No. 716,939. Patented Dec. 30, 1902.

J. SCHMIDT.

PHOTOGRAPHING.

(Application filed Dec. 24, 1901.

(No Model.)

Fig. 1

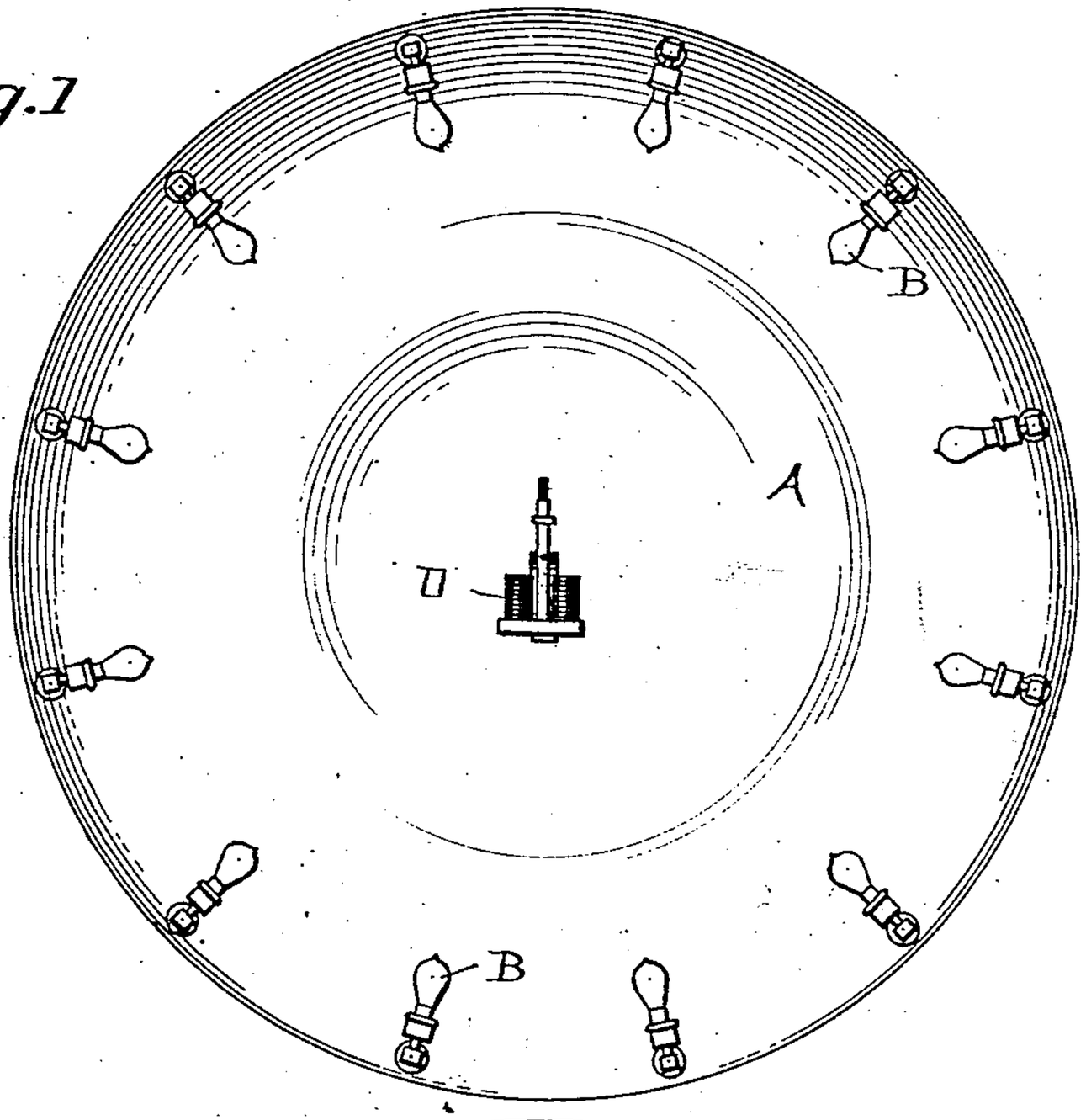
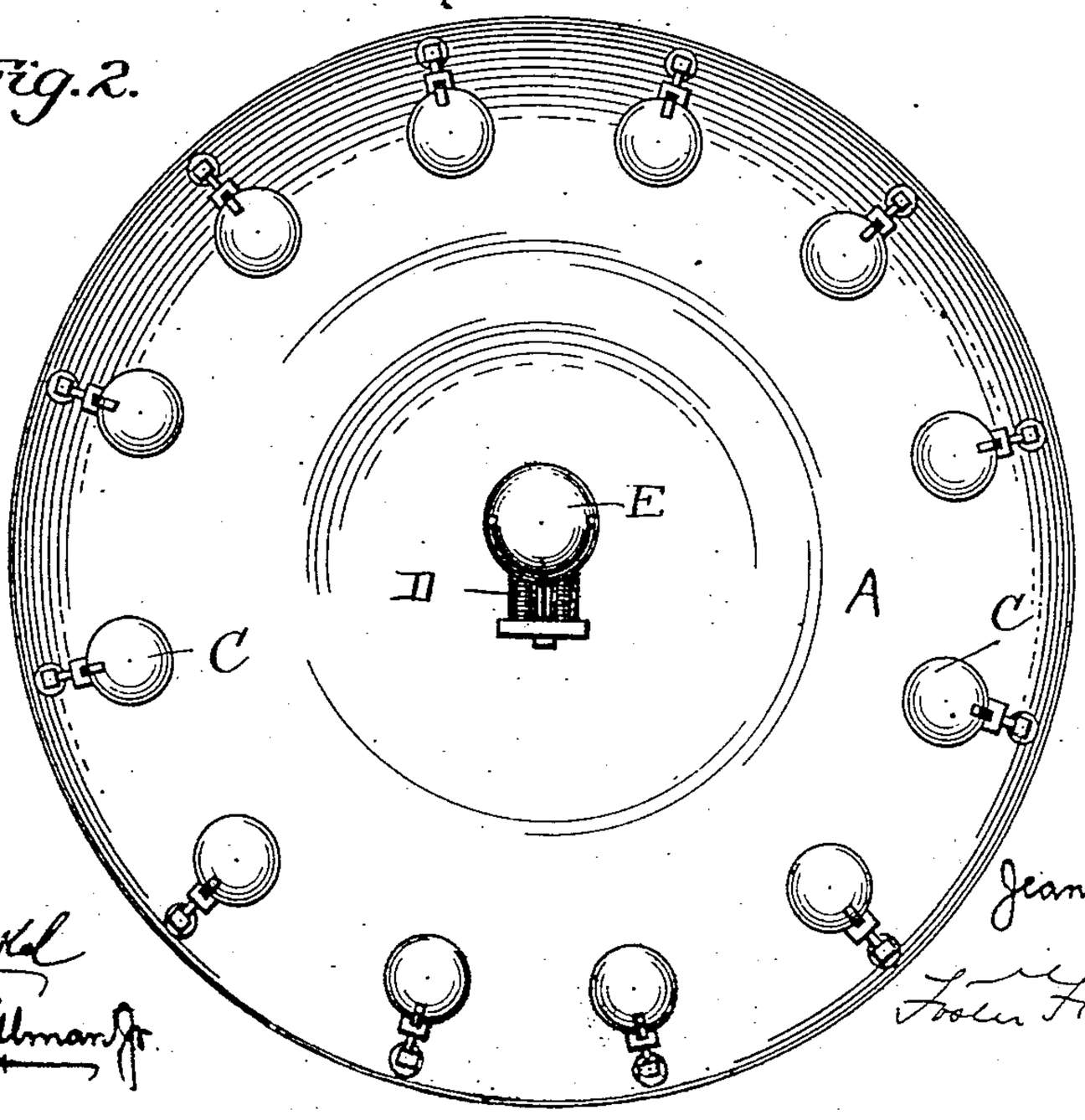


Fig. 2.



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UNITED STATES PATENT OFFICE.

JEAN SCHMIDT, OF FRANKFORT-ON-THE-MAIN, GERMANY.

PHOTOGRAPHING.

SPECIFICATION forming part of Letters Patent No. 716,939, dated December 30, 1902.

Application filed December 24, 1901. Serial No. 37,664. (No specimens.)

To all whom it may concern:

Be it known that I, JEAN SCHMIDT, a subject of the Emperor of Germany, and a resident of 3 Kaiserstrasse, Frankfort-on-the-Main, Germany, have invented certain new and useful Improvements in Photographing, of which the following is a specification.

This invention relates to a process of taking photographs, and has for its object to produce a photograph having very soft tones and to avoid undesirable shadows; and to these ends the process consists in exposing the object to be photographed successively to three lights of various strengths and actinic effects.

In carrying out the process the object to be photographed is exposed to a relatively feeble light of little or no actinic effect, which is preferably a reflected light from incandescent illuminated lamps, and in this light the object is posed so as to produce the desired effects. The object is then subjected to a powerful white light of considerable actinic effect, such as may be produced by overcharging incandescent lights, and the object is finally subjected to a strong instantaneous light of great actinic effect. These various effects thus successively produced result in producing a photograph without undesirable shadows and of very soft tones, and especially when these successive lights of various intensities are reflected from one reflector it is possible to so expose the object to the first light as to get the required or desired results of light and shadow and then by means of the successive stronger and more actinic lights to produce the effects desired.

In the accompanying drawing there is illustrated one means of carrying out the process constituting the invention.

For this purpose the device is so made that a shade or screen A, with reflective surface turned toward the person or object to be photographed, is provided with incandescent lamps B at or near the border thereof, which throw their light on the shade or screen and are separated from the object to be photographed by means of other small shades or screens C or by a common ring-shaped shade. Two contacts consisting of carbon or other conducting material are placed opposite each other in the center of the shade or screen. These contacts lie in a powerful electric circuit, which can also be conducted through the incandescent lamps arranged all around the shades or screens, and are so arranged that they can be separated from each other at any moment desired by means of an electromagnet D, and a strong interrupting-spark of extremely great actinic effect thus passes from one contact to the other. This contact apparatus is also separated from the object to be photographed by means of a shade or screen E in such a manner that it throws its light toward the latter and from there onto the object to be illuminated. The arrangement is connected with a circuit-changer or switch and is arranged in any known manner, so that, on the one hand, a current is passed through the incandescent lamps B, arranged around the contact apparatus, of an intensity sufficiently great for their ordinary working, and, on the other hand, also momentarily allows a strong current to pass into the circuit of said lamps and again out of it and then at the same time or at the next moment passes through the two contacts, which are simultaneously separated from each other by means of an electromagnet D, and then the interrupting-spark of actinic effect is produced. In this manner the object to be photographed is exposed to three lights of various strengths—that is, first to the light reflected by the shade or screen of the incandescent lamps supplied with their ordinary current. In this light the photographer is able to place the object to be photographed in the desired light, which he can do very easily and with the greatest accuracy by moving the shade, as the beams, which later on have an actinic effect, fall upon the object to be illuminated exactly in the same direction as those which only illuminate. When the object has thus been placed in the correct position and light, a powerful current is passed through the incandescent lamps by means of the circuit-changer. These lamps are overcharged, and consequently now throw a white light of actinic effect toward the shade or screen, which light, the objective now being open, introduces the photograph, which at the following moment is completed through the immediate separation of the contacts and through the interrupting-spark pro-

duced thereby. Through the increasing effect of the light described the photograph receives very soft tones, &c., and by means of this method persons are not, as hitherto, alarmed at the moment of taking the photograph through the sudden appearance of the flash-light. An electromagnet can also be connected with the circuit-changer or switch, which magnet shortly before the powerful current is passed through the incandescent lamps and the contact apparatus opens the shutter of the camera and closes it immediately after the illumination.

The shades or screens C and E, which separate the light of the incandescent lamps and interrupting-spark from the object to be photographed, are transparent, so that they do not throw any undesirable shadow.

I claim—

1. In the process of taking photographs, exposing the object to be photographed successively to three lights of various strengths and actinic effects.

2. In the process of taking photographs, exposing the object to be photographed successively to three reflected artificial lights of increasing strength and actinic effects.

3. In the process of taking photographs, exposing the object to be photographed to a reflected artificial light of no effective actinic strength, then to a powerful white light of relatively high actinic effect, and finally to a strong instantaneous light of great actinic effect.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JEAN SCHMIDT.

Witnesses:
EMMA HOFMANN,
MICHAEL VOLK.