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# (54) "FOGGING" TYPE PHOTOGRAPHIC PRINTING METHOD FOR CLASSICAL PHOTOGRAPHIC PRINTS

(57)The present invention relates to a fogging type photographic printing method for classical photographic prints. The method comprises the following steps: controlling the room humidity, dividing an operation area, a reagent brushing area and a fogging operation area on a piece of classical photographic printing paper; evenly applying a liquid reagent to the projections on the projection-recess board; after the classical photographic printing paper is pressed on the projection-recess operation area, making the projections on the projection-recess board abut against the classical photographic printing paper; dropping the liquid reagent on the theme-prominent reagent brushing area on the classical photographic printing paper, and evenly brushing with a brush along a single direction; resting the classical photographic printing paper for 2-15 minutes, and naturally drying or wind-drying; placing a photographic film above the classical photographic printing paper on which the liquid reagent is brushed, and irradiating by an ultraviolet lamp; separating the photographic film, cleaning in a classical cleaning solution, and then taking out the classical photographic printing paper. The technical solution provides people with a new visual sense of a classical photographic print by presenting non-prominent portions on a classic photographic print by means of foggy dots, deepens the external and internal connotations of a picture, and implements more stereoscopic and diversified picture presentation, thus greatly improving the aesthetic property and the visibility.



Figure 1

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#### **Technical Field**

**[0001]** The present invention relates to a photographic development technology for classical photographic prints, and particularly relates to a fogging type photographic printing method for classical photographic prints.

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### **Background Art**

[0002] In a photographic development method for classical traditional photographic prints, a plurality of methods involving platinum (platinum palladium), protein, iron salt, silver salt, iron silver, blue printing, chrome-plated silver lactate and the like are collectively called a classical photographic printing method. Offering quite rich tones and rarely causing color fading, the classical photographic printing method is very suitable for making collectable products. In addition to the abundant contrast, subtle gray scale, unique tone, rich layers and extremely perfect detail expression, the classical photographic printing method enables the creation of a photographer to become permanent, and thus can be regarded as a perfect combination of the science and technology and the art, establishing a dominant position of the classical traditional photographic prints.

[0003] The World War I and the World War II in the 20th century resulted in worldwide lack of resources, and the classical traditional photographic prints, requiring a huge number of expensive and rare metals, were forbidden by all countries in the world, despite the unique performance and effects. However, existing classical photographic prints all employ an even brushing approach and are controlled through the photosensitive sun-curing time; the process cannot satisfy higher artistic pursuit of people but just conduct copying in original photos, simply stagnating on the ancient classical photographic printing technology. What needs to be done is to further expand and create art works at a higher level and break shackles imposed by traditional classical form of spreading an image all over a photographic print.

## **Technical Problems**

[0004] So, the present invention primarily aims to provide a fogging type photographic printing method for classical photographic prints. The technical scheme provides people with a new visual sense of a classical photographic print by presenting non-prominent portions on a classic photographic print by means of foggy dots, deepens the external and internal connotations of a picture and implements more stereoscopic and diversified picture presentation, thus greatly improving the aesthetic property and the visibility. Resuming the technique in current era of digital image, more than 180 years later since initial application thereof, and tightly combining the digital technology with the classical photographic printing technol-

ogy, are undoubtedly of new times value and significance to the innovation of image language and the expansion of creation ways of photographic art.

#### Technical Solutions

**[0005]** To achieve the aim, the present invention adopts the following technical solutions.

[0006] A fogging type photographic printing method for classical photographic prints is characterized by comprising the following steps:

- (A) controlling room humidity to 30-60% RH, and dividing an operation area and a theme-prominent reagent brushing area on a piece of classical photographic printing paper, by use of a pencil according to the size of a photographic film, wherein the remaining part of the classical photographic printing paper becomes a fogging operation area;
- (B) evenly applying a liquid reagent to projections on a pre-made projection-recess board; after the classical photographic printing paper is pressed on the fogging operation area, making projections on the projection-recess board abut against the classical photographic printing paper for 10-30 seconds, then taking up quickly;
- (C) dropping the liquid reagent on the theme-prominent reagent brushing area on the classical photographic printing paper by use of a dropper, and evenly brushing the liquid reagent with a brush along a single direction;
- (D) resting the classical photographic printing paper for 2-15 minutes, and naturally drying or wind-drying; (E) placing a photographic film above the classical photographic printing paper on which the liquid reagent is brushed and, irradiating for 2-15 minutes by an ultraviolet lamp;
- (F) separating the classical photographic printing paper from the photographic film, and putting the separated classical photographic printing paper in a classical developing solution; and
- (G) taking out the developed classical photographic printing paper and washing with water; cleaning the classical photographic printing paper in a classical cleaning solution to remove residual liquid reagent thereon; taking out the classical photographic printing paper, and washing again with clean water for 20 minutes.
- 50 [0007] The projection-recess board is composed of a hard board and a water absorbing elastic sheet, wherein the water absorbing elastic sheet is glued on the hard board and has the same shape as the projection-recess operation area; the water absorbing elastic sheet positioned on the theme-prominent reagent brushing area is provided to be a hollowed-out shape.

**[0008]** The water absorbing elastic sheet is prepared from water absorbing sponge, water absorbing cloth or

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water absorbing mat.

**[0009]** Thickness of the water absorbing elastic sheet is 3-5 mm.

#### **Beneficial Effects**

[0010] The technical solution has the following beneficial effects: in a fogging type photographic printing method for classical photographic prints, the technical solution provides people with a new visual sense of a classical photographic print by presenting non-prominent portions on a classic photographic print by means of foggy dots, deepens the external and internal connotations of a picture, and implements more stereoscopic and diversified picture presentation, thus greatly improving the aesthetic property and the visibility. Resuming the technique in current era of digital image, more than 180 years later since initial application thereof, and tightly combining the digital technology with the classical photographic printing technology, are undoubtedly of new times value and significance to the innovation of image language and the expansion of creation ways of photographic art

#### **Brief Description of the Drawings**

## [0011]

of Fig. 2.

Fig. 1 is a design sketch of an actual photo of classical photographic print generated by the technical solution of the present invention.

Fig. 2 is a schematic diagram of the structure of a projection-recess board applied in the Fig. 1. Fig. 3 is a cutaway view of the section in A-A direction

## **Detailed Description of the Invention**

[0012] Specific embodiments of the present invention are elaborated below in conjunction with the drawings.
[0013] The fogging type photographic printing method for classical photographic prints provided by the invention comprises the following steps:

- (A) controlling room humidity to 30-60% RH, and dividing an operation area and a theme-prominent reagent brushing area on a piece of photographic printing paper, by use of a pencil according to the size of a photographic film, wherein the remaining part of the classical photographic printing paper becomes a fogging operation area;
- (B) evenly applying a liquid reagent to projections on a pre-made projection-recess board; after the photographic printing paper is pressed on a projection-recess operation area, making projections on the projection-recess board abut against the classical photographic printing paper for 10-30 seconds, then taking up quickly;
- (C) dropping the liquid reagent on the theme-prom-

inent reagent brushing area on the classic photographic printing paper by use of a dropper, and evenly brushing the liquid reagent with a brush along a single direction;

- (D) resting the classical photographic printing paper for 2-15 minutes, and naturally drying or wind-drying; (E) placing a photographic film above the classical photographic printing paper on which the liquid reagent is brushed, and irradiating for 2-15 minutes by an ultraviolet lamp;
- (F) separating the classical photographic printing paper from the photographic film, and putting the separated classical photographic printing paper in a classical developing solution; and
- (G) taking out the developed classical photographic printing paper and washing with water; cleaning the classical photographic printing paper in a classical cleaning solution to remove residual liquid reagent thereon; taking out the classical photographic printing paper, and washing again with clean water for 20 minutes.

**[0014]** As shown in Fig. 2 and Fig. 3, the projection-recess board is composed of a hard board 1 and a water absorbing elastic sheet, wherein the water absorbing elastic sheet 2 is glued on the hard board 1 and has the same shape as the projection-recess operation area; the water absorbing elastic sheet positioned on the theme-prominent reagent brushing area is provided to be a hollowed-out shape 3.

**[0015]** The water absorbing elastic sheet applied in the embodiment of the present invention is water absorbing sponge 2; thickness of the water absorbing sponge is 5 mm

- [0016] As shown in Fig. 1, the photo originally shows a baby held in the arms of mother. The head of the baby and the hands of the mother are taken as a theme-prominent reagent brushing area for brushing a reagent to sufficient development; in the remaining part, the head of the baby and the hands of the mother on the water absorbing sponge are taken as a theme-prominent reagent brushing area for hollowing-out treatment, then the water absorbing sponge 2 is glued on the hard board 1; after the liquid reagent is brushed on the water absorbing sponge 1, the projection-recess operation area is treated. By adopting the picture treatment technology for classical photographic prints in the technical scheme, boundless love of the mother for the baby is highlighted more effectively in a hard life.
- 50 [0017] With the technical solution, in practical work, a printmaking technique for example, by adopting the projection-recess board as a fogging basis and treating the to-be-shown image, a plane pattern is improved into a stereoscopic pattern from an artistic angle, greatly improving the sense of depth and standing out the theme more noticeably.

[0018] As shown in Fig. 1, the flow of the platinum photographic printing technology, one of the classical pho-

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tographic printing technologies, is adopted as an example, and different photographic printing technologies apply different methods and flows.

**[0019]** The above description is merely preferred feasible embodiments of the present invention and is not intended to limit the protection scope of the present invention.

#### Claims

- A fogging type photographic printing method for classical photographic prints, characterized by comprising the following steps:
  - (A) controlling room humidity to 30-60% RH, and dividing an operation area and a theme-prominent reagent brushing area on a piece of classical photographic printing paper, by use of a pencil according to the size of a photographic film, wherein the remaining part of the classical photographic printing paper becomes a fogging operation area;
  - (B) evenly applying a liquid reagent to projections on a pre-made projection-recess board; after the classical photographic printing paper is pressed on the fogging operation area, making projections on the projection-recess board abut against the classical photographic printing paper for 10-30 seconds, then taking up quickly; (C) dropping the liquid reagent on the themeprominent reagent brushing area on the classical photographic printing paper by use of a dropper, and evenly brushing the liquid reagent with a brush along a single direction;
  - (D) resting the classical photographic printing paper for 2-15 minutes, and naturally drying or wind-drying;
  - (E) placing a photographic film above the classical photographic printing paper on which the liquid reagent is brushed, and irradiating for 2-15 minutes by an ultraviolet lamp;
  - (F) separating the classical photographic printing paper from the photographic film, and putting the separated classical photographic printing paper in a classical developing solution; and
  - (G) taking out the developed classical photographic printing paper and washing with water; cleaning the classical photographic printing paper in a classical cleaning solution to remove residual liquid reagent thereon; taking out the classical photographic printing paper, and washing again with clean water for 20 minutes.
- 2. The fogging type photographic printing method for classical photographic prints according to claim 1, characterized in that the projection-recess board is composed of a hard board and a water absorbing

- elastic sheet, wherein the water absorbing elastic sheet is glued on the hard board and has the same shape as the fogging operation area; the water absorbing elastic sheet positioned on the theme-prominent reagent brushing area is provided to be a hollowed-out shape.
- 3. The fogging type photographic printing method for classical photographic prints according to claim 2, characterized in that the water absorbing elastic sheet is prepared from water absorbing sponge, water absorbing cloth or water absorbing mat.
- 4. The fogging type photographic printing method for classical photographic prints according to claim 2, characterized in that thickness of the water absorbing elastic sheet is 3-5 mm.

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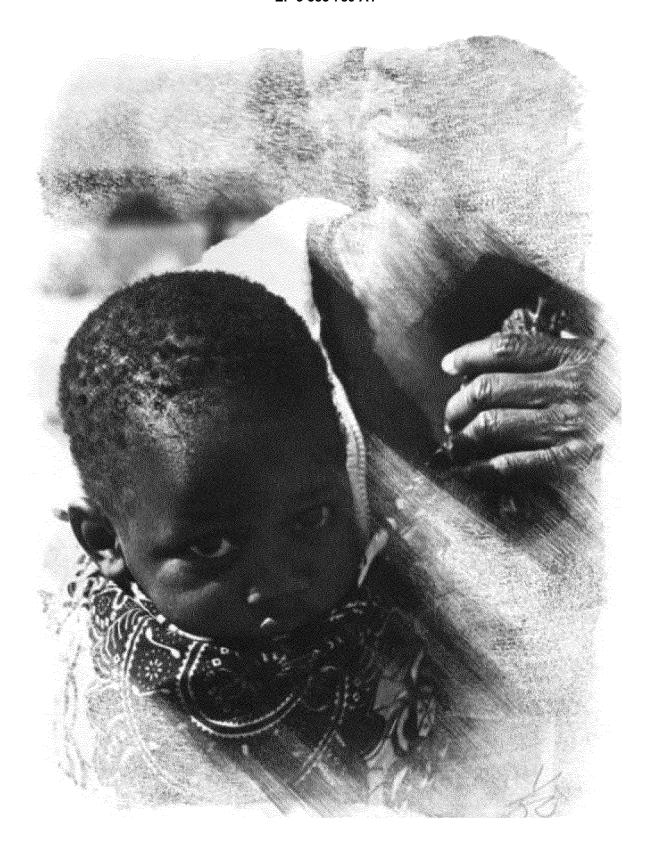


Figure 1

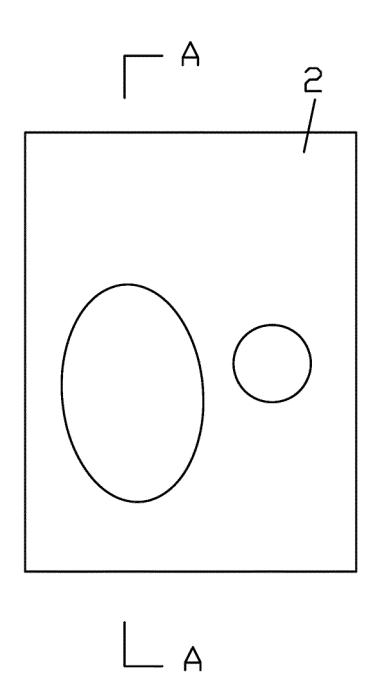


Figure 2

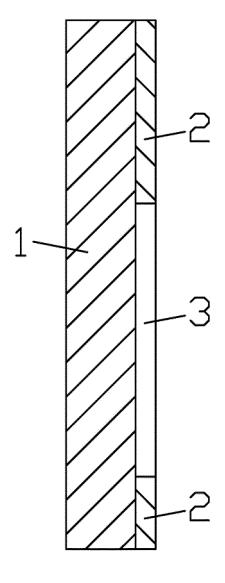


Figure 3

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2016/078925

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### A. CLASSIFICATION OF SUBJECT MATTER

G03D 3/00 (2006.01) i

According to International Patent Classification (IPC) or to both national classification and IPC

#### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) CNKI, CNPAT, WPI, EPODOC: camera shooting, negative film, photo+, imag+, camera?, film?, print+, classical+, develop+, platinum+

#### C. DOCUMENTS CONSIDERED TO BE RELEVANT

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Category*	Category* Citation of document, with indication, where appropriate, of the relevant passages	
X	TANG, Dongping et al., "Study on platinum palladium printing process in the digital era", JOURNAL OF BEIJING FILM ACADEMY, no. 4, 31 August 2013 (31.08.2013), ISSN: 1002-6142, pages 38-47	1-4
A	CN 1072025 A (SUN, Chongsen), 12 May 1993 (12.05.1993), the whole document	1-4
A	US 3607346 A (EASTMAN KODAK COMPANY), 21 September 1971 (21.09.1971), the whole document	1-4
A	JP 2004058378 A (KO, K.), 26 February 2004 (26.02.2004), the whole document	1-4
A	GB 1082012 A (KODAK LTD.), 06 September 1967 (06.09.1967), the whole document	1-4
A	GB 1022102 A (KODAK LTD.), 09 March 1966 (09.03.1966), the whole document	1-4

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▼ Further documents are listed in the continuation of Box C.

See patent family annex.

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Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

earlier application or patent but published on or after the

international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

document referring to an oral disclosure, use, exhibition or other means

document published prior to the international filing date but later than the priority date claimed

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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Date of the actual completion of the international search

11 July 2016 (11.07.2016) Name and mailing address of the ISA/CN: State Intellectual Property Office of the P. R. China No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088, China Facsimile No.: (86-10) 62019451

Date of mailing of the international search report 24 August 2016 (24.08.2016)

Authorized officer

HU, Tao Telephone No.: (86-10), 010-62413615

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Form PCT/ISA/210 (second sheet) (July 2009)

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2016/078925

5	C (Continua	C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT						
	Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.					
10	A	CA 484293 A (CANADIAN KODAK COMPANY), 24 June 1952 (24.06.1952), the whole document	1-4					
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Form PCT/ISA/210 (continuation of second sheet) (July 2009)

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

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International application No.

PCT/CN2016/078925

01 May 1996

Patent Documents referred publication Date Patent Family Publication Date Publication Date			Publication Date	Patent Family	Publication Date
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CN 1072025 A 12 May 1993 CN 1031735 C US 3607346 A 21 September 1971 None JP 2004058378 A 26 February 2004 None

GB 1082012 A 06 September 1967 DE 1286901 B 09 January 1969

GB 1022102 A 09 March 1966 None CA 484293 A 24 June 1952 None

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Form PCT/ISA/210 (patent family annex) (July 2009)