/066

### {Shape, location or size of the viewing zones}

#### Definition statement

*This place covers:*

Progressive lenses characterized by parameters related to their use:

- Shape, size and location of viewing zones for particular viewing tasks (car driver, golf, office, musician, ...).
- Special design for particular population (children, pre-presbyopes).

## G02C 7/068

**{Special properties achieved by the combination of the front and back surfaces}**

### Definition statement

*This place covers:*

Progressive spectacle lenses characterized by combined effects of front and back surface other than combined spherical and astigmatic power:

- Special alignment or orientation e.g. for thickness reduction (prism), appearance.
- Lenses with progressive surface on the back side.
- Double progressive lenses, one surface regressive.
- Lens magnification determining the shape of both surfaces (at least one being progressive), magnification differences within lens or lens pair, choice of base curvatures dependent on magnification.
- Progressive surface in combination with other specific surfaces on different sides (progressive and toric, atoric, aspheric, etc.)

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                            |
|--|----------------------------|
| Combination (fusion) with other (e.g. toric) corrective surface properties (on one surface!) | <a href="#">G02C 7/063</a> |
|--|----------------------------|

## G02C 7/08

**Auxiliary lenses; Arrangements for varying focal length**

### Definition statement

*This place covers:*

Lenses in addition to primary spectacles or contact lenses.

Spectacles comprising telescopes, loupes.

Lenses having variable focal length.

Telescopic systems comprising a positive spectacle lens + negative contact lens = Galilean telescope.

## G02C 7/081

**{Ophthalmic lenses with variable focal length}**

### Definition statement

*This place covers:*

Single or compound lens element exhibiting temporarily changeable and controllable lens power (mechanical, electrostatic, pneumatic actuation).

**G02C 7/083****{Electrooptic lenses}****Definition statement**

*This place covers:*

Lenses of which the optical index and, thus, the power are controllable.

Frequently comprising liquid crystal material.

Frequently cellular structures.

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|   |                            |
|---|----------------------------|
| Filter lenses having liquid crystal material acting as light valve: | <a href="#">G02C 7/101</a> |
| Non-linear optical devices  | <a href="#">G02F 1/29</a>  |

**Special rules of classification**

Add [G02C 2202/18](#) (cellular structures) if applicable.

**G02C 7/085****{Fluid-filled lenses, e.g. electro-wetting lenses}****Definition statement**

*This place covers:*

Lenses comprising a (deformable) cavity which can be filled by fluid by means of pumps, etc.

Lenses comprising two immiscible fluids, the curvature of their contacting surface being electrostatically controllable (electro-wetting lenses).

**References****Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|   |  |
|---|--|
| Fluid-filled lenses with variable focal length per se | <a href="#">G02B 3/14</a>                                    |
| Electrowetting lenses per se                          | <a href="#">G02B 3/14</a> ,<br><a href="#">G02B 2207/115</a> |

**G02C 7/086****{Auxiliary lenses located directly on a main spectacle lens or in the immediate vicinity of main spectacles}****Definition statement**

*This place covers:*

Auxiliary lenses (removably) attached to or adhered onto the surface of a spectacle lens or contact lens.

## Definition statement

Clip-on auxiliary lenses.

Optical elements provided on or in a lens serving as a part of a head up display.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|                              |                           |
|------------------------------|---------------------------|
| Mounting of auxiliary lenses | <a href="#">G02C 9/00</a> |
|------------------------------|---------------------------|

## G02C 7/088

### {Lens systems mounted to spectacles}

#### Definition statement

*This place covers:*

Magnifying and telescopic spectacles, spectacles for amblyopic persons

Spectacles providing enlarged field of vision, e.g. by anamorphic lenses or lens elements.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|                   |                            |
|-------------------|----------------------------|
| Telescopes per se | <a href="#">G02B 23/00</a> |
|-------------------|----------------------------|

#### Special rules of classification

For low vision devices add [G02C 2202/10](#) if applicable.

## G02C 7/10

### Filters, e.g. for facilitating adaptation of the eyes to the dark; Sunglasses

#### Definition statement

*This place covers:*

Coloured ophthalmic lenses with or without optical power having particular spectral transmission properties serving for sun-protection in ultraviolet, visible and infrared wavelength ranges.

Filters having special spectral characteristics other than for sun protection.

Inhomogeneously tinted filters.

Special colouring materials.

Interference filters.

Filters having a coloured layer of constant thickness irrespective of the local thickness of the lens.

Electrooptic, photochromic filters.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|                                       |                            |
|---------------------------------------|----------------------------|
| Lenses having technical markings      | <a href="#">G02C 7/021</a> |
| Contact lenses having an iris pattern | <a href="#">G02C 7/046</a> |
| Optical filters per se                | <a href="#">G02B 5/20</a>  |

## Special rules of classification

Filters having a coloured layer: add [G02C 2202/16](#).

## G02C 7/101

{having an electro-optical light valve (electro-optical elements per se [G02F](#))}

### Definition statement

*This place covers:*

Electrically controlled active filters: liquid crystal, electro-optical, electro-chromic.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|   |                             |
|---|-----------------------------|
| Devices or arrangements, the optical operation of which is modified by changing the optical properties of the medium of the devices or arrangements for the control of the intensity, colour, phase, polarisation or direction of light | <a href="#">G02F</a>        |
| Liquid crystal filters in general   | <a href="#">G02F 1/13</a>   |
| Their operation   | <a href="#">G02F 1/133</a>  |
| Using temporal multiplexing   | <a href="#">H04N 13/341</a> |

## G02C 7/102

{Photochromic filters}

### Definition statement

*This place covers:*

Filters reversibly changing their absorption upon light incidence (UV), photochromic (phototropic) filter lenses.

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|                                 |                           |
|---------------------------------|---------------------------|
| Photochromic filters in general | <a href="#">G02B 5/23</a> |
|---------------------------------|---------------------------|

**G02C 7/104****{having spectral characteristics for purposes other than sun-protection}****Definition statement***This place covers:*

Filters provided for medical reasons (e.g. age related macular degeneration, dyslexia).

Filters provided to enhance visibility of traffic lights and other optical signals.

Filters provided to enhance visibility of (particularly coloured) objects in (particularly coloured) environment, e.g. tennis or golf balls.

**G02C 7/105****{having inhomogeneously distributed colouring}****Definition statement***This place covers:*

Filters having only portions tinted or different colour in different portions, e.g. top dark - bottom light.

**G02C 7/107****{Interference colour filters}****Definition statement***This place covers:*

Spectral transmissivity achieved by interference layers.

**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

|                                 |                           |
|---------------------------------|---------------------------|
| Interference filters in general | <a href="#">G02B 5/28</a> |
|---------------------------------|---------------------------|

**G02C 7/108****{Colouring materials}****Definition statement***This place covers:*

Ophthalmic filters characterized by their colouring material (dyes, pigments).

**References****Limiting references***This place does not cover:*

|                      |                            |
|----------------------|----------------------------|
| Photochromic filters | <a href="#">G02C 7/102</a> |
|----------------------|----------------------------|



**Informative references**

Attention is drawn to the following places, which may be of interest for search:

|                |                     |
|----------------|---------------------|
| Dyes, pigments | <a href="#">C09</a> |
|----------------|---------------------|

**G02C 7/12****Polarisers****Definition statement**

*This place covers:*

Polarizing filters for ophthalmic purposes, e.g. sun protection.

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

|   |                             |
|---|-----------------------------|
| Testing stereoscopic vision   | <a href="#">A61B 3/08</a>   |
| Optical elements made of polarizing materials   | <a href="#">G02B 1/08</a>   |
| Polarizing elements per se  | <a href="#">G02B 5/30</a>   |
| Optical systems for producing stereoscopic or other 3D effects involving polarizing means | <a href="#">G02B 30/25</a>  |
| Stereoscopic photography by simultaneous viewing using polarized or coloured light        | <a href="#">G03B 35/26</a>  |
| Using polarisation multiplexing   | <a href="#">H04N 13/337</a> |

**G02C 7/14****Mirrors; Prisms****Definition statement**

*This place covers:*

Prisms for treating/correcting strabismus.

Prisms, mirrors for deviating the line of sight, e.g. for looking rearwardly, for looking horizontally when lying in bed.

**References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

|                               |                           |
|-------------------------------|---------------------------|
| Mirrors per se                | <a href="#">G02B 5/08</a> |
| Mounts for prisms and mirrors | <a href="#">G02B 7/18</a> |

## G02C 7/16

**Shades; shields; Obturators, e.g. with pinhole, with slot {(G02C 5/003 takes precedence)}**

### Definition statement

*This place covers:*

Shielding elements in the optical path.

Side and top shields only if arranged for limiting the field of view.

### References

#### Limiting references

*This place does not cover:*

|   |                            |
|---|----------------------------|
| Shooting or aiming glasses comprising such elements | <a href="#">G02C 5/003</a> |
|---|----------------------------|

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |                            |
|---|----------------------------|
| Iris patterns and pin holes on contact lenses                     | <a href="#">G02C 7/041</a> |
| Side shields for protection of the eyes (not in the optical path) | <a href="#">G02C 11/12</a> |
| Diaphragms per se   | <a href="#">G02B 5/005</a> |

### Special rules of classification

Side and top shields if arranged for limiting the field of view: add [G02C 11/00](#)

pin holes (stenopaedic aperture) on contact lenses: add [G02C 7/046](#).

## G02C 7/165

**{with stenopaedic apertures}**

### Definition statement

*This place covers:*

Aperture(s) producing a depth of field effect.

## G02C 9/00

**Attaching auxiliary optical parts (auxiliary optical parts per se [G02C 7/08](#) - [G02C 7/16](#))**

### Definition statement

*This place covers:*

Attachments of any auxiliary lens or system of [G02C 7/086](#) or [G02C 7/088](#)

mounting corrective or protective lenses in goggles, diving masks, helmets,

attaching head mounted displays [HMD].

## References

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|                                       |   |
|---------------------------------------|---|
| Spectacles allowing access to the eye | <a href="#">G02C 5/003</a>                            |
| Auxiliary parts per se                | <a href="#">G02C 7/08</a> - <a href="#">G02C 7/16</a> |
| HMDs per se                           | <a href="#">G02B 27/017</a>                           |

## G02C 11/00

### Non-optical adjuncts; Attachment thereof ([G02C 7/16](#) takes precedence)

#### Definition statement

*This place covers:*

Specially adapted (parts of) spectacles for mounting or integrating or having mounted or integrated additional elements without optical function (for the eye):

- Protection for the ears (sound and sun), nose, mouth, protection against radio frequency radiation;
- Cameras mounted to the frame;
- Retroreflective elements;
- Devices for holding articles e.g. Pencil;
- Devices for retaining the hair;
- Devices for delivering air or medical gaseous compositions to the nose or the eyes;
- Devices for delivering ophthalmic solutions to the eyes;
- Tools, e.g. Bottle opener;
- Devices for dispensing perfumes, crèmes (cosmetic, medical), etc. To the face;
- Anti theft devices;
- Means for preventing wrinkles

#### Relationships with other classification places

[G02C 3/00](#) and subgroups concern devices for supporting spectacles.

[G02C 11/00](#) and subgroups concern devices supported by spectacles.

Whereas [G02C 11/00](#) concerns specially adapted (parts of) spectacles for mounting or integrating or having mounted or integrated non optical adjuncts, the non optical adjuncts themselves are classified in their respective groups (see e.g. the informative references in the subsequent sub-groups).

## References

### Limiting references

*This place does not cover:*

|  |                           |
|--|---------------------------|
| Shields, shades, obturators in the optical path of the eye | <a href="#">G02C 7/16</a> |
|--|---------------------------|

### Informative references

Attention is drawn to the following places, which may be of interest for search:

|  |                            |
|--|----------------------------|
| Special temple ends, e.g. for providing improved fit | <a href="#">G02C 5/143</a> |
| Protection for the ears per se                       | <a href="#">A61F 11/06</a> |

|  |                              |
|--|------------------------------|
| Anti theft devices for spectacles per se | <a href="#">E05B 73/0035</a> |
|--|------------------------------|

### Special rules of classification

This group is only used if the spectacles comprise particular features enabling the attachment or integration of the non-optical adjunct (exception [G02C 11/08](#)).

## G02C 11/02

### Ornaments, e.g. exchangeable

#### Definition statement

*This place covers:*

Specially adapted (parts of) spectacles for attaching or having attached decorative or ornamental elements (frequently exchangeably).

## G02C 11/04

### Illuminating means

#### Definition statement

*This place covers:*

Specially adapted (parts of) spectacles for attaching or having attached illuminating means or lasers for pointing and aiming.

#### References

##### Limiting references

*This place does not cover:*

|   |   |
|---|---|
| (indicator) lights of electronic devices integrated in spectacles | <a href="#">G02C 11/06</a> , <a href="#">G02C 11/10</a> |
|---|---|

## G02C 11/06

### Hearing aids (construction of electric hearing aids [H04R 25/00](#))

#### Definition statement

*This place covers:*

Specially adapted (parts of) spectacles for attaching or having attached hearing aids.

#### References

##### Limiting references

*This place does not cover:*

|                                       |                            |
|---------------------------------------|----------------------------|
| Construction of electric hearing aids | <a href="#">H04R 25/00</a> |
|---------------------------------------|----------------------------|

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|                   |                            |
|-------------------|----------------------------|
| Microphone arrays | <a href="#">H04R 1/406</a> |
|-------------------|----------------------------|

**G02C 11/08**

**Anti-misting means, e.g. ventilating, heating ([H05B 3/84](#) takes precedence);  
Wipers**

**Definition statement**

*This place covers:*

Specially adapted (parts of) spectacles for attaching or having attached:

- Means to prevent fogging.
- Means for cleaning the lenses during wearing.
- Means other than shields to protect the eyes from dust or pollen, e.g. By ventilating, sealing.
- Sealing means, attachments on the rear side of the frame front or the lenses.

**References****Limiting references**

*This place does not cover:*

|  |                           |
|--|---------------------------|
| Heating arrangements specially adapted for transparent or reflecting areas | <a href="#">H05B 3/84</a> |
|--|---------------------------|

**Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|                         |                            |
|-------------------------|----------------------------|
| Wipers for helmets      | <a href="#">A42B 3/26</a>  |
| Ventilation for goggles | <a href="#">A61F 9/028</a> |
| Wipers for goggles      | <a href="#">A61F 9/029</a> |

**G02C 11/10**

**{Electronic devices other than hearing aids}**

**Definition statement**

*This place covers:*

Specially adapted (parts of) spectacles for attaching or having attached any electronic device other than hearing aids, e.g. audio, radio, wireless devices, mp3, telephone, memory sticks, USB-devices, etc.

**References****Limiting references**

*This place does not cover:*

|  |  |
|--|--|
| Electronic devices for controlling electro-optic elements used as auxiliary lenses and filters | <a href="#">G02C 7/08</a> , <a href="#">G02C 7/101</a> |
|--|--|

## G02C 11/12

### {Side shields for protection of the eyes}

#### Definition statement

*This place covers:*

Side shields, top shields for protection against sun, dust, wind, etc.

Integral with the frame or attached thereto.

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |                            |
|---|----------------------------|
| Shields, shades, obturators in the optical path | <a href="#">G02C 7/16</a>  |
| Goggles, additional functions                   | <a href="#">A61F 9/029</a> |
| Eye shades or visors for eye masks              | <a href="#">A61F 9/045</a> |

#### Special rules of classification

If the side or top shields are (also) intended to limit the field of view, add [G02C 7/16](#)

## G02C 13/00

**Assembling (producing spectacle frames from plastics or from substances in a plastic state [B29D 12/02](#)); Repairing; Cleaning (disinfection or sterilisation of contact lenses [A61L 12/00](#))**

#### Definition statement

*This place covers:*

Assembling, repairing, cleaning, measurements required for fitting of spectacles.

Computer assisted measurements for fitting or selecting of spectacle frames.

Protecting spectacles or parts thereof during assembling, repairing, cleaning.

Protecting spectacles or parts thereof during other procedures(e.g. during hair colouring).

#### References

##### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|   |                               |
|---|-------------------------------|
| Cases for contact lenses  | <a href="#">A45C 11/005</a>   |
| Cases for spectacles  | <a href="#">A45C 11/04</a>    |
| Show cases and stands for selling spectacles  | <a href="#">A47F 7/021</a>    |
| Disinfection or sterilisation of contact lenses   | <a href="#">A61L 12/00</a>    |
| Cleaning in general   | <a href="#">B08B</a>          |
| Grinding, polishing, edging of lenses drilling holes in lenses and instruments therefor | <a href="#">B24B 9/14</a>     |
| Moulding of plastics lenses   | <a href="#">B29D 11/00009</a> |

|  |                              |
|--|------------------------------|
| Manufacture of plastics frames                                   | <a href="#">B29D 12/02</a>   |
| Compositions for cleaning of contact lenses and spectacle lenses | <a href="#">C11D 3/0078</a>  |
| Cleaning of optical elements in general                          | <a href="#">G02B 27/0006</a> |

## **G02C 13/001**

### **{Assembling; Repairing}**

#### **Definition statement**

*This place covers:*

Maintenance, mounting tools.

Devices for supporting during assembling and repairing.

Apparatus for fitting eyewear (e.g heaters, tools).

## **G02C 13/003**

### **{Measuring during assembly or fitting of spectacles}**

#### **Definition statement**

*This place covers:*

Measuring geometrical and mechanical parameters required for fitting lenses:

instruments for measuring geometrical parameters of spectacles (length of temples, width of bridges, optometrists' ruler, etc.)

Centering of lenses in the frame

Testing spectacles without involving the designated wearer

Aids for trying spectacles, test lens holder used when trying spectacles

Measuring facial proportions

Measuring geometrical parameters for aligning the lenses in the frame

Computer assisted measuring and simulations for fitting (may additionally include remote selling, simulation of user's face wearing spectacles, computer assisted choice of frames, frame portions and lens colours

#### **References**

##### **Limiting references**

*This place does not cover:*

|   |   |
|---|---|
| Instruments for determining the shape of frames | <a href="#">G01B 5/20</a> , <a href="#">G01B 7/08</a> |
|---|---|

##### **Informative references**

*Attention is drawn to the following places, which may be of interest for search:*

|                                   |                            |
|-----------------------------------|----------------------------|
| Simulation of view through lenses | <a href="#">G02C 7/024</a> |
| Testing optical elements          | <a href="#">G01M 11/00</a> |

|  |                              |
|--|------------------------------|
| Data processing for shopping, remote ordering                          | <a href="#">G06Q 30/0601</a> |
| Combining figures (for overlaying images of face and spectacles frame) | <a href="#">G06T 11/60</a>   |

## G02C 13/005

**{Measuring geometric parameters required to locate ophtalmic lenses in spectacles frames (apparatus for testing or instruments for examining the eyes per se [A61B 3/00](#); machines or devices and accessories for grinding the edges of lenses using spectacles as a template [B24B 9/144](#))}**

### Definition statement

*This place covers:*

Measuring geometrical, mechanical parameters of the human head and eyes with respect to the spectacles frame required for alignment of the lenses with respect to the eye:

Inclination, pantoscopic angle, wrap angle

Pupil position with respect to the frame

Direction of view, vertical, horizontal view angles

Measuring and calculating cornea-vertex, vertex-center of rotation distance

Photographic and related methods therefor

Measuring interpupillary distance

### References

#### Informative references

*Attention is drawn to the following places, which may be of interest for search:*

|  |                             |
|--|-----------------------------|
| Measurements of geometric parameters of the spectacles frame                             | <a href="#">G02C 13/003</a> |
| Measuring facial proportions   | <a href="#">G02C 13/003</a> |
| Testing eyes   | <a href="#">A61B 3/00</a>   |
| Instruments for measuring the interpupillary distance                                    | <a href="#">A61B 3/111</a>  |
| Instruments for measuring the diameter of the pupils                                     | <a href="#">A61B 3/112</a>  |
| Measuring the human body   | <a href="#">A61B 5/103</a>  |
| Devices for grinding the edges of lenses using a lens or a spectacle frame as a template | <a href="#">B24B 9/144</a>  |
| Positioning or marking of lenses (in preparation of edging)                              | <a href="#">B24B 13/005</a> |

### Special rules of classification

Instruments for measuring the interpupillary distance are classified in [G02C 13/005](#) as well as [A61B 3/111](#)



## G02C 2200/00

**Generic mechanical aspects applicable to one or more of the groups  
G02C 1/00 - G02C 5/00 and G02C 9/00 - G02C 13/00 and their subgroups**

### Definition statement

*This place covers:*

Aspects relating to the spectacles frame occurring in various frame portions and/or not constituting per se an individual constructional concept

### Special rules of classification

Do not use [G02C 2200/00](#) but only its subgroups.

Do not use the subgroups of [G02C 2200/00](#) alone but only in combination with at least one of groups [G02C 1/00](#) - [G02C 5/00](#) and [G02C 9/00](#) - [G02C 13/00](#) and their subgroups.

## G02C 2200/02

### Magnetic means

#### Definition statement

*This place covers:*

Magnetic element for connecting parts of a frame or for attaching auxiliary elements.

## G02C 2200/04

### Junctions between frame elements having a click function

#### Definition statement

*This place covers:*

Member providing the click function being part of one of the elements to be joined.

## G02C 2200/06

### Locking elements

#### Definition statement

*This place covers:*

Individual element for locking a junction of frame parts, the locking element not being a part or integral with the frame parts to be joined:

Locking element in elastic hinges;

Screw locking element;

Locking elements in modular frames.

## **G02C 2200/08**

### **Modular frames, easily exchangeable frame parts and lenses**

#### **Definition statement**

*This place covers:*

Elements of the frame or lenses can easily be changed without requiring tools or special skills, kits of elements.

Frames or portions made of variably combinable modules.

## **G02C 2200/10**

### **Frame or frame portions made from wire**

#### **Definition statement**

*This place covers:*

Frequently metal.

## **G02C 2200/12**

### **Frame or frame portions made from sheet type material**

#### **Definition statement**

*This place covers:*

E.g. metal, card board.

## **G02C 2200/14**

### **Laminated frame or frame portions**

#### **Definition statement**

*This place covers:*

Frame portions or elements comprising laminated or layered structure.

## **G02C 2200/16**

### **Frame or frame portions made from rubber**

#### **Definition statement**

*This place covers:*

Frame or portions made from elastic (compressible or expandable) material such as rubber or other elastomer.

**G02C 2200/18****Adjustment ridges or notches****Definition statement**

*This place covers:*

Moveable junctions between frame portions (e.g. hinges, telescopic temples, inclination adjustment) comprising ridges, notches, stripes, teeth, for temporarily locking the junction in at least two discrete angular or linear positions.

**G02C 2200/20****Friction elements****Definition statement**

*This place covers:*

Frame elements or portions (junctions) comprising frictionally cooperating features.

**G02C 2200/22****Leaf spring****Definition statement**

*This place covers:*

Leaf spring or bent coil in hinges, elastic hinges, nose pads, temples, front frames, bridges of clip-ons, etc.

**G02C 2200/24****Coil spring pulled upon actuation****Definition statement**

*This place covers:*

Coil spring extended when actuated, in elastic hinges (temple over-opened), adjustable temples, in bridges of clip-ons, closure of rims, non optical adjuncts.

**G02C 2200/26****Coil spring pushed upon actuation****Definition statement**

*This place covers:*

Coil spring compressed when actuated in elastic hinges (temple over-opened), adjustable temples in bridges of clip-ons, non optical adjuncts.

**G02C 2200/28****Coil spring twisted upon actuation****Definition statement**

*This place covers:*

Coil spring twisted when actuated in elastic hinges (temple over-opened), bridges of clip-ons, bridges of pince-nez.

**G02C 2200/30****Piston****Definition statement**

*This place covers:*

Piston shaped element for actuating a coil spring, used in elastic hinges, collapsible frames, length adjustable temples.

**G02C 2200/32****Oblong hole****Definition statement**

*This place covers:*

Non-circular hole for particular function, for mounting ornaments, in hinges for displacing the hinge axis, etc.

**G02C 2202/00****Generic optical aspects applicable to one or more of the subgroups of [G02C 7/00](#)****Definition statement**

*This place covers:*

Aspects relating to the optical elements occurring in various types of lenses or other optical element and/or not constituting per se an individual constructional concept.

**Special rules of classification**

Do not use [G02C 2202/00](#) but only its subgroups.

Do not use the subgroups of [G02C 2202/00](#) alone but only in combination with at least one of the subgroups of [G02C 7/00](#).

**G02C 2202/02****Mislocation tolerant lenses or lens systems****Definition statement**

*This place covers:*

Tolerance with respect to mutual misalignment of lens surfaces .

Tolerance with respect to lateral misalignment of contact lenses on the cornea.

Tolerance with respect to astigmatism axis angular misorientation of contact lenses on the cornea.

## **G02C 2202/04**

### **Lenses comprising decentered structures**

#### **Definition statement**

*This place covers:*

Decentered front and back surfaces (e.g. contact lenses, progressive lenses).

Contact lenses decentered with respect to the eye.

Contact lenses having optical regions decentered with respect to the perimeter of the lens.

Contact lenses having mutually decentered optical regions.

## **G02C 2202/06**

### **Special ophthalmologic or optometric aspects**

#### **Definition statement**

*This place covers:*

Disclosure relating to ophthalmologic or optometric issues in general.

## **G02C 2202/08**

### **Series of lenses, lens blanks**

#### **Definition statement**

*This place covers:*

Series of lenses having a common concept, property or parameter, relations between such parameters.

Semi-finished lenses (blanks) from which representatives of such series can be manufactured.

## **G02C 2202/10**

### **Optical elements and systems for visual disorders other than refractive errors, low vision**

#### **Definition statement**

*This place covers:*

Lenses and lens systems particularly designed for vision impaired persons suffering from visual deficiencies other than those related to imaging: loss of field of view, macula degeneration, brain disorders, psychological disorders, etc.

**G02C 2202/12****Locally varying refractive index, gradient index lenses****Definition statement**

*This place covers:*

Lenses having a permanent local index variation, in monofocal as well as (multifocal) progressive lenses.

**G02C 2202/14****Photorefractive lens material****Definition statement**

*This place covers:*

Lenses made from material the index of which is (permanently) adjustable by irradiation, light adjustable material.

**G02C 2202/16****Laminated or compound lenses****Definition statement**

*This place covers:*

Lenses having laminated or layered structure, compound lens elements.

**G02C 2202/18****Cellular lens surfaces****Definition statement**

*This place covers:*

Layer of cellular compartments (microcups) filled with substances having particular optical properties, e.g. liquid crystal material having electrically controllable optical index or photochromic material.

**G02C 2202/20****Diffraction and Fresnel lenses or lens portions****Definition statement**

*This place covers:*

Ophthalmic lenses having a diffraction or Fresnel structure on at least a portion of at least one of its surfaces or sandwiched between two lens elements.

## **G02C 2202/22**

### **Correction of higher order and chromatic aberrations, wave front measurement and calculation**

#### **Definition statement**

*This place covers:*

Correction for higher order aberrations of the lens and/or of the eye (spherical aberration, koma, oblique astigmatism) description by conicals, polynomials, Zernicke polynomials, Seidl polynomials.

Correction of chromatic aberrations of the lens and/or of the eye.

## **G02C 2202/24**

### **Myopia progression prevention**

#### **Definition statement**

*This place covers:*

Lenses for inhibiting the progression of myopia or other ametropia.