

M.G. TOWNSLEY

JOURNAL *of the* SOCIETY OF MOTION PICTURE ENGINEERS



INDEX

by

Subjects and
Authors

JANUARY, 1930—DECEMBER, 1935

Price \$1.00

From the collection of the

*o z n
v Prelinger m
t Library a
p*

*San Francisco, California
2007*

INDEX

of the

JOURNAL OF THE SOCIETY OF
MOTION PICTURE ENGINEERS

January, 1930—December, 1935

Classified Index.....	p. 5
Author Index.....	p. 71

Society of Motion Picture Engineers
Hotel Pennsylvania, New York, N. Y.

Copyright, 1936, by
Society of
Motion Picture Engineers
New York, N. Y.

**JOURNAL OF THE
SOCIETY OF MOTION PICTURE ENGINEERS**

Prior to January, 1930, the *Transactions* of the Society were published several times a year, beginning with 1916. A complete index of the *Transactions* was published in 1930 under the title "Aims and Accomplishments of the Society of Motion Picture Engineers." A limited number of copies of this index may be obtained from the General Office of the Society at the price of \$1.00 each.

The volume and issue numbers of the *Transactions*, and the years in which they were issued, are as follows:

<i>Vol.</i>	<i>Year</i>	<i>No.</i>	<i>Vol.</i>	<i>Year</i>	<i>No.</i>	<i>Vol.</i>	<i>Year</i>	<i>No.</i>
I	1916	1	VI	1922	14	X	1926	27
		2			15			28
		3			16			29
		4			17			30
		5			18			31
II	1917	6	VII	1923	19	XI	1927	32
		7			20			33
III	1918	8	VIII	1924	21	XII	1928	34
		9			22			35
IV	1919	10	IX	1925	23	XIII	1929	36
		11			24			37
V	1920	12	X	1926	25			38
		13			26			

Beginning with the January, 1930, issue, the JOURNAL of the Society superseded the *Transactions*, being issued monthly in two volumes a year, six issues to the volume. The volume numbers and corresponding years are as follows:

<i>Vol.</i>	<i>Year</i>	<i>Vol.</i>	<i>Year</i>
XIV	1930	XX	1933
XV		XXI	
XVI		XXII	
XVII	1931	XXIII	1934
XVIII		XXIV	
XIX	1932	XXV	1935

Back issues of the JOURNAL may be obtained from the General Office of the Society at the price of \$1.00 each. Address—Society of Motion Picture Engineers, Hotel Pennsylvania, New York, N. Y.

BACK NUMBERS OF THE TRANSACTIONS AND JOURNALS

Back numbers of the *Transactions* may be obtained from the General Office of the Society at the prices listed in the following table. Some of the issues are no longer available, and the number of copies remaining of other issues is rapidly diminishing. Those who wish to avail themselves of the opportunity of acquiring these back numbers should do so quickly, as they will not be reprinted.

No.	Price	No.	Price	No.	Price
10	\$1.00	20	\$1.25	29	\$1.25
12	1.00	21	1.25	30	1.25
13	1.00	22	1.25	32	1.25
14	1.00	23	1.25	33	2.50
15	1.00	24	1.25	34	2.50
16	2.00	25	1.25	35	2.50
17	2.00	26	1.25	36	2.50
18	2.00	27	1.25	37	3.00
19	1.25	28	1.25	38	3.00

Back numbers of the *JOURNAL* may be obtained from the General Office of the Society at the price of one dollar for each copy. Only a few hundred copies of each issue are printed in excess of the current mailing list, so that those who wish to acquire complete volumes of the *JOURNAL* should do so promptly.

JOURNAL BINDERS

Black fabrikoid binders for the *JOURNAL*, lettered in gold, may be obtained from the General Office of the Society for \$2.00 each. The purchaser's name and the volume number may be lettered in gold on the back-bone of the binder at an additional charge of fifty cents each.

CLASSIFIED INDEX

1 Aberration

A Method of Measuring Axial Chromatic Aberration in an Objective Lens, W. Herriott, **XX** (April, 1933), No. 4, p. 323.

2 Acoustics

Acoustic Control of Recording for Talking Motion Pictures, J. P. Maxfield, **XIV** (Jan., 1930) No. 1, p. 85.

Some New Aspects of Reverberation, E. W. Kellogg, **XIV** (Jan., 1930), No. 1, p. 96.

Theater Acoustics for Sound Reproduction, S. K. Wolf, **XIV** (Feb., 1930), No. 2, p. 151.

Sound-Proofing and Acoustic Treatment of RKO Stages, A. S. Ringel, **XV** (Sept., 1930), No. 3, p. 352.

One Type of Acoustic Distortion in Sound Picture Sets, R. L. Hanson, **XV** (Oct., 1930), No. 4, p. 460.

Conditions under which Residual Sound in Reverberant Rooms May Have More Than One Rate of Decay, C. F. Eyring, **XV** (Oct., 1930), No. 4, p. 528.

Aiding the Theater Patron Who Is Hard of Hearing, F. H. Graham, **XVI** (March, 1931), No. 3, p. 341.

A Truck-Mounted Laboratory for the Diagnosis of Theater Acoustic Defects, V. A. Schlenker, **XVI** (March, 1931), No. 3, p. 302.

Noise Measurement, S. K. Wolf and G. T. Stanton, **XVII** (Dec., 1931), No. 6, p. 966.

Measurements with a Reverberation Meter, V. L. Chrisler and W. F. Snyder, **XVIII** (April, 1932), No. 4, p. 479.

The Acoustics of Large Auditoriums, S. K. Wolf, **XVIII** (April, 1932), No. 4, p. 517.

Report of the Sound Committee, **XIX** (Aug., 1932), No. 2, p. 160.

Theater Noise Problems, S. K. Wolf and J. E. Tweeddale, **XIX** (Dec., 1932), No. 6, p. 499.

Musical Acoustics of Auditoriums, P. Caporale, **XX** (Feb. 1933), No. 2, p. 119.

Report of the Sound Committee, **XX** (June, 1933), No. 6, p. 500.

Some Practical Applications of Acoustics in Theaters, G. W. Baker and M. A. Smith, **XXII** (Feb., 1934), No. 2, p. 148.

Acoustical Requirements for Wide-Range Reproduction of Sound, S. K. Wolf, **XXII** (April, 1934), No. 4, p. 242.

Recent Developments in the Acoustics of Motion Picture Sound Stages, M. Rettinger, **XXIV** (May, 1935), No. 5, p. 395.

Studio Acoustics, M. Rettinger, **XXV** (Oct., 1935), No. 4, p. 331.

Modern Instruments for Acoustical Studies, E. C. Wen'e, **XXV** (Nov., 1935), No. 5, p. 389.

3 Acting

Voice and Personality in the Motion Pictures, I. L. Bradley, **XXI** (Sept., 1933), No. 3, p. 209.

4 Addresses

Presidential Address, **XV** (Aug., 1930), No. 2, p. 246.

Presidential Address, **XV** (Dec., 1930), No. 6, p. 840.

Banquet Addresses, **XV** (Aug., 1930), No. 2, p. 250.

Scientific Progress and the New Era in Motion Pictures, W. H. Hays, **XV** (Aug., 1930), p. 263.

The Engineer and His Tools, C. F. Jenkins, **XV** (Aug., 1930), No. 2, p. 260.

Banquet Speeches (Fall, 1930, Meeting), **XVI** (Feb., 1931), No. 2, p. 223.

Presidential Address (Spring, 1931, Meeting), **XVII** (Aug., 1931), No. 2, p. 241.

Banquet Speeches (Spring, 1931, Meeting), **XVII** (Sept., 1931), No. 3, p. 417.

Banquet Speeches (Fall, 1931, Meeting), **XVII** (Nov., 1931), No. 5, p. 839.

Address of Welcome (Fall, 1931, Meeting), **XVII** (Dec., 1931), No. 6, p. 895.

Presidential Address (Fall, 1931, Meeting), **XVII** (Dec., 1931), No. 6, p. 898.

Proceedings of the Semi-Annual Banquet at Washington, D. C. Oct., 1935, **XXV** (Dec., 1935), No. 6, p. 467.

5 Advertising Equipment

The Economics of Projector Lamps for Advertising Purposes, E. W. Beggs, **XXII** (Feb., 1934), No. 2, p. 127.

The Control-Frequency Principle, J. E. Jenkins and S. E. Adair, **XXII** (March, 1934), No. 3, p. 193.

6 Aerial Photography

Photographic Effects Obtained with Infra D Negative, D. R. White, **XX** (Jan., 1933), No. 1, p. 54.

7 Air-Conditioning

Air-Conditioning in Film Laboratories, A. H. Simonds and L. H. Polderman, **XVII** (Oct., 1931), No. 4, p. 604.

Silica Gel Air-Conditioning for Film Processing, E. C. Holden, **XVII** (April, 1932), No. 4, p. 471.

8 Aluminum

Reflecting Surfaces of Aluminum, J. D. Edwards, **XXIV** (Feb., 1935), No. 2, p. 126.

9 American Standards Association

(See also *Standards and Nomenclature*; and *Committee Reports, Standards and Nomenclature*.)

S.M.P.E. Requests National Standards for Motion Picture Industry, **XIX** (Oct., 1932), No. 4, p. 393.

Sectional Committee on Motion Pictures (ASA),

XXIII (July, 1934), No. 1, p. 59.

XXIII (Sept., 1934), No. 3, p. 182.

XXIII (Oct., 1934), No. 4, p. 243.

XXIV (Feb., 1935), No. 2, p. 185.

- XXIV** (April, 1935), No. 4, p. 377.
XXIV (May, 1935), No. 5, p. 464.
XXV (July, 1935), No. 1, p. 97.
XXV (Aug., 1935), No. 2, p. 198.
XXV (Oct., 1935), No. 4, p. 370.

Sixteen-Mm. Sound-Film Standardization, **XXV** (July, 1935), No. 1, p. 97.
National Standardization in America, P. G. Agnew, **XXI** (Oct., 1933), No. 4, p. 261.

10 Amplifiers

- A New Power Amplifier System, L. Thompson, **XV** (Nov., 1930), No. 5, p. 602.
A Method of Measuring Directly the Distortion in Audio-Frequency Amplifier Systems, W. N. Tuttle, **XVIII** (Feb., 1932), No. 2, p. 199.
Vacuum Tube and Photoelectric Tube Developments for Sound Picture Systems, M. J. Kelly, **XVIII** (June, 1932), No. 6, p. 761.

11 Animation

- The Production of Animated Cartoons, W. Garity, **XX** (April, 1933), No. 4, p. 309.
The History of the Animated Cartoon, E. Theisen, **XXI** (Sept., 1933), No. 3, p. 239.

12 Apertures

- Camera and Projector Apertures in Relation to Sound-on-Film Pictures, L. Cowan, **XIV** (Jan., 1930), No. 1, p. 108.
The Aperture Effect, E. D. Cook, **XIV** (June, 1930), No. 6, p. 650.
Scanning Losses in Reproduction, N. R. Stryker, **XV** (Nov., 1930), No. 5, p. 610.
Standardization of the Picture Aperture and the Camera Motor—A Needed Development, Fred Westerberg, **XVII** (Sept., 1931), No. 3, p. 395.
New Dimensional Standards, **XIX** (July, 1932), No. 1, p. 924.
Report of the Standards and Nomenclature Committee, **XIX** (Nov., 1932), No. 5, p. 477.
The Aperture Alignment Effect, E. D. Cook, **XXI** (Nov., 1933), No. 5, p. 390.

13 Apparatus

- Symposium of New Motion Picture Apparatus, **XVII** (Sept., 1931), No. 3, p. 363.
A Sound-Film Re-Recording Machine, J. J. Kuhn, **XVII** (Sept., 1931), No. 3, p. 326.
Thermionic Tube Control of Theater Lighting, B. S. Burke, **XVIII** (Jan., 1932), No. 1, p. 90.
A Method of Measuring Directly the Distortion in Audio-Frequency Amplifier Systems, W. N. Tuttle, **XVIII** (Feb., 1932), No. 2, p. 199.
Two Special Sensitometers, D. R. White, **XVIII** (March, 1932), No. 3, p. 279.
Optical Instruments and Their Application in the Motion Picture Industry, I. L. Nixon, **XVIII** (March, 1932), No. 3, p. 304.
Western Electric Noiseless Recording, H. C. Silent and J. G. Frayne, **XVIII** (May, 1932), No. 5, p. 551.

CLASSIFIED INDEX

- The Lapel Microphone and Its Application to Public Address and Announcing Systems, W. C. Jones and D. T. Bell, **XIX** (Sept., 1932), No. 3, p. 219.
- Modern Tools and Methods Used in Servicing Sound Equipment, J. Mauran, **XIX** (Sept., 1932), No. 3, p. 260.
- New Apparatus, **XX** (Jan., 1933), No. 1, p. 84.
- New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.
- A New Development in Carbon Arc Lighting, P. Mole, **XXII** (Jan., 1934), No. 1, p. 51.
- A New 35-Mm. Portable Sound Projector, H. Griffin, **XXII** (Jan., 1934), No. 1, p. 70.
- Recent Improvements in the Bell & Howell Fully Automatic Printer, A. S. Howell and R. F. Mitchell, **XXII** (Feb., 1934), No. 2, p. 115.
- Standard S.M.P.E. Visual and Sound Test-Reels, **XXII** (March, 1934), No. 3, p. 173.
- An Automatic Change-Over Device, A. Pritchard, **XXII** (March, 1934), No. 3, p. 186.
- The Rotambulator—A New Motion Picture Camera Stand, J. A. Dubray, **XXII** (March, 1934), No. 3, p. 200.
- Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.
- Recent Improvements in Equipment and Technic in the Production of Motion Pictures, E. A. Wolcott, **XXIII** (Oct., 1934), No. 4, p. 210.
- A Sweep Oscillator Method of Recording Wide Frequency-Band Response Spectra on Short Lengths of Motion Picture Film, J. Crabtree, **XXIII** (Nov., 1934), No. 5, p. 299.
- The Microdensitometer as a Laboratory Measuring Tool, W. R. Goehner, **XXIII** (Dec., 1934), No. 6, p. 318.
- A Rotating Mirror Oscilloscope, R. F. Mallina, **XXIII** (Dec., 1934), No. 6, p. 328.
- A Small Developing Machine, H. R. Kossman, **XXIII** (Dec., 1934), No. 6, p. 356.
- The New Klieglight, H. Kliegl, **XXIII** (Dec., 1934), No. 6, p. 359.
- A Physical Densitometer for Sound Processing Laboratories, F. L. Eich, **XXIV** (Feb., 1935), No. 2, p. 180.
- A Roller Developing Rack for Continuously Moving the Film during Processing by the Rack-and-Tank System, C. E. Ives, **XXIV** (March, 1935), No. 3, p. 261.
- New Motion Picture Apparatus, **XXIV** (May, 1935), No. 5, p. 450.
- Introduction to the Photographic Possibilities of Polarized Light, F. Tuttle and J. W. McFarlane, **XXV** (July, 1935), No. 1, p. 69.
- Three New Kodascopes, N. B. Green, **XXV** (Sept., 1935), No. 3, p. 271.
- A New Sound Reader and Frame Viewer, I. Serrurier, **XXV** (Sept., 1935), No. 3, p. 275.
- Arc Supply Generator for Use with Suprex Carbons, W. K. Hartman, **XXV** (Sept., 1935), No. 3, p. 278.
- A Professional 16-Mm. Projector with Intermittent Sprocket, H. A. DeVry, **XXV** (Sept., 1935), No. 3, p. 279.

- The Argentometer—An Apparatus for Testing for Silver in a Fixing Bath, W. J. Weyerts and K. C. D. Hickman, **XXV** (Oct., 1935), No. 4, p. 335.
- Ozaphane Film and the Cinelux Projector, A. M. Cheftel, **XXV** (Oct., 1935), No. 4, p. 358.
- A High-Speed Camera, C. T. Burke, **XXV** (Oct., 1935), No. 4, p. 360.
- The Wall Motion Picture Camera, H. Griffin, **XXV** (Oct., 1935), No. 4, p. 363.
- Lighting for Technicolor Motion Pictures, C. W. Handley, **XXV** (Nov., 1935), No. 5, p. 423.
- A New High-Fidelity Sound Head, F. J. Loomis and E. W. Reynolds, **XXV** (Nov., 1935), No. 5, p. 449.

14 Applied Motion Picture Photography

(See also *Industrial Cinematography*; *Medical Photography*; and *Technical Cinematography*.)

- Some Applications of the Comparison Microscope in the Film Industry, O. E. Conklin, **XVI** (Feb., 1931), No. 2, p. 159.
- The Call Announcer: A Telephone Application of Sound Picture Ideas, O. M. Glunt, **XVI** (March, 1931), No. 3, p. 362.
- The World's Most Powerful Microscope, F. F. Lucas, **XVI** (April, 1931), No. 4, p. 445.
- Time-Lapse Cinematography in Research, R. Evans, **XVI** (May, 1931), No. 5, p. 547.
- Industry Adopts the Motion Picture Camera, A. H. Mogensen, **XVI** (May, 1931), No. 5, p. 563.
- Cinematographic Analysis of Mechanical Energy Expenditure in the Sprinter, C. A. Morrison and W. O. Fenn, **XVI** (May, 1931), No. 5, p. 603.
- Sound Pictures in the Solution of Solar Eclipse Problems, F. P. Brackett, **XVII** (Aug., 1931), No. 2, p. 235.
- A New Way of Splitting Seconds, C. H. Fetter, **XX** (April, 1933), No. 4, p. 332.
- A High-Speed Camera, C. T. Burke, **XXV** (Oct., 1935), No. 4, p. 360.

15 Architecture

(See *Theater Design*.)

16 Arcs

- Characteristics of High-Intensity Arcs, D. B. Joy and A. C. Downes, **XIV** (March, 1930), No. 3, p. 291.
- Elimination of Commutator Ripple from Direct-Current Generators, O. K. Buck and J. C. Albert, **XIV** (April, 1930), No. 4, p. 399.
- Radiation Characteristics of Two Mercury Arcs, F. Benford, **XIV** (April, 1930), No. 4, p. 404.
- Operation of Projection Arcs from Motor-Generator Sets, C. C. Dash, **XV** (Nov., 1930), No. 5, p. 702.
- Some Causes for Variations in the Light and Steadiness of High-Intensity Carbons, D. B. Joy and A. C. Downes, **XVI** (Jan., 1931), No. 1, p. 61.
- Properties of Low-Intensity Reflecting Arc Projector Carbons, D. B. Joy and A. C. Downes, **XVI** (June, 1931), No. 6, p. 684.

- The Mercury Arc as a Source of Intermittent Light, H. E. Edgerton, **XVI** (June, 1931), No. 6, p. 735.
- A Reflector Arc Lamp for Portable Projectors, H. H. Strong, **XVIII** (June, 1932), No. 6, p. 752.
- A New Alternating-Current Projection Arc, D. B. Joy and A. C. Downes, **XXI** (Aug., 1933), No. 2, p. 116.
- Direct-Current High-Intensity Arcs with Non-Rotating Positive Carbons, D. B. Joy and A. C. Downes, **XXII** (Jan., 1934), No. 1, p. 42.
- A New Development in Carbon Arc Lighting, P. Mole, **XXII** (Jan., 1934), No. 1, p. 51.
- A New White-Flame Carbon for Photographic Light, D. B. Joy, F. T. Bowditch, and A. C. Downes, **XXII** (Jan., 1934), No. 1, p. 58.
- Operating Characteristics of the High-Intensity A-c. Arc for Motion Picture Projection, D. B. Joy and E. R. Geib, **XXIII** (July, 1934), No. 1, p. 27.
- The Relation of the High-Intensity A-c. Arc to the Light on the Projection Screen, D. B. Joy and E. R. Geib, **XXIII** (July, 1934), No. 1, p. 35.
- Report of the Projection Practice Committee, **XXIV** (Jan., 1935), No. 1, p. 35.
- The Non-Rotating High-Intensity D-c. Arc for Projection, D. B. Joy and E. R. Geib, **XXIV** (Jan., 1935), No. 1, p. 47.
- High-Intensity Mercury and Sodium Arc Lamps, L. J. Buttolph, **XXIV** (Feb., 1935), No. 2, p. 110.
- A Motor-Generator for the Non-Rotating High-Intensity Arc, **XXIV** (May, 1935), No. 5, p. 450.
- Arc Supply Generator for Use with Suprex Carbons, W. K. Hartman, **XXV** (Sept., 1935), No. 3, p. 278.
- The Photographic Effectiveness of Carbon Arc Studio Light-Sources, F. T. Bowditch and A. C. Downes, **XXV** (Nov., 1935), No. 5, p. 375.
- The Radiant Energy Delivered on Motion Picture Sets from Carbon Arc Studio Light-Sources, F. T. Bowditch and A. C. Downes, **XXV** (Nov., 1935), No. 5, p. 383.

11 Artistic Considerations

- Rectangle Proportions in Pictorial Composition, L. A. Jones, **XIV** (Jan., 1930), No. 1, p. 32.
- Art and Science in Sound-Film Production, J. W. Coffman, **XIV** (Feb., 1930), No. 2, p. 172.
- Voice and Personality in the Motion Pictures, I. L. Bradley, **XXI** (Sept., 1933), No. 3, p. 209.

12 Auditory Perspective

- Transmission and Reproduction of Speech and Music in Auditory Perspective, H. Fletcher, **XXII** (May, 1934), No. 5, p. 314.

13 Awards

(See *Journal Award* and *Progress Medal Award*.)

14 Background Projection

- Background Projection for Process Cinematography, G. G. Popovici, **XXIV** (Feb., 1935), No. 2, p. 102.

21 Bakelite

Laminated Bakelite in the Motion Picture Industry, R. L. Foote, **XXIV** (April, 1935), No. 4, p. 354.

22 Brightness

(See *Committee Reports, Screen Brightness.*)

23 Cameras

Camera and Projector Apertures in Relation to Sound-on-Film Pictures, L. Cowan, **XIV** (Jan., 1930), No. 1, p. 108.

Film-Numbering Device for Cameras and Recorders, M. W. Palmer, **XIV** (March, 1930), No. 3, p. 327.

Camera Mechanism, Ancient and Modern, A. S. Newman, **XIV** (May, 1930), No. 5, p. 534.

Some Considerations in the Design of Sound-Proof Camera Housings, L. E. Clark, **XV** (Aug., 1930), No. 2, p. 165.

A Note on the Need for Re-Designing the Auxiliary Camera View-Finder, F. F. Baker, **XVII** (Sept., 1931), No. 3, p. 398.

Standardization of the Picture Aperture and the Camera Motor—A Needed Development, F. Westerberg, **XVII** (Sept., 1931), No. 3, p. 395.

The Camera of Tomorrow, I. B. Hoke, **XVII** (Sept., 1931), No. 3, p. 401.

Problems of the Cameraman, L. W. Physioc, **XVII** (Sept., 1931), No. 3, p. 406.

New Apparatus, **XX** (Jan., 1933), No. 1, p. 84.

The Photronic Photographic Exposure Meter, W. N. Goodwin, Jr., **XX** (Feb., 1933), No. 2, p. 95.

A Silent Camera, H. R. Kossman, **XXI** (Nov., 1933), No. 5, p. 420.

The Ciné-Kodak Special, O. Wittel, J. Stoiber, and F. E. Tuttle, **XXI** (Dec., 1933), No. 6, p. 478.

A Non-Intermittent High-Speed 16-Mm. Camera, F. E. Tuttle, **XXI** (Dec., 1933), No. 6, p. 474.

New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.

A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph, W. K. L. Dickson, **XXI** (Dec., 1933), No. 6, p. 435.

A 16-Mm. Sound Recording Camera, C. N. Batsel, L. T. Sachtleben, and G. L. Dimmick, **XXIII** (Aug., 1934), No. 2, p. 87.

A High-Speed Camera, C. T. Burke, **XXV** (Oct., 1935), No. 4, p. 360.

The Wall Motion Picture Camera, H. Griffin, **XXV** (Oct., 1935), No. 4, p. 363.

24 Cartoons

The Production of Animated Cartoons, W. Garity, **XX** (April, 1933), No. 4, p. 309.

The History of the Animated Cartoon, W. E. Theisen, **XXI** (Sept., 1933), No. 3, p. 239.

25 Change-Overs

New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.

An Automatic Change-Over Device, A. Pritchard, **XXII** (March, 1934), No. 3, p. 186.

21 Cinematography

(See also *Medical Cinematography*; *High-Speed Cinematography*; and *Technical Cinematography*.)

The Depicting of Motion Prior to the Advent of the Screen, E. Theisen, **XX** (March, 1933), No. 3, p. 249.

Early Stages of Kinematography, C. H. Bothamley, **XX** (March, 1933), No. 3, p. 263.

Background Projection for Process Cinematography, G. G. Popovici, **XXIV** (Feb., 1935), No. 2, p. 102.

Roentgen Cinematography, R. F. James, **XXIV** (March, 1935), No. 3, p. 233.

Historical Notes on X-Ray Cinematography, R. F. Mitchell and L. G. Cole, **XXIV** (April, 1935), No. 4, p. 333.

On the Relation between the Shape of the Projected Picture, the Areas of Vision, and Cinematographic Technic, B. Schlanger, **XXIV** (May, 1935), No. 5, p. 402.

21 Cinephotomicrography

(See also *Micro Cinematography*.)

The World's Most Powerful Microscope, F. F. Lucas, **XVI** (April, 1931), No. 4, p. 445.

A Simple Cinephotomicrographic Apparatus, A. C. Hardy and O. W. Pineo, **XVII** (Aug., 1931), No. 2, p. 216.

21 Cleaning Motion Picture Film

A New Buffing Machine, A. S. Dworsky, **XV** (Nov., 1930), No. 5, p. 676.

21 Color Cinematography

(See also *Committee Reports*, *Color*.)

Some Experiments in Medical Motion Pictures in Color, H. B. Tuttle, **XV** (Aug., 1930), No. 2, p. 193.

A Motion Picture Made in 1916 by a Two-Color Subtractive Process, G. E. Matthews, **XV** (Nov., 1930), No. 5, p. 624.

Three-Color Subtractive Cinematography, P. D. Brewster and P. Miller, **XVI** (Jan., 1931), No. 1, p. 49.

Processes of Photography in Natural Colors, G. E. Matthews, **XVI** (Feb., 1931), No. 2, p. 188.

Color, H. B. Franklin, **XVII** (July, 1931), No. 1, p. 3.

The Multicolor Process, R. M. Otis, **XVII** (July, 1931), No. 1, p. 5.

The Multicolor Laboratory, B. Burns, **XVII** (July, 1931), No. 1, p. 11.

The Handschieg and Pathéchrome Color Processes, W. V. D. Kelley, **XVII** (Aug., 1931), No. 2, p. 230.

Some Color Problems, G. Geoghegan, **XVIII** (May, 1932), No. 5, p. 619.

Remarks on the Making of Sound Records on Lenticular Color Films, A. P. Richard, **XX** (Jan., 1933), No. 1, p. 60.

The Optical-Photographic Principles of the Agfacolor Process, F. Weil, **XX** (April, 1933), No. 4, p. 301.

The Use of Mazda Lamps for Color Photography, R. E. Farnham, **XXI** (Aug., 1933), No. 2, p. 166.

The Morgana Color Process, J. A. Dubray, **XXI** (Nov., 1933), No. 5, p. 403.

- Color for Industrial and Business Films, R. H. Ray and H. W. Cress, **XXII** (Feb., 1934), No. 2, p. 144.
- The English Dufaycolor Film Process, W. H. Carson, **XXIII** (July, 1934), No. 1, p. 14.
- Sixteen-Mm. Sound Pictures in Color, C. N. Batsel and L. T. Sachtleben, **XXIII** (Aug., 1934), No. 2, p. 82.
- The Kodachrome Process for Amateur Cinematography in Natural Colors, L. D. Mannes and L. Godowsky, Jr., **XXV** (July, 1935), No. 1, p. 65.
- The Technicolor Process of Three-Color Cinematography, J. A. Ball, **XXV** (Aug., 1935), No. 2, p. 127.
- Color Consciousness, N. M. Kalmus, **XXV** (Aug., 1935), No. 2, p. 139.
- Some Problems in Directing Color Pictures, R. Mamoulian, **XXV** (Aug., 1935), No. 2, p. 148.
- Lighting for Technicolor Motion Pictures, C. W. Handley, **XXV** (Nov., 1935), No. 5, p. 423.

30 Coloring

- Hand-Coloring of Motion Picture Film, G. F. O. Brock, **XVI** (June, 1931), No. 6, p. 751.

31 Committee Reports

Color

- XV** (Nov., 1930), No. 5, p. 721.
- XVI** (Jan., 1931), No. 1, p. 97.
- XVII** (July, 1931), No. 1, p. 116.
- XVIII** (June, 1932), No. 6, p. 792.
- XXIV** (Jan., 1935), No. 1, p. 29.
- XXIV** (May, 1935), No. 5, p. 432.
- Commercial color systems.
- Commercial color systems.
- Commercial color systems, International Society color council, 1930 color patents, Classification of color patents.
- Present status of color, Commercial color systems.
- Nomenclature and standardization of color.
- Glossary of color photography.

Exchange Practice

- XIX** (July, 1932), No. 1, p. 925.
- XIX** (Sept., 1932), No. 3, p. 298.
- XIX** (Oct., 1932), No. 4, p. 395.
- XX** (March, 1933), No. 3, p. 199.
- XX** (March, 1933), No. 3, p. 277.
- XXII** (May, 1934), No. 5, p. 332.
- XXII** (June, 1934), No. 6, p. 386.
- XXV** (Nov., 1935), No. 5, p. 462.
- Scope of work.
- Report on current practices in handling release prints in exchanges.
- 1700-ft. vs. 2000-ft. release print reels.
- Release print reel length.
2000-ft. reel.

Historical and Museum

- XVI** (Jan., 1931), No. 1, p. 102.
- Plans for motion picture museum, Eugene A. Lauste, Jean A. LeRoy.

- XVII** (July, 1931), No. 1, p. 46.
XVII (Sept., 1931), No. 3, p. 448.
- XVII** (Oct., 1931), No. 4, p. 632.
XVII (Oct., 1931), No. 4, p. 655.
- XVII** (Dec., 1931), No. 6, p. 1060.
- XIX** (Aug., 1932), No. 2, p. 203.
- XIX** (Oct., 1932), No. 4, p. 396.
- XIX** (Nov., 1932), No. 5, p. 493.
XX (March, 1933), No. 3, p. 276.
- XX** (June, 1933), No. 6, p. 531.
- XXII** (Jan., 1934), No. 1, p. 13.
- XXIV** (Jan., 1935), No. 1, p. 31.

Journal

- XVI** (Jan., 1931), No. 1, p. 90.

Journal Award

- XVIII** (March, 1932), No. 3, p. 410.
XVIII (May, 1932), No. 5, p. 690.
XXIII (Oct., 1934), No. 4, p. 243.
XXIII (Dec., 1934), No. 6, p. 367.
XXV (Dec., 1935), No. 6, p. 467.

- L. A. A. LePrince.
 Progress report, Historical bibliography, Poulsen telephone.
 Eugene A. Lauste.
 Articles on the settlement of the high-vacuum electron tube patents (R. A. Milliken and W. R. Ballard).
 Recommendation of J. A. LeRoy and E. A. Lauste for recognition, Progress report.
 Motion picture exhibit of the Los Angeles Museum.
 New exhibits at Los Angeles Museum.
 Eastern motion picture exhibit.
 New accessions to Los Angeles Museum.
 Description of Los Angeles Museum exhibit.
 Further description of Los Angeles Museum exhibit.
 New accessions to Los Angeles Museum exhibit.

Laboratory Practice

- XIX** (Sept., 1932), No. 3, p. 299.
XIX (Oct., 1932), No. 4, p. 395.
XX (March, 1933), No. 3, p. 183.
- XXII** (Jan., 1934), No. 1, p. 3.

- Regulations pertaining to Award.
 Regulations pertaining to Award.
- Awards for 1933.
 Proceedings of the Semi-Annual Banquet at Washington, D. C., October 23, 1935.

Projects

Projects.

Report on current practices in handling and treating exposed and unexposed film.

Current practices in development of negative and positive film, Bibliography.

Membership and Subscription

- XVI** (Feb., 1931), No. 2, p. 242.
XVI (May, 1931), No. 5, p. 632.

- XVII** (Sept., 1931), No. 3, p. 452.
XXII (March, 1934), No. 3, p. 209.
XXII (May, 1934), No. 5, p. 333.

Reclassification of membership.

Non-Theatrical Equipment

- XIX** (Aug., 1932), No. 2, p. 199.

XXI (July, 1933), No. 1, p. 16.
XXIII (July, 1934), No. 1, p. 9.
XXIV (Jan., 1935), No. 1, p. 23.
XXV (Dec., 1935), No. 6, p. 541.

Interchangeability of lenses, Semi-professional uses, Screen sizes, Film slides, Lantern slide dimensions
Projector lamp standardization, Screen illumination.
General survey of non-theatrical field.
Continuation of survey.
German specifications for non-theatrical equipment.

Papers

- XVI** (Feb., 1931), No. 2, p. 243.
XVI (June, 1931), No. 6, p. 787.
XX (March, 1933), No. 3, p. 275.
XXIV (April, 1935), No. 4, p. 377.

Preservation of Film

- XX** (June, 1933), No. 6, p. 523.

Recommended methods and equipment, Report on German Government methods.

Progress

- XIV** (Feb., 1930), No. 2, p. 222.
XV (July, 1930), No. 1, p. 68.
XV (Dec., 1930), No. 6, p. 759.
XVI (Feb., 1931), No. 2, p. 244.
XVI (May, 1931), No. 5, p. 631.
XVII (July, 1931), No. 1, p. 67.
XVII (Dec., 1931), No. 6, p. 906.
XVIII (Feb., 1932), No. 2, p. 252.
XIX (Aug., 1932), No. 2, p. 117.
XX (June, 1933), No. 6, p. 459.
XXII (June, 1934), No. 6, p. 341.
XXV (July, 1935), No. 1, p. 3.

Semi-Annual report.
Semi-Annual report.
Semi-Annual report.

Semi-Annual report
Semi-Annual report.
Plan of work.
Semi-Annual report.
Semi-Annual report.
Semi-Annual report.
Semi-Annual report.

Progress Medal Award

- XVIII** (March, 1932), No. 3, p. 411.
XVIII (May, 1932), No. 5, p. 691.
XXIV (April, 1935), No. 4, p. 378.
XXIV (June, 1935), No. 6, p. 554.
XXV (July, 1935), No. 1, p. 98.

Regulations pertaining to Award.
Regulations pertaining to Award
Description of Award Medal.

XXV (Dec., 1935), No. 6, p. 467.

Proceedings of the Semi-Annual Banquet at Washington, D. C., October 23, 1935. Awards for 1934.

Projection and Sound Reproduction

(See also *Projection Practice* and *Sound*.)

XV (Oct., 1930), No. 4, p. 550.

Screen characteristics, Fire prevention, Remote volume control.

XVI (May, 1931), No. 5, p. 623.

Standard release print, Fire prevention, Analysis of sound reproduction quality and defects in equipment.

Projection Practice

(See also *Projection and Sound Reproduction*.)

XIV (April, 1930), No. 4, p. 444.

Ventilation.

XVI (March, 1931), No. 3, p. 368.

Formation of new Committee, Personnel.

XVI (April, 1931), No. 4, p. 493.

Endorsement of standard release print.

XVI (May, 1931), No. 5, p. 630.

Projection room lay-outs and specifications, Difficulties in projection and reproduction, Monitoring and sound control, Projection room maintenance.

XVI (June, 1931), No. 6, p. 789.

Film mutilation, Processing of prints, Resolution to President Crabtree.

XVII (July, 1931), No. 1, p. 134.

XVII (Aug., 1931), No. 2, p. 245.

XVIII (Jan., 1932), No. 1, p. 107.

Equalization of projector outputs, Testing circuit continuity, Release print problems, Supervision.

XVIII (Jan., 1932), No. 1, p. 135.

Theater Problems of the Release Print.

XVIII (April, 1932), No. 4, p. 539.

Projects

XVIII (May, 1932), No. 5, p. 689.

SMPE test-reel: optical and sound sections, Projection optical alignment, Print density, Change-over marks.

XIX (Aug., 1932), No. 2, p. 184.

New projects, Personnel of projection rooms.

XIX (Nov., 1932), No. 5, p. 407.

XX (Feb., 1933), No. 2, p. 178.

XX (April, 1933), No. 4, p. 362.

XXI (July, 1933), No. 1, p. 84.

XXI (Aug., 1933), No. 2, p. 89.

XXI (Oct., 1933), No. 4, p. 347.

XXII (Jan., 1934), No. 1, p. 11.

XXII (Feb., 1934), No. 2, p. 153.

- XXII** (March, 1934), No. 3, p. 173. Standard SMPE Visual and Sound Reels.
- XXII** (March, 1934), No. 3, p. 212. Release print reel length.
- XXII** (May, 1934), No. 5, p. 332. Reel lengths, SMPE test-reels.
- XXII** (June, 1934), No. 6, p. 379.
- XXIII** (Oct., 1934), No. 4, p. 243.
- XXIV** (Jan., 1935), No. 1, p. 35. Suprex carbons Power sources, Illumination.
- XXIV** (Jan., 1935), No. 1, p. 92.
- XXIV** (March, 1935), No. 3, p. 281.
- XXIV** (April, 1935), No. 4, p. 377.
- XXIV** (June, 1935), No. 6, p. 553.
- XXV** (Oct., 1935), No. 4, p. 341. Revised projection room plans.
- XXV** (Nov., 1935), No. 5, p. 462. 2000-ft. reel.

Projection Screen Brightness

(See also *Projection Screens*.)

- XX** (March, 1933), No. 3, p. 277.
- XXV** (Sept., 1935), No. 3, p. 269.

Scope of work, Screen brightness symposium planned.

Projection Screens

(See also *Projection Screen Brightness*.)

- XVI** (April, 1931), No. 4, p. 492.
- XVI** (June, 1931), No. 6, p. 788.
- XVII** (Sept., 1931), No. 3, p. 437.

Personnel.

Manufacture, Mounting, size, and viewing distance, Maintenance, Reflection factors, Sound transmission tests and tolerances.

Light reflection, Deterioration, Tests for preferred screen brightness (Sectional meeting of Society), Rear projection.

Projects for study.

New types, Maintenance and deterioration, Pigments, Light-measuring devices, Selection.

Standardization of screen sizes, Reflectivity.

Recommended sizes, screen image distortion, Reflectivity and Brightness, Comparison papers, Perforations.

- XVIII** (Feb., 1932), No. 2, p. 242.

- XVIII** (April, 1932), No. 4, p. 538.
- XIX** (Aug., 1932), No. 2, p. 191.

- XX** (March, 1933), No. 3, p. 277.

- XX** (April, 1933), No. 4, p. 362.
- XX** (June, 1933), No. 6, p. 510.

- XXIII** (Dec., 1934), No. 6, p. 387.

Projection Theory

XVI (May, 1931), No. 5, p. 631.
 XVII (July, 1931), No. 1, p. 129.

XVIII (Jan., 1932), No. 1, p. 113.
 XIX (Oct., 1932), No. 4, p. 396.
 XX (June, 1933), No. 6, p. 521.

Personnel, plans.
 Non-intermittent projection, Rear projection, Angle of view, Wide-screen and anamorphote systems, Fatigue.

Monograph planned on theory of projection.
 Progress report.

Publicity

XVI (Jan., 1931), No. 1, p. 95.
 XVI (May, 1931), No. 5, p. 632.

Sound

XVI (May, 1931), No. 5, p. 633.
 XVI (June, 1931), No. 6, p. 788.
 XVII (Aug., 1931), No. 2, p. 267.

Personnel, Present and future projects.

Status report—Horns, Baffles, Reflectors, Camera silencers, Noiseless recording, Acoustics, Preservation, Theater and home equipment; Items for further investigation—Sound-track dimensions, Separate film for sound, Volume control in recording, Film development.

New Projects.
 Desirable frequency range, Flatness of recording and reproducing characteristics.

XVIII (March, 1932), No. 3, p. 410.
 XVIII (April, 1932), No. 4, p. 526.

XVIII (May, 1932), No. 5, p. 689.
 XIX (July, 1932), No. 1, p. 924.
 XIX (Aug., 1932), No. 2, p. 160.

XX (March, 1933), No. 3, p. 276.
 XX (June, 1933), No. 6, p. 500.

XXIII (July, 1934), No. 1, p. 6.

XXIII (Nov., 1934), No. 5, p. 305.
 XXIV (June, 1935), No. 6, p. 554.
 XXV (Oct., 1935), No. 4, p. 353.

Auditorium acoustics, Relation between studio and theater acoustics, Compensation for losses, Desirable volume range, Bibliography.

Frequency extension, Review rooms, Processing, Film economy, Acoustics between theater and studio. Standards of recording and reproduction, Standard frequency reference film.

Uniformity of recording, frequency

Standards and Nomenclature(See also *American Standards Association.*)**XIV** (Jan., 1930), No. 1, p. 122.**XIV** (May, 1930), No. 5, p. 545.**XV** (Aug., 1930), No. 2, p. 160.**XV** (Dec., 1930), No. 6, p. 818.**XVI** (June, 1931), No. 6, p. 789.**XVII** (Sept., 1931), No. 3, p. 431.**XVII** (Nov., 1931), No. 5, p. 819.**XVIII** (Feb., 1932), No. 2, p. 273.**XVIII** (March, 1932), No. 3, p. 409.**XVIII** (April, 1932), No. 4, p. 538.**XVIII** (May, 1932), No. 5, p. 690.**XIX** (July, 1932), No. 1, p. 924.**XIX** (Sept., 1932), No. 3, p. 298.**XIX** (Nov., 1932), No. 5, p. 477.**XX** (Jan., 1933), No. 1, p. 91.**XX** (Feb., 1933), No. 2, p. 178.**XX** (March, 1933), No. 3, p. 276.**XX** (June, 1933), No. 6, p. 505.**XXI** (July, 1933), No. 1, p. 84. X**XXI** (Oct., 1933), No. 4, p. 347.**XXII** (Jan., 1934), No. 1, p. 17. X

reference standard, processing characteristics of sound-film, acoustic measurements.

Safety film, Scanning slit, Notching negatives, Sprockets, Titles, Wide film, Projection aperture.

Standards adopted.

Safety code for projection, Wide-film dimensions.

Projector and camera speed, Standard release print, Screen brightness, negative notching, Wide-film dimensions.

Wide-film dimensions.

Glossary of technical terms used in the motion picture industry.

Approval of new projector and camera apertures, 16-mm. standards.

Adoption of new aperture standards by Society, 16-mm. proposals reconsidered.

16-mm. sound-film lay-outs, Projection speed, Sound lead, 35-mm. apertures, Performance tests of sound screens.

16-mm. proposals submitted to Society for validation.

35-mm. and 16-mm. standards approved by Board of Governors.

Standardization procedure, International relations.

Unit of photographic intensity, Principle of non-intermittency in sensitometry, SMPE standard perforation approved.

Standard SMPE film perforation, Unit of photographic intensity, Principle of intermittency in sensitometry.

- XXII** (Jan., 1934), No. 1, p. 79.
XXII (May, 1934), No. 5, p. 333.
XXIII (July, 1934), No. 1, p. 3.
XXIII (Oct., 1934), No. 4, p. 243.
XXIII (Nov., 1934), No. 5, p. 247.
XXIV (Jan., 1935), No. 1, p. 16.
XXIV (Jan., 1935), No. 1, p. 92.
XXIV (May, 1935), No. 5, p. 463.
XXV (July, 1935), No. 1, p. 97.
XXV (Aug., 1935), No. 2, p. 192.
XXV (Nov., 1935), No. 5, p. 461.
- German 16-mm. sound-film proposals.**
Standards adopted by the SMPE. Stresa (Italy) conference on 16-mm. sound-film standards.
Submission of SMPE standards to American Standards Association, New projects.
16-mm. sound-film standardization in Europe.
New projects, Sectional Committee on Motion Pictures.
New projects.

Studio Lighting

- XV** (Nov., 1930), No. 5, p. 716.
XVI (Jan., 1931), No. 1, p. 96.
XVI (Feb., 1931), No. 2, p. 245.
XVI (April, 1931), No. 4, p. 492.
XVII (Oct., 1931), No. 4, p. 645.
XVIII (May, 1932), No. 5, p. 666.
XX (June, 1933), No. 6, p. 517.
XXV (Nov., 1935), No. 5, p. 432.
- Intensity measurements, Arc noises, Bibliography.**
Progress report.
Questionnaire on current lighting practices.
Results of questionnaire; Characteristics of arc, gaseous tube, and incandescent sources.
General lighting devices, Modeling lighting devices, Choke coils.
Current studio practice, Light-sources.
Illuminants, Characteristics, Equipment.

Theater Lighting

- XIV** (April, 1930), No. 4, p. 441.
XV (Nov., 1930), No. 5 p. 725.
XIX (Feb., 1931), No. 2, p. 239.
- Visual comfort scale of lighting.**
Progress report.
Brightness survey of 30 theaters.

Ways and Means

- XVIII** (Feb., 1932), No. 2, p. 274.
XIX (July, 1932), No. 1, p. 926.

Composite Photography

- Dunning Process and Process Backgrounds, C. H. Dunning, **XVII** (Nov., 1931), No. 5, p. 743.
Special Process Technic, V. Walker, **XVIII** (May, 1932), No. 5, p. 662.
Process Photography, G. A. Chambers, **XVIII** (June, 1932), No. 6, p. 782.

Composite Photographic Processes, H. D. Hineline, **XX** (April, 1933), No. 4, p. 283.

33 Constitution and By-Laws

Constitution and By-Laws as Amended October, 1929, and May, 1930, **XV** (July, 1930), No. 1, p. 136.

New Amendments, **XIX** (Aug., 1932), No. 2, p. 215.

Addition to By-Law VII, **XX** (May, 1933), No. 5, p. 454.

34 Continuous Projectors

(See *Projectors, Continuous.*)

35 Decibel

The Decibel in the Motion Picture Industry, V. C. Hall, **XVIII** (March, 1932), No. 3, p. 292.

36 Defects in Film Resulting from Processing

Effect of the Water Supply in Processing Motion Picture Film, J. I. Crabtree and G. E. Matthews, **XVI** (April, 1931), No. 4, p. 437.

Directional Effects in Continuous Film Processing, J. Crabtree, **XVIII** (Feb., 1932), No. 2, p. 207.

Directional Effects in Sound Film Processing—II, J. Crabtree and J. H. Wad-dell, **XXI** (Nov., 1933), No. 5, p. 351.

37 Densitometry

(See also *Microdensitometers and Sensitometry.*)

The Relation between Diffuse and Specular Density, C. Tuttle, **XX** (March, 1933), No. 3, p. 228.

A Physical Densitometer for Sound Processing Laboratories, F. L. Eich, **XXIV** (Feb., 1935), No. 2, p. 180.

38 Development, Photographic

(See also *Committee Reports, Laboratory Practice; and Processing.*)

A Quick Test for Determining the Degree of Exhaustion of Developers, M. L. Dundon, G. H. Brown, and J. G. Capstaff, **XIV** (April, 1930), No. 4, p. 389.

The Processing of Variable-Density Sound Records, R. F. Nicholson, **XV** (Sept., 1930), No. 3, p. 374.

A Replenishing Solution for a Motion Picture Positive Film Developer, J. I. Crabtree and C. E. Ives, **XV** (Nov., 1930), No. 5, p. 627.

A Method for Quantity Developing of Motion Picture Films, C. R. Hunter and R. M. Pierce, **XVII** (Dec., 1931), No. 6, p. 954.

Directional Effects in Continuous Film Processing, J. Crabtree, **XVIII** (Feb., 1932), No. 2, p. 207.

The Mechanism of Hypersensitization, B. H. Carroll and D. Hubbard, **XVIII** (May, 1932), No. 5, p. 600.

Time-and-Temperature *vs.* the Test System for Development of Motion Pic-ture Negatives, W. Leahy, **XVIII** (May, 1932), No. 5, p. 649.

Variation of Photographic Sensitivity with Different Light-Sources, R. Davis and G. K. Neeland, **XVIII** (June, 1932), No. 6, p. 732.

- Variation of Photographic Sensitivity with Development Time, R. Davis and G. K. Neeland, **XVIII** (June, 1932), No. 6, p. 742.
- A Method for the Calculation of the Correct and Most Economical Concentrations of Elon and Hydroquinone in a Borax Developer for Motion Picture Film, A. M. Gundelfinger, **XX** (April, 1933), No. 4, p. 343.
- Some Properties of Two-Bath Developers for Motion Picture Film, J. I. Crabtree, H. Parker, Jr., and H. D. Russell, **XXI** (July, 1933), No. 1, p. 21.
- Directional Effects in Sound-Film Processing—II, J. Crabtree and J. H. Wad-dell, **XXI** (Nov., 1933), No. 5, p. 351.
- A Small Developing Machine, H. R. Kossman, **XXIII** (Dec., 1934), No. 6, p. 356.
- A Roller Developing Rack for Continuously Moving the Film during Process-ing by the Rack-and-Tank System, C. E. Ives, **XXIV** (March, 1935), No. 3, p. 261.
- The Davidge Developing Apparatus, **XXIV** (May, 1935), No. 5, p. 452.
- Uniformity in Photographic Development, J. Crabtree, **XXV** (Dec., 1935), No. 6, p. 512.

39 Directing

(See also *Production*.)

- Some Problems in Directing Color Pictures, R. Mamoulian, **XXV** (Aug., 1935), No. 2, p. 148.

40 Directional Effects

- Directional Effects in Continuous Film Processing, J. Crabtree, **XVIII** (Feb., 1932), No. 2, p. 207.
- Directional Effects in Sound-Film Processing—II, J. Crabtree and J. H. Wad-dell, **XXI** (Nov., 1933), No. 5, p. 351.

41 Disk Recording

(See also *Sound Reproduction, Disk*.)

- Vertical Sound Records: Recent Fundamental Advances in Mechanical Rec-ords on "Wax," H. A. Frederick, **XVIII** (Feb., 1932), No. 2, p. 141.
- Victrolac Motion Picture Records, F. C. Barton, **XVIII** (April, 1932), No. 4, p. 452.
- High-Fidelity Lateral-Cut Disk Records, F. C. Barton, **XXII** (March, 1934), No. 3, p. 179.
- Improvements in Playback Disk Recording, G. M. Best, **XXV** (Aug., 1935), No. 2, p. 109.

42 Distortion

- Distortion in the Projection and Viewing of Motion Pictures, C. Tuttle, **XXI** (Sept., 1933), No. 3, p. 198.

43 Drying Motion Picture Film

- Drying Conditions and Photographic Density, D. R. White, **XIX** (Oct., 1932), No. 4, p. 340.

44 Dubbing

- Dubbing and Its Relation to Sound Picture Production, G. Lewin, **XVI** (Jan., 1931), No. 1, p. 38.

45 Dufaycolor

The English Dufaycolor Film Process, W. H. Carson, **XXIII** (July, 1934), No. 1, p. 14.

46 Dunning Process

Dunning Process and Process Backgrounds, C. H. Dunning, **XVII** (Nov., 1931), No. 5, p. 743.

47 Duplication of Motion Picture Film

(See also *Printing*.)

The Duplication of Motion Picture Negatives, J. I. Crabtree and C. H. Schwingel, **XIX** (July, 1932), No. 1, p. 891.

48 Economies

Economies in Sound-Film Processing, G. M. Best, **XXI** (Sept., 1933), No. 3, p. 236.

The Preselection of Takes for Processing from Exposed Undeveloped Negative, D. W. Ridgway, **XXI** (Sept., 1933), No. 3, p. 230.

49 Editing

A Triplex Moviola for Editing Re-Recording, J. O. Aalberg, **XXI** (Nov., 1933), No. 5, p. 426.

New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.

Moviola Film Viewing Machines, **XXIV** (May, 1935), No. 5, p. 455.

Engineering Technic in Pre-Editing Motion Pictures, M. J. Abbott, **XXV** (Aug., 1935), No. 2, p. 171.

A New Sound Reader and Frame Viewer, I. Serrurier, **XXV** (Sept., 1935), No. 3, p. 275.

50 Educational

Production Aspects of a Technical Lecture Sound Picture, F. L. Hunt, **XV** (Oct., 1930), No. 4, p. 473.

Visual Aids in Teaching, C. E. Baer, **XVI** (April, 1931), No. 4, p. 457.

Teaching Health with Pictures, C. E. Turner, **XVI** (May, 1931), No. 5, p. 557.

Standards and Requirements of Projection for Visual Education, C. L. Greene, **XIX** (Nov., 1932), No. 5, p. 424.

Photoplay Appreciation in the Nation's Schools, W. Lewin, **XXI** (July, 1933), No. 1, p. 9.

The Use of the Talking Picture as an Additional Educational Tool at the University of Chicago, H. B. Lemon, **XXII** (Jan., 1934), No. 1, p. 62.

Overcoming Limitations to Learning with the Sound Motion Picture, V. C. Arnsperger, **XXIV** (March, 1935), No. 3, p. 257.

The Educational Motion Picture of Yesterday, Today, and Tomorrow, H. A. Gray, **XXIV** (May, 1935), No. 5, p. 414.

The Use of Motion Pictures for Visual Education in the New York Schools, R. Hochheimer, **XXIV** (June, 1935), No. 6, p. 519.

The Use of Films and Motion Picture Equipment in Schools, M. Evans, **XXV** (Nov., 1935), No. 5, p. 443.

51 Electrical Machinery and Equipment

- Elimination of Commutator Ripple from Direct-Current Generators, O. K. Buck and J. C. Albert, **XIV** (April, 1930), No. 4, p. 399.
- Some Aspects of the National Electrical Code as Applied to the Motion Picture Industry, J. R. Manheimer, **XV** (Aug., 1930), No. 2, p. 145.
- Thermionic Tube Control of Theater Lighting, B. S. Burke, **XVIII** (Jan., 1932), No. 1, p. 90.
- A New Western Electric Double-Film Portable Sound Recording System, C. R. Daily, **XX** (Feb., 1933), No. 2, p. 128.
- New Developments in Portable Gas-Electric Generators for Motion Picture Lighting, P. Mole, **XXI** (Nov., 1933), No. 5, p. 413.

52 Electron Tubes

- Radio's Past and Future, R. A. Millikan, **XVII** (Oct., 1931), No. 4, p. 655.
- The High-Vacuum Tube Comes before the Supreme Court, W. R. Ballard, **XVII** (Oct., 1931), No. 4, p. 658.
- Thermionic Tube Control of Theater Lighting, B. S. Burke, **XVIII** (Jan., 1932), No. 1, p. 90.
- Vacuum Tube and Photoelectric Tube Developments for Sound Picture Systems, M. J. Kelly, **XVIII** (June, 1932), No. 6, p. 761.
- Simple Theory of the Three-Electrode Vacuum Tube, H. A. Pidgeon, **XXIV** (Feb., 1935), No. 2, p. 133.
- Electronic Tube Control for Theater Lighting, J. R. Manheimer and T. H. Joseph, **XXIV** (March, 1935), No. 3, p. 221.

53 Emulsions

- The Mechanism of Hypersensitization, B. H. Carroll and D. Hubbard, **XVIII** (May, 1932), No. 5, p. 600.
- Photographic Emulsions, L. W. Physioc, **XIX** (July, 1932), No. 1, p. 913.
- New Emulsions for Special Fields in Motion Picture Photography, W. Leahy, **XXV** (Sept., 1935), No. 3, p. 248.

54 Exchanges

(See also *Committee Reports, Exchange Practice*.)

- The Maintenance of Sound-Film in Exchange Operation, and the Degree That Sound Reproduction Is Affected by the Continued Use of Sound-Track Film, T. Faulkner, **XV** (Oct., 1930), No. 4, p. 501.
- Release Print Problems of the Distributor, J. A. Gove, **XIX** (Nov., 1932), No. 5, p. 410.
- The 2000-ft. Reel, **XXV** (Nov., 1935), No. 5, p. 462.

55 Exhibition

- The European Film Market—Then and Now, C. J. North and N. D. Golden, **XVIII** (April, 1932), No. 4, p. 442.
- Problems of a Theater Manager, N. Glasser, **XIX** (Sept., 1932), No. 3, p. 272.
- Theater Problems of the Release Print—Report of the Projection Practice Committee, **XIX** (Nov., 1932), No. 5, p. 407.

54 Exposure

The Photronic Photographic Exposure Meter, W. N. Goodwin, Jr., **XX** (Feb., 1933), No. 2, p. 95.

A Practical Method and Photometer for Controlling Exposures in Photography, M. Lasky and B. Rubin, **XXI** (Aug., 1933), No. 2, p. 154.

Reciprocity Law Failure in Photographic Exposures, L. A. Jones and J. H. Webb, **XXIII** (Sept., 1934), No. 3, p. 142.

51 Eye-Strain

An Introduction to the Experimental Study of Visual Fatigue, P. A. Snell **XX** (May, 1933), No. 5, p. 367.

Avoidance of Eye Fatigue, F. H. Richardson, **XX** (May, 1933), No. 5, p. 391.

58 Fades

Making a Fade-Out by After Treatment, C. E. Ives, L. E. Muehler, and J. I. Crabtree, **XX** (Jan., 1933), No. 1, p. 65.

59 Film, Development of

(See also *Committee Reports, Laboratory Practice.*)

A Method for the Calculation of the Correct and Most Economical Concentrations of Elon and Hydroquinone in a Borax Developer for Motion Picture Film, A. M. Gundelfinger, **XX** (April, 1933), No. 4, p. 343.

New Emulsions for Special Fields in Motion Picture Photography, W. Leahy, **XXV** (Sept., 1935), No. 3, p. 248.

Ozaphane Film and Cinelux Projector, A. M. Cheftel, **XXV** (Oct., 1935), No. 4, p. 358.

60 Film, History of

The History of Nitrocellulose as a Film Base, E. Theisen, **XX** (March, 1933), No. 3, p. 259.

61 Film, Mutilation in Use

The Life of Sound-Films in Hungary, A. Szekely, **XVI** (May, 1931), No. 5, p. 553.

The Film Problems of Theater Operation, S. Sumner, **XIX** (Sept., 1932), No. 3, p. 286.

62 Film, Phonograph

Film Recorders, A. G. Zimmerman, **XX** (March, 1933), No. 3, p. 211.

63 Film, Photographic Characteristics

(See also *Emulsions; Photography; and Processing.*)

On the Theory of Tone Reproduction, with a Graphic Method for the Solution of Problems, L. A. Jones, **XVI** (May, 1931), No. 5, p. 568.

Characteristics of Dupont Panchromatic Negative Film, D. R. White, **XVII** (Aug., 1931), No. 2, p. 223.

Eastman Supersensitive Motion Picture Negative Film, E. Huse and G. A. Chambers, **XVII** (Oct., 1931), No. 4, p. 560.

The Effect of Exposure and Development on the Quality of Variable-Width Photographic Sound Recording, D. Foster, **XVII** (Nov., 1931), No. 5, p. 749.

- High-Frequency Response from Variable-Width Records as Affected by Exposure and Development, G. L. Dimmick, **XVII** (Nov., 1931), No. 5, p. 766.
- The Processing of Variable-Width Sound Records in the Film Laboratory, W. P. Bielicke, **XVII** (Nov., 1931), No. 5, p. 778.
- New Filters for Exterior Photography with Supersensitive Film, E. Huse and G. A. Chambers, **XVII** (Nov., 1931), No. 5, p. 783.
- Photographic Sensitometry: L. A. Jones,
 Part I, **XVII** (Oct., 1931), No. 4, p. 491.
 Part II, **XVII** (Nov., 1931), No. 5, p. 695.
 Part III, **XVIII** (Jan., 1932), No. 1, p. 54.
 Part IV, **XVIII** (March, 1932), No. 3, p. 324.
- On the Assignment of Printing Exposure by Measurement of Negative Characteristics, C. Tuttle, **XVIII** (Feb., 1932), No. 2, p. 172.
- Directional Effects in Continuous Film Processing, J. Crabtree, **XVIII** (Feb., 1932), No. 2, p. 207.
- Gamma by Least Squares, D. R. White, **XVIII** (May, 1932), No. 5, p. 584.
- Variation of Photographic Sensitivity with Different Light-Sources, R. Davis and G. K. Neeland, **XVIII** (June, 1932), No. 6, p. 732.
- Variation of Photographic Sensitivity with Development Time, R. Davis and G. K. Neeland, **XVIII** (June, 1932), No. 6, p. 742.
- Photographic Emulsions, L. W. Physioc, **XIX** (July, 1932), No. 1, p. 913.
- Drying Conditions and Photographic Density, D. R. White, **XIX** (Oct., 1932), No. 4, p. 340.
- Photographic Effects Obtained with Infra D Negative, D. R. White, **XX** (Jan., 1933), No. 1, p. 54.
- Directional Effects in Sound-Film Processing—II, J. Crabtree and J. H. Wad-dell, **XXI** (Nov., 1933), No. 5, p. 351.
- Reciprocity Law Failure in Photographic Exposures, L. A. Jones and J. H. Webb, **XXIII** (Sept., 1934), No. 3, p. 142.
- A Motion Picture Negative of Wider Usefulness, P. Arnold, **XXIII** (Sept., 1934), No. 3, p. 160.

b4 Film Preservation

- Treatment for Rejuvenating and Preserving Motion Picture Film, J. A. Norling and A. P. Rippenbein, **XVI** (June, 1931), No. 6, p. 766.

b5 Film, Physical Characteristics

- Wide-Film Shrinkage, and Its Effect as a Factor in Determining Proper Dimensional Specifications for a New Standard, A. S. Howell and J. A. Dubray, **XV** (Sept., 1930), No. 3, p. 306.

b6 Film, Storage

- Storage and Handling of Motion Picture Film, E. W. Fowler and L. B. Newell, **XVI** (June, 1931), No. 6, p. 773.

b7 Filters

- New Filters for Exterior Photography with Supersensitive Film, E. Huse and G. A. Chambers, **XVII** (Nov., 1931), No. 5, p. 783.

- The Precise Measurement of Filter-Factors and Photographic Reflecting Powers, L. A. Jones and J. W. McFarlane, **XIX** (Oct., 1932), No. 4, p. 361.

A Mechanical Demonstration of the Properties of Wave Filters, C. E. Lane, **XXIV** (March, 1935), No. 3, p. 206.

63 **Fixing Motion Picture Film**

A Method of Testing for the Presence of Sodium Thiosulfate in Motion Picture Films, J. I. Crabtree and J. F. Ross, **XIV** (April, 1930), No. 4, p. 419.

Some Properties of Chrome Alum Stop Baths and Fixing Baths, J. I. Crabtree and H. D. Russell, Part I, **XIV** (May, 1930), No. 5, p. 483; Part II, **XIV** (June, 1930), No. 6, p. 667.

The Electrolytic Regeneration of Fixing Baths, K. Hickman, C. Sanford, and W. Weyerts, **XVII** (Oct., 1931), No. 4, p. 568.

The Reducing Action of Fixing Baths on the Silver Image, H. D. Russell and J. I. Crabtree, **XVIII** (March, 1932), No. 3, p. 371.

An Improved Potassium Alum Fixing Bath Containing Boric Acid, H. D. Russell and J. I. Crabtree, **XXI** (Aug., 1933), No. 2, p. 137.

64 **Frequency Control**

Piezoelectric Frequency Control, F. R. Lack, **XXIII** (Oct., 1934), No. 4, p. 187.

70 **Gammagraph**

Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.

71 **Gammameters**

The Sensitometric Control of Sound Records on Film, A. Küster and R. Schmidt, **XIX** (Dec., 1932), No. 6, p. 539.

72 **General**

(See also *Committee Reports, Progress; Progress; Addresses; and Educational.*)

A Milestone, **XIV** (Jan., 1930), No. 1, p. 3.

Our New Journal, **XIV** (Jan., 1930), No. 1, p. 7.

Sound-Film Motion Pictures in Europe, N. D. Golden, **XIV** (Jan., 1930), No. 1, p. 11.

Art and Science in Sound-Film Production, J. W. Coffman, **XIV** (Feb., 1930), No. 2, p. 172.

The Human Equation in Sound Picture Production, T. Ramsaye, **XIV** (Feb., 1930), No. 2, p. 219.

A Year of Sound, H. B. Franklin, **XIV** (March, 1930), No. 3, p. 302.

The Academy of Motion Picture Arts and Sciences and Its Service as a Forum for the Industry, F. Woods, **XIV** (April, 1930), No. 4, p. 436.

Technical Activities of the Academy of Motion Picture Arts and Sciences, I. Thalberg, **XV** (July, 1930), No. 1, p. 3.

Talking Pictures—The Great Internationalist, H. B. Franklin, **XV** (July, 1930), No. 1, p. 17.

Recent and Future Economic Changes in the Motion Picture Field, F. S. Irby, **XV** (Sept., 1930), No. 3, p. 332.

The Soviet Cinematography, L. I. Monosson, **XV** (Oct., 1930), No. 4, p. 509.

International Relations in the Sound Picture Field, F. S. Irby, **XV** (Dec., 1930), No. 6, p. 739.

CLASSIFIED INDEX

- The Progress of Sound Motion Pictures, H. B. Franklin, **XV** (Dec., 1930), No. 6, p. 809.
- Meeting Sound-Film Competition Abroad, C. J. North and N. D. Golden, **XV** (Dec., 1930), No. 6, p. 749.
- Methods of Securing a Large Screen Picture, **XVI** (Jan., 1931), No. 1, p. 80.
- Methods of Securing a Large Screen Picture, **XVI** (Feb., 1931), No. 2, p. 174.
- An Entertainment City, A. N. Goldsmith, **XVI** (Feb., 1931), No. 2, p. 220.
- Aiding the Theater Patron Who Is Hard of Hearing, F. H. Graham, **XVI** (March, 1931), No. 3, p. 341.
- The Talking Film, P. Bonneau, **XVI** (April, 1931), No. 4, p. 399.
- Sound and Speech in Silent Pictures, A. E. Krows, **XVI** (April, 1931), No. 4, p. 427.
- The Motion Picture Industry in Soviet Russia, **XVI** (May, 1931), No. 5, p. 619.
- Open Forum, **XVI** (May, 1931), No. 5, p. 665; **XVII** (Sept., 1931), No. 3, p. 485.
- The Latin-American Audience Viewpoint on American Films, C. J. North and N. D. Golden, **XVII** (July, 1931), No. 1, p. 18.
- Career of L. A. A. Le Prince, E. K. Scott, **XVII** (July, 1931), No. 1, p. 46.
- The Camera of Tomorrow, I. B. Hoke, **XVII** (Sept., 1931), No. 3, p. 401.
- Problems of the Cameraman, L. W. Physioc, **XVII** (Sept., 1931), No. 3, p. 406.
- Making a Motion Picture, W. C. Harcus, **XVII** (Nov., 1931), No. 5, p. 802.
- Making a Motion Picture in Asiatic Jungles, G. S. Mitchell, **XVII** (Nov., 1931), No. 5, p. 811.
- Sound Recording—From the Musician's Point of View, L. Stokowski, **XVIII** (Feb., 1932), No. 2, p. 164.
- Résumé of the Proceedings of the Dresden International Photographic Congress, S. E. Sheppard, **XVIII** (Feb., 1932), No. 2, p. 232.
- The Decibel in the Motion Picture Industry, V. C. Hall, **XVIII** (March, 1932), No. 3, p. 292.
- The European Film Market—Then and Now, C. J. North and N. D. Golden, **XVIII** (April, 1932), No. 4, p. 442.
- The Motion Picture Industry in Japan, M. Ruot, **XVIII** (May, 1932), No. 5, p. 628.
- Sound Recording for Independent Productions, L. E. Clark, **XVIII** (May, 1932), No. 5, p. 659.
- Photographic Emulsions, L. W. Physioc, **XIX** (July, 1932), No. 1, p. 913.
- Modern Tools and Methods Used in Servicing Sound Equipment, J. Mrauan, **XIX** (Sept., 1932), No. 3, p. 260.
- Problems of a Theater Manager, N. Glasser, **XIX** (Sept., 1932), No. 3, p. 272.
- How the SMPE Can Be of Greater Service to Theater Managers, C. E. Lewis, **XIX** (Sept., 1932), No. 3, p. 275.
- The Film Problems of Theater Operation, S. Sumner, **XIX** (Sept., 1932), No. 3, p. 286.
- Theater Operating Problems, M. A. Lightman, **XIX** (Sept., 1932), No. 3, p. 291.
- The Future of Motion Pictures, C. Smith, **XIX** (Sept., 1932), No. 3, p. 294.
- The Literature of the Motion Picture Industry, G. E. Matthews, **XIX** (Nov., 1932), No. 5, p. 451.

- Theater Noise Problems, S. K. Wolf and J. E. Tweeddale, **XIX** (Dec., 1932), No. 6, p. 499.
- Recording Artificial Speech in Motion Pictures, C. W. Barrell, **XIX** (Dec., 1932), No. 6, p. 561.
- Finishing a Motion Picture, W. C. Harcus, **XIX** (Dec., 1932), No. 6, p. 553.
- Photoplay Appreciation in the Nation's Schools, W. Lewin, **XXI** (July, 1933), No. 1, p. 9.
- Voice and Personality in the Motion Pictures, I. L. Bradley, **XXI** (Sept., 1933), No. 3, p. 209.
- The Sound-Film Program of the United States Department of Agriculture, R. Evans, **XXI** (Sept., 1933), No. 3, p. 224.
- National Standardization in America, P. G. Agnew, **XXI** (Oct., 1933), No. 4, p. 261.
- Military Training and Historical Films, F. W. Hoorn, **XXI** (Oct., 1933), No. 4, p. 337.
- Unoccupied Motion Picture Fields, W. H. Short, **XXI** (Dec., 1933), No. 6, p. 494.
- The Economics of Projector Lamps for Advertising Purposes, E. W. Beggs, **XXII** (Feb., 1934), No. 2, p. 127.
- Equipment for Recording and Reproducing Sound with Photo-Film, A. F. Chocrine, **XXII** (March, 1934), No. 3, p. 157; **XXII** (April, 1934), No. 4, p. 215.
- The Control-Frequency Principle, J. E. Jenkins and S. E. Adair, **XXII** (March, 1934), No. 3, p. 193.
- Transmission and Reproduction of Speech and Music in Auditory Perspective, H. Fletcher, **XXII** (May, 1934), No. 5, p. 314.
- Pioneering Inventions by an Amateur, F. E. Ives, **XXIII** (Sept., 1934), No. 3, p. 175.
- Problems in Motion Picture Engineering, A. N. Goldsmith, **XXIII** (Dec., 1934), No. 6, p. 350.
- Current Developments in Production Methods in Hollywood, H. G. Tasker, **XXIV** (Jan., 1935), No. 1, p. 3.
- The Motion Picture Industry in the Soviet Union, V. I. Verlinsky, **XXIV** (Jan., 1935), No. 1, p. 12.
- The Development of 16-Mm. Sound Motion Pictures, E. W. Kellogg, **XXIV** (Jan., 1935), No. 1, p. 63.
- Reflecting Surfaces of Aluminum, J. D. Edwards, **XXIV** (Feb., 1935), No. 2, p. 126.
- Simple Theory of the Three-Electrode Vacuum Tube, H. A. Pidgeon, **XXIV** (Feb., 1935), No. 2, p. 133.
- The 16-Mm. Sound-Film Outlook, W. B. Cook, **XXIV** (Feb., 1935), No. 2, p. 175.
- A Mechanical Demonstration of the Properties of Wave Filters, C. E. Lane, **XXIV** (March, 1935), No. 3, p. 206.
- Roentgen Cinematography, R. F. James, **XXIV** (March, 1935), No. 3, p. 233.
- My Part in the Development of the Motion Picture Projector, T. Armat, **XXIV** (March, 1935), No. 3, p. 241.
- Some Photographic Aspects of Sound Recording, C. E. K. Mees, **XXIV** (April, 1935), No. 4, p. 285.

- The Progress Medal Award, **XXIV** (April, 1935), No. 4, p. 378.
- On the Relation between the Shape of the Projected Picture, the Areas of Vision, and Cinematographic Technic, B. Schlanger, **XXIV** (May, 1935), No. 5, p. 402.
- Mechanical Recording on Film, A. F. Chorine, **XXIV** (May, 1935), No. 5, p. 410.
- The Theatergoer's Reaction to the Audible Picture as It Was, and Now, M. Hall, **XXIV** (May, 1935), No. 5, p. 424.
- A Glossary of Color Photography, **XXIV** (May, 1935), No. 5, p. 432.
- Rulings of the U. S. Supreme Court in Recent Patent Cases of the American Tri-Ergon Corp., **XXIV** (June, 1935), No. 6, p. 529.
- The Theatrical Possibilities of Television, H. R. Lubeke, **XXV** (July, 1935), No. 1, p. 46.
- Highlights of the Spring, 1935, Convention at Hollywood, **XXV** (July, 1935), No. 1, p. 87.
- Program of the Spring, 1935, Convention at Hollywood, **XXV** (July, 1935), No. 1, p. 91.
- Technical Aspects of the Motion Picture, A. N. Goldsmith, **XXV** (Sept., 1935), No. 3, p. 254.
- Highlights of the Fall, 1935, Convention at Washington, D. C., **XXV** (Dec., 1935), No. 6, p. 545.
- Program of the Fall, 1935, Convention at Washington, D. C., **XXV** (Dec., 1935), No. 6, p. 549.
- Proceedings of the Semi-Annual Banquet at Washington, D. C., **XXV** (Dec., 1935), No. 6, p. 467.
- Citation of Thomas Armat, G. E. Matthews, **XXV** (Dec., 1935), No. 6, p. 468.
- The Work of Drs. L. A. Jones and J. H. Webb (1934 Journal Award), E. A. Williford, **XXV** (Dec., 1935), No. 6, p. 473.
- The Work of Edward Christopher Wente (1935 Progress Medal Award), J. I. Crabtree, **XXV** (Dec., 1935), No. 6, p. 478.
- The New Era in Motion Pictures, W. H. Hays, **XXV** (Dec., 1935), No. 6, p. 483.

13 Generators

(See also *Motor-Generators*; and *Arcs*.)

- New Developments in Portable Gas-Electric Generators for Motion Picture Lighting, P. Mole, **XXV** (Nov., 1933), No. 5, p. 413.
- Arc Supply Generator for Use with Suprex Carbons, W. K. Hartman, **XXV** (Sept., 1935), No. 3, p. 278.

14 Glossary

- Glossary of Technical Terms Used in the Motion Picture Industry, **XVII** (Nov., 1931), No. 5, p. 819.
- A Glossary of Color Photography, **XXIV** (May, 1935), No. 5, p. 432.

15 Glow Lamps

- Portable Recording Equipment, D. Canady, **XXI** (Dec., 1933), No. 6, p. 483.

76 Ground-Noise

A Shutter for Use in Reduction of Ground-Noise, E. W. Kellogg and C. N. Batsel, **XVII** (Aug., 1931), No. 2, p. 203.

Further Investigation of Ground-Noise in Photographic Sound Records, O. Sandvik, V. C. Hall, and W. K. Grimwood, **XXII** (Feb., 1934), No. 2, p. 83.

77 Hand-Coloring

Hand-Coloring of Motion Picture Film, G. F. O. Brock, **XVI** (June, 1931), No. 6, p. 751.

78 Handschiegl

The Handschiegl and Pathéchrome Color Processes, W. V. D. Kelley, **XVII** (Aug., 1931), No. 2, p. 230.

79 High-Speed Cinematography

Cinematographic Analysis of Mechanical Energy Expenditure in the Sprinter, C. A. Morrison and W. O. Fenn, **XVI** (May, 1931), No. 5, p. 603.

A New Way of Splitting Seconds, C. H. Fetter, **XX** (April, 1933), No. 4, p. 332.

Stroboscopic-Light High-Speed Motion Pictures, H. E. Edgerton and K. J. Germeshausen, **XXIII** (Nov., 1934), No. 5, p. 284.

80 Historical

(See also *Committee Reports, Historical.*)

Early History of Motion Picture Cameras for Film Wider than 35-Mm., C. L. Gregory, **XIV** (Jan., 1930), No. 1, p. 27.

Camera Mechanism, Ancient and Modern, A. S. Newman, **XIV** (May, 1930), No. 5, p. 534.

Some Accomplishments of Eugene Augustin Lauste—Pioneer Sound-Film Inventor, M. Crawford, **XVI** (Jan., 1931), No. 1, p. 105.

Jean Acme LeRoy—Projection Pioneer, M. Crawford, **XVI** (Jan., 1931), No. 1, p. 109.

Career of L. A. A. Le Prince, E. K. Scott, **XVII** (July, 1931), No. 1, p. 46.

Early Film and Telegraphone Demonstration at the Hollywood Convention, **XVII** (Sept., 1931), No. 3, p. 450.

Pioneer Experiments of Eugene Lauste in Recording Sound, M. Crawford, **XVII** (Oct., 1931), No. 4, p. 632.

Photographic Emulsions, L. W. Physioc, **XIX** (July, 1932), No. 1, p. 913.

The Depicting of Motion Prior to the Advent of the Screen, E. Theisen, **XX** (March, 1933), No. 3, p. 249.

The History of Nitrocellulose as a Film Base, E. Theisen, **XX** (March, 1933), No. 3, p. 259.

Early Stages of Kinematography, C. H. Bothamley, **XX** (March, 1933), No. 3, p. 263.

Composite Photographic Processes, H. D. Hineline, **XX** (April, 1933), No. 4, p. 283.

The History of the Animated Cartoon, E. Theisen, **XXI** (Sept., 1933), No. 3, p. 239.

- Military Training and Historical Films, F. W. Hoorn, **XXI** (Oct., 1933), No. 4, p. 337.
- A Historical Summary of Standardization in the Society of Motion Picture Engineers, L. A. Jones, **XXI** (Oct., 1933), No. 4, p. 280.
- A Brief History of the Kinematograph, the Kinetoscope, and the Kinetophonograph, W. K. L. Dickson, **XXI** (Dec., 1933), No. 6, p. 435.
- Pioneering Inventions by an Amateur, F. E. Ives, **XXIII** (Sept., 1934), No. 3, p. 175.
- The Development of 16-Mm. Sound Motion Pictures, E. W. Kellogg, **XXIV** (Jan., 1935), No. 1, p. 63.
- My Part in the Development of the Motion Picture Projector, T. Armat, **XXIV** (March, 1935), No. 3, p. 241.
- William Van Doren Kelley, **XXIV** (March, 1935), No. 3, p. 275.
- Historical Notes X-Ray Cinematography, R. F. Mitchell and L. G. Cole, **XXIV** (April, 1935), No. 4, p. 333.

§1 Home Motion Picture Equipment

(See also *Committee Reports, Non-Theatrical Equipment.*)

- A Portable Non-Intermittent Ciné Projector, **XVIII** (Jan., 1932), No. 1, p. 101.
- Optics of Projectors for 16-Mm. Film, A. A. Cook, **XVIII** (April, 1932), No. 4, p. 461.
- 16-Mm. Sound-Film Dimensions, R. P. May, **XVIII** (April, 1932), No. 4, p. 488.
- The Animatophone—A New Type 16-Mm. Synchronous Disk Reproducer, A. F. Victor, **XVIII** (April, 1932), No. 4, p. 512.
- A 16-Mm. Sound-on-Film Projector, H. C. Holden, **XIX** (Sept., 1932), No. 3, p. 228.
- Motion Pictures with Sound on Standard 16-Mm. Film, H. G. Tasker and A. W. Carpenter, **XIX** (Sept., 1932), No. 3, p. 237.
- A Portable 16-Mm. Sound Picture System, R. A. Miller and H. Pfannenstiehl, **XIX** (Sept., 1932), No. 3, p. 249.

§2 Hypersensitization

- The Mechanism of Hypersensitization, B. H. Carroll and D. Hubbard, **XVIII** (May, 1932), No. 5, p. 600.

§3 Illumination, General

- Stroboscopic and Slow-Motion Moving Pictures by Means of Intermittent Light, H. E. Edgerton, **XVIII** (March, 1932), No. 3, p. 356.
- Standardization of Projection Lamps, E. W. Beggs, **XIX** (July, 1932), No. 1, p. 817.
- New Developments in Portable Gas-Electric Generators for Motion Picture Lighting, P. Mole, **XXI** (Nov., 1933), No. 5, p. 413.
- Introduction to the Photographic Possibilities of Polarized Light, F. Tuttle and J. W. McFarlane, **XXV** (July, 1935), No. 1, p. 69.

§4 Illumination in Printing

- Illumination in Projection Printing of Motion Pictures, C. Tuttle and D. A. Young, **XIX** (July, 1932), No. 1, p. 842.
- A New Light Control for Printing Machines, K. Schneider, **XIX** (July, 1932), No. 1, p. 865.

82 Illumination in Projection

A Reflector Arc Lamp for Portable Projectors, H. H. Strong, **XVIII** (June, 1932), No. 6, p. 752.

Standardization of Projection Lamps, E. W. Beggs, **XIX** (July, 1932), No. 1, p. 817.

Biplane Filament Construction—A High-Intensity Incandescent Lamp Light Source for Motion Picture Projection, J. T. Mili, **XIX** (July, 1932), No. 1, p. 829.

Operating Characteristics of the High-Intensity A-c. Arc for Motion Picture Projection, D. B. Joy and E. R. Geib, **XXIII** (July, 1934), No. 1, p. 27.

The Relation of the High-Intensity A-c. Arc to the Light on the Projection Screen, D. B. Joy and E. R. Geib, **XXIII** (July, 1934), No. 1, p. 35.

The Effect of the Aperture Lenses on Illumination, W. B. Rayton, **XXIII** (Dec., 1934), No. 6, p. 309.

The Non-Rotating High-Intensity D-c. Arc for Projection, D. B. Joy and E. R. Geib, **XXIV** (Jan., 1935), No. 1, p. 47.

Light-Source Requirements for Picture Projection, F. E. Carlson, **XXIV** (March, 1935), No. 3, p. 189.

Relation Between Illumination and Screen Size for Non-Theatrical Projection, D. F. Lyman, **XXV** (Sept., 1935), No. 3, p. 227.

83 Illumination, Sound Recorders

Lighting of Sound-Films, L. Dunoyer, **XVIII** (Jan., 1932), No. 1, p. 3.

84 Illumination, Studio and Photographic

(See also *Committee Reports, Studio Lighting.*)

Radiation Characteristics of Two Mercury Arcs, F. Benford, **XIV** (April, 1930) No. 4, p. 404.

A Silhouette Studio, C. F. Jenkins, **XV** (Sept., 1930), No. 3, p. 381.

Professional Motion Picture Photography with High-Intensity Short-Life Incandescent Lamps, M. W. Palmer and E. W. Beggs, **XXI** (Aug., 1933), No. 2, p. 126.

The Use of Mazda Lamps for Color Photography, R. E. Farnham, **XXI** (Aug., 1933), No. 2, p. 166.

A New Development in Carbon Arc Lighting, P. Mole, **XXII** (Jan., 1934), No. 1, p. 51.

A New White-Flame Carbon for Photographic Light, D. B. Joy, F. T. Bowditch, and A. C. Downes, **XXII** (Jan., 1934), No. 1, p. 58.

The Biplane Filament in Spotlighting, G. Mili, **XXIII** (Sept., 1934), No. 3, p. 131.

The New Klieglight, H. Kliegl, **XXIII** (Dec., 1934), No. 6, p. 359.

High-Intensity Mercury and Sodium Arc Lamps, L. J. Buttolph, **XXIV** (Feb., 1935), No. 2, p. 110.

Certain Phases of Studio Lighting, C. S. Woodside, **XXIV** (April, 1935), No. 4, p. 327.

Recent Developments in the Use of Mazda Lamps for Color Motion Picture Photography, R. E. Farnham, **XXIV** (June, 1935), No. 6, p. 487.

Lighting for Technicolor Motion Pictures, C. W. Handley, **XXV** (Nov., 1935), No. 5, p. 423.

88 Illumination, Theater

- Thermionic Tube Control of Theater Lighting, B. S. Burke, **XVIII** (Jan., 1932), No. 1, p. 90.
 Electronic Tube Control for Theater Lighting, J. R. Manheimer and T. H. Joseph, **XXIV** (March, 1935), No. 3, p. 221.

89 Incandescent Lamps

- Water Cooling of Incandescent Lamps, N. T. Gordon, **XIV** (March, 1930), No. 3, p. 332.
 Modern Practice in Incandescent Cinema Studio Lighting, W. A. Villiers, **XV** (Oct., 1930), No. 4, p. 451.
 Trend of Lamp Development and Operation in Motion Picture Projectors Employing 16-Mm. Film, V. J. Roper and H. I. Wood, **XV** (Dec., 1930), No. 6, p. 824.
 Lighting of Sound-Films, L. Dunoyer, **XVIII** (Jan., 1932), No. 1, p. 3.
 Standardization of Projection Lamps, E. W. Beggs, **XIX** (July, 1932), No. 1, p. 817.
 Biplane Filament Construction—A High-Intensity Incandescent Lamp Light-Source for Motion Picture Projection, J. T. Mili, **XIX** (July, 1932), No. 1, p. 829.
 Professional Motion Picture Photography with High-Intensity Short-Life Incandescent Lamps, M. W. Palmer and E. W. Beggs, **XXI** (Aug., 1933), No. 2, p. 126.
 The Use of Mazda Lamps for Color Photography, R. E. Farnham, **XXI** (Aug., 1933), No. 2, p. 166.
 The Economics of Projector Lamps for Advertising Purposes, E. W. Beggs, **XXII** (Feb., 1934), No. 2, p. 127.
 The Biplane Filament in Spotlighting, G. Mili, **XXIII** (Sept., 1934), No. 3, p. 131.
 Recent Developments in the Use of Mazda Lamps for Color Motion Picture Photography, R. E. Farnham, **XXIV** (June, 1935), No. 6, p. 487.

90 Inconel

- Inconel as a Material for Photographic Film Processing Apparatus, F. L. LaQue, **XXIV** (April, 1935), No. 4, p. 357.

91 Indexes**Author**

- Jan.-June, 1930: Included in *Aims and Accomplishments*, an index of the publications of the Society from July, 1916, to June, 1930.
 July-Dec., 1930: **XV** (Dec., 1930), No. 6, p. 848.
 Jan.-June, 1931: **XVI** (Published as a separate pamphlet).
 July-Dec., 1931: **XVII** (Dec., 1931), No. 6, p. 1087.
 Jan.-June, 1932: **XVIII** (June, 1932), No. 6, p. 803.
 July-Dec., 1932: **XIX** (Dec., 1932), No. 6, p. 587.
 Jan.-June, 1933: **XX** (June, 1933), No. 6, p. 539.
 July-Dec., 1933: **XXI** (Dec., 1933), No. 6, p. 520.

- Jan.-June, 1934: **XXII** (June, 1934), No. 6, p. 393.
 July-Dec., 1934: **XXIII** (Dec., 1934), No. 6, p. 368.
 Jan.-June, 1935: **XXIV** (June, 1935), No. 6, p. 555.
 July-Dec., 1935: **XXV** (Dec., 1935), No. 6, p. 557.

Classified

- Jan.-June, 1930: Included in *Aims and Accomplishments*, an index of the publications of the Society from July, 1916, to June, 1930.
 July-Dec., 1930: **XV** (Dec., 1930), No. 6, p. 851.
 Jan.-June, 1931: **XVI** (Published as a separate pamphlet).
 July-Dec., 1931: **XVII** (Dec., 1931), No. 6, p. 1090.
 Jan.-June, 1932: **XVIII** (June, 1932), No. 6, p. 806.
 July-Dec., 1932: **XIX** (Dec., 1932), No. 6, p. 590.
 Jan.-June, 1933: **XX** (June, 1933), No. 6, p. 541.
 July-Dec., 1933: **XXI** (Dec., 1933), No. 6, p. 523.
 Jan.-June, 1934: **XXII** (June, 1934), No. 6, p. 395.
 July-Dec., 1934: **XXIII** (Dec., 1934), No. 6, p. 370.
 Jan.-June, 1935: **XXIV** (June, 1935), No. 6, p. 557.
 July-Dec., 1935: **XXV** (Dec., 1935), No. 6, p. 560.

q2 Industrial Cinematography

- Color for Industrial and Business Films, R. H. Ray and H. W. Cress, **XXII** (Feb., 1934), No. 2, p. 144.

q3 Infrared Photography

- Photographic Effects Obtained with Infra D Negative, D. R. White, **XX** (Jan., 1933), No. 1, p. 54.

q4 Instruments

(See also *Sensitometry*.)

- Test-Set for Servicing Sound Projection Equipment, A. H. Wolferz, **XVI** (March, 1931), No. 3, p. 349.
 Optical Instruments and Their Application in the Motion Picture Industry, I. L. Nixon, **XVIII** (March, 1932), No. 3, p. 304.
 The Photronic Photographic Exposure Meter, W. N. Goodwin, Jr., **XX** (Feb., 1933), No. 2, p. 95.
 A Practical Method and Photometer for Controlling Exposures in Photography, M. Lasky and B. Rubin, **XXI** (Aug., 1933), No. 2, p. 154.
 Standard SMPE Visual and Sound Test-Reels, **XXII** (March, 1934), No. 3, p. 173.
 Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.
 The Argentometer—An Instrument for Testing for Silver in a Fixing Bath, W. J. Weyerts and K. C. D. Hickman, **XXV** (Oct., 1935), No. 4, p. 335.
 Modern Instruments for Acoustical Studies, E. C. Wente, **XXV** (Nov., 1935), No. 5, p. 389.
 A Portable Flutter-Measuring Instrument, R. R. Scoville, **XXV** (Nov., 1935), No. 5, p. 416.

The Calibrated Multi-Frequency Test-Film, F. C. Gilbert, **XXV** (Dec., 1935), No. 6, p. 503.

95 **Intensification**

Reducing and Intensifying Solutions for Motion Picture Film, J. I. Crabtree and L. E. Muehler, **XVII** (Dec., 1931), No. 6, p. 1001.

96 **International Markets**

(See also *Progress*.)

The Sound-Film Situation in Europe, N. D. Golden, **XIV** (Jan., 1930), No. 1, p. 11.

Recent and Future Economic Changes in the Motion Picture Field, F. S. Irby, **XV** (Sept., 1930), No. 3, p. 332.

International Relations in the Sound Picture Field, F. S. Irby, **XV** (Dec., 1930), No. 6, p. 739.

Meeting Sound-Film Competition Abroad, C. J. North and N. D. Golden, **XV** (Dec., 1930), No. 6, p. 749.

The Latin-American Audience Viewpoint on American Films, C. J. North and N. D. Golden, **XVII** (July, 1931), No. 1, p. 18.

The European Film Market—Then and Now, C. J. North and N. D. Golden, **XVIII** (April, 1932), No. 4, p. 442.

97 **Jenkins, C. Francis**

C. Francis Jenkins: An Appreciation, L. C. Porter, **XXIII** (Sept., 1934), No. 3, p. 126.

98 **Journal**

Report of Journal Committee:

XVI (Jan., 1931), No. 1, p. 90.

XVIII (March, 1932), No. 3, p. 410.

XXIII (Dec., 1934), No. 6, p. 367.

99 **Journal Award**

(See also *Committee Reports, Journal Award*.)

Proceedings of the Semi-Annual Banquet at Washington, D. C., October 23, 1935, **XXV** (Dec., 1935), No. 6, p. 467.

100 **Laboratories, Processing**

(See *Processing* and *Committee Reports, Laboratory Practice*.)

Laboratory Apparatus

(See also *Processing*; and *Committee Reports, Laboratory Practice*).

Materials for the Construction of Motion Picture Processing Apparatus, J. I.

Crabtree, G. E. Matthews, and J. F. Ross, **XVI** (March, 1931), No. 3, p. 330.

Improvements in Motion Picture Laboratory Apparatus, C. E. Ives, A. J. Miller, and J. I. Crabtree, **XVII** (July, 1931), No. 1, p. 26.

Automatic Silver Recovery Control, K. Hickman, **XVII** (Oct., 1931), No. 4, p. 591.

Air-Conditioning in Film Laboratories, A. H. Simonds and L. H. Polderman, **XVII** (Oct., 1931), No. 4, p. 604.

- A Motion Picture Laboratory Sensitometer, L. A. Jones, **XVII** (Oct., 1931), No. 4, p. 536.
- The Rapid Record Oscillograph in Sound Picture Studies, A. M. Curtis, T. E. Shea, and C. H. Rumpel, **XVIII** (Jan., 1932), No. 1, p. 39.
- A Method of Measuring Directly the Distortion in Audio-Frequency Amplifier Systems, W. N. Tuttle, **XVIII** (Feb., 1932), No. 2, p. 199.
- Optical Instruments and Their Application in the Motion Picture Industry, I. L. Nixon, **XVIII** (March, 1932), No. 3, p. 304.
- Silica Gel Air-Conditioning for Film Processing, E. C. Holden, **XVIII** (April, 1932), No. 4, p. 471.
- A Machine for Printing Picture and Sound Simultaneously and Automatically, O. B. Depue, **XVIII** (May, 1932), No. 5, p. 643.
- The Bell & Howell Fully Automatic Sound Picture Production Printer, A. S. Howell, B. E. Stechbart, and R. F. Mitchell, **XIX** (Oct., 1932), No. 4, p. 305.
- The Precise Measurement of Filter-Factors and Photographic Reflecting Powers, L. A. Jones and J. W. McFarlane, **XIX** (Oct., 1932), No. 4, p. 361.
- Use of Photoelectric Cell in Cinematography, L. Kutzleb, **XIX** (Dec., 1932), No. 6, p. 528.
- The Sensitometric Control of Sound Records on Film, A. Küster and R. Schmidt, **XIX** (Dec., 1932), No. 6, p. 539.
- Film Recorders, A. G. Zimmerman, **XX** (March, 1933), No. 3, p. 211.
- Model Making with Sheet Film Base, K. Hickman and D. E. Hyndman, **XX** (March, 1933), No. 3, p. 236.
- RCA Victor High-Fidelity Film Recording Equipment, S. Read, Jr., **XX** (May, 1933), No. 5, p. 396.
- A Small Developing Machine, H. R. Kossman, **XXIII** (Dec., 1934), No. 6, p. 356.
- A Roller Developing Rack for Continuously Moving the Film during Processing by the Rack-and-Tank System, C. E. Ives, **XXIV** (March, 1935), No. 3, p. 261.
- The Davidge Developing Apparatus, **XXIV** (May, 1935), No. 5, p. 452.

102 **Laboratory Practice**

(See *Committee Reports, Laboratory Practice; Processing; Processing, Control of; and Sensitometry.*)

103 **Lamps**

(See also *Illumination in Projection; and Illumination, Studio and Photographic.*)
The Economics of Projector Lamps for Advertising Purposes, E. W. Beggs, **XXII** (Feb., 1934), No. 2, p. 127.

104 **Lantern Slides**

Engineering and Scientific Charts for Lantern Slides, **XX** (Feb., 1933), No. 2, p. 142.

105 **Lauste, E.**

Some Accomplishments of Eugene Augustin Lauste—Pioneer Sound-Film Inventor, M. Crawford, **XVI** (Jan., 1931), No. 1, p. 105.

Pioneer Experiments of Eugene Lauste in Recording Sound, M. Crawford, **XVII** (Oct., 1931), No. 4, p. 632.

106 Lenses

(See *Optics*.)

107 Lenticular Color Films

Remarks on the Making of Sound Records on Lenticular Color Films, A. P. Richard, **XX** (Jan., 1933), No. 1, p. 60.

The Optical-Photographic Principles of the Agfacolor Process, F. Weil, **XX** (April, 1933), No. 4, p. 301.

108 Le Prince, L. A. A.

Career of L. A. A. Le Prince, E. K. Scott, **XVII** (July, 1931), No. 1, p. 46.

109 LeRoy, J. A.

Jean Acme LeRoy—Projection Pioneer, M. Crawford, **XVI** (Jan., 1931), No. 1, p. 109.

110 Lighting

(See also *Arcs*; *Committee Reports*, *Studio Lighting*; *Illumination*; and *Incandescent Lamps*.)

Thermionic Tube Control of Theater Lighting, B. S. Burke, **XVIII** (Jan., 1932), No. 1, p. 90.

Professional Motion Picture Photography with High-Intensity Short-Life Incandescent Lamps, M. W. Palmer and E. W. Beggs, **XXI** (Aug., 1933), No. 2, p. 126.

New Developments in Portable Gas-Electric Generators for Motion Picture Lighting, P. Mole, **XXI** (Nov., 1933), No. 5, p. 413.

A New Development in Carbon Arc Lighting, P. Mole, **XXII** (Jan., 1934), No. 1, p. 51.

A New White-Flame Carbon for Photographic Light, D. B. Joy, F. T. Bowditch, and A. C. Downes, **XXII** (Jan., 1934), No. 1, p. 58.

High-Intensity Mercury and Sodium Arc Lamps, L. J. Buttolph, **XXIV** (Feb., 1935), No. 2, p. 110.

Light-Source Requirements for Picture Projection, F. E. Carlson, **XXIV**, (March, 1935), No. 3, p. 189.

Electronic Tube Control for Theater Lighting, J. R. Manheimer and T. H. Joseph, **XXIV** (March, 1935), No. 3, p. 221.

Certain Phases of Studio Lighting, C. S. Woodside, **XXIV** (April, 1935), No. 4, p. 327.

111 Light-Valves

Straight-Line and Toe Records with the Light-Valve, D. MacKenzie, **XVII** (Aug., 1931), No. 2, p. 172.

Recent Contributions to Light-Valve Technic, O. O. Ceccarini, **XVII** (Sept., 1931), No. 3, p. 305.

Lighting of Sound-Films, L. Dunoyer, **XVIII** (Jan., 1932), No. 1, p. 3.

The Principles of the Light-Valve, T. E. Shea, W. Herriott, and W. R. Goehner, **XVIII** (June, 1932), No. 6, p. 697.

112 Literature of the Motion Picture Industry

The Literature of the Motion Picture Industry, G. E. Matthews, **XIX** (Nov., 1932), No. 5, p. 451.

113 Loud Speakers

Loud Speakers for Use in Theaters, D. G. Blattner and L. G. Bostwick, **XIV** (Feb., 1930), No. 2, p. 161.

Loud Speakers and Theater Sound Reproduction, L. Malter, **XIV** (June, 1930), No. 6, p. 611.

Improvements in Design of Dynamic Speakers, I. B. Serge, **XVI** (Feb., 1931), No. 2, p. 144.

A Loud Speaker Good to Twelve Thousand Cycles, L. G. Bostwick, **XVI** (May, 1931), No. 5, p. 529.

Recent Developments in Theater Loud Speakers of the Directional Baffle Type, H. F. Olson, **XVIII** (May, 1932), No. 5, p. 571.

Piezoelectric Loud Speakers, A. L. Williams, **XXIV** (Feb., 1935), No. 2, p. 121.

114 Lubrication of Motion Picture Film

The Surface Treatment of Sound-Film, J. I. Crabtree, O. Sandvik, and C. E. Ives, **XIV** (March, 1930), No. 3, p. 275.

A Modified Film-Waxing Machine, J. I. Crabtree and C. E. Ives, **XV** (Sept., 1930), No. 3, p. 370.

115 Materials Used in the Motion Picture Art

Reflecting Surfaces of Aluminum, J. D. Edwards, **XXIV** (Feb., 1935), No. 2, p. 126.

Applications of Stainless Steels in the Motion Picture Industry, W. M. Mitchell, **XXIV** (April, 1935), No. 4, p. 346.

Laminated Bakelite in the Motion Picture Industry, R. L. Foote, **XXIV** (April, 1935), No. 4, p. 354.

Inconel as a Material for Photographic Film Processing Apparatus, F. L. LaQue, **XXIV** (April, 1935), No. 4, p. 357.

116 Measurements, Optical

A Method of Measuring Axial Chromatic Aberration in an Objective Lens, W. Herriott, **XX** (April, 1933), No. 4, p. 323.

117 Mechanical Accessories

Flexible Drive Shafts—Their Application to Sound Pictures, J. C. Smack, **XIV** (April, 1930), No. 4, p. 384.

118 Mechanical Recording

Mechanical Recording on Film, A. F. Chorine, **XXIV** (May, 1935), No. 5, p. 410.

Mechanographic Recording for Motion Picture Sound-Tracks, J. A. Miller, **XXV** (July, 1935), No. 1, p. 50.

119 Medical Photography

Sound-Films for Surgical Instruction, P. E. Truesdale, **XIV** (May, 1930), No. 5, p. 513.

- Some Experiments in Motion Photography of the Vocal Cords, G. Russell and C. Tuttle, **XV** (Aug., 1930), No. 2, p. 171.
- Some Experiments in Medical Motion Pictures in Color, H. B. Tuttle, **XV** (Aug., 1930), No. 2, p. 193.
- Progress in Micro Cinematography, H. Rosenberger, **XV** (Oct., 1930), No. 4, p. 439.
- X-Ray Cinematography, S. Rodwell, **XV** (Dec., 1930), No. 6, p. 815.
- Cinematography with the Laryngoscope, C. A. Morrison, **XVI** (March, 1931), No. 3, p. 356.
- Advantages of Using 16-Mm. Supersensitive Panchromatic Film in Making Medical Motion Pictures, H. B. Tuttle and R. P. Schwartz, **XVIII** (May, 1932), No. 5, p. 609.
- The New Ciné-Kodak Special in Medicine, H. B. Tuttle and R. P. Schwartz, **XXI** (July, 1933), No. 1, p. 3.
- Historical Notes on X-Ray Cinematography, R. F. Mitchell and L. G. Cole, **XXIV** (April, 1935), No. 4, p. 333.

Membership

(See also *Committee Reports, Membership and Subscription.*)

- Lists of Members of the Society.
- XVI** (April, 1931), No. 4, p. 466.
- XX** (Feb., 1933), No. 2, p. 151.
- XXIII** (Oct., 1934), No. 4, p. 215.

Meters

(See *Instruments.*)

Micro Cinematography

(See also *Cinephotomicrography.*)

- Progress in Micro Cinematography, H. Rosenberger, **XV** (Oct., 1930), No. 4, p. 439.
- New Developments in Micro Motion Picture Technic, H. Roger, **XXIV** (June, 1935), No. 6, p. 475.

Microdensitometers

- The Microdensitometer as a Laboratory Measuring Tool, W. R. Goehner, **XXIII** (Dec., 1934), No. 6, p. 318.

Microphones

- Condenser and Carbon Microphones—Their Construction and Use, W. C. Jones, **XVI** (Jan., 1931), No. 1, p. 3.
- Microphone Concentrators in Picture Production, C. Dreher, **XVI** (Jan., 1931), No. 1, p. 23.
- The Ribbon Microphone, H. F. Olson, **XVI** (June, 1931), No. 6, p. 695.
- A Moving-Coil Microphone for High-Quality Sound Reproduction, W. C. Jones and L. W. Giles, **XVII** (Dec., 1931), No. 6, p. 977.
- The Lapel Microphone and Its Application to Public Address and Announcing Systems, W. C. Jones and D. T. Bell, **XIX** (Sept., 1932), No. 3, p. 219.
- Piezoelectric Microphones, A. L. Williams, **XXIII** (Oct., 1934), No. 4, p. 196.

Microscopy

New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.

Military

Military Training and Historical Films, F. W. Hoorn, **XXI** (Oct., 1933), No. 4, p. 337.

Miniatures

Dimensional Analysis as an Aid to Miniature Cinematography, G. F. Hutchins. **XIV** (April, 1930), No. 4, p. 377.

Motion Picture Sets, H. Dreier, **XVII** (Nov., 1931), No. 5, p. 789.

Miscellaneous

(See also *General*.)

Engineering and Scientific Charts for Lantern Slides, **XX** (Feb., 1933), No. 2, p. 142.

A New Way of Splitting Seconds, C. H. Fetter, **XX** (April, 1933), No. 4, p. 332.

Model Making

Model Making with Sheet Film Base, K. Hickman and D. E. Hyndman, **XX** (March, 1933), No. 3, p. 236.

Motor-Generators

(See also *Arcs*.)

Operation of Projection Arcs from Motor-Generator Sets, C. C. Dash, **XV** (Nov., 1930), No. 5, p. 702.

A Motor-Generator for the Non-Rotating High-Intensity Arc, **XXIV** (May, 1935), No. 5, p. 450.

Arc-Supply Generator for Use with Suprex Carbons, W. K. Hartman, **XXV** (Sept., 1935), No. 3, p. 278.

Moviola

A Triplex Moviola for Editing Re-Recording, J. O. Aalberg, **XXI** (Nov., 1933), No. 5, p. 426.

Moviola Film-Viewing Machines, **XXIV** (May, 1935), No. 5, p. 455.

A New Sound-Reader and Frame-Viewer, I. Serrurier, **XXV** (Sept., 1935), No. 3, p. 275.

Multicolor

The Multicolor Laboratory, B. Burns, **XVII** (July, 1931), No. 1, p. 11.

The Multicolor Process, R. M. Otis, **XVII** (July, 1931), No. 1, p. 5.

Museum

(See *Committee Reports, Historical and Museum*.)

Music

(See also *Acoustics*.)

Sound Recording—From the Musician's Point of View, L. Stokowski, **XVIII** (Feb., 1932), No. 2, p. 164.

Practical Problems in the Recording and Reproduction of Music for Motion Pictures, D. Mendoza, **XX** (Jan., 1933), No. 1, p. 79.

Musical Acoustics of Auditoriums, P. Caporale, **XX** (Feb., 1933), No. 2, p. 119.

135 Naval Projection Equipment

Sound Motion Picture Equipment for the U. S. Navy, S. W. Cochran, **XIX** (July, 1932), No. 1, p. 872.

Motion Pictures in the U. S. Navy, C. E. Fraser, **XIX** (Dec., 1932), No. 6, p. 546.

136 Newsreels

The Modern News Reel, H. W. Jones, **XIV** (Feb., 1930), No. 2, p. 204.

A Light-Weight Single-Film Recording System for Newsreels and Travelogues, C. R. Sawyer, **XXI** (Dec., 1933), No. 6, p. 466.

Improvements in Sound Quality of Newsreels, J. A. Battle, **XXV** (Aug., 1935), No. 2, p. 154.

137 Noise

(See also *Acoustics*.)

Noise Measurement, S. K. Wolf and G. T. Stanton, **XVII** (Dec., 1931), No. 6, p. 966.

Theater Noise Problems, S. K. Wolf and J. E. Tweedale, **XIX** (Dec., 1932), No. 6, p. 499.

138 Noiseless Recording

(See also *Sound Recording*.)

Noise Reduction with Variable-Area Recording, B. Kreuzer, **XVI** (June, 1931), No. 6, p. 671.

A Shutter for Use in Reduction of Ground-Noise, E. W. Kellogg and C. N. Batsel, **XVII** (Aug., 1931), No. 2, p. 203.

Western Electric Noiseless Recording, H. C. Silent and J. G. Frayne, **XVIII** (May, 1932), No. 5, p. 551.

Further Investigation of Ground-Noise in Photographic Sound Records, O. Sandvik, V. C. Hall, and W. K. Grimwood, **XXII** (Feb., 1934), No. 2, p. 83.

An Improved System for Noiseless Recording, G. L. Dimmick and H. Belar, **XXIII** (July, 1934), No. 1, p. 48.

139 Non-Intermittent Projection

The Problem of Motion Picture Projection from Continuously Moving Film, F. Tuttle and C. D. Reid, **XX** (Jan., 1933), No. 1, p. 3.

A Non-Intermittent High-Speed 16-Mm. Camera, F. Tuttle, **XXI** (Dec., 1933), No. 6, p. 474.

140 Non-Theatrical

(See also *Sixteen-Millimeter Equipment*; and *Committee Reports, Non-Theatrical Equipment*.)

An Estimate of the Present Status and Future Development of the Home Talkies, J. B. Carrigan and R. C. Hol slag, **XVI** (Jan., 1931), No. 1, p. 67.

The Kodachrome Process for Amateur Cinematography in Natural Colors, L. D. Mannes and L. Godowsky, Jr., **XXV** (July, 1935), No. 1, p. 65.

Relation between Illumination and Screen Size for Non-Theatrical Projection, D. F. Lyman, **XXV** (Sept., 1935), No. 3, p. 227.

Non-Theatrical Projection, R. F. Mitchell, **XXV** (Oct., 1935), No. 4, p. 314.

Obituary

- William Henry Bristol, **XV** (Sept., 1930), No. 3, p. 406.
 John J. Lyng, **XV** (Oct., 1930), No. 4, p. 581.
 Arthur Gray, **XVI** (March, 1931), No. 3, p. 394.
 Alex G. Penrod, **XVI** (May, 1931), No. 5, p. 664.
 Donald F. Whiting, **XVII** (Oct., 1931), No. 4, p. 685.
 Thomas Alva Edison, **XVII** (Nov., 1931), No. 5, p. 888; **XVIII** (June, 1932), No. 6, p. 796.
 H. Frank Johnson, **XVII** (Nov., 1931), No. 5, p. 888.
 George Eastman, **XVIII** (April, 1932), No. 4, p. 539; **XVIII** (May, 1932), No. 5, p. 685.
 L. T. Troland, **XIX** (July, 1932), No. 1, p. 927.
 W. R. Brewster, **XIX** (Sept., 1932), No. 3, p. 300.
 V. R. Cralley, **XIX** (Sept., 1932), No. 3, p. 300.
 H. Dain, **XIX** (Sept., 1932), No. 3, p. 300.
 J. A. LeRoy, **XIX** (Sept., 1932), No. 3, p. 300.
 Walter Akemann, **XXI** (Aug., 1933), No. 2, p. 176.
 William C. Hubbard, **XXI** (Aug., 1933), No. 2, p. 176; **XXI** (Sept., 1933), No. 3, p. 254.
 Peter A. Snell, **XXII** (May, 1934), No. 5, p. 333.
 C. Francis Jenkins, **XXIII** (July, 1934), No. 1, p. 59.; **XXIII** (Sept., 1934), No. 3, p. 126.
 J. Elliott Jenkins, **XXIII** (July, 1934), No. 1, p. 59.
 W. V. D. Kelley, **XXIII** (Nov., 1934), No. 5, p. 305; **XXIV** (March, 1935), No. 3, p. 275.
 George K. Jenson, **XXIII** (Nov., 1934), No. 5, p. 305.
 Jamnadas Subedar, **XXIV** (March, 1935), No. 3, p. 281.
 Max Ruben, **XXIV** (June, 1935), No. 6, p. 554.
 Eugene Augustin Lauste, **XXV** (July, 1935), No. 1, p. 99; **XXV** (Sept., 1935), No. 3, p. 281.
 William K. L. Dickson, **XXV** (Nov., 1935), No. 5, p. 463.

Ocular Fatigue

(See also *Physiological Optics*.)

- An Introduction to the Experimental Study of Visual Fatigue, P. A. Snell, **XX** (May, 1933), No. 5, p. 367.
 Avoidance of Eye Fatigue, F. H. Richardson, **XX** (May, 1933), No. 5, p. 391.

Officers and Governors of the Society

Prior to October, 1933, the list of officers and governors appeared near the back of each issue of the JOURNAL; after October, 1933, upon the reverse of the Contents page, at the front.

Photographs:

- XIV** (April, 1930), No. 4, p. 457 (Committee chairmen).
XIV (May, 1930), No. 5, p. 577 (Officers and Governors).
XVI (Feb., 1931), No. 2, p. 257 (Officers and Governors).
XVI (April, 1931), No. 4, p. 517 (Committee chairmen).
XX (March, 1933), No. 3, p. 269 (Officers and Governors).
XXIII (Aug., 1934), No. 2, p. 118 (Officers and Governors).
XXIV (May, 1935), No. 5, p. 457 (Officers and Governors).

144 Open Forum

XVI (May, 1931), No. 5, p. 665.

XVII (Sept., 1931), No. 3, p. 485.

Methods of Securing a Large Screen Picture.

XVI (Jan., 1931), No. 1, p. 80.

XVI (Feb., 1931), No. 2, p. 174.

Should Studio Recording Equipment Compensate for Theater Reproducing Characteristics? XXII (March, 1934), No. 3, p. 183.

145 Optical Intermittents

Mechanical Advantages of the Optical Intermittent Projector, J. L. Spence, XVIII (May, 1932), No. 5, p. 593.

146 Optical Reduction

Continuous Optical Reduction Printing, A. F. Victor, XXIII (Aug., 1934), No. 2, p. 96.

Optical Reduction Sound Printing, G. L. Dimmick, C. N. Batsel, and L. T. Sachtleben, XXIII (Aug., 1934), No. 2, p. 108.

Some Characteristics of 16-Mm. Sound by Optical Reduction and Re-Recording, C. N. Batsel and L. T. Sachtleben, XXIV (Feb., 1935), No. 2, p. 95.

A Continuous Optical Reduction Sound Printer, O. Sandvik and J. G. Streiffert, XXV (Aug., 1935), No. 2, p. 117.

147 Optics

The Optical Problems of Wide-Film Motion Pictures, W. B. Rayton, XIV (Jan., 1930), No. 1, p. 50.

The Optics of Motion Picture Projectors, A. C. Hardy, XIV (March, 1930), No. 3, p. 309.

Measuring the Effective Illumination of Photographic Objectives, J. Hrdlicka, XIV (May, 1930), No. 5, p. 531.

The Depth of Field of Camera Lenses with Special Reference to Wide Film, A. C. Hardy, XVI (March, 1931), No. 3, p. 286.

An Apertureless Optical System for Sound-on-Film, R. C. Burt, XVII (Dec., 1931), No. 6, p. 994.

Lighting of Sound-Films, L. Dunoyer, XVIII (Jan., 1932), No. 1, p. 3.

Optical Instruments and Their Application in the Motion Picture Industry, I. L. Nixon, XVIII (March, 1932), No. 3, p. 304.

Optics of Projectors for 16-Mm. Film, A. A. Cook, XVIII (April, 1932), No. 4, p. 461.

Size of Image as a Guide to Depth of Focus in Cinematography, J. F. Westerberg, XVIII (May, 1932), No. 5, p. 655.

Illumination in Projection Printing of Motion Pictures, C. Tuttle and D. A. Young, XIX (July, 1932), No. 1, 842.

The Bell & Howell Cooke Varo Lens, A. Warmisham and R. F. Mitchell, XIX (Oct., 1932), No. 4, p. 329.

Short-Focus Lenses for Projection with Translucent Screens, W. B. Rayton, XIX (Dec., 1932), No. 6, p. 512.

Memorandum on Widening the Field of Camera Lenses and on the Use of

- Normal Films for the Panoramic Screen, H. Dain, **XIX** (Dec., 1932), No. 6, p. 522.
- Wide-Screen Photography with Cylindrical Anamorphosing Systems and Characteristics of Motion Picture Lenses and Images, H. S. Newcomer, **XX** (Jan., 1933), No. 1, p. 31.
- A Method of Measuring Axial Chromatic Aberration in an Objective Lens, W. Herriott, **XX** (April, 1933), No. 4, p. 323.
- Recent Optical Improvements in Sound-Film Recording Equipment, W. Herriott and L. V. Foster, **XXIII** (Sept., 1934), No. 3, p. 167.
- The Effect of Aperture Lenses on Illumination, W. B. Rayton, **XXIII** (Dec., 1934), No. 6, p. 309.
- A Revolving Lens for Panoramic Pictures, F. Altman, **XXIV** (May, 1935), No. 5, p. 383.
- A Proposed New Series of Standard Focal Lengths for Motion Picture Projection Objectives, W. B. Rayton, **XV** (Sept., 1930), No. 3, p. 277.

148 Organization of the Society

Functional and Administrative Organization of the S. M. P. E., **XXII** (April, 1934) No. 4, p. 270.

149 Oscillograph

The Rapid-Record Oscillograph in Sound Picture Studies, A. M. Curtis, T. E. Shea, and C. H. Rumpel, **XVIII** (Jan., 1932), No. 1, p. 39.

150 Oscilloscope

A Rotating-Mirror Oscilloscope, R. F. Mallina, **XXIII** (Dec., 1934), No. 6, p. 328.

151 Panoramic Pictures

Memorandum on Widening the Field of Camera Lenses, and on the Use of Normal Films for the Panoramic Screen, H. Dain, **XIX** (Dec., 1932), No. 6, p. 522.

A Revolving Lens for Panoramic Pictures, F. Altman, **XXIV** (May, 1935), No. 5, p. 383.

152 Papers

(See *Committee Reports, Papers.*)

153 Patent Litigation

Radio's Past and Future, R. A. Milliken, **XVII** (Oct., 1931), No. 4, p. 655.

The High-Vacuum Tube Comes before the Supreme Court, W. R. Ballard, **XVII** (Oct., 1931), No. 4, p. 659.

Rulings of the U. S. Supreme Court in Recent Patent Cases of the American Tri-Ergon Corp., **XXIV** (June, 1935), No. 6, p. 529.

154 Pathéchrome

The Handschiegl and Pathechrome Color Processes, W. V. D. Kelley, **XVII** (Aug., 1931), No. 2, p. 230.

155 **Perforation**

Film Perforation and Its Measurement, W. H. Carson, **XIV** (Feb., 1930), No. 2, p. 209.

Proposed Change in the Present Standards of 35-Mm. Film Perforations, A. S. Howell and J. A. Dubray, **XVIII** (April, 1932), No. 4, p. 503.

156 **Photoelectric Cells**

The Becquerel Effect and Its Adaptation to Talking Picture Systems, R. Miehling, **XV** (Sept., 1930), No. 3, p. 281.

Vacuum Tube and Photoelectric Tube Developments for Sound Picture Systems, M. J. Kelly, **XVIII** (June, 1932), No. 6, p. 761.

Use of the Photoelectric Cell in Cinematography, L. Kützleb, **XIX** (Dec., 1932), No. 6, p. 528.

157 **Photoflash Lamp**

The Photoflash Lamp, R. E. Farnham, **XVI** (June, 1931), No. 6, p. 742.

158 **Photography**

(See also *Film, Photographic Characteristics and Development of; and Processing.*)

The Photronic Photographic Exposure Meter, W. N. Goodwin, Jr., **XX** (Feb., 1933), No. 2, p. 95.

A Practical Method and Photometer for Controlling Exposures in Photography, M. Lasky and B. Rubin, **XXI** (Aug., 1933), No. 2, p. 154.

Reciprocity Law Failure in Photographic Exposures, L. A. Jones and L. H. Webb, **XXIII** (Sept., 1934), No. 3, p. 142.

Some Factors in Photographic Sensitivity, S. E. Sheppard, **XXIV** (June, 1935), No. 6, p. 500.

Introduction to the Photographic Possibilities of Polarized Light, F. Tuttle and J. W. McFarlane, **XXV** (July, 1935), No. 1, p. 69.

New Emulsions for Special Fields in Motion Picture Photography, W. Leahy, **XXV** (Sept., 1935), No. 3, p. 248.

The Photographic Effectiveness of Carbon Arc Studio Light-Sources, F. T. Bowditch and A. C. Downes, **XXV** (Nov., 1935), No. 5, p. 375.

159 **Photography, Wide-Screen**

Wide-Screen Photography with Cylindrical Anamorphosing Systems and Characteristics of Motion Picture Lenses and Images, H. S. Newcomer, **XX** (Jan., 1933), No. 1, p. 31.

160 **Photometers**

A Practical Method and Photometer for Controlling Exposures in Photography, M. Lasky and B. Rubin, **XXI** (Aug., 1933), No. 2, p. 154.

161 **Photometry**

A Light-Intensity Meter, J. L. McCoy, **XIV** (March, 1930), No. 3, p. 357.

Measuring the Effective Illumination of Photographic Objectives, J. Hrdlicka, **XIV** (May, 1930), No. 5, p. 531.

A Method for the Determination of Exposure in Cinematography, R. P. Loveland, **XV** (Nov., 1930), No. 5, p. 689.

A New Photometer Exposure Meter, J. A. Dubray, **XV** (Nov., 1930), No. 5, p. 710.

167 **Photomicrography**

(See also *Cinephotomicrography*.)

Progress in Micro Cinematography, H. Rosenberger, **XV** (Oct., 1930), No. 4, p. 439.

The Cinematography of Brownian Movement with the Filmo Camera, R. F. Mitchell, **XV** (Nov., 1930), No. 5, p. 679.

New Developments in Micro Motion Picture Technic, H. Roger, **XXIV** (June, 1935), No. 6, p. 475.

168 **Physiological Optics**

(See also *Ocular Fatigue*.)

Radiation Characteristics of Two Mercury Arcs, F. Benford, **XIV** (April, 1930), No. 4, p. 404.

169 **Piezoelectric Equipment**

Piezoelectric Frequency Control, F. R. Lack, **XXIII** (Oct., 1934), No. 4, p. 187.

Piezoelectric Microphones, A. L. Williams, **XXIII** (Oct., 1934), No. 4, p. 196.

Piezoelectric Loud Speakers, A. L. Williams, **XXIV** (Feb., 1935), No. 2, p. 121.

170 **Portable Equipment**

(See also *Sixteen-Millimeter Equipment*.)

A Sixteen-Millimeter Portable Sound-on-Film Projection Equipment, C. R. Hanna, P. L. Irwin, and E. W. Reynolds, **XXI** (Dec., 1933), No. 6, p. 456.

A Light-Weight Single-Film Recording System for Newsreels and Travelogues, C. R. Sawyer, **XXI** (Dec., 1933), No. 6, p. 466.

New Developments in Portable Gas-Electric Generators for Motion Picture Lighting, P. Mole, **XXI** (Nov., 1933), No. 5, p. 413.

Portable Recording Equipment, D. Canady, **XXI** (Dec., 1933), No. 6, p. 483.

A New 35-Mm. Portable Sound Projector, H. Griffin, **XXII** (Jan., 1934), No. 1, p. 70.

Sixteen-Millimeter Sound-on-Film, J. O. Baker, **XXII** (Feb., 1934), No. 2, p. 139.

171 **Power Supply, for Reproducing Equipment**

The Application of Rectifier Power Supply to Sound Reproducing Equipment, B. F. W. Heyer, **XIX** (Nov., 1932), No. 5, p. 437.

172 **Preservation of Film**

(See *Committee Reports, Care and Development of Film*.)

173 **Preselection of Takes**

Economies in Sound-Film Processing, G. M. Best, **XXI** (Sept., 1933), No. 3, p. 236.

The Preselection of Takes for Processing from Exposed Undeveloped Negative, D. W. Ridgway, **XXI** (Sept., 1933), No. 3, p. 230.

149 Printer Light Control

A New Light Control for Printing Machines, K. Schneider, **XIX** (July, 1932), No. 1, p. 865.

150 Printers

Curved Gates in Optical Printers, W. S. Vaughn and F. Tuttle, **XIV** (June, 1930), No. 6, p. 663.

A Compounded Geneva Pull-Down for Motion Picture Printers, F. Tuttle, **XV** (Nov., 1930), No. 5, p. 671.

A Machine for Printing Picture and Sound Simultaneously and Automatically, O. B. Depue, **XVIII** (May, 1932), No. 5, p. 643.

A Shrinkage-Compensating Sound Printer, R. V. Wood, **XVIII** (June, 1932), No. 6, p. 788.

The Bell & Howell Fully Automatic Sound Picture Production Printer, A. S. Howell, B. E. Stechbart, and R. F. Mitchell, **XIX** (Oct., 1932), No. 4, p. 305.

Recent Improvements in the Bell & Howell Fully Automatic Printer, A. S. Howell and R. F. Mitchell, **XXII** (Feb., 1934), No. 2, p. 115.

151 Printing

A Proposed New Method of "Timing" Negatives, M. W. Palmer and A. J. Richards, **XV** (Aug., 1930), No. 2, p. 181.

On the Assignment of Printing Exposure by Measurement of Negative Characteristics, C. Tuttle, **XVIII** (Feb., 1932), No. 2, p. 172.

Illumination in Projection Printing of Motion Pictures, C. Tuttle and D. A. Young, **XIX** (July, 1932), No. 1, p. 842.

A New Light Control for Printing Machines, K. Schneider, **XIX** (July, 1932), No. 1, p. 865.

The Duplication of Motion Picture Negatives, J. I. Crabtree and C. H. Schwingel, **XIX** (July, 1932), No. 1, p. 891.

Sound Film Printing—I, J. Crabtree, **XXI** (Oct., 1933), No. 4, p. 294—II, J. Crabtree, **XXII** (Feb., 1934), No. 2, p. 98.

Continuous Optical Reduction Printing, A. F. Victor, **XXIII** (Aug., 1934), No. 2, p. 96.

A Non-Slip Sound Printer, C. N. Batsel, **XXIII** (Aug., 1934), No. 2, p. 100.

Optical Reduction Sound Printing, G. L. Dimmick, C. N. Batsel, and L. T. Sachtleben, **XXIII** (Aug., 1934), No. 2, p. 108.

A Continuous Optical Reduction Sound Printer, O. Sandvik and J. G. Streiffert, **XXV** (Aug., 1935), No. 2, p. 117.

152 Process Cinematography

Special Process Technic, V. Walker, **XVIII** (May, 1932), No. 5, p. 662.

Process Photography, G. A. Chambers, **XVIII** (June, 1932), No. 6, p. 782.

Composite Photographic Processes, H. D. Hineline, **XX** (April, 1933), No. 4, p. 283.

Background Projection for Process Cinematography, G. G. Popovici, **XXIV** (Feb., 1935), No. 2, p. 102.

153 Processing

(See *Cleaning of Motion Picture Film; Defects in Film Resulting from Processing; Development, Photographic; Drying Motion Picture Film; Duplication*

- of Motion Picture Film; Fixing Motion Picture Film; Lubrication of Motion Picture Film; Tinting and Toning; Washing Motion Picture Film.)*
- The Processing of Variable-Density Sound Records, R. F. Nicholson, **XV** (Sept., 1930), No. 3, p. 374.
- A Modern Laboratory for the Study of Sound Picture Problems, T. E. Shea, **XVI** (March, 1931), No. 3, p. 277.
- Materials for the Construction of Motion Picture Processing Apparatus, J. I. Crabtree, G. E. Matthews, and J. F. Ross, **XVI** (March, 1931), No. 3, p. 330.
- Effect of the Water Supply in Processing Motion Picture Film, J. I. Crabtree and G. E. Matthews, **XVI** (April, 1931), No. 4, p. 437.
- The Multicolor Process, R. M. Otis, **XVII** (July, 1931), No. 1, p. 5.
- The Multicolor Laboratory, B. Burns, **XVII** (July, 1931), No. 1, p. 11.
- Improvements in Motion Picture Laboratory Apparatus, C. E. Ives, A. J. Miller, and J. I. Crabtree, **XVII** (July, 1931), No. 1, p. 26.
- The Electrolytic Regeneration of Fixing Baths, K. Hickman, C. Sanford, and W. Weyerts, **XVII** (Oct., 1931), No. 4, p. 568.
- Automatic Silver Recovery Control, K. Hickman, **XVII** (Oct., 1931), No. 4, p. 591.
- Air-Conditioning in Film Laboratories, A. H. Simonds and L. H. Polderman, **XVII** (Oct., 1931), No. 4, p. 604.
- The Processing of Variable-Width Sound Records in the Film Laboratory, W. P. Bielicke, **XVII** (Nov., 1931), No. 5, p. 778.
- High-Frequency Response from Variable-Width Records as Affected by Exposure and Development, G. L. Dimmick, **XVII** (Nov., 1931), No. 5, p. 766.
- The Effect of Exposure and Development on the Quality of Variable-Width Photographic Sound Recording, D. Foster, **XVII** (Nov., 1931), No. 5, p. 749.
- A Method for Quantity Developing of Motion Picture Films, C. R. Hunter and R. M. Pierce, **XVII** (Dec., 1931), No. 6, p. 954.
- Directional Effects in Continuous Film Processing, J. Crabtree, **XVIII** (Feb., 1932), No. 2, p. 207.
- The Reducing Action of Fixing Baths on the Silver Image, H. D. Russell and J. I. Crabtree, **XVIII** (March, 1932), No. 3, p. 371.
- Silica Gel Air-Conditioning for Film Processing, E. C. Holden, **XVIII** (April, 1932), No. 4, p. 471.
- Time-and-Temperature *vs.* the Test System for Development of Motion Picture Negatives, W. Leahy, **XVIII** (May, 1932), No. 5, p. 649.
- A Method for the Calculation of the Correct and Most Economical Concentrations of Elon and Hydroquinone in a Borax Developer for Motion Picture Film, A. M. Gundelfinger, **XX** (April, 1933), No. 4, p. 343.
- Economies in Sound-Film Processing, G. M. Best, **XXI** (Sept., 1933), No. 3, p. 236.
- The Preselection of Takes for Processing from Exposed Undeveloped Negative, D. W. Ridgway, **XXI** (Sept., 1933), No. 3, p. 230.
- Directional Effects in Sound-Film Processing—II, J. Crabtree and J. H. Waddell, **XXI** (Nov., 1933), No. 5, p. 351.
- A Roller Developing Rack for Continuously Moving the Film during Processing by the Rack-and-Tank System, C. E. Ives, **XXIV** (March, 1935), No. 3, p. 261.

The Davidge Developing Apparatus, **XXIV** (May, 1935), No. 5, p. 452.

Processing, Control of

Time-and-Temperature *vs.* the Test System for Development of Motion Picture Negatives, W. Leahy, **XVIII** (May, 1932), No. 5, p. 649.

Sensitometric Control in the Processing of Motion Picture Film in Hollywood, E. Huse, **XXI** (July, 1933), No. 1, p. 54.

The Eastman Type *II/b* Sensitometer as a Control Instrument in the Processing of Motion Picture Film, G. A. Chambers and I. D. Wratten, **XXI** (Sept., 1933), No. 3, p. 218.

Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.

A Physical Densitometer for Sound Processing Laboratories, F. L. Eich, **XXIV** (Feb., 1935), No. 2, p. 180.

The Need for Uniform Density in Variable-Density Sound-Tracks, F. H. Richardson, **XXIV** (June, 1935), No. 6, p. 524.

A Dynamic Check on the Processing of Film for Sound Records, F. G. Albin, **XXV** (Aug., 1935), No. 2, p. 161.

Sensitometric Studies of Processing Conditions for Motion Picture Films, H. Meyer, **XXV** (Sept., 1935), No. 3, p. 239.

The Argentometer—An Apparatus for Testing for Silver in a Fixing Bath, W. J. Weyerts and K. C. D. Hickman, **XXV** (Oct., 1935), No. 4, p. 335.

Processing Release Prints

Release Print Problems of the Distributor, J. A. Gove, **XIX** (Nov., 1932), No. 5, p. 410.

The Treatment of New Film Prior to Release, T. Faulkner, **XIX** (Nov., 1932), No. 5, p. 419.

Production

Making a Motion Picture, W. C. Harcus, **XVII** (Nov., 1931), No. 5, p. 802.

Making Motion Pictures in Asiatic Jungles, G. S. Mitchell, **XVII** (Nov., 1931), No. 5, p. 811.

Finishing a Motion Picture, W. C. Harcus, **XIX** (Dec., 1932), No. 6, p. 553.

Recent Improvements in Equipment and Technic in the Production of Motion Pictures, E. A. Wolcott, **XXIII** (Oct., 1934), No. 4, p. 210.

Current Developments in Production Methods in Hollywood, H. G. Tasker, **XXIV** (Jan., 1935), No. 1, p. 3.

Progress

(See also *Addresses; Committee Reports, Progress, and Progress Award; General; and International Markets.*)

A Year of Sound, H. B. Franklin, **XIV** (March, 1930), No. 3, p. 302.

Progress in Industrial and Scientific Cinematography in France, M. Abribat, **XV** (Aug., 1930), No. 2, p. 214.

Applied and Scientific Cinematography in Austria, P. Schrott, **XV** (Aug., 1930), No. 2, p. 223.

The Soviet Cinematography, L. I. Monosson, **XV** (Oct., 1930), No. 4, p. 509.

The Progress of Sound Motion Pictures, H. B. Franklin, **XV** (Dec., 1930), No. 6, p. 809.

The Motion Picture Industry in Soviet Russia, XVI (May, 1931), No. 5, p. 619.
The Motion Picture Industry in Japan, M. Ruot, XVIII (May, 1932), No. 5, p. 628.

The Future of Motion Pictures, C. Smith, XIX (Sept., 1932), No. 3, p. 294.
Current Developments in Production Methods in Hollywood, H. G. Tasker, XXIV (Jan., 1935), No. 1, p. 3.
The Motion Picture Industry in the Soviet Union, V. I. Verlinsky, XXIV (Jan., 1935), No. 1, p. 12.

Progress Medal Award

(See also *Committee Reports, Progress Medal Award.*)

Regulations Pertaining to the Progress Medal Award:

XVIII (March, 1932), No. 3, p. 411.

XXIV (April, 1935), No. 4, p. 378.

The SMPE Progress Medal Award, XXV (July, 1935), No. 1, p. 98.

Proceedings of the Semi-Annual Banquet at Washington, D. C., October 23, 1935, XXV (Dec., 1935), No. 6, p. 467.

Projection, General Information

(See also *Committee Reports, Projection and Sound Reproduction; Projection Practice; Projection Screens; Projection Theory; and Sound.*)

Camera and Projector Apertures in Relation to Sound-on-Film Pictures, L. Cowan, XIV (Jan., 1930), No. 1, p. 108.

The Optics of Motion Picture Projectors, A. C. Hardy, XIV (March, 1930), No. 3, p. 309.

Methods of Securing a Large Screen Picture:

XVI (Jan., 1931), No. 1, p. 80.

XVI (Feb., 1931), No. 2, p. 174.

The Life of Sound-Films in Hungary, A. Szekely, XVI (May, 1931), No. 5, p. 553.

Reversing the Form and Inclination of the Motion Picture Theater Floor for Improving Vision, B. Schlanger, XVII (Aug., 1931), No. 2, p. 161.

Utilization of Desirable Seating Areas in Relation to Screen Shapes and Sizes and Theater Floor Inclinations, B. Schlanger, XVIII (Feb., 1932), No. 2, p. 189.

Studio Projection and Reproduction Practice, J. O. Aalberg, XVIII (May, 1932), No. 5, p. 652.

Sound Motion Picture Equipment for the U. S. Navy, S. W. Cochran, XIX (July, 1932), No. 1, p. 872.

The Screen—A Projectionist's Problem, F. M. Falge, XIX (July, 1932), No. 1, p. 909.

Standards and Requirements of Projection for Visual Education, C. L. Greene, XIX (Nov., 1932), No. 5, p. 424.

Memorandum on Widening the Field of Camera Lenses and on the Use of Normal Films for the Panoramic Screen, H. Dain, XIX (Dec., 1932), No. 6, p. 522.

Motion Pictures in the U. S. Navy, C. E. Fraser, XIX (Dec., 1932), No. 6, p. 546.

- Avoidance of Eye Fatigue, F. H. Richardson, **XX** (May, 1933), No. 5, p. 391.
A New Alternating-Current Projection Arc, D. B. Joy and A. C. Downes, **XXI** (Aug., 1933), No. 2, p. 116.
An Experimental Apparatus for the Projection of Motion Pictures in Relief, H. E. Ives, **XXI** (Aug., 1933), No. 2, p. 106.
Distortion in the Projection and Viewing of Motion Pictures, C. Tuttle, **XXI** (Sept., 1933), No. 3, p. 198.
A Sixteen-Millimeter Portable Sound-on-Film Projection Equipment, C. R. Hanna, P. L. Irwin, and E. W. Reynolds, **XXI** (Dec., 1933), No. 6, p. 456.
A Brief History of the Kinetograph, the Kinetoscope, and the Kineto-Phonograph, W. K. L. Dickson, **XXI** (Dec., 1933), No. 6, p. 435.
Sprocket Dimensions for 35-Mm. Visual and Sound Projection Equipment, H. Griffin, **XXII** (Jan., 1934), No. 1, p. 20.
Direct-Current High-Intensity Arcs with Non-Rotating Positive Carbons, D. B. Joy and A. C. Downes, **XXII** (Jan., 1934), No. 1, p. 42.
A New 35-Mm. Portable Sound Projector, H. Griffin, **XXII** (Jan., 1934), No. 1, p. 70.
An Automatic Change-Over Device, A. Pritchard, **XXII** (March, 1934), No. 3, p. 186.
Operating Characteristics of the High-Intensity A-C. Arc for Motion Picture Projection, D. B. Joy and E. R. Geib, **XXIII** (July, 1934), No. 1, p. 27.
The Relation of the High-Intensity A-C. Arc to the Light on the Projection Screen, D. B. Joy and E. R. Geib, **XXIII** (July, 1934), No. 1, p. 35.
The Effect of Aperture Lenses on Illumination, W. B. Rayton, **XXIII** (Dec., 1934), No. 6, p. 309.
The Non-Rotating High-Intensity D-C. Arc for Projection, D. B. Joy and E. R. Geib, **XXIV** (Jan., 1935), No. 1, p. 47.
Background Projection for Process Cinematography, G. G. Popovici, **XXIV** (Feb., 1935), No. 2, p. 102.
Light-Source Requirements for Picture Projection, F. E. Carlson, **XXIV** (March, 1935), No. 3, p. 189.
My Part in the Development of the Motion Picture Projector, T. Armat, **XXIV** (March, 1935), No. 3, p. 241.
On the Relation between the Shape of the Projected Picture, the Areas of Vision, and Cinematographic Technic, B. Schlanger, **XXIV** (May, 1935), No. 5, p. 402.
A Motor-Generator for the Non-Rotating High-Intensity Arc, **XXIV** (May, 1935), No. 5, p. 450.
Relation between Illumination and Screen Size for Non-Theatrical Projection, D. F. Lyman, **XXV** (Sept., 1935), No. 3, p. 227.
Arc-Supply Generator for Use with Suprex Carbons, W. K. Hartman, **XXV** (Sept., 1935), No. 3, p. 278.
Non-Theatrical Projection, R. F. Mitchell, **XXV** (Oct., 1935), No. 4, p. 314.
Ozaphane Film and the Cinelux Projector, A. M. Cheftel, **XXV** (Oct., 1935), No. 4, p. 358.

Projection Lamps

(See *Arcs*; and *Illumination in Projection*.)

181 **Projection Optics**
(See *Optics*.)

182 **Projection Practice**
(See *Committee Reports, Projection Practice*.)

183 **Projection Screen Brightness**
(See *Committee Reports, Projection Screen Brightness*, and *Projection Screens*.)

184 **Projection Screens**
(See *Committee Reports, Projection Screen Brightness*, and *Projection Screens*.)

185 **Projection Theory**
(See *Committee Reports, Projection Theory*.)

186 **Projectors, Continuous**
Apparatus Developed to Simplify Manufacture of Lens Wheels for Continuous Projectors, A. J. Holman, **XIV** (June, 1930), No. 6, p. 623.
The Revolving Lens Wheel Projector, A. J. Holman, **XV** (July, 1930), No. 1, p. 20.
Continuous Non-Intermittent Projectors, A. J. Holman, **XVI** (May, 1931), No. 5, p. 612.
Some Interesting Properties of Continuous Projectors, W. C. Plank, **XVI** (June, 1931), No. 6, p. 709.
A Portable Non-Intermittent Ciné Projector, **XVIII** (Jan., 1932), No. 1, p. 101.
Mechanical Advantages of the Optical Intermittent Projector, J. L. Spence, **XVIII** (May, 1932), No. 5, p. 593.
Inertia in the Service of Cinematography, W. C. Plank, **XIX** (Dec., 1932), No. 6, p. 565.
The Problem of Motion Picture Projection from Continuously Moving Film, F. Tuttle and C. D. Reid, **XX** (Jan., 1933), No. 1, p. 3.

187 **Projectors, Intermittent**
Some New Projection Equipment, H. Griffin, **XV** (Nov., 1930), No. 5, p. 641.

188 **Projectors, Portable**
(See also *Sixteen-Millimeter Equipment*.)
New 35-Mm. Portable Projector, H. Griffin, **XVII** (Oct., 1931), No. 4, p. 623.
A Portable Non-Intermittent Ciné Projector, **XVIII** (Jan., 1932), No. 1, p. 101.

189 **Projectors, Special Type**
(See also *Projectors, Continuous*; and *Non-Intermittent Projection*.)
A Novel Projector, **XVI** (May, 1931), No. 5, p. 541.
A Portable Non-Intermittent Ciné Projector, **XVIII** (Jan., 1932), No. 1, p. 101.
The Problem of Projecting Motion Pictures in Relief, H. E. Ives, **XVIII** (April, 1932), No. 4, p. 417.
Mechanical Advantages of the Optical Intermittent Projector, J. L. Spence, **XVIII** (May, 1932), No. 5, p. 593.
Sound Motion Picture Equipment for the U. S. Navy, S. W. Cochran, **XIX** (July, 1932), No. 1, p. 872.

Motion Pictures in the U. S. Navy, C. E. Fraser, **XIX** (Dec., 1932), No. 6, p. 546.

Inertia in the Service of Cinematography, W. C. Plank, **XIX** (Dec., 1932), No. 6, p. 565.

190 Psychology (of Color)

Color Consciousness, N. M. Kalmus, **XXV** (Aug., 1935), No. 2, p. 139.

191 Public Address Systems

The Lapel Microphone and Its Application to Public Address and Announcing Systems, W. C. Jones and D. T. Bell, **XIX** (Sept., 1932), No. 3, p. 219.

192 Publications of the Motion Picture Industry

The Literature of the Motion Picture Industry, G. E. Matthews, **XIX** (Nov., 1932), No. 5, p. 451.

193 Reciprocity Law

Reciprocity Law Failure in Photographic Exposures, L. A. Jones and J. H. Webb, **XXIII** (Sept., 1934), No. 3, p. 142.

194 Recorders

(See also *Sound Recording*, *Variable-Density Method*, and *Variable-Width Method*.)

Recent Developments in RCA Photophone Portable Recording Equipment, P. M. Robillard and E. B. Lyford, **XVI** (March, 1931), No. 3, p. 269.

Some New RCA Photophone Studio Recording Equipment, W. P. Dutton and S. Read, Jr., **XVI** (March, 1931), No. 3, p. 315.

A Sound-Film Re-Recording Machine, J. J. Kuhn, **XVII** (Sept., 1931), No. 3, p. 326.

A New Western Electric Double-Film Portable Sound Recording System, C. R. Daily, **XX** (Feb., 1933), No. 2, p. 128.

Film Recorders, A. G. Zimmerman, **XX** (March, 1933), No. 3, p. 211.

RCA Victor High-Fidelity Film Recording Equipment, S. Read, Jr., **XX** (May, 1933), No. 5, p. 396.

195 Recording, Mechanical

Mechanical Recording on Film, A. F. Chorine, **XXIV** (May, 1935), No. 5, p. 410.

Mechanographic Recording for Motion Picture Sound-Tracks, J. A. Miller, **XXV** (July, 1935), No. 1, p. 50.

196 Rectifiers

The Application of Rectifier Power Supply to Sound Reproducing Equipment, B. F. W. Heyer, **XIX** (Nov., 1932), No. 5, p. 437.

197 Reduction

Reducing and Intensifying Solutions for Motion Picture Film, J. I. Crabtree and L. E. Muehler, **XVII** (Dec., 1931), No. 6, p. 1001.

The Reducing Action of Fixing Baths on the Silver Image, H. D. Russell and J. I. Crabtree, **XVIII** (March, 1932), No. 3, p. 371.

Reels

(See also *Committee Reports, Exchange Practice, and Projection Practice.*)
The 2000-Ft. Reel, **XXV** (Nov., 1935), No. 5, p. 462.

Reflectors

Reflecting Surfaces of Aluminum, J. D. Edwards, **XXIV** (Feb., 1935), No. 2, p. 126.

Release Prints

Theater Problems of the Release Print, **XIX** (Nov., 1932), No. 5, p. 407.
Release Print Problems of the Distributor, J. A. Gove, **XIX** (Nov., 1932), No. 5, p. 410.
The Treatment of New Film Prior to Release, T. Faulkner, **XIX** (Nov., 1932), No. 5, p. 419.

Re-Recording

A Sound-Film Re-Recording Machine, J. J. Kuhn, **XVII** (Sept., 1931), No. 3, p. 326.
Film Recorders, A. G. Zimmerman, **XX** (March, 1933), No. 3, p. 211.
A Device for Automatically Controlling the Balance between Recorded Sounds, W. A. Mueller, **XXV** (July, 1935), No. 1, p. 79.

Reverberation of Auditoriums

(See *Acoustics.*)

Roentgenology

(See *X-Ray Cinematography.*)

Screen Illumination

(See *Illumination in Projection.*)

Screens

(See also *Committee Reports, Projection Screen Brightness and Projection Screens.*)
Considerations in the Design and Testing of Motion Picture Screens for Sound Picture Work, H. F. Hopkins, **XV** (Sept., 1930), No. 3, p. 320.
Tests of Motion Picture Screens, W. F. Little, **XVI** (Jan., 1931), No. 1, p. 31.
Motion Picture Screens—Their Selection and Use for Best Picture Presentation, F. M. Falge, **XVII** (Sept., 1931), No. 3, p. 343.
The Screen—A Projectionist's Problem, F. M. Falge, **XIX** (July, 1932), No. 1, p. 909.

Sectional Committee on Motion Pictures, A.S.A.

(See *American Standards Association.*)

Selenophon

The Selenophon Sound Recording System, P. Schrott, **XVIII** (May, 1932), No. 5, p. 622.
The "Selenophon" Sound Recording and Reproducing System, G. E. Roth, **XXII** (April, 1934), No. 4, p. 260.

Sensitivity, Photographic

The Mechanism of Hypersensitization, B. H. Carroll and D. Hubbard, **XVIII** (May, 1932), No. 5, p. 600.

Some Factors in Photographic Sensitivity, S. E. Sheppard, **XXIV** (June, 1935), No. 6, p. 500.

Sensitograph

Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.

Sensitometry

(See also *Densitometry*.)

Photographic Characteristics of Sound Recording Film, L. A. Jones and O. Sandvik, **XIV** (Feb., 1930), No. 2, p. 180.

A Quick Test for Determining the Degree of Exhaustion of Developers, M. L. Dundon, G. H. Brown, and J. G. Capstaff, **XIV** (April, 1930), No. 4, p. 389.

The Measurement of Density in Variable-Density Sound-Film, C. Tuttle and J. W. McFarlane, **XV** (Sept., 1930), No. 3, p. 345.

A Semi-Automatic Timing Device for Motion Picture Negatives, J. I. Crabtree-C. E. Ives, and F. Tuttle, **XV** (Nov., 1930), No. 5, p. 587.

A Motion Picture Laboratory Sensitometer, L. A. Jones, **XVII** (Oct., 1931), No. 4, p. 536.

Photographic Sensitometry, L. A. Jones,

Part I, **XVII** (Oct., 1931), No. 4, p. 491.

Part II, **XVII** (Nov., 1931), No. 5, p. 695.

Part III, **XVIII** (Jan., 1932), No. 1, p. 54.

Part IV, **XVIII** (March, 1932), No. 3, p. 324.

Two Special Sensitometers, D. R. White, **XVIII** (March, 1932), No. 3, p. 279.

Gamma by Least Squares, D. R. White, **XVIII** (May, 1932), No. 5, p. 584.

The Sensitometric Control of Sound Records on Film, A. Küster and R. Schmidt, **XIX** (Dec., 1932), No. 6, p. 539.

The Relation between Diffuse and Specular Density, C. Tuttle, **XX** (March, 1933), No. 3, p. 228.

Sensitometric Control in the Processing of Motion Picture Film in Hollywood, E. Huse, **XXI** (July, 1933), No. 1, p. 54.

The Eastman Type *IIb* Sensitometer as a Control Instrument in the Processing of Motion Picture Film, G. A. Chambers and I. D. Wratten, **XXI** (Sept., 1933), No. 3, p. 218.

Analysis of Sound Quality with the Variable-Density Recording Method from Sensitometric Data, R. Schmidt and A. Küster, **XXI** (Nov., 1933), No. 5, p. 374.

Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.

A Physical Densitometer for Sound Processing Laboratories, F. L. Eich, **XXIV** (Feb., 1935), No. 2, p. 180.

Sensitometric Studies of Processing Conditions for Motion Picture Films, H. Meyer, **XXV** (Sept., 1935), No. 3, p. 239.

211 Servicing Motion Picture Equipment(See also *Theater Operation*.)Test-Set for Servicing Sound Projection Equipment, A. H. Wolferz, **XVI** (March, 1931), No. 3, p. 349.Modern Tools and Methods Used in Servicing Sound Equipment, J. Mauran, **XIX** (Sept., 1932), No. 3, p. 260.**212 Sets, Motion Picture**Motion Picture Sets, H. Dreier, **XVII** (Nov., 1931), No. 5, p. 789.**213 Shutters**A Shutter for Use in Reduction of Ground-Noise, E. W. Kellogg and C. N. Batsel, **XVII** (Aug., 1931), No. 2, p. 203.**214 Silver Recovery**The Electrolytic Regeneration of Fixing Baths, K. Hickman, C. Sanford, and W. Weyerts, **XVII** (Oct., 1931), No. 4, p. 568.Automatic Silvery Recovery Control, K. Hickman, **XVII** (Oct., 1931), No. 4, p. 591.**215 Sixteen-Millimeter Equipment**(See also *Non-Theatrical; American Standards Association; and Committee Reports, Non-Theatrical Equipment, and Standards and Nomenclature*.)A New Synchronizing Apparatus for 16-Mm. Films with Disk Records, W. H. Bristol, **XIV** (March, 1930), No. 3, p. 361.A New 16-Mm. Motion Picture Camera, J. A. Dubray, **XIV** (April, 1930), No. 4, p. 427.Improved Synchronizing Apparatus for 16-Mm. Films with Disk Records, W. H. Bristol, **XV** (Oct., 1930), No. 4, p. 494.A New 16-Mm. Projector, A. Shapiro, **XV** (Nov., 1930), No. 5, p. 598.A New Power Amplifier System, L. Thompson, **XV** (Nov., 1930), No. 5, p. 602.Optics of Projectors for 16-Mm. Film, A. A. Cook, **XVIII** (April, 1932), No. 4, p. 461.Sixteen-Millimeter Sound-Film Dimensions, R. P. May, **XVIII** (April, 1932), No. 4, p. 488.The Animatophone—A New Type 16-Mm. Synchronous Disk Reproducer, A. F. Victor, **XVIII** (April, 1932), No. 4, p. 512.Advantages of Using 16-Mm. Supersensitive Panchromatic Film in Making Medical Motion Pictures, H. B. Tuttle and R. P. Schwartz, **XVIII** (May, 1932), No. 5, p. 609.A 16-Mm. Sound-on-Film Projector, H. C. Holden, **XIX** (Sept., 1932), No. 3, p. 228.Motion Pictures with Sound on Standard 16-Mm. Film, H. G. Tasker and A. W. Carpenter, **XIX** (Sept., 1932), No. 3, p. 237.A Portable 16-Mm. Sound Picture System, R. A. Miller and H. Pfannenstiehl, **XIX** (Sept., 1932), No. 3, p. 249.Sound Recording and Reproducing, Using 16-Mm. Film, C. N. Batsel and J. O. Baker, **XXI** (Aug., 1933), No. 2, p. 161.

- The Ciné-Kodak Special, O. Wittel, J. Stoiber, and F. E. Tuttle, **XXI** (Dec., 1933), No. 6, p. 478.
- A Non-Intermittent High-Speed 16-Mm. Camera, F. E. Tuttle, **XXI** (Dec., 1933), No. 6, p. 474.
- A 16-Mm. Portable Sound-on-Film Projection Equipment, C. R. Hanna, P. L. Irwin, and E. W. Reynolds, **XXI** (Dec., 1933), No. 6, p. 456.
- New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.
- Sixteen-Millimeter Sound-on-Film, J. O. Baker, **XXII** (Feb., 1934), No. 2, p. 139.
- Sixteen-Millimeter Sound Pictures in Color, C. N. Batsel and L. T. Sachtleben, **XXIII** (Aug., 1934), No. 2, p. 82.
- A 16-Mm. Sound Recording Camera, C. N. Batsel, L. T. Sachtleben, and G. L. Dimmick, **XXIII** (Aug., 1934), No. 2, p. 87.
- The Development of 16-Mm. Sound Motion Pictures, E. W. Kellogg, **XXIV** (Jan., 1935), No. 1, p. 63.
- Some Characteristics of 16-Mm. Sound by Optical Reduction and Re-Recording, C. N. Batsel and L. T. Sachtleben, **XXIV** (Feb., 1935), No. 2, p. 95.
- The 16-Mm. Sound-Film Outlook, W. B. Cook, **XXIV** (Feb., 1935), No. 2, p. 175.
- Sixteen-Millimeter Sound-Film Standardization, **XXV** (July, 1935), No. 1, p. 97.
- Three New Kodascopes, N. B. Green, **XXV** (Sept., 1935), No. 3, p. 271.
- A Professional 16-Mm. Projector with Intermittent Sprocket, H. A. DeVry, **XXV** (Sept., 1935), No. 3, p. 279.

216 Sound as an Art

- Sound Recording—From the Musician's Point of View, L. Stokowski, **VIII** (Feb., 1932), No. 2, p. 164.

217 Sound Committee

(See *Committee Reports, Sound.*)

218 Sound Installations in Theaters

- (See also *Acoustics; Loud Speakers; and Committee Reports, Sound.*)
- Factors Governing Power Capacity of Sound Reproducing Equipment in Theaters, S. K. Wolf and W. J. Sette, **XV** (Oct., 1930), No. 4, p. 415.
- Some Experiences in Adapting Theaters for Sound Reproduction, L. M. Townsend, **XVI** (May, 1931), No. 5, p. 600.
- Sound in the Los Angeles Theater—Los Angeles, California, D. M. Cole, **XVIII** (March, 1932), No. 3, p. 365.
- Modern Tools and Methods Used in Servicing Sound Equipment, J. Mauran, **XIX** (Sept., 1932), No. 3, p. 260.
- The Application of Rectifier Power Supply to Sound Reproducing Equipment, B. F. W. Heyer, **XIX** (Nov., 1932), No. 5, p. 437.
- High-Fidelity Lateral-Cut Disk Records, F. C. Barton, **XXII** (March, 1934), No. 3, p. 179.
- Improvements in Playback Disk Recording, G. M. Best, **XXV** (Aug., 1935), No. 2, p. 109.

²¹⁹ Sound Pictures, Applications
(See *Applied Motion Picture Photography*.)

²²⁰ Sound Printing
(See *Printing*.)

²²¹ Sound Recording, with Color
Remarks on the Making of Sound Records on Lenticular Color Films, A. P. Richard, **XX** (Jan., 1933), No. 1, p. 60.

²²² Sound Recording, Disk
Vertical Sound Records: Recent Fundamental Advances in Mechanical Records on "Wax," H. A. Frederick, **XVIII** (Feb., 1932), No. 2, p. 141.
Victrolac Motion Picture Records, F. C. Barton, **XVIII** (April, 1932), No. 4, p. 452.

²²³ Sound Recording, General Information
Photographic Characteristics of Sound Recording Film, L. A. Jones and O. Sandvik, **XIV** (Feb., 1930), No. 2, p. 180.
Some Aspects of Western Electric Sound Recording System, S. S. A. Watkins and C. H. Fetter, **XIV** (May, 1930), No. 5, p. 520.
Recent Contributions to Light-Valve Technic, O. O. Ceccarini, **XVII** (Sept., 1931), No. 3, p. 305.
Recording Artificial Speech in Motion Pictures, C. W. Barrell, **XIX** (Dec., 1932), No. 6, p. 561.
Further Investigation of Ground-Noise in Photographic Sound Records, O. Sandvik, V. C. Hall, and W. K. Grimwood, **XXII** (Feb., 1934), No. 2, p. 83.
Equipment for Recording and Reproducing Sound with Photofilm, A. F. Chorraine, **XXII** (March, 1934), No. 3, p. 157; **XXII** (April, 1934), No. 4, p. 215.
High-Fidelity Lateral-Cut Disk Records, F. C. Barton, **XXII** (March, 1934), No. 3, p. 179.
Open Forum: Should Studio Recording Equipment Compensate for Theater Reproducing Characteristics? **XXII** (March, 1934), No. 3, p. 183.
Wide-Range Recording, F. L. Hopper, **XXII** (April, 1934), No. 4, p. 253.
The "Selenophon" Sound Recording and Reproducing System, G. E. Roth, **XXII** (April, 1934), No. 4, p. 260.
Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph, H. Brandes and R. Schmidt, **XXII** (May, 1934), No. 5, p. 279.
An Improved System for Noiseless Recording, G. L. Dimmick and H. Belar, **XXIII** (July, 1934), No. 1, p. 48.
A 16-Mm. Sound Recording Camera, C. N. Batsel, L. T. Sachtleben, and G. L. Dimmick, **XXIII** (Aug., 1934), No. 2, p. 87.
Recent Optical Improvements in Sound-Film Recording Equipment, W. Herriott and L. V. Foster, **XXIII** (Sept., 1934), No. 3, p. 167.
A Sweep Oscillator Method of Recording Wide Frequency-Band Response Spectra on Short Lengths of Motion Picture Film, J. Crabtree, **XXIII** (Nov., 1934), No. 5, p. 299.
Some Characteristics of 16-Mm. Sound by Optical Reduction and Re-Recording, C. N. Batsel and L. T. Sachtleben, **XXIV** (Feb., 1935), No. 2, p. 95.

- Some Photographic Aspects of Sound Recording, C. E. K. Mees, **XXIV** (April, 1935), No. 4, p. 285.
- Mechanical Recording on Film, A. F. Chorine, **XXIV** (May, 1935), No. 5, p. 410.
- A New Method of Improving the Frequency Characteristic of a Single-Ribbon Light Modulator, A. F. Chorine, **XXIV** (June, 1935), No. 6, p. 493.
- The Need for Uniform Density in Variable-Density Sound-Tracks, F. H. Richardson, **XXIV** (June, 1935), No. 6, p. 524.
- Mechanographic Recording for Motion Picture Sound-Tracks, J. A. Miller, **XXV** (July, 1935), No. 1, p. 50.
- A Device for Automatically Controlling the Balance between Recorded Sounds, W. A. Mueller, **XXV** (July, 1935), No. 1, p. 79.
- Recording Music for Motion Pictures, M. C. Batsel, **XXV** (Aug., 1935), No. 2, p. 103.
- Improvements in Playback Disk Recording, G. M. Best, **XXV** (Aug., 1935), No. 2, p. 109.
- Improvements in Sound Quality of Newsreels, J. A. Battle, **XXV** (Aug., 1935), No. 2, p. 154.
- Characteristics of Photophone Light-Modulating System, L. T. Sachtleben, **XXV** (Aug., 1935), No. 2, p. 175.
- A Comparison of Variable-Density and Variable-Width Systems, E. W. Kellogg, **XXV** (Sept., 1935), No. 3, p. 203.
- Some Technical Aspects of Recording Music, R. H. Townsend, **XXV** (Sept., 1935), No. 3, p. 259.
- Flutter in Sound Records, T. E. Shea, W. A. MacNair, and V. Subrizi, **XXV** (Nov., 1935), No. 5, p. 403.
- A Portable Flutter-Measuring Instrument, R. R. Scoville, **XXV** (Nov., 1935), No. 5, p. 416.
- Analysis of the Distortion Resulting from Sprocket-Hole Modulation, E. W. Kellogg and H. Belar, **XXV** (Dec., 1935), No. 6, p. 492.
- A Consideration of Some Special Methods for Re-Recording, E. D. Cook, **XXV** (Dec., 1935), No. 6, p. 523.

Sound Recording, Portable

- Recent Developments in RCA Photophone Portable Recording Equipment, P. M. Robillard and E. B. Lyford, **XVI** (March, 1931), No. 3, p. 269.
- Recording on Sound Stages with Portable Units, C. Felstead, **XVII** (Sept., 1931), No. 3, p. 389.

Sound Recording, Studio Installations

- Some New RCA Photophone Studio Recording Equipment, W. P. Dutton and S. Read, Jr., **XVI** (March, 1931), No. 3, p. 315.
- A Shutter for Use in Reduction of Ground-Noise, E. W. Kellogg and C. N. Batsel, **XVII** (Aug., 1931), No. 2, p. 203.
- Recent Contributions to Light-Valve Technic, O. O. Ceccarini, **XVII** (Sept., 1931), No. 3, p. 305.
- A Sound-Film Re-Recording Machine, J. J. Kuhn, **XVII** (Sept., 1931), No. 3, p. 326.

Recording on Sound Stages with Portable Units, C. Felstead, **XVII** (Sept., 1931), No. 3, p. 389.

Operating Problems of Recording Equipment, L. D. Grignon, **XVII** (Nov., 1931), No. 5, p. 792.

126 Sound Recording, Variable-Density Method

Lighting of Sound-Films, L. Dunoyer, **XVIII** (Jan., 1932), No. 1, p. 3.

Western Electric Noiseless Recording, H. C. Silent and J. G. Frayne, **XVIII** (May, 1932), No. 5, p. 551.

The Principles of the Light-Valve, T. E. Shea, W. Herriott, and W. R. Goehner, **XVIII** (June, 1932), No. 6, p. 697.

Wave-Form Analysis of Variable-Density Sound Recording, O. Sandvik and V. C. Hall, **XIX** (Oct., 1932), No. 4, p. 346.

The Sensitometric Control of Sound Records on Film, A. Küster and R. Schmidt, **XIX** (Dec., 1932), No. 6, p. 539.

A New Western Electric Double-Film Portable Recording Sound System, C. R. Daily, **XX** (Feb., 1933), No. 2, p. 128.

Analysis of Sound Quality with the Variable-Density Recording Method from Sensitometric Data, R. Schmidt and A. Küster, **XXI** (Nov., 1933), No. 5, p. 374.

21 Sound Recording, Variable-Width Method

Lighting of Sound-Films, L. Dunoyer, **XVIII** (Jan., 1932), No. 1, p. 3.

The Selenophon Sound Recording System, P. Schrott, **XVIII** (May, 1932), No. 5, p. 622.

Extension of the Frequency Range of Film Recording and Reproduction, G. L. Dimmick and H. Belar, **XIX** (Nov., 1932), No. 5, p. 401.

Film Recorders, A. G. Zimmerman, **XX** (March, 1933), No. 3, p. 211.

RCA Victor High-Fidelity Film Recording Equipment, S. Read, Jr., **XX** (May, 1933), No. 5, p. 396.

Sound Recording and Reproducing Using 16-Mm. Film, C. N. Batsel and J. O. Baker, **XXI** (Aug., 1933), No. 2, p. 161.

Wave-Form Analysis of Variable-Width Sound Records, O. Sandvik, V. C. Hall, and J. G. Streiffert, **XXI** (Oct., 1933), No. 4, p. 323.

22 Sound Reproduction, Disk

A New Synchronizing Apparatus for 16-Mm. Films with Disk Records, W. H. Bristol, **XIV** (March, 1930), No. 3, p. 361.

A Comparative Study of Sound on Disk and Film, P. H. Evans, **XV** (Aug., 1930), No. 2, p. 185.

Some Considerations Affecting the Design of Phonograph Needles, R. T. Fribus, **XV** (Oct., 1930), No. 4, p. 484.

Improved Synchronizing Apparatus for 16-Mm. Films with Disk Records, W. H. Bristol, **XV** (Oct., 1930), No. 4, p. 494.

Vertical Sound Records: Recent Fundamental Advances in Mechanical Records on "Wax," H. A. Frederick, **XVIII** (Feb., 1932), No. 2, p. 141.

Sound Recording—From the Musician's Point of View, L. Stokowski, **XVIII** (Feb., 1932), No. 2, p. 164.

- Victrolac Motion Picture Records, F. C. Barton, **XVIII** (April, 1932), No. 4, p. 452.
- The Animatophone—A New Type 16-Mm. Synchronous Disk Reproducer, A. F. Victor, **XVIII** (April, 1932), No. 4, p. 512.
- High-Fidelity Lateral-Cut Disk Records, F. C. Barton, **XXII** (March, 1934), No. 3, p. 179.
- Improvements in Playback Disk Recording, G. M. Best, **XXV** (Aug., 1935), No. 2, p. 109.

229 Sound Reproduction, General Information

- (See also *Committee Reports, Projection, Sound Reproduction; and Sound.*)
- Photographic Characteristics of Sound Recording Film, L. A. Jones and O. Sandvik, **XIV** (Feb., 1930), No. 2, p. 180.
- Multiple-Exposure Cinematography in Sound Pictures, W. Stull, **XIV** (March, 1930), No. 3, p. 318.
- The Illusion of Sound and Picture, J. L. Cass, **XIV** (March, 1930), No. 3, p. 323.
- A New Method of Blocking Out Splices in Sound-Film, J. I. Crabtree and C. E. Ives, **XIV** (March, 1930), No. 3, p. 349.
- Some Aspects of a Western Electric Sound Recording System, S. S. A. Watkins and C. H. Fetter, **XIV** (May, 1930), No. 5, p. 520.
- The Aperture Effect, E. D. Cook, **XIV** (June, 1930), No. 6, p. 650.
- Apparatus for the Analysis of Photographic Sound Records, O. Sandvik, **XV** (Aug., 1930), No. 2, p. 201.
- One Type of Acoustic Distortion in Sound Picture Sets, R. L. Hanson, **XV** (Oct., 1930), No. 4, p. 460.
- A New Power Amplifier System, L. Thompson, **XV** (Nov., 1930), No. 5, p. 602.
- Scanning Losses in Reproduction, N. R. Stryker, **XV** (Nov., 1930), No. 5, p. 610.
- Reproducing Sound from Separate Film, **XVI** (Feb., 1931), No. 2, p. 148.
- Noise Reduction with Variable-Area Recording, B. Kreuzer, **XVI** (June, 1931), No. 6, p. 671.
- An A-C. Operated Sound Motion Picture Reproducing Equipment, T. D. Cunningham, **XVI** (June, 1931), No. 6, p. 719.
- Operating Problems of Recording Equipment, L. D. Grignon, **XVII** (Nov., 1931), No. 5, p. 792.
- A Moving Coil Microphone for High-Quality Sound Reproduction, W. C. Jones and L. W. Giles, **XVII** (Dec., 1931), No. 6, p. 977.
- An Apertureless Optical System for Sound-on-Film, R. C. Burt, **XVII** (Dec., 1931), No. 6, p. 994.
- Sound Recording—From the Musician's Point of View, L. Stokowski, **XVIII** (Feb., 1932), No. 2, p. 164.
- Recent Developments in Theater Loud Speakers of the Directional Baffle Type, H. F. Olson, **XVIII** (May, 1932), No. 5, p. 571.
- Sound Recording for Independent Productions, L. E. Clark, **XVIII** (May, 1932), No. 5, p. 659.
- Motion Pictures with Sound on Standard 16-Mm. Film, H. G. Tasker and A. W. Carpenter, **XIX** (Sept., 1932), No. 3, p. 237.

- A Portable 16-Mm. Sound Picture System, R. A. Miller and H. Pfannenstiehl, **XIX** (Sept., 1932), No. 3, p. 249.
- Modern Tools and Methods Used in Servicing Sound Equipment, J. Mauran, **XIX** (Sept., 1932), No. 3, p. 260.
- The Application of Rectifier Power Supply to Sound Reproducing Equipment, B. F. W. Heyer, **XIX** (Nov., 1932), No. 5, p. 437.
- Practical Problems in the Recording and Reproduction of Music for Motion Pictures, D. Mendoza, **XX** (Jan., 1933), No. 1, p. 79.
- Sound Recording and Reproducing Using 16-Mm. Film, C. N. Batsel and J. O. Baker, **XXI** (Aug., 1933), No. 2, p. 161.
- Radio City Sound Equipment, B. Kreuzer, **XXI** (Sept., 1933), No. 3, p. 181.
- The Aperture Alignment Effect, E. D. Cook, **XXI** (Nov., 1933), No. 5, p. 390.
- Light-Weight Single-Film Recording System for Newsreels and Travelogues, C. R. Sawyer, **XXI** (Dec., 1933), No. 6, p. 466.
- Portable Recording Equipment, D. Canady, **XXI** (Dec., 1933), No. 6, p. 483.
- Equipment for Recording and Reproducing Sound with Photofilm, A. F. Chorraine, **XXII** (March, 1934), No. 3, p. 157; **XXII** (April, 1934), No. 4, p. 215.
- Open Forum: Should Studio Recording Equipment Compensate for Theater Reproducing Characteristics? **XXII** (March, 1934), No. 3, p. 183.
- Acoustical Requirements for Wide-Range Reproduction of Sound, S. K. Wolf, **XXII** (April, 1934), No. 4, p. 242.
- The "Selenophon" Sound Recording and Reproducing System, G. E. Roth, **XXII** (April, 1934), No. 4, p. 260.
- Transmission and Reproduction of Speech and Music in Auditory Perspective, H. Fletcher, **XXII** (May, 1934), No. 5, p. 314.
- On the Realistic Reproduction of Sound with Particular Reference to Sound Motion Pictures, H. F. Olson and F. Massa, **XXIII** (Aug., 1934), No. 2, p. 63.
- Some Characteristics of 16-Mm. Sound by Optical Reduction and Re-Recording, C. N. Batsel and L. T. Sachtleben, **XXIV** (Feb., 1935), No. 2, p. 95.
- Piezoelectric Loud Speakers, A. L. Williams, **XXIV** (Feb., 1935), No. 2, p. 121.
- A Mechanical Demonstration of the Properties of Wave Filters, C. E. Lane, **XXIV** (March, 1935), No. 3, p. 206.
- The Need for Uniform Density in Variable-Density Sound-Tracks, F. H. Richardson, **XXIV** (June, 1935), No. 6, p. 524.
- Improvements in Sound Quality of Newsreels, J. A. Battle, **XXV** (Aug., 1935), No. 2, p. 154.
- The Technical Aspects of the High-Fidelity Reproducer, E. D. Cook, **XXV** (Oct., 1935), No. 4, p. 289.
- Flutter in Sound Records, T. E. Shea, W. A. MacNair, and V. Subrizi, **XXV** (Nov., 1935), No. 5, p. 403.
- A Portable Flutter-Measuring Instrument, R. R. Scoville, **XXV** (Nov., 1935), No. 5, p. 416.
- A New High-Fidelity Sound Head, F. J. Loomis and E. W. Reynolds, **XXV** (Nov., 1935), No. 5, p. 449.
- The Calibrated Multi-Frequency Test-Film, F. C. Gilbert, **XXV** (Dec., 1935), No. 6, p. 503.

²³⁰ **Sound Reproduction, Studio Installations**

(See also *Studio Practice*.)

Some Aspects of a Western Electric Sound Recording System, S. S. A. Watkins and C. H. Fetter, **XIV** (May, 1930), No. 5, p. 520.

Studio Projection and Reproduction Practice, J. O. Aalberg, **XVIII** (May, 1932), No. 5, p. 652.

²³¹ **Sound Reproduction, Variable-Density Method**

Volume Control by the Squeeze-Track, W. C. Miller, **XV** (July, 1930), No. 1, p. 53.

The Measurement of Light-Valve Resonance by the Absorption Method, O. O. Ceccarini, **XV** (July, 1930), No. 1, p. 60.

Straight-Line and Toe Records with the Light-Valve, D. MacKenzie, **XVII** (Aug., 1931), No. 2, p. 172.

Recent Contributions to Light-Valve Technic, O. O. Ceccarini, **XVII** (Sept., 1931), No. 3, p. 305.

The Principles of the Light-Valve, T. E. Shea, W. Herriott, and W. R. Goehner, **XVIII** (June, 1932), No. 6, p. 697.

²³² **Sound Reproduction, Variable-Width Method**

The Photographic Treatment of Variable-Area Sound-Films, J. A. Maurer, **XIV** (June, 1930), No. 6, p. 636.

Galvanometers for Variable-Area Recording, G. L. Dimmick, **XV** (Oct., 1930), No. 4, p. 428.

A New Recorder for Variable-Area Recording, E. W. Kellogg, **XV** (Nov., 1930), No. 5, p. 653.

A New Sound Reproducing System for Theaters, G. Puller, **XVI** (Feb., 1931), No. 2, p. 131.

Noise Reduction with Variable-Area Recording, B. Kreuzer, **XVI** (June, 1931), No. 6, p. 671.

A Shutter for Use in Reduction of Ground-Noise, E. W. Kellogg and C. N. Bassel, **XVII** (Aug., 1931), No. 2, p. 203.

The Effect of Exposure and Development on the Quality of Variable-Width Photographic Sound Recording, D. Foster, **XVII** (Nov., 1931), No. 5, p. 749.

High-Frequency Response from Variable-Width Records as Affected by Exposure and Development, C. L. Dimmick, **XVII** (Nov., 1931), No. 5, p. 766.

The Processing of Variable-Width Sound-Records in the Film Laboratory, W. P. Bielicke, **XVII** (Nov., 1931), No. 5, p. 778.

Extension of the Frequency Range of Film Recording and Reproduction, G. L. Dimmick and H. Belar, **XIX** (Nov., 1932), No. 5, p. 401.

²³³ **Sound Scoring and Re-Recording**

Recording, Re-Recording, and Editing of Sound, C. Dreher, **XVI** (June, 1931), No. 6, p. 756.

A Sound-Film Re-Recording Machine, J. J. Kuhn, **XVII** (Sept., 1931), No. 3, p. 326.

A Device for Automatically Controlling the Balance between Recorded Sounds, W. A. Mueller, **XXV** (July, 1935), No. 1, p. 79.

34 Splicing

A New Method of Blocking Out Splices in Sound-Film, J. I. Crabtree and C. E. Ives, **XIV** (March, 1930), No. 3, p. 349.

35 Spotlighting

(See *Arcs; Illumination, Studio; and Photography.*)

The Biplane Filament in Spotlighting, G. Mili, **XXIII** (Sept., 1934), No. 3, p. 131.

36 Sprockets

Sprocket Dimensions for 35-Mm. Visual and Sound Projection Equipment, H. Griffin, **XXII** (Jan., 1934), No. 1, p. 20.

37 Standardization

(See also *American Standards Association; and Committee Reports, Standards and Nomenclature.*)

Some Practical Aspects of, and Recommendations on, Wide-Film Standards, A. S. Howell and J. A. Dubray, **XIV** (Jan., 1930), No. 1, p. 59.

Résumé of the Proceedings of the Dresden International Photographic Congress, S. E. Sheppard, **XVIII** (Feb., 1932), No. 2, p. 232.

Proposed Change in the Present Standards of 35-Mm. Film Perforations, A. S. Howell and J. A. Dubray, **XVIII** (April, 1932), No. 4, p. 503.

Standardization of Projection Lamps, E. W. Beggs, **XIX** (July, 1932), No. 1, p. 817.

S. M. P. E. Requests National Standards for Motion Picture Industry, **XIX** (Oct., 1932), No. 4, p. 393.

National Standardization in America, P. G. Agnew, **XXI** (Oct., 1933), No. 4, p. 261.

A Historical Summary of Standardization in the Society of Motion Picture Engineers, L. A. Jones, **XXI** (Oct., 1933), No. 4, p. 280.

The 2000-Ft. Reel, **XXV** (Nov., 1935), No. 5, p. 462.

38 Standards and Nomenclature

(See also *American Standards Association; and Committee Reports, Standards and Nomenclature.*)

Glossary of Technical Terms Used in the Motion Picture Industry, **XVII** (Nov., 1931), No. 5, p. 819.

Standards and Requirements of Projection for Visual Education, C. L. Greene, **XIX** (Nov., 1932), No. 5, p. 424.

Sprocket Dimensions for 35-Mm. Visual and Sound Projection Equipment, H. Griffin, **XXII** (Jan., 1934), No. 1, p. 20.

Standard SMPE Visual and Sound Test-Reels, **XXII** (March, 1934), No. 3, p. 173.

Standards Adopted by the Society of Motion Picture Engineers, **XXIII** (Nov. 1934), No. 5, p. 247.

A Glossary of Color Photography, **XXIV** (May, 1935), No. 5, p. 432.

39 Standard Test Reels

(See *Committee Reports, Projection Practice and Sound.*)

240 Steel, Stainless

Applications of Stainless Steels in the Motion Picture Industry, W. M. Mitchell, **XXIV** (April, 1935), No. 4, p. 346.

Stereoscopy

241 Some Observations of Stereoscopic Projection, J. B. Taylor, **XVI** (Feb., 1931), No. 2, p. 168.

The Problem of Projecting Motion Pictures in Relief, H. E. Ives, **XVIII** (April, 1932), No. 4, p. 417.

An Experimental Apparatus for the Projection of Motion Pictures in Relief, H. E. Ives, **XXI** (Aug., 1933), No. 2, p. 106.

Storage of Motion Picture Film

242 (See also *Committee Reports, Preservation of Film.*)

The Storage of Valuable Motion Picture Film, J. I. Crabtree and C. E. Ives, **XV** (Sept., 1930), No. 3, p. 289.

Stroboscopic Cinematography

243 Stroboscopic and Slow-Motion Moving Pictures by Means of Intermittent Light, H. E. Edgerton, **XVIII** (March, 1932), No. 3, p. 356.

Stroboscopic-Light High-Speed Motion Pictures, H. E. Edgerton and K. J. Germeshausen, **XXIII** (Nov., 1934), No. 5, p. 284.

Studio Equipment

244 (See also *Illumination; Sound Reproduction; and Electrical Machinery and Equipment.*)

A Microphone Boom, E. C. Richardson, **XV** (July, 1930), No. 1, p. 41.

Tilt Heads and Rolling Tripods for Camera Blimps, E. C. Richardson, **XV** (July, 1930), No. 1, p. 46.

Studio Projection and Reproduction Practice, J. O. Aalberg, **XVIII** (May, 1932), No. 5, p. 652.

A Triplex Moviola for Editing Re-Recording, J. O. Aalberg, **XXI** (Nov., 1933), No. 5, p. 426.

A New Development in Carbon Arc Lighting, P. Mole, **XXII** (Jan., 1934), No. 1, p. 51.

A New White-Flame Carbon for Photographic Light, D. B. Joy, F. T. Bowditch, and A. C. Downes, **XXII** (Jan., 1934), No. 1, p. 58.

The Rotambulator—A New Motion Picture Camera Stand, J. A. Dubray, **XXII** (March, 1934), No. 3, p. 200.

Recent Improvements in Equipment and Technic in the Production of Motion Pictures, E. A. Wolcott, **XXIII** (Oct., 1934), No. 4, p. 210.

245 Studio Lighting

(See *Illumination, Studio and Photographic.*)

Studio Practice

246 Studio Projection and Reproduction Practice, J. O. Aalberg, **XVIII** (May, 1932), No. 5, p. 652.

Current Developments in Production Methods in Hollywood, H. G. Tasker, **XXIV** (Jan., 1935), No. 1, p. 3.

- Background Projection for Process Cinematography, G. G. Popovici, **XXIV** (Feb., 1935), No. 2, p. 102.
- Certain Phases of Studio Lighting, C. S. Woodside, **XXIV** (April, 1935), No. 4, p. 327.
- Recent Developments in the Acoustics of Motion Picture Sound Stages, M. Rettinger, **XXIV** (May, 1935), No. 5, p. 395.
- Improvements in Playback Disk Recording, G. M. Best, **XXV** (Aug., 1935), No. 2, p. 109.
- Lighting for Technicolor Motion Pictures, C. W. Handley, **XXV** (Nov., 1935), No. 5, p. 423.

⁴¹ **Synchronization**

- A New Synchronizing Apparatus for 16-Mm. Films with Disk Records, W. H. Bristol, **XIV** (March, 1930), No. 3, p. 361.

⁴⁸ **Technical Cinematography**

(See *Applied Motion Picture Photography*.)

⁴⁹ **Telephotography**

- New Motion Picture Apparatus, **XXI** (Dec., 1933), No. 6, p. 510.

⁵⁰ **Television and Telephonic Transmission of Pictures**

- The Development of Television and Radiomovies to Date, C. F. Jenkins, **XIV** (March, 1930), No. 3, p. 344.
- Television Systems, C. F. Jenkins, **XV** (Oct., 1930), No. 4, p. 445.
- Two-Way Television, H. E. Ives, **XVI** (March, 1931), No. 3, p. 293.
- Television in Color from Motion Picture Film, H. E. Ives, **XVI** (May, 1931), No. 5, p. 535.
- A New Process of Television Out of Doors, A. T. Stoyanowsky, **XX** (May, 1933), No. 5, p. 437.
- A Study of Television Image Characteristics, E. W. Engstrom, **XXII** (May, 1934), No. 5, p. 290.
- Television and Motion Pictures, A. N. Goldsmith, **XXV** (July, 1935), No. 1, p. 37.
- The Theatrical Possibilities of Television, H. R. Lubcke, **XXV** (July, 1935), No. 1, p. 46.

⁵¹ **Test-Films**

(See also *Committee Reports, Projection Practice, and Sound*.)

- The Calibrated Multi-Frequency Test-Film, F. C. Gilbert, **XXV** (Dec., 1935), No. 6, p. 503.

- Standard SMPE Visual and Sound Test-Reels, **XXI** (Aug., 1933), No. 2, p. 89; **XXII** (March, 1934), No. 3, p. 173.

²⁵² **Theater Characteristics**

(See also *Acoustics*.)

- Some Practical Applications of Acoustics in Theaters, G. W. Baker and M. A. Smith, **XXII** (Feb., 1934), No. 2, p. 148.

- Open Forum: Should Studio Recording Equipment Compensate for Theater Reproducing Characteristics? **XXII** (March, 1934), No. 3, p. 183.

Acoustical Requirements for Wide-Range Reproduction of Sound, S. K. Wolf, **XXII** (April, 1934), No. 4, p. 242.

Theater Design

Reversing the Form and Inclination of the Motion Picture Theater Floor for Improving Vision, B. Schlanger, **XVII** (Aug., 1931), No. 2, p. 161.

Utilization of Desirable Seating Areas in Relation to Screen Shapes and Sizes and Theater Floor Inclinations, B. Schlanger, **XVIII** (Feb., 1932), No. 2, p. 189.

On the Relation between the Shape of the Projected Picture, the Areas of Vision, and Cinematographic Technic, B. Schlanger, **XXIV** (May, 1935), No. 5, p. 402.

Theater Equipment

(See also *Acoustics; Committee Reports, Projection Practice; Lighting; and Sound Installations in Theaters.*)

Sound in the Los Angeles Theater—Los Angeles, California, D. M. Cole, **XVIII** (March, 1932), No. 3, p. 365.

Radio City Sound Equipment, B. Kreuzer, **XXI** (Sept., 1933), No. 3, p. 181.

Theater Lighting

(See *Committee Reports, Theater Lighting; Lighting; and Illumination, Theaters.*)

Theater Noises

Theater Noise Problems, S. K. Wolf and J. E. Tweeddale, **XIX** (Dec., 1932), No. 6, p. 499.

Theater Operation

(See also *Committee Reports, Projection Practice.*)

Modern Tools and Methods Used in Servicing Sound Equipment, J. Mauran, **XIX** (Sept., 1932), No. 3, p. 260.

Problems of a Theater Manager, N. Glasser, **XIX** (Sept., 1932), No. 3, p. 272.

How the S. M. P. E. Can Be of Greater Service to Theater Managers, C. E. Lewis, **XIX** (Sept., 1932), No. 3, p. 275.

The Film Problems of Theater Operation, S. Sumner, **XIX** (Sept., 1932), No. 3, p. 286.

Theater Operating Problems, M. A. Lightman, **XIX** (Sept., 1932), No. 3, p. 291.

The Future of Motion Pictures, C. Smith, **XIX** (Sept., 1932), No. 3, p. 294.

Theater Noise Problems, S. K. Wolf and J. E. Tweeddale, **XIX** (Dec., 1932), No. 6, p. 499.

Some Technical Aspects of Theater Operation, H. M. Wilcox and L. W. Conrow, **XXIII** (Dec., 1934), No. 6, p. 338.

Tinting and Toning

Double Toning of Motion Picture Films, J. I. Crabtree and W. Marsh, **XVI** (Jan., 1931), No. 1, p. 57.

Tone Reproduction

On the Theory of Tone Reproduction, with a Graphic Method for the Solution of Problems, L. A. Jones, **XVI** (May, 1931), No. 5, p. 568.

Transmission of Sound

Transmission and Reproduction of Speech and Music in Auditory Perspective, H. Fletcher, **XXII** (May, 1934), No. 5, p. 314.

Travelogs

A Light-Weight Single-Film Recording System for Newsreels and Travelogs, C. R. Sawyer, **XXI** (Dec., 1933), No. 6, p. 466.

Trick Photography

Multiple-Exposure Cinematography in Sound Pictures, W. Stull, **XIV** (March, 1930), No. 3, p. 318.

Dunning Process and Process Backgrounds, C. H. Dunning, **XVII** (Nov., 1931), No. 5, p. 743.

Special Process Technic, V. Walker, **XVIII** (May, 1932), No. 5, p. 662.

Process Photography, G. A. Chambers, **XVIII** (June, 1932), No. 6, p. 782.

The Bell & Howell Cooke Varo Lens, A. Warmisham and R. F. Mitchell, **XIX** (Oct., 1932), No. 4, p. 329.

Composite Photographic Processes, H. D. Hineline, **XX** (April, 1933), No. 4, p. 283.

The Production of Animated Cartoons, W. Garity, **XX** (April, 1933), No. 4, p. 309.

Tri-Ergon

Rulings of the U. S. Supreme Court in Recent Patent Cases of the American Tri-Ergon Corp., **XXIV** (June, 1935), No. 6, p. 529.

Tripods

Tilt Heads and Rolling Tripods for Camera Blimps, E. C. Richardson, **XV** (July, 1930), No. 1, p. 46.

Vacuum Tubes

(See *Electron Tubes*.)

View-Finders

A Note on the Need for Re-Designing the Auxiliary Camera View-Finder, F. F. Baker, **XVII** (Sept., 1931), No. 3, p. 398.

Moviola Film-Viewing Machines, **XXIV** (May, 1935), No. 5, p. 455.

A New Sound Reader and Frame Viewer, I. Serrurier, **XXV** (Sept., 1935), No. 3, p. 275.

Viewing Devices

A Triplex Moviola for Editing Re-Recording, J. O. Aalberg, **XXI** (Nov., 1933), No. 5, p. 426.

Vision

Reversing the Form and Inclination of the Motion Picture Theater Floor for Improving Vision, B. Schlanger, **XVII** (Aug., 1931), No. 2, p. 161.

Utilization of Desirable Seating Areas in Relation to Screen Shapes and Sizes and Theater Floor Inclinations, B. Schlanger, **XVIII** (Feb., 1932), No. 2, p. 189.

On the Relation between the Shape of the Projected Picture, the Areas of Vision, and Cinematographic Technic, B. Schlanger, **XXIV** (May, 1935), No. 5, p. 402.

²⁰⁹ **Visual Fatigue**

An Introduction to the Experimental Study of Visual Fatigue, P. A. Snell, **XX** (May, 1933), No. 5, p. 367.

Avoidance of Eye Fatigue, F. H. Richardson, **XX** (May, 1933), No. 5, p. 391.

²¹⁰ **Washing Motion Picture Film**

A Method of Testing for the Presence of Sodium Thiosulphate in Motion Picture Films, J. I. Crabtree and J. F. Ross, **XIV** (April, 1930), No. 4, p. 419.

²¹¹ **Wave-Form Analysis**

Wave-Form Analysis of Variable-Density Sound Recording, O. Sandvik and V. C. Hall, **XIX** (Oct., 1932), No. 4, p. 346.

Wave-Form Analysis of Variable-Width Sound Records, O. Sandvik, V. C. Hall, and J. G. Streiffert, **XXI** (Oct., 1933), No. 4, p. 323.

²¹² **Wide Pictures**

The Early History of Motion Picture Cameras for Film Wider than 35-Mm., C. L. Gregory, **XIV** (Jan., 1930), No. 1, p. 27.

Rectangle Proportions in Pictorial Composition, L. A. Jones, **XIV** (Jan., 1930), No. 1, p. 32.

The Optical Problems of Wide-Film Motion Pictures, W. B. Rayton, **XIV** (Jan., 1930), No. 1, p. 50.

Some Practical Aspects of, and Recommendations on, Wide-Film Standards, A. S. Howell and J. A. Dubray, **XIV** (Jan., 1930), No. 1, p. 59.

Wide-Film Shrinkage and Its Effects as a Factor in Determining Proper Dimensional Specifications for a New Standard, A. S. Howell and J. A. Dubray, **XV** (Sept., 1930), No. 3, p. 306.

Methods of Securing a Large Screen Picture:

XVI (Jan., 1931), No. 1, p. 80.

XVI (Feb., 1931), No. 2, p. 174.

The Depth of Field of Camera Lenses with Special Reference to Wide Film, A. C. Hardy, **XVI** (March, 1931), No. 3, p. 286.

Memorandum on Widening the Field of Camera Lenses and on the Use of Normal Films for the Panoramic Screen, H. Dain, **XIX** (Dec., 1932), No. 6, p. 522.

Wide-Screen Photography with Cylindrical Anamorphosing Systems and Characteristics of Motion Picture Lenses and Images, H. S. Newcomer, **XX** (Jan., 1933), No. 1, p. 31.

A Revolving Lens for Panoramic Pictures, F. Altman, **XXIV** (May, 1935), No. 5, p. 383.

²¹³ **X-Ray Cinematography**

X-Ray Cinematography, S. Rodwell, **XV** (Dec., 1930), No. 6, p. 815.

Roentgen Cinematography, R. F. James, **XXIV** (March, 1935), No. 3, p. 233.

Historical Notes on X-Ray Cinematography, R. F. Mitchell and L. G. Cole, **XXIV** (April, 1935), No. 4, p. 333.

²¹⁴ **Zoom Lens**

The Bell & Howell Cooke Varo Lens, A. Warmisham and R. F. Mitchell, **XIX** (Oct., 1932), No. 4, p. 329.

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
AALBERG, J. O.	A Triplex Moviola for Editing Re-Recording Studio Projection and Re-production Practice	XXI	5	Nov., 1933	426
ABBOTT, M. J.	Engineering Technic in Pre-Editing Motion Pictures	XVIII	5	May, 1932	652
ABRIBAT, M.	Progress in Industrial and Scientific Cinematography in France	XXV	2	Aug., 1935	171
ADAIR, S. E. (and JENKINS, J. E.)	The Control-Frequency Principle	XV	2	Aug., 1930	214
AGNEW, P. G.	National Standardization in America	XXII	3	Mar., 1934	193
ALBERT, J. C. (and BUCK, O. K.)	Elimination of Commutator Ripple from Direct-Current Generators	XXI	4	Oct., 1933	261
ALBIN, F. G.	A Dynamic Check on the Processing of Film for Sound Records	XIV	4	Apr., 1930	399
ALTMAN, F.	A Revolving Lens for Panoramic Pictures	XXV	2	Aug., 1935	161
ARMAT, T.	My Part in the Development of the Motion Picture Projector	XXIV	5	May, 1935	383
ARNOLD, P.	A Motion Picture Negative of Wider Usefulness	XXIV	3	Mar., 1935	241
ARNSPIGER, V. C.	Overcoming Limitations to Learning with the Sound Motion Picture	XXIII	3	Sept., 1934	160
BAER, C. E.	Visual Aids in Teaching	XXIV	3	Mar., 1935	257
BAKER, F. F.	A Note on the Need for Re-Designing the Auxiliary Camera View-Finder	XVI	4	Apr., 1931	457
BAKER, G. W. (and SMITH, M. A.)	Some Practical Applications of Acoustics in Theaters	XVII	3	Sept., 1931	398
BAKER, J. O.	Sixteen - Mm. Sound - on - Film	XXII	2	Feb., 1934	148
		XXII	2	Feb., 1934	139

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and BATSEL, C. N.)	Sound Recording and Re-producing Using 16-Mm. Film	XXI	2 Aug., 1933	161	
BALL, J. A.	The Technicolor Process of Three-Color Cinematography	XXV	2 Aug., 1935	127	
BALLARD, W. R.	The High-Vacuum Tube Comes before the Supreme Court	XVII	4 Oct. 1931	658	
BARRELL, C. W.	Recording Artificial Speech in Motion Pictures	XIX	6 Dec., 1932	561	
BARTON, F. C.	Victrolac Motion Picture Records High-Fidelity Lateral-Cut Disk Records	XVIII	4 Apr., 1932	452	
BATSEL, C. N. (and BAKER, J. O.)	A Non-Slip Sound Printer Sound Recording and Re-producing Using 16-Mm. Film	XXII	3 Mar., 1934	179	
(and KELLOGG, E. W.)	A Shutter for Use in Reduction of Ground-Noise	XXIII	2 Aug., 1934	100	
(and SACHTLEBEN, L. T.)	Sixteen-Millimeter Sound Pictures in Color Some Characteristics of 16-Mm. Sound by Optical Reduction and Re-Recording	XXI	2 Aug., 1933	161	
(and DIMMICK, G. L., and SACHTLEBEN, L. T.)	Optical Reduction Sound Printing A 16-Mm. Sound Recording Camera	XVII	2 Aug., 1931	203	
BATSEL, M. C.	Recording Music for Motion Pictures	XXIII	2 Aug., 1934	82	
BATTLE, J. A.	Improvements in Sound Quality of Newsreels	XXIV	2 Feb., 1935	95	
BEGGS, E. W.	Standardization of Projection Lamps The Economics of Projector Lamps for Advertising Purposes	XXIII	2 Aug., 1934	108	
(and PALMER, M. W.)	Professional Motion Picture Photography with High-Intensity Short-Life Incandescent Lamps	XXII	2 Feb., 1934	87	
		XXV	2 Aug., 1935	103	
		XXV	2 Aug., 1935	154	
		XIX	1 July, 1932	817	
		XXI	2 Aug., 1933	127	
					126

AUTHOR INDEX

73

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
BELAR, H. (and DIMMICK, G. L.)	An Improved System for Noiseless Recording Extension of the Frequency Range of Film Record- ing and Reproduction	XXIII	1	July, 1934	48
(and KELLOGG, E. W.)	Analysis of the Distortion Resulting from Sprock et-Hole Modulation	XIX	5	Nov., 1932	401
BELL, D. T. (and JONES, W. C.)	The Lapel Microphone and Its Application to Public Address and Announcing Systems	XXV	6	Dec., 1935	492
BENFORD, F.	Radiation Characteristics of Two Mercury Arcs	XIX	3	Sept., 1932	219
BEST, G. M.	Economies in Sound-Film Processing	XIV	4	Apr., 1930	404
	Improvements in Playback Disk Recording	XXI	3	Sept., 1933	236
BIELICKE, W. P.	The Processing of Vari- able-Width Sound Rec- ords in the Film Labora- tory	XXV	2	Aug., 1935	109
BLATTNER, D. G. (and BOSTWICK, L. G.)	Loud Speakers for Use in Theaters	XVII	5	Nov., 1931	778
BONNEAU, P.	The Talking Film	XIV	2	Feb., 1930	161
BOSTWICK, L. G. (and BLATTNER, D. G.)	A Loud Speaker Good to Twelve Thousand Cycles	XVI	4	Apr., 1931	399
BOTHAMLEY, C. H.	Loud Speakers for Use in Theaters	XVI	5	May, 1931	529
BOWDITCH, F. T. (and DOWNES, A. C.)	Early Stages of Kinema- tography	XIV	2	Feb., 1930	161
	The Photographic Ef- fectiveness of Carbon Arc Studio Light-Sources	XX	3	Mar., 1933	263
	The Radiant Energy De- livered on Motion Pic- ture Sets from Carbon Arc Studio Light- Sources	XXV	5	Nov., 1935	375
(and DOWNES, A. C., and JOY, D. B.)	A New White-Flame Car- bon for Photographic Light	XXV	5	Nov., 1935	383
BRACKETT, F. P.	Sound Pictures in the Solution of Solar Eclipse Problems	XXII	1	Jan., 1934	58
BRADLEY, I. L.	Voice and Personality in the Motion Pictures	XVII	2	Aug., 1931	235
		XXI	3	Sept., 1933	209

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
BRANDES, H. (and SCHMIDT, R.)	Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph	XXII	5	May, 1934	279
BREWSTER, P. D. (and MILLER, P.)	Three-Color Subtractive Cinematography	XVI	1	Jan., 1931	49
BRISTOL, W. H.	A New Synchronizing Apparatus for Sixteen-Millimeter Films with Disk Records	XIV	3	Mar., 1930	361
BROCK, G. F. O.	Improved Synchronizing Apparatus for Sixteen-Millimeter Films with Disk Records	XV	4	Oct., 1930	494
BROWN, G. H. (and DUNDON, M. L., and CAPSTAFF, J. G.)	Hand-Coloring of Motion Picture Film	XVI	6	June, 1931	751
BUCK, O. K. (and ALBERT, J. C.)	A Quick Test for Determining the Degree of Exhaustion of Developers	XIV	4	Apr., 1930	389
BURKE, B. S.	Elimination of Commutator Ripple from Direct-Current Generators	XIV	4	Apr., 1930	399
BURKE, C. T.	Thermionic Tube Control of Theater Lighting	XVIII	1	Jan., 1932	90
BURNS, B.	A High-Speed Camera	XXV	4	Oct., 1935	360
BURT, R. C.	The Multicolor Laboratory	XVII	1	July, 1931	11
BUTTOLPH, L. J.	An Apertureless Optical System for Sound-on-Film	XVII	6	Dec., 1931	994
CANADY, D.	High-Intensity Mercury and Sodium Arc Lamps	XXIV	2	Feb., 1935	110
CAPORALE, P.	Portable Recording Equipment	XXI	6	Dec., 1933	483
CAPSTAFF, J. G. (and DUNDON, M. L., and BROWN, G. H.)	Musical Acoustics of Auditoriums	XX	2	Feb., 1933	119
CARLSON, F. E.	A Quick Test for Determining the Degree of Exhaustion of Developers	XIV	4	Apr., 1930	389
CARPENTER, A. W. (and TASKER, H. G.)	Light - Source Requirements for Picture Projection	XXIV	3	Mar., 1935	189
	Motion Pictures with Sound on Standard 16-Mm. Film	XIX	3	Sept., 1932	237

AUTHOR INDEX

75

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
CARRIGAN, J. B. (and HOLSLAG, R. C.)	An Estimate of the Present Status and Future Development of the Home Talkies	XVI	1	Jan., 1931	67
CARROLL, B. H. (and HUBBARD, D.)	The Mechanism of Hypersensitization	XVIII	5	May, 1932	600
CARSON, W. H.	Film Perforation and Its Measurement	XIV	2	Feb., 1930	209
	The English Dufaycolor Film Process	XXIII	1	July, 1934	14
CASS, J. L.	The Illusion of Sound and Picture	XIV	3	Mar., 1930	323
CECCARINI, O. O.	Recent Contributions to Light-Valve Technic	XVII	3	Sept., 1931	305
	The Measurement of Light-Valve Resonance by the Absorption Method	XV	1	July, 1930	60
CHAMBERS, G. A. (and HUSE, E.)	Eastman Supersensitive Motion Picture Negative Film	XVII	4	Oct., 1931	560
	New Filters for Exterior Photography with Supersensitive Film	XVII	5	Nov., 1931	783
	Process Photography	XVIII	6	June, 1932	782
(and WRATTEN, I. D.)	The Eastman Type IIb Sensitometer as a Control Instrument in the Processing of Motion Picture Film	XXI	3	Sept., 1933	218
CHEFTEL, A. M.	Ozaphane Film and the Cinelux Projector	XXV	4	Oct., 1935	358
CHORINE, A. F.	Equipment for Recording and Reproducing Sound with Photofilm—Part I	XXII	3	Mar., 1934	157
	Part II	XXII	4	Apr., 1934	215
	Mechanical Recording on Film	XXIV	5	May, 1935	410
	A New Method of Improving the Frequency Characteristic of a Single-Ribbon Light-Modulator	XXIV	6	June, 1935	493
CHRISLER, V. L. (and SNYDER, W. F.)	Measurements with a Reverberation Meter	XVIII	4	Apr., 1932	479

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
CLARK, L. E.	Some Considerations in the Design of Sound-Proof Camera Housings	XV	2	Aug., 1930	165
COCHRANE, S. W.	Sound Recording for Independent Productions	XVIII	5	May, 1932	659
COFFMAN, J. W.	Sound Motion Picture Equipment for the U. S. Navy	XIX	1	July, 1932	872
COLE, D. M.	Art and Science in Sound-Film Production	XIV	2	Feb., 1930	172
COLE, L. G. (and MITCHELL, R. F.)	Sound in the Los Angeles Theater; Los Angeles, Calif.	XVIII	3	Mar., 1932	365
COMPTON, K. T.	Historical Notes on X-Ray Cinematography	XXIV	4	Apr., 1935	333
CONKLIN, O. E.	Address of Welcome	XVII	6	Dec., 1931	895
CONROW, L. W. (and WILCOX, H. M.)	Some Applications of the Comparison Microscope in the Film Industry	XVI	2	Feb., 1931	159
COOK, A. A.	Some Technical Aspects of Theater Operation	XXIII	6	Dec., 1934	338
COOK, E. D.	Optics of Projectors for 16-Mm. Film	XVIII	4	Apr., 1932	461
	The Aperture Effect	XIV	6	June, 1930	650
	The Aperture Alignment Effect	XXI	5	Nov., 1933	390
	The Technical Aspects of the High-Fidelity Reproducer	XXV	4	Oct., 1935	289
COOK, W. B.	A Consideration of Some Special Methods for Re-Recording	XXV	6	Dec., 1935	523
COWAN, L.	The 16-Mm. Sound-Film Outlook	XXIV	2	Feb., 1935	175
CRABTREE, J.	Camera and Projector Apertures in Relation to Sound-on-Film Pictures	XIV	1	Jan., 1930	108
	Directional Effects in Continuous Film Processing	XVIII	2	Feb., 1932	207
	Sound-Film Printing—I	XXI	4	Oct., 1933	294
	Sound-Film Printing—II	XXII	2	Feb., 1934	98
	A Sweep Oscillator Method of Recording Wide Frequency-Band Response Spectra on Short Lengths of Motion Pic-				

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
	ture Film	XXIII	5	Nov., 1934	299
(and WADDELL, J. H.)	Uniformity in Photo-graphic Development	XXV	6	Dec., 1935	512
	Directional Effects in Sound-Film Processing	XXI	5	Nov., 1933	351
CRABTREE, J. I.	—II	XV	2	Aug., 1930	246
	Presidential Address	XV	6	Dec., 1930	840
	Presidential Address	XVII	2	Aug., 1931	241
	Presidential Address	XVII	6	Dec., 1931	898
	The Work of Edward Christopher Wente (1935 Progress Medal Award)	XXV	6	Dec., 1935	478
(and Ives, C. E.)	A New Method of Blocking Out Splices in Sound-Film	XIV	3	Mar., 1930	349
(and Ives, C. E.)	The Storage of Valuable Motion Picture Film	XV	3	Sept., 1930	298
	A Modified Film-Waxing Machine	XV	3	Sept., 1930	370
	A Replenishing Solution for a Motion Picture Positive Film Developer	XV	5	Nov., 1930	627
(and Ives, C. E., and MILLER, A. J.)	Improvements in Motion Picture Laboratory Apparatus	XVII	1	July, 1931	26
(and Ives, C. E. and MUEHLER, L. E.)	Making a Fade-Out by After-Treatment	XX	1	Jan., 1933	65
(and Ives, C. E. and TUTTLE, F.)	A Semi-Automatic Timing Device for Motion Picture Negatives	XV	5	Nov., 1930	587
(and MARSH, W.)	Double Toning of Motion Picture Films	XVI	1	Jan., 1931	57
(and MATTHEWS, G. E.)	Effect of the Water Supply in Processing Motion Picture Film	XVI	4	Apr., 1931	437
(and MATTHEWS, G. E., and ROSS, J. F.)	Materials for the Construction of Motion Picture Processing Apparatus	XVI	3	Mar., 1931	330
(and MUEHLER, L. E.)	Reducing and Intensifying Solutions for Motion Picture Film	XVII	6	Dec., 1931	1001
(and PARKER, H., and RUSSELL, H. D.)	Some Properties of Two-Bath Developers for Motion Picture Film	XXI	1	July, 1933	21

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and ROSS, J. F.)	A Method of Testing for the Presence of Sodium Thiosulfate in Motion Picture Films	XIV	4	Apr., 1930	419
(and RUSSELL, H. D.)	Some Properties of Chrome Alum Stop Baths and Fixing Baths	XIV	5	May, 1930	483
	Part I	XIV	6	June, 1930	667
	Part II				
	The Reducing Action of Fixing Baths on the Silver Image	XVIII	3	Mar., 1932	371
	An Improved Potassium Alum Fixing Bath Containing Boric Acid	XXI	2	Aug., 1933	137
(and SANDVIK, O., and IVES, C. E.)	The Surface Treatment of Sound-Film	XIV	3	Mar., 1930	275
(and SCHWINGEL, C. H.)	The Duplication of Motion Picture Negatives	XIX	1	July, 1932	891
CRAWFORD, M.	Some Accomplishments of Eugene Augustin Lauste —Pioneer Sound-Film Inventor	XVI	1	Jan., 1931	105
	Jean Acme LeRoy—Projection Pioneer	XVI	1	Jan., 1931	109
	Pioneer Experiments of Eugene Lauste in Recording Sound	XVII	4	Oct., 1931	632
CRESS, H. W. (and RAY, R. H.)	Color for Industrial and Business Films	XXII	2	Feb., 1934	144
CUNNINGHAM, T. D.	An A-C. Operated Sound Motion Picture Reproducing Equipment	XVI	6	June, 1931	719
CURTIS, A. M. (and SHEA, T. E., and RUMPEL, C. H.)	The Rapid-Record Oscillograph in Sound Picture Studies	XVIII	1	Jan., 1932	39
DAILY, C. R.	A New Western Electric Double Film Portable Sound Recording System	XX	2	Feb., 1933	128
DAIN, H.	Memorandum on Widening the Field of Camera Lenses and the Use of Normal Films for the Panoramic Screen	XIX	6	Dec., 1932	522

AUTHOR INDEX

79

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
DASH, C. C.	Operation of Projection Arcs from Motor-Generator Sets	XV	5	Nov., 1930	702
DAVIS, R. (and NEELAND, G. K.)	Variation of Photographic Sensitivity with Different Light-Sources	XVIII	6	June, 1932	732
	Variation of Photographic Sensitivity with Development Time	XVIII	6	June, 1932	742
DEPUE, O. B.	A Machine for Printing Picture and Sound Simultaneously and Automatically	XVIII	5	May, 1932	643
DEVRY, H. A.	A Professional 16-Mm. Projector with Intermittent Sprocket	XXV	3	Sept., 1935	279
DICKSON, W. K. L.	A Brief History of the Kinetograph, the Kinetoscope, and the Kinetophonograph				
DIMMICK, G. L.	Galvanometers for Variable-Area Recording	XXI	6	Dec., 1933	435
	High-Frequency Response from Variable-Width Records as Affected by Exposure and Development	XV	4	Oct., 1930	428
(and BATSEL, C. N., and SACHTLEBEN, L. T.)	A 16-Mm. Sound Recording Camera	XVII	5	Nov., 1931	766
	Optical Reduction Sound Printing	XXIII	2	Aug., 1934	87
(and BELAR, H.)	An Improved System for Noiseless Recording	XXIII	2	Aug., 1934	108
	Extension of the Frequency Range of Film Recording and Reproduction	XXIII	1	July, 1934	48
DOWNES, A. C. (and BOWDITCH, F. T.)	The Photographic Effectiveness of Carbon Arc Studio Light-Sources	XIX	5	Nov., 1932	401
	The Radiant Energy Delivered on Motion Picture Sets from Carbon Arc Studio Light-Sources	XXV	5	Nov., 1935	375
(and JOY, D. B.)	Characteristics of High-Intensity Arcs	XXV	5	Nov., 1935	383
		XIV	3	Mar., 1930	291

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
	Properties of Low-Intensity Reflecting Arc Projector Carbons	XVI	6	June, 1931	684
	Some Causes for Variations in the Light and Steadiness of High-Intensity Carbons	XVI	1	Jan., 1931	61
	A New Alternating-Current Projection Arc	XXI	2	Aug., 1933	116
	Direct-Current High-Intensity Arcs with Non-Rotating Positive Carbons	XXII	1	Jan., 1934	42
(and JOY, D. B., and BOWDITCH, F. T.)	A New White-Flame Carbon for Photographic Light	XXII	1	Jan., 1934	58
DREHER, C.	Microphone Concentrators in Picture Production Recording, Re-Recording, and Editing of Sound	XVI	1	Jan., 1931	23
	Motion Picture Sets	XVI	6	June, 1931	756
DREIER, H.		XVII	5	Nov., 1931	789
DUBRAY, J. A.	A New Sixteen-Millimeter Motion Picture Camera	XIV	4	Apr., 1930	427
	A New Photometer Exposure Meter	XV	5	Nov., 1930	710
	The Morgana Color Process	XXI	5	Nov., 1933	403
	The Rotambulator — A New Motion Picture Camera Stand	XXII	3	Mar., 1934	200
(and HOWELL, A. S.)	Some Practical Aspects of, and Recommendations on, Wide-Film Standards	XIV	1	Jan., 1930	59
	Wide-Film Shrinkage and Its Effects as a Factor in Determining Proper Dimensional Specifications for a New Standard	XV	3	Sept., 1930	306
	Proposed Change in the Present Standards of 35-Mm. Film Perforations	XVIII	4	Apr. 1932	503

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
DUNDON, M. L. (and BROWN, G. H., and CAPSTAFF, J. G.)	A Quick Test for Determining the Degree of Exhaustion of Developers	XIV	4	Apr., 1930	389
DUNNING, C. H.	Dunning Process and Process Backgrounds	XVII	5	Nov., 1931	743
DUNOYER, L.	Lighting of Sound-Films	XVIII	1	Jan., 1932	3
DUTTON, W. P. (and READ, S., JR.)	Some New RCA Photophone Studio Recording Equipment	XVI	3	Mar., 1931	315
DWORSKY, A. S.	A New Buffing Machine	XV	5	Nov., 1930	676
EDGERTON, H. E. (and GERMESHAUSEN, K. J.)	The Mercury Arc as a Source of Intermittent Light Stroboscopic and Slow-Motion Moving Pictures by Means of Intermittent Light	XVI	6	June, 1931	735
EDWARDS, J. D.	Stroboscopic-Light High-Speed Motion Pictures	XVIII	3	Mar., 1932	356
EICH, F. L.	Reflecting Surfaces of Aluminum	XXIII	5	Nov., 1934	284
ENGSTROM, E. W.	A Physical Densitometer for Sound Processing Laboratories	XXIV	2	Feb., 1935	126
EVANS, M.	A Study of Television Image Characteristics	XXIV	2	Feb., 1935	180
EVANS, P. H.	The Use of Films and Motion Picture Equipment in Schools	XXII	5	May, 1934	290
EVANS, R.	A Comparative Study of Sound on Disk and Film Time-Lapse Cinematography in Research	XXV	5	Nov., 1935	443
EYRING, C. F.	The Sound-Film Program of the U. S. Department of Agriculture	XV	2	Aug., 1930	185
FALGE, F. M.	Conditions Under Which Residual Sound in Reverberant Rooms May Have More Than One Rate of Decay Motion Picture Screens—Their Selection and Use for Best Picture Presentation	XVI	5	May, 1931	547
		XXI	3	Sept., 1933	224
		XV	4	Oct., 1930	528
		XVII	3	Sept., 1931	343

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
FARNHAM, R. E.	The Screen—A Projectionist's Problem	XIX	1	July, 1932	909
	Recent Developments in the Use of Mazda Lamps for Color Motion Picture Photography				
FAULKNER, T.	The Photoflash Lamp	XXIV	6	June, 1935	487
	The Use of Mazda Lamps for Color Photography				
FELSTEAD, C.	The Maintenance of Sound-Film in Exchange Operation and the Degree That Sound Reproduction Is Affected by the Continued Use of Sound-Track Film	XXI	2	Aug., 1933	166
	The Treatment of New Film Prior to Release				
FENN, W. O. (and MORRISON, C. A.)	Recording on Sound Stages with Portable Units	XV	4	Oct., 1930	501
	Cinematographic Analysis of Mechanical Energy Expenditure in the Sprinter				
FETTER, C. H. (and WATKINS, S. S. A.)	A New Way of Splitting Seconds	XVI	5	May, 1931	603
	Some Aspects of a Western Electric Sound Recording System				
FLETCHER, H.	Transmission and Reproduction of Speech and Music in Auditory Perspective	XX	4	Apr., 1933	332
FOOTE, R. L.	Laminated Bakelite in the Motion Picture Industry	XIV	5	May, 1930	520
FOSTER, D.	The Effect of Exposure and Development on the Quality of Variable-Width Photographic Sound Recording	XXII	5	May, 1934	314
FOSTER, L. V. (and HERRIOTT, W.)	Recent Optical Improvements in Sound-Film Recording Equipment	XXIV	4	Apr., 1935	354
	Storage and Handling of Motion Picture Film				
FOWLER, E. W. (and NEWELL, L. B.)		XVII	5	Nov., 1931	749
		XXIII	3	Sept., 1934	167
		XVI	6	June, 1931	773

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
FRANKLIN, H. B.	A Year of Sound	XIV	3	Mar., 1930	302
	Color	XVII	1	July, 1931	3
	Talking Pictures—The Great Internationalist	XV	1	July, 1930	17
	The Progress of Sound Motion Pictures	XV	6	Dec., 1930	809
FRASER, C. E.	Motion Pictures in the U. S. Navy	XIX	6	Dec., 1932	546
FRAYNE, J. G. (and SILENT, H. C.)	Western Electric Noiseless Recording	XVIII	5	May, 1932	551
FREDERICK, H. A.	Vertical Sound Records: Recent Fundamental Advances in Mechanical Records on "Wax"	XVIII	2	Feb., 1932	141
FRIEBUS, R. T.	Some Considerations Affecting the Design of Phonograph Needles	XV	4	Oct., 1930	484
GARITY, W.	The Production of Animated Cartoons	XX	4	Apr., 1933	309
GEIB, E. R. (and Joy, D. B.)	Operating Characteristics of the High-Intensity A-c. Arc for Motion Picture Projection	XXIII	1	July, 1934	27
	The Relation of the High-Intensity A-c. Arc to the Light on the Projection Screen	XXIII	1	July, 1934	35
	The Non-Rotating High-Intensity D-c. Arc for Projection	XXIV	1	Jan., 1935	47
GEOHEGAN, G.	Some Color Problems	XVIII	5	May, 1932	619
GERMESHAUSEN, K. J. (and EDGERTON, H. E.)	Stroboscopic-Light High-Speed Motion Pictures	XXIII	5	Nov., 1934	284
GILBERT, F. C.	The Calibrated Multi-Frequency Test-Film	XXV	6	Dec., 1935	503
GILES, L. W. (and JONES, W. C.)	A Moving-Coil Microphone for High-Quality Sound Reproduction	XVII	6	Dec., 1931	977
GLASSER, N.	Problems of a Theater Manager	XIX	3	Sept., 1932	272
GLUNT, O. M.	The Call Announcer: A Telephone Application of Sound Picture Ideas	XVI	3	Mar., 1931	362
GODOWSKY, L., JR. (and MANNES, L. D.)	The Kodachrome Process for Amateur Cinematography in Natural Colors	XXV	1	July, 1935	65

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
GOEHNER, W. R. (and SHEA, T. E., and HERRIOTT, W.)	The Microdensitometer as a Laboratory Measuring Tool	XXIII	6	Dec., 1934	318
GOLDEN, N. D. (and NORTH, C. J.)	The Principles of the Light-Valve Sound-Film Motion Pic- tures in Europe Meeting Sound-Film Com- petition Abroad The Latin-American Audi- ence Viewpoint on American Films The European Film Mar- ket—Then and Now	XVIII	6	June, 1932	697
	An Entertainment City Problems in Motion Pic- ture Engineering Television and Motion Pic- tures	XIV	1	Jan., 1930	11
	Technical Aspects of the Motion Picture The Photronic Photogra- phic Exposure Meter	XV	6	Dec., 1930	749
GOLDSMITH, A. N.	Water Cooling of Incan- descent Lamps Release Print Problems of the Distributor Aiding the Theater Patron Who Is Hard of Hearing	XVII	1	July, 1931	18
GOODWIN, W. N., JR.	The Educational Motion Picture of Yesterday, Today, and Tomorrow	XVIII	4	Apr., 1932	442
GORDON, N. T.	Three New Kodascopes Standards and Require- ments of Projection for Visual Education	XVI	2	Feb., 1931	220
GOVE, J. A.	Early History of Motion Picture Cameras for Film Wider than 35-Mm.	XXIII	6	Dec., 1934	350
GRAHAM, F. H.	Some New Projection Equipment	XXV	1	July, 1935	37
GRAY, H. A.	A New 35-Mm. Portable Projector	XXV	3	Sept., 1935	254
GREEN, N. B.	Sprocket Dimensions for 35-Mm. Visual and Sound Projection Equip- ment	XXIV	2	Feb., 1933	95
GREENE, C. L.		XIV	3	Mar., 1930	332
GREGORY, C. L.		XIX	5	Nov., 1932	410
GRiffin, H.		XVI	3	Mar., 1931	341
		XXIV	5	May, 1935	414
		XXV	3	Sept., 1935	271
		XIX	5	Nov., 1932	424
		XIV	1	Jan., 1930	27
		XV	5	Nov., 1930	641
		XVII	4	Oct., 1931	623
		XXII	1	Jan., 1934	20

AUTHOR INDEX

85

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
GRIGNON, L. D.	A New 35-Mm. Portable Sound Projector	XXII	1	Jan., 1934	70
GRIMWOOD, W. K. (and SANDVIK, O., and HALL, V. C.)	The Wall Motion Picture Camera Operating Problems of Recording Equipment Further Investigation of Ground-Noise in Photographic Sound Records	XXV	4	Oct., 1935	363
GUNDELFINGER, A. M.	Operating Problems of Recording Equipment A Method for the Calculation of the Correct and Most Economical Concentrations of Elon and Hydroquinone in a Borax Developer for Motion Picture Film	XVII	5	Nov., 1931	792
HALL, M.	The Theatergoer's Reaction to the Audible Picture as It Was, and Now	XXII	2	Feb., 1934	83
HALL, V. C. (and SANDVIK, O.)	The Decibel in the Motion Picture Industry Wave-Form Analysis of Variable-Density Sound Recording Further Investigation of Ground-Noise in Photographic Sound Records	XXIV	5	May, 1935	424
(and SANDVIK, O., and GRIMWOOD, W. K.) (and SANDVIK, O., and STREIFFERT, J. G.)	Wave-Form Analysis of Variable-Width Sound Records Lighting for Technicolor Motion Pictures	XVIII	3	Mar., 1932	292
HANDLEY, C. W.	A Sixteen-Millimeter Portable Sound - on - Film Projection Equipment	XIX	4	Oct., 1932	346
HANNA, C. R. (and IRWIN, P. L., and REYNOLDS, E. W.)	One Type of Acoustic Distortion in Sound Picture Sets	XXII	2	Feb., 1934	83
HANSON, R. L.	Making a Motion Picture Finishing a Motion Picture	XXI	4	Oct., 1933	323
HARCUS, W. C.	The Optics of Motion Picture Projectors	XXV	5	Nov., 1935	423
HARDY, A. C.	The Depth of Field of Camera Lenses with Special Reference to Wide Film	XI	6	Dec., 1933	456
		XV	4	Oct., 1930	460
		XVII	5	Nov., 1931	802
		XIX	6	Dec., 1932	553
		XIV	3	Mar., 1930	309
		XVI	3	Mar., 1931	286

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and PINEO, O. W.)	A Simple Ciné Photomicrographic Apparatus	XVII	2	Aug., 1931	216
HARTMAN, W. K.	Arc Supply Generator for Use with Suprex Carbons	XXV	3	Sept., 1935	278
HAYS, W. H.	Scientific Progress and the New Era in Motion Pictures	XV	2	Aug., 1930	263
	The New Era in Motion Pictures	XXV	6	Dec., 1935	483
HERRIOTT, W.	A Method of Measuring Axial Chromatic Aberration in an Objective Lens	XX	4	Apr., 1933	323
(and FOSTER, L. V.)	Recent Optical Improvements in Sound-Film Recording Equipment	XXIII	3	Sept., 1934	167
(and SHEA, T. E., and GOEHNER, W. R.)	The Principles of the Light-Valve	XVIII	6	June, 1932	697
HEYER, B. F. W.	The Application of Rectifier Power Supply to Sound Reproducing Equipment	XIX	5	Nov., 1932	437
HICKMAN, K.	Automatic Silver Recovery Control	XVII	4	Oct., 1931	591
(and WEYERTS, W.)	The Argentometer—An Apparatus for Testing for Silver in a Fixing Bath	XXV	4	Oct., 1935	335
(and SANFORD, C., and WEYERTS, W.)	The Electrolytic Regeneration of Fixing Baths	XVII	4	Oct., 1931	568
(and HYNDMAN, D. E.)	Model Making with Sheet Film Base	XX	3	Mar., 1933	236
HINELINE, H. D.	Composite Photographic Processes	XX	4	Apr., 1933	283
HOCHHEIMER, R.	The Use of Motion Pictures for Visual Education in the New York Schools	XXIV	6	June, 1935	519
HOKE, I. B.	The Camera of Tomorrow	XVII	3	Sept., 1931	401
HOLDEN, E. C.	Silica Gel Air-Conditioning for Film Processing	XVII	4	Apr., 1932	471
HOLDEN, H. C.	A 16-Mm. Sound-on-Film Projector	XIX	3	Sept., 1932	228

AUTHOR INDEX

87

Author

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
HOLMAN, A. J.	Apparatus Developed to Simplify Manufacture of Lens Wheels for Continuous Projectors	XIV	6	June, 1930	623
	The Revolving Lens Wheel Projector	XV	1	July, 1930	20
	Continuous Non-Intermittent Projectors	XVI	5	May, 1931	612
HOLSLAG, R. C. (and CARRIGAN, J. B.)	An Estimate of the Present Status and Future Development of the Home Talkies	XVI	1	Jan., 1931	67
HOORN, F. W.	Military Training and Historical Films	XXI	4	Oct., 1933	337
HOPKINS, H. F.	Considerations in the Design and Testing of Motion Picture Screens for Sound Picture Work	XV	3	Sept., 1930	320
HOPPER, F. L.	Wide-Range Recording	XXII	4	Apr., 1934	253
HOWELL, A. S. (and DUBRAY, J. A.)	Some Practical Aspects of, and Recommendations on, Wide-Film Standards	XIV	1	Jan., 1930	59
	Wide-Film Shrinkage and Its Effects as a Factor in Determining Proper Dimensional Specifications for a New Standard	XV	3	Sept., 1930	306
	Proposed Change in the Present Standards of 35-Mm. Film Perforations	XVIII	4	Apr., 1932	503
(and MITCHELL, R. F.)	Recent Improvements in the Bell & Howell Fully Automatic Printer	XXII	2	Feb., 1934	115
(and STECHBART, B. E., and MITCHELL, R.F.)	The Bell & Howell Fully Automatic Sound Picture Production Printer	XIX	4	Oct., 1932	305
HRDLICKA, J.	Measuring the Effective Illumination of Photographic Objectives	XIV	5	May, 1930	531
HUBBARD, D. (and CARROLL, B. H.)	The Mechanism of Hypersensitization	XVIII	5	May, 1932	600
HUNT, F. L.	Production Aspects of a Technical Lecture Sound Picture	XV	4	Oct., 1930	473

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
HUNTER, C. R. (and PIERCE, R. M.)	A Method of Quantity Developing of Motion Picture Films	XVII	6	Dec., 1931	954
HUSE, E. (and CHAMBERS, G. A.)	Sensitometric Control in the Processing of Motion Picture Film in Hollywood	XXI	1	July, 1933	54
HUTCHINS, G. F.	Eastman Supersensitive Motion Picture Negati- ve Film	XVII	4	Oct., 1931	560
HYNDMAN, D. E. (and HICKMAN, K.)	New Filters for Exterior Photography with Supersensitive Film	XVII	5	Nov., 1931	783
IRBY, F. S.	Dimensional Analysis as an Aid to Miniature Cinematography	XIV	4	Apr., 1930	377
IRWIN, P. L. (and HANNA, C. R., and REYNOLDS, E. W.)	Model Making with Sheet Film Base	XX	3	Mar., 1933	236
IVES, C. E.	Recent and Future Eco- nomic Changes in the Motion Picture Field	XV	3	Sept., 1930	332
	International Relations in the Sound Picture Field	XV	6	Dec., 1930	739
	A Sixteen-Millimeter Port- able Sound-on-Film Pro- jection Equipment	XXI	6	Dec., 1933	456
(and CRABTREE, J. I.)	A Roller Developing Rack for Continuously Mov- ing the Film during Processing by the Rack- and-Tank System	XXIV	3	Mar., 1935	261
	A New Method of Block- ing Out Splices in Sound- Film	XIV	3	Mar., 1930	349
	The Storage of Valuable Motion Picture Film	XV	3	Sept., 1930	289
	A Modified Film-Waxing Machine	XV	3	Sept., 1930	370
	A Replenishing Solution for a Motion Picture Positive Film Developer	XV	5	Nov., 1930	627
(and CRABTREE, J. I., and SANDVIK, O.)	The Surface Treatment of Sound-Film	XIV	3	Mar., 1930	275
(and CRABTREE, J. I., and TUTTLE, F.)	A Semi-Automatic Timing Device for Motion Pic- ture Negatives	XV	5	Nov., 1930	587
(and MILLER, A. J.,	Improvement in Motion				

AUTHOR INDEX

89

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
and CRABTREE, J. I.)	Picture Laboratory Apparatus	XVII	1	July, 1931	26
(and MUEHLER, L. E., and CRABTREE, J. I.)	Making a Fade-Out by After-Treatment	XX	1	Jan., 1933	65
IVES, F. E.	Pioneering Inventions by an Amateur	XXIII	3	Sept., 1934	175
IVES, H. E.	Two-Way Television	XVI	3	Mar., 1931	293
	Television in Color from Motion Picture Film	XVI	5	May, 1931	535
	The Problem of Projecting Motion Pictures in Relief	XVIII	4	Apr., 1932	417
	An Experimental Apparatus for the Projection of Motion Pictures in Relief	XXI	2	Aug., 1933	106
JAMES, R. F.	RoentgenCinematography	XXIV	3	Mar., 1935	233
JENKINS, C. F.	The Development of Television and Radiomovies to Date	XIV	3	Mar., 1930	344
JENKINS, J. E. (and ADAIR, S. E.)	The Engineer and His Tools	XV	2	Aug., 1930	260
JONES, H. W.	A Silhouette Studio	XV	3	Sept., 1930	381
JONES, L. A.	Television Systems	XV	4	Oct., 1930	445
	The Control Frequency Principle	XXII	3	Mar., 1934	193
	The Modern Newsreel	XIV	2	Feb., 1930	204
	Rectangle Proportions in Pictorial Composition	XIV	1	Jan., 1930	32
	On the Theory of Tone Reproduction, with a Graphic Method for the Solution of Problems	XVI	5	May, 1931	568
	Photographic Sensitometry—Part I	XVII	4	Oct., 1931	491
	Part II	XVII	5	Nov., 1931	695
	Part III	XVIII	1	Jan., 1932	54
	Part IV	XVIII	3	Mar., 1932	324
	A Motion Picture Laboratory Sensitometer	XVII	4	Oct., 1931	536
	A Historical Summary of Standardization in the Society of Motion Picture Engineers	XXI	4	Oct., 1933	280
(and MCFARLANE, J. W.)	The Precise Measurement of Filter Factors and Photographic Reflecting Powers	XIX	4	Oct., 1932	361

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and SANDVIK, O.)	Photographic Characteristics of Sound Recording Film	XIV	2	Feb., 1930	180
(and WEBB, J. H.)	Reciprocity Law Failure in Photographic Exposures	XXIII	3	Sept., 1934	142
JONES, W. C.	Condenser and Carbon Microphones—Their Construction and Use	XVI	1	Jan., 1931	3
(and GILES, L. W.)	The Lapel Microphone and Its Application to Public Address and Announcing Systems	XIX	3	Sept., 1932	219
JOSEPH, T. H. (and MANHEIMER, J. R.)	A Moving - Coil Microphone for High-Quality Sound Reproduction	XVII	6	Dec., 1931	977
Joy, D. B. (and DOWNES, A. C.)	Electronic Tube Control for Theater Lighting	XXIV	3	Mar., 1935	221
(and DOWNES, A. C.)	Characteristics of High-Intensity Arcs	XIV	3	Mar., 1930	291
(and GEIB, E. R.)	Some Causes for Variations in the Light and Steadiness of High-Intensity Carbons	XVI	1	Jan., 1931	61
	Properties of Low-Intensity Reflecting Arc Projector Carbons	XVI	6	June, 1931	684
	A New Alternating-Current Projection Arc	XXI	2	Aug., 1933	116
	Direct-Current High-Intensity Arcs with Non-Rotating Positive Carbons	XXII	1	Jan., 1934	42
	Operating Characteristics of the High-Intensity A-c. Arc for Motion Picture Projection	XXIII	1	July, 1934	27
	The Relation of the High-Intensity A-C. Arc to the Light on the Projection Screen	XXIII	1	July, 1934	35
	The Non-Rotating High-Intensity D-c. Arc for Projection	XXIV	1	Jan., 1935	47
(and BOWDITCH, F. T., and DOWNES, A. C.)	A New White-Flame Carbon for Photographic Light	XXII	1	Jan., 1934	58

AUTHOR INDEX

91

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
KALMUS, N. M.	Color Consciousness	XXV	2	Aug., 1935	139
KELLY, M. J.	Vacuum Tube and Photoelectric Tube Developments for Sound Picture Systems	XVIII	6	June, 1932	761
KELLEY, W. V. D.	The Handschieg and Pathéchrome Color Processes	XVII	2	Aug., 1931	230
KELLOGG, E. W.	Some New Aspects of Reverberation	XIV	1	Jan., 1930	96
(and BATSEL, C. N.)	A New Recorder for Variable Area Recording	XV	5	Nov., 1930	653
(and BELAR, H.)	The Development of 16-Mm. Sound Motion Pictures	XXIV	1	Jan., 1935	63
(and KIEGL, H.)	A Comparison of Variable-Density and Variable-Width Systems	XXV	3	Sept., 1935	203
(and KOSSMAN, H. R.)	A Shutter for Use in Reduction of Ground-Noise	XVII	2	Aug., 1931	203
KREUZER, B.	Analysis of the Distortion Resulting from Sprocket-Hole Modulation	XXV	6	Dec., 1935	492
KROWS, A. E.	The New Klieglight	XXIII	6	Dec., 1934	359
KUHN, J. J.	A Silent Camera	XXI	5	Nov., 1933	420
KÜSTER, A. (and SCHMIDT, R.)	A Small Developing Machine	XXIII	6	Dec., 1934	356
KÜTZLEB, L.	Noise Reduction with Variable-Area Recording	XVI	6	June, 1931	671
LACK, F. R.	Radio City Equipment	XXI	3	Sept., 1933	181
	Sound and Speech in Silent Pictures	XVI	4	Apr., 1931	427
	A Sound-Film Re-Recording Machine	XVII	3	Sept., 1931	326
	The Sensitometric Control of Sound Records on Film	XIX	6	Dec., 1932	539
	Analysis of Sound Quality with the Variable-Density Recording Method from Sensitometric Data	XXI	5	Nov., 1933	374
	Use of the Photoclectric Cell in Cinematography	XIX	6	Dec., 1932	528
	Piezoelectric Frequency Control	XXIII	4	Oct., 1934	187

AUTHOR INDEX

Author	Subject	Vol.	No.	Date	Page
LANE, C. E.	A Mechanical Demonstration of the Properties of Wave-Filters	XXIV	3	Mar., 1935	206
LAQUE, F. L.	Inconel as a Material for Photographic Film Processing Apparatus	XXIV	4	Apr., 1935	357
LASKY, M. (and RUBIN, B.)	A Practical Method and Photometer for Controlling Exposures in Photography	XXI	2	Apr., 1933	154
LEAHY, W.	Time-and-Temperature <i>vs.</i> the Test System for Development of Motion Picture Negatives	XVIII	5	May, 1932	649
LEMON, H. B.	New Emulsions for Special Fields in Motion Picture Photography	XXV	3	Sept., 1935	248
LEWIN, G.	The Use of the Talking Picture as an Additional Educational Tool at the University of Chicago	XXII	1	Jan., 1934	62
LEWIN, W.	Dubbing and Its Relation to Sound Picture Production	XVI	1	Jan., 1931	38
LEWIS, C. E.	Photoplay Appreciation in the Nation's Schools	XXI	1	July, 1933	9
LIGHTMAN, M. A.	How the SMPE Can Be of Greater Service to Theater Managers	XIX	3	Sept., 1932	275
LITTLE, W. F.	Theater Operating Problems	XIX	3	Sept., 1932	291
LOOMIS, F. J. (and REYNOLDS, E. W.)	Tests of Motion Picture Screens	XVI	1	Jan., 1931	31
LOVELAND, R. P.	New Apparatus—a New High-Fidelity Sound Head	XXV	5	Nov., 1935	449
LUBCKE, H. R.	A Method for the Determination of Exposures in Cinematography	XV	5	Nov., 1930	689
LUCAS, F. F.	The Theatrical Possibilities of Television	XXV	1	July, 1935	46
LYFORD, E. B. (and ROBILLARD, P. M.)	The World's Most Powerful Microscope	XVI	4	Apr., 1931	445
	Recent Developments in RCA Photophone Portable Recording Equipment	XVI	3	Mar., 1931	269

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
LYMAN, D. F.	Relation between Illumination and Screen Size for Non-Theatrical Projection	XXV	3	Sept., 1935	227
MACKENZIE, D.	Straight-Line and Toe Records with the Light-Valve	XVII	2	Aug., 1931	172
MACNAIR, W. A. (and SHEA, T. E., and SUBRIZI, A.)	Flutter in Sound Records	XXV	5	Nov., 1935	403
MALLINA, R. F.	A Rotating-Mirror Oscilloscope	XXIII	6	Dec., 1934	328
MANNES, L. D. (and GODOWSKY, L., JR.)	The Kodachrome Process for Amateur Cinematography in Natural Colors	XXV	1	July, 1935	65
MALTER, L.	Loud Speakers and Theater Sound Reproduction	XIV	6	June, 1930	611
MAMOULIAN, R.	Some Problems in Directing Color Pictures	XXV	2	Aug., 1935	148
MANHEIMER, J. R. (and JOSEPH, T. H.)	Some Aspects of the National Electrical Code as Applied to the Motion Picture Industry Electronic Tube Control for Theater Lighting	XV	2	Aug., 1930	145
MARSH, W. (and CRABTREE, J. I.)	Double Toning of Motion Picture Films	XXIV	3	Mar., 1935	221
MASSA, F. (and OLSON, H. F.)	On the Realistic Reproduction of Sound with Particular Reference to Sound-Motion Pictures	XVI	1	Jan., 1931	57
MATTHEWS, G. E.	A Motion Picture Made in 1916 by a Two-Color Subtractive Process	XXIII	2	Aug., 1934	63
	Processes of Photography in Natural Colors	XV	5	Nov., 1930	624
	The Literature of the Motion Picture Industry	XVI	2	Feb., 1931	188
	Citation of Thomas Armat	XIX	5	Nov., 1932	451
(and CRABTREE, J. I.).	Effect of the Water Supply in Processing Motion Picture Film	XXV	6	Dec., 1935	468
(and CRABTREE, J. I. and ROSS, J. F.)	Materials for the Construction of Motion Picture Processing Apparatus	XVI	4	Apr., 1931	437
		XVI	3	Mar., 1931	330

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
MAURAN, J.	Modern Tools and Methods Used in Servicing Sound Equipment	XIX	3	Sept., 1932	260
MAURER, J. A.	The Photographic Treatment of Variable-Area Sound-Films	XIV	6	June, 1930	636
MAXFIELD, J. P.	Acoustic Control of Recording for Talking Motion Pictures	XIV	1	Jan., 1930	85
MAY, R. P.	16-Mm. Sound-Film Dimensions	XVIII	4	Apr., 1932	488
McCoy, J. L.	A Light-Intensity Meter	XIV	3	Mar., 1930	357
McFARLANE, J. W. (and JONES, L. A.)	The Precise Measurement of Filter Factors and Photographic Reflecting Powers	XIX	4	Oct., 1932	361
(and TUTTLE, C.)	The Measurement of Density in Variable-Density Sound-Film	XV	3	Sept., 1930	345
(and TUTTLE, F.)	Introduction to the Photographic Possibilities of Polarized Light	XXV	1	July, 1935	69
MEES, C. E. K.	Some Photographic Aspects of Sound Recording	XXIV	4	Apr., 1935	285
MENDOZA, D.	Practical Problems in the Recording and Reproduction of Music for Motion Pictures	XX	1	Jan., 1933	79
MEYER, H.	Sensitometric Studies of Processing Conditions for Motion Picture Films	XXV	3	Sept., 1935	239
MIEHLING, R.	The Becquerel Effect and Its Adaptation to Talking Motion Pictures	XV	3	Sept., 1930	281
MILI, G.	The Biplane Filament in Spotlighting	XXIII	3	Sept., 1934	131
MILI, G.	Biplane Filament Construction—A High-Intensity Incandescent Lamp Light-Source for Motion Picture Projection	XIX	1	July, 1932	829
MILLER, A. J. (and IVES, C. E., and CRABTREE, J. I.)	Improvements in Motion Picture Laboratory Apparatus	XVII	1	July, 1931	26

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
MILLER, J. A.	Mechanographic Recording for Motion Picture Sound-Tracks	XXV	1	July, 1935	50
MILLER, P. (and BREWSTER, P. D.)	Three-Color Subtractive Cinematography	XVI	1	Jan., 1931	49
MILLER, R. A. (and PFANNENSTIEHL, H.)	A Portable 16-Mm. Sound Picture System	XIX	3	Sept., 1932	249
MILLER, W. C.	Volume Control by the Squeeze Track	XV	1	July, 1930	53
MILLIKEN, R. A.	Radio's Past and Future	XVII	4	Oct., 1931	655
MITCHELL, G. S.	Making Pictures in Asiatic Jungles	XVII	5	Nov., 1931	811
MITCHELL, R. F. (and COLE, L. G.)	The Cinematography of Brownian Movement with Filmo Camera	XV	5	Nov., 1930	679
(and HOWELL, A. S.)	Non-Theatrical Projection	XXV	4	Oct., 1935	314
(and WARMISHAM, A.)	Historical Notes on X-Ray Cinematography	XXIV	4	Apr., 1935	333
(and HOWELL, A. S., and STECHBART, B. E.)	Recent Improvements in the Bell & Howell Fully Automatic Printer	XXII	2	Feb., 1934	115
MITCHELL, W. M.	The Bell & Howell Cooke Varo Lens	XIX	4	Oct., 1932	329
MOLE, P.	The Bell & Howell Fully Automatic Sound Picture Production Printer	XIX	4	Oct., 1932	305
MONOSSON, L. I.	Applications of Stainless Steel in the Motion Picture Industry	XXIV	4	Apr., 1935	346
MOGENSEN, A. H.	New Developments in Portable Gas-Electric Generators for Motion Picture Lighting	XXV	5	Nov., 1933	413
MORRISON, C. A. (and FENN, W. O.)	A New Development in Carbon Arc Lighting	XXII	1	Jan., 1934	51
MUEHLER, L. E.	The Soviet Cinematography	XV	4	Oct., 1930	509
	Industry Adopts the Motion Picture Camera	XVI	5	May, 1931	563
	Cinematography with the Laryngoscope	XVI	3	Mar., 1931	356
	Cinematographic Analysis of Mechanical Energy Expenditure in the Sprinter	XVI	5	May, 1931	603
	Reducing and Intensifying				

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and CRABTREE, J. I.)	Solution for Motion Picture Film	XVII	6	Dec., 1931	1001
(and CRABTREE, J. I., and IVES, C. E.)	Making a Fade-Out by After-Treatment	XX	1	Jan., 1933	65
MUELLER, W. A.	A Device for Automatically Controlling the Balance between Recorded Sounds	XXV	1	July, 1935	79
NEELAND, G. K. (and DAVIS, R.)	Variation of Photographic Sensitivity with Different Light-Sources	XVIII	6	June, 1932	732
	Variation of Photographic Sensitivity with Development Time	XVIII	6	June, 1932	742
NEWCOMER, H. S.	Wide-Screen Photography with Cylindrical Anamorphosing Systems and Characteristics of Motion Picture Lenses and Images	XX	1	Jan., 1933	31
NEWELL, L. B. (and FOWLER, E. W.)	Storage and Handling of Motion Picture Film	XVI	6	June, 1931	773
NEWMAN, A. S.	Camera Mechanism, Ancient and Modern	XIV	5	May, 1930	534
NICHOLSON, R. F.	The Processing of Variable - Density Sound Records	XV	3	Sept., 1930	374
NIXON, I. L.	Optical Instruments and Their Application in the Motion Picture Industry	XVIII	3	Mar., 1932	304
NORLING, J. A. (and RIPPLEBEIN, A. P.)	Treatment for Rejuvenating and Preserving Motion Picture Film	XVI	6	June, 1931	766
NORTH, C. J. (and GOLDEN, N. D.)	Meeting Sound-Film Competition Abroad	XV	6	Dec., 1930	749
	The Latin-American Audience Viewpoint on American Films	XVII	1	July, 1931	18
	The European Film Market—Then and Now	XVIII	4	Apr., 1932	442
OLSON, H. F.	The Ribbon Microphone Recent Developments in Theater Loud Speakers of the Directional Baffle Type	XVI	6	June, 1931	695
		XVIII	5	May, 1932	571

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and MASSA, F.)	On the Realistic Reproduction of Sound with Particular Reference to Sound Motion Pictures	XXIII	2	Aug., 1934	63
OTIS, R. M.	The Multicolor Process	XVII	1	July, 1931	5
PALMER, M. W.	Film-Numbering Device for Cameras and Recorders	XIV	3	Mar., 1930	327
(and BEGGS, E. W.)	Professional Motion Picture Photography with High-Intensity Short-Life Incandescent Lamps	XXI	2	Aug., 1933	126
(and RICHARDS, A. J.)	A Proposed New Method of "Timing" Negatives	XV	2	Aug., 1930	181
PARKER, H., JR.	Some Properties of Two-Bath Developers for Motion Picture Film	XXI	1	July, 1933	21
(and CRABTREE, J. I., and RUSSELL, H. D.)	A Portable 16-Mm. Sound Picture System	XIX	3	Sept., 1932	249
PFANNENSTIEHL, H.	Problems of the Cameraman	XVII	3	Sept., 1931	406
(and MILLER, R. A.)	Photographic Emulsions	XIX	1	July, 1932	913
PHYSIOC, L. W.	Simple Theory of the Three-Electrode Vacuum Tube	XXIV	2	Feb., 1935	133
PIDGEON, H. A.	A Method for Quantity Developing of Motion Picture Films	XVII	6	Dec., 1931	954
PIERCE, R. M.	A Simple Ciné Photomicrographic Apparatus	XVII	2	Aug., 1931	216
(and HUNTER, C. R.)	Some Interesting Properties of Continuous Projectors	XVI	6	June, 1931	709
PINEO, O. W.	Inertia in the Service of Cinematography	XIX	6	Dec., 1932	565
(and HARDY, A. C.)	Air-Conditioning in Film Laboratories	XVII	4	Oct., 1931	604
PLANK, W. C.	Background Projection for Process Cinematography	XXIV	2	Feb., 1935	102
POLDERMANN, L. H.	C. Francis Jenkins: An Appreciation	XXIII	3	Sept., 1934	126
(and SIMONDS, A. H.)	An Automatic Change-Over Device	XXII	3	Mar., 1934	186
POPOVICI, G. G.	A New Sound Reproducing System for Theaters	XVI	2	Feb., 1931	131
PORTER, L. C.					
PRITCHARD, A.					
PULLER, G.					

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
RAMSAYE, T.	The Human Equation in Sound Picture Production	XIV	2	Feb., 1930	219
RAY, R. H. (and CRESS, H. W.)	Color for Industrial and Business Films	XXII	2	Feb., 1934	144
RAYTON, W. B.	The Optical Problems of Wide-Film Motion Pictures	XIV	1	Jan., 1930	50
	A Proposed New Series of Standard Focal Lengths for Motion Picture Projection Objectives	XV	3	Sept., 1930	277
	Short-Focus Lenses for Projection with Translucent Screens	XIX	6	Dec., 1932	512
	The Effect of Aperture Lenses on Illumination	XXIII	6	Dec., 1934	309
READ, S., JR. (and DUTTON, W. P.)	RCA Victor High-Fidelity Film Recording Equipment	XX	5	May, 1933	396
	Some New RCA Photophone Studio Recording Equipment	XVI	3	Mar., 1931	315
REID, C. D. (and TUTTLE, F.)	The Problem of Motion Picture Projection from Continuously Moving Film	XX	1	Jan., 1933	3
RETTINGER, M.	Recent Developments in the Acoustics of Motion Picture Sound Stages	XXIV	5	May, 1935	395
	Studio Acoustics	XXV	4	Oct., 1935	331
REYNOLDS, E. W. (and HANNA, C. R., and IRWIN, P. L.) (and LOOMIS, F. J.)	A Sixteen-Millimeter Portable Sound-on-Film Projection Equipment	XXI	6	Dec., 1933	456
	New Apparatus—a New High-Fidelity Sound Head	XXV	5	Nov., 1935	449
RICHARD, A. P.	Remarks on the Making of Sound Records on Lenticular Color Films	XX	1	Jan., 1933	60
RICHARDS, A. J. (and PALMER, M. W.)	A Proposed New Method of "Timing" Negatives	XV	2	Aug., 1930	181
RICHARDSON, E. C.	A Microphone Boom Tilt Heads and Rolling Tripods from Camera Blimps	XV	1	July, 1930	41
		XV	1	July, 1930	46

AUTHOR INDEX

99

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
RICHARDSON, F. H.	Avoidance of Eye Fatigue	XX	5	May, 1933	391
RIDGWAY, D. W.	The Need for Uniform Density in Variable-Density Sound-Tracks	XXIV	6	June, 1935	524
RINGEL, A. S.	The Preselection of Takes for Processing from Exposed Undeveloped Negative	XXI	3	Sept., 1933	220
RIPPENBEIN, A. P. (and NORLING, J. A.)	Sound - Proofing and Acoustic Treatment of RKO Stages	XV	3	Sept., 1930	352
ROBILLARD, P. M. (and LYFORD, E. B.)	Treatment for Rejuvenating and Preserving Motion Picture Film	XVI	6	June, 1931	766
RODWELL, S.	Recent Developments in RCA Photophone Portable Recording Equipment	XVI	3	Mar., 1931	269
ROGER, H.	X-Ray Cinematography	XV	6	Dec., 1930	815
ROPER, V. J. (and WOOD, H. I.)	New Developments in Micro Motion Picture Technic	XXIV	6	June, 1935	475
ROSENBERGER, H.	Trend of Lamp Development and Operation in Motion Picture Projectors Employing 16-Mm. Film	XV	6	Dec., 1930	824
ROSS, J. F. (and CRABTREE, J. I.)	Progress in Micro Cinematography	XV	4	Oct., 1930	439
(and CRABTREE, J. I., and MATTHEWS, G. E.)	A Method of Testing for the Presence of Sodium Thiosulfate in Motion Picture Films	XIV	4	Apr., 1930	419
ROTH, G. E.	Materials for the Construction of Motion Picture Processing Apparatus	XVI	3	Mar., 1931	330
RUBIN, B. (and LASKY, M.)	The "Selenophon" Sound Recording and Reproducing System	XXII	4	Apr., 1934	260
RUMPEL, C. H. (and SHEA, T. E., and CURTIS, A. M.)	A Practical Method and Photometer for Controlling Exposures in Photography	XXI	2	Aug., 1933	154
	The Rapid-Record Oscillograph in Sound Picture Studies	XVIII	1	Jan., 1932	39

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
RUOT, M.	The Motion Picture Industry in Japan	XVIII	5	May, 1932	628
RUSSELL, G. O. (and TUTTLE, C.)	Some Experiments in Motion Photography of the Vocal Cords	XV	2	Aug., 1930	171
RUSSELL, H. D. (and CRABTREE, J. I.)	Some Properties of Chrome Alum Stop Baths and Fixing Baths—Part I Part II	XIV	5	May, 1930	483
	The Reducing Action of Fixing Baths on the Silver Image	XIV	6	June, 1930	667
(and CRABTREE, J. I., and PARKER, H., Jr.)	An Improved Potassium Alum Fixing Bath Containing Boric Acid	XVIII	3	Mar., 1932	371
SACHTLEBEN, L. T. (and BATSEL, C. N.)	Some Properties of Two-Bath Developers for Motion Picture Film Characteristics of Photophone Light-Modulating System Sixteen-Millimeter Sound Pictures in Color Some Characteristics of 16-Mm. Sound by Optical Reduction and Re-Recording	XXI	2	Aug., 1933	137
(and BATSEL, C. N., and DIMMICK, G. L.)	A 16-Mm. Sound Recording Camera Optical Reduction Sound Printing	XXV	2	Aug., 1935	175
SANFORD, C. (and HICKMAN, K., and WEYERTS, W.)	The Electrolytic Regeneration of Fixing Baths	XXIII	2	Aug., 1934	82
SANDVIK, O. (and HALL, V. C.)	Apparatus for the Analysis of Photographic Sound Records	XXIV	2	Feb., 1935	95
(and JONES, L. A.)	Wave-Form Analysis of Variable-Density Sound Recording	XXIII	2	Aug., 1934	87
(and STREIFFERT, J. G.)	Photographic Characteristics of Sound Recording Film	XXIII	2	Aug., 1934	108
(and CRABTREE, J. I., and IVES, C. E.)	A Continuous Optical Reduction Sound Printer The Surface Treatment of Sound-Film	XVII	4	Oct., 1931	568
		XV	2	Aug., 1930	201
		XIX	4	Oct., 1932	346
		XIV	2	Feb., 1930	180
		XXV	2	Aug., 1935	117
		XIV	3	Mar., 1930	275

AUTHOR INDEX

101

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and HALL, V. C., and GRIMWOOD, W. K.)	Further Investigation of Ground-Noise in Photographic Sound Records	XXII	2	Feb., 1934	83
(and HALL, V. C., and STREIFFERT, J. G.)	Wave-Form Analysis of Variable-Width Sound Records	XXI	4	Oct., 1933	323
SAWYER, C. R.	A Light-Weight Single-Film Recording System for Newsreels and Travelogues	XXI	6	Dec., 1933	466
SCHLANGER, B.	Reversing the Form and Inclination of the Motion Picture Theater Floor for Improving Vision	XVII	2	Aug., 1931	161
	Utilization of Desirable Seating Areas in Relation to Screen Shapes and Sizes and Theater Floor Inclinations	XVIII	2	Feb., 1932	189
	On the Relation between the Shape of the Projected Picture, the Areas of Vision, and Cinematographic Technic	XXIV	5	May, 1935	402
SCHLENKER, V. A.	A Truck-Mounted Laboratory for the Diagnosis of Theater Acoustic Defects	XVI	3	Mar., 1931	302
SCHMIDT, R. (and BRANDES, H.)	Two New Photographic Recording Instruments, the Sensitograph and the Gammagraph	XXII	5	May, 1934	279
(and KÜSTER, A.)	The Sensitometric Control of Sound Records on Film	XIX	6	Dec., 1932	539
	Analysis of Sound Quality with the Variable-Density Recording Method from Sensitometric Data	XXI	5	Nov., 1933	374
SCHNEIDER, K.	A New Light Control for Printing Machines	XIX	1	July, 1932	865
SCHRÖTT, P. von	Applied and Scientific Cinematography in Austria	XV	2	Aug., 1930	223
	The Selenophon Sound Recording System	XVIII	5	May, 1932	622

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
SCHWARTZ, R. P. (and TUTTLE, H. B.)	Advantages of Using 16-Mm. Supersensitive Panchromatic Film in Making Medical Motion Pictures	XVIII	5	May, 1932	609
SCHWINGEL, C. H. (and CRABTREE, J. I.)	The New Ciné-Kodak Special in Medicine	XXI	1	July, 1933	3
SCOTT, E. K.	The Duplication of Motion Picture Negatives	XIX	1	July, 1932	891
SCOVILLE, R. R.	Career of L. A. A. Le-Prince	XVII	1	July, 1931	46
SERGE, I. B.	A Portable Flutter-Measuring Instrument	XXV	5	Nov., 1935	416
SERRURIER, I.	Improvements in Design of Dynamic Speakers	XVI	2	Feb., 1931	144
SETTE, W. J. (and WOLF, S. K.)	A New Sound Reader and Frame Viewer	XXV	3	Sept., 1935	275
SHAPIRO, A.	Factors Governing Power Capacity of Sound Reproducing Equipment in Theaters	XV	4	Oct., 1930	415
SHEA, T. E. (and CURTIS, A. M., and RUMPEL, C. H.)	A New Sixteen-Millimeter Projector	XV	5	Nov., 1930	598
(and HERRIOTT, W., and GOEHNER, W.R.)	A Modern Laboratory for the Study of Sound Picture Problems	XVI	3	Mar., 1931	277
(and MACNAIR, W. A., and SUBRIZI, A.)	The Rapid-Record Oscillograph in Sound Picture Studies	XVIII	1	Jan., 1932	39
SHEPPARD, S. E.	The Principles of the Light-Valve	XVIII	6	June, 1932	697
SHORT, W. H.	Flutter in Sound Records	XXV	5	Nov., 1935	403
SILENT, H. C. (and FRAYNE, J. G.)	Résumé of the Proceedings of the Dresden International Photographic Congress	XVIII	2	Feb., 1932	232
SIMONDS, A. H. (and POLDERMAN, L.H.)	Some Factors in Photographic Sensitivity	XXIV	6	June, 1935	500
	Unoccupied Motion Picture Fields	XXI	6	Dec., 1933	494
	Western Electric Noiseless Recording	XVIII	5	May, 1932	551
	Air-Conditioning in Film Laboratories	XVII	4	Oct., 1931	604

AUTHOR INDEX

103

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
SMACK, J. C.	Flexible Drive Shafts— Their Application to Sound Pictures	XIV	4	Apr., 1930	384
SMITH, C.	The Future of Motion Pictures	XIX	3	Sept., 1932	294
SMITH, M. A. (and BAKER, G. W.)	Some Practical Applications of Acoustics in Theaters	XXII	2	Feb., 1934	148
SNELL, P. A.	An Introduction to the Experimental Study of Visual Fatigue	XX	5	May, 1933	367
SNYDER, W. F. (and CHRISLER, V. L.)	Measurements with a Re- verberation Meter	XVIII	4	Apr., 1932	479
SPENCE, J. L.	Mechanical Advantages of the Optical Intermittent Projector	XVIII	5	May, 1932	593
STANTON, G. T. (and WOLF, S. K.)	Noise Measurement	XVII	6	Dec., 1931	966
STECHBART, B. E. (and HOWELL, A. S., and MITCHELL, R. F.)	The Bell & Howell Fully Automatic Sound Pic- ture Production Printer	XIX	4	Oct., 1932	305
STOIBER, J. (and WITTEL, O., and TUTTLE, F. E.)	The Ciné-Kodak Special	XXI	6	Dec., 1933	478
STOKOWSKI, L.	Sound Recording—From the Musician's Point of View	XVIII	2	Feb., 1932	164
STOYANOWSKI, A. T.	A New Process of Tele- vision Out of Doors	XX	5	May, 1933	437
STREIFFERT, J. G. (and SANDVIK, O.) (and SANDVIK, O., and HALL, V. C.)	A Continuous Optical Re- duction Printer	XXV	2	Aug., 1935	117
	Wave-Form Analysis of Variable-Width Sound Records	XXI	4	Oct., 1933	323
STRONG, H. H.	A Reflector Arc Lamp for Portable Projectors	XVIII	6	June, 1932	752
STRYKER, N. R.	Scanning Losses in Repro- duction	XV	5	Nov., 1930	610
STULL, W.	Multiple Exposure Cine- matography in Sound Pictures	XIV	3	Mar., 1930	318
SUBRIZI, A. (and MACNAIR, W. A., and SHEA, T. E.)	Flutter in Sound Records	XXV	5	Nov., 1935	403
SUMNER, S.	The Film Problems of Theater Operation	XIX	3	Sept., 1932	286

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
SZEKELY, A.	The Life of Sound-Films in Hungary	XVI	5	May, 1931	553
TASKER, H. G.	Current Development in Production Methods in Hollywood	XXIV	1	Jan., 1935	3
(and CARPENTER, A. W.)	Motion Pictures with Sound on Standard 16-Mm. Film	XIX	3	Sept., 1932	237
TAYLOR, J. B.	Some Observations on Stereoscopic Projection	XVI	2	Feb., 1931	168
THALBERG, I.	Technical Activities of the Academy of Motion Pic- ture Arts & Sciences	XV	1	July, 1930	3
THEISEN, W. E.	The Depicting of Motion Prior to the Advent of the Screen	XX	3	Mar., 1933	249
	The History of Nitrocellu- lose as a Film Base	XX	3	Mar., 1933	259
THOMPSON, L.	The History of the Ani- mated Cartoon	XXI	3	Sept., 1933	239
TOWNSEND, L. M.	A New Power Amplifier System	XV	5	Nov., 1930	602
TOWNSEND, R. H.	Some Experiences in Adapting Theaters for Sound Reproduction	XVI	5	May, 1931	600
TRUESDALE, P. E.	Some Technical Aspects of Recording Music	XXV	3	Sept., 1935	259
TURNER, C. E.	Sound-Films for Surgical Instruction	XIV	5	May, 1930	513
TUTTLE, C.	Teaching Health with Pic- tures	XVI	5	May, 1931	557
(and YOUNG, D. A.)	On the Assignment of Printing Exposure by Measurement of Neg- ative Characteristics	XVIII	2	Feb., 1932	172
	The Relation between Diffuse and Specular Density	XX	3	Mar., 1933	228
	Distortion in the Projec- tion and Viewing of Motion Pictures	XXI	3	Sept., 1933	198
(and RUSSELL, G.)	Illumination in Projection Printing of Motion Pic- tures	XIX	1	July, 1932	842
	Some Experiments in Mo- tion Photography of the Vocal Cords	XV	2	Aug., 1930	171

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
(and MCFARLANE, J. W.)	The Measurement of Den- sity in Variable-Density Sound-Film	XV	3	Sept., 1930	345
TUTTLE, F. E.	A Non-Intermittent High- Speed 16-Mm. Camera	XXI	6	Dec., 1933	474
	A Compounded Geneva Pull-Down for Motion Picture Printers	XV	5	Nov., 1930	671
(and MCFARLANE, J. W.)	Introduction to the Photo- graphic Possibilities of Polarized Light	XXV	1	July, 1935	69
(and REID, C. D.)	The Problem of Motion Picture Projection from Continuously Moving Film	XX	1	Jan., 1933	3
(and VAUGHAN, W. S.)	Curved Gates in Optical Printers	XIV	6	June, 1930	663
(and CRABTREE, J. I. and IVES, C. E.)	A Semi-Automatic Timing Device for Motion Pic- ture Negative	XV	5	Nov., 1930	587
(and WITTEL, O., and STOIBER, J.)	The Ciné-Kodak Special	XXI	6	Dec., 1933	478
TUTTLE, H. B.	Some Experiments in Medical Motion Pic- tures in Color	XV	2	Aug., 1930	193
(and SCHWARTZ, R. P.)	Advantages of Using 16- Mm. Supersensitive Panchromatic Film in Making Medical Mo- tion Pictures	XVIII	5	May, 1932	609
	The New Ciné - Kodak Special in Medicine	XXI	1	July, 1933	3
TUTTLE, W. N.	A Method of Measuring Directly the Distortion in Audio - Frequency Amplifier Systems	XVIII	2	Feb., 1932	199
	Theater Noise Problems	XIX	6	Dec., 1932	499
TWEEDDALE, J. E. (and WOLF, S. K.)	Curved Gates in Optical Printers	XIV	6	June, 1930	663
VAUGHAN, W. S. (and TUTTLE, F.)	The Motion Picture In- dustry in the Soviet Union	XXIV	1	Jan., 1935	12
VERLINSKY, V. I.	The Animatophone—A New Type 16-Mm. Syn- chronous Disk Repro- ducer	XVIII	4	Apr., 1933	512
VICTOR, A. F.					

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
VILLIERS, W. A.	Continuous Optical Reduction Printing	XXIII	2	Aug., 1934	96
WADDELL, J. H. (and CRABTREE, J.)	Modern Practice in Incandescent Cinema Studio Lighting	XV	4	Oct., 1930	451
WALKER, V.	Directional Effects in Sound-Film Processing —II	XXI	5	Nov., 1933	351
WARMISHAM, A. (and MITCHELL, R. F.)	Special Process Technic	XVIII	5	May, 1932	662
WATKINS, S. S. A. (and FETTER, C. H.)	The Bell & Howell Cooke Varo Lens	XIX	4	Oct., 1932	329
WEBB, J. H. (and JONES, L. A.)	Some Aspects of a Western Electric Sound Recording System	XIV	5	May, 1930	520
WEIL, F.	Reciprocity Law Failure in Photographic Exposures	XXIII	3	Sept., 1934	142
WENTE, E. C.	The Optical-Photographic Principles of the Agfa-color Process	XX	4	Apr., 1933	301
WESTERBERG, F.	Modern Instruments for Acoustical Studies	XXV	5	Nov., 1935	389
WEYERTS, W. (and HICKMAN, K.)	Standardization of the Picture Aperture and the Camera Motor—A Needed Development	XVII	3	Sept., 1931	395
(and HICKMAN, K., and SANFORD, C.)	Size of Image as a Guide to Depth of Focus in Cinematography	XVIII	5	May, 1932	655
WHITE, D. R.	The Argentometer—An Apparatus for Testing for Silver in a Fixing Bath	XXV	4	Oct., 1935	335
WILCOX, H. N. (and CONROW, L. W.)	The Electrolytic Regeneration of Fixing Baths	XVII	4	Oct., 1931	568
	Characteristics of Dupont Panchromatic Negative Film	XVII	2	Aug., 1931	223
	Two Special Sensitometers	XVIII	3	Mar., 1932	279
	Gamma by Least Squares Drying Conditions and Photographic Density	XVIII	5	May, 1932	584
	Photographic Effects Obtained with Infra D Negative	XIX	4	Oct., 1932	340
	Some Technical Aspects of Theater Operation	XX	1	Jan., 1933	54
		XXIII	6	Dec., 1934	338

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
WILLIAMS, A. L.	Piezoelectric Microphones	XXIII	4	Oct., 1934	196
	Piezoelectric Loud Speakers	XXIV	2	Feb., 1935	121
WILLIFORD, E. A.	The Work of Drs. L. A. Jones and J. H. Webb (1934 Journal Award)	XXV	6	Dec., 1935	473
	The Ciné-Kodak Special	XXI	6	Dec., 1933	478
WITTEL, O. (and STOIBER, J., and TUTTLE, F. E.)	Recent Improvements in Equipment and Technic in the Production of Motion Pictures	XXIII	4	Oct., 1934	210
WOLCOTT, E. A.	Theater Acoustics for Sound Reproduction	XIV	2	Feb., 1930	151
WOLF, S. K. (and SETTE, W. J.)	The Acoustics of Large Auditoriums	XVIII	4	Apr., 1932	517
	Acoustical Requirements for Wide-Range Reproduction of Sound	XXII	4	Apr., 1934	242
	Factors Governing Power Capacity of Sound Reproducing Equipment in Theaters	XV	4	Oct., 1930	415
(and STANTON, G. T.)	Noise Measurement	XVII	6	Dec., 1931	966
(and TWEEDEALE, J. E.)	Theater Noise Problems	XIX	6	Dec., 1932	499
WOLFERZ, A. H.	Test Set for Servicing Sound Projection Equipment	XVI	3	Mar., 1931	349
Wood, H. I. (and ROPER, V. J.)	Trend of Lamp Development and Operation in Motion Picture Projectors Employing 16-Mm. Film	XV	6	Dec., 1930	824
Wood, R. V.	Shrinkage - Compensating Sound Printer	XVIII	6	June, 1932	788
Woods, F.	The Academy of Motion Picture Arts & Sciences and Its Service as a Forum for the Industry	XIV	4	Apr., 1930	436
WOODSIDE, C. S.	Certain Phases of Studio Lighting	XXIV	4	Apr., 1935	327
WRATTEN, I. D. (and CHAMBERS, G. A.)	The Eastman Type IIb Sensitometer as a Control Instrument in the Processing of Motion Picture Film	XXI	3	Sept., 1933	218

AUTHOR INDEX

<i>Author</i>	<i>Subject</i>	<i>Vol.</i>	<i>No.</i>	<i>Date</i>	<i>Page</i>
YOUNG, D. A. (and TUTTLE, C.)	Illumination in Projection Printing of Motion Pictures	XIX	1	July, 1932	842
ZIMMERMAN, A. G.	Film Recorders	XX	3	Mar., 1933	211

