Letter to the Editor

Re: A New Fastax Camera

In Mr. Waddell's recent paper[1] the following statement on optical design is to be found on page 625, top of the second column under the heading "Sprocket":

"The curvature of this sprocket face very nearly matches the change in back focus created by the oblique rays as they pass through the prism."

In reality, the sprocket design has to be related to very different conditions which are not limited to the prism alone. The cylindrical curvature of the film has to be compared with the axially symmetrical curvatures of field produced by both the lens and the prism.

Without going into mathematical details, an important aspect of optical correction in high-speed cameras can be explained by considering these curvature relationships. In rotating prism high-speed cameras the vertical aperture is generally much smaller than the horizontal aperture, so that the latter will determine the optical aberrations. The horizontal aperture represents a tangential beam along the horizontal section through the film, but it represents a sagittal beam for points along a vertical section through the film. Due to the cylindrical sprocket curvature, the optical design should balance the astigmatism of the prism and the cylindrical curvature of the film on the one side with the astigmatism of the camera lens on the other side. The following two conditions have to be fulfilled:

(A) The resultant saggital curvature of field produced by the lens and the prism together should equal the sprocket curvature.

(B) The resultant tangential field of lens and prism together should be flat.

In the case of the Fastax cameras the above conditions may require a lens with negative Petzval curvature.

In addition to these remarks, may I refer to my proposal of a gearless high-speed camera,[2] in which the cylindrical curvature of the film is concave (i.e. opposite to the convex film curvature in the Fastax cameras). This gearless feature has the particular advance, among others, that the optical correction for the concave cylindrical film curvature can be conveniently achieved in connection with a camera lens having positive Petzval curvature.

The convex sprocket curvature in Fastax cameras is an inherent drawback of the geared system, representing hardly manageable conditions from the point of view of the feasibility of optical correction.

References

1. J. H. Waddell, "Full-frame 35mm Fastax Camera," *Jour. SMPTE, 61:* 624–627, Nov. 1953; an integral part of the few closely related publications is: J. H. Waddell, "Errata," *Jour. SMPTE, 57:* 82–83, July 1951, which item was omitted in the Bibliography on High-Speed Photography, *Jour. SMPTE, 61:* 749–757, Dec. 1953.
2. John C. Kudar, "Optical problems in high-speed camera design," *Jour. SMPTE, 58:* 487–490, June 1952.

September 14, 1954 John C. Kudar
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news and reports

Papers Program 78th Convention

The general theme of the program for the 78th Semiannual Convention at Lake Placid, October 3–7, 1955, will be "COLOR IN MOTION PICTURES AND TELEVISION." It is felt that a theme involving color is particularly appropriate and in harmony with the beauty of nature at Lake Placid in early October.

Several round table discussions are being planned to attempt to evaluate some of the trends of the industry in regard to studio and laboratory practice, projection and viewing aspects, high-speed photography applications and television practice. The round table discussions will be conducted by leaders in several fields of activity.

It is planned to have a smaller number of papers than usual on the technical papers program and an attempt will be made to select subjects of timely interest in line with the general theme. A restricted papers program will permit those attending the meeting to have more time for discussion both at the sessions and in private conferences.

The Papers Committee invites your thoughtful consideration of the plans for the Fall Meeting and welcomes your suggestions with regard to subjects for papers. Author's forms may be obtained from the Chairman or anyone of the following committee members or from Society headquarters.

I. *Materials and Their Uses*, Glenn E. Matthews, Research Laboratories, Eastman Kodak Co., Rochester 4, N.Y.

II. *Studio Practice*, Arthur C. Blaney, Radio Corp. of America, 1560 N. Vine St., Hollywood 28, Calif.

III. *Laboratory Practice*, Gordon A. Chambers, Motion Picture Film Dept., Eastman Kodak Co., 343 State St., Rochester 4, N.Y.

IV. *Projection and Viewing*, Dr. Charles R. Daily, Paramount Pictures Corp., 5451 Marathon St., Hollywood 38, Calif.

V. *Television Practice*, T. Gentry Veal, Research Laboratories, Eastman Kodak Co., Kodak Park, Rochester 4, N.Y.

VI. *High-Speed Photography Symposium*, John H. Waddell, Fairchild Camera and Instr. Corp., 88-06 Van Wyck Expressway, Jamaica 1, N.Y.

Deadline date for titles and abstracts is August 1. It would be much appreciated, however, if authors would complete the author's form and send the copies in by July 1 as this will assist the Committee in the planning of the final program.

Papers will also be considered on non-color aspects of motion pictures and television.—*Glenn E. Matthews*, Program Chairman, 78th Convention.

The 77th Convention

The 77th was one of Chicago's greatest and a lot of kudos is due to the people who worked all week long behind the scenes to keep it rolling.

The Papers Program was under C. E. Heppberger who had great support from special subject chairmen — Dick Painter for high-speed photography, John Ditamore

for nontheatrical motion-picture subjects, and Bill Kusack for television. Ken Mason as motion-picture short subjects chairman had all the film shorts in order early so that all were listed by title and studio in the Final Program.

The Program was a very big one — 71 papers. Defaults were few: one paper was cancelled at the last minute, one author was ill and failed to arrange for the reading of his paper, and four were read by title only. This was a bang-up program with the high attendance of about 400 reached at the State-Lake Theatre session on wide-screen photography. The nontheatrical motion-picture sessions drew an average of 150 throughout, with other sessions ranging from 50 to 100 in attendance.

Ken Mason, who headed the Registration team, carried the largest burden of work on his capable shoulders. The new idea of preregistration was his and it is expected to become a standard procedure in the future. Ken deserves much credit for his tedious job.

Recording and Projection chairmen Robert Burns and I. F. Jacobsen cracked the whip over their selected crew and "toted the bale" themselves when necessary. Setting up and operating all the equipment is a thankless job, so publicly, our thanks to "Bobby" and "Jake." Helping on recording were Steve Welch, N. W. Rodelius and Earl Platt.

Exhibits at the 77th were highly successful and all praise is due the two men who organized them — George Oakley and Jerry Debish.

Our luncheon went off smoothly with a terrific keynote speech by Chuck Percy, President of Bell & Howell, who spoke on "World-Wide Competition Spurs Trade," a subject which he has elaborated before Congress and the public. He made his subject particularly pointed for his fellow SMPTE members with apt examples from our industry and with practical butter, cheese and oil tanker tales about survival of business abroad. All luncheon arrangements were made by Henry Ushijima with his usual aplomb.

Jerry Diebold put on a banquet which was really the social high spot of the week. The music was danceable, the floor smooth, the atmosphere heady, and a good time was had by all. Many thanks, Jerry.

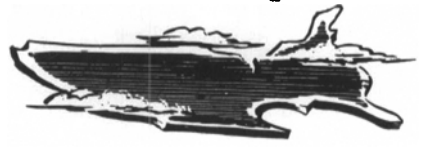
Publicity — and Miss SMPTE — came from the fertile pen of Ed Seguin ably assisted by Bob McIntyre. Messrs. McDonald, Docterman and Case comprised Ed's committee.

Hotel arrangements were completed by Larry Hanchek and our thanks to all the Central Section people who pitched in and did such a swell job — people like Harry Lange, George Colburn, Bob Herbst, Dave Ridgway and Reid Ray.

And last our thanks to the Ladies' Committee, Mesdames Townsley, Colburn, Diebold, Ray, Mason, Hanchek, Heppberger, Ushijima and Wassell.—*James L. Wassell.*

Editorial Note: The 77th Convention was thoroughly organized and run off under Local Arrangements Chairman Jim Wassell.

section reports



The Pacific Coast Section held its regular monthly meeting on Tuesday, April 19, 1955, at CBS-Television City, Hollywood. The program featured three papers which were concurrently being presented at the Semiannual Convention in Chicago. 170 members attended.

E. H. Bowlds of E. H. Bowlds Engineering Co. gave a paper entitled "Two Animation Stands of New Design." The stands were described as applicable to 16mm and 35mm single-frame or continuous photography of animated sequences. One stand features extremely flexible movements coupled with a precise system of calibrations. The second model, called "Animation Junior," is designed with great simplicity to meet the demands of television stations and nontheatrical producers.

R. A. Lindsay of Jerry Fairbanks Productions presented for Jerry Fairbanks the paper "Use of CinemaScope in 16mm Nontheatrical Films." This paper discussed the problems encountered and the solutions in filming of 16mm CinemaScope films for industrial and educational use. A 16mm CinemaScope film made for Chrysler