## G03B APPARATUS OR ARRANGEMENTS FOR TAKING PHOTOGRAPHS OR FOR PROJECTING OR VIEWING THEM; APPARATUS OR ARRANGEMENTS EMPLOYING ANALOGOUS TECHNIQUES USING WAVES OTHER THAN OPTICAL WAVES; ELECTROGRAPHY; HOLOGRAPHY

### Details common to at least two of the following types of apparatus: cameras, projectors, printers (details common to cameras only G03B 7/00 - G03B 17/00, to projectors only G03B 21/00, G03B 23/00, to printers only G03B 27/00)

<table>
<thead>
<tr>
<th>1/00</th>
<th>Film strip handling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/02</td>
<td>Moving film strip by pull on end thereof</td>
</tr>
<tr>
<td>1/04</td>
<td>Pull exerted by take-up spool</td>
</tr>
<tr>
<td>1/06</td>
<td>rotated by lever operated ratchet and pawl</td>
</tr>
<tr>
<td>1/08</td>
<td>rotated by band, chain, rack, or other linear reciprocating operation</td>
</tr>
<tr>
<td>1/10</td>
<td>rotated by knob through gearing</td>
</tr>
<tr>
<td>1/12</td>
<td>rotated by motor, e.g. spring</td>
</tr>
<tr>
<td>1/14</td>
<td>Special arrangements to ensure constant length of movement of film</td>
</tr>
<tr>
<td>1/16</td>
<td>by film-arresting pins</td>
</tr>
<tr>
<td>1/18</td>
<td>Moving film strip by means which act on the film between the ends thereof</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>1/20</th>
<th>Acting means</th>
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<tr>
<td>1/22</td>
<td>Claws or pins engaging holes in the film</td>
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<tr>
<td>1/24</td>
<td>Sprockets engaging holes in the film</td>
</tr>
<tr>
<td>1/26</td>
<td>Spiked wheels or pins not penetrating the film</td>
</tr>
<tr>
<td>1/28</td>
<td>Shuttle feed</td>
</tr>
<tr>
<td>1/30</td>
<td>Belt feed</td>
</tr>
<tr>
<td>1/32</td>
<td>Friction grippers or rollers</td>
</tr>
<tr>
<td>1/34</td>
<td>Beaters</td>
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<tr>
<td>1/36</td>
<td>Pneumatic acting means</td>
</tr>
<tr>
<td>1/38</td>
<td>embodying Geneva motion, e.g. Maltese-cross gearing</td>
</tr>
<tr>
<td>1/40</td>
<td>embodying frictional coupling or clutches</td>
</tr>
<tr>
<td>1/42</td>
<td>Guiding, framing, or constraining film in desired position relative to lens system</td>
</tr>
</tbody>
</table>

| 1/44 | Guides engaging edge of film (gates G03B 1/48) |
| 1/46 | Rollers engaging face of film, e.g. barrel, waisted, conical (gates G03B 1/48) |
| 1/48 | Gates or pressure devices, e.g. plate |
| 1/50 | adjustable or interchangeable, e.g. for different film widths |
| 1/52 | Pneumatic pressure devices |
| 1/54 | Tensioning or loop-maintaining devices |
| 1/56 | Threading; Loop forming |
| 1/58 | automatic |
| 1/60 | Measuring or indicating length of the used or unused film; Counting number of exposures |
| 1/62 | involving locking or stop-motion devices |
| 1/64 | by means which as certain the radius of the film coiled on a spool |
| 1/66 | Counting number of exposures |

<table>
<thead>
<tr>
<th>3/00</th>
<th>Focusing arrangements of general interest for cameras, projectors or printers</th>
</tr>
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<tbody>
<tr>
<td>3/02</td>
<td>moving lens along baseboard</td>
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<tr>
<td>3/04</td>
<td>adjusting position of image plane without moving lens</td>
</tr>
<tr>
<td>3/06</td>
<td>using movable reflectors to alter length of light path</td>
</tr>
<tr>
<td>3/10</td>
<td>Power-operated focusing</td>
</tr>
<tr>
<td>3/12</td>
<td>adapted for remote control</td>
</tr>
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</table>

<table>
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<tr>
<th>5/00</th>
<th>Adjustment of optical system relative to image or object surface other than for focusing</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/02</td>
<td>Lateral adjustment of lens</td>
</tr>
<tr>
<td>5/04</td>
<td>Vertical adjustment of lens; Rising fronts</td>
</tr>
<tr>
<td>5/06</td>
<td>Swinging lens about normal to the optical axis</td>
</tr>
</tbody>
</table>
Details common to at least two of the following types of apparatus: cameras, projectors, printers

5/08 . Swing backs

7/000 . Control of exposure by setting shutters, diaphragms or filters, separately or conjointly (control of exposure in television cameras by means of circuitry influencing the optical part of the camera)

**WARNING**

Group **G03B 7/00** is impacted by reclassification into groups **G03B 7/01** and **G03B 7/30**.

Groups **G03B 7/00**, **G03B 7/01** and **G03B 7/30** should be considered in order to perform a complete search.

7/003 . {setting of both shutter and diaphragm (**G03B 7/02** - **G03B 7/22** take precedence)}

7/006 . {setting of both diaphragm and distance (**G03B 7/02** - **G03B 7/22** take precedence)}

7/01 . with selection of either manual or automatic mode

**WARNING**

Group **G03B 7/01** is incomplete pending reclassification of documents from group **G03B 7/00**.

Groups **G03B 7/00** and **G03B 7/01** should be considered in order to perform a complete search.

7/02 . Control effected by setting a graduated member on the camera in accordance with indication or reading afforded by a light meter, which may be either separate from or built into camera body

7/04 . Control effected by hand adjustment of a member that senses indication of a pointer of a built-in light-sensitive device, e.g. by restoring point to a fixed associated reference mark

7/06 . . . by a follow-up movement of an associated reference mark to the pointer

7/08 . Control effected solely on the basis of the response, to the intensity of the light received by the camera, of a built-in light-sensitive device

7/0805 . . . Setting of priority modes

7/0807 . . .  {Control circuits (**G03B 7/10** takes precedence)}

**WARNING**

Group **G03B 7/0807** is no longer used for the classification of documents as of July 1, 2014. The content of this group is being reclassified into groups **G03B 7/081** - **G03B 7/097**.

Until reclassification is complete, groups **G03B 7/0807** and **G03B 7/081** - **G03B 7/097** should be considered in order to perform a complete search.

7/081 . . . Analogue circuits

**WARNING**

Groups **G03B 7/081** - **G03B 7/089** are incomplete pending reclassification of documents from group **G03B 7/0807**.

Group **G03B 7/0807** should be considered when searching any group of the range **G03B 7/081** - **G03B 7/089** in order to perform a complete search.

7/083 . . . for control of exposure time

7/085 . . . for control of aperture

7/087 . . . for control of both exposure time and aperture

7/089 . . . for storage of exposure value in mirror reflex cameras

7/091 . . . Digital circuits

**WARNING**

Groups **G03B 7/091** - **G03B 7/097** are incomplete pending reclassification of documents from group **G03B 7/0807**.

Group **G03B 7/0807** should be considered when searching any group of the range **G03B 7/091** - **G03B 7/097** in order to perform a complete search.

7/093 . . . for control of exposure time

7/095 . . . for control of aperture

7/097 . . . for control of both exposure time and aperture

7/099 . . . Arrangement of photoelectric elements in or on the camera

7/09908 . . . [on the camera or in the objective]

7/0993 . . . in the camera

7/0997 . . . Through the lens [TTL] measuring

7/09971 . . . . . . (in mirror-reflex cameras (**G03B 7/0997 takes precedence**))

7/09972 . . . . . . {using the mirror as sensor light reflecting or transmitting member}

7/09973 . . . . . . {using the mirror as sensor}

7/09974 . . . . . . {using the film or shutter as sensor light reflecting member}

7/09976 . . . . . . {the sensor being mounted in, before, or behind the porro-prism}

7/09977 . . . . . . {with a movable light-measuring element}

7/09978 . . . . . . {Protection against viewer backlight or integration of the viewer light into the measured light}

7/09979 . . . . . . {Multi-zone light measuring}

7/10 . . . a servo-motor providing energy to move the setting member

7/12 . . . a hand-actuated member moved from one position to another providing the energy to move the setting member, e.g. depression of shutter release button causes a stepped feeler to co-operate with the pointer of the light-sensitive device to set the diaphragm and thereafter release the shutter

7/14 . . . setting of both shutter and diaphragm aperture being effected so as to give the optimum compromise between depth of field and shortness of exposure
Details common to cameras

9/16 . . . in accordance with both the intensity of the flash source and the distance of the flash source from the object, e.g. in accordance with the "guide number" of the flash bulb and the focusing of the camera

**WARNING**
Group G03B 7/16 is impacted by reclassification into group G03B 7/17.
Groups G03B 7/16 and G03B 7/17 should be considered in order to perform a complete search.

7/17 . . . Selection of modes in flash units by exposure control arrangements

**WARNING**
Group G03B 7/17 is incomplete pending reclassification of documents from group G03B 7/16.
Groups G03B 7/16 and G03B 7/17 should be considered in order to perform a complete search.

7/18 . . . in accordance with light-reducing "factor" of filter or other obturator used with or on the lens of the camera

7/20 . . . in accordance with change of lens

7/22 . . . in accordance with temperature or height, e.g. in aircraft

7/24 . . . automatically in accordance with markings or other means indicating film speed or kind of film on the magazine to be inserted in the camera

7/26 . . . Power supplies; Circuitry or arrangement to switch on the power source; Circuitry to check the power source voltage

7/28 . . . Circuitry to measure or to take account of the object contrast

7/30 . . . Safety arrangements for control of exposure

**WARNING**
Group G03B 7/30 is incomplete pending reclassification of documents from group G03B 7/00.
Groups G03B 7/00 and G03B 7/30 should be considered in order to perform a complete search.

9/00 Exposure-making shutters; Diaphragms

9/02 . . . Diaphragms

9/04 . . . Single movable plate with two or more apertures of graded size, e.g. sliding plate, pivoting plate

9/06 . . . Two or more co-operating pivoted blades, e.g. iris type (shutters functioning as diaphragms by limiting extent of opening movement G03B 9/08)

9/07 . . . with means for presetting the diaphragm

9/08 . . . Shutters

9/10 . . . Blade or disc rotating or pivoting about axis normal to its plane

9/12 . . . Two relatively-adjustable aperture-defining members moving as a unit

9/14 . . . Two separate members moving in opposite directions

9/16 . . . Two separate members moving in the same direction

9/18 . . . More than two members

9/20 . . . . each moving in a single direction first to open and then to reclose

9/22 . . . . each moving in one direction to open and then in opposite direction to close, e.g. iris type

9/24 . . . Adjusting size of aperture formed by members when fully open so as to constitute a virtual diaphragm that is adjustable

9/26 . . . incorporating cover blade or blades

9/28 . . . Roller blind or flexible plate

9/30 . . . Single blind with multiple slots or other apertures

9/32 . . . Double blind

9/34 . . . . with adjustable slot; with mechanism controlling relative movement of blinds to form slot

9/36 . . . Sliding rigid plate

9/38 . . . Single rigid plate with multiple slots or other apertures

9/40 . . . Double plate

9/42 . . . . with adjustable slot; with mechanism controlling relative movement of plates to form slot

9/44 . . . Curved track and plate

9/46 . . . Flap shutters pivoting about axis in plane of flap

9/48 . . . Double flap

9/50 . . . Louvre type

9/52 . . . Barrel shutters

9/54 . . . Conical shutters; Rotating plate with axis of rotation inclined to optical axis of shutter

9/58 . . . Means for varying duration of "open" period of shutter

9/60 . . . by varying speed of movement of obturating members

9/62 . . . by varying interval of time between end of opening movement and beginning of closing movement

9/64 . . . Mechanism for delaying opening of shutter (separate from shutter G03B 17/38)

9/66 . . . Means for cocking shutter separate from means for releasing shutter

9/68 . . . Cocking effected by movement of film

9/70 . . . with flash-synchronising contacts

11/00 Filters or other obturators specially adapted for photographic purposes

11/02 . . . Sky masks

11/04 . . . Hoods or caps for eliminating unwanted light from lenses, viewfinders or focusing aids

11/041 . . . [Lens caps as separate accessory (accessories in general G03B 17/56)]

11/043 . . . [Protective lens closures or lens caps built into cameras]

11/045 . . . [Lens hoods or shields]

11/046 . . . [for viewfinders or eyepieces]

11/06 . . . Lens caps for exposure making

13/00 Viewfinders; Focusing aids for cameras; Means for focusing for cameras; Autofocus systems for cameras

13/02 . . . Viewfinders

13/04 . . . of direct vision type, e.g. frame, sighting mark

13/06 . . . with lenses with or without reflectors

13/08 . . . with reflected image of frame
Details common to cameras

Apparatus therefor

Special procedures for taking photographs;

15/00

15/003 . . . . . . . [Apparatus for photographing CRT-screens]
15/006 . . . . . . . [Apparatus mounted on flying objects]
15/02 . . . . . . . Illuminating scene
15/03 . . . . . . . Combinations of cameras with lighting apparatus;
Flash units
15/035 . . . . . . . Combinations of cameras with incandescent lamps
15/04 . . . . . . . Combinations of cameras with non-electronic flash apparatus; Non-electronic flash units
15/0405 . . . . . [Non-electronic flash apparatus incorporated in photographic apparatus]
15/041 . . . . . . . [Separable flash apparatus; Means for mounting the flash apparatus on the photographic apparatus]
15/0415 . . . . . . . [Mounting means comprising transversal slide and separate cable]
15/0421 . . . . . . . [Mounting means comprising transversal slide and incorporated contacts of the type “Hot shoe”]
15/0426 . . . . . . . [Mounting means comprising longitudinal slide and incorporated contacts (for multiple lamps)]
15/0431 . . . . . . . [Rotatable mounting means]
15/0436 . . . . . . . [Mounting means for sequential translation]
15/0442 . . . . . . . [Constructional details of the flash apparatus; Arrangement of lamps, reflectors, or the like (G03B 15/0484 takes precedence)]
15/0447 . . . . . . . [Energy sources; Batteries; Capacitors]
15/0452 . . . . . . . [Electrical ignition means connected to the shutter]
15/0457 . . . . . . . [Ignition mechanisms for sequential ignition of flash lamps]
15/0463 . . . . . . . [Piezoelectric ignition mechanisms]
15/0468 . . . . . . . [Ignition mechanisms permitting choice of multiple ignition modes; Adaptors for different modes]
15/0473 . . . . . . . [Remote controlled ignition mechanisms]
15/0478 . . . . . . . [Combinations of photographic apparatus with percussion type flash ignition systems]
Details common to cameras

17/44 . Means for exchanging focusing screen and light sensitive material
17/46 . Means for exposing single frames in motion-picture camera
17/48 . adapted for combination with other photographic or optical apparatus
17/50 . with both developing and finishing apparatus
17/52 . of the Land type
17/53 . for automatically delivering a finished picture after a signal causing exposure has been given, e.g. by pushing a button, by inserting a coin
17/54 . with projector
17/55 . with provision for heating or cooling, e.g. in aircraft
17/56 . Accessories (carrying-cases A45C 11/38)
17/561 . [Support related camera accessories]
17/563 . [Camera grips, handles (means in general for steadying hand-held apparatus F16M 13/00)]
17/565 . [Optical accessories, e.g. converters for close-up photography, tele-converters, wide-angle converters]
17/566 . [Accessory clips, holders, shoes to attach accessories to camera (if integral part of camera body G03B 17/02)]
17/58 . Attachments for converting cameras into reflex cameras

19/00 Cameras (details G03B 17/00)
19/02 . Still-picture cameras
19/023 . [Multi-image cameras]
19/026 . [Sequence cameras]
19/04 . Roll-film cameras
19/06 . adapted to be loaded with more than one film, e.g. with exposure of one or the other at will (G03B 19/07 takes precedence)
19/07 . having more than one objective
19/08 . with provision for alternative use with plates or cut-films
19/10 . Plate or cut-film cameras (with provision for alternative use with roll film G03B 19/08)
19/12 . Reflex cameras with single objective and a movable reflector or a partly-transmitting mirror
19/14 . with paired lenses, one of which forms image on photographic material and the other forms a corresponding image on a focusing screen
19/16 . Pin-hole cameras
19/18 . Motion-picture cameras (with non-intermittently running film G03B 41/02)
19/20 . Reflex cameras
19/22 . Double cameras
19/24 . adapted to be loaded with more than one film, e.g. with exposure of one or the other at will
19/26 . with fade-in and fade-out effects

21/00 Projectors or projection-type viewers; Accessories therefor (devices for changing pictures G03B 23/00)

WARNING

Groups G03B 21/142 - G03B 21/147 are incomplete pending reclassification of documents from group G03B 21/14.

Until reclassification is complete, groups G03B 21/14 and G03B 21/142 - G03B 21/147 should be considered in order to perform a complete search.

21/001 . [Slide projectors]
21/003 . [Cine-projectors]
21/005 . [Projectors using an electronic spatial light modulator but not peculiar thereto]
21/006 . [using LCDs]
21/008 . [using micromirror devices]
21/02 . Multiple-film apparatus
21/04 . Picture "juke-boxes"
21/06 . affording only episcopic projection
21/08 . affording epidiascopic projection
21/10 . Projectors with built-in or built-on screen
21/11 . for microfilm reading
21/111 . [of roll films]
21/113 . [Handling roll films]
21/115 . [of microfiches]
21/116 . [Handling microfiches]
21/118 . [Reader-printers]
21/12 . adapted for projection of either still pictures or motion pictures (prolonged exhibition of single frame G03B 21/38)
21/13 . Projectors for producing special effects at the edges of picture, e.g. blurring
21/132 . Overhead projectors, i.e. capable of projecting handwriting or drawing during action (epidiascopic projectors G03B 21/08)
21/134 . Projectors combined with typing apparatus or with printing apparatus
21/14 . Details

WARNING

Groups G03B 21/142 - G03B 21/147 are incomplete pending reclassification of documents from group G03B 21/14.

Until reclassification is complete, groups G03B 21/14 and G03B 21/142 - G03B 21/147 should be considered in order to perform a complete search.

21/142 . [Adjusting of projection optics]
21/145 . [Housing details, e.g. position adjustments thereof]
21/147 . [Optical correction of image distortions, e.g. keystone]
21/16 . Cooling; Preventing overheating
21/18 . Fire preventing or extinguishing
21/20 . Lamp housings
21/206 . [characterised by the light source]
21/213 . [Plural light sources]
21/202 . [Incandescent light sources]
21/2026 . [Gas discharge type light sources, e.g. arcs]
21/2033 . [LED or laser light sources]
21/204 . [using secondary light emission, e.g. luminescence or fluorescence (using different colours G03B 33/00; if related to video signals H04N 9/3197)]
21/2046 . [Positional adjustment of light sources]
21/2053 . [Intensity control of illuminating light (controlled by video signal processing H04N 5/74 or H04N 9/31)]
21/206 . [Control of light source other than position or intensity]
21/2066 . [Reflectors in illumination beam (in projection beam G03B 21/28)]

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5
Details common to cameras

Accessories

Projection screens

Means for automatic focusing, e.g. to compensate through the gate G03B 41/02

Details specially adapted for motion-picture beam G03B 21/2066

} simultaneously with main image

Projecting separately subsidiary matter

Soundproof bodies

Details especially adapted for motion-picture projection (with film moving continuously through the gate G03B 41/02)

[Holders for films, e.g. reels, cassettes, spindles]

[Cassettes (G03B 21/326, G03B 21/328 take precedence; for containing light-sensitive material G03B 17/265)]

(Endless cassettes)

[Means for fixing the film on the axis of a reel or spindle]

[Means for fixing the film on the periphery of a reel]

Change-over arrangements

Fades, dissolves, or wipes

Prolonged exhibition of single frame

Eliminating or reducing effect of flicker

Preventing damage to film due to abnormal operation of projector

Driving mechanisms

Mechanisms transmitting motion to film-strip feed; Mechanical linking of shutter and driving mechanisms

Means for controlling the forward motion of the film

Affording adjustment for framing

for altering frame speed; for regulating constancy of film speed

Control devices operated by the film strip during the run

by prepared film

Means for automatic focusing, e.g. to compensate thermal effects

Accessories

Projection screens

Screens moving during projection

Screens allowing free passage of sound

for colour projection (G03B 21/58, G03B 21/60 take precedence)

Collapsible, e.g. foldable, of variable area

Inflatable screens

WARNING

Group G03B 21/585 is incomplete pending reclassification of documents from group G03B 21/58. Until reclassification is complete, groups G03B 21/58 and G03B 21/585 should be considered in order to perform a complete search.

21/602 . . . Lenticular screens (G03B 21/625 takes precedence)

21/604 . . . Polarised screens

21/606 . . . for relief projection

21/608 . . . Fluid screens

WARNING

Group G03B 21/608 is incomplete pending reclassification of documents from group G03B 21/60. Until reclassification is complete, groups G03B 21/60 and G03B 21/608 should be considered in order to perform a complete search.

21/62 . . . Translucent screens

21/625 . . . Lenticular translucent screens

21/64 . . Means for mounting individual pictures to be projected, e.g. frame for transparency

23/00 Devices for changing pictures in viewing apparatus or projectors

NOTE

For the purposes of this group the term "picture" denotes any flat representation, whether transparent or not, e.g. produced by photography, writing or printing

23/02 . . in which a picture is removed from a stock and returned to the same stock or another one; Magazines therefor

23/04 . . with linear movement

23/042 . . . [whereby the picture is not returned to the same stock after projection]

23/044 . . . [whereby the picture is returned to the same stock]

23/046 . . . [Picture changing devices]

23/048 . . . [with horizontally sliding mechanism]

23/06 . . with rotary movement

23/08 . . in which pictures are attached to a movable carrier

23/10 . . drum or disc carrier

23/105 . . . [disc carriers]

23/12 . . linear strip carrier

23/125 . . . [the pictures being attached to a chain or linked up to form a chain]

23/14 . . Carriers operable to move pictures into, and out of, the projection or viewing position and carrying one or two pictures only in a removable manner (G03B 23/18 takes precedence) (also other devices not provided with a stock, e.g. chutes)

23/18 . . with fade-in and fade-out effects

25/00 Viewers, other than projection viewers, giving motion-picture effects by persistence of vision, e.g. zoetrope

25/02 . . with interposed lenticular or line screen

27/00 Photographic printing apparatus

27/02 . . Exposure apparatus for contact printing

27/04 . . Copying apparatus without a relative movement between the original and the light source during exposure, e.g. printing frame or printing box

27/06 . . . for automatic repeated copying of the same original
Details common to cameras

27/08 . . . for automatic copying of several originals one after the other, e.g. for copying cinematograph film
27/10 . . . Copying apparatus with a relative movement between the original and the light source during exposure
27/12 . . . for automatic repeated copying of the same original
27/14 . . . Details
27/16 . . . Illumination arrangements, e.g. positioning of lamps, positioning of reflectors (controlling the exposure G03B 27/72)
27/18 . . . Maintaining or producing contact pressure between original and light-sensitive material
27/20 . . . by using a vacuum or fluid pressure
27/22 . . . by stretching over a curved surface
27/24 . . . Separating the original from the print
27/26 . . . Cooling
27/28 . . . Edge-masking devices
27/30 . . . adapted to be combined with processing apparatus
27/303 . . . (Gas processing (gas processing apparatus G03D 7/00))
27/306 . . . (Heat development (heat development apparatus G03D 13/002))
27/32 . . . Projection printing apparatus, e.g. enlarger, copying camera
27/323 . . . (Copying cameras (G03B 27/34 - G03B 27/70 take precedence))
27/326 . . . (Enlargers (G03B 27/34 - G03B 27/70 take precedence))
27/34 . . . Means for automatic focusing therefor
27/36 . . . by mechanical connections, e.g. by cam, by linkage
27/38 . . . embodying screws with non-uniform pitch
27/40 . . . adapted for use with lenses of different focal length
27/42 . . . for automatic sequential copying of the same original (G03B 27/34, G03B 27/53 take precedence)
27/423 . . . [in copying cameras]
27/426 . . . [in enlargers]
27/44 . . . for multiple copying of the same original at the same time (G03B 27/34, G03B 27/53 take precedence)
27/46 . . . for automatic sequential copying of different originals, e.g. enlargers, roll film printers (G03B 27/34, G03B 27/50, G03B 27/53 take precedence)
27/462 . . . [in enlargers, e.g. roll film printers]
27/465 . . . at different positions of the same strip, e.g. microfilm
27/47 . . . at different positions of the same sheet, e.g. microfiche
27/475 . . . copying cinematographic film (G03B 27/48 takes precedence)
27/48 . . . with original in the form of a film strip moving continuously and compensation for consequent image movement
27/50 . . . with slit or like diaphragm moving over original for progressive exposure (G03B 27/34 takes precedence ; projection optics per se G03B 27/521)
27/52 . . . Details

27/521 . . . [Arrangements for applying a supplementary information onto the sensitive material, e.g. coding (producing marks on the film in cameras G03B 17/24)]
27/522 . . . [Projection optics (for electro-photographic copiers in particular G03G 15/04)]
27/523 . . . [for full time exposure]
27/525 . . . [for slit exposure]
27/526 . . . [in which the projection optics move]
27/527 . . . [as a whole in a translatory movement]
27/528 . . . [in which the projection optics remain stationary]
27/53 . . . Automatic registration or positioning of originals with respect to each other or the photosensitive layer
27/54 . . . Lamp housings; Illuminating means
27/542 . . . [for copying cameras, reflex exposure lighting]
27/545 . . . [for enlargers]
27/547 . . . [colour mixing heads]
27/56 . . . Mounting enlarger head on column [Mounting reproduction camera on column]
27/58 . . . Baseboards, masking frames, or other holders for the sensitive material (G03B 27/53 takes precedence ; for electrophotographic copiers G03G 15/65)]
27/581 . . . [in copying cameras (G03B 27/60 takes precedence)]
27/582 . . . [Baseboards, easels]
27/583 . . . [Handling microfiche]
27/585 . . . [Handling cut photosensitive sheets]
27/586 . . . [Supply stacks; Peeling off]
27/587 . . . [Handling photosensitive webs (G03B 1/00 takes precedence)]
27/588 . . . [Supply rolls; Cutting arrangements]
27/60 . . . using a vacuum or fluid pressure
27/62 . . . Holders for the original (G03B 27/53 takes precedence ; for electrophotographic copiers G03G 15/60)]
27/6207 . . . [in copying cameras]
27/6214 . . . [Copy boards]
27/6221 . . . [Transparent copy platens]
27/6228 . . . [Platen covers]
27/6235 . . . [Reciprocating copy platens]
27/6242 . . . [Masks; Overlays; Transparent carriers]
27/625 . . . [Apparatus which relate to the handling of originals, e.g. presence detectors, inverters]
27/6257 . . . [Arrangements for moving an original once or repeatedly to or through an exposure station]
27/6264 . . . [Arrangements for moving several originals one after the other to or through an exposure station]
27/6271 . . . [in enlargers]
27/6278 . . . [Handling single frame negatives]
27/6285 . . . [Handling strips (G03B 1/00 takes precedence)]
27/6292 . . . [Handling microfiche]
27/64 . . . using a vacuum or fluid pressure
27/66 . . . specially adapted for holding half-tone screens
27/68 . . . Introducing or correcting distortion, e.g. in connection with oblique projection
G03B

Special techniques

31/00 Associated working of cameras or projectors with sound-recording or sound-reproducing means
31/02 . . . in which sound track is on a moving-picture film
31/04 . . . in which sound track is not on, but is synchronised with a moving-picture film
31/06 . . . in which sound track is associated with successively-shown still pictures
31/08 . . . with fade-in and fade-out effects

33/00 Colour photography, other than mere exposure or projection of a colour film (printing apparatus G03B 27/00; stereoscopic colour photography G03B 35/00)
33/02 . . . by two-colour separation records, e.g. red-aspect and white complete records; using Land effect
33/04 . . . by four or more separation records
33/06 . . . by additive-colour projection apparatus
33/08 . . . Sequential recording or projection (G03B 33/02, G03B 33/04, G03B 33/06 take precedence)
33/10 . . . Simultaneous recording or projection (G03B 33/02, G03B 33/04 G03B 33/06 take precedence)
33/12 . . . using beam-splitting or beam-combining systems, e.g. dichroic mirrors
33/14 . . . using lenticular screens (integral with film G03C)
33/16 . . . using colour-pattern screens (integral with film G03C)

35/00 Stereoscopic photography
35/02 . . . by sequential recording
35/04 . . . with movement of beam-selecting members in a system defining two or more viewpoints
35/06 . . . with axial movement of lens or gate between exposures
35/08 . . . by simultaneous recording
35/10 . . . having single camera with stereoscopic-base-defining system

35/12 . . . involving recording of different viewpoint images in different colours on a colour film
35/14 . . . Printing apparatus specially adapted for conversion between different types of record (G03B 42/08 takes precedence)
35/16 . . . by sequential viewing
35/18 . . . by simultaneous viewing
35/20 . . . using two or more projectors
35/22 . . . using single projector with stereoscopic-base-defining system
35/24 . . . using apertured or refractive resolving means on screens or between screen and eye
35/26 . . . using polarised or coloured light separating different viewpoint images

37/00 Panoramic or wide-screen photography; Photographing extended surfaces, e.g. for surveying; Photographing internal surfaces, e.g. of pipe
37/005 . . . [Photographing internal surfaces, e.g. of pipe, G03B 37/02 - G03B 37/06 take precedence; instruments for performing medical examinations of cavities or tubes of the body by photographic inspection A61B 1/00]
37/02 . . . with scanning movement of lens or cameras
37/04 . . . with cameras or projectors providing touching or overlapping fields of view
37/06 . . . involving anamorphosis (G03B 37/02, G03B 37/04 take precedence)

39/00 High-speed photography
39/005 . . . [using image converters or amplifiers]
39/02 . . . using stationary plate or film (G03B 39/06 takes precedence)
39/04 . . . using moving plate or film (G03B 39/06 takes precedence)
39/06 . . . using light-guides for transferring image frame or elements thereof into different array, e.g. into a line

41/00 Special techniques not covered by groups G03B 31/00 - G03B 39/00; Apparatus therefor
41/02 . . . using non-intermittently running film
41/023 . . . [combined with shutter]
41/026 . . . [combined with slit]
41/04 . . . with optical compensator
41/06 . . . with rotating reflecting member
41/08 . . . with rotating transmitting member
41/10 . . . with oscillating reflecting member
41/12 . . . with oscillating transmitting member
41/14 . . . Overcoming image movement by brief flashes of light

42/00 Obtaining records using waves other than optical waves; Visualisation of such records by using optical means
42/02 . . . using X-rays
42/021 . . . [Apparatus for direct X-ray cinematography (circuit arrangements for obtaining a series of X-ray photographs or for X-ray cinematography H05Q 1/60)]
42/023 . . . [Apparatus for indirect X-ray cinematography, i.e. by taking pictures on ordinary film from the images on the fluorescent screen (by transforming the picture information intermittently into electrical signals G03B 27/725)]
Special techniques

42/025 . . . {Positioning or masking the X-ray film cartridge in the radiographic apparatus}
42/026 . . . {for obtaining three-dimensional pictures}
42/028 . . . {Industrial applications}
42/04 . . . Holders for X-ray films
42/042 . . . {for dental applications (see also A61B 6/14); (individual packages for X-ray film G03C 3/003)}
42/045 . . . {apparatus for loading or unloading the holders}
42/047 . . . {provided with marking means}
42/06 . using ultrasonic, sonic or infrasonic waves
42/08 . Visualisation of records by optical means
43/00 Testing correct operation of photographic apparatus or parts thereof
43/02 . Testing shutters

2205/00 Adjustment of optical system relative to image or object surface other than for focusing
2205/0007 . Movement of one or more optical elements for control of motion blur (imaging systems in general using optical elements for stabilisation of the position of the image G02B 27/64)
2205/0015 . by displacing one or more optical elements normal to the optical axis
2205/0023 . by tilting or inclining one or more optical elements with respect to the optical axis
2205/003 . by a prism with variable angle or the like
2205/0038 . by displacing the image plane with respect to the optical axis (in case of an electronic image sensor H04N 5/23248)
2205/0046 . Movement of one or more optical elements for zooming (for optical zoom lenses in general G02B 7/10)
2205/0053 . Driving means for the movement of one or more optical element
2205/0061 . using piezoelectric actuators
2205/0069 . using electromagnetic actuators, e.g. voice coils
2205/0076 . using shape memory alloys
2205/0084 . using other types of actuators
2206/00 Systems for exchange of information between different pieces of apparatus, e.g. for exchanging trimming information, for photo finishing
2206/002 . using detachable memory means
2206/004 . using markings on the photographic material, e.g. to indicate pseudo-panoramic exposure
2206/006 . of the bar-code type
2206/008 . using holders for the photographic material
2207/00 Control of exposure by setting shutters, diaphragms, or filters separately or conjointly
2207/005 . involving control of motion blur
2213/00 Viewfinders; Focusing aids for cameras; Means for focusing for cameras; Autofocus systems for cameras
2213/02 . Viewfinders
2213/025 . Sighting detection
2215/00 Special procedures for taking photographs; Apparatus therefor
2215/05 . Combinations of cameras with electronic flash units
2215/0503 . . . Built-in units
2215/0507 . . . Pop-up mechanisms
2215/051 . . . with movable reflector, e.g. change of illumination angle or illumination direction
2215/0514 . . . Separate unit
2215/0517 . . . Housing
2215/0521 . . . movable housing, e.g. bounce-light
2215/0525 . . . Reflector
2215/0528 . . . movable reflector, e.g. change of illumination angle or illumination direction
2215/0532 . . . Flashtube mounting
2215/0535 . . . Built-in diffusor
2215/0539 . . . Ringflash
2215/0542 . . . watertight
2215/0546 . . . modular
2215/055 . . . Clamp-on device, e.g. filter
2215/0553 . . . with second integrated flash
2215/0557 . . . Multiple units, e.g. slave-unit
2215/0556 . . . Connection with camera, e.g. adapter
2215/0564 . . . characterised by the type of light source
2215/0567 . . . Solid-state light source, e.g. LED, laser
2215/0571 . . . With second light source
2215/0575 . . . Ring shaped lighting arrangements
2215/0578 . . . Flashtube mounting
2215/0582 . . . Reflectors
2215/0585 . . . Movable reflectors, e.g. change of illumination angle or direction
2215/0589 . . . Diffusers, filters or refraction means
2215/0592 . . . installed in front of light emitter
2217/00 Details of cameras or camera bodies; Accessories thereof
2217/002 . . . Details of arrangement of components in or on camera body
2217/005 . . . Blur detection
2217/007 . . . Details of energy supply or management
2217/18 . . . Signals indicating condition of a camera member or suitability of light
2217/185 . . . providing indication that the picture may be blurred
2217/24 . . . with means for separately producing marks on the film
2217/241 . . with means for producing composite exposures, e.g. exposing an image and a border, producing identity cards
2217/242 . . . Details of the marking device
2217/243 . . . Optical devices
2217/244 . . . Magnetic devices
2217/245 . . . Mechanical devices
2217/246 . . . Details of the markings
2217/247 . . . Bar codes
2217/248 . . . with means for masking
2217/26 . . . Holders for containing light-sensitive material and adapted to be inserted within the camera
2217/261 . . . Details of spools
2217/263 . . . Details of exposure status indicators; Double exposure prevention
2217/265 . . . Details of light-proofing
2217/266 . . . Thrust-type cartridges
2217/268 . . . Unloading the cartridge from the camera; Loading the cartridge into the camera
Cameras

Still-picture cameras
Roll-film cameras
- adapted for unloading the film in the processing laboratory, e.g. disposable, reusable or recyclable cameras

Photographic printing apparatus

Matrix print; Index print
Projection printing apparatus, e.g. enlarging apparatus, copying camera
Microcapsule copiers