In another column is published the Interim Report of the Committee on the Causes and Prevention of Blindness regarding the alleged dangerous lights used in kinema studios. Readers will remember that a question was asked upon the subject in the House of Commons and that it was referred by the Minister of Health to the Committee in question. The Committee's report is most reassuring. It was shown by witnesses that the inflammation of the eyes was merely transitory, occurring within a few hours of leaving the studio, and speedily subsiding. No evidence was obtained that the inflammation was ever permanent or serious. As regards this country practically all complaints of which the Committee have heard date from the last three months of 1920, and coincided with the introduction and injudicious use of certain very powerful arc lamps of the search-light type, largely imported from America. The evidence went to show that injuries to the eyes have occurred in kinema studios from the use of unscreened arc lights, that no injury has occurred from the use of adequately screened arc lamps, and finally that the use of unscreened arc lights in these studios is not necessary.

The Committee thinks that the eye trouble is due to the unimpeded access of ultra-violet rays to the eyes. The Committee is definitely of the opinion that the employment of suitably enclosed and screened arc lights is not likely to be dangerous to the eyes apart from culpable temerity on the part of the artistes.
injuries to the eyes from artists and others engaged in film production, and from illuminating engineers, film producers, and photographers as to the types of lamp used in kinema studios, and the manner of their usage. The Committee also visited a large studio and witnessed the actual production of films.

Sir Anderson Critchett, Bt., honorary ophthalmic surgeon to the Actors' Association, gave evidence as to five patients, one actor and four actresses, who had recently consulted him on account of eye trouble following exposure to the intense lights used in studios. The cases reported all occurred in October and November, 1920. The symptoms described were those of conjunctival inflammation, causing pain and photophobia, and in one of the cases there was stated to be some degree of retinitis; in all, the injury was transient, and in the most severe of them recovery was complete by February, 1921.

Mr. Alfred Lugg, Secretary to the Actors' Association, gave evidence to the effect that transient attacks of pain and inflammation of the eyes have of late occurred frequently among actors and actresses engaged in film production, and that a number of artistes suffer from bloodshot eyes attributed to the strong lights used. He stated that transient eye injuries from this cause are well known among film actors in America. Other witnesses stated that the attacks of inflammation do not occur immediately, but within a few hours after leaving the studio, the sufferer awaking from sleep the same night with pain and smarting in the eye, lacrimation, photophobia, and a feeling as if the eyes were full of sand. These symptoms yield to simple remedies, and last, at most, a few days.

We regard it as established that, as a result of their occupation, injuries to the eyes of a transient, and in most cases trivial nature, have recently occurred among kinematograph artistes. We have had no evidence that serious or permanent injuries have arisen from this cause.

As regards this country, practically all complaints of which we have heard date from the last three months of 1920, and such injuries as have occurred coincide with the introduction and injudicious use of certain very powerful arc lamps of the searchlight type, largely imported from America.

As to the types of lamp used in kinema studios, we have taken the evidence of Mr. Leon Gaster, Honorary Secretary of the Illuminating Engineering Society; Mr. Ruthven Murray, M.I.C.E., who has made a special study of the supply of energy to and lighting of kinema studios; Mr. Maurice Elvey, chief producer, and Mr. Paul Burger, chief photographer of Stoll Picture Productions, Limited; a deputation from the Incorporated Association of Kinematograph Manufacturers, Limited; Mr. L. V. Cargill, F.R.C.S., who has made a report to Stoll Picture Productions,
Limited, on the alleged danger from the lamps used; and Mr. Lamplough, director of research for Messrs. Chance Brothers, Limited.

The evidence of these witnesses is to the effect that—

1. Injuries to the eyes have occurred in kinema studios from the use of unscreened* arc lights.
2. No injuries have occurred from the use of adequately screened arc or mercurial vapour lamps.
3. The use of unscreened arc lights in these studios is not necessary.

On this evidence we offer the following observations:

1. and 2. Before the use of these exceptionally powerful unscreened arc lights for film production in this country, cases of injuries to the eyes from electric lights in studios were, so far as we have been able to learn, unknown; they certainly must have been very rare. Many artistes, producers, photographers and electric lighting operatives, have worked for several years in British kinema studios, without ever experiencing the least inconvenience to their eyes.

About May, 1920, new patterns of arc lamps of the searchlight type were imported from America, and have since been used in several British studios. In some instances during the latter months of 1920, the diffusing glass screens with which such lamps are ordinarily provided, were not used; such injuries as have been reported to us occurred in these circumstances.

Unscreened arc lamps are, in our opinion, liable to cause injury by reason of the unimpeded access of ultra-violet rays to the eyes. The danger is increased according to the proximity of the eyes to the lights and to the duration of the exposure.

In one studio visited by us goggles were provided for the artistes as a form of protection, but they did not appear to be generally worn, nor, indeed, did their use during the actual production of films appear to be practicable.

In certain types of arc lamp commonly used in kinema studios, the cores of the carbons emit irritating vapours composed of suspended particles and products of combustion. Danger might arise from this source, but it is unlikely to be serious unless the lamps were very close to the artistes.

It is possible that danger might arise from the artistes looking directly at the lights, even if these were properly screened, owing to the intensity of the luminous rays. Permanent damage to sight has been caused, for example, by viewing eclipses of the sun with the naked or inadequately protected eyes. There is no evidence that any such injury has been caused in kinema studios, and we are

*Note.—We use the term "Screen" to indicate the glass which encloses or covers the lamp and which cuts off the dangerous part of the ultra-violet radiation.
of opinion that suitably enclosed and screened arc lights are not likely to be dangerous apart from culpable temerity on the part of the artistes.

(3) The evidence of electric light experts and photographers is to the effect that not only is the use of unscreened arc lights unnecessary for the purpose of film production, but that better photographic results can be obtained when filters are used. The screens ordinarily used are of spun glass, which diminishes the glare, and cuts off the greater part of the dangerous ultra-violet rays.

The Incorporated Association of Kinematograph Manufacturers, Ltd., an association which comprises practically all the film-producing firms in this country, is so much impressed by the evidence of danger to the eyes from unscreened arc lights, that it has given its assurance to the Minister of Health that—

"... In no case will any member of the Incorporated Association of Kinematograph Manufacturers, Ltd., from now onwards, and as has been the case for some weeks past, permit "any open arc lights to be used in their studios for general "illumination without glass filters, and the Association is willing to "be responsible for its members in that respect, undertaking to "notify to the Ministry any studio among its members unwilling to "abide by this condition."

In consideration of the fact that the producers and photographic experts have definitely stated in evidence that such unscreened arc lights are not necessary for film production, and that the Incorporated Association of Kinematograph Manufacturers, Ltd., have given the above quoted assurance, we are of opinion that their undertaking should be accepted, and that further action is unnecessary for the present.

At the same time we realise that the industry is in a state of development. Research is required to determine what types of lamp are best adapted to the purposes of film production. Since new developments may mean new dangers to the artistes, we strongly recommend that this aspect should be made the subject of special investigation, and we are glad to learn from Mr. Leon Gaster that the Illuminating Engineering Society contemplate the formation of a Joint Committee, to include representatives of the kinema industry, lighting experts, ophthalmologists and others interested, for the purpose of studying the whole question.

(Signed on behalf of the Committee),

GEO. H. ROBERTS, Chairman.

REGINALD FARRAR, P. N. R. BUTCHER, Secretaries.

Dated 27th May, 1921.