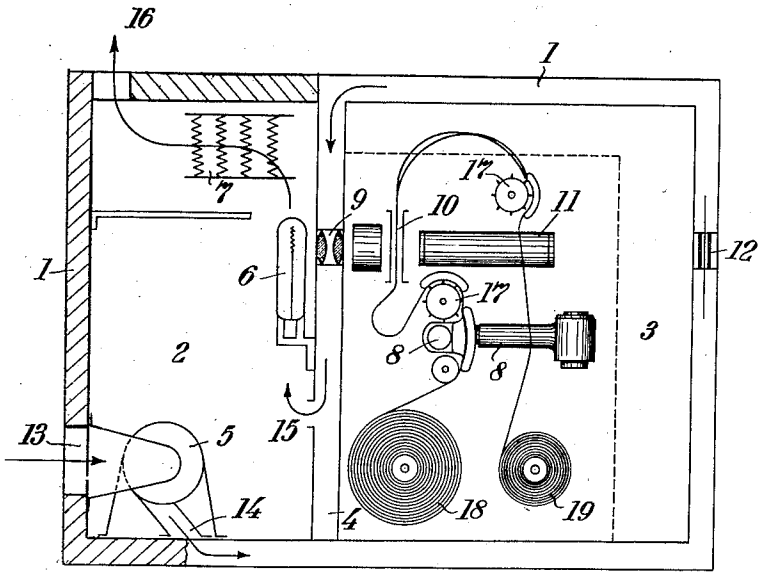
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SOUND FILM EQUIPMENT

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Inventors:
Kurt Riess,
Otto Liebchen,

By Attorneys
Potter, Pierce & Scheffler.

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SOUND FILM EQUIPMENT

Kurt Riess, Wolfen, near Bitterfeld, and Otto Liebchen, Dessau in Anhalt, Germany, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany

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2 Claims. (Cl. 88—16.2)

Our present invention relates to a sound film equipment.

One of its objects is an improved sound film equipment which is efficient in structure.

In the projection of cinematographic pictures, particularly those which at the same time serve for reproducing sound records, difficulty is experienced in dissipating the heat which is produced, particularly by the projection lamp and the resistance in series therewith, as all the equipment, in order to reduce noise, must be enclosed in as air-tight a housing as possible.

According to the invention this drawback can be overcome to a very great extent if the fan which is necessary for circulating air over the parts that give off heat and which is the main source of noise—together with the main sources of heat (e. g. lamp, resistance)—is separated from the other parts of the apparatus. Then if the housing enclosing the actual producing apparatus is built with double walls and air is circulated between the walls of the housing, the dimensions of the surface of the housing and the speed of the air being suitably chosen, this arrangement suffices for cooling the other parts of the apparatus. Moreover, this involves the great advantage that the air is not constrained to flow through the driving parts of the projecting apparatus so that dust from the air is not deposited there unnecessarily.

The accompanying drawing shows diagrammatically by way of example a form of construction according to the invention.

The double-walled case 1 is subdivided into the two compartments 2 and 3 by the wall 4 which is also double. In the compartment 2 there is provided the fan 5 which is driven in known manner, the projection light source 6, the resistance 7 and any other necessary parts which give off great heat. In the compartment 3 are located the other parts of a sound film reproduction apparatus, for instance, the gate 10, the optical system 11 for projecting the pictures, the sprocket drums 17, the sound reproducing means 8 and the winding off reel 19 and the winding on reel 18.

The ray of projection light passes from the source of light 6 through the condenser 9, the film guide 10, the optical system 11, and the double window 12 to the outside. The air is sucked through an aperture 13 by the fan 5, forced through the aperture 14 between the two walls of the housing, flows round the space 3, cools the condenser 9, and passes through the opening 15 into the space 2. Here it flows round the source of light 6 and the resistance 7 and leaves the case by the opening 16. If the smooth surface of the housing 3 is not sufficient for the dissipation of the heat produced, it may be provided with cooling fins. In the space 2 there may be fitted in known manner a dust separating device through which the air on its way from the opening 13 is sucked or pressed and which is arranged in such a manner that a rapid cleaning or renewal is possible. The space between the double walls of the part 2 of the housing, where it does not serve as air way, may be filled up with sound and heat insulating material.

What we claim is:

1. A self-contained sound film equipment which comprises in combination, a casing consisting of a double walled first part and a second part, means for guiding a film along a normal path, an optical system for projecting pictures, and means for reproducing sound in said double walled first part, a fan connected with said double walled casing and located in said second part for circulating air through the space between the two walls of said first part, an opening in the outer of said two walls of said first part communicating with said second part, a source of light and resistances in said second part.

2. A self-contained sound film equipment which comprises in combination, a casing consisting of a double walled first part and a second part, means for guiding a film along a normal path, an optical system for projecting pictures, and means for reproducing sound in said double walled first part, a fan connected with said double walled casing and located in said second part for circulating air through the space between the two walls of said first part, an opening in the outer of said two walls of said first part communicating with said second part, a source of light and resistances in said second part, a condenser arranged between said two walls above said opening in the path of the light rays for projecting the pictures so that it is cooled by the circulating air.

KURT RIESS.
OTTO LIEBCHEN.