

COMMITTEE ACTIVITIES

REPORT OF THE PROJECTION PRACTICE COMMITTEE*

The Projection Practice Committee wishes to direct attention to what it considers one of the foremost causes of waste and monetary loss suffered by the motion picture industry, namely, the mutilation of positive prints. This mutilation not only results in a considerably shortened life of the individual print, which is serious enough in itself, but in addition to this, it is impossible to obtain the optimum screen results, which are so highly important in creating the proper illusion so necessary to the motion picture play. Both picture and sound are affected by mutilation of film.

It is generally understood that the mutilation of film is frequently due to the maladjustment of projector parts, wearing of projector parts, accumulation of emulsion during projection, excessive oiling of projector or leakage of oil, and careless handling of film. The Projection Practice Committee is of the opinion that there is urgent need for the establishment of standards dealing with the various tensions to which the film should be subjected during projection, the clearances of adjacent projector parts and sound apparatus, allowable tolerances, and the amount of wear projector parts may suffer without impairing the quality of the picture or causing mutilation of film.

The committee, therefore, plans to conduct a thorough investigation which will be nation wide in scope, with the view of obtaining all necessary data for submittance to the Society for the purpose of adopting such standards. In order to accomplish this, the committee requests the earnest coöperation and support of the Society as a whole, as well as of associated individuals and organizations. Their assistance will be needed as this work will be of considerable magnitude and should, when completed, prove invaluable to the industry.

The Committee wishes also to call attention at this time to the lack of uniformity in the processing of prints, which constitutes another

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serious loss. In regard to the processing of film, there seems to be no standard for this work at the present time. One producer uses a certain method of processing film; another producer simply waxes the margins of the print; and a third producer does not process the print at all. This condition works a hardship on all concerned, inasmuch as it frequently happens that the producer who has processed his product suffers by reason of the fact that the theater uses unprocessed film at the same time. This evil adversely affects both the sound quality and the quality of the picture.

It is well known that with unprocessed film there is a tendency to accumulate emulsion at the tension points in the projector. Formation of emulsion greatly increases the tension applied to the film and imposes a strain on the sprocket holes. Occasionally a positive print is irreparably damaged during its first projection. The Projection Practice Committee recommends that a thorough investigation to find the best method or methods of processing film be conducted by a designated committee of the Society so that such methods may be recommended as a standard for the industry.

Unless such a standard is adopted, generally accepted, and put into use by the producers of film, the industry will continue to suffer the great loss now occasioned through faulty (or the lack of) processing methods, and such benefits which should accrue through the adoption of the standards relating to projector tensions, adjustments, *etc.*, would be largely nullified. In the opinion of the Projection Practice Committee, such a work is one of the most important contributions the Society could make to the industry.

RESOLUTION

The Projection Practice Committee wishes to include in the records of the Society a statement of its appreciation of the splendid work and coöperation which President Crabtree extended to this Committee and, also, for his realization of the important role which practical projection plays in the motion picture industry.

Through President Crabtree's foresight, initiative, and efforts, a committee to deal with the practical problems of projection was formed for the first time in the history of the industry, and specific problems greatly in need of attention and correction were brought to the light of day and taken under consideration.

Therefore, we, the Projection Practice Committee, gratefully acknowledge what President Crabtree has done for the craft, for the Society, and for the industry at large, and extend to him our thanks and a vote of confidence in his conduct of the affairs of the Society.

HARRY RUBIN, *Chairman*

THAD. C. BARROWS	R. H. McCULLOUGH
G. C. EDWARDS	P. A. McGUIRE
SAM GLAUBER	RUDOLPH MIEHLING
J. H. GOLDBERG	F. H. RICHARDSON
CHAUNCEY GREENE	MAX RUBEN
HERBERT GRIFFIN	H. B. SANTEE
JESSE J. HOPKINS	L. M. TOWNSEND

DISCUSSION

MR. McGUIRE: For quite a few years I was one of those who vigorously protested against the neglect of projection by this Society, but no longer have I any cause for complaint as we have our own Projection Practice Committee and it is up to ourselves to make good. In discussing the Report of the Projection Practice Committee it is not my intention to complain or criticize, but to offer some suggestions which I hope will be helpful to the motion picture industry and a benefit to the Society of Motion Picture Engineers. I ask you to be patient because much of what I will say is to be of a somewhat general nature and, perhaps out of place in the proceedings of this Society. But most of the papers and much of the discussion of the Society are more or less incomprehensible or relatively unimportant to some part of the membership of this organization. In order to deal only with subjects which would be of interest to everyone it might be necessary to hold a hundred conventions or divide the meetings into an equally large number of groups. In its proceedings, the Society of Motion Picture Engineers must give some attention to invention, development, manufacture, maintenance and operation, the electrical, chemical, and mechanical divisions of the industry, visual and sound recording and reproducing, and always theory and practice. These are rough classifications, but give a general idea of the vast field the Society must cover.

The Society of Motion Picture Engineers is not a scientific body seeking abstract truth, but a technical organization with a very definite commercial background. When we lose sight of the fact that we are part of the motion picture industry we fail to realize the true purpose of the Society. It, therefore, seems to me that anything the Society can do to render a practical service to the industry should result in the organization receiving increased support. The benefits that the industry has derived from the Society of Motion Picture Engineers have not always been recognized because they were often of an extremely indirect and intangible nature. The fact that the Society has for many years focused attention upon the technical side of the motion picture industry and to some extent has won the interest of non-technically minded executives is in itself a great achievement. The executives of this industry have never given the Society adequate support, and I believe that the producers and exhibitors have contributed more to a single activity of another organization in this field than they have to the Society of Motion Picture Engineers in its entire history.

The Society is facing new conditions and it is desirable that the service which it renders the industry should be more direct and more obvious. If this can be

done, the Society will receive increased support and be in a better position to carry on its important work. This organization is in a particularly strong position to secure technical data regarding the cause and prevention of film mutilation. Various attempts have been made to get this information, but there is good reason to believe that the results have not been entirely satisfactory.

Someone has said that "science is common sense made exact." The Projection Practice Committee will conduct a scientific survey, collecting the facts systematically and thoroughly, and present them in an authoritative report. When this is done definite action should result and the Society will have rendered a service comprehensible in terms of dollars and cents.

The work we are undertaking, however, will involve considerable time and expense, and should receive adequate support from the Society as well as the industry. It is an unfortunate fact that the industry does not take proper interest in the collective thought developed by such an organization as the Society of Motion Picture Engineers. Progressive projectionists in this organization, and their own projection societies, are constantly giving their own time to do valuable technical work without receiving the least recognition from the executives of their own firms. Conceding that this is a period in which executives are very properly insisting upon economies, it nevertheless seems unwise to ignore totally all the collective effort for the betterment of the industry.

Back of the artistic side of the motion picture industry is a vast technical field whose work offers infinite opportunity for flaws and failures. Motion pictures provide entertainment and education through chemical, mechanical, and electrical processes. What the public pays for is not the product of a single commercial organization, and it is important that the Society of Motion Picture Engineers should bring this to the attention of the industry—emphasize the interdependence of the various departments and point out the need for coördination. In all work which is not of a competitive nature the industry benefits tremendously from the collective thought developed in such organizations as the Society of Motion Picture Engineers. I sincerely hope that a way will be found to encourage and finance adequately the efforts of the Projection Practice Committee to find the cause and prevention of film mutilation. The men on this Committee have the technical and practical experience to do the work. Their report should result in a tremendous saving through prevention of waste and the improvement in screen presentation.

PRESIDENT CRABTREE: I indorse Mr. McGuire's remarks one hundred per cent. Of course the world was not made in a day. But it is encouraging that the producers have shown a much greater willingness to do things for us at this Convention than at any time previously.

Will Mr. Griffin give us a few details as to how the stoppages occurred in the projection room?

MR. GRIFFIN: There was only one cause, Mr. President, and that was the processing. Emulsion, or whatever was on the film, supposedly to prevent its "seizing up" during transit through the mechanism, did not prevent it. In some cases it was wax, and in some cases something else.

PRESIDENT CRABTREE: Where did it seize?

MR. GRIFFIN: In the gates. It can seize anywhere in transit, wherever there is tension—at the picture gate or the sound gate. This time it happened

to be at the sound gate. It is not the fault of the manufacturer of the equipment, because one can run a film through that has been run two or three times, and properly processed, and it will not cause any trouble at all. We could have run the film through without stopping; it was a new print, however, and we wanted to save it. And in as much as it was not a very serious matter to stop the picture here, as would have been the case in a theater, we stopped it. But the sound was terrible in some cases, caused by a piling up of the wax, behind the film, thus changing the thickness of the scanning beam.

PRESIDENT CRABTREE: Was this a new machine?

MR. GRIFFIN: It was not new in the sense that it had never been run before. Films had been run through it on different occasions, but the equipment to all intents and purposes is new.

PRESIDENT CRABTREE: In the case of two metal surfaces, one of which is polished to an extremely high degree with rouge, and one which is not polished, the polished surface will not pick up as much gelatin or emulsion as the rougher one. I was wondering, therefore, that if this machine had been a little older, would the trouble have occurred?

MR. GRIFFIN: The finishes on all parts that come into contact with film are finished with rouge, and I believe that RCA uses crocus-cloth for polishing. I don't know of anything better. The surfaces are highly polished and burnished.

MR. SUMNER: I happen to be an exhibitor, and this report of the Committee was very interesting to me. We happen to run a theater that is called a "first subsequent run;" that is, we run after the key point in this district, which is Boston. I have attended a number of the conventions, and have heard the reports from the various specialists in the studios; and I realize the great amount of thought and work that is put into the pictures, the great mass of work that has been done to accomplish perfect sound, and so forth. And yet, when these prints get to the theaters, the greater part of that work has been ruined by improper handling of film. As an exhibitor, I wish to state that I believe that the work that has been begun by this Committee is most important. I want to urge them not to stop with the problem of processing film. They must go much further than that.

In spite of the noiseless recording system, the prints reach the theaters so dirty and scratched that the work of noiseless recording has almost gone for naught.

I think this Committee is one of the most important factors in the organization and I want to urge that it be given all possible support in its work.

PRESIDENT CRABTREE: I should like to ask Mr. Griffin: Was the accumulation of emulsion due to friction along the perforations, or at some portion of the picture area? In other words, is it necessary to process the entire surface of the film, or merely the edges of the perforations?

MR. GRIFFIN: For projection purposes it is necessary only to process—or lubricate, as it may be called—the edges of the film in the sprocket hole area.

PRESIDENT CRABTREE: Was the film in question lubricated or "processed?"

MR. GRIFFIN: I cannot answer that. I do not know either the processes or who does the processing. I only know what occurs during projection.

MR. FAULKNER: Four different prints caused the trouble, and each one of the four had four different applications and four different kinds of chemicals on them. The gathering of emulsion on three different prints that I looked at

was identically in the same spot, showing that no matter what caused it to gather, it did so in exactly the same place on the film. I did not see the fourth print but the sound quality and the way in which it behaved were similar.

As Mr. Griffin says, as far as passing the film through a projector is concerned, it is only necessary to lubricate the margin of the film. The emulsion that is on film, unless the metal parts with which it comes into contact are lubricated, is quite likely to stick. Therefore, the film is lubricated for the purpose of keeping the tension shoes lubricated.

Mr. Rubin asked me to present to you his idea that "processing" is an incorrect term to use for this process. He wants to find a name for waxing, treating, processing or "whatnot," and to standardize that name. I went to a dictionary and ran down every name I could think of. I have a great number of them, none of which I think would be appropriate, except perhaps "treatment" or "finishing" or the like. "Processing" is used to indicate anything that may happen to film from the time it is printed to the time it is developed for screening.

PRESIDENT CRABTREE: Why not use the word "conditioning?"

MR. FAULKNER: Some of the names I accumulated are: hardening, completing, seasoning, curing, impregnating, finishing, duratizing, dura-proofing, inuring, toughening, preserving, protecting, treating, perfecting treatment. None of these I think would be satisfactory except perhaps "conditioning" or "treating." I do not like "processing," nor does Mr. Rubin.

MR. MCGUIRE: I ask you not to exaggerate the importance of "processing" merely because it has received special attention in this discussion. It is a serious problem, but we shall have other important subjects to consider in our efforts to find the cause and prevention of film mutilation. There has been much talk in the past about film mutilation and various organizations have dealt with it rather unsuccessfully.

The Projection Practice Committee is starting out with the idea that there seems to be an evil which is called film mutilation, but that it knows absolutely nothing about its cause and prevention. We hope to be able to gather some data in the next six or twelve months, which will save the motion picture industry a tremendous sum every year and greatly improve the quality of screen presentation.

MR. J. CRABTREE: I think a little more attention to the projector is what is necessary. I often project green film, and find that as long as the projector is kept in shape, little trouble is experienced. Mr. Faulkner pointed out that last night the accumulation occurred in the same spot in each case, which goes to show that there is a high spot somewhere. One cannot expect lubrication to take care of all high spots. Eliminate the high spots, and the lubrication won't be so necessary.

MR. GRIFFIN: I must take exception to that. I don't know under what conditions Mr. Crabtree projects his prints, but I defy anybody to take a piece of green film off the drying rack and project it under conditions existing in the theater today and not have it seize up, no matter how well the projector is designed.

PRESIDENT CRABTREE: Are you speaking now of a film to the edges of which wax has been applied?

MR. GRIFFIN: Mr. Crabtree said he would use it without treatment—right

out of the laboratory. It is not waxed there. Now, waxing is not the solution, apparently, because the wax peels off and rolls up. With the old silent machines, waxing was all right. Today we have sound. The wax rolls off, gets in the sprocket holes, and is carried to the sound gate, where it either leaves the film or raises it off the sound gate.

PRESIDENT CRABTREE: You are speaking of the old method of waxing with solid wax?

MR. GRIFFIN: Yes.

PRESIDENT CRABTREE: You should use a solution of wax in a solvent. It is only necessary to put on a layer of wax a millionth or so of an inch thick, to provide the necessary lubrication.

MR. GRIFFIN: I have seen, in cases where the film is put on a rewinding device, two pieces of tallow right at the sprocket holes, over which this film is drawn. The projectionist should be taught not to do a thing like that. We must find a proper means of treating the film so that during projection under high amperages it does not seize in the tension parts of the projector.

PRESIDENT CRABTREE: Of course, Mr. Crabtree is not projecting under the high amperages that you speak of.

MR. FAULKNER: When the film comes off the drying cabinets and is projected for inspection, felt runners are used in some places, and I know one laboratory that does not use them. They never scratch film, but it is due to the fact that there is no heat on them.

MR. GRIFFIN: We supply thousands of different types of runners to the laboratories of studios, and I know how they work. They use a Mazda lamp, and very little light.

PRESIDENT CRABTREE: I happen to have done a considerable amount of research on the lubrication of film. Our researches have shown that if you have even the merest trace of wax or oil or grease or any lubricant, on the film, it makes a tremendous difference in the ease with which it passes through the projector. To date we have not found that any special processing treatment is any better with regard to lubrication.

REPORT OF THE PROJECTION THEORY COMMITTEE

SUBCOMMITTEE ON LITERATURE

At the Spring Convention at Hollywood a report was made of the activities of the Projection Theory Committee. A subcommittee to examine the literature of the subject was formed, consisting of C. Tuttle, F. K. Moss, and H. P. Gage, *Chairman*. The present plan of this Committee is to prepare a tutorial paper on the progress of the optics of motion picture projection, based principally on the papers published by of the Society of Motion Picture Engineers, but also referring to significant papers in other publications.