

## SECTION G — PHYSICS

**G03 PHOTOGRAPHY; CINEMATOGRAPHY; ANALOGOUS TECHNIQUES USING WAVES OTHER THAN OPTICAL WAVES; ELECTROGRAPHY; HOLOGRAPHY**

**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; ACCESSORIES THEREFOR** (optical parts of such apparatus G02B; photosensitive materials or processes for photographic purposes G03C; apparatus for processing exposed photographic materials G03D) **[4]**

**Note(s)**

This subclass covers, as far as processes are concerned, only processes characterised by the use or manipulation of apparatus classifiable per se in this subclass.

**Subclass index**

## DETAILS

Common to at least two of cameras, projectors and printers.....	1/00-5/00
Common to cameras only	
exposure, control thereof.....	7/00, 9/00
viewfinders, focusing aids.....	13/00
filters; constructional details, accessories.....	11/00, 17/00
special procedures for taking photographs.....	15/00
Common to projectors only.....	21/00, 23/00
Common to printers only.....	27/00

## APPARATUS

Cameras.....	19/00
Projectors, viewers; devices for changing pictures.....	21/00, 25/00, 23/00
Printing apparatus.....	27/00
Combinations with other apparatus.....	29/00

## SPECIAL TECHNIQUES

Associated working with sound apparatus.....	31/00
Colour photography; stereoscopic photography; panoramic photography; high-speed photography.....	33/00, 35/00, 37/00, 39/00
Other techniques.....	41/00
Using waves other than optical waves, visualisation.....	42/00

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**Details common to at least two of the following types of apparatus: cameras, projectors, printers**

<b>1/00</b>	<b>Film-strip handling of general interest for cameras, projectors or printers [1, 2006.01]</b>
1/02	• Moving film strip by pull on end thereof [1, 2006.01]
1/04	• • Pull exerted by take-up spool [1, 2006.01]
1/06	• • • rotated by lever-operated ratchet and pawl [1, 2006.01]
1/08	• • • rotated by band, chain, rack, or other linear reciprocating operation [1, 2006.01]
1/10	• • • rotated by knob through gearing [1, 2006.01]
1/12	• • • rotated by motor, e.g. spring [1, 2006.01]
1/14	• • Special arrangements to ensure constant length of movement of film [1, 2006.01]
1/16	• • • by film-arresting pins [1, 2006.01]
1/18	• Moving film strip by means which act on the film between the ends thereof [1, 2006.01]
1/20	• • Acting means [1, 2006.01]

1/22	• • • Claws or pins engaging holes in the film [1, 2006.01]
1/24	• • • Sprockets engaging holes in the film [1, 2006.01]
1/26	• • • Spiked wheels or pins not penetrating the film [1, 2006.01]
1/28	• • • Shuttle feed [1, 2006.01]
1/30	• • • Belt feed [1, 2006.01]
1/32	• • • Friction grippers or rollers [1, 2006.01]
1/34	• • • Beaters [1, 2006.01]
1/36	• • • Pneumatic acting means [1, 2006.01]
1/38	• • embodying Geneva motion, e.g. Maltese-cross gearing [1, 2006.01]
1/40	• embodying frictional coupling or clutches [1, 2006.01]
1/42	• Guiding, framing, or constraining film in desired position relative to lens system [1, 2006.01]

- 1/44 • • Guides engaging edge of film (gates G03B 1/48) [1, 2006.01]
- 1/46 • • Rollers engaging face of film, e.g. barrel, waisted, conical (gates G03B 1/48) [1, 2006.01]
- 1/48 • • Gates or pressure devices, e.g. plate [1, 2006.01]
- 1/50 • • • adjustable or interchangeable, e.g. for different film widths [1, 2006.01]
- 1/52 • • • Pneumatic pressure devices [1, 2006.01]
- 1/54 • • Tensioning or loop-maintaining devices [1, 2006.01]
- 1/56 • Threading; Loop forming [1, 2006.01]
- 1/58 • • automatic [1, 2006.01]
- 1/60 • Measuring or indicating length of the used or unused film; Counting number of exposures [1, 2006.01]
- 1/62 • • involving locking or stop-motion devices [1, 2006.01]
- 1/64 • • by means which ascertain the radius of the film coiled on a spool [1, 2006.01]
- 1/66 • • Counting number of exposures [1, 2006.01]
- 3/00 Focusing arrangements of general interest for cameras, projectors or printers [1, 2006.01]**
- 3/02 • moving lens along baseboard [1, 2006.01]
- 3/04 • adjusting position of image plane without moving lens [1, 2006.01]
- 3/06 • • using movable reflectors to alter length of light-path [1, 2006.01]
- 3/10 • Power-operated focusing [1, 2006.01]
- 3/12 • • adapted for remote control [1, 2006.01]
- 5/00 Adjustment of optical system relative to image or object surface other than for focusing of general interest for cameras, projectors or printers [1, 2006.01]**
- 5/02 • Lateral adjustment of lens [1, 2006.01]
- 5/04 • Vertical adjustment of lens; Rising fronts [1, 2006.01]
- 5/06 • Swinging lens about normal to the optical axis [1, 2006.01]
- 5/08 • Swing backs [1, 2006.01]

#### Details common to cameras

- 7/00 Control of exposure by setting shutters, diaphragms or filters, separately or conjointly** (control of exposure in television cameras by means of circuitry for compensating for variation in the brightness of the object H04N 5/235) [1, 2006.01, 2014.01]
- 7/01 • with selection of either manual or automatic mode [2014.01]
- 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 [1, 2006.01]
- 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 pointer to a fixed associated reference mark [1, 2006.01]
- 7/06 • • by a follow-up movement of an associated reference mark to the pointer [1, 2006.01]
- 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 [1, 2006.01, 2014.01]
- 7/0805 • • Setting of priority modes [2014.01]
- 7/081 • • Analogue circuits [3, 2006.01]
- 7/083 • • • for control of exposure time [3, 2006.01]
- 7/085 • • • for control of aperture [3, 2006.01]

- 7/087 • • • for control of both exposure time and aperture [3, 2006.01]
- 7/089 • • • for storage of exposure value in mirror reflex cameras [3, 2006.01]
- 7/091 • • Digital circuits [3, 2006.01]
- 7/093 • • • for control of exposure time [3, 2006.01]
- 7/095 • • • for control of aperture [3, 2006.01]
- 7/097 • • • for control of both exposure time and aperture [3, 2006.01]
- 7/099 • • Arrangement of photoelectric elements in or on the camera [3, 2006.01, 2014.01]
- 7/0993 • • • in the camera [2014.01]
- 7/0997 • • • • Through the lens [TTL] measuring [2014.01]
- 7/10 • • a servo-motor providing energy to move the setting member [1, 2006.01]
- 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 [1, 2006.01]
- 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 [1, 2006.01]
- 7/16 • 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 [1, 2006.01, 2014.01]
- 7/17 • • Selection of modes in flash units by exposure control arrangements [2014.01]
- 7/18 • in accordance with light-reducing "factor" of filter or other obturator used with or on the lens of the camera [1, 2006.01]
- 7/20 • in accordance with change of lens [1, 2006.01]
- 7/22 • in accordance with temperature or height, e.g. in aircraft [1, 2006.01]
- 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 [3, 2006.01]
- 7/26 • Power supplies; Circuitry or arrangement to switch on the power source; Circuitry to check the power source voltage [3, 2006.01]
- 7/28 • Circuitry to measure or to take account of the object contrast [3, 2006.01]
- 7/30 • Safety arrangements for control of exposure [2014.01]
- 9/00 Exposure-making shutters; Diaphragms [1, 2006.01]**
- 9/02 • Diaphragms [1, 2, 2006.01]
- 9/04 • • Single movable plate with two or more apertures of graded size, e.g. sliding plate, pivoting plate [1, 2006.01]
- 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) [1, 2006.01]
- 9/07 • • with means for presetting the diaphragm [1, 2006.01]
- 9/08 • Shutters [1, 2, 2006.01]
- 9/10 • • Blade or disc rotating or pivoting about axis normal to its plane [1, 2006.01]
- 9/12 • • • Two relatively-adjustable aperture-defining members moving as a unit [1, 2006.01]

- 9/14 • • • Two separate members moving in opposite directions [1, 2006.01]
- 9/16 • • • Two separate members moving in the same direction [1, 2006.01]
- 9/18 • • • More than two members [1, 2006.01]
- 9/20 • • • • each moving in a single direction first to open and then to reclose [1, 2006.01]
- 9/22 • • • • each moving in one direction to open and then in opposite direction to close, e.g. iris type [1, 2006.01]
- 9/24 • • • Adjusting size of aperture formed by members when fully open so as to constitute a virtual diaphragm that is adjustable [1, 2006.01]
- 9/26 • • • incorporating cover blade or blades [1, 2006.01]
- 9/28 • • Roller blind or flexible plate [1, 2006.01]
- 9/30 • • • Single blind with multiple slots or other aperture [1, 2006.01]
- 9/32 • • • Double blind [1, 2006.01]
- 9/34 • • • • with adjustable slot; with mechanism controlling relative movement of blinds to form slot [1, 2006.01]
- 9/36 • • Sliding rigid plate [1, 2006.01]
- 9/38 • • • Single rigid plate with multiple slots or other apertures [1, 2006.01]
- 9/40 • • • Double plate [1, 2006.01]
- 9/42 • • • • with adjustable slot; with mechanism controlling relative movement of plates to form slot [1, 2006.01]
- 9/44 • • • Curved track and plate [1, 2006.01]
- 9/46 • • Flap shutters pivoting about axis in plane of flap [1, 2006.01]
- 9/48 • • • Double flap [1, 2006.01]
- 9/50 • • • Louvre type [1, 2006.01]
- 9/52 • • Barrel shutters [1, 2006.01]
- 9/54 • • Conical shutters; Rotating plate with axis of rotation inclined to optical axis of shutter [1, 2006.01]
- 9/58 • Means for varying duration of "open" period of shutter [1, 2006.01]
- 9/60 • • by varying speed of movement of obturating members [1, 2006.01]
- 9/62 • • by varying interval of time between end of opening movement and beginning of closing movement [1, 2006.01]
- 9/64 • Mechanism for delaying opening of shutter (separate from shutter G03B 17/38) [1, 2006.01]
- 9/66 • Means for cocking shutter separate from means for releasing shutter [1, 2006.01]
- 9/68 • • Cocking effected by movement of film [1, 2006.01]
- 9/70 • with flash-synchronising contacts [1, 2006.01]
- 11/00 Filters or other obturators specially adapted for photographic purposes [1, 2006.01]**
- 11/02 • Sky masks [1, 2006.01]
- 11/04 • Hoods or caps for eliminating unwanted light from lenses, viewfinders, or focusing aids [1, 2006.01]
- 11/06 • • Lens caps for exposure making [1, 2006.01]
- 13/00 Viewfinders; Focusing aids for cameras; Means for focusing for cameras; Autofocus systems for cameras [1, 5, 2006.01]**
- 13/02 • Viewfinders [1, 2006.01]
- 13/04 • • of direct-vision type, e.g. frame, sighting mark [1, 2006.01]
- 13/06 • • with lenses with or without reflectors [1, 2006.01]
- 13/08 • • • with reflected image of frame [1, 2006.01]
- 13/10 • • adjusting viewfinder field [1, 2006.01]
- 13/12 • • • to compensate for change of camera lens or size of picture [1, 2006.01]
- 13/14 • • • to compensate for parallax due to short range [1, 2006.01]
- 13/16 • • combined with focusing aids [1, 2006.01]
- 13/18 • Focusing aids [1, 2006.01]
- 13/20 • • Rangefinders coupled with focusing arrangements, e.g. adjustment of rangefinder automatically focusing camera [1, 2006.01]
- 13/22 • • • coupling providing for compensation upon change of camera lens [1, 2006.01]
- 13/24 • • Focusing screens [1, 2006.01]
- 13/26 • • • with magnifiers for inspecting image formed on screen [1, 2006.01]
- 13/28 • • • Image-splitting devices [1, 2006.01]
- 13/30 • • indicating depth of field [5, 2006.01]
- 13/32 • Means for focusing [5, 2006.01]
- 13/34 • • Power focusing [5, 2006.01]
- 13/36 • • • Autofocus systems [5, 2006.01]
- 15/00 Special procedures for taking photographs; Apparatus therefor [1, 2006.01]**
- 15/02 • Illuminating scene [1, 2006.01]
- 15/03 • • Combinations of cameras with lighting apparatus; Flash units [1, 2006.01]
- 15/035 • • • Combinations of cameras with incandescent lamps [1, 2006.01]
- 15/04 • • • Combinations of cameras with non-electronic flash apparatus; Non-electronic flash units [1, 2006.01]
- 15/05 • • • Combinations of cameras with electronic flash apparatus; Electronic flash units [1, 2006.01]
- 15/06 • • Special arrangements of screening, diffusing, or reflecting devices, e.g. in studio [1, 2006.01]
- 15/07 • • • Arrangements of lamps in studios [1, 2006.01]
- 15/08 • Trick photography [1, 2006.01]
- 15/10 • • using back-projection, i.e. blending artificial background with real foreground [1, 2006.01]
- 15/12 • • using mirrors [1, 2006.01]
- 15/14 • for taking photographs during medical operations [1, 2006.01]
- 15/16 • for photographing the track of moving objects (high-speed photography G03B 39/00) [1, 2006.01]
- 17/00 Details of cameras or camera bodies; Accessories therefor (lens hoods or caps G03B 11/04) [1, 2006.01]**
- 17/02 • Bodies [1, 2006.01]
- 17/04 • • collapsible, foldable or extensible, e.g. book type [1, 2006.01]
- 17/06 • • with exposure meters or other indicators built into body but not connected to other camera members [1, 2006.01]
- 17/08 • • Waterproof bodies or housings [1, 2006.01]
- 17/10 • • Soundproof bodies [1, 2006.01]
- 17/12 • • with means for supporting objectives, supplementary lenses, filters, masks, or turrets [1, 2006.01]
- 17/14 • • • interchangeably [1, 2006.01]
- 17/16 • • for containing both motion-picture camera and still-picture camera [1, 2006.01]
- 17/17 • • with reflectors arranged in beam forming the photographic image, e.g. for reducing dimensions of camera [1, 2006.01]

17/18	• Signals indicating condition of a camera member or suitability of light (indicating depth of field G03B 13/30) [1, 2006.01]	19/18	• Motion-picture cameras (with non-intermittently running film G03B 41/02) [1, 2006.01]
17/20	• • visible in viewfinder [1, 2006.01]	19/20	• • Reflex cameras [1, 2006.01]
17/22	• with means for cutting-off film [1, 2006.01]	19/22	• • Double cameras [1, 2006.01]
17/24	• with means for separately producing marks on the film, e.g. title, time of exposure [1, 2006.01]	19/24	• • adapted to be loaded with more than one film, e.g. with exposure of one or the other at will [1, 2006.01]
17/26	• Holders for containing light-sensitive material and adapted to be inserted within the camera (holders for X-ray films G03B 42/04) [1, 2, 2006.01]	19/26	• • with fade-in and fade-out effects [4, 2006.01]
17/28	• Locating light-sensitive material within camera [1, 2006.01]	21/00	<b>Projectors or projection-type viewers; Accessories therefor</b> (devices for changing pictures G03B 23/00) [1, 2006.01]
17/30	• • Locating spools or other rotatable holders of coiled film [1, 2006.01]	21/02	• Multiple-film apparatus [1, 2006.01]
17/32	• • Locating plates or cut films [1, 2006.01]	21/04	• • Picture "juke-boxes" [1, 2006.01]
17/34	• • • Changing plates or cut films [1, 2006.01]	21/06	• affording only episcopic projection [1, 2006.01]
17/36	• Counting number of exposures (of film strips G03B 1/66) [1, 2006.01]	21/08	• affording epidiascopic projection [1, 2006.01]
17/38	• Releasing-devices separate from shutter (integral with shutter G03B 9/08) [1, 2006.01]	21/10	• Projectors with built-in or built-on screen [1, 2006.01]
17/40	• • with delayed or timed action [1, 2006.01]	21/11	• • for microfilm reading [1, 2006.01]
17/42	• Interlocking between shutter operation and advance of film or change of plate or cut-film [1, 2006.01]	21/12	• adapted for projection of either still pictures or motion pictures (prolonged exhibition of single frame G03B 21/38) [1, 2006.01]
17/44	• Means for exchanging focusing screen and light-sensitive material [1, 2006.01]	21/13	• Projectors for producing special effects at the edges of picture, e.g. blurring [1, 2006.01]
17/46	• Means for exposing single frames in motion-picture camera [1, 2006.01]	21/132	• Overhead projectors, i.e. capable of projecting hand-writing or drawing during action (epidiascopic projectors G03B 21/08) [1, 2006.01]
17/48	• adapted for combination with other photographic or optical apparatus [1, 2006.01]	21/134	• Projectors combined with typing apparatus or with printing apparatus [1, 2006.01]
17/50	• • with both developing and finishing apparatus [1, 2006.01]	21/14	• Details [1, 2006.01]
17/52	• • • of the Land type [1, 2006.01]	21/16	• • Cooling; Preventing overheating [1, 2006.01]
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 [1, 2006.01]	21/18	• • Fire preventing or extinguishing [1, 2006.01]
17/54	• • with projector [1, 2006.01]	21/20	• • Lamp housings [1, 2006.01]
17/55	• with provision for heating or cooling, e.g. in aircraft [1, 2006.01]	21/22	• • Soundproof bodies [1, 2006.01]
17/56	• Accessories (carrying-cases A45C 11/38) [1, 2006.01]	21/26	• • Projecting separately subsidiary matter simultaneously with main image [1, 2006.01]
17/58	• • Attachments for converting cameras into reflex cameras [1, 2006.01]	21/28	• • Reflectors in projection beam [1, 2006.01]
<hr/>		21/30	• • adapted to collapse or fold, e.g. for portability [1, 2006.01]
19/00	<b>Cameras</b> (details G03B 17/00) [1, 2006.01]	21/32	• • Details specially adapted for motion-picture projection (with film moving continuously through the gate G03B 41/02) [1, 2006.01]
19/02	• Still-picture cameras [1, 2006.01]	21/34	• • • Change-over arrangements [1, 2006.01]
19/04	• • Roll-film cameras [1, 2006.01]	21/36	• • • Fades, dissolves, or wipes [1, 2006.01]
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) [1, 2006.01]	21/38	• • • Prolonged exhibition of single frame [1, 2006.01]
19/07	• • • having more than one objective [1, 2006.01]	21/40	• • • Eliminating or reducing effect of flicker [1, 2006.01]
19/08	• • • with provision for alternative use with plates or cut-films [1, 2006.01]	21/42	• • • Preventing damage to film due to abnormal operation of projector [1, 2006.01]
19/10	• • Plate or cut-film cameras (with provision for alternative use with roll film G03B 19/08) [1, 2006.01]	21/43	• • • Driving mechanisms [1, 2006.01]
19/12	• • Reflex cameras with single objective and a movable reflector or a partly-transmitting mirror [1, 2006.01]	21/44	• • • • Mechanisms transmitting motion to film-strip feed; Mechanical linking of shutter and intermittent feed [1, 2006.01]
19/14	• • with paired lenses, one of which forms image on photographic material and the other forms a corresponding image on a focusing screen [1, 2006.01]	21/46	• • • • • affording adjustment for framing [1, 2006.01]
19/16	• • Pin-hole cameras [1, 2006.01]	21/48	• • • • • for altering frame speed; for regulating constancy of film speed [1, 2006.01]
		21/50	• • • Control devices operated by the film strip during the run [1, 2006.01]
		21/52	• • • • by prepared film [1, 2006.01]
		21/53	• • Means for automatic focusing, e.g. to compensate thermal effects [5, 2006.01]
		21/54	• Accessories [1, 2006.01]
		21/56	• • Projection screens [1, 2006.01]

- 21/58 • • • collapsible, e.g. foldable; of variable area [1, 2006.01, 2014.01]
- 21/585 • • • • Inflatable screens [2014.01]
- 21/60 • • • characterised by the nature of the surface [1, 2006.01, 2014.01]
- 21/602 • • • • Lenticular screens (G03B 21/625 takes precedence) [2014.01]
- 21/604 • • • • Polarised screens [2014.01]
- 21/606 • • • • for relief projection [2014.01]
- 21/608 • • • • Fluid screens [2014.01]
- 21/62 • • • • Translucent screens [1, 2006.01, 2014.01]
- 21/625 • • • • • Lenticular translucent screens [2014.01]
- 21/64 • • Means for mounting individual pictures to be projected, e.g. frame for transparency [1, 2006.01]
- 23/00 Devices for changing pictures in viewing apparatus or projectors [1, 2006.01]**
- Note(s)**
- In this group, the following term is used with the meaning indicated:
- "picture" means 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 [1, 2006.01]
- 23/04 • • with linear movement [1, 2006.01]
- 23/06 • • with rotary movement [1, 2006.01]
- 23/08 • in which pictures are attached to a movable carrier [1, 2006.01]
- 23/10 • • drum or disc carrier [1, 2006.01]
- 23/12 • • linear strip carrier [1, 2006.01]
- 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) [1, 4, 2006.01]
- 23/18 • with fade-in and fade-out effects [4, 2006.01]
- 25/00 Viewers, other than projection viewers, giving motion-picture effects by persistence of vision, e.g. zoetrope [1, 2006.01]**
- 25/02 • with interposed lenticular or line screen [1, 2006.01]
- 27/00 Photographic printing apparatus [1, 2006.01]**
- 27/02 • Exposure apparatus for contact printing [1, 2006.01]
- 27/04 • • Copying apparatus without a relative movement between the original and the light source during exposure, e.g. printing frame, printing box [1, 2006.01]
- 27/06 • • • for automatic repeated copying of the same original [1, 2006.01]
- 27/08 • • • for automatic copying of several originals one after the other, e.g. for copying cinematograph film [1, 2006.01]
- 27/10 • • Copying apparatus with a relative movement between the original and the light source during exposure [1, 2006.01]
- 27/12 • • • for automatic repeated copying of the same original [1, 2006.01]
- 27/14 • • Details [1, 2006.01]
- 27/16 • • • Illumination arrangements, e.g. positioning of lamps, positioning of reflectors (controlling the exposure G03B 27/72) [1, 2006.01]
- 27/18 • • • Maintaining or producing contact pressure between original and light-sensitive material [1, 2006.01]
- 27/20 • • • • by using a vacuum or fluid pressure [1, 2006.01]
- 27/22 • • • • by stretching over a curved surface [1, 2006.01]
- 27/24 • • • Separating the original from the print [1, 2006.01]
- 27/26 • • • Cooling [1, 2006.01]
- 27/28 • • • Edge-masking devices [1, 2006.01]
- 27/30 • • • adapted to be combined with processing apparatus [1, 2006.01]
- 27/32 • Projection printing apparatus, e.g. enlarger, copying camera [1, 2006.01]
- 27/34 • • Means for automatic focusing therefor [1, 4, 2006.01]
- 27/36 • • • by mechanical connections, e.g. by cam, by linkage [1, 2006.01]
- 27/38 • • • • embodying screws with non-uniform pitch [1, 2006.01]
- 27/40 • • • • adapted for use with lenses of different focal length [1, 2006.01]
- 27/42 • • for automatic sequential copying of the same original (G03B 27/34, G03B 27/53 take precedence) [1, 4, 2006.01]
- 27/44 • • for multiple copying of the same original at the same time (G03B 27/34, G03B 27/53 take precedence) [1, 4, 2006.01]
- 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) [1, 4, 2006.01]
- 27/465 • • • at different positions of the same strip, e.g. microfilm [4, 2006.01]
- 27/47 • • • at different positions of the same sheet, e.g. microfiche [4, 2006.01]
- 27/475 • • • copying cinematographic film (G03B 27/48 takes precedence) [4, 2006.01]
- 27/48 • • • with original in the form of a film strip moving continuously and compensation for consequent image movement [1, 2006.01]
- 27/50 • • with slit or like diaphragm moving over original for progressive exposure (G03B 27/34 takes precedence) [1, 4, 2006.01]
- 27/52 • • Details [1, 2006.01]
- 27/53 • • • Automatic registration or positioning of originals with respect to each other or the photosensitive layer [4, 2006.01]
- 27/54 • • • Lamp housings; Illuminating means [1, 2006.01]
- 27/56 • • • Mounting enlarger head on column [1, 2006.01]
- 27/58 • • • Baseboards, masking frames, or other holders for the sensitive material (G03B 27/53 takes precedence) [1, 4, 2006.01]
- 27/60 • • • • using a vacuum or fluid pressure [1, 2006.01]
- 27/62 • • • Holders for the original (G03B 27/53 takes precedence) [1, 4, 2006.01]
- 27/64 • • • • using a vacuum or fluid pressure [1, 2006.01]
- 27/66 • • • specially adapted for holding half-tone screens [1, 2006.01]
- 27/68 • • • Introducing or correcting distortion, e.g. in connection with oblique projection [1, 2006.01]
- 27/70 • • • Reflectors in printing beam [1, 2006.01]
- 27/72 • Controlling or varying light intensity, spectral composition, or exposure time in photographic printing apparatus [1, 2006.01]

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- 27/73 • • Controlling exposure by variation of spectral composition, e.g. multicolor printers [3, 2006.01]
- 27/74 • • Positioning exposure meters in the apparatus [1, 2006.01]
- 27/80 • • in dependence upon automatic analysis of the original (G03B 27/73 takes precedence) [3, 2006.01]
- 29/00 **Combinations of cameras, projectors or photographic printing apparatus with non-photographic non-optical apparatus, e.g. clocks or weapons; Cameras having the shape of other objects** (combinations with flash apparatus G03B 15/03) [1, 2006.01]

### Special techniques

- 31/00 **Associated working of cameras or projectors with sound-recording or sound-reproducing means** [1, 2006.01]
- 31/02 • in which sound track is on a moving-picture film [1, 2006.01]
- 31/04 • in which sound track is not on, but is synchronised with, a moving-picture film [1, 2006.01]
- 31/06 • in which sound track is associated with successively-shown still pictures [1, 2006.01]
- 31/08 • with fade-in and fade-out effects [4, 2006.01]
- 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) [1, 2006.01]
- 33/02 • by two-colour separation records, e.g. red-aspect and white complete records; using Land effect [1, 2006.01]
- 33/04 • by four or more separation records [1, 2006.01]
- 33/06 • by additive-colour projection apparatus [1, 2006.01]
- 33/08 • Sequential recording or projection (G03B 33/02, G03B 33/04, G03B 33/06 take precedence) [1, 2006.01]
- 33/10 • Simultaneous recording or projection (G03B 33/02, G03B 33/04, G03B 33/06 take precedence) [1, 2006.01]
- 33/12 • • using beam-splitting or beam-combining systems, e.g. dichroic mirrors [1, 2006.01]
- 33/14 • • using lenticular screens (integral with film G03C) [1, 2006.01]
- 33/16 • • using colour-pattern screens (integral with film G03C) [1, 2006.01]
- 35/00 **Stereoscopic photography** [1, 2006.01]
- 35/02 • by sequential recording [1, 2006.01]
- 35/04 • • with movement of beam-selecting members in a system defining two or more viewpoints [1, 2006.01]
- 35/06 • • with axial movement of lens or gate between exposures [1, 2006.01]
- 35/08 • by simultaneous recording [1, 2006.01]
- 35/10 • • having single camera with stereoscopic-base-defining system [1, 2006.01]
- 35/12 • • involving recording of different viewpoint images in different colours on a colour film [1, 2006.01]

- 35/14 • Printing apparatus specially adapted for conversion between different types of record (G03B 42/08 takes precedence) [1, 4, 2006.01]
  - 35/16 • by sequential viewing [1, 2006.01]
  - 35/18 • by simultaneous viewing [1, 2006.01]
  - 35/20 • • using two or more projectors [1, 2006.01]
  - 35/22 • • using single projector with stereoscopic-base-defining system [1, 2006.01]
  - 35/24 • • using apertured or refractive resolving means on screen or between screen and eye [1, 2006.01]
  - 35/26 • • using polarised or coloured light for separating different viewpoint images [1, 2006.01]
  - 37/00 **Panoramic or wide-screen photography; Photographing extended surfaces, e.g. for surveying; Photographing internal surfaces, e.g. of pipe** [1, 2006.01]
  - 37/02 • with scanning movement of lens or camera [1, 2006.01]
  - 37/04 • with cameras or projectors providing touching or overlapping fields of view [1, 2006.01]
  - 37/06 • involving anamorphosis (G03B 37/02, G03B 37/04 take precedence) [1, 2006.01]
  - 39/00 **High-speed photography** [1, 2006.01]
  - 39/02 • using stationary plate or film (G03B 39/06 takes precedence) [1, 2006.01]
  - 39/04 • using moving plate or film (G03B 39/06 takes precedence) [1, 2006.01]
  - 39/06 • using light-guides for transferring image frame or elements thereof into different array, e.g. into a line [1, 2006.01]
  - 41/00 **Special photographic techniques not covered by groups G03B 31/00-G03B 39/00; Apparatus therefor** [1, 2, 2006.01]
  - 41/02 • using non-intermittently-running film [1, 2006.01]
  - 41/04 • • with optical compensator [1, 2006.01]
  - 41/06 • • • with rotating reflecting member [1, 2006.01]
  - 41/08 • • • with rotating transmitting member [1, 2006.01]
  - 41/10 • • • with oscillating reflecting member [1, 2006.01]
  - 41/12 • • • with oscillating transmitting member [1, 2006.01]
  - 41/14 • • Overcoming image movement by brief flashes of light [1, 2006.01]
  - 42/00 **Obtaining records using waves other than optical waves; Visualisation of such records by using optical means** [4, 2006.01]
  - 42/02 • using X-rays [4, 2006.01]
  - 42/04 • • Holders for X-ray films [4, 2006.01]
  - 42/06 • using ultrasonic, sonic or infrasonic waves [4, 2006.01]
  - 42/08 • Visualisation of records by optical means [4, 2006.01]
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- 43/00 **Testing correct operation of photographic apparatus or parts thereof** [1, 2006.01]
  - 43/02 • Testing shutters [1, 2006.01]