REPORT
OF
STANDARDS AND NOMENCLATURE COMMITTEE

May, 1924.

Introduction

IT WILL be recalled that at last Fall's convention in Ottawa, it was voted to take no action on either the report of the Standards Committee, or that of the Nomenclature Committee, due to the small attendance at the time of presentation of these reports.

Your present Committee has studied these reports very carefully, and combined the recommendations contained therein with additional ones. The entire matter is, therefore, combined into one report, dealing first with Standards and second with Nomenclature, as follows:

Historical

Diligent study of our Transactions reveals the fact that the Society has not yet officially adopted standard dimensions for newly perforated motion picture film. The history of this matter as it appears in our printed Transactions is as follows:

The Standards Committee was first appointed at the Washington Convention, May, 1921.

At the Buffalo Convention, November, 1921, the Standards Committee submitted drawings and dimensions for professional standard film, and also considered the question of submitting these drawings and dimensions to the American Engineering Standards Committee. The Standards Committee report given on page 163 of the No. 13 Buffalo Transactions, reads in part as follows:

First—

The dimensions given in the drawing entitled "Standard Safety Film" are not those published in the transactions of May, 1920, but rather those in apparently universal use at present. According to the constitution, the dimensions of the drawing cannot be formally adopted by the Society as standards before its next meeting, at the very earliest. The Standards Committee cannot approve the submission of standards to other societies, which have not been so adopted.

Second—

The addition of the word "Professional" in the title "Professional Standard Film" has not been authorized by the Society by tentative adoption at one meeting and formal adoptance at a subsequent meeting, as required by the constitution. The Standards Committee

cannot approve the introduction of such limiting terms without such authorization.

The Standards Committee report in the No. 14 Transactions, Boston, 1922, re-submitted drawings of the standard and safety standard film, but with the word "Professional" omitted from the standard film. These drawings and dimensions were approved by the Society, and reported on page 188 of the No. 14 Transactions. The slight change made, however, necessitated the material laying over six months before it could be officially adopted by the Society.

In the No. 15 Transactions, Rochester, October, 1922, the Standards Committee report, page 132, reads in part as follows: Perforated Motion-Picture Film—

The Committee has just learned that the Eastman Kodak Company is now compiling data on the shrinkage of film, and on the dimensions of sprocket models manufactured by the various companies. The results of this, a study far more exhaustive than can be made by the Committee, will be available to the Society, probably by the meeting next Spring. The Committee, therefore, suggests that the Society wait until that time before again considering the standardization of the dimensions of perforated film.

The No. 16 Transactions, Atlantic City, May, 1923, page 308, contain the following portion of the Standards Committee report dealing with newly perforated motion picture film:

"The matter of film perforation has been discussed during the present session in connection with the work of the Committee on Film Perforations, and has been referred back to that Committee for further consideration."

The net result of this is, that the Society has not yet officially adopted the dimensions for newly perforated motion-picture film.

It also appears that whereas the dimensions and cuts referred to above show a film width of the 35 m.m. size of 1.375″, the film manufacturers have actually been cutting to a maximum width of 35 m.m. or 1.3779″ and not 1.375″, and a minimum of 34.95 m. m. This being the case, and as 35 m. m. is 1.3779, and not 1.375, it seems highly desirable to correct our standard.

It also appears that most of the positive film is now being perforated with round corners in the sprocket holes. Negative film is still being made with square corners. This would necessitate standards varying in this respect for positive and negative raw stock.

The 16 m.m. film seems to be coming into general favor, and it would seem desirable to standardize the dimensions for this film also.

Recommendation

Therefore, to bring this whole matter to a head, your Standards Committee instructed Mr. J. G. Jones to prepare a complete report showing all dimensions of 35 m.m., 28 m.m. and 16 m.m. film. This report has been submitted to all film manufacturers, and is presented herewith, with a recommendation that the Society accept the report preparatory to officially standardizing it after the usual six months consideration.

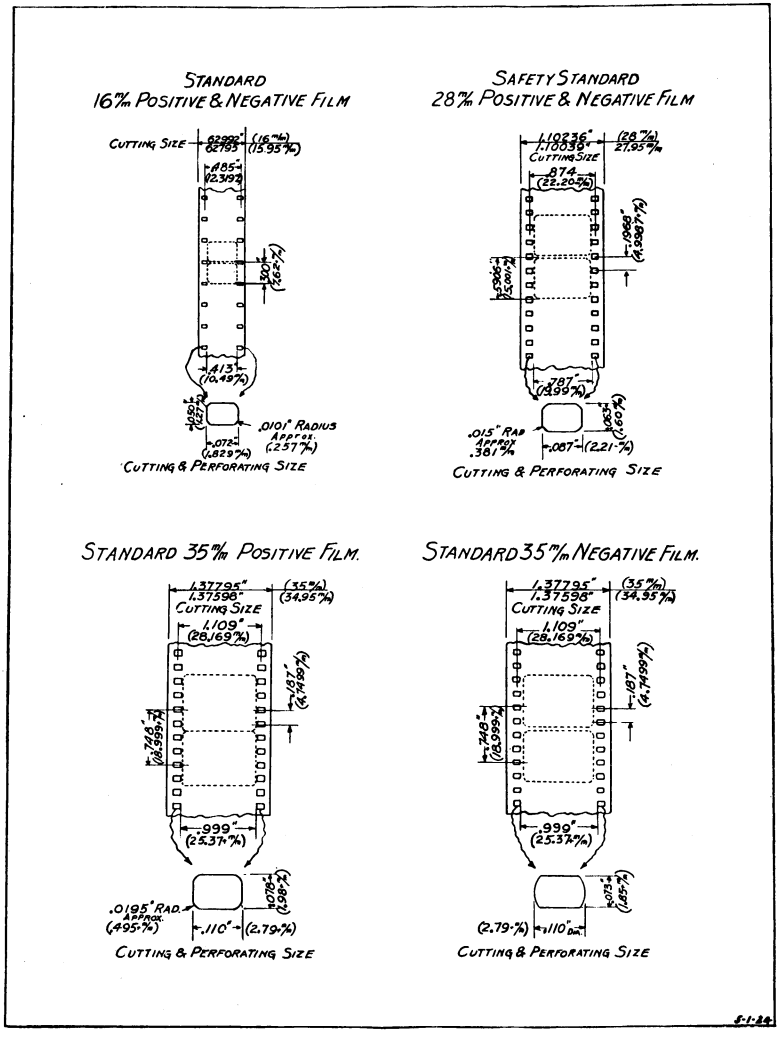
STANDARD
16% POSITIVE & NEGATIVE FILM
CUTTING SIZE
.6299"
.6795"
(16%)
(15.95%)
.485"
(12.319)
.300"
(7.62%)
.413"
(10.49%)
.101" RADIUS
APPROX.
(.257%)
.072"
(1.829%)
CUTTING & PERFORATING SIZE
SAFETY STANDARD
28% POSITIVE & NEGATIVE FILM
1.10236"
1.10039"
(28%)
27.95%
CUTTING SIZE
.874"
(22.20%)
.1968"
(4.998%)
.787"
(19.99%)
.015" RAD
APPROX
.381%
.087"
(2.21%)
CUTTING & PERFORATING SIZE
STANDARD 35% POSITIVE FILM.
1.37795"
1.37598"
(35%)
(34.95%)
CUTTING SIZE
1.109"
(28.169%)
.187"
(4.749%)
.746"
(18.95%)
.999"
(25.37%)
.0195" RAD.
APPROX.
(.495%)
.110"
(2.79%)
.078"
(1.98%)
CUTTING & PERFORATING SIZE
STANDARD 35% NEGATIVE FILM.
1.37795"
1.37598"
(35%)
(34.95%)
CUTTING SIZE
1.109"
(28.169%)
.187"
(4.749%)
.746"
(18.95%)
.999"
(25.37%)
(2.79%)
.110" DIA
.073"
(1.85%)
CUTTING & PERFORATING SIZE
8-1-24

FIG. A

You will note (Fig. A) that in the case of the 35 m.m. film, we are recommending two standards; one for negative film and one for positive film. This is for the reason that we are recommending the use of rounded corners in the perforations of positive film. The need for perforating positive film with rounded corners has been apparent for a considerable length of time. The steadily increasing speed at which the films are run has made this demand even more urgent. Exhaustive tests have been made which show conclusively that the running life of the film is materially increased by the use of round corners in the perforations.

There is no difficulty experienced in printing on positive film perforated in this manner from negative film with flat side, round end style, or Bell & Howell standard perforations.

The increase in width of the perforation in 35 m.m. film from .073″ to .078″, has been found necessary to accomodate the varying sizes and designs of sprockets, thus considerably reducing interference, especially with shrunken films.

In connection with the cutting width, you will note that the tolerance for the minimum dimension for all sizes is .05 m.m. below the basic sizes, so that the cutting width will be nothing over and nothing under these limits.

Aperture Plate Dimensions

It is recommended by the Standards Committee that the Society call attention to the importance of retaining the existing ratio of three to four between the height and width of the picture when introducing any new size of motion picture film; in order to permit direct reduction or enlargement from existing sizes.

Your committee believes it desirable to establish standard dimensions both for camera and printer aperture masks. We have already standardized the dimensions of the projector aperture. (No. 14 Transactions May, 1922.)

It is felt that the question as to whether or not it is desirable to project a black border with the picture, is one which should be settled by vote of the Society after seeing a demonstration, which we shall proceed to give.

As the aperture size for projectors for 35 m.m. film has been approved by the Society at the Boston Meeting May, 1922, your Committee thought it desirable as well to establish standard dimensions for the camera and printer. This question came up at the Atlantic City Meeting, May 1923, at which time discussion brought up the point as to whether in so standardizing, it would be possible to follow the example of the Incorporated Association of Kinematograph Manufacturers, Ltd., as in so doing the picture when projected would have a black border due to the camera aperture being smaller than the projector aperture.

Your present Committee has given this matter further consideration and has prepared a film in order to give a practical dem-

onstration so that their action may be guided by the judgment of the Society in standardizing the size of apertures of cameras and printers.

This picture was taken with a Moy camera with regular and special size aperture plates, mounted on a tripod which did not hold the camera very steady so that it met the conditions very well for this demonstration.

(SHOWING THE FILM)

No doubt you will all agree that the picture showing the black border appears to be more stationary than the one framed by the projector aperture.

Two lantern slides have been prepared which will show the existing conditions as to the various sizes of apertures in cameras, printers and projectors. No names of apparatus are given in this illustration and will be referred to by letters.

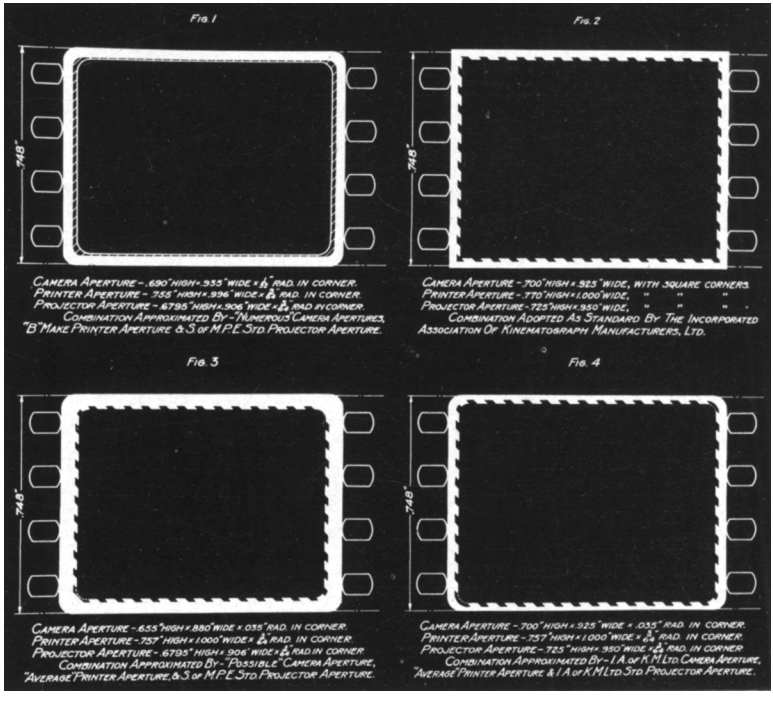

Plate No. 1

Figure 1:

Shows the size of three different apertures super-imposed. The dimension .748" is equal to four pitches of standard film perforations. The single line cross hatch shows the size of aperture in "B" make of

camera as the negative would appear. The double cross hatch section shows the size of "B" make printer, this includes the black border which shows the amount the printer aperture overlaps the camera aperture. The clear outline shows the size of the "C" make projector aperture, the size of this being .6776″ high by .908″ wide with a corner radius of 1/16″.

You will note that with a condition of this kind, it would not be possible to have the aperture of the projector large enough to allow the black border.

Figure 2:

The black outlines show the "B" make printer aperture size; the cross hatch section shows the "A" camera aperture size; and the clear outline shows the "C" make projector aperture size.

In this case the positive film would have a black border but would be considerably larger than the projector aperture.

Figure 3:

You will note the size of the "C" make camera aperture and "B" make printer aperture are the same length and very little difference in height, the height of the camera aperture being somewhat greater than the printer aperture.

In this case you will see there is no black border on the positive film.

Figure 4:

The black border shows the outline of the "B" make printer aperture. The cross hatch area shows the size of the "A" make camera aperture, and the clear line area shows the "D" make projector aperture.

You will note that all of the projector apertures are approximately the same size.

Plate No. 2

Figure 1:

The black border outline shows the "B" make printer aperture; the cross hatch section shows the outline dimension of a great many makes of cameras; while the clear line area shows the projector aperture size as adopted by the Society. This is practically the prevailing condition at present.

Figure 2:

Shows the size of camera, printer and projector apertures as adopted by The Incorporated Association of Kinematograph Manufacturers, Ltd. The continuous black border shows the size of the printer aperture; the extreme limits of clear area show the size of the projector aperture; while the area included within the black projections shows the camera aperture; thus giving a black border projected which would be about .012″ margin between the camera and projector apertures. The total width of the black border, of course, would be the difference between the camera and printer apertures. You will also note in this case that the camera aperture's size, or size

of picture that would be projected, is somewhat larger than the aperture of the projector compared in the previous cases.

Figure 3:

Shows a combination of aperture sizes that do not exist at the present time, but is shown as an example of what could be done by making the camera apertures smaller. The projector aperture in this case carrying the dimensions adopted by this Society, and the

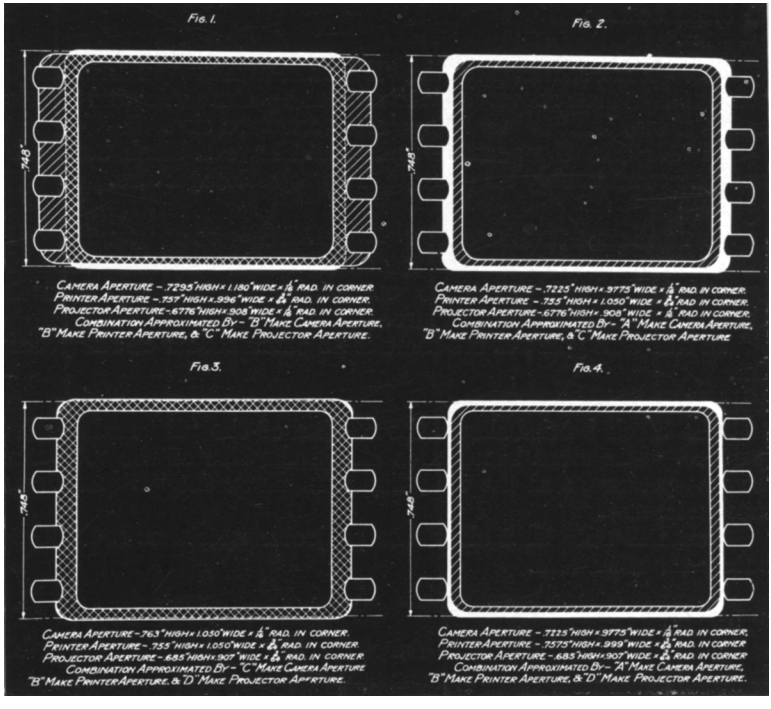

Plate No 2.

printer aperture represents the existing average conditions of all machines which we have been able to measure. In this case the size of the camera aperture as shown would be somewhat smaller than any of the existing projector apertures, so that the outside dimensions of the picture on the screen would be smaller by approximately 3 to 4½ per cent, or a reduction in screen area of about 6 to 7½ per cent.

It would hardly seem proper to make any modification that would reduce the size of the picture on the screen.

Figure 4:

The dimension of the outline black border is the same as in Fig. 3. The dimensions of the extreme clear area would be the size

of projector aperture which is somewhat larger than the dimensions standardized by this Society, being .045″ greater in height and .044″ greater in length. The dimensions of the area included between the projections would be that of the camera aperture and would be the same as shown in Fig. 2 except with rounded corners.

This would mean that the size of all projector apertures and camera apertures would have to be modified. Some of the camera apertures would have to be made larger and some smaller in order to meet this condition. The projector apertures, as aforesaid, would all have to be made somewhat larger—(approximately .025″).

It would seem, therefore, *if* it is not desirable to adopt the principle of the black border, that the dimensions as shown in Fig. 1, Plate 2, would be about the right size of camera and printing machine apertures to be adopted as standard. With this arrangement, any side weave of the film would not show the clear margin around the picture.

Observation Ports

The Committee feels that it would be a desirable thing for the Society to take some action which would tend to prevent further construction of observation ports which are altogether too small for satisfactory service. No port should be used which does not allow the projectionist to see the whole of the screen when standing in his normal position.

The Committee recommends that the size of the observation port be standardized at 16″ square, with its center located 5′ 3″ above the floor, based on a zero projection angle. The center of the port to be lowered one inch for each one degree drop in angle of projection.

Nomenclature

The Committee, after very careful consideration, recommends changes in our present nomenclature as given below. The same numerals are used as in our present nomenclature.

	Present Definition	*Recommended Definition*
1. Action	The director's signal to the players to begin performing	It is recommended that as this is a colloquialism, we eliminate the word and its definition.
2. Arc	A column of very hot light-emitting gas, carrying an electric current sustaining this condition.	Not peculiar to Motion Picture Industry, therefore recommends elimination from nomenclature.
5. Camera	The director's signal to the photographer to begin taking the scene	As this is simply a colloquial signal, and non-essential to our nomen-

	Present Definition	*Recommended Definition*
		clature, it is recommended to remove this term and its definition from the list.
6. Change-Over	In projection, the act of changing from one projector to another without interrupting the continuity of projection	In projection, the act of changing from one projector to another preferably without interrupting the continuity of projection.
10. Cutting	Editing a picture by the elimination of unacceptable film	Editing a picture by eliminating unsuitable subject matter therefrom.
18. Douser	The manually operated door in the projecting machine which intercepts the light before it reaches the film	The fire-proof shutter usually mounted on the lamphouse of a motion picture projector or stereopticon by means of which the light may be intercepted before it reaches the film or slide.
24. Fade-Out	The gradual disappearance of the screen picture into blackness. (The reverse of fade-in)	The gradual but finally complete disappearance of the screen image. (The opposite of fade-in).
41. Lantern Picture	A still picture projected on the screen by a stereopticon	Stereopticon or Lantern picture: A still picture projected on the screen by suitable means.
42. Lantern Slide (Stereo Slide)	A transparent picture for projection by a stereopticon	Stereopticon or Lantern Slide. A single transparent picture designed for projection.
53. Multiple-Reel	A photoplay of more than a thousand feet of film in length	Multiple Reel Picture: (As applies to 35 m.m. film). A photoplay of too great footage to be placed on a single thousand foot reel. In Practice a term applied to photoplays requiring more than three, one thousand foot reels to hold it: photoplays of two and three reel length being termed "two-reelers" and "three-reelers."
57. Opaque Projector	Lantern for optically projecting opaque objects, picture post cards, or the like	As such instruments are practically never used in the motion picture industry, it is recommen-

	Present Definition	*Recommended Definition*
		ded that we eliminate the term and its definition.
73. Retake	A second photograph of a scene	A repetition of the operation of photographing a scene or the resulting negative.
77. Scene	The action taken at a single camera setting	It was felt that the present definition is inadequate, but no better one has been suggested. Suggestions from the membership would be welcome.
80. Shutter	A moving element, usually a disc, which intercepts the light in a motion picture apparatus one or more times for each frame	A moving element, usually rotating, which intercepts the beam of light in a motion picture camera, projector or printer, one or more times during each cycle.
85. Spot	The illuminated area on the aperture plate of motion picture apparatus	The illuminated area on the cooling plate of a motion picture projector.
87. Stereopticon	A lantern for projecting transparent pictures; i.e., lantern slides, often a double lantern for dissolving	Stereopticon or Optical Lantern: An apparatus for optically projecting transparent still pictures. It is recommended that any reference to single or dissolving lanterns be eliminated from the nomenclature.
89. Take-up (Noun)	The mechanism which receives and winds the film after it passes the picture aperture	The mechanism by means of which a film is wound upon a reel after it has passed through the projector, camera, printer etc., mechanism.

Definitions for the following terms were recommended in last year's Committee report, but have not been adopted by the Society. Their recommendations, together with the recommendations of the present Committee, are given as follows:

	Definition under Consideration at Present	*Recommended Definition*
1. Moving Period	That portion of the picture cycle during which the film at the aperture is in motion. This period is expressed in degrees of revolution of the fly wheel when 360 degrees are equal to one cycle	It was decided to accept this definition as given.

	Present Definition	*Recommended Definition*
2. Observation Port	An opening in the front wall of the projection room through which the projectionist observes the screen	It is recommended that this definition be accepted as proposed with the exception that the word "front" in front of "wall" shall be omitted.
3. Picture Cycle	The entire series of mechanical operations which takes place between the positioning of one frame of a motion picture film and the positioning of the next frame	It was recommended to leave this definition as at present.
4. Projection Periods	Those periods during the picture cycle during which the picture is projected upon the screen.	The total fraction of the picture cycle during which the picture is being projected.
5. Projection Room	A room or enclosure from which motion pictures are projected	Projector Room: A room or enclosure from which motion pictures are projected.
6. Stationary Period	That portion of the picture cycle during which the film at the aperture is stationary. This period is expressed in degrees	That portion of the picture cycle during which the film at the aperture is stationary. This period is expressed in degrees of revolution of the fly wheel when 360 degrees are equal to one cycle.

The following new terms and definitions are offered.

Cooling Plate

A shield or baffle composed of one or more plates mounted in front of the film aperture forming an air gap to prevent overheating the aperture plate.

Aperture

The opening in the aperture plate at which each individual picture is situated during exposure, printing or projecting respectively.

Aperture Plate

In a motion picture projector, printer, or camera, a plate of metal containing the actual aperture opening.

Film Gate

A hinged or sliding plate provided with tension springs holding the film against the aperture plate.

Signed

L. C. PORTER (Chairman)
J. G. JONES
F. F. RENWICK
F. H. RICHARDSON.

SUMMARY

Standards

The Committee submitted complete dimensional drawings for 35 m.m. positive and negative film, the former having rounded corners and the latter square in the perforations, 28 m.m. film and 16 m.m. film, as shown in Fig. A. The dimensions of 35 m.m. positive film were referred back to the committee. The dimensions of 35 m.m. negative film and of the 28 and 16 m.m. film were accepted by the Society.

The committee gave a demonstration of pictures projected with and without a black border and submitted data re: The sizes of various camera and printer aperture plates, Plates I and II. Size of Projector aperture was standardized by the Society in May 1922 (No. 14 Transactions). If it is decided to adopt the principle of the black border, it would be necessary to modify the size of all projector and camera apertures. The committee recommends the dimensions for camera and printer apertures shown in Fig. 1, Plate II. The matter was referred back to the committee for further consideration.

The Committee recommends standardization of an observation port 16″ square with its center 5′ 3″ above the floor for a zero projection angle, the center to be lowered one inch for each one degree drop in angle of projection. This recommendation was accepted by the Society.

The Committee recommended retaining the existing ratio of three to four between height and width of pictures when introducing any new size of film. The Society accepted this recommendation.

The Society instructed the committee to investigate the question of projection speeds and report at the next convention.

Nomenclature

The committee recommended changes in the definitions of the following terms, the numbers used being the same as in the present published nomenclature list:

Term	*Action of Society*
(1) Action	Voted to eliminate from Nomenclature
(2) Arc	Refered back to Committee
(5) Camera	Voted to eliminate from Nomenclature
(6) Change-Over	Recommended definition accepted
(10) Cutting	" " "
(18) Douser	" " "
(24) Fade-Out	" " "
(41) Lantern Picture	" " "
(42) Lantern Slide—Stereo Slide	" " "
(53) Multiple-Reel	" " "
(57) Opaque Projector	Voted to eliminate from Nomenclature
(73) Retake	Referred back to Committee
(77) Scene	" " " "
(80) Shutter	Recommended definition accepted
(85) Spot	" " "

(87)	Stereopticon	Recommended definition accepted
(89)	Take-up (noun)	" " "
(a)	*Moving Period	Accepted as stands
(b)	Observation Port	Recommended definition accepted
(c)	*Picture Cycle	Accepted as stands
(d)	Projection Periods	Recommended definition accepted
(e)	*Projection Room	Accepted as stands
(f)	Stationary Period	Recommended definition accepted.
	Definitions for the following were presented for the first time:	
(g)	Cooling Plate	Referred back to the Committee
(h)	Aperture	Recommended definition accepted
(i)	Aperture Plate	" " "
(j)	Film Gate	Referred back to Committee.

* Each of these definitions has stood before the Society without change for the requisite six months period and therefore become official Nomenclature.

The committee feels that the discussion of the Standards and Nomenclature Committee is of such importance that it warrants publication and it is accordingly given herewith.

DISCUSSION OF STANDARDS

MR. PORTER: I think it will be best to take up the Standards part first and then the Nomenclature.

We have previously prepared and sent to the entire membership a preliminary report of how things stand, so I don't think it is necessary to take time to read the history again but rather to go directly into the work of discussing the Standards proposed.

MR. PORTER: Is there any discussion on the proposed dimensions for 35 m.m. positive film?

DR. GAGE: I merely wanted to inquire whether the dimension for 35 m.m. 1.3779" was the maximum for tolerance limits.

MR. PORTER: I am going to ask Mr. Jones to answer the questions on this point.

MR. JOHN JONES: That shown is the intended tolerance for 35 m.m. size. You must have some tolerance on freshly cut film.

MR. CRABTREE: I suggest that if these cuts are reproduced they be enlarged to page size; at present it is difficult to read the lettering on them.

MR. RICHARDSON: One of the principal points discussed by the Committee, the one that brought up the discussion, was the radius of the corner (indicating).

MR. JOHN JONES: That may vary, but it must not interfere where the sprocket engages. This radius (indicating) must not interfere. You see the specifications, 19/1000ths approximately, indicate it can be a trifle more or less. We found this radius would be about right.

MR. HUBBARD: I should like to ask Mr. Jones if it has been established that this style of perforation has better lasting qualities than the other; what tests on the actual use of the film have shown.

MR. JOHN JONES: Exhaustive tests were made.

MR. HUBBARD: I mean on actual use of the film in the theatres. What reports do you get?

MR. J. G. JONES: The reports are very good indeed. The only request for the old style perforations on positive film has been for use in making titles direct on the positive. This was owing to the pilots in the title camera not having been changed to fit the new style perforations. We have received a letter from abroad complimenting the changes to the new style perforations very highly.

MR. CHANIER: I want to call your attention to the fact that the flat part is only .071; in the Bell & Howell it is .08228 and I think there is more chance of interference by the sprocket teeth in this perforation than in the other. I think we should have round corners but the flat part the same as on the Bell & Howell.

MR. JOHN JONES: We could not do that very well.

MR. CHANIER: You can make the perforation longer.

MR. JOHN JONES: Then you reduce the edge margin.

MR. CHANIER: The length of the Continental perforation is .118 and the flat is the same as in the Bell & Howell. The narrower space between perforation and edge of film would have no importance.

MR. JOHN JONES: The idea was to make use of some of this (indicating). The perforation should have a fillet coming down here (indicating).

MR. CHANIER: You are figuring on rounded sprocket teeth.

MR. JOHN JONES: Yes, very slightly. The sprocket teeth should not have sharp corners.

MR. BRIEFER: The proposed type of perforation appears logical because it has no corner, but I think the Society should not definitely commit itself on this type of perforation. Some experiments with which I am familiar, cast a shadow of doubt as to its thorough effectiveness. This may be the best perforation we can get, but I think we should go a little slow and recommend it only provisionally. If it is found after two or three other meetings of the Society that it has proven itself, it would be well then, to make it a recommendation of the Society. There is no doubt that this design looks better than the Bell & Howell standard, but, with the present type of sprocket tooth, it does not appear as having greater strength. I have not had sufficient experience with this proposed type to know whether it is the better perforation but, I am sure we should not commit ourselves on the proposition until it has proved itself worthy.

MR. JOHN JONES: For your information it has been used for about a year, not in full practice but several million feet have been perforated this way and research work for some time before that has been carried on, and considerable time and money has been spent to prove that it was superior to the old perforation. Otherwise, it would not merit the expense of going into it.

MR. BRIEFER: I realize that, but I think we should receive from outside sources more information to prove that it is better. I have no doubt that a great deal has been done, but this thing should

have a general public trial before an organization of this character commits itself to it.

MR. CHANIER: I should like to ask how the tests were made. Were reels of film run through machines or were different styles of perforation run through together? I have made tests with the three styles of perforation and sent them through the regular routine, and the Continental was found slightly superior to the rectangular. In all tests did you have the three kinds of perforations on each reel?

MR. JOHN JONES: Yes, we have done this but running on would not be conclusive specimen through an exchange. Different style perforations should be tested under the same conditions in order to get accurate comparisons.

MR. BRIEFER: I might add that my paper scheduled for Thursday may provoke some discussion on the two types of perforation.

MR. RICHARDSON: I don't agree that these laboratory experiments are altogether conclusive. They are largely theoretical, but when a film goes out it is subject to certain abuses in practice, and these come from many sources. You may make an experiment in a laboratory with known conditions, and when the film comes into use it will go through a projector with undercut teeth, with hooked teeth, with an abnormal strain tension at the gate. In all my experience I do not remember a sample that has broken between the sprocket holes and the edge of the film unless it first broke between the sprocket holes which is proof that that portion of the film has ample strength. I have had thousands and thousands of samples of film with cracked sprocket hole corners at the upper edge as the film is in the projector, meaning there was too much tension on the take up, and others cracked at the opposite corners, indicating too much tension at the gate, but I have never found a crack at the curve of the sprocket hole where there was no sharp corner. I believe Mr. Griffin, Mr. Dennison, Mr. Bowen, and others will bear me out in this proposition, so that the basic trouble lies in sharp corner sprocket holes. That is the basis of practically all the damage in the way of cracks at sprocket holes. I have found they have broken in the center of round corner sprocket holes, but not at the corner.

MR. VINTEN: I am going to read a paper dealing with this from the English Standards Committee. They take the biggest exception in this matter to the increased width. I believe it was arranged to engage six teeth or more and allow for the shrinkage. We felt that the alterations should be made to the sprocket teeth of the machine because I believe your researches showed there is a large variation in projectors and the standardization should be taken up at this end and not the standard film altered. They also consider that the corner is beneficial but should not take up more of the face than the Bell & Howell. They want to know whether the sprocket has to be rounded to take that radius of the corner where the film shrinks. They think it is a step in the wrong direction to increase

the width against the negative film which leaves you with a negative stock of a different size.

MR. JOHN JONES: Are you speaking for the British Society?

MR. VINTEN: For the British Society.

MR. CHANIER: I want to mention that the cutting width of the film has been changed from 1.375 to 1.3779. The former is the standard all over the world. I have a publication here giving the standard in England, France, Germany and the U. S. as 34.92 m.m. or 1.375″. The American dimensions are taken from the S. M. P. E. standards adopted in 1917.

MR. JOHN JONES: You say all over the whole world; in what proportion? For about seventeen years all the 35 m.m. film the Eastman Kodak Company has sent out has been cut to these dimensions.

MR. CHANIER: In 1914, 1915 and 1916 I checked up the width of the Eastman Kodak Company film as a regular business at the same time as the perforation, and it was 1.375 or below on fresh cut film.

MR. J. G. JONES: Your method of measuring might show a slight variation from that of the workman, also the length of time elapsed after the film was cut undoubtedly would give you somewhat different reading.

MR. CHANIER: That is my experience.

DR. KELLNER: Mr. President, If such a motion is in order I move to refer this matter back to the committee.

MR. PORTER: I might say that when these recommendations were prepared they were sent to the various film manufacturers, and in justification to Mr. Chanier I will say he sent an answer promptly along the lines just presented. None of the manufacturers entered any objections.

PRESIDENT JONES: May I ask do you mean that all the dimensions be referred back or only those referring to 35 m.m.?

MR. PORTER: As I understand it, we are discussing only 35 m.m. positive.

PRESIDENT JONES: That is only a matter of being perfectly definite. You have heard the motion. Is there any further discussion?

MR. VINTEN: I suggest that the English and American societies get together before the matter is settled. I think whatever is done should become universal.

MR. CHANIER: I move that the matter be taken up with the French society if there is one.

MR. VINTEN: There is a German one but no French.

MR. CHANIER: Let us take it up with them, then.

PRESIDENT JONES: I think those suggestions can be given directly to the Standards Committee. The motion, then, as amended will be put. (Motion duly passed).

MR. PORTER: Next, we present to you the proposed dimensions

for 35 m.m. negative film. I think the Chairman's suggestion of asking for any objections is the quickest way of handling this.

MR. BRIEFER: I move that the dimensions for negative film be adopted. (Motion seconded).

PRESIDENT JONES: Is there any discussion?

MR. CHANIER: The same thing comes in as in the positive—the cutting width.

MR. BRIEFER: I think the difference in width is unimportant. The dimensions between perforations is the important thing.

MR. VINTEN: The English Society gives a tolerance on these limits and in connection with the negative there is 35 m.m. width with a plus limit and the positive only a minus limit.

PRESIDENT JONES: I should state at this point that all the action we can take on this today is simply preliminary adoption; it must stand before us for six months before being approved, so that we are merely accepting today the recommendations.

MR. RENWICK: If we are to be consistent should we not refer back the dimensions of negative as well as of positive stock so that they can be discussed together with the British and other similar societies?

MR. PORTER: I might say that your previous Standards Committee had been in touch with the English society, and we have the dimensions standardized by the English, and while your chairman has not been in touch with them, I know your previous chairman was not successful in this, but I don't want Mr. Vinten to get the impression we don't know what they are doing.

MR. MCNABB: I should like to say with reference to the width of the negative, that existing apparatus such as printers or camera would not be affected, but any change affecting the perforation hole or gauge would be a step in the wrong direction. I don't think change in width will make any difference.

PRESIDENT JONES: As I interpret the point, it should.—It is a question of whether we deem it advisable to get in agreement with the English society on width. There is no discussion on the negative stock except the width. Do you wish to adopt this recommendation as it stands or to include with the positive the negative for uniformity of agreement with the foreign societies? Are you ready for the question? The motion is that the recommendations as stated on the chart be accepted.

(Motion duly passed.)

MR. PORTER: Next, we will present for your consideration the proposed dimensions of 28 m.m. film.

PRESIDENT JONES: Is there any discussion on the dimensions for the 28 m.m. film? If not, what is your wish? (Motion made and seconded that the dimensions be accepted.)

MR. RENWICK: Before that is voted upon may I say that it seems to me anomalous to refer back to the Committee the proposed

new perforation for 35 m.m. stock and approve a similar perforation on 28 m.m. stock.

MR. JOHN JONES: The 28 m.m. has a similar perforation to the 35 m.m.

MR. COOK: The French perforation always had the fillet in the corner. Eastman has only recently adopted it. Bell & Howell had nothing to do with 28 m.m. Pathé always had a small fillet in the corner, and Eastman has recently adopted something similar. There is no reason why there should be further discussion on this.

PRESIDENT JONES: Any further discussion? If not, are you ready for the question that we accept the recommendation of the Committee on 28 m.m. positive and negative film?

(Motion duly passed.)

MR. PORTER: The 16 m.m. film seems to be coming into general use and, therefore, your Committee felt it advisable to recommend its standardization.

MR. COOK: It would seem to me that on the 16 m.m. film, as this has been originated by the Eastman Kodak Company, and, as far as I am aware, it has not been manufactured by any other company, t would be wise for us, at this early stage to adopt something definite such as the existing form of perforation and avoid any discussions of the type we have been having for the last few minutes. Unless there is some one having a decided objection to this, I make a motion that it be adopted as specified by the Eastman Kodak Company.

(Motion duly passed.)

MR. PORTER: It is the recommendation of the Standards Committee that the Society call attention to the importance of retaining the existing ratio of 3 to 4 between the height and width of the picture when introducing any new size of motion picture film in order to permit enlargement or reduction from existing sizes.

MR. BRIEFER: I move that we adopt the recommendation of the Committee. (Motion seconded.) (Passed.)

MR. PORTER: Your committee believes it desirable to establish standard dimensions both for aperture and printer masks. Mr. Jones has prepared a discussion of this question with a demonstration, and I will ask him to present it at this time.

(Mr. Jones' paper read.)

MR. GRIFFIN: Seeing these apertures projected reminds me that as machine manufacturers we are getting demands for square cornered aperture plates. I don't know what the reason is, but the theatre managements seem to think square corners are better than round ones, and I think we have shipped out a thousand in the several months on request.

MR. VINTEN: Could we have the reason why the round corner was adopted in the first place? I think it was because the early lenses were poor in the first place and did not cover well, but we usually visualize oil paintings, and so forth with a square corner.

MR. TOWNSEND: Do I understand that the idea of making a wide black border inside the projector area is under serious considerat on?

PRESIDENT JONES: Yes, that is the point under consideration.

MR. TOWNSEND: I should like to point out one serious objection to this. There are more theatres having a distorted picture owing to angle of projection than otherwise. The aperture plate is either filed to overcome the distortion or the screen masked in with black to make the sides perpendicular. If we make a black border on the film inside the projector aperture the theatres cannot overcome the Keystone effect without coming away inside the film again, and they wouldn't use the black border in this event.

MR. VINTEN: The point just made came before our committee and settled our decision.

MR. RICHARDSON: If you can find anything, which will cause the architect to use common sense in this respect I am for it. If the man will keep within reasonable bounds in projection angle the distortion will not be such that it must be removed. In some theatres the picture is as high as it is wide, and is, of course, highly distorted. Such a picture is not as pleasing to the eye as an undistorted picture. Whether it is advisable that this Society take this kind of action, I cannot say but I would not give the architect's practice a moment's consideration. They are defying the action of this society. The architect seems totally lacking in knowledge as to the requirements of projection and entirely unwilling to seek advice or information, therefore why should we consider him until such time as he shows disposition to change his attitude.

MR. GRIFFIN: I think that black border would help Mr. Richardson's and my point very much. We have been fighting to get the projection room down where it belongs so that the picture will be projected from the right point. I don't know how other companies are bothered, but we have many inquiries about projection, and they expect us to make an aperture plate to fit those conditions. With the border on the film they could only blame themselves, and I am for it.

MR. VINTEN: Another advantage of using the small camera aperture is that the camera man does get on the sheet the actual picture he photographs; nothing is cut off.

MR. JOHN JONES: The first question is shall we adopt the sizes of camera and printer apertures allowing a black border without making the picture smaller?

MR. MCNABB: It is intended to print all that is on the negative, and standardization is unnecessary. Why bring in the printer?

MR. PORTER: Because at the last meeting the Society instructed the Committee to do so.

MR. MCNABB: I think it is foolish.

DR. GAGE: It seems to me that in a way the discussion is very valuable, but I don't know what weight the decision will have. It has pointed out to the producers who have to do with taking the pictures that it is advantageous to have a black border in the print itself which

is not to exceed a certain size; I think this can then be carried out in practice. The producers do mat in and iris down the picture to a small size in order to produce certain pictorial effects, and I think the result of what has been shown here is that a desirable pictorial effect is produced by a mask not exceeding a certain size.

MR. RICHARDSON: I move that the Committee be instructed to draw up a recommendation to standardize the camera aperture or mask so that the black border will show.

(Motion seconded.)

MR. TREISS: If you standardize camera aperture and not the printing aperture, how can you get the black border—if your printer has the same aperture as your negative?

MR. JOHN JONES: You can't; it must be larger.

MR. PALMER: I think in connection with this matter we should have the discussion on the picture with the square corners. In England they use pictures with square corners. I think it has advantages, and I should like to hear a discussion on this.

PRESIDENT JONES: There is an action before the house to be voted upon before we discuss another matter. Is there any further discussion on the action to instruct our committee to standardize the camera aperture so that we shall have a black border showing? I rule that it does not involve corners.

MR. JOHN JONES: Before we put the question I should like to call attention that the aperture for the projector has been standardized with a fillet in the corner. If you standardize on the corner with the black border, shall we discontinue the round corner?

MR. GRIFFIN: As I stated before, there is getting to be a demand for square cornered aperture plates; which are we to standardize?

MR. BRIEFER: If it is only a question of the black border, why discuss the other?

PRESIDENT JONES: That is my ruling. The question is before you in the original form. I will attempt to repeat the motion—that we recommend to the Standards Committee that they recommend a standard size for camera aperture so that we have a black border.

(Motion duly passed.)

MR. JOHN JONES: We have already recommended dimensions for camera and projector aperture.

(Slide again projected.) The printer aperture can vary, but it must be large enough to take in the full picture and enough for side weave.

PRESIDENT JONES: That opens up another discussion of this point. I do not consider that the motion approves the dimensions recommended by this Committee. The motion merely instructs you to submit dimensions.

MR. PORTER: After studying the question very carefully, we have recommended dimensions which we believe are suitable. Some existing apparatus must be changed; we recommend the dimensions which Mr. Jones pointed out in the slides.

PRESIDENT JONES: As I interpret the proceeding, the Standards Committee are submitting a recommendation of dimensions. If you wish this to be reconsidered by the body as well as the question of square corners we need a motion to this effect or a motion to accept the recommendation.

MR. RICHARDSON: I did not have this before me and I had forgotten that we had recommended these dimensions (laughter). In order to get the matter before the house I move that the dimensions recommended by the Committee be adopted.

MR. VINTEN: Do those figures agree with the English dimensions?

MR. JOHN JONES: These (indicating) are the British adopted standard .725, We would adopt the same thing but we have rounded the corners; that is, the printing aperture is .757 and the projector .725 × .95

MR. PALMER: I amend Mr. Richardson's motion that the dimensions as recommended be adopted with the addition of square corners.

PRESIDENT JONES: Is there a second?

MR. GRIFFIN: Before we go too far with the adoption of these dimensions I call your attention to the fact that it does not leave much room for the tension shoes which are a definite width on all projectors; I should like to hear Mr. Bowen on this.

MR. BOWEN: The width of aperture will be a serious problem because you run into the sprocket holes and there is little leeway, and it would be ugly to see a sprocket hole projected on the screen. You have the tension shoe question to take care of.

PRESIDENT JONES: Has the Committee anything to say?

MR. JOHN JONES: This line on the chart is the same as the aperture, and you increase this five one hundred-thousandths.

MR. GRIFFIN: It will mean that projector manufacturers will have to redesign their gates because our gate is just designed to have only a certain size opening for the light to pass through.

MR. JOHN JONES: These are .902, .9055, and .908.

MR. GRIFFIN: If you change these, they will all have to be made larger in proportion.

MR. JOHN JONES: This can be done, but if you keep them standard it would be well.

MR. GRIFFIN: We must keep sight of the fact that there are forty odd projectors of ours and plenty of others on the market.

MR. RICHARDSON: I didn't understand when this was discussed that it was to involve narrowing the tension shoes, because, if that be done, you must increase the tension, and this sets up a very serious objection where a new film is concerned. As against this, new film is largely waxed or treated to some hardening process.

PRESIDENT JONES: I think it is the sense of the meeting that the black border is a good thing but there is some disagreement as to the final recommendation. I suggest that the matter be referred back to the committee.

MR. RICHARDSON: I withdraw my motion. (Second thereupon withdrawn). I move that it be referred back to the Committee.

(Motion seconded.)

MR. VINTEN: Another point in favor of this black border system is that you get two same size pictures on the sheet from two different machines. The film gives you the actual size on the sheet and not the projecting lens.

MR. MCNABB: As long as the matter is being referred back to the Committee, one more point I think might be considered—if we can have the slide, I will show you. (slide projected.) The aperture could be extended to about here (indicating), with the purpose of having the margin of the frame come out into the white line of the perforation. This would facilitate assembly of positives, particularly in fade-outs and fade-ins, where the dividing line is difficult to see.

MR. JOHN JONES: How would this interfere with the producers marking film by the perforations?

MR. MCNABB: This should not interfere, regardless of whether it be done on one or both sides of the negative.

PRESIDENT JONES: It has been moved and seconded that the matter of aperture be referred back for further consideration.

(Motion duly passed.)

MR. PORTER: The Standards Committee feels it would be a desirable thing for the Society to take some action in connection with the observation port being too small. It recommends that it be adopted as 16″ square located above the floor, the center of the port to be lowered one inch for each degree drop in angle of projection.

MR. GRIFFIN: That is a fine recommendation, but I wonder if the Committee took into consideration the fact that the laws in different parts of the country forbid anything like this.

MR. PORTER: We have considered it, and while we do not have available the details of all the laws, it is a situation which I don't think we can control. We think we are making a recommendation here for the benefit of the majority.

(Motion thereupon made and seconded that the recommendation be accepted.)

MR. PALMER: I suggest that the measurement from the floor be changed to the surface on which the operator is standing because sometimes the machine is set on a box.

MR. GRIFFIN: I disagree with Mr. Palmer on this because we are looking ahead and not correcting the existing evils; this is for new construction.

(Motion duly passed.)

MR. PORTER: That completes the part of our report pertaining to standards. If the Society wishes we will pass on to nomenclature.

MR. MCNABB: Can new business be originated at this time?

PRESIDENT JONES: It may be since the chairman has no objection.

MR. MCNABB: I suggest that consideration be given to the standardization of the film splice width for exchanges and theaters.

MR. PORTER: I think this is a good suggestion, and we shall be glad to consider it.

MR. MCNABB: I shall be glad to furnish data on this.

MR. PORTER: We shall be glad to have it and give it consideration.

MR. RICHARDSON: Either it has been discarded or there is in our practice at the present time something which is very wrong. I have brought it to the Society's attention at every meeting for three or four years. Our Standard projection speed is 60 feet of film a minute. You can't project film at that speed today. The screen brilliancy has become so great that the contrast between light and dark periods is so terrific that if you drop down to 60 you get flicker. Mr. Denison has called attention to the fact that camera speed remains 60. I don't know why, but it really seems necessary to project faster than the camera speed else the action drags. I, therefore, hold that this body should adopt a different projection speed. I believe that the projection speed today should be 70, for reasons set forth.

MR. GRIFFIN: Might I suggest that this be referred to the Standards Committee? I put this as a motion. (Motion seconded.)

DR. GAGE: I make the amendment requesting that the Committee on projection or optics make some experiments along that line and that they submit results in the form of a demonstration at the next convention.

PRESIDENT JONES: We have no committee on projection or optics.

MR. GRIFFIN: I move that such a committee be appointed.

PRESIDENT JONES: That is out of order.

MR. RICHARDSON: I call attention of Dr. Gage to the fact that we make demonstrations of this kind in the theatres every day. Mr. Denison's opinion concerning this matter should be worth hearing.

MR. DENISON: It is true that 60 feet is much too slow. For the sake of a standard it should be changed. The minimum projection speed in theatres is 75 feet a minute. I made some exhaustive tests a few years ago and found a speed of 70 feet a minute took care of every kind of action. At more than 76, the speed of the action is excessive.

MR. PORTER: This question of projection speed has been before the Society on a number of occasions and has been discussed. It seems to me we can't make it a definite standard. I think projection speed should come up under "Recommended Practice," and the Standards Committee should be glad to give this careful study.

PRESIDENT JONES: There is a motion before the house that the projector speed be referred to the Standards Committee.

(Motion duly passed.)

Discussion of Nomenclature

The Committee's recommendations concerning the terms, "action," "camera," and "change over" were agreed to without discussion.

Discussion on the rest of the Nomenclature Report was as follows:

(Recommendation of Committee that definition of "arc" be eliminated.)

DR. KELLNER: I recommend that this be laid over; that is, that it be referred back to the Committee.

(Motion duly seconded and passed.)

Cutting (Present and recommended new definitions read.)

MR. PALMER: I believe that definition is not complete. Cutting a picture means more than the elimination of unacceptable film; it means putting a picture together in such a way as to add to its dramatic value, and that is one of the very important features in cutting a picture as we understand it.

MR. RENWICK: I think the definition covers this. The thing would not be suitable unless it met this idea.

(Definition thereupon accepted.)

Opaque Projector. (Recommended to eliminate this.)

MR. NELSON: There is a paper film motion picture on the market, that reflects the picture on to the screen.

MR. GRIFFIN: I know the machine that the gentleman speaks of, but it is not in use generally, and I don't think it is applicable in this field. (Motion that the recommendation be accepted; seconded.)

DR. GAGE: I think we ought to keep the term, so I am going to vote against the recommendation.

PRESIDENT JONES: The motion has been made and seconded. Is there any discussion on this? (Motion passed.)

MR. PORTER: *Retake* (Present and recommended new definitions read.)

MR. CHANIER: The fact that the photograph is taken twice does not necessarily mean that the second is a retake.

MR. BRIEFER: I don't think it matters to us why it was retaken.

MR. DAVIDSON: I don't think we want any definitions in our minutes that are incorrect. In taking a scene over it means we have only two retakes and one print, and I think Mr. Chanier is correct.

MR. RENWICK. In those cases where three, four, and five retakes are made, is it not true that the middle one is often selected? (Motion made to accept the recommendation.)

MR. PALMER: It is true that they do take a scene four or five times and select one to go into the final picture, but they don't call them retakes. A retake is a scene taken over because something happened to the camera or the action, making it necessary to take it over.

PRESIDENT JONES: Any further discussion? There is a motion before the house to accept this; it seems there are arguments against it.

(Motion passed to refer the definition back to the Committee.)

MR. PORTER: *Scene* (Definition read.)

MR. RICHARDSON: I think the studio men should be able to give a definition for "scene."

MR. MANHEIMER: I think that could be better defined by the Camera Men's Society or the Studio Directors' Association; unfortunately we have not enough of these men in the eastern branch of the Motion Picture Engineers.

MR. BROWN: I am familiar with both organizations, and important as they are they do not formulate definitions. It is up to the Engineers Society to formulate and define, and we must accept this responsibility.

MR. RICHARDSON: While that is true, I think it is the province of the Committee to take up the matter with these men to formulate such a definition. I move that it be referred back. (Motion seconded.)

MR. GRIFFIN: There is a publication on the Pacific Coast called "The American Cinematographer," there must be some one among that membership, who could give you a definition.

(Motion thereupon duly passed that the matter be referred back to the Committee.)

MR. PORTER: *Shutter.* (Present and recommended new definitions read.)

PRESIDENT JONES: Any comments on this definition? (Motion made and seconded that it be accepted.)

MR. ROEBUCK: Would it be wise to specify "automatic"?

VOICES: No; only in that it is part of a mechanism.

PRESIDENT JONES: Further discussion? (Motion passed.)

MR. PORTER: *Spot.* (Present and recommended new definitions read.)

PRESIDENT JONES: Any comments on this definition?

MR. MANHEIMER: In studios they speak of spot lights as spots; I don't know whether this will cause confusion; the term is sort of idiomatic.

MR. GRIFFIN: I don't think that would interfere with us because the "spot" as we know it is purely as designated here. I move that it be accepted. (Motion seconded.) (Motion duly accepted.) *Stereopticon.* (Present and recommended new definitions read.)

DR. GAGE: I think if we say "stereopticon or" the word after "or" should be "magic lantern." I think we should define a single term or put in the word "magic lantern."

MR. PORTER: Stereopticon is the common term used here in America and optical lantern is that used on the other side, so that we thought they should both be put in.

(Motion passed to accept the definition as recommended by the Committee.)

MR. PORTER: *Take-up.* (Definition read.)

PRESIDENT JONES: Any comments on this definition?

(Motion passed to accept the term as recommended.)

MR. PORTER: Definitions for the following terms were recom-

mended last year but have not been adopted. *Moving Period.* Recommended definition approved without discussion. *Observation port.*) Definition read.)

PRESIDENT JONES: Any comments?

DR. GAGE: In that definition the word "projection room" is mentioned. The vote of the Society a year ago was to call it "projector room."

MR. PORTER: In answer to that I should say that inasmuch as no action was taken at the Ottawa convention the Society has not decided between projector room or projection room.

MR. PALMER: Can't we discuss the definition for "projector room" before we adopt this definition?

MR. PORTER: I think Mr. Palmer's suggestion is a good one, and if you are willing, we will pass over this definition for "observation port" and take up "projector room." (Definition read.) I might say in connection with this that it is the only one on which our committee was not finally in unanimous agreement.

MR. RICHARDSON: I move that the term "projection room" be adopted. I published just once the proposal of this society to adopt "projector room." I have here endorsements from seventeen local unions and about two thousand letters, every one of which condemns "projector room" in more or less emphatic terms, and only one has favored "projection room." I have letters here from the Philippine Islands, New Zealand, and so on. These men are all opposed to projector room.

DR. GAGE: A year ago at Atlantic City the question came up that the term "screening room" was used, and I think the Society should consider putting in a definition of "screening room." It is a room usually in connection with the studio or exchange in which motion pictures are projected for the purpose of editing them.

MR. DAVIDSON: I think perhaps there is a great deal of truth in what Mr. Richardson said about the time spent in putting across projection room, but 95% of the people still call it a booth. If we go ahead with the name "projection room" for the booth, you will force the architect to call the "projection room" a "booth." You cannot call both "projection rooms," and we will undo what Mr. Richardson is trying to accomplish.

MR. GRIFFIN: I cannot agree with Mr. Davidson because we have the opportunity of seeing many blue prints during the year covering theater plans, and I am glad to see they use "screening room" for that part of the theater, and they use "projection room" quite commonly. I agree with Mr. Richardson.

MR. BRIEFER: Regardless of what we think about it, I don't believe we could get the general public to use the term "projector room" because it is not euphonious. "Projection room" has been

adopted and has the guarantee of usage, so why should we trouble ourselves to change it?

MR. RICHARDSON: I should like to say a word. As evidence that the nomenclature of this society is followed, before we adopted projectionist there was no government using the term; there are now several states in the Union and several Canadian Provinces which have officially adopted the term projectionist, one province having officially declared the term "operator" obsolete.

MR. PALMER: We should like to decide in this meeting to change the name of "projection room" to something else, but I don't think it is within our province to do so. It has always meant a room where people go to see pictures; it is used everywhere.

MR. MANHEIMER: I don't think it makes much difference whether we receive five letters or two thousand letters. In the first place they are projectionists, not engineers or architects. I am in touch with many of the architects of studios, and I know all of them have adopted "projection room" for the room in which pictures are shown in the studio or the exchange. They will continue this, and it will only cause a lot of confusion if we adopt something else.

MR. TOWNSEND: I am not talking for or against either one, but to my mind if you call what I call a "projection room" a "projector room," it covers a room where only projectors are used and several other things are projected from a projection room besides motion pictures through a stereopticon; we have flood lights, spot lights, and so forth.

VOICES: They are all defined as projectors.

MR. RICHARDSON: The exchanges used "projection rooms" years before this society was ever thought of. It is a screening room, not a projection room, because you don't project pictures from it.

MR. MANHEIMER: The projectors are in the same room with the screens in many projection rooms.

MR. PORTER: All I can say is that this question has been up for a year and exactly the same arguments have been presented here as have been presented at previous meetings. I hope you will not refer it back to the Committee; I don't know what more we could do.

PRESIDENT JONES: The motion before the house is that the term "projection room" be adopted.

(Motion duly passed.)

MR. PORTER: That brings us back to the consideration of *observation port.* I should like to ask the other members of the Committee if they are willing to change our recommendation to "projection room." (Committee agreed.) We recommend, then, opening in the front wall of the projection room through which the projectionist observes the screen.

(Recommendation accepted.)

The recommended definition of "picture cycle" was approved without discussion.

MR. PORTER: We are now down to number 4, *projection periods.* (Definition read.)

MR. COOK: Are you talking about the stationary period of the film or of the image on the screen?

MR. PORTER: About the projection period.

MR. COOK: Then, that is the same in 4 as it is in 6; the stationary period of the picture is the same as the projection period on the screen.

MR. GRIFFIN: That is not exactly correct because the projection period is a shorter length of time than the stationary period—much shorter.

MR. COOK: Are you speaking of the screen image?

MR. GRIFFIN: Of the screen image; that is, the projection period.

PRESIDENT JONES: I should like to have Mr. Porter read the definition of "picture cycle" already adopted. (Definition read.) It seems to me, then, that that defines a series of mechanical operations and does not refer to the projection on the screen.

MR. RICHARDSON: That has no application to the projection period.

MR. GRIFFIN: Everything is correct, I should say, as it stands.

PRESIDENT JONES: Is there further discussion?

MR. RICHARDSON: I might make that more clear. When we speak of the picture cycle, we define the total mechanical cycle. When we speak of the projection period, we mean the time the picture is actually on the screen.

(Motion made and seconded that the definition be accepted as recommended.)

DR. GAGE: As taken up in Atlantic City, the definition is those periods during which the picture is projected on the screen. To those of us trying to define it, I think it is pretty clear. Whether it is more so as the total fractions of the picture cycle during which a certain thing occurs, I don't know. If we adopt that change it means another six months; if we are prepared to confirm the Atlantic City report, we could vote "no" on this proposition.

MR. RENWICK: I should like to point out with regard to the definition as it stood that there are one or two objections to it. It does not tell anybody in what terms we are to express this projection period. Secondly there is an unfortunate repetition of the word "during." The picture cycle is expressed in degrees, there is no provision as to how this period should be stated, and the proposal is that it should be expressed as the total time of projection expressed as a fraction of the picture cycle.

MR. GRIFFIN: I don't think you could do more than express it in fractions of the total time. Inasmuch as various projectors today have a different time of stationary period and projection period it is impossible for the Society to set the exact number of seconds.

MR. RICHARDSON: In addition, the width of the blades and kinds of shutters vary.

PRESIDENT JONES: Are you ready for the question?

(Motion passed to accept the definition as recommended.)

MR. PORTER: *Stationary period.* (Definition read.)

PRESIDENT JONES: Any discussion of this definition?

(Definition accepted as read.)

MR. PORTER: Your committee proposes for the first time the following new definitions:

(Definition of cooling plate read.)

MR. RICHARDSON: I think it should be "mechanism" instead of "*aperture plate,*" overheating would tend to warp the whole mechanism frame.

MR. JOHN G. JONES: I don't think there is any mechanism which will not heat if the aperture plate is overheated.

MR. RICHARDSON: That is necessarily true.

MR. ROEBUCK: I think that one of the most important elements to consider is the tension shoes and particularly the springs for the tension shoes. If they become overheated they tend to lose their temper and their tension.

MR. GRIFFIN: I agree with Mr. Roebuck. I think we could change this to read "tension devices" because that is all you are trying to keep cool; you are trying to protect the tension springs.

MR. RICHARDSON: Is it not true that in the past mechanisms warped because the projectionist removed the cooling plate? The heating of the mechanism frame sets up heavy stress. Perhaps the frame mechanism has been changed so this would not so much matter.

MR. GRIFFIN: That was true a few years ago, but we have adopted rugged construction, and I think the thing is well taken care of at this time.

MR. JOHN G. JONES: Under the heading of "aperture plate" we have included all this mechanism.

PRESIDENT JONES: I think we should take up the aperture and aperture plate definitions first.

(*Aperture.*) (Definition read.)

(Definition accepted.)

MR. PORTER: *Aperture plate* (Definition read.)

(Motion made and seconded to accept definition.)

MR. MCNABB: There are other plates besides those mentioned; for instance, camera men use what is called "auxiliary" aperture plates for viewing.

MR. RICHARDSON: That would be an "auxiliary."

PRESIDENT JONES: Any further discussion? Are you ready for the question?

(Definition duly accepted.)

MR. PORTER: We are recommending for the first time the definition of "film gate."

(Definition read.)

(Motion made and seconded to accept definition.)

MR. ROEBUCK: I think it is misleading not to include the shoes because they are a vital part of the mechanism.

MR. GRIFFIN: I don't think there is a projector made today without shoes to hold the film against the aperture plate.

MR. RENWICK: While I have no opinion on this, I think if we could do it without introducing the shoes we are able to get a definition at this time, for film gate, whereas the matter of shoes involves another definition.

MR. GRIFFIN: It is unfortunate that it would have to wait over, but I think we should have shoes in there because they are an important part of the film gate; it is the shoes I should say that hold the film.

MR. PALMER: It is not necessary for a film gate to have shoes on it because on the new amateur there are tension springs but no shoes.

MR. PORTER: I want to point out to Mr. Griffin that this definition must wait over six months in any case.

MR. DAVIDSON: Is it necessary to have "hinged or sliding"? I saw one the other day without either. There are half a dozen film gates besides that defined.

PRESIDENT JONES: A motion has been made to refer it back to the Committee.

(Motion seconded.)

DR. KELLNER: I wish members would offer us some suggestions in writing so that we shall not be in the same boat at the next meeting.

MR. GRIFFIN: We don't know all there is to know about this, but we shall be glad to help.

(Definition thereupon referred back to the Committee.)

MR. PORTER: That bring us back to the definition of *cooling plate.*

(Definition read.)

PRESIDENT JONES: Any discussion?

MR. BOWEN: I think Mr. Richardson's change in the wording of the definition should stand as he wished to make it because it is not only the aperture but all the other parts of the mechanism you want to keep cool because you are not only trying to protect the film but the shoes, the aperture plate and also the tension springs.

(Definition thereupon referred back to the Committee.)

MR. PORTER: In closing I should like to say that I wish the body would offer suggestions on these things at the present convention. I don't believe there is any necessity for rush or hurry in adopting standards or nomenclature. I think it is better to go slowly and be sure we are right before adopting anything.

(Applause.)

PRESIDENT JONES: I think this committee is to be congratulated on the work they have done, and the Society is to be congratulated on having such a committee.

MR. DAVIDSON: I think the Society has never adopted the definition for the size of lenses. At the present time the president of

our Company asked for this to be referred to the Committee for consideration. Lenses are made of slightly different sizes, and it leads to a great deal of confusion. I am perhaps speaking for more than one manufacturer, and I suggest that the Committee take this under consideration between now and the next meeting.

DR. KELLNER: We have such standards established three or four years ago.

MR. ROEBUCK: In connection with Mr. Porter's advice that the suggestion be made in connection with these definitions, may I suggest that those points which are still for discussion be written out and circulated for our convenience before the meeting is over? I should like to bring up one point in regard to the Deltor shutter. It seems to me that if we would add after "inspecting light" "at will" or "manually operated," I think the safety shutter would be distinguished from it.

PRESIDENT JONES: Mr. Porter will make note of that suggestion.

MR. RICHARDSON: The matter of lens aperture brings up the changing of construction of some projectors. Some projectors cannot accommodate the lens they should use under some conditions, with the result that the lens manufacturers are confined to a smaller diameter factor than should be used.

MR. GRIFFIN: I think Mr. Davidson made a very good point when he suggested that the lens standards be adopted, and I think I understood him correctly to mean the diameter of the lenses and that Dr. Kellner said standards were adopted three or four years ago, but I know that Bausch & Lomb are the only lens manufacturers who are putting out lenses which are not standard. I refer to the Semaphore lens, the No. 1 of which is larger than those we know as No. 1 and the Series II is smaller in diameter than those of any other make. I think some one should get other manufacturers to come to them or Bausch & Lomb should adopt the sizes used by other manufacturers. We have to furnish adapters for all projectors on the market.

MR. PORTER: I think this is an important question and I can assure you that your committee will give it careful study between now and the next meeting.

PRESIDENT JONES: I should like to inquire whether the Society desires to continue the discussion at this time. I think it would be advisable to proceed with the order of the day and I shall so rule.