On the Altar of Sound

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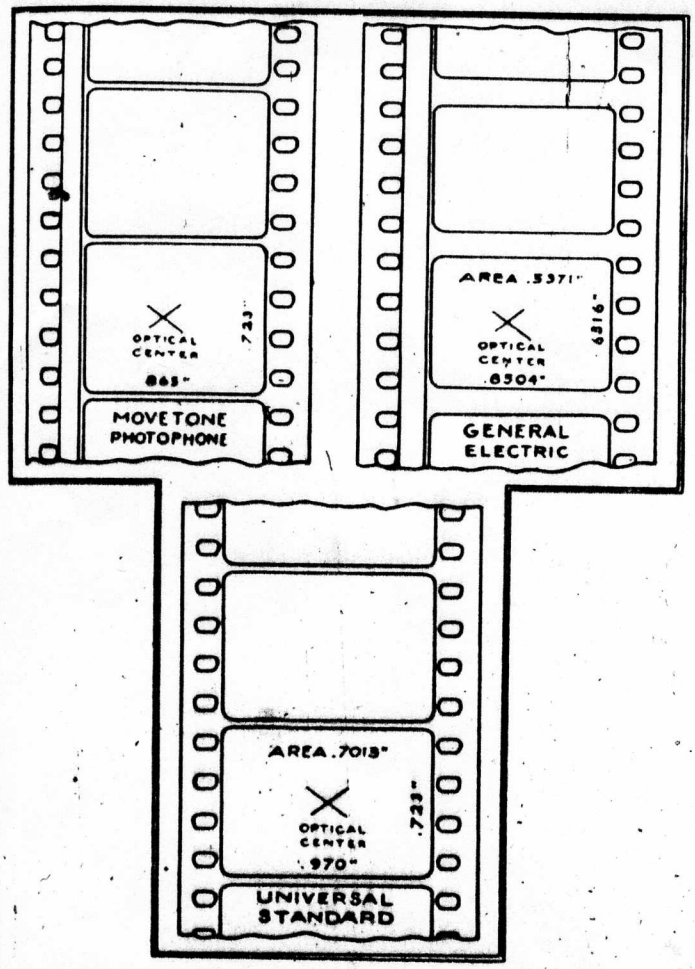
It must be evident to the most casual observer upon looking at the present crop of motion pictures, especially those employing the photographic method of recording, that cinematography is being sacrificed on the altar of sound.

Apparently the "talk" in "talkie" is being counted upon to overwhelm our sense of hearing with fascinating sounds to such an extent as to leave all powers of perception relatively numb to visual stimuli, good or bad.

A story comes to mind of a young man who was assigned to grease the wheels of a wagon. Later it was



found that only the front wheels had been greased. When questioned, the young man replied that he was of the opinion that as long as the front wheels went around the rear wheels of course had to follow.

In this new sound picture situation it seems that cinematography is going through the motions of being a rear wheel in need of grease. If the wheels of sound revolve perforce the wheels of cinematography must follow.

It can hardly be expected that the electrical sound engineers, immersed as they are in their own problems, totally foreign to the practice of cinematography as an art and as a factor in the economy of picture production, would always consider fully in the development of their devices the needs of the cinematographer.

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When the process of sound reproduction operates as an independent unit, such as it does in the various phonographic methods, cinematography is not greatly concerned. Certain limitations are imposed it is true, such as the use of sound-proof booths for the cameras and the necessity of using incandescent light, but cinematography has nothing to lose in acquiring a mazda lamp technique or in being forced to find a way to make the cameras silent in operation. But when sound reproduction, as embodied in the various photographic methods, enters vitally into the cinematographic process and degrades it, the cinematographer can no longer afford to remain quiescent.

When such is the state—as we have it with us now—it becomes necessary that the problems of cinematography be duly considered and acted upon while the sound process is being developed, standardized and adapted to the needs of motion picture work.

Let us examine a few of the factors of sound production that are now at work to undermine the cinematographic structure.

The camera in many cases has been saddled with a great deal of accessory machinery, the hindrance of which only a cinematographer can appreciate. Simplicity, accessibility and mobility of camera equipment is one of the main factors on which the cinematographer depends for efficient and economical performance of his duties.

Any method that burdens the camera with more than a synchronous motor is not desirable.

Anybody who has ever sat near the front in a large theatre will readily appreciate this factor.

Much harm has been done by forcing the cinematographer to give up picture space to make room for a sound track.

It has imposed upon the industry the new picture size of about 18x24 millimeters.

Based solely on its own merits this size has no valid claim to warrant its adoption as a new standard.

This shape has been foisted upon the cinematographer simply to meet the exigencies of sound production.

This shape is so nearly square as to seriously limit the scope of this proportion artistically and furthermore it is not centered on the optical axis of the camera lens.

Is this a tribute to the artistic soul of the cinematographer that he is capable of indifference to such an obvious and irritating lack of precision?

Another shape of approximately 16x21 millimeters, which was at first adopted in the variable area system of General Electric, while presenting an acceptable proportion is smaller in area by nearly 25% which increases materially the problem of grain due to the greater magnification necessary when projected on the screen.

Anybody who has ever sat near the front in a large theater will readily appreciate this factor.

When the cinematographer is not only forced to give up space on the positive print, but also must share the exposure on the negative, the situation is bad indeed for it entails a degree of loss in the control of his medium beginning on the set with the operation of the camera and carried on through into the laboratory.

Despite assurances from the scientists of sound that standard and unvarying conditions of development (necessary for the sake of the sound record) will automatically give the picture record the best possible treatment many cinematographers will insist that deviation from standard conditions of exposure and development under certain conditions is absolutely necessary in order to achieve the effect they desire. Fortunately for the cinematographer and for the sound technicians, too, probably, the practice of combining the sound and picture record on the same negative is losing ground.

In the final printing of the picture and sound records for release the film has to be run through the printing

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machines twice, once to expose the picture record and again to expose the sound record. In order to overcome this economic waste the practice has grown up of making a "dupe" negative in which the sound track is properly adjusted to the picture in regard to both exposure and synchronization. Such a negative greatly simplifies the printing operation and reduces the cost but the result, photographically, leaves much to be desired. This is especially noticeable when a comparison is made with other scenes in the same picture that have no sound accompaniment.

Thus all roads lead to Rome. In this case we are forced to the conclusion that the sound record does not belong on the motion picture film—that a grave error of policy has been made in so joining the two. Let us face this issue squarely. Photographic reproducion of sound has a manifest destiny but not as a parasite on the motion picture record. It must put down roots of its own and the tap root must be a cheap, simple independent vehicle for its record.

Under present conditions a separate sound record occupies about one-eighth of the available area on the film. To use such a record separately in the theatres would be obviously costly and wasteful. In some cases the photographic record is transferred to a phonograph disc for release. This, however, is still begging the questions, because, while it gives cinematography necessary consideration, it forfeits the possibilities of the photographic method of sound reproduction in regard to quality for the sake of the cheapness of the phonograph record.

The answer then is to transfer the sound record as obtained independently on motion picture film not to a phonograph disc, nor to the picture film, but to a separate photographic vehicle at low cost.

It is conceivable that such a record could be placed either spirally on standard film and thus make use of the full width of the film or as a single track on very narrow film or even spirally on a cylinder.

Here at any rate is an opportunity for research and invention in response to a basic need.

Cinematography is glad and willing to be a brother to sound technology, but it has no desire to have him as a Siamese twin.

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18 and 25 thousandths of an inch. The shoes should be made carefully and must move freely under the spring tension of two-thirds of an ounce. All surfaces in contact with the film require a high polish to prevent scratching.

In the case of most gates which have been in use and are to be converted to the curved type, it is necessary to rebore the hinge brackets and to fit new hinge pins, otherwise the play at this point will make it impossible to bring the moving portion to exactly the same point of rest every time it is closed.

Pull-down claws which are badly mounted or which have become undercut or "hooked" from wear should be renewed.

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