

## ENGINEERING

# Better Sound for Movies

Is possible through loudspeaker systems that are more efficient, give better performance and eliminate rear radiation resulting in higher overall quality.

► NEW and improved sound for motion picture theaters is possible through loudspeaker systems that are more efficient, give better performance, and eliminate rear radiation from the speaker resulting in higher overall quality, J. B. Lansing and K. K. Hilliard, both of Altec Lansing Company, reported at the meeting of the Society of Motion Picture Engineers in Hollywood.

The loud speakers described employ new metal diaphragms and voice coils that are superior to those used in the past, and new Alnico Type 5 permanent magnet with magnetic circuits of very low leakage. The diaphragm and voice coil assembly is mounted in such a manner that it can be removed for replacement purposes without discharging the permanent magnet field, the authors stated.

Mr. Lansing also revealed details of a new duplex public address system for theaters that combines a low-frequency unit and a high-frequency unit into a single speaker with a total combined frequency range of from 40 to 15,000 cycles over a wide angle. The efficiency of this unit in converting electrical power into acoustic energy is very high and the unit is capable of producing high-quality sound at high power, he declared.

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## Simpler Film Filing

► AMATEUR movie fans who have so many reels of film that the location of any one particular scene in a film presents a special problem may get a few good ideas from Carl M. Effinger, of 20th Century Fox Film Corporation, who reported to the meeting a new filing and cataloging system for motion picture films. The system, as described, replaces the card index system and is streamlined, simplified, and visual.

The secret of the system is a loose-leaf catalog. Each loose-leaf page is divided into seven sections with a hole, the shape and size of one frame of motion picture film, cut into the page at each section. It is a good deal like a snapshot album, with seven single frames and a description of each on a single page. Since amateurs use 16-millimeter film they could

probably get more frames on one page than the movie studios, which use larger 35-millimeter film.

Only similar scenes appear on any given page, such as ships, excursion day, trains, streets, and so on. At the top of each page is an exact breakdown summary of the shots on the particular page, so that you can tell at a glance where the shots in a particular category are located.

Each item is keyed to a particular spool of film, so that the librarian can instantly locate the desired sequence. One of the most desirable features of the film catalog system is its compactness. Stored in two medium-size safes, 36 volumes catalog completely over 22,000,000 feet of film, he pointed out.

This same method was to have been adopted by the U. S. Government in cataloging war films in the United States War Film Index Library, Mr. Effinger stated.

Adapted to amateur use, it would make it possible for the movie fan to keep a complete record of all the pictures he has taken, and to locate quickly any desired shot, without having to run through hundreds of feet of film. Not only would this be helpful in editing his own home movies, but the film catalog makes an excellent album for recording a picture-taking career.

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## PUBLIC HEALTH

## Predict TB Death Rate Will Be Halved in 1960

► ONLY about 20 people in every 100,000 in the United States will die from tuberculosis in 1960 if the present rate of improvement continues, statisticians of the Metropolitan Life Insurance Company estimate.

At present about 40 in every 100,000 die from tuberculosis, while in 1921 about 100 per 100,000 died from this disease which caused the death of almost 200 in every 100,000 at the beginning of the century, according to the U. S. Bureau of the Census.

For more than four decades the mortality from tuberculosis in our country



**FILING FILM**—This new system makes it easier to locate any particular scene in a film. A loose-leaf catalog is used, with each page divided into seven sections. A hole, the size and shape of one frame of motion picture film is cut into the page at each section.

has been sweeping downward without interruption. The current death rate from the disease is only about one-fifth what it was in 1900.

From 1921 through 1943 the death rate decreased on an average by 4% annually. This means that the absolute annual decline was less each year, but it should be remembered that as room for improvement diminishes, it becomes increasingly difficult to make further gains.

We may expect a death rate of only about 30 persons each 100,000 in 1950 if the decline in deaths from this cause continues at the same rate as in the period from 1921 to 1943, the company statisticians state. They believe, however, that the actual figures may be even lower than those indicated by the forecast.

An important step toward combatting this disease was the establishment, last July, of the Tuberculosis Control Division in the U. S. Public Health Service, whose function is to develop, on a nationwide scale, more effective measures for the prevention, treatment and control of the disease.

The new program will give added impetus to the widespread use of X-ray mobile units for mass surveys, an incidental advantage of which will probably be the discovery of other diseases.

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