

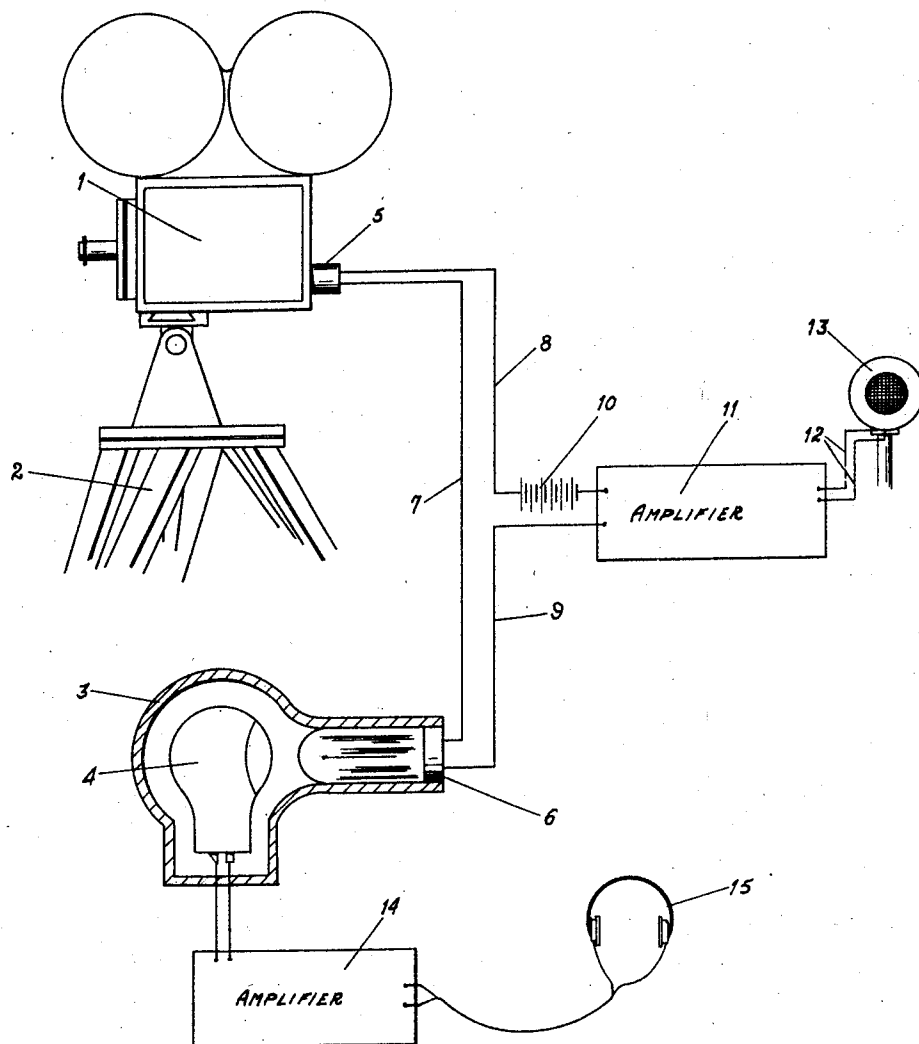
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SOUND RECORDING AND REPRODUCING APPARATUS

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## UNITED STATES PATENT OFFICE

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## SOUND RECORDING AND REPRODUCING APPARATUS

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This invention relates to improvements in sound recording and reproducing apparatus, the principal object of the invention being to provide an apparatus in which are combined both recording and reproducing instrumentalities actuated from a sound source.

Another object lies in the provision of a listening in means for sound recording apparatus whereby an operator can judge as to the volume and quality of the sound being recorded.

A further object lies in the provision of two recording lamps in a sound recording circuit, one of which records the sound on film and the other of which acts in the dual capacity of a "listening in" lamp and ballast or resistance for the first mentioned lamp, preventing overloading thereof.

Other objects and advantages of the invention will appear as the description proceeds.

The drawing accompanying this specification is a diagrammatic, partly sectional and broken away side view of an apparatus embodying the features of the present invention.

It will be understood that though I have illustrated and will describe the invention in connection with a photographic sound recorder, I do not limit myself thereto, as obviously the invention is equally adaptable to other types of sound recording devices.

Referring to the drawing, 1 designates a sound recording camera of the usual type, mounted on a tripod 2, and 3 designates an independent housing in which is disposed a photo-electric cell 4. Mounted in the camera 1 is a photographic sound recording lamp 5 of usual or desired type, and in the housing 3 of the photo-electric cell is mounted a lamp 6, said lamps being connected by wires 7, 8 and 9 in series with each other and with a battery 10 and the output of an amplifier 11, the input of which amplifier is connected by wires 12 with a microphone 13 or other sound source or sources. The output of the photo-electric cell 4 is connected with the input of an amplifier 14, the output of which is connected with a pair of head phones 15, or if desired of course, a loud speaker.

From the foregoing it will be seen that sounds received by the microphone will be amplified and transmitted to both lamps 5 and 6 thereby varying the intensity of said lamps equally, the variations of lamp 5 being recorded on the film in the camera in the usual manner while the variations of lamp 6 are received by the photo-electric cell 4 and thereby translated into electrical impulses, which are amplified by the amplifier 14 and rendered audible at the head phones 15. The invention thus provides an apparatus in which are combined both recording and reproducing instrumentalities by means of which an operator may "listen in" while the sound record is being made and consequently is in a position to check up on the recording apparatus and detect imperfections therein at a stage when it would be a comparatively easy matter to correct such imperfections.

I claim:—

1. The combination of a sound recording apparatus including a lamp, a sound reproducing apparatus including a lamp, and a sound source having translating and amplifying means common to both of said lamps.

2. The combination of a sound recording apparatus, a sound reproducing apparatus, a recording lamp in said recording apparatus, a lamp in said reproducing apparatus, and a sound source and translating means connected in series with both of said lamps.

3. The combination of a sound recording camera, a recording lamp disposed in said camera, a closed housing; a photoelectric cell in said housing, a lamp in said housing, a sound source and translating means connected in series with both of said lamps, and means connected with said photo electric cell for amplifying and rendering audible the electrical impulses delivered by the cell.

4. In combination, a sound recording means including a lamp, a sound reproducing means including a lamp, a sound source and translating means, means for amplifying the translated sound from said source, and operative connections between said amplifying means and both said lamps.

In testimony whereof, I affix my signature.

FREEMAN H. OWENS.