The Advent of the Movie-tone

Now Making its Appearance in New Zealand

TO synchronise sound with the pictures has been the aim and the ambition of engineers and inventors ever since moving pictures became popular. There have been numerous attempts at its accomplishment, notably the attempt to work a gramophone in conjunction with the picture. By this method, it was impossible to co-ordinate voice and movement perfectly, and the system had to be discarded.

About nineteen years ago a student of the Yale University, America, became convinced that sound could be photographed, and this idea has been worked upon and at last developed, and its development has been made possible only by radio. Radiovision, yet in its infancy, has meant much to the development of the "movie-tone," as the process combining sound and picture has been called. Attempts to make television possible have resulted in the evolution of a radio cell akin to the valve, and it is through this that the movie-tone is possible.

History of the Movie-tone.

THE history of the development of this new science has been slow, but interesting. The invention of the aeo light bulb which records all the sounds near a camera with flashes on the side of the film has been the ultimate result of researches. A little over two years ago this invention was placed before the owner of one of the leading picture producers (Fox Films Corporation), who, seeing the possibilities, financed further experiments.

Production work began in New York in 1926, in the studios of the corporation. One of the first subjects was Raquel Meller, the Spanish danseuse. This was an instantaneous attraction, and proved that movie-tone would indeed be popular. On March 25, the same year, the first complete programme embodying the new principle was shown in connection with the New York showing of the "Seventh Heaven." The sound and sight pictures included Lindbergh's take-off of his Paris flight and the drilling of West Point cadets. In October, 1927, the first all movie-tone news reel was shown at the Roxy Theatre, and consisted of the following subjects: "Niagara Falls," "The Romance of the Iron Horse," "Yale Bowl Festivities," and "West Comes East." By December of that year, the first issue of movie-tone news had been released.

In June, 1928, the first all-dialogue comedy, "The Family Picnic," was shown at the Globe Theatre in conjunction with the "Red Dance" synchronised feature. By October 6 two movie-tone news subjects were being released every week.

Production of Colour Films.

TO this same corporation goes the credit of the production of the first coloured film with sound accompaniment. The corporation was able to do this by the aid of techni-colour, and this has been recently demonstrated by a violin selection, in colour, by Marie Conway. The reproductions were perfect. To-day the corporation is issuing weekly a news reel to sound accompaniment, which has been released in Australia recently, and has for the first time been released in New Zealand this week.

The Recording of Sounds.

IN these movie-tones, the sound is recorded photographically on motion picture film, in a narrow space adjacent to the pictures. Perfect synchronisation between the picture action and the corresponding sound is thus assured.

The sound vibrations are received in a high quality microphone. The varying currents thereby produced in the microphone are increased by amplification and passed through a special glow discharge tube, called an aeo (pronounced A-E-O) light. The light from the aeo tube shines through a narrow slit, and is brought to focus by lenses upon the film as a narrow crosswise line. When the film is developed, the sound record appears as a series of alternate light and dark lines of varied spacing and density.

Reproduction From Film.

THE film is run through a standard moving-picture projector fitted with a sound attachment. In this attachment a beam of light shines through the sound record, and emerges varied in intensity and frequently due to the sound lines.

The varying light falls upon a light sensitive device known as a photo-electric cell, and causes electrical variations corresponding to the original sound variations. These are amplified and conducted to powerful loudspeakers directly behind the moving-picture screen. The sound is thus in perfect synchronisation with the picture appearing on the screen.

Release in New Zealand.

THE invention has proved very valuable, and as it is liable to revolutionise picture production, it is no longer retained solely by its original producers, and in the near future, it is safe to assume that pictures combining both sight and sound will be an everyday occurrence.

Already, several theatres in New Zealand are installing movie-tone apparatus. In essential, the auxiliary device is an apparatus consisting of a photo electric cell that is capable of translating the varying intensity of light at the side of the film into sounds. These are passed through a power amplifier exactly similar to those used for public addresses, and in powerful radio sets. A Wellington theatre has its equipment well in hand, and within the next week the first movie-tone is being featured there.

The novelty of the situation has an appeal in itself. Imagine the voice of George Bernard Shaw, the foremost of contemporary playwrights, speaking to an audience in Wellington, while he is yet thousands of miles away, and at the same time visible to his audience. This is the accomplishment of movie-tones, and during the next week this will actually be realised.

One usually associates talking pictures with something "tinny and hard," but this is by no means the case, the reproduction being full, loud, clear, and natural.

Installation in England.

ALTHOUGH the releases now showing in New Zealand are American, the production of these is by no means limited to that country.

In England, circuit cinema owners are already considering the cost of the equipment installation for the American inventions, so certain are they that they must be ready to provide their audiences with this latest form of theatre entertainment. There are still in that country, three or four sound-film processes, which, either by equipment already installed in cinemas or by laboratory development on the ground, have some call on foreign systems.

The process of the British Accoustic (Ltd.) is based on an invention of two Danish engineers, and is commonly referred to as the "Poulsen system." This process differs from the American "Movietone" in that the sound is recorded on an entirely separate, yet synchronised, film. Thus, by a synchronisation attachment, both photographic and sound records are taken simultaneously. By this means, the cameras are synchronous and the sound-film is projected by means of synchronously-geared projectors.

A novelty in this direction, its owners claim, is that the sound film can be projected separately if desired. The film on which the sound is recorded is of standard size. In addition, once the film and its sound accomplishment have been made, cutting becomes a simple matter by reason of the use of special double rewinders, enabling the synchronisation to be kept perfect.

"Phototone" is the property of a leading gramophone company, which is capitalised at about £300,000. This company plans to inaugurate a complete service of sound films, irrespective of the origin of the picture concerned. The process, based on an English invention, synchronises the gramophone with the film, and can, therefore, be applied to any film accompaniment recorded on discs. The "Phonofilm" is a disc-recording device which is being exploited by the De Forest British Phonofilms Company, a British firm operated with British capital and British technicians. This company has studios at Wembley, England, and claims to be turning out 3000 feet of film weekly. In addition, it claims to own 28 British sealed patents, with 16 more pending, covering its process, and to control 40 theatres throughout the country, which are showing "Phonofilm" products. The initial cost of the outfit is said to be about one-fifth that of its nearest rival. Installation costs the exhibitor nothing; he pays for the film supply only. The company says it has no tie-up with any British producing organisation. It has already completed and equipped two vans for film "shooting."

German Plans for Sound Films.

THE German initiative in exploiting the sound film rests with Heinrich Bruckmann, who is now reported to be forming a syndicate for the production of films by the Danish "Poulsen system," the British rights of which belong to the Gaumont-British Company. The German producers see in the talking motion picture film a means of education, enabling even the students of smallest universities to attend conferences of the greatest authorities of the world.

London Hears First "Talkies."

LATE in September, London, England, witnessed its first talking picture at the Picadilly Theatre, and the show went over big with the auidience. Equipment for this kind of picture in houses in England is now well on the

GENERAL MEETING.

A GENERAL MEETING of the Amateur Radio Society of Wellington, will be held on TUESDAY, MARCH 12, in the Cambridge Terrace Congregational Church Hall, at 7.45 p.m.

A Lecture will be delivered by Mr. H. Hardcastle, on "Some Electrical Units" All listeners are extended a hearty invitation to be present.

A. G. H. LAWS,
Hon. Secretary.