

Search strategy

Query

(PROJECTOR AND MIRROR+ AND REFLEC+ AND CONVEX AND IMAGE AND VIDEO)/TI/AB
--

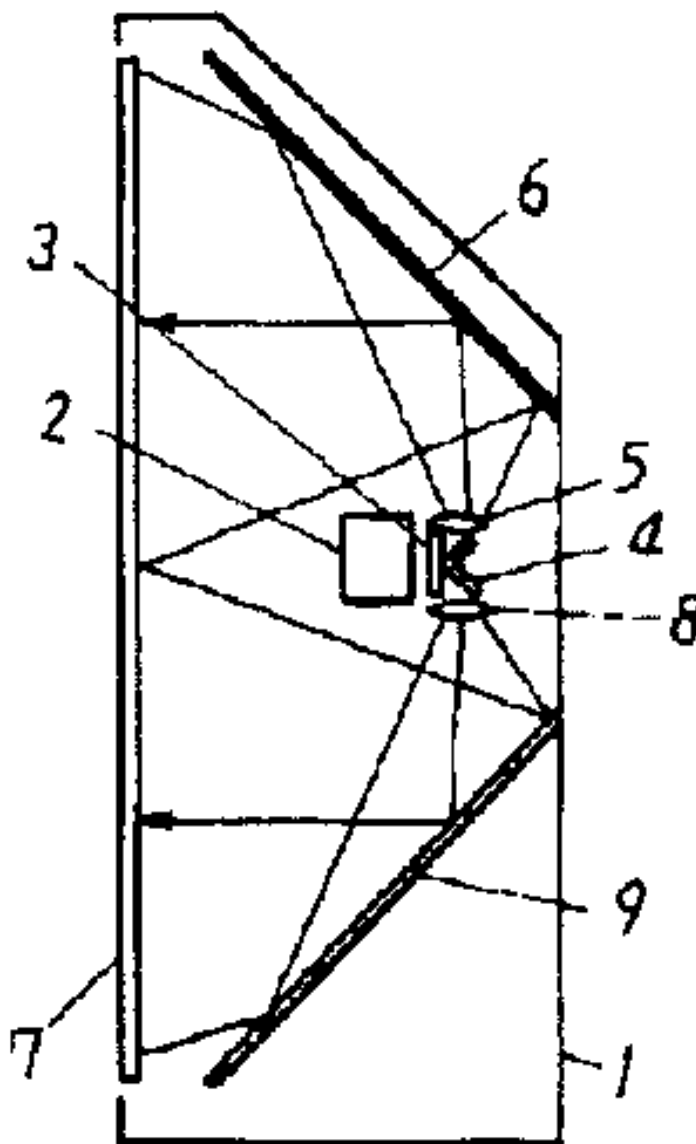
9 Documents

Publication numbers	Title	Current assignees
JP04372938 A	Liquid crystal video projector device	PANASONIC
JP57035486 A	Video projector	SANYO ELECTRIC
JP61095328 A	Optical synthetic image projector for trial wearing of clothing and hairdo	ITOYA HIROSHI
EP-933951 A1	Relay lens for image projector	NEC
DE10307570 A1	Projection system for video images using laser as light source, incorporates convex or concave mirror directing reflected light beam onto flat screen	KUELS GUIDO
US4234894 A	Reflecting optical system for projection television	MINOLTA CAMERA
EP2183633 A2	Panoramic projection device and method implemented by said device	UNIVERSITE D AUVERGNE, ...
US20090262309 A1	Projection type video display apparatus	SANYO ELECTRIC
JP09093519 A	Image display device and perception integrating system provide with the same	HITACHI

Family 1/9 - FAMPAT - ©Questel

Title

(JP04372938)

Liquid crystal **video projector** device**Images****Publication numbers with kind code & date**[JP04372938](#)

A

1992-12-25

JP04372938

**Abstract**

(JP04372938)

PURPOSE: To provide a liquid crystal **video projector** device with a small depth.

CONSTITUTION: A liquid crystal panel 3 with a region split into two and a V-shaped **mirror** 4 are provided in front of a light source 2 provided in a device main body 1, a pair of **convex** lenses 5, 8 are provided on the optical axis **reflected** by the V-shaped **mirror** 4, **mirrors** 6, 9 **reflecting** the **image** passing through the **convex** lenses 5, 8, vertically splitting the **image** into two, and integrally displaying the **image** on a transmission type projection screen 7 are provided inclinarily by a fixed angle, and the depth size of the device is reduced by half.

COPYRIGHT: (C)1992,JPO&Japio

Inventors

MORIMOTO HIROAKI

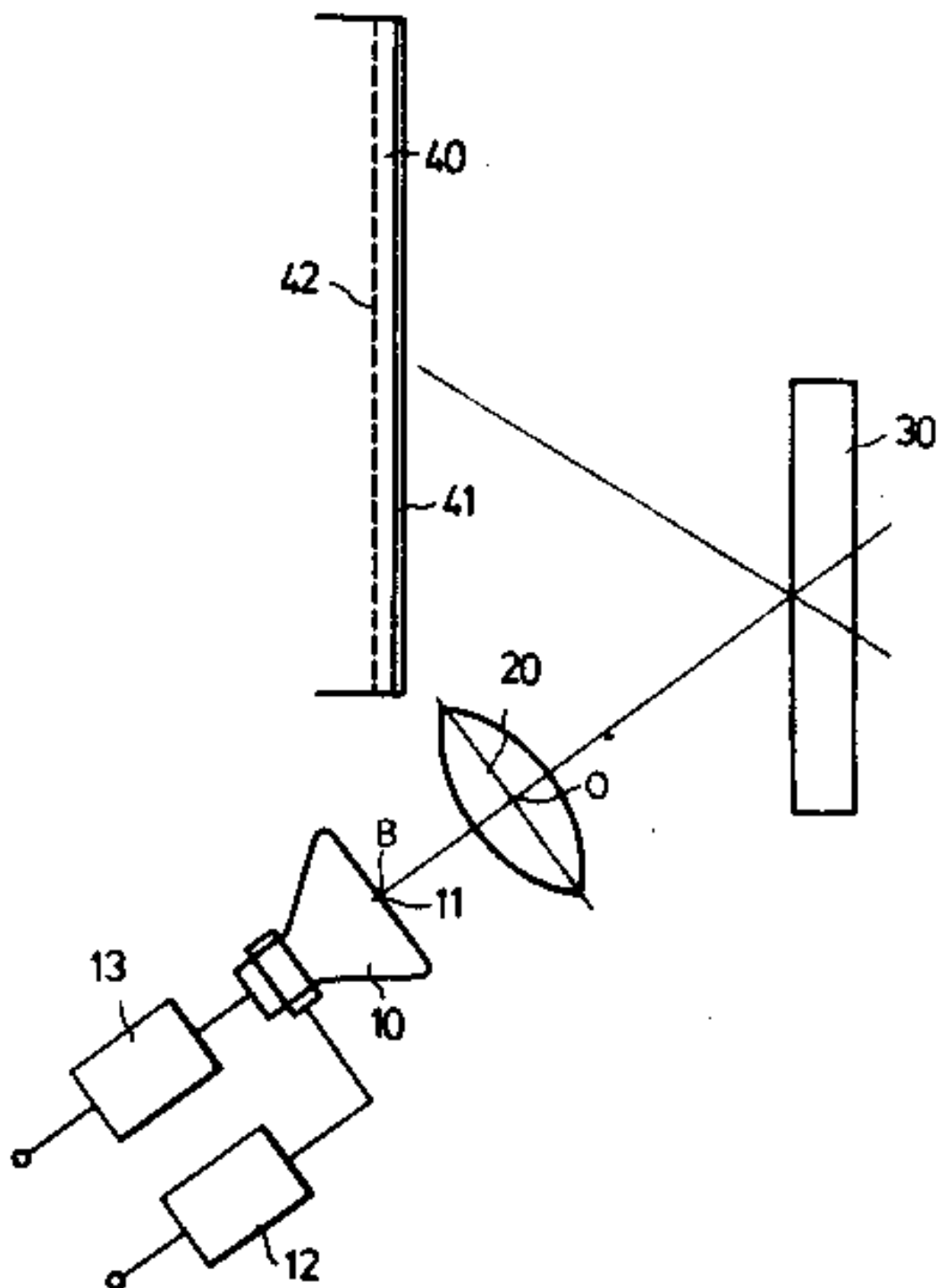
Latest standardized assignees - inventors removed

PANASONIC

Family 2/9 - FAMPAT - ©Questel

Title

(JP57035486)

Video projector**Images****Publication numbers with kind code & date**[JP57035486](#)

A

1982-02-26

JP57035486

**Abstract**

(JP57035486)

PURPOSE: To obtain a bright projective **image** and to reduce color slipping, by projecting an extended light of optical **image** of high luminance cathode ray tube where approximately square screen is formed by compressing the horizontal amplitude, on a screen via a pillar shape **convex mirror**.

CONSTITUTION: A **video projector** consists of a high luminance cathode ray tube 10 as an optical **image** source, extended projective lens system 20, **convex reflection mirror** 30 and transparent screen 40. The tube 10 is provided with a square screen 11, which is used in combination with a horizontal deflection circuit 12 suppressing the horizontal deflection amplitude, and a **video** signal applied from a **video** output circuit 13 is compressed horizontally on the screen 11 to picture the **video**. The **convex reflection mirror** 30 consists of a **convex** pillar in which the curvature is selected so that the compressed picture is enlarged and recovered on the screen 40.

COPYRIGHT: (C)1982,JPO&Japio

Inventors

SUNABA KOUHEI

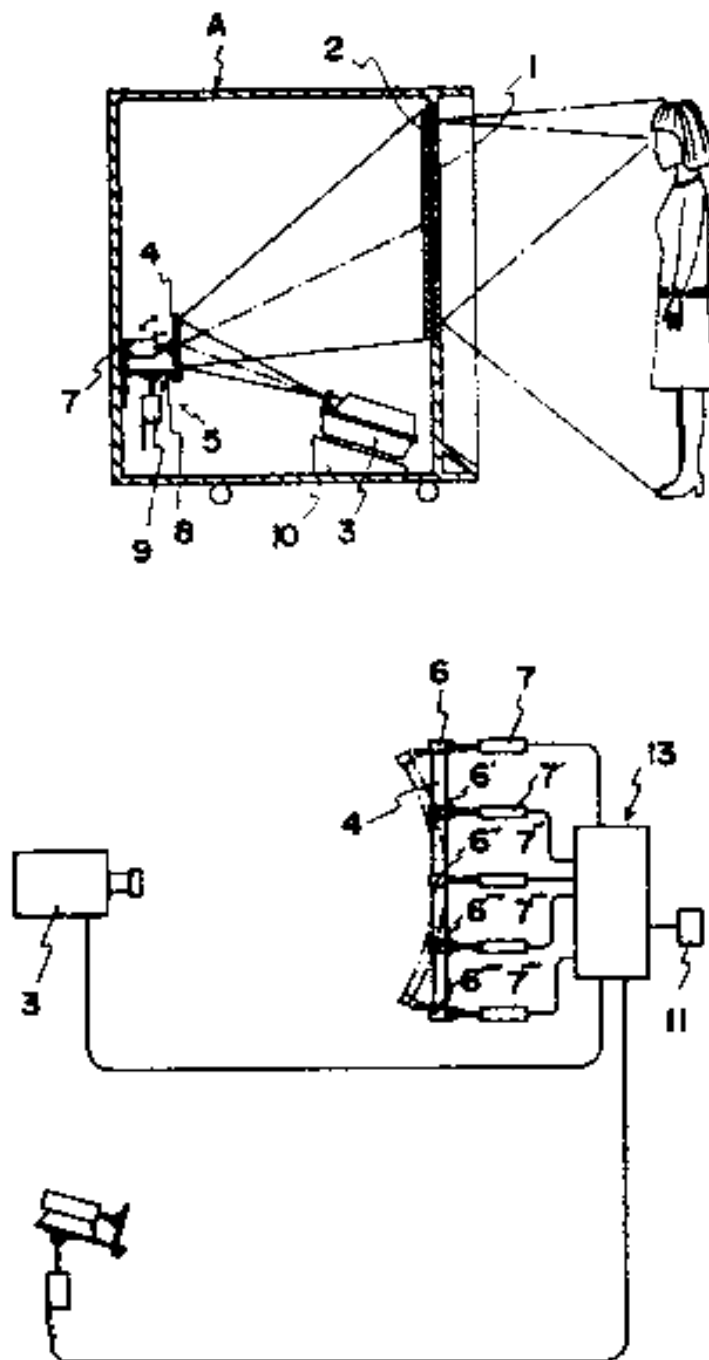
Latest standardized assignees - inventors removed

SANYO ELECTRIC

Family 3/9 - FAMPAT - ©Questel

Title

(JP61095328)

Optical synthetic **image projector** for trial wearing of clothing and hairdo**Images****Publication numbers with kind code & date**[JPS6229782](#)

B2 1987-06-29

JP87029782

[JP61095328](#)

A 1986-05-14

JP61095328

**Abstract**

(JP61095328)

PURPOSE: To obtain such a **video** which appears as if a person wears trially clothing and hairdo even if the person does not actually wear the same by projecting a film with a **projector**, **reflecting** the same once with a **mirror** body and projecting the portrait wearing the prescribed clothing and hairdo except the face part on a screen.

CONSTITUTION: The film to be projected by the **projector** 3 is preliminarily photo graphed with the portraits wearing actually various kinds of clothing and hairdos into many frames and the face parts thereof are subjected to a light shielding treat ment. Such film is projected by the **projector** 3 and is once **reflected** by the **mirror** body 4 so as to project the portrait wearing the prescribed clothing and hairdo except the face part on the screen 2. The projected **image** is viewed through a magic **mirror** 1 by the person facing the same. The **reflecting** angle of the **mirror** body is adjusted by a remote operation panel so that the face of the person facing the face part of the projected **image** is projected to said part. A mechanism 5 for inflecting the **mirror** body is then operated to curve the flexible **mirror** body 4 to an approximately **convex** or concave arc shape so that the synthetic **image** formed to meet the person's physical style is projected as the fat or lean portrait.

COPYRIGHT: (C)1986,JPO&Japio

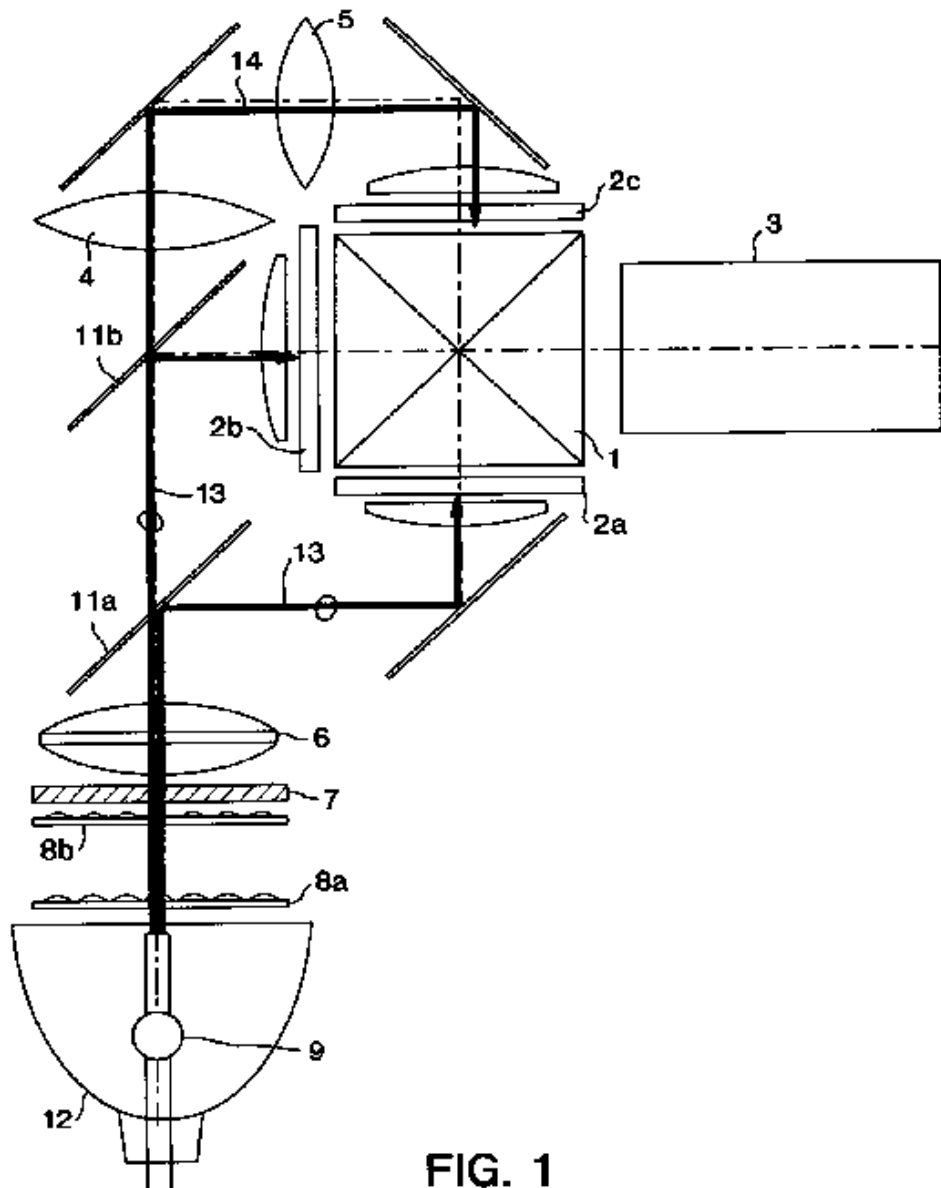
Inventors

ITOYA HIROSHI

Family 4/9 - FAMPAT - ©Questel

Title

(EP-933951)

Relay lens for **image projector****Images****Publication numbers with kind code & date**

US6149276	A	2000-11-21	US6149276
JP11212022	A	1999-08-06	JP11212022
EP0933951	A1	1999-08-04	EP-933951

Abstract

(EP0933951)



There is provided a colour **image projector** including a light source (9), a **reflection mirror** (12), three **image** display units (2a,2b,2c) for forming images, and a relay system (8a,8b,7,6,11a,11b) for transferring the flux of light to the **image** display unit. The relay system includes a biconvex relay lens (4), characterized by the ratio of the radius of curvature (R1) of the first **convex** surface (4a) to the radius of a curvature (R2) of the second **convex** surface (4b) being determined such that spherical aberration of the relay lens (4) is increased to thereby cause a converging point of the flux of light to be displaced. This provides uniform colour balance and brightness on the screen. <**IMAGE**>

Inventors

TAKEUCHI TADASHI

UCHIDA HIROSHI

Latest standardized assignees - inventors removed

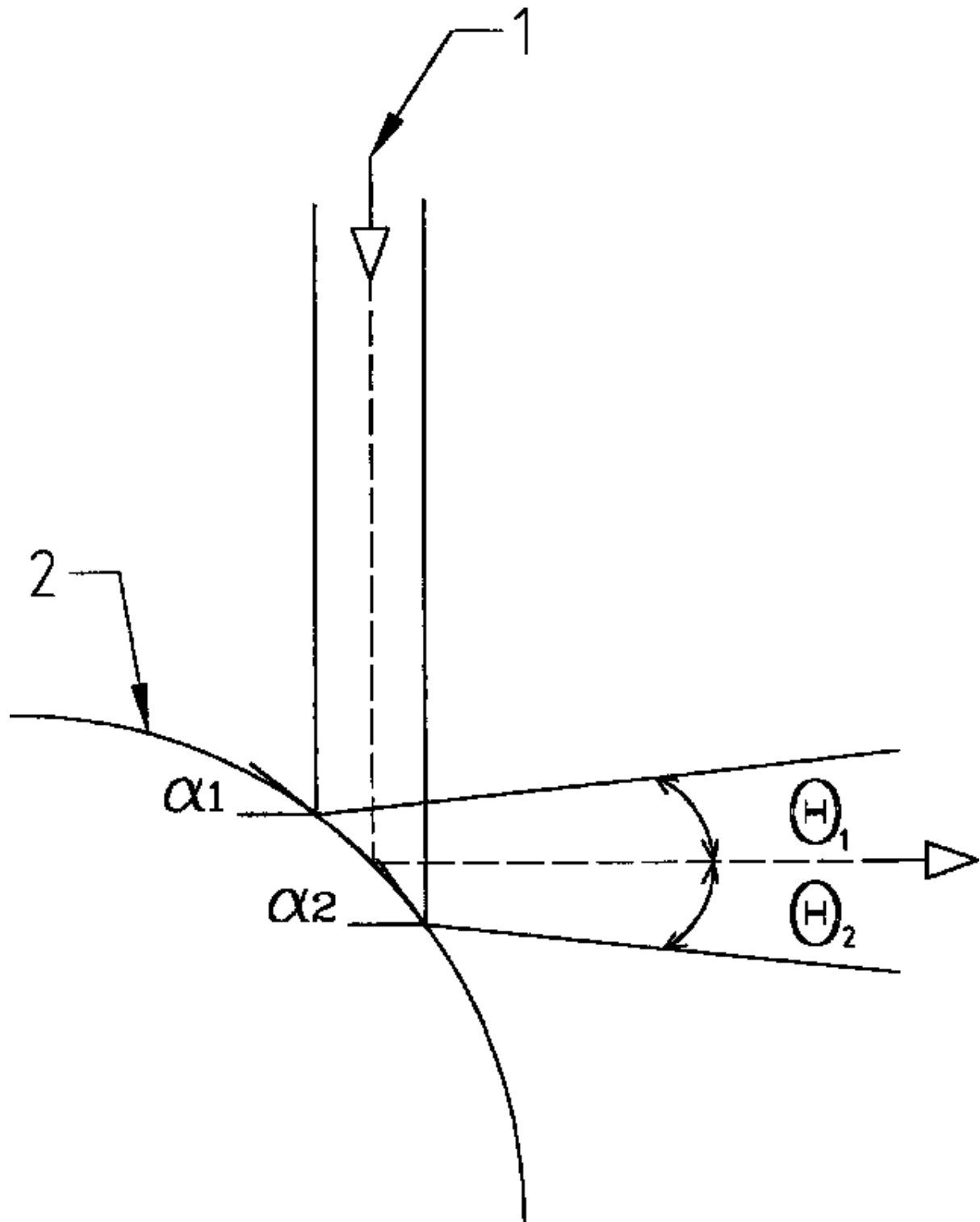
NEC

Family 5/9 - FAMPAT - ©Questel

Title

(DE10307570)

Projection system for **video** images using laser as light source, incorporates **convex** or concave **mirror** directing **reflected** light beam onto flat screen

Images**Publication numbers with kind code & date**[DE10307570](#)

B4 2005-02-24

DE10307570

[DE10307570](#)

A1 2003-12-18

DE10307570

**Abstract**

(DE10307570)

A parallel laser light beam (1) may strike a **convex** cylindrical **mirror** (2), at an angle of approximately 45 degrees. The

reflected beam is defocused and spreads at an angle ($\Theta_1 + \Theta_2$), where the total angle $\Theta_{\text{tot}} = \Theta_1 + \Theta_2 = 2 \times (\alpha_2 + \alpha_1)$. α_1 and α_2 are 90 degrees minus the angles of incidence of the edges of the beam on the mirror.

(From DE10307570 A1)

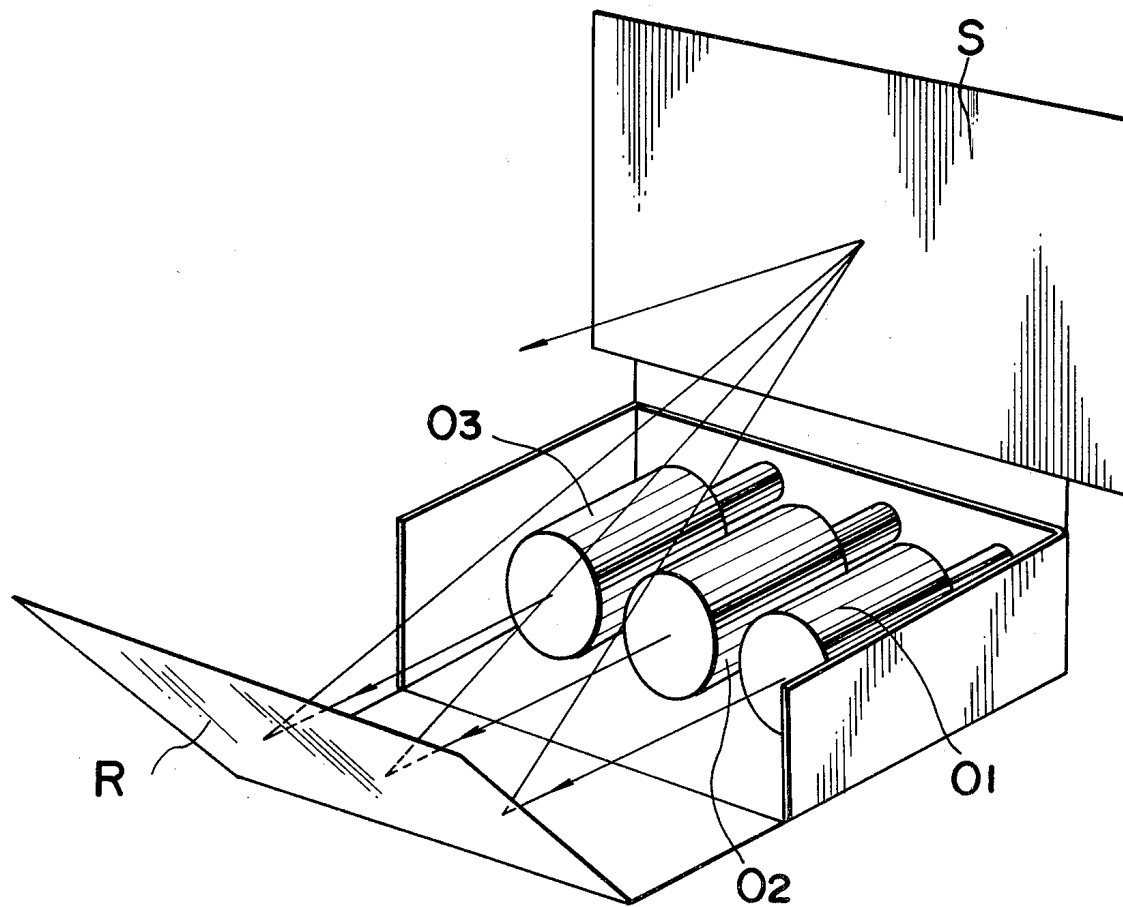
Inventors

KUELS GUIDO

Family 6/9 - FAMPAT - ©Questel

Title

(US4234894)

Reflecting optical system for projection television**Images****Publication numbers with kind code & date**

JP1366645	C	1987-02-26	JP1366645
JPS6133164	B2	1986-07-31	JP86033164
US4234894	A	1980-11-18	US4234894
JP54065048	A	1979-05-25	JP54065048

**Abstract**

(US4234894)

A projection television system having a light emitting target and a screen for realizing a projected **video image** is provided with an improved **reflecting** optical system which provides enhanced resolution and uniform correction of aberrations across a projected **image**. The optical system includes a concave **mirror**, positioned adjacent the light emitting target, for **reflecting** the **video image** towards the display screen. An optical compensating plate having at least one aspherical surface is located on the optical path. A meniscus lens is also located in the optical path. Both the optical compensating member and the meniscus lens can be positioned outside the vacuum envelope of the target and the electron gun to simplify alignment and construction.

Inventors

TOKUMARU HISASHI

YASUKUNI MITSUO

Latest standardized assignees - inventors removed

MINOLTA CAMERA

three-dimensional environment (7, 8a, 8b) such as the ground, a ceiling, one or more side walls and the content of a room. When combining the **projector** with a **convex mirror**, the mother **image** can for example be projected into a solid angle higher than 2π steradians (i.e. a half-sphere), or even substantially equal to or slightly lower than 4π steradians (i.e. a sphere). The invention also relates to a method implemented by said device. The field of the invention is particularly that of **video** projectors for virtual or mixed reality applications.

Inventors

STEHLE ROBERT ANDRE MARCEL

BRAY MICHAEL

SARRY LAURENT

ZEGHERS ERIC

Latest standardized assignees - inventors removed

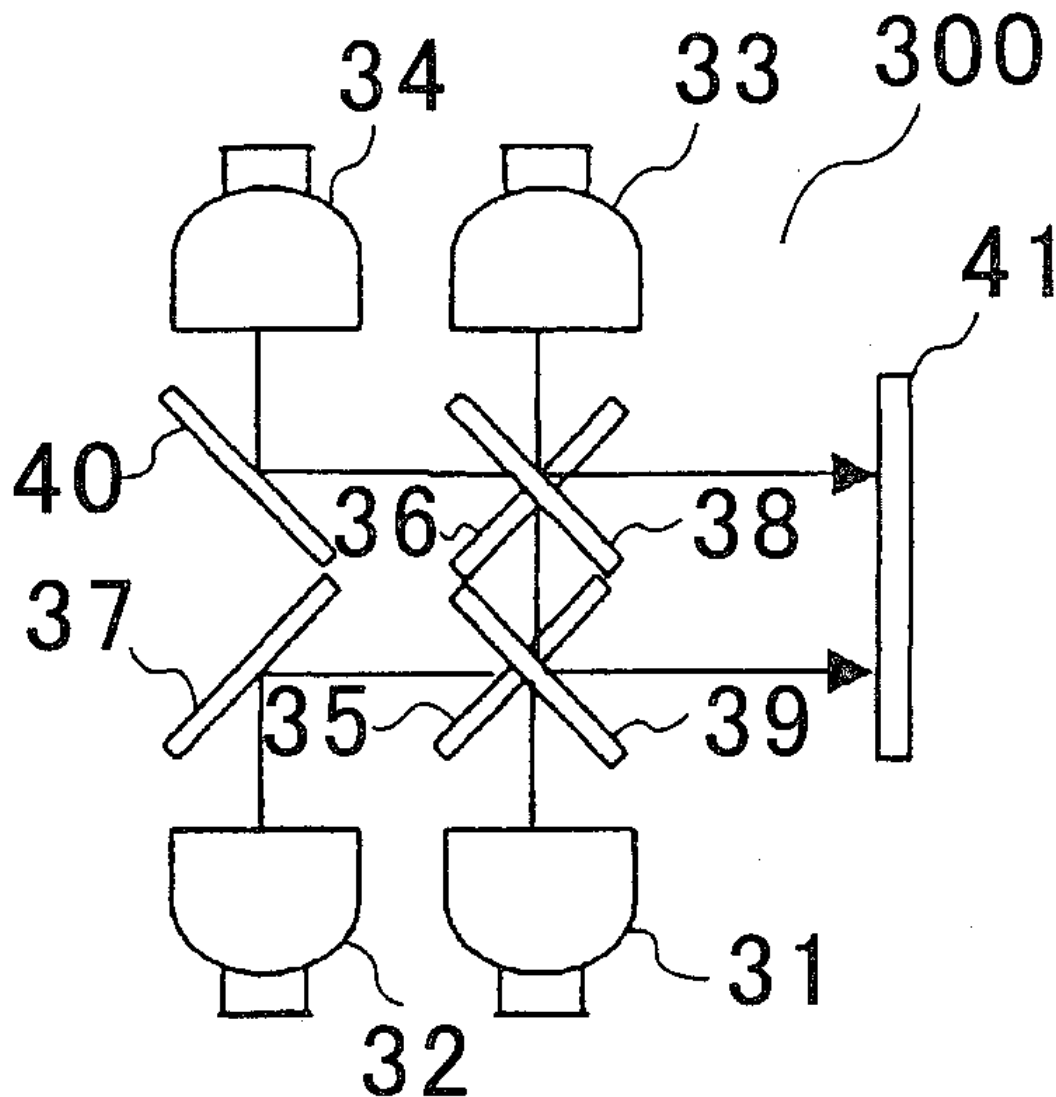
UNIVERSITE D AUVERGNE

MB OPTIQUE

Family 8/9 - FAMPAT - ©Questel

Title

(US20090262309)

Projection type **video** display apparatus**Images****Publication numbers with kind code & date**

JP5156338	B2	2012-12-14	JP5156338
US20090262309	A1	2009-10-22	US20090262309
JP2009031715	A	2009-02-12	JP2009031715
CN101334143	A	2008-12-31	CN101334143

**Abstract**

(US20090262309)

A projection type **video** display apparatus has a lighting system, which comprises a multiplicity of light sources (11, 12) for emitting substantially parallel beams of light, a half-**mirror** (13), and a total-**reflection mirror** (14). The half-**mirror** and the total-**reflection mirror** are arranged to transmit and/or **reflect** these beams to illuminate substantially the same entire region of an integrator lens (14). As a result, a high-quality **image** having no unbalanced white or black color uniformity can be obtained even when the light sources are used only partially. This arrangement can be obtained using an inexpensive half-**mirror** and total-**reflection mirror**. Moreover, there is no need of precisely positioning the **mirrors** in alignment with a large number of **convex** lenses constituting the integrator lens. Thus, the **projector** can be manufactured at low cost.

Inventors

YAMAUCHI KENJI

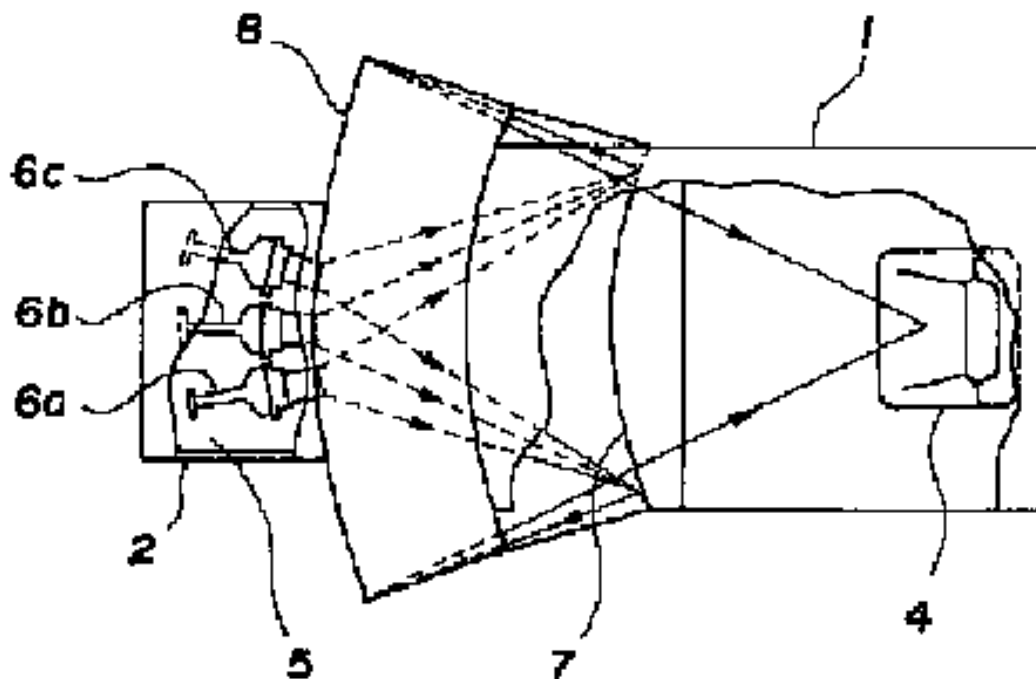
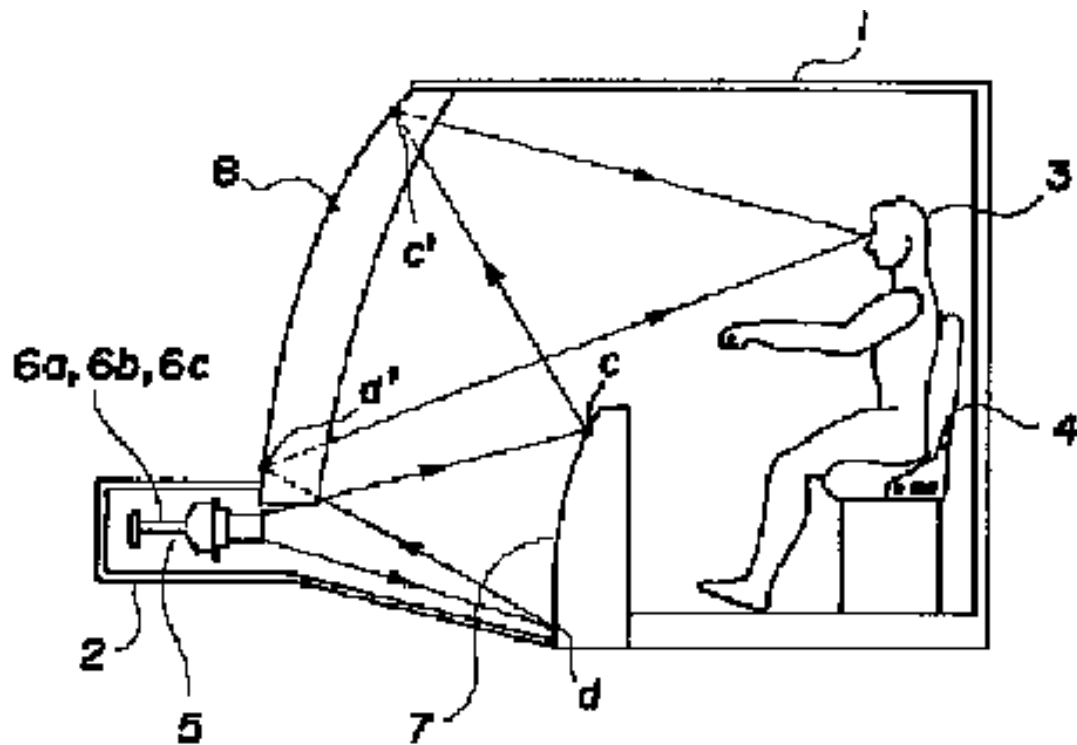
Latest standardized assignees - inventors removed

SANYO ELECTRIC

Family 9/9 - FAMPAT - ©Questel

Title

(JP09093519)

Image display device and perception integrating system provide with the same**Images****Publication numbers with kind code & date**[JP3277480](#)

B2 2002-04-22

JP3277480

[JP09093519](#)

A 1997-04-04

JP09093519

**Abstract**

(JP09093519)

PROBLEM TO BE SOLVED: To ensure a sufficient space for a viewer in which a **convex mirror** with a light weight and high stiffness is used at a low cost and a projection lens similar to that of a conventional system may be useable.

SOLUTION: A **reflection** spherical screen 7 is arranged to a **reflection** face of a concave **mirror** 8 opposite to a projection **reflection** screen face and an **image projector** 5 is arranged opposite to the screen face of the **reflection** spherical screen 7. Thus, the **image projector** 5 is located at lower rear side of a concave **mirror** 8. A **video image** from the **image projector** 5 is projected onto a screen face of the **reflection** spherical screen 7 with magnification, the projected **video image** is **reflected** in the concave **mirror** 8 and viewed by a viewer 3. A radius of curvature of the concave **mirror** 8 is defined nearly twice of the radius of curvature of the **reflection** spherical screen 7 and the arrangement between the concave **mirror** 8 and the **reflection** spherical screen 7 are defined so that the center of the curvature of the concave **mirror** 8 and the center of curvature of the **reflection** spherical screen 7 are close to each other.

COPYRIGHT: (C)1997,JPO

Inventors

YOSHIKAWA HIROKI

OISHI SATORU

Hideo Taniuchi

Latest standardized assignees - inventors removed

HITACHI