

American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

JANUARY 1976 ONE DOLLAR



THE FILMING OF

"The Hindenburg"

Three came back



LEN HOLLANDER CAME BACK FROM CINEMOBILE.

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"For the twenty years I've been serving the professional film maker, I have found no easy way. I've got to supply equipment that works every time. I've got to be at your service 24 hours every day. I must have enough equipment to back up anything you're using, and my company has to be the best in the industry. F&B/CECO is the only company that fits that description. So I came back."

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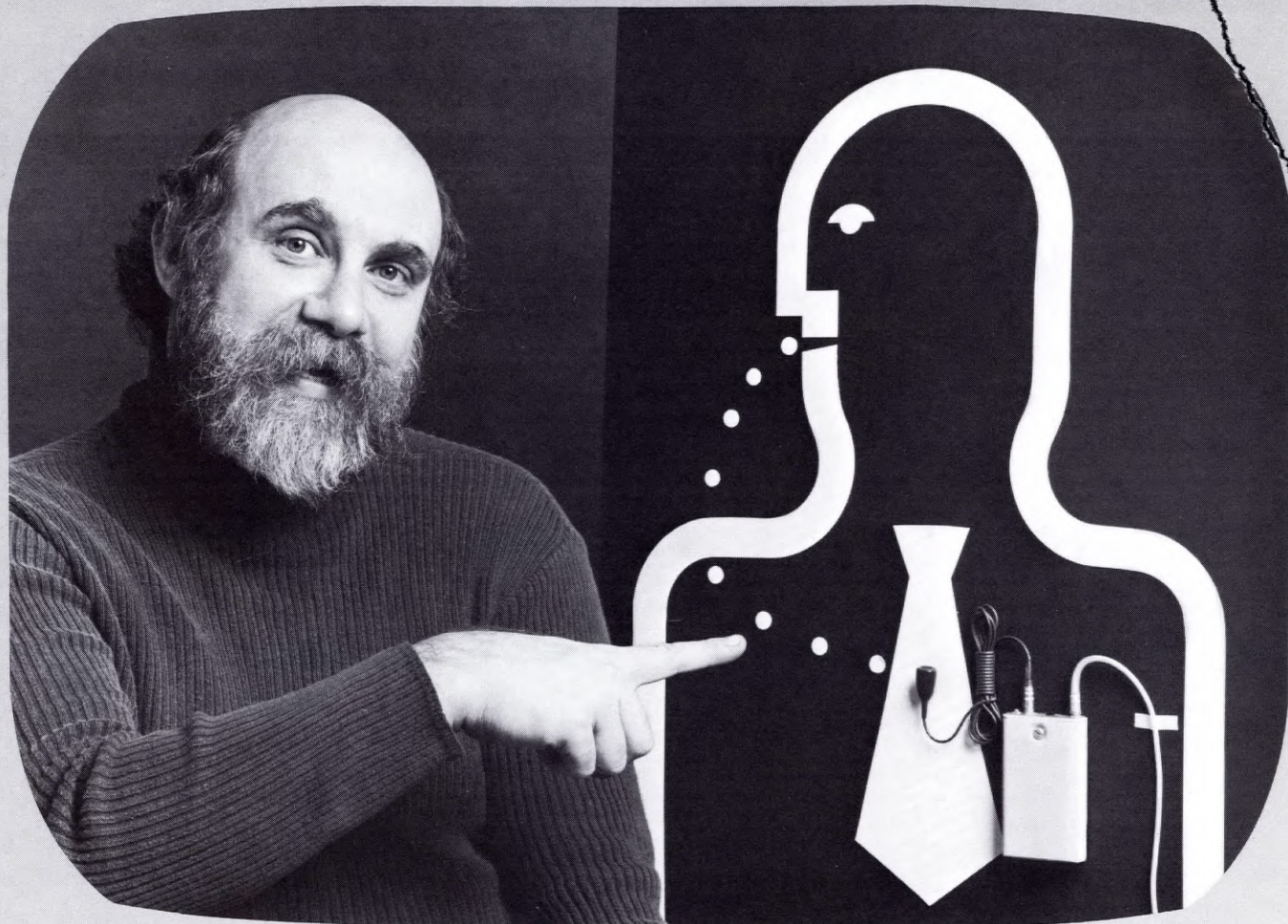
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American Cinematographer

International Journal of Motion Picture Photography and Production Techniques

The American Society of Cinematographers is not a labor union or a guild, but is an educational, cultural and professional organization. Membership is by invitation to those who are actively engaged as Directors of Photography and have demonstrated outstanding ability. Not all cinematographers can place the initials A.S.C. after their names. A.S.C. membership has become one of the highest honors that can be bestowed upon a professional cinematographer, a mark of prestige and distinction.

JANUARY, 1976

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ON THE COVER: Artist's rendition of that fateful moment in 1937 when the German dirigible, The Hindenburg, in attempting to land at Lakehurst, N.J., after a transatlantic crossing, burst into flames and crashed, killing or injuring 33 of the 100 people on board. It forms the climactic scene in the Universal production of "THE HINDENBURG", produced and directed by Robert Wise. In the film, the actual newsreel footage of the disaster depicts this scene.

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New lenses— not still-camera conversions. All genuine T1.4s.

Floating and aspheric elements, multiple coatings—these are the most *advanced* lenses you can buy.



Every photographic lens ever made was designed originally for one purpose, one lens-to-film distance, one film format. If you adapt it for a *different* use, it'll work—but not as well.

Adaptation compromises

Some high-speed lenses now available for motion picture use are adapted still-camera designs—but not ours. The others are good lenses—but, used in this different way, they're compromised.

Remounting problems

For example: The typical 35mm SLR still camera has a back focal distance about $\frac{3}{4}$

inch shorter than one major studio camera. So to adapt it, you have to put the SLR lens into a new mount, or even a completely new barrel. *Or even move the glass elements!*

Critical back focus

And back focus is critical, of course. With a 50mm lens at $f/2.8$, the depth of focus behind the lens is plus or minus two thousandths of an inch. With a 25mm lens at $f/1.4$, *it's a quarter of that.*

Wasted trade-offs

Moreover, the SLR lens was designed to cover the Leica frame. To get even coverage over the bigger format, *with high speed*, the designer had to make certain trade-offs. On the SLR, they may have been worth it. For the motion-picture frame, they're wasted.

Doing it the hard way

To design a high-speed lens exclusively for motion picture use takes more time and costs more money, naturally.

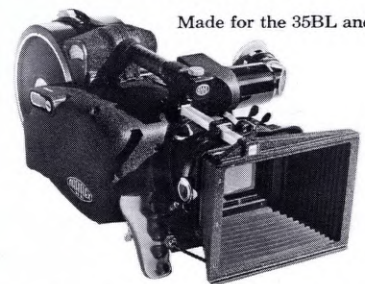
But, given a good designer, you get a better lens.

\$350,000 investment

So we invested just over \$350,000—and Zeiss designed a brand-new, no-compromise set of lenses. Specifically for Arriflex cameras.

New design parameter: "Make the best lenses."

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These lenses are made for the new style of shooting encouraged by the 35BL.

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We've seen night-for-night footage. Wide open, on New York City streets — car

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With good lighting, too: best lenses you can buy

Naturally, these lenses perform just as well in daylight and on the soundstage. They're

made by Zeiss, after all — using the latest design techniques, and sparing no expense. We hope you'll run some comparison tests. We're confident of the results.

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WHAT'S NEW

IN PRODUCTS, SERVICES AND LITERATURE

ASC HOSTS SECOND ANNUAL 'BEST PHOTOGRAPHED COLLEGE FILM' AWARDS

The American Society of Cinematographers will host the second annual ASC awards event for Best Photographed College Film of the Year in May, 1976, it has been announced by Stanley Cortez, event chairman.

Entries from major universities and colleges around the nation are invited. More than 150 schools are expected to participate.

An ASC committee will view prints of the entries, with March 31 set as the deadline for submission of 35mm or 16mm films. A series of screenings will be held by the ASC committee.

"We strongly urge interested schools to submit their best photographed film for 1975 as early as possible," stated Cortez.

Films must be student-photographed and should be submitted by the head of the film department of the college making the entry.

The national winner will be announced at an ASC awards dinner, to be held at the ASC headquarters in Hollywood, at 1782 N. Orange Drive.

17 TECHNICAL ACHIEVEMENTS CONSIDERED FOR ACADEMY AWARDS

Seventeen technical achievements of the past year have been selected for the 48th Annual Academy Awards consideration, it has been announced today by Wilton R. Holm, Chairman of the Academy's Scientific or Technical Awards Committee.

Meetings and demonstrations to evaluate the achievements are now in progress, with a final meeting scheduled for January to determine which of the achievements the committee will recommend to the Board of Governors for Awards recognition.

Under Academy policy, the following list of achievements is publicized to permit those with claims of prior invention or with devices similar to those under consideration to advise the Academy.

Those methods or devices being considered by the committee include:

Film Transport Systems, Lawrence W. Butler and Roger Banks; Silver

Recovery System, DeLuxe General and Akwaklame; Static D.C. Power Supply, Universal City Studios; Spectra Tricolor Meter, Photo Research; "Super Speed" Lenses, Arriflex Company of America; Canon Series of Aspheric Super-Speed Lenses, Cinema Products Corporation; Demand Drive Processing Machine, Filmline Corporation; Fluid Heads, O'Connor Engineering Laboratories; Rotomatic System, Kinotone Inc.; Computerized Tape Punching System, Carter Equipment/Ramtronics; Tape Preparation System, Hollywood Film Company; Tape Preparation System, Bell & Howell.

Also: Single Lens Concept Magnifier, Kollmorgen Corp. and Jos. Schneider Optical Co.; Compumix 11 Automated Console, Quad-Eight Electronics and Tran/Audio Inc.; 7-Input Production Mixing Panel, The Burbank Studios; Device to Obtain Shadows on Film Titles, Westheimer Company; and Quintaphonic Sound, Quinta Enterprises, Inc.

IFPA NEW YORK CHAPTER

The New York City chapter of the Information Film Producers of America, Inc. has been formed by a group of Metropolitan area IFPA members.

At a recent chapter organization meeting, Chairman Jules Leni said, "A successful and effective chapter is going to be more than mechanics, especially in New York City where professional communicators tend to be sophisticated and very busy. It is very clear to us that what will make the New York Chapter a success will be the consistent quality of the programming which we offer to engage and retain the interest and support of industrial and independent information communicators in the area."

Monthly programs will be held every third Thursday (except December 11). It is not necessary to be a member of IFPA in order to attend. Topics scheduled for the 1975-76 meetings are: Improving Communications Between Producer and Buyer, Multimedia, What Every Producer Should Know About Distribution, Animation, How To Give the Client the Most for His Money, Interface Between Film and

Videotape, and New Product Review.

The New York Chapter of IFPA consists of metropolitan New York IFPA members. Current officers are: Chairman — Jules Leni, Comprehensive Service; Secretary/Treasurer — John Griller, Visual House; Membership — Vincent Tilotta, LAVA Productions; Program — Ernest Lutz, Association Sterling Films; Publicity — Fred Schmidt, Photomethods magazine.

Information Film Producers of America is a national society founded in 1957. Members, in-plant and independent, are producers, writers, directors, cameramen, editors, sound specialists, designers, animators, managers, and related professionals who produce AV media which primarily communicate as compared to those which merely entertain.

IFPA recognizes and honors outstanding creative efforts through the annual Cindy film and videotape awards competition, and it sponsors an annual national conference. The non-profit organization is open to everyone actively engaged or interested in the expanding field of audiovisual — film, television and related media. IFPA has chapters in major metropolitan areas of the U.S.

Information on New York chapter programs and membership is available by writing to IFPA, PO Box 741, Madison Square Station, New York, NY 10010, or calling (212) 586-6150. The national headquarters office is located at 7080 Hollywood Boulevard, Suite 114, Hollywood, CA 90028.

WET-GATE OPTICAL PRINTER PERMITS EASY REVISION OF EXISTING FILMSTRIPS

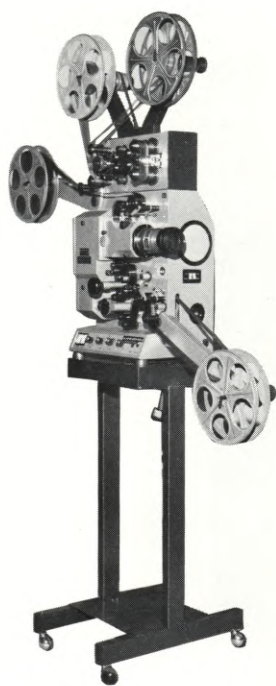
Berkey Manhattan Filmstrip and Slide Laboratories has announced that by utilization of the wet-gate optical printer, updating or revision of existing filmstrips by deleting, adding or substituting frames now is viable. Since it is now unnecessary to reshoot the entire show, this service is available at an extremely nominal cost.

Stated George Paterakis, Berkey Manhattan's Vice President, "Of the many technological breakthroughs in our industry, the advent of the optical wet-gate printer has the greatest significance to the producer because it allows him a far greater flexibility. In addition to current revisions, the optical wet-gate printer is the most practical medium for a one-to-one transferral; i.e., 35mm-to-35mm or 35mm-to-Super-8mm." ■

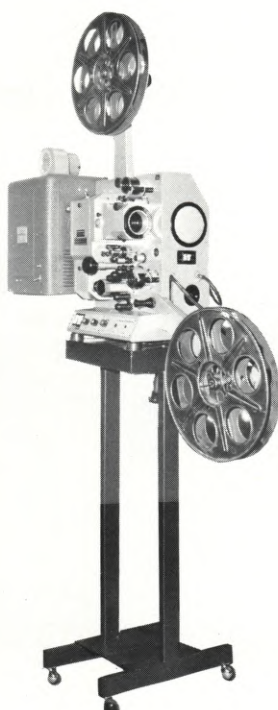
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MP-30M . \$3995.00
(Includes all standard features plus Magnetic Interlock (track and picture), projection stand and 12" external speaker)



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(Includes standard features plus 500W Xenon lamphouse (in place of quartz halogen lamp), projection stand and 12" external speaker)



Standard Features for the MP-30S:

- Heavy-duty Geneva star and cam intermittent.
- Interchangeable apertures.
- Constant speed ¼ HP motor, 125V AC, 60 Hz.
- 1000 watt quartz halogen lamp. 3200°K high light transmission efficiency.
- Pre-focus exciter lamp, 6V, 5A.
- Solid state built-in amplifier, 30 watts, with tone controls.
- 8 ohm output.
- Standard 3½" to 5" lens.
- Solar cell.
- Built-in speaker.
- 4000' reel capacity.
- Microphone input.

◀ **MP-30S . \$2295.00**
(Includes all standard features)

Optional Accessories:

- Xenon lamphouse and power supply.
- Magnetic interlock (track and picture).
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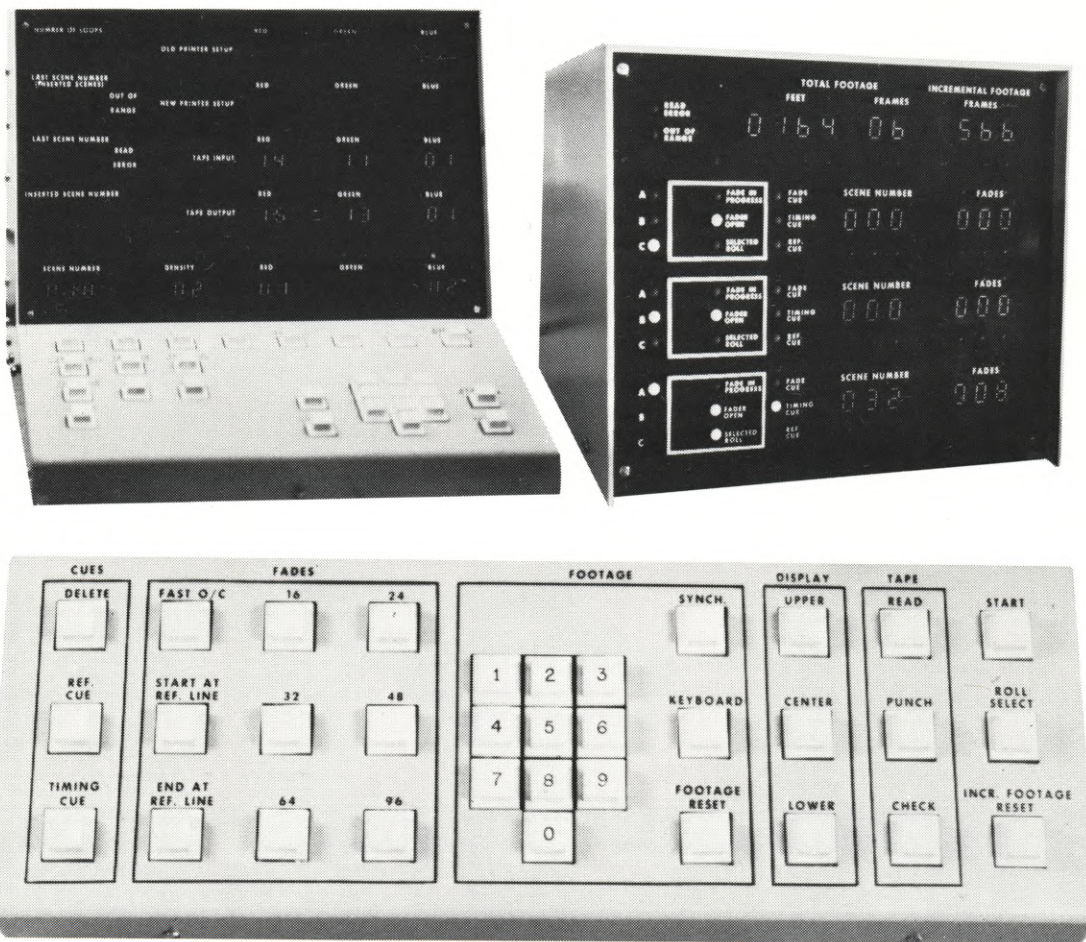
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Your camera, of whatever make, is no stronger than its weakest link. In battery operated cameras using D.C. motors, the electrical brushes or rotating electrical contacts are usually this "weakest link," consuming up to 40% of the power, by friction, and sooner or later wearing out (or burning out!) and calling for service or rebuilding of the motor. With D.C. motor brushes, this sometimes happens "far from home" or at a most inconvenient time, in the middle of an important "take"! Why take this chance? Now you can have the dependability of the Auricon-Pro 400, with the new Soundrive-XTL D.C. motor!

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- Cine Voice 400 Camera Head weighs less than 7 pounds, built of Alumisteel™... will not crack if given hard use that would split Magnesium!
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- Available for Auricon or Mitchell™ 400 ft. Magazines.
- 60 cycle 117 volt sync. for 24 or 25 F.P.S. available.
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- For "Cordless," see Auricon-Pro 400 shown at left. Runs ten 400 ft. film magazines on one "Cine-Pak" Battery. Soundrive-XTL Motor, Quartz Crystal Speed Control, all Gear Drive, Datasync-Pulse for "Double-System" Sound, etc.
- Cameraman can see over top of Camera while operating.
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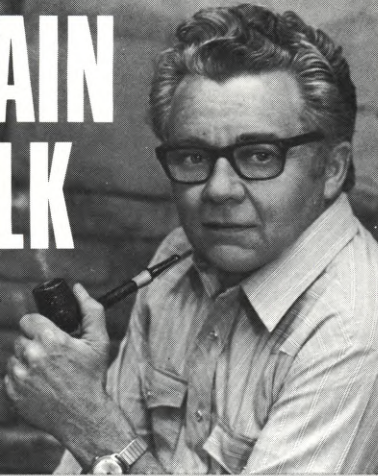
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PLAIN TALK



by *J. Carl Treise*

Honestly, do you believe that everyone is the greatest?

If you accept what you read in most film processor ads, it seems that every manufacturer is the greatest. Honestly, do you believe that stuff?

Many manufacturers brag about their units being made of "stainless steel", as if it were a miracle metal. Frankly, that makes me laugh. They don't tell you that some of the metal they use is so thin any sharp object can penetrate it.

And you can go right down the line . . .

For example, do you know that some firms have to modify their processors beyond Kodak specifications, in order to reach the film speed they advertise? (Which means Kodak can't help you when you get into trouble!)

We get tired of false promises and misleading statements. Instead of boasting, a manufacturer should simply describe his unit and let you come to your own conclusion.

The best compliment we ever received was from a customer who thanked us for telling it "as it is".

Do yourself a favor. Don't believe everything you read or hear (— including what you find in this column). Check out every processor you're interested in. Talk to the customer who's actually using it. Find out what he thinks of it.

That's how you can decide what's best for you.

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QUESTIONS & ANSWERS

Conducted by CHARLES G. CLARKE, ASC.
and WINTON HOCH, ASC.

(Inquiries are invited relating to cinematographic problems. Address: Q. & A., AMERICAN CINEMATOGRAPHER, P.O. Box 2230, Hollywood, Calif. 90028.)



Q I hear that most professionals use incident light meter readings over reflective readings. Yet, using an 18% gray reflectancy card I seem to get more accurate results with reflective readings. Is incident the preferred method for the pros? If so, why?

A Professionals use the incident meter to read the principal light source (the "key light") to determine the proper amount of light required for exposure at a given f stop. Reflective meter readings are usually taken on exterior scenes.

Q I am planning to produce a program to be put onto videodisc. Two sets of facilities are available to me. I can use my 16mm and tape recorder to make the original footage, but I also have access to professional quality TV cameras and one-half inch EIAJ color video tape equipment. Which of these systems would provide the best quality masters for transfer to videodisc?

A Of your two alternatives only your 16mm camera can produce original quality acceptable for videodisc. You can use ECO film, Hi-speed Ektachrome, Fujichrome, Agfachrome or Eastman Negative film, Type 7247, as camera films. Videotape in the one-half inch EIAJ format is a useful tool for industrial or educational purposes but is not capable of yielding prime quality source material. —*Sid Solow.*

Q I have been experiencing difficulty synchronizing my tape recorder with a 16mm projector while adding magnetic sound to the striped film.

Background music is placed on one tape channel and commentary on the other channel. The synchronizers that I have found require modification of both the tape recorder and projector and more importantly require the use of one tape channel for the synchronizing signal.

Is there anything simpler available?

A This subject is covered in the December 1974 and the September, 1975 issues of *American Cinematographer*, pages 1452 and

1044 respectively. After reading these articles you could contact the firms manufacturing the products and get prices and more information.

Q In a recent article on rear projection in your magazine you mention a translucent screen. What is the brand name, what is it made of and where can I write for further information?

A A rear projection or translucent screen is a plastic crystalline substance and preferably a seamless sheet or screen. There are various manufacturers of this product but the one most used by Hollywood film makers is Stewart Film Screen Corporation of Torrance, California.

Q I have read that a beaded screen material from 3M is used in Front Projection. What is the product name and where can I write for further details?

A A Front Projection screen material is manufactured by 3M Special Products Division of St. Paul, Minnesota. You may purchase as many rolls as you need, which are two feet wide by one hundred and fifty feet long with a paper backing. This backing is removed and the reflective material is applied to any desired backing or screen base. The material is known as Retro/Reflective number 7610.

Q In both rear and front projection rephotography where synchronization of camera and projector shutters isn't possible, how can flicker be reduced? Would use of a variable shutter and decreasing of the exposure per frame to 1/104 or 1/208 on the camera help reduce flicker?

A In rear projection or front projection where it is impossible to mechanically or electrically sync camera and projector shutter, the so-called flicker can be totally eliminated by using a two-wing shutter on the projector. The camera and projector must turn the same number of frames per second. When balancing the foreground to the background with this method, the projected image must win out by one stop.

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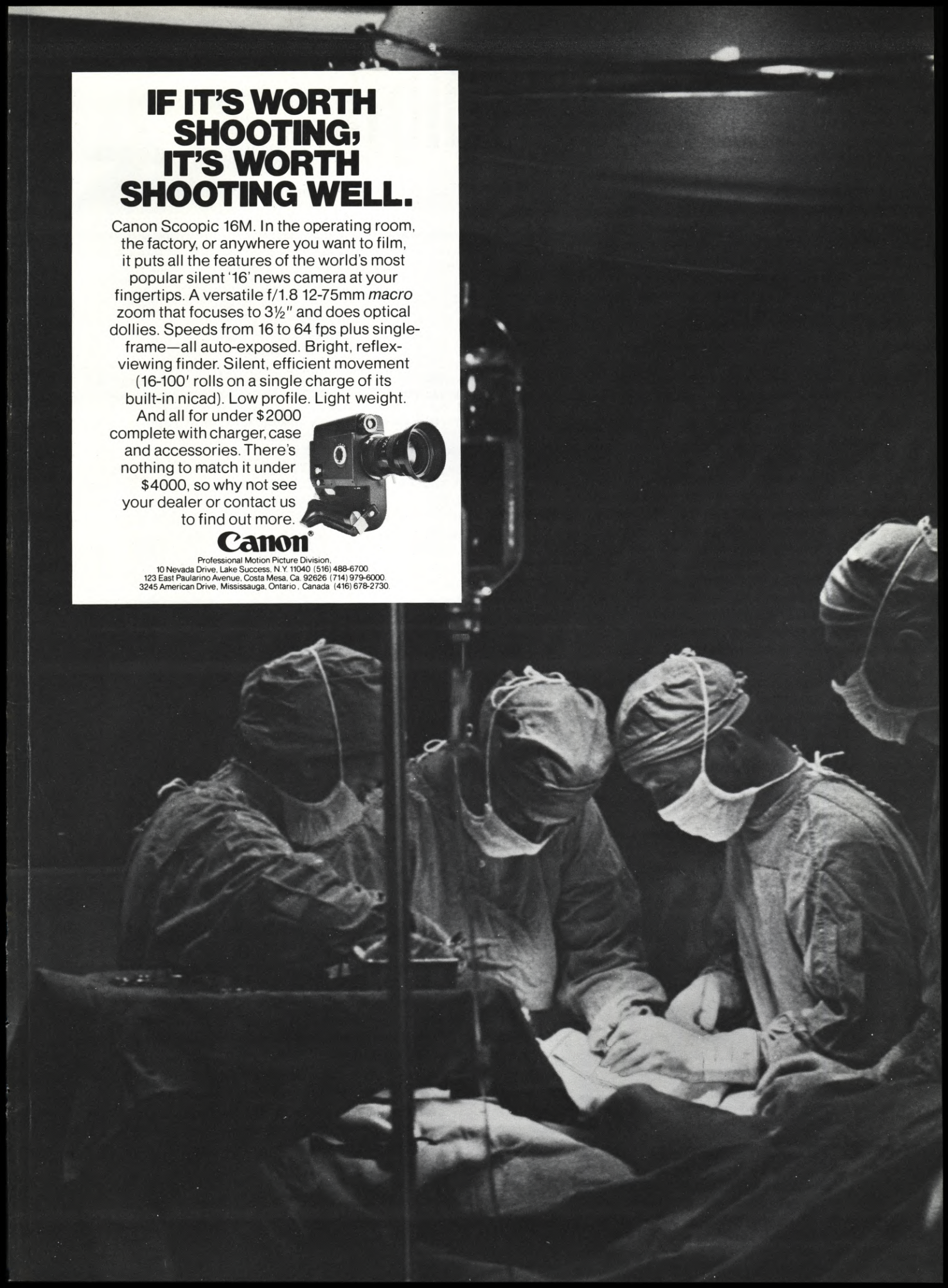
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CINEMA WORKSHOP



By ANTON WILSON

ANAMORPHIC WIDE-SCREEN

Flat wide-screen systems are simple, but very wasteful, and result in less than optimum image quality. The anamorphic process is a viable alternative. It not only eliminates the waste associated with the flat wide-screen systems, but actually reclaims the wasted negative area lost by the addition of the soundtrack back in 1932.

The basic idea for the anamorphic system can be traced back to the 1820's when Fresnel began experimenting with cylindrical lenses. In 1930 Professor Henri Chrétien developed his "Hypergonar" anamorphic lens system, which is the basis of all modern anamorphic systems. In 1952 Twentieth Century-Fox acquired the rights to the Chrétien process and contracted Bausch & Lomb to manufacture the optics in the U.S.A. The process was dubbed "CinemaScope", and the rest is history.

Diagram showing relative waste of the 35mm frame by various formats indicates that the CinemaScope (anamorphic) format is least wasteful.

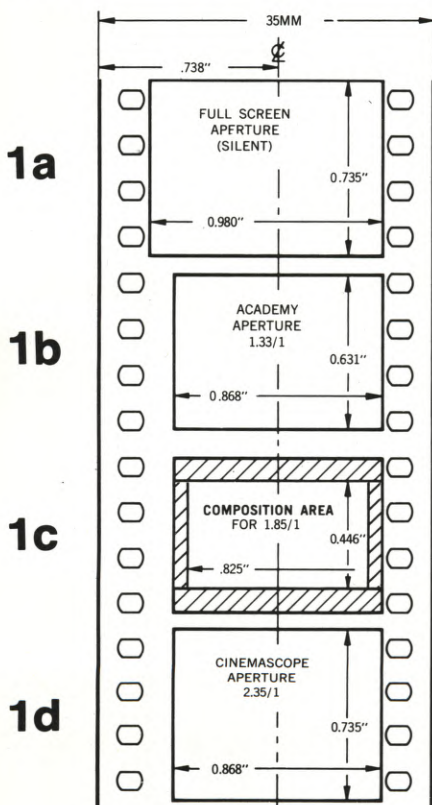


	IMAGE AREA	WASTED AREA	% AREA RELATIVE TO CINEMASCOPE	% of TOTAL AREA WASTED
CINEMASCOPE 2.35:1	.638	0	100%	0
ACADEMY 1.33:1	.548	.090	86%	14%
Wide Screen 1.66:1	.454	.184	71%	29%
Wide Screen 1.75:1	.430	.207	67%	33%
Wide Screen 1.85:1	.407	.231	64%	36%

Numerical comparisons not only reveal in startlingly concrete terms the "efficiency" of the anamorphic frame (as represented by CinemaScope and Panavision), but the appalling amount of waste inherent in the 1.85:1 pseudo-wide-screen format which is standard in America and which manages to not show 36% of the potentially available image information area of the 35mm frame.

The anamorphic process is quite simple in concept. The lens on the camera compresses or squeezes the image in the horizontal direction by a factor of two-to-one. Vertical dimensions remain normal. The filmed image thus contains twice the normal amount of horizontal information. Compared to a regular "spherical" lens, the anamorphic lens "sees" twice as much horizontally, but *squeezes* it to fit the standard 35mm film width. The projection anamorphic lens performs the inverse function and *unsqueezes*, or spreads the image out to fill a screen twice the normal width.

While the system is simple in concept, the practical aspects are somewhat complex. Anamorphic lenses are far more sophisticated than spherical types and require great care in design and manufacture to maintain high optical quality and reduce distortions to a minimum. It is no secret that the early anamorphic systems had their problems. Closeups were difficult, due to distortions caused by shifts in compression coefficients. Lenses were available in limited focal lengths ("THE ROBE" was shot almost entirely with one lens), and zooms did not exist for several years.

The picture has changed drastically over the last twenty years. The anamorphic system has been perfected and the cinematographer now has a complete selection of optically superb lenses. Panavision currently offers more than twenty anamorphic lenses in their catalogue, including several zoom lenses with ranges up to 10:1. These optics have gained an international reputation for quality and superb image definition. The hardware is obviously there, but what does the anamorphic system really buy you? PLENTY!

Would you believe 60% more image area than the 1.85:1 flat system? FIGURES 1 and 2 tell the complete story. Note that the anamorphic aperture has *no* waste at all. It actually regains the image area lost since 1932 when the Academy Aperture was established. In FIGURE 1a the Full (Silent) aperture height is 0.735. This was reduced to 0.631 in FIGURE 1b to maintain the 1.33:1 aspect ratio with the Academy Aperture. Note in FIGURE 1d that the image height of the CinemaScope format is once again 0.735, thus utilizing the total available negative area. The original CinemaScope format employed a four track magnetic sound system with an aspect ratio of 2.55:1. The specifications were later modified to include an optical soundtrack and a resulting ratio of 2.35:1.

The anamorphic system with its 100% utilization of negative area should be quite popular in these waste-conscious times, not to mention the fact that the anamorphic process undoubtedly produces the finest quality image of any 35mm wide-screen format. There are many other advantages of the anamorphic system which we will discuss next month. ■

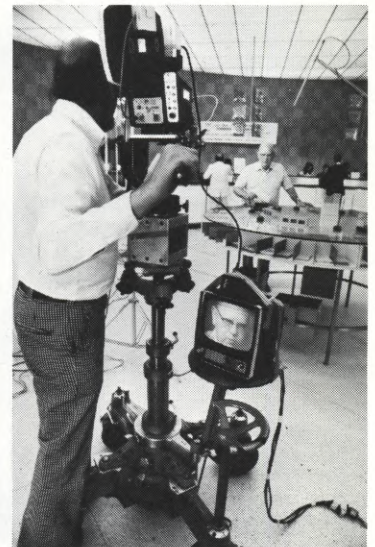
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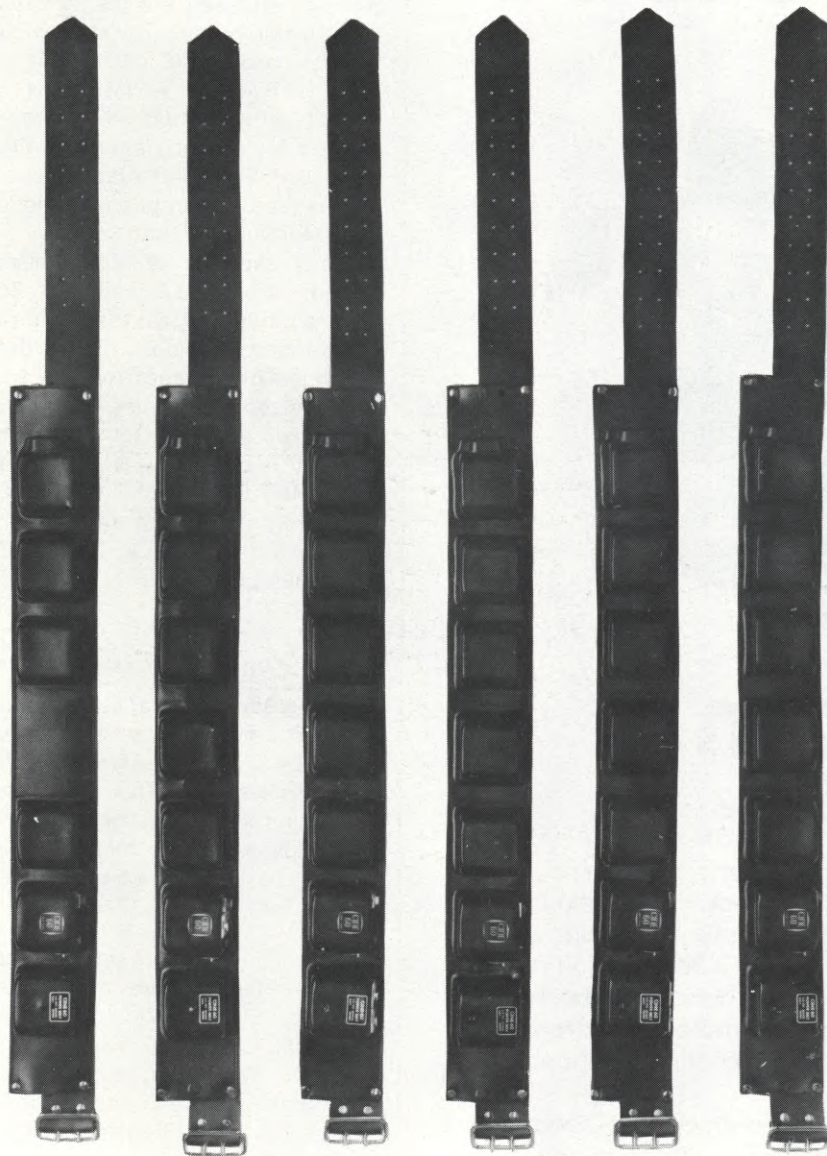
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THE BOOKSHELF

By GEORGE L. GEORGE

THE TECHNICAL APPROACH

Properly billed as "the man who created cartoon mayhem in Hollywood," the originator of such characters as Bugs Bunny, Porky Pig, and of Looney Tunes is paid tribute in Joe Adamson's lively biography **TEX AVERY: KING OF CARTOONS**. Strongly stressed are his pictorial talent's black humor, comedic violence and sex parodies. (Crown \$3.95)

In **CARTOON ANIMATION FOR EVERYONE**, a simplified yet workable method for creating animated films is discussed by expert Alan Cleave in a step-by-step description of the process. (Morgan & Morgan \$6.95)

Many samples of Max Fleischer's famous strip of the 20's, **BETTY BOOP**, are reprinted in all their wide-eyed candor and sauciness in this delightfully nostalgic volume. (Avon \$2.95)

Advanced techniques of film/video-tape news coverage for television are expertly explored by Stanley Field in **THE MINI-DOCUMENTARY: SERIALIZING TV NEWS**, a reportage procedure widely used in local stations. (TABooks \$12.95)

* * *

FILM GENRES AND TRENDS

The great comedians who practiced their art before the talkies are lovingly surveyed in **THE SILENT CLOWNS** by critic Walter Kerr. This attractive and entertaining volume, beautifully illustrated, is a perfect blend of urbane erudition and ever-youthful enthusiasm. (Knopf \$17.95)

How "modern" art and particularly cubism influenced the movies is analyzed by Standish D. Lowder in **THE CUBIST CINEMA**, a detailed and sensitive study that covers Picasso, Kandinsky, Léger, and such filmmakers as Hans Richter, Walter Ruttmann and Man Ray. (NYU Press \$18.50/11.75)

Erwin Leiser, in **NAZI CINEMA**, offers a well-rounded and concise survey of the fate that befell German film art and industry under Hitler and Goebbels, pinpointing the pro-Nazi and pro-war film propaganda of the notorious Leni Riefenstahl among others. (Macmillan \$7.95/4.95)

Bounty Books, an appealing series from Crown Publishers, offers 3 new titles effectively sizing up the more sen-

sational aspects of contemporary cinema. *CATASTROPHE* by David Annan considers the current audience appetite for disaster movies, whether they deal in prehistoric monsters, natural or man-made calamities. *SAVAGE CINEMA* by Rick Trader Witcombe dynamically examines violence in gangster, horror, and western films. In *CUT: THE UNSEEN CINEMA*, Baxter Phillips restores to films what censors eliminated because of sex or brutality, or a combination of both. (\$2.95 ea.)

The building of the transcontinental railroad was an epic undertaking, whose spectacular dimensions are superbly caught in *MAKIN' TRACKS* by Lynne Rhodes Mayer and Kenneth E. Vose. It's a definitive book which provides, both in pictures and words, an invaluable source of data on early railroading evolving, as it does, from Harold Mayer's prize-winning documentary. *Movin' On*. (Praeger \$25.)

* * *

FOR THE REFERENCE SHELF

Issued by the Association of Motion Picture and Television Producers, *GUIDE TO LOCATION INFORMATION* is a highly useful compilation by Dale Coons of contacts, forms, rules and permits for shooting in 18 states and 13 cities, plus full data on Los Angeles City and County regulations (AMPTP, 8480 Beverly Blvd., Los Angeles, CA 90046, \$10.)

The Southwest's extensive film-making facilities are itemized in the 1975-76 edition of the *WHITMARK TALENT DIRECTORY*, edited by Margaret F. Murrell. It lists, in a 7 state area, resources in performers, agents, production firms and personnel, labs and other movie making prerequisites. (Whitmark, 4120 Main St., Dallas, TX 75226; \$15.)

A comprehensive annual edited by David Goldfield and Piers Handling, *FILM CANADIANA 1974-75* offers an expert gauge of the state of the country's film industry, listing and analyzing its production record, its publications dealing with cinema, its industry's organizational structure and statistical tables, its festivals and awards. (Canadian Film Institute, 1762 Carling, Ottawa, Ont. K2A 2H7)

An authoritative annual survey by B. V. Dharap, *INDIAN FILM 1974* offers statistics, references and data on all aspects of the subcontinent's movie industry, presenting a detailed picture

of its progress and expansion. (Motion Picture Enterprises, Tilak Rd., Poona 411 030, £2½)

* * *

PERSONALITIES PLUS

Hollywood's beautiful people are forever the subject of books eagerly awaited by legions of panting movie buffs. Among these works, a few may be noted for such qualities as insight, frankness, information, novelty or literary style — much as in a camera-man's probing close-up.

Lilli Palmer's autobiography *CHANGE LOBSTERS — AND DANCE* (with a bow to Alice in Wonderland) is revealing of her positive personality, with enough inside details of her private life and career to pique the reader's interest. (Macmillan \$8.95)

Charles Hamblett's *PAUL NEWMAN* gets most of its facts straight, but becomes overly maudlin when dealing with the Newman-Woodward romance. (Regnery \$8.95)

René Jordan calls his Barbra Streisand biography *THE GREATEST STAR*, a pretentious title that cheapens an otherwise well-researched book about a spectacular career. (Putnam \$7.95) Jonathan Black's *STREISAND* tells a lively tale, but is made hard to read by ads inserted in the text. (Leisure Books \$1.50)

Don Widener's *LEMMON* is an eminently appealing biography: it is factual yet tactful, discreet yet revealing, complimentary yet measured. (Macmillan \$9.95)

Cynthia Lindsey, a lifelong friend of Boris Karloff, presents in *DEAR BORIS* a warm and documented biography of an actor who placed privacy above everything else and was utterly unlike the horror roles he generally played. (Knopf \$12.50)

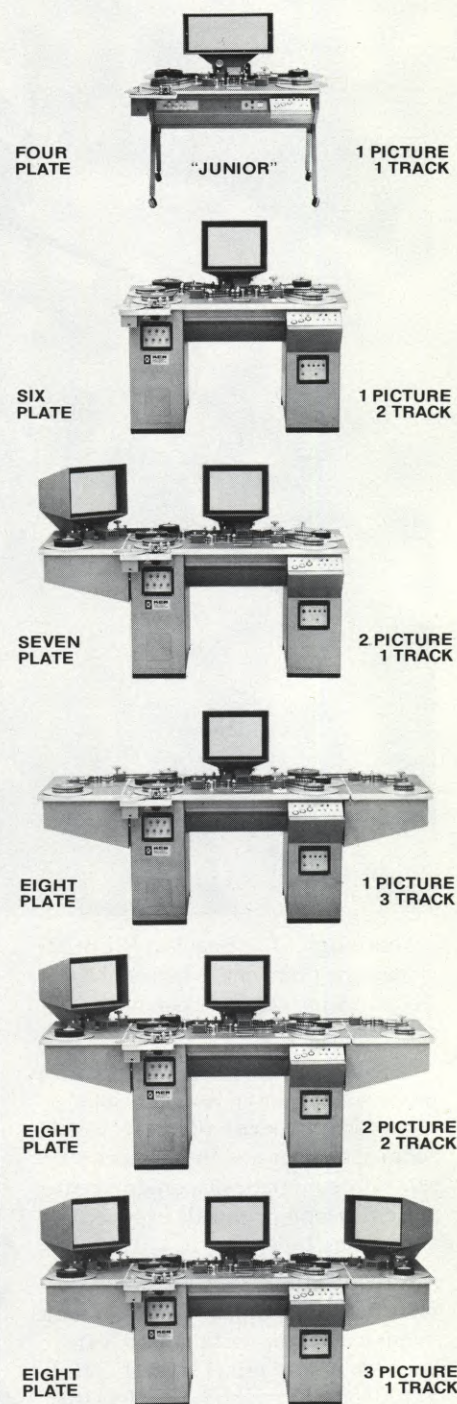
Larry Swindell's entertaining biography of Carole Lombard, *SCREWBALL*, conveys accurately the personality of the comedienne, a lively, generous and happy woman who believed in living her own life. (Morrow \$8.95)

Strictly surface gloss with a mixture of arrogance and candor ("I'm nobody"), *THE PHILOSOPHY OF ANDY WARHOL* is a mish-mash of random observations on art, sex, money, death, life and such, all with an autobiographical slant. If it weren't for Warhol's notoriety as a filmmaker, this book would add little to our perception of the futility of our times. (Harcourt Brace Jovanovich \$7.95) ■

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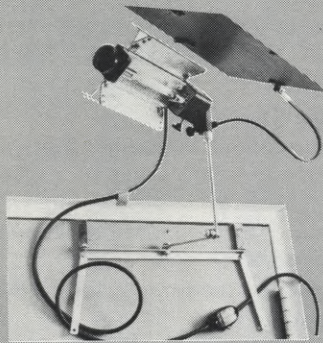


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Location lighting's not what it used to be.



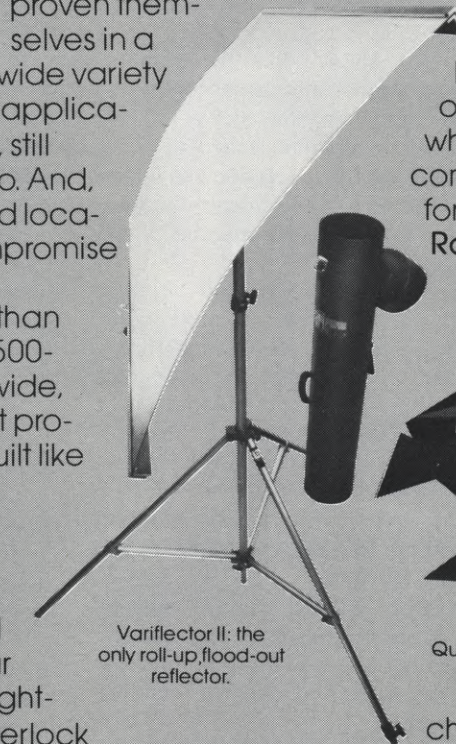
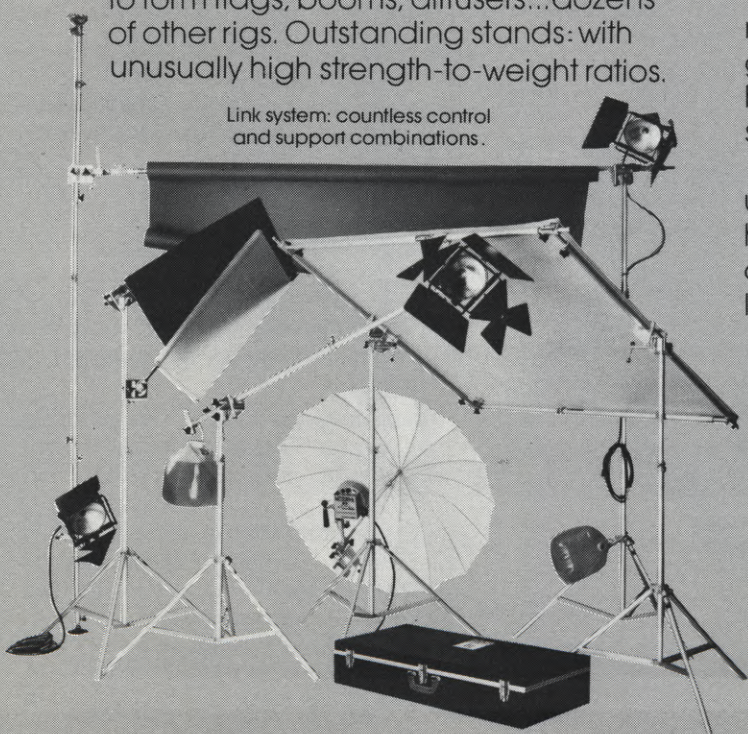
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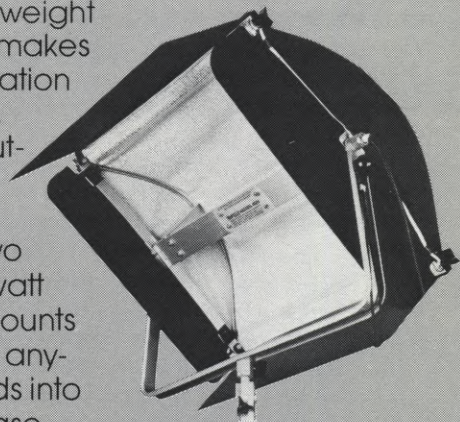
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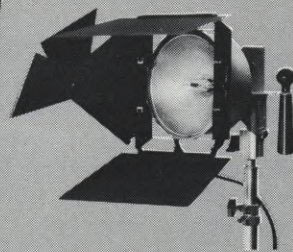
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PROFILE: A.S.C.

By JOHN ORMOND

ROBERT MORENO, A.S.C.

From travelogs to newsreels to motion pictures to television.

That's the career, in capsule, of Robert "Bob" Moreno, the energetic, articulate cinematographer who currently directs the camera crew of the highly-successful TV series, "Police Woman", starring Angie Dickinson.

Way back when (he was 19 at the time), Moreno had just graduated from the University of Southern California when he was invited by Martin and Osa Johnson to join them on a film-making venture to Africa, to "shoot travelogs."

During a two-year stint ranging from Nairobi to Cape Town, the young Moreno learned much about movie-making. He also met a Hollywood movie mogul on safari. His name was Darryl Zanuck.

In 1932, Bob Moreno signed on with Fox Movietone News as a newsreel cameraman. His first job: film the 1932 Olympics at the Los Angeles Coliseum.

Two years and miles of newsreel footage later, Moreno got another invitation, this time from Zanuck. Would he like to be an assistant cameraman at 20th Century Studios? Would he!

"When 20th merged with Fox, though, I got squeezed out," Moreno reminisced the other day at The Burbank Studios. "But it was a blessing in disguise. I wound up at MGM — and I stayed there until 1942."

That was the year Bob signed up with Uncle Sam — and John Ford, in par-

ticular. He journeyed far and wide with Ford's film unit, which was an offshoot of the famed OSS.

After World War Two ended, Moreno returned to Hollywood and MGM. Even though he'd had his own camera crew with Ford, he was still an assistant cameraman.

In 1951, he won a job as first assistant on the long-running "Ozzie and Harriet" TV show. This assignment developed almost into a career by itself. He was with the show for 14 seasons — some kind of a record!

Bob Moreno finally landed his initial job as director of photography on that same series, in 1961. He was the "first" for five years.

During the mid-1960s, Bob Moreno directed the cameras on such high-rated TV series as "12 O'Clock High" and "F.B.I." Those were for producer Quinn Martin — a longtime friend.

Between TV series, though, Moreno photographed several feature films. He worked at Disney (with Glenn Ford in "Smith") and also was director of photography for several Metromedia 90-minute TV films.

Thus, Bob Moreno rightly believes he is well-informed as to the respective merits of the motion picture cinematographer and the TV director of photography.

"There's much less difference now than there used to be," he told me. "Nowadays, many features are geared like television series, anyway. But I have to point out that, usually, you have

more time to do better work in a motion picture."

He doesn't agree that the average European cinematographer performs quite as well as his Hollywood counterpart, although he exempts his British colleagues.

"Some of the greatest cameramen in the world are in England," he enthused. He cited Freddie Young as "an outstanding example."

Moreno admits, though, that television has been the salvation of many working directors of photography. "Television has an enormous appetite, and I couldn't be happier about it. TV has provided steady work for an awful lot of people."

In his spare time (when he has any), Moreno is a traveler and a sailor. He and his wife, Alice ("would you believe, we've been married 38 years!") are planning to go to all the places he saw, but she didn't.

"I was in the Navy during World War Two a total of three years, five months and eight days," Moreno recalled with some relish, "and I'm going to eventually take Alice to just about every place I visited."

That primarily includes the United Kingdom, Italy, parts of Africa, and a lot of the eastern United States.

The Morenos live in an English-style part-stone house in the Los Angeles suburb of Brentwood. Their canyon home is adjacent to the house they formerly lived in, after World War Two.

Bob and Alice have two sons, Anthony and Michael. Anthony is like father, like son: he's an assistant cameraman.

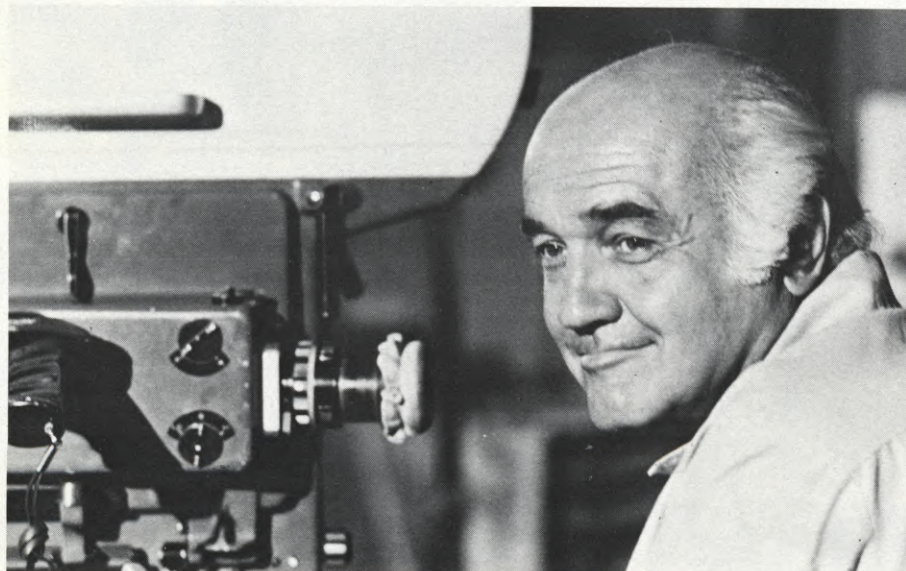
His hobby? Perhaps surprisingly, it's photography. Bob has his own still camera, and an expensive set of lenses. His favorite photographic subjects are California sunsets. But he's also shot some spectacular sunsets in Mexico and Hawaii.

Lately, of course, Moreno hasn't been photographing too many sunsets. When he gets through each day after filming on "Police Woman", it's usually well past sunset. Interiors of the series are mostly shot on Stage 8 at The Burbank Studios. That's the "squad room" set.

Moreno praised both producer Doug Benton and actress Angie Dickinson. "He brought me into this series, and she has kept me here!" he grinned.

In its second season, and a winner in the Nielsen ratings, "Police Woman" appears to be a "regular" in the Top Twenty rated shows.

As for Bob Moreno, it also seems most probable he has a job there as long as he wants it. ■





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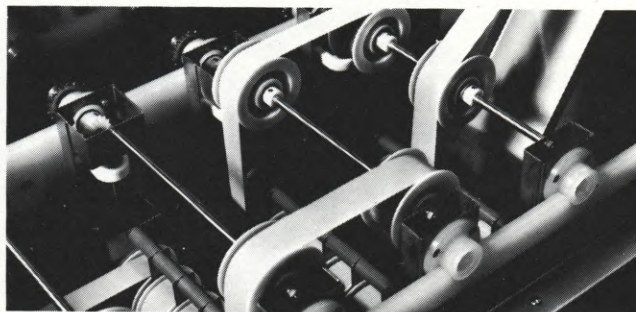


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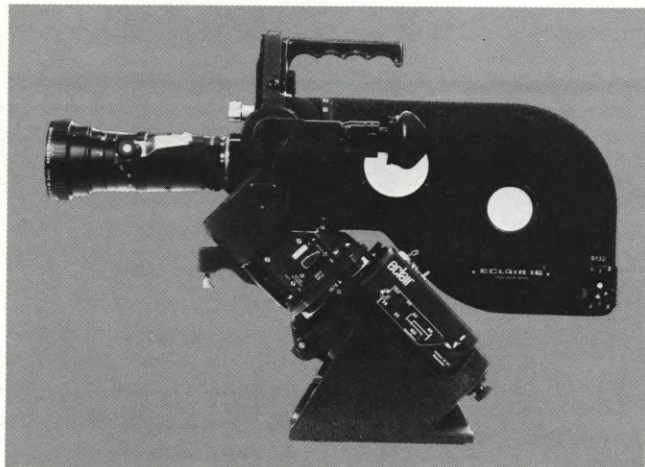


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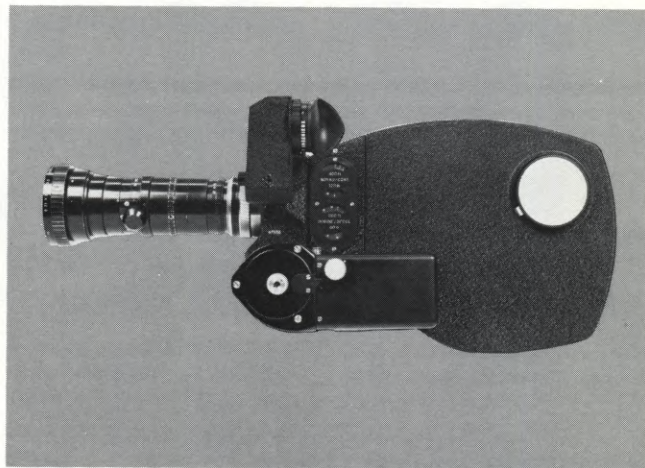


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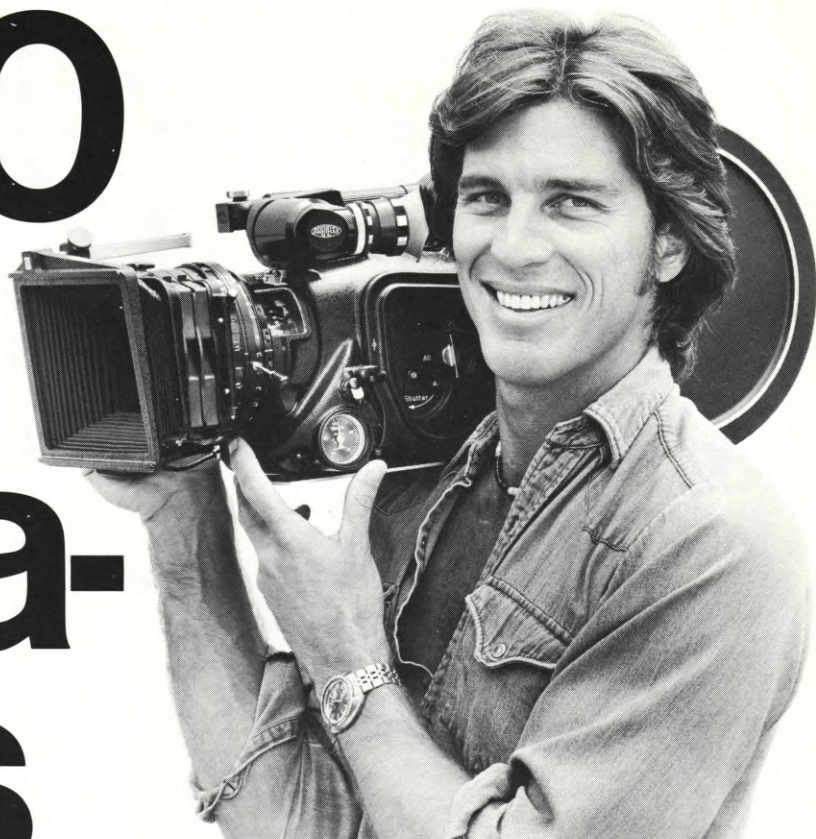
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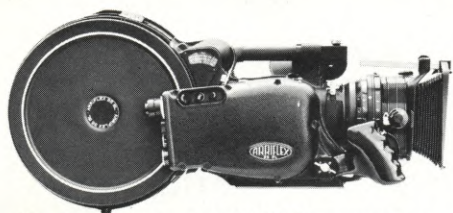
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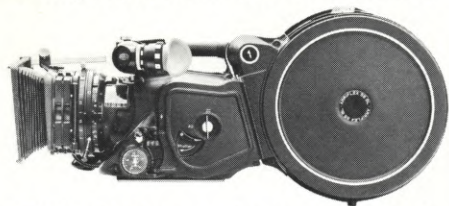
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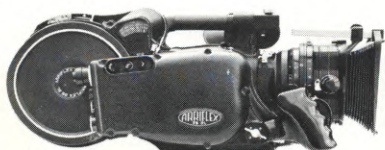
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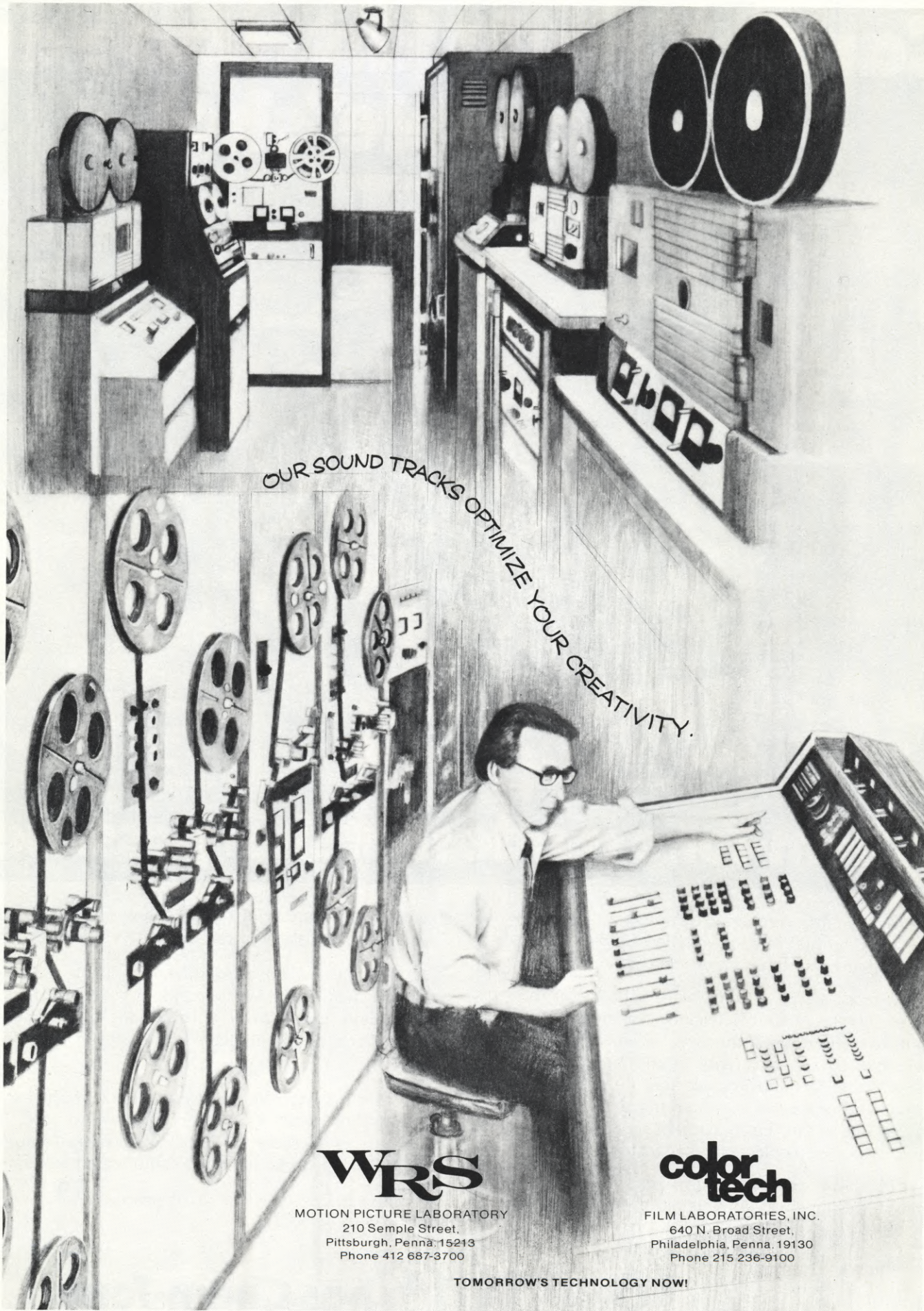
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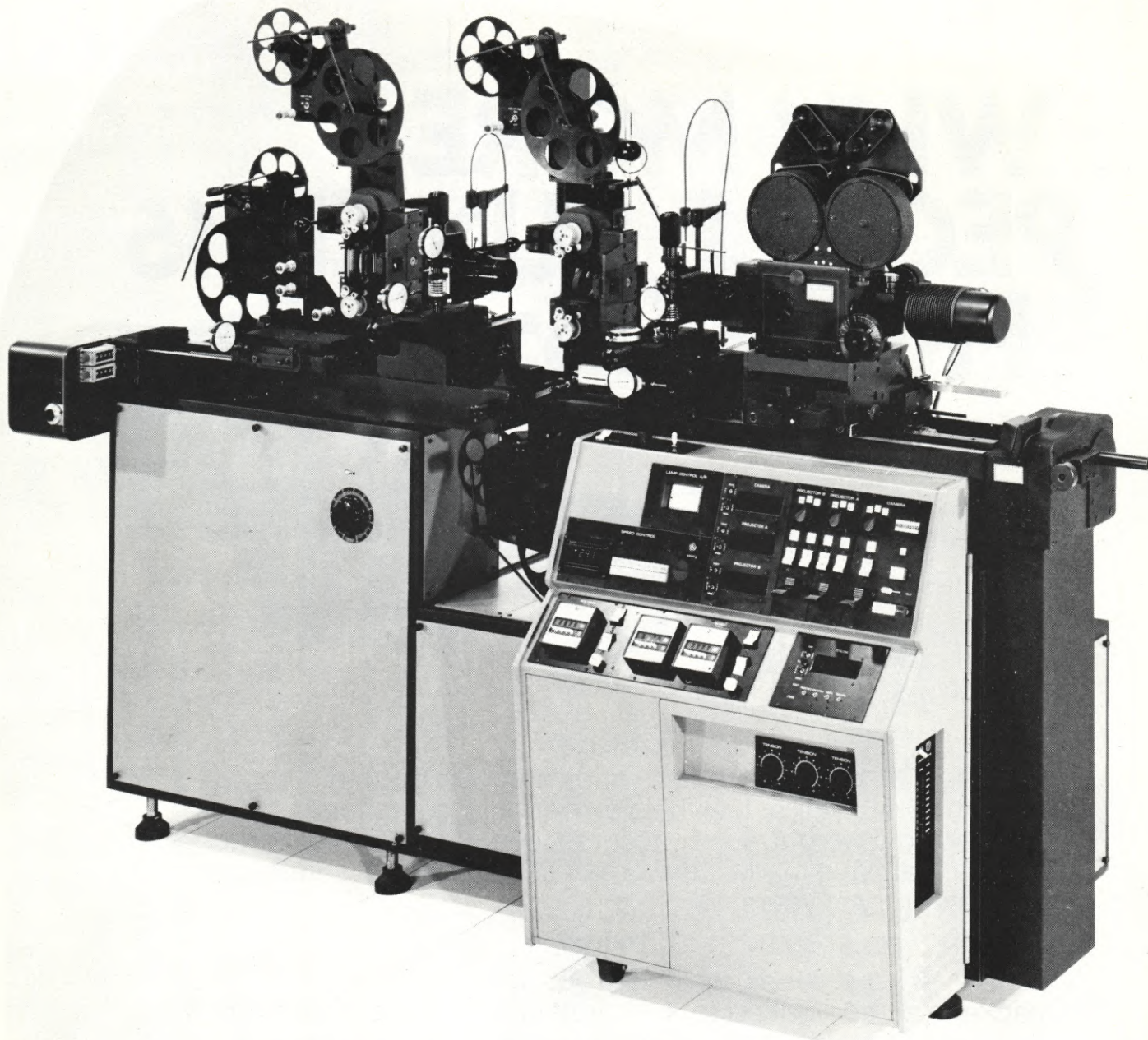
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BEHIND THE SCENES OF "THE HINDENBURG"

Hollywood's most skilled film artists and technicians re-create for the screen the proud life and flaming death of a massive dirigible

The catastrophe that on May 6, 1937, seared itself on the consciousness of all who heard the first radio news flashes and read the terse newspaper accounts under extra-edition headlines, and has continued through almost four decades to engage the imagination of other generations, is recreated on a vast cinematic cyclorama of earth, sea and sky in Universal's "THE HINDENBURG", a Robert Wise Production from The Filmmakers Group, starring George C. Scott, and also starring Anne Bancroft as The Countess.

The final Atlantic crossing of Germany's giant luxury dirigible with its bold emblem of the swastika in bright red and black intrigued moviemakers for years, but it was seen as a project that defied filmization. The cost would be prohibitive. The age of lighter-than-air travel ended with the disaster and there were no more great silver cigar-shaped airships to double for the symbol of the Third Reich's might. Screenwriters were hard put to come up with a valid story line for what was not actually the worst disaster of the first half of the 20th Century but rather one of the world's most publicized and dramatic happenings. The true cause of the explosion was unknown and remains a mystery to this day. A Department of Commerce investigation in 1937 listed sabotage, St. Elmo's fire, structural fail-

ure and electrostatic discharge of the hydrogen-inflated gas bags as possible causes, and agreed that the explosion might not have occurred had the United States granted Germany's request for helium. Over the years, experts ascribed the disaster to a broken structure, a disintegrated propeller, lightning, motor sparks and catalysis.

With the publication of "*The Hindenburg*" by Michael M. Mooney (Dodd, Mead), there was available a body of fresh material on which a suspenseful motion picture — not a documentary — could be based. Robert Wise, The Filmmakers Group and Universal moved in quickly to re-tell in cinematic terms the story of the airship's final voyage from Frankfurt to Lakehurst. Mooney's account of sabotage by a crew member was only one of a number of sabotage theories advanced since the explosion, but it lent itself with dramatic force and impact to the screen.

The time was never more propitious for a movie about the Hindenburg. Technical know-how was at a new level of ingenuity and visual effects never before imagined were being accomplished on film. Moreover, "Zeppelin Fever," as Wise termed it, was mounting throughout the world. Aeronautical engineers had rediscovered lighter-

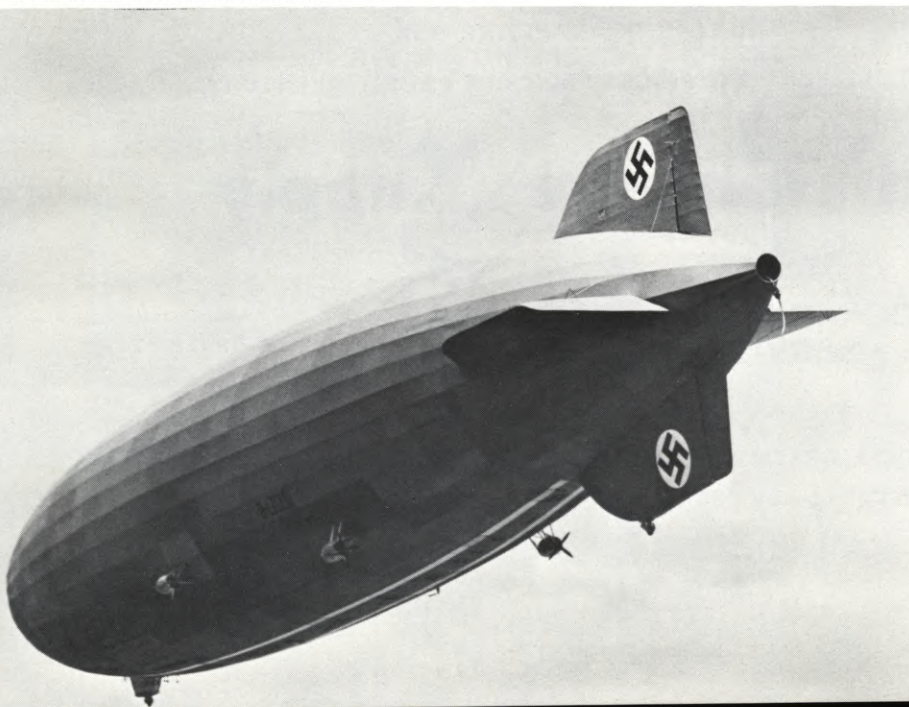
than-air craft of all kinds — balloons, blimps, hybrids and dirigibles. A revival of travel in helium-suspended airships was being seriously debated. A 225-foot-long dirigible was actually being built by a father-and-son team in Arizona. Two hundred scientists, engineers, bankers and military leaders from nine countries convened in Monterey, Ca., to argue for a second chance for lighter-than-air travel. Goodyear representatives advanced the belief that new technology would make possible volumes as large as 10 million cubic feet — more than a third again as large as the Hindenburg, without her heavy structural weight.

Almost a year before cameras turned, Robert Wise, a four-time Academy Award winner, who is partnered with Mark Robson and Bernard Donnfeld in The Filmmakers Group, began pre-production planning. Nelson ("THE ANDROMEDA STRAIN") Gidding would base his screenplay on the Mooney book, and on a screen story by Richard Levinson and William Link. At the outset, the decision was made to utilize the spectacular black-and-white newsreel footage of the disaster in the climactic scenes — that which was known to exist and that which might be discovered in archives — and to juxtapose it in freeze-frame style with footage, shot in matching black and white, of the fictional characters as they are gripped by terror, rise to self-sacrifice and heroism, escape through a rain of fire or perish in flame. No advanced technical wizardry could duplicate the coverage of the disaster which stands, even today, as one of the most graphic on-the-spot photographic records in news history.

The film, Wise also decided, would open in black and white, and after a few moments segue into color as the personae — passengers and crew members — bid farewell to loved ones and board the giant ship for the two-and-a-half-day voyage that would, in the end, take, in 34 seconds, the lives of 13 passengers, 22 crewmen, and one member of the ground crew. As the shattering explosion occurs, there is a white flash, and the film drama explodes into black and white.

With the fusion of newsreel footage, special visual effects and a screenplay that focuses on the men and women aboard the dirigible, Wise opened the

The star of Universal's "THE HINDENBURG" is the 805-foot dirigible which the Nazis decorated with their swastika and used as a propaganda symbol on its flights around the world. It crashed and burned (or vice versa) on May 6, 1937 as it was descending to moor at Lakehurst, New Jersey, after a transatlantic flight. The film is not a documentary, but a semi-fictionalized drama based on fact.





(LEFT) Prestigious producer/director Robert Wise rides the camera crane while directing a scene from "THE HINDENBURG". He spent two and a quarter years bringing this story to the screen. (CENTER) Uniformed Nazis salute the giant dirigible as it takes off on what is to be its last flight. (RIGHT) Giant camera crane soars into the sky for filming scenes depicting the Hindenburg's fiery crash.



(LEFT) Anne Bancroft, playing the role of a German countess seeking to flee the Nazi scene, makes her way along a catwalk deep in the bowels of the dirigible. (CENTER) The proud airship in flight. (RIGHT) Filming the final sequence was a complex technical achievement involving flames and wind machines, among other equipment.

way for other filmmakers to dramatize real news events by visually combining fact and fiction in cinematic collage. It was a new *genre*, akin to Robert Rauschenberg's lithographs in which news photos are used with the artist's drawings.

Following a period of research with Bernard Donnfeld and production designer Edward Carfagno in Washington, London and Germany (the film archives in Coblenz yielded remarkable material), Wise returned to Hollywood to proceed with the ambitious

project. George C. Scott was signed to play Luftwaffe Colonel Franz Ritter, dispatched by Dr. Goebbels to travel aboard the Hindenburg and prevent threatened sabotage; and Anne Bancroft was set to also star as The Countess, unsympathetic to the Third Reich. The co-starring cast — William Atherton, Roy Thinnes, Gig Young, Burgess Meredith, Charles Durning, Richard A. Dysart, Robert Clary, Rene Auberjonois, Peter Donat, Alan Oppenheimer, Katherine Helmond, Joanna Moore and Stephen Elliott, and featured players — were selected in a meticulous matching of actors to real life characters.

On a Universal City Studios sound stage, the bow section of the dirigible explodes into flame, as a hapless crew member is threatened with being roasted alive. In order to properly vent the sound stage to control flames and smoke, a large hole had to be cut in its roof. The scene which starts this final climactic sequence is a shot from the newsreel coverage of the actual event.

Eight tons of aluminum (16,000 pounds), 11,000 yards of muslin, 24,000 feet of sash cord and two million rivets were among the materials used to build the nose cone, belly and fin, and catwalk areas of the Hindenburg on Stage 12 at Universal Studios. A scale replica of the airship, 25 feet in length, was constructed, with lights shining from the gondola for night shots, figures on the observation decks, four simulated Diesel engines, and a remote-control motor. The shimmering replica could also dump water ballast.

Continued on Page 47



THE PRODUCTION OF "THE HINDENBERG"

How a suspenseful film of intrigue and spectacular tragedy grew from the facts and speculations surrounding a stunning true-life disaster

By **ROBERT WISE**

Producer/Director

I was approached by Universal in the summer of '73 as to whether I would be interested in doing "THE HINDENBURG". The property had actually been given to another group of people on the lot and they had developed a screenplay based on it. However, the studio hadn't been too keen on the script and didn't want to go ahead with it, so the vehicle was just sitting there in limbo.

It was then that I read the book and became fascinated with the whole idea and life-style of flying on a giant dirigible — as well as the possibility of what might have gone on that led up to the tragic accident. So I told the studio that I would like to do it. As I saw it, there were two major challenges. One was that of finding a dramatic "handle" that would capture the audience, hold their interest and keep them in a degree of suspense, while moving toward an ending that was pre-ordained by what had actually happened. That was the big challenge dramatically.

The other challenge was that of figuring out how to do the picture physically. We would have to resurrect

— *reincarnate*, if you will — this giant dirigible in a time when there were no such craft still in existence. The question was: could we, with all the means at hand (miniatures, trick work, traveling mattes, etc.) successfully, effectively bring the *Hindenburg* back to life?

With this question in mind, and before we actually got involved in doing anything concrete, I had a talk with Al Whitlock. He's the matte painting expert at Universal and, as a matter of fact, the top guy in that field around the world. I knew that much of our success in reincarnating the *Hindenburg* would lie in Al's hands, in his talent. He was familiar with the project, in that he had read the other script and knew what would be needed. He felt that with the application of all the techniques we had available (and maybe the improvements that could be made on some of them), that if we all got involved in the film together and worked very closely with one another in the planning and execution, we could do it.

But I still had to find that dramatic handle. The studio agreed to put a

writer on it for a period of time in order to see if we could come up with a twenty or thirty-page approach — concept only, the thrust of how we felt the story might be told. So I contacted Nelson Gidding, with whom I had worked a number of times before, starting with "I WANT TO LIVE" and most recently on "THE ANDROMEDA STRAIN". He loved the whole idea, because he'd been a dirigible buff since he was a kid. He worked up an approach which the studio liked and they decided to take the next step, which was a long and fairly detailed treatment from Nelson. Then there were several versions of the screenplay, which led up to the one that we started to shoot on August 12th of last year.

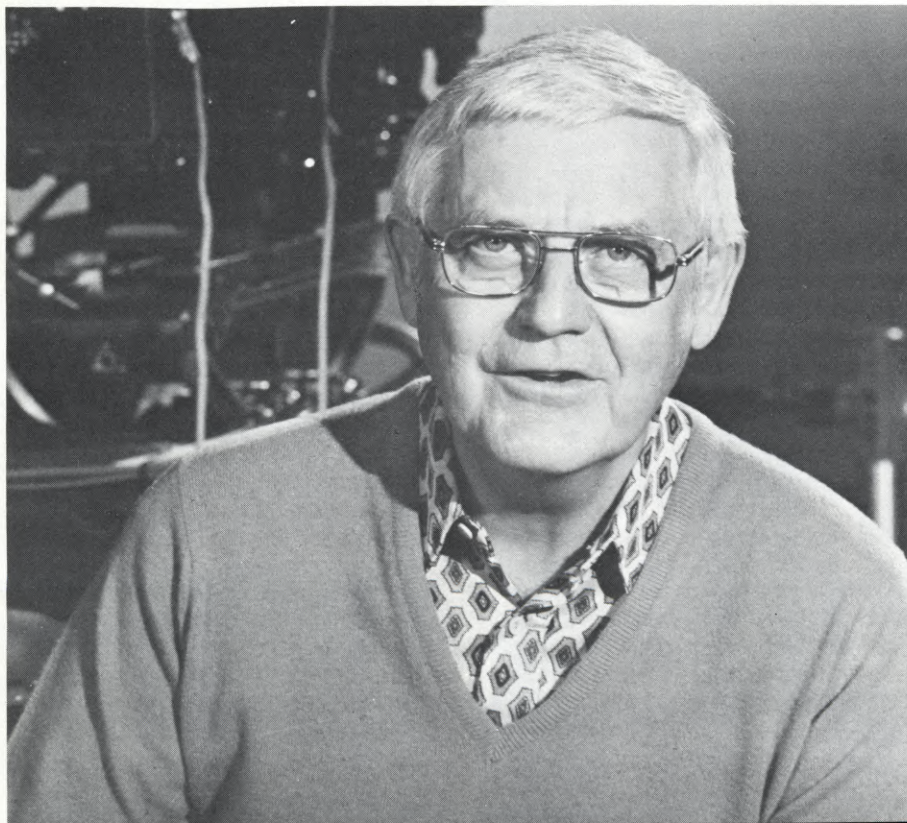
A little more than a year had elapsed between the time that I came onto the project and the time that we began to shoot. The total time involved, starting when I read the book and running through until I turned the completed film over to the studio at the end of November, was two-and-a-quarter years. Even though I was able to do some other things concurrently, that's the longest time I've ever worked on a specific project. "WEST SIDE STORY" took about 22 months. "THE SOUND OF MUSIC" took 18 months and "THE SAND PEBBLES" 20 months.

Dramatically, in order to hold audience interest up until the final disaster, which occurs near the end of the film, we put the emphasis on several elements. Number one — we followed the thesis of the book, that it was sabotage that caused the tragic ending. The author of the book had advanced that thesis, as had others before him, and we decided that this was the plot line we wanted to follow. It obviously offered more dramatic possibilities than an accidental tragedy caused by static electricity or structural failure.

Having made that decision, we had to create a set of characters — some real, some fictionalized — any one of whom might possibly be the person behind the sabotage plot. Establishing the threat of sabotage early on gave us a story of suspense.

As I mentioned earlier, all of us got very caught up in the life-style of flying in a giant dirigible, so we leaned on the aspect of that last flight to try to bring to the audience the look and the feel and

Master Hollywood producer/director Robert Wise spent 27 months in all on the production of "THE HINDENBURG", the longest period of time he has ever devoted to a single film project, and considerably longer than the time spent on "WEST SIDE STORY" (22 months), "THE SOUND OF MUSIC" (18 months), and "THE SAND PEBBLES" (20 months). Involved was a tremendous amount of research to "reincarnate" a giant dirigible of a type which ceased to exist several decades ago, but which was actually to be "the star of the show".



the texture and the fabric of one of those huge airships. We worked to convey the feeling, the sounds, the ambience of flying her as a captain or crew member, as well as taking a trip on her as a passenger. We wanted to recreate authentically how she looked and the loveliness of her accommodations for passengers.

In addition to that, we hoped to sustain audience interest by means of several sequences of suspenseful action and excitement. For example, we take her through a thunderstorm, with lightning and balls of static electricity bouncing all over, and everybody afraid that she might blow up. Then there is a strong physical sequence where a tear occurs on one of the horizontal fins and has to be repaired in flight, for fear the whole cover might blow off. Very honestly, that didn't happen on the flight, but it did happen on a flight of the *Graf Zeppelin*, so we took dramatic license.

When you're dealing with an historical incident you have to be careful not to get too far afield from the actual facts, and we haven't in this picture, really. We've taken the actual elements of the flight and real characters and woven in a small amount of fictionalization — but all the main bones of the story skeleton are true. At the end, the airship approaches Lakehurst, but can't land because of the weather. It has to go on and fly around the New Jersey coast waiting for the weather to settle down before coming back and starting to land again. All of this is as authentic as we could possibly make it.

That element of authenticity was uppermost in our minds all the way through the planning and shooting stages. This is the first theatrical film that I know of that's ever been made about an actual dirigible. There have been films about dirigibles before, but they've all been fiction. In this case, there are still so many people around who flew on the *Hindenburg*, so many still alive who knew her, and there's a lot of material at hand about her — so we just couldn't go too far afield. We reconstructed huge sections of the ship itself in the most precise detail, because I wanted this film to be as authentic and as reflective of the real thing as possible. We wanted to be able to say: "Here's the *Hindenburg*, reproduced in all its detail and magnificence by the talents of the greatest technicians in all of Hollywood."

We started by getting together all the research material we could while the script was being written. I had to go to Washington two or three times during that year. I went to the Smithsonian Institution and found everything I could



Under the precisely authentic mock-up of the *Hindenburg's* control gondola, Wise discusses a sequence with key crew members. Every scene and set-up was meticulously pre-planned and story-boarded far in advance of shooting. No film-maker in the industry is more universally respected and admired by his co-workers than is Wise. A perfectionist himself, he brings out the best in his crews, understands their problems, appreciates and applauds their achievements.

on the *Hindenburg* and other airships. There's a lot of material in the National Archives, particularly on the wreck that was left after the crash. Then eventually, after Ed Carfagno came onto the project as Art Director and Production Designer, we went abroad and visited the archives in Berlin and the Deutsche Museum in Munich, which is one of the world's great museums. We got a lot of material there and then went to Friedrichshafen, which is a small manufacturing town of 60,000 on Lake Constance. On the third floor of their small city hall there is a lighter-than-air museum where they have pieces of the *Hindenburg*, big chunks of the nose-cone, ladders that the passengers used to climb, chairs, and a lot of blown-up photographs that gave us details of the interior, and which I photographed.

They had their own miniature model, which was about 27 feet long and which was not nearly as refined as the one we later made — but we were able to photograph it from all angles. We got copies of a lot of still photographs from their archives that showed details of the construction. We were told that, unfortunately, all the original drawings and plans and blueprints from which she was built were destroyed in World War II. We have been told since then by somebody who certainly knows that they are actually residing in the lofts of the old buildings where she was built. For some reason, the Germans didn't want me to see them.

Also, I went to the German Film Archives in Coblenz and viewed a lot of

films that had been made about zeppelins. We ran this on a KEM machine and I picked out some stock shots to use in the newsreel opening that we have in the film about old airships. There were also shots of the actual *Hindenburg* in small-screen black and white, and I ordered certain pieces of that to bring back to show to the men who were going to build our miniature, so that they could see how it looked in motion. You could see the unevenness of some of the fabric and other interesting details. We roamed far and wide searching for every bit of detail and knowledge that we could find and then Ed Carfagno had to piece together how it all worked from these bits and pieces. It was a massive job.

One morning in Frankfurt I had coffee with the son of the man who was captain on that last flight of the *Hindenburg*. He had been on board her as a little kid. He said he was 12 years old when the accident occurred. He was very cooperative and he gave me several personal pictures of his father and some of the other officers in uniform, because we didn't have any such photos. He also had several sets of color postcards that had been made at the time of the interior of the ship — the dining room and the lounge and the writing room and the promenade. He gave me a couple of sets of these and they proved to be invaluable, because, up until then, we hadn't known what the colors were.

Then we had another great stroke of
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REINCARNATING AN 800-FOOT GIANT SUPERSTAR

Bringing back to life a non-existent giant dirigible was done by means of meticulously executed matte paintings, miniatures, combinations of both and every other trick of cinematic magic

By ALBERT WHITLOCK

The first thing we had to tell ourselves in approaching the production of "THE HINDENBURG" was: "The 'star' that plays the title role in this picture is more than 800 feet long — and it doesn't exist!"

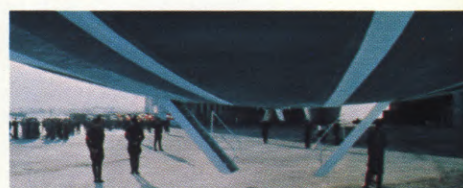
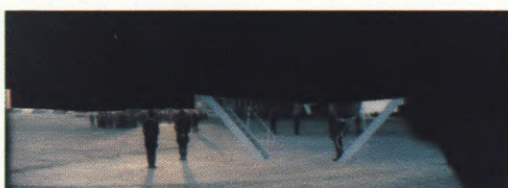
That was a pretty horrendous realization in itself — the re-creation of a giant dirigible of a type long gone from the lighter-than-air scene. But add to that was the fact that we would be called upon to execute almost 70 separate scenes utilizing a wide variety of sophisticated special effects techniques. Some of the effects would be incidental, while others would be quite large and comprehensive, but the types of techniques involved would run the entire gamut of the trick areas involving matte shots and combinations of miniatures and mattes.

Many of the effects required showing the airship flying in the upper portion of the picture, with the introduction of a landscape, seascape or whatever in the



(ABOVE RIGHT) Universal Studio's matte painting expert Albert Whitlock, acknowledged to be the top man in his field, shown working on a painting for "EARTHQUAKE", which won him an Academy Award. (BELOW) The non-existent Hindenburg is shown moving against the skyline of Manhattan as it appeared in 1937, and painted by Whitlock. The dirigible was painted on a separate piece of glass which was slowly moved in front of the background to simulate flight.





Shown on this page are examples of several composite matte painting shots from "THE HINDENBURG" (of which there were approximately 70 executed). (LEFT) The original "live action" scene as shot. (CENTER) The original scene with the area to be replaced matted out in black. (RIGHT) The final scene, with the matte painting replacing the matted out section. Examples shown here are not color balanced, but were very precisely balanced in the final cut.

lower portion. Others involved the use of travelling mattes, and these were really the most difficult.

For example, it was reckoned that the best way to get a convincing light from a single source on a slow-moving object like a dirigible was to have the

airship stationary against a blue screen and then track the camera on a very well laid out, highly polished, precision-milled track, using a dolly that had polished bronze wheels. Once we had this, it was then a matter of getting the right kinds of backgrounds, mostly aerial, to

fit the speed.

Of course, with infinity clouds, there is very little obvious movement. Clouds 25 miles away are not going to get appreciably closer or further away in a cut that will run for, let's say, seven to

Continued on Page 91



PHOTOGRAPHING "THE HINDENBURG"

Filming inside the close confines of a dirigible, with little room for lights and cameras, poses some fascinating challenges for famed three-time Academy Award-winning cinematographer

The Director of Photography on "THE HINDENBURG" was the distinguished Hollywood cinematographer, Robert Surtees, ASC, three-time Academy Award winner for "Best Achievement in Cinematography" ("KING SOLOMON'S MINES", "THE BAD AND THE BEAUTIFUL", "BEN HUR").

His vast skill and versatility is evidenced by the diversified photographic styles which he employed in such widely varying films as "DOCTOR DO-LITTLE", "THE GRADUATE" and "THE STING".

In the following interview he discusses some of the problems and challenges presented in his assignment to photograph "THE HINDENBURG":

QUESTION: Before we get down to specific technical questions about your photography of "THE HINDENBURG", could you give me a few general observations about your experiences in working on the picture?

SURTEES: I suppose most people will feel that one of the big reasons for doing this picture was the success of "THE POSEIDON ADVENTURE" and the other catastrophe pictures which have followed the cycle. But there are some important differences in this one.

"Life-size" nose cone section of the Hindenburg was constructed on one of the largest stages at the Universal City Studios. Full-scale segments like this, plus miniatures, plus matte paintings were all skillfully combined to reproduce and "make whole" the no-longer-existent 800-foot giant dirigible — and photographic consistency had to be maintained in blending these diverse elements. It required very close liaison between the cinematographer and other key technicians.

First of all, it deals with an actual disaster that really happened, and there are quite a few people around who still remember it. Secondly, there are important differences in terms of attention to story line and dramatic treatment — mostly due to Bobby Wise, who is a very bright director. We agreed at the start that you could never realistically stage the disaster, which comes at the end of the picture and serves as its climax — so the actual black and white newsreel footage was used, together with the famous soundtrack of the radio commentator breaking down and crying as he watches the airship burst into flames.

We had quite a bit of preparation before shooting. We went to Germany and actually shot some scenes there — not with the actors, just background scenes. The Germans I met all take the attitude that the disaster was caused by sabotage — set up either by the communists or other anti-Hitler forces. The actual Hindenburg had become quite a political thing, because it was flying at the time that Hitler was making his big moves in Europe and he was trying to use the dirigible as a giant German propaganda machine. The theory runs that it was sabotaged in an attempt to put down this propaganda. However, the American investigating committee,

under Commander Rosenthal (who is still alive and whom I met), came out and said that it was not sabotage, but static electricity that caused the explosion.

The research on this picture was really complete and everything was reconstructed with incredible authenticity, even down to duplicating the lightweight aluminum piano they had on board. I hope the picture is successful, especially because of the pains they took to make it authentic.

QUESTION: Can you tell me a bit about the photographic style that you adopted in shooting "THE HINDENBURG"?

SURTEES: We start off in black and white with historical footage and then go to color, but the color is very muted and has a definite blue cast to it in the printing. I don't know the reason for the blue cast. Maybe they just happened to get a blue workprint one day and decided that it looked different. Or possibly it's because the inside framework of the airship is constructed of lightweight aluminum and the blue tinge suggests a metallic quality. Anyway, the faces also go blue in the close-ups. The strange thing is that you get used to that and, after a while, you don't even notice it. The objective was to make the photography as realistic as possible by desaturating the colors, but no diffusion was used — no fogging or anything like that. The picture ends with the black and white newsreel footage, but you're not even aware that it's gone to black and white. Only a director with Wise's ability and the respect he commands could pull off something like that and make it work.

QUESTION: What were some of the problems inherent in making a picture like this?

SURTEES: The main problem was that here we were making a picture of tremendous scope and budget which had as its "star" a giant dirigible that no longer exists. In other words, we had no star. It had to be created exclusively by means of miniatures and matte paintings. Al Whitlock, who is one of the greatest artists in our business, did some 60 or 70 matte paintings, and if



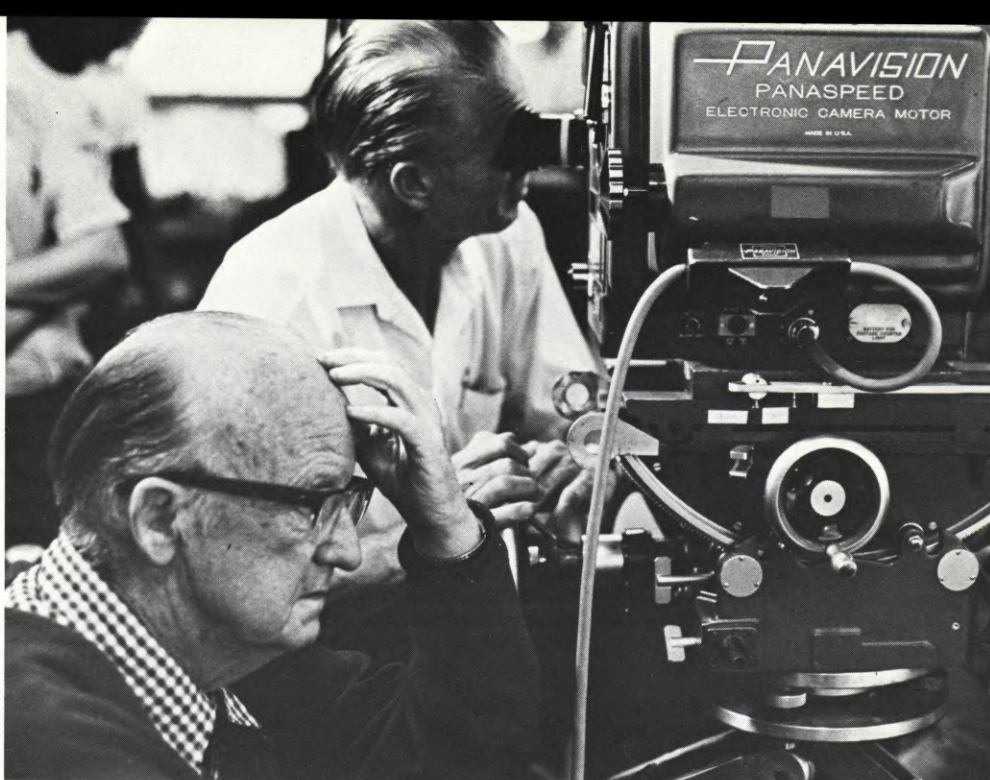
his work hadn't been right the picture could never have been made. Only Al can do stuff like that. There just isn't anyone being trained to do that kind of thing anymore, really.

QUESTION: What about the production design of the film, as it affected your work?

SURTEES: The production designer, Eddie Carfagno, was sensational. We've done 10 or 12 pictures together, including "BEN-HUR", and we're a great combination. We really work together, and he's such a big help and so good at research. His office was stacked clear to the ceiling with books and newspapers he was using to re-search the sets. He did a very thorough job. Helpful to me also were pictures taken at the time that were available. I tried to make my photographic quality somewhat like that of the still pictures of those days.

QUESTION: To achieve that photographic quality, was everything done in the camera or did you direct the lab to do certain things afterward?

SURTEES: Nothing was done in the lab except putting in that blue cast I spoke of. We desaturated the color by means of low-contrast filters, but it's actually a very light and soft effect that makes it less contrasty; the rest was done in the lighting, the way the sets were painted and the way it was printed — with the blue cast, that is. The blue added very good mood to the sequence that takes place after the fire. We shot that at the El Toro Marine air base and we lucked out in having an overcast day. The shot of that huge burned-out skeleton of a wreck employed forced perspective, so that it actually looked 800 feet long. As for the blue cast, I know some camera-



Veteran Director of Photography Robert Surtees, ASC (lower left) is noted for his versatility and is proud of the fact that his photographic style is not "consistent" from film to film, as some critics feel it should be. He prefers to adopt a different style for each film — one that is precisely in key with the story. He says: "I've never seen a shot yet that's impossible to make, if you have the time."

men are going to say: "That guy is crazy, printing the whole picture on the blue side — of all things, the blue side." I hate the red side; that always looks phony.

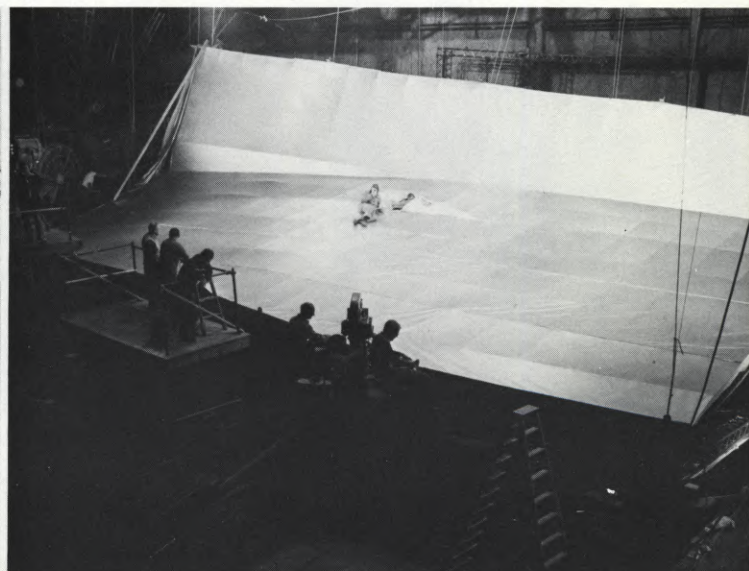
QUESTION: You say that the blue cast over the flesh tones wasn't objectionable?

SURTEES: Well, we were shooting mostly men wearing officers' hats and shiny buttons — German uniforms, and it wasn't objectionable. In Goebbells' office I used lighting that was different from everything else in the picture — extreme high contrast, lighted with arcs. The result is very hard and sharp and you feel something when you get

inside that guy's office; you feel that there's something wrong here. The picture offered several opportunities like that to get feeling and emotion into the lighting. Wise really appreciates things like that. He's such a great guy. When you do get a shot that he likes and he sees it in the projection room, he's so thankful. He applauds as you go out and it's a big boost for your morale. You also know that you can do anything you want, because he'll back you up. Sometimes I think Universal wondered what the heck was happening — especially when we knocked a hole through the ceiling of one of their sound stages to let the fumes out when the dirigible was set on fire.

Continued overleaf

In the storyline of "THE HINDENBURG", a tear develops in the fabric of one of the huge fins and threatens to peel off the entire casing of the dirigible (a situation which actually occurred on the Graf Zeppelin). (LEFT) Crew technicians crawl out on the fin and fight against wind to stay there long enough to make repairs. (RIGHT) The full-scale segment of the fin during filming of this sequence on the sound stage. The extremely heavy set piece unexpectedly dropped seven feet when guy wires gave way.





(LEFT) The entire set was mounted on rockers, so that it could be tilted to send passengers piling up against walls in sequence following the explosion. (CENTERS) Cameras grind away behind shields set up to protect them and crew from intense heat generated by burning of the airship after it has crashed. (RIGHT) Roaring inferno, which developed within 30 seconds after the explosion, is all too realistically re-created for the film.

QUESTION: What were some of your photographic problems in shooting that fire?

SURTEES: The main problem was that in order to show crew members and passengers jumping out of the airship during the fire, the entire set had to be built high above the stage floor. There were no footholds for us to work from, no platforms. We had to climb up there and hold on to the struts and work like mountain climbers. We also had to use small cameras — the old Eyemos with the spring motors. We had 12 of those

and we had the springs made a little more powerful and put them inside asbestos boxes, shooting through holes in the boxes. It was so hot that the aluminum was melting and even the asbestos on the camera boxes was burning. When you see the footage, there's flames curling up around the lenses — but with all that, we lost only one camera in that fire.

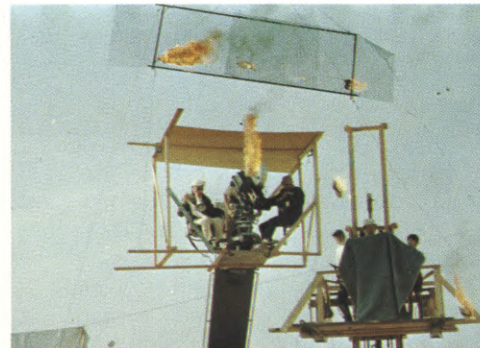
QUESTION: As I understand it, not having seen the picture yet, the moment the explosion occurs the whole thing goes to black and white,

including the fire. Is that correct?

SURTEES: Yes. It happens so suddenly that I'm sure no one will notice the switch. What helped was the distracting action of all the stunts going on.

QUESTION: But you did shoot the fire sequence in color originally, isn't that so?

SURTEES: Yes, we did shoot it in color, because Universal wanted to have some protection in case Bob's black and white concept didn't work out.



At the El Toro Marine air base in California, wind machines, smoke machines, cameras on giant Chapman cranes and a huge crew labor long and hard to film the fiery devastation in the aftermath of the explosion and crash of the dirigible. "THE HINDENBURG" is yet another example of the incredible skill of Hollywood's specialized technicians, as previously evidenced in such large-scale disaster films as "THE POSEIDON ADVENTURE", "EARTHQUAKE" and "THE TOWERING INFERNO".



(LEFT) Inside the huge "spiderweb" aluminum framework of the dirigible, crew technicians clamber about the struts to reach the location of the tear in the airship's fabric, so that they can repair it. (CENTER) A chic collection of passengers mount twin stairways to board the Hindenburg, prior to its ill-fated last voyage. During the filming Surtees became increasingly fascinated by the capabilities of dirigibles, observing: "This picture made a lighter-than-air buff out of me." (RIGHT) Crew member emerges from hole in fin's fabric.



QUESTION: What about the sets of the interior of the dirigible — were they built solid or with wild walls?

SURTEES: The main interior set, the basic structure of the dirigible, was nothing but a gigantic cigar-shaped framework of aluminum struts connecting with and crossing each other. The perspective was forced to reduce the scale way off in the background, in order to give it more depth. It was very difficult to get a camera in there, because you had maybe a 2 x 4 to walk on between those struts 30 feet in the air. Large lighting units were ruled out because it was impossible to hide them among the struts. The biggest would be a "Junior", used once in a while, but mostly they were very small lights. This meant working very slowly, because for each lamp an electrician would have to climb up overhead and pull it up after him. We developed a screw-down type of thing to mount the lamps on, but then they were all in the picture, so we would paint pieces of composition board with metallic paint and block the light off of them. The whole picture has lights in it, from start to finish. In fact, it was like working on a submarine — only on a larger scale. All of the electricians had to be young guys, because clambering around up there with those lights was really something. For the fire we even had indicators down below to tell if the cameras were running, so that we could stop the scene in time without burning up the cameras.

QUESTION: Could you be a bit more specific about the type of small lights that were used?

SURTEES: Anything that would do, actually. Each studio has its own name for them. We used to call them "Inky-dinkies". However, we could use those only for someone's eyes in a closeup. In many scenes the light still had to have enough spread to hold a full figure. This took so many lights and the men had to climb up so high to set them that the Safety Committee at Universal considered it suicide. Then one day we accidentally dropped a set seven feet. That drew quite a group.

QUESTION: How could you drop a set seven feet? That's hard to do.

SURTEES: There was just a hell of a lot of weight. It was the section of one of the airship's fins that the men go out on to fix a tear in the fabric. It was tremendous — about 40 or 50 feet long — and weighed a terrible amount. I guess they just didn't have enough guy wires holding it.

QUESTION: How did you light that set?

SURTEES: We used those open lights called "chicken coops", with skirts around them and just hung them all over the stage — maybe 30 lamps in all. We had to show morning, noon and evening light, so we put shadow gags on the edges of the lights and pulled them up to vary exposures, while the sky changed colors in the background.

QUESTION: To get back to the lighting of the interior of the dirigible's framework — by using all those small lamps you achieved what might be called "area lighting". Wasn't there any way you could have solved the problem by using a more generalized lighting?

SURTEES: You would have created no effect, no emotion. You'd just have had flat-looking pieces of aluminum. It was necessary to have a lot of shadow and make it dark in there, because the German technical advisor I talked to (who had made trips on the actual Hindenburg) told me that it was so dark in there that you could barely see your way. Then, too, you had to have a little leeway for the sequence at the end of the picture, when the lights are turned off and they're getting ready to explode the bomb. So, far from lighting just for illumination, you had to light for a very definite mood, an effect.

QUESTION: What was the lighting situation inside the staterooms and common rooms of the airship?

SURTEES: The staterooms were very small — almost like cells, except for the Captain's, which was bigger. Two people could sleep in each one on something like bunkbeds. They were very sparsely furnished, because the weight factor was so important. The dining room was a little more elaborate. The gondola, which hung down right under it, was a wonderful set. It had the same make of instruments as the real Hindenburg — sent over from Germany.

QUESTION: What problems of lighting and camera angles did those small staterooms present?

SURTEES: All the walls were designed to come out, but you couldn't get "outside the walls". In other words, you couldn't get so far back that it was obvious you were shooting from outside the walls. That would have looked silly. As for lighting inside those tiny rooms, I

used mainly bounce light reflected from "space blankets", so that the actors could walk around. If I'd used regular direct lighting the actors would have "burned up", gotten too hot, as they moved closer to the lamps. To take the curse off the basic softness of the bounce light, I underexposed a half stop and then printed up. This underexposure gave me a bit more contrast. It's amazing what skin texture you can get with this kind of lighting, but the main thing is to be careful to keep it from going flat. A lot of times it fills in just a little. You can't control it.

QUESTION: If you were using something as diffused as bounce light from a space blanket, how did you manage to get any sort of modeling to keep the lighting from going flat?

SURTEES: By bouncing the light from one side. It was directional, not flat-on, bounce light. You've really got to watch that. Now, in working on a Mike Nichols picture since then we used a different approach to a similar problem. We took strip lights consisting of five to seven great big bulbs and shined them through French tracing paper. The tracing paper cuts the light down a lot, so you've got to use an awful lot of light coming through it, but the light will be of the same density two feet away as it is six feet away. You can see that with your light meter. It's unbelievable stuff. You can't burn anyone up with it, and you wonder why.

QUESTION: How about camera movement in a picture with basically restricted sets such as these? Did you use much camera movement, and, if so, what were the problems?

SURTEES: Shooting on a dolly inside the big aluminum "skeleton" framework of the dirigible was the toughest challenge, but by laying down 2 x 4's with plywood over the top we were able to do a dolly shot of a guy running the full length of the thing, from one end of it to the other. It was a sensational shot. We got some other dolly shots outside the ship by operating from platforms 15 or 20 feet high. In a pinch, we could always produce an illusion of movement with the zoom lens. I like actual dolly movement better than zooming, but sometimes that's the best you can do.

QUESTION: There's been a lot of argument as to whether you can duplicate the effect of an actual dolly shot by using a zoom lens. How do you feel about that?

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A GIANT FLYING JIGSAW PUZZLE COMES TOGETHER

Bits and pieces of research information from many sources add up to an authentic reproduction of an ill-fated airship

By **EDWARD CARFAGNO**
Production Designer

At the time that Bob Wise asked me to do the production design on "THE HINDENBURG" I hadn't researched anything about zeppelins and had no idea what the interiors were like. I had a kind of mental image of what they were like, but after reading the script and doing some preliminary research I found that my ideas had been completely erroneous.

A dirigible was a big, big balloon, of course, but most of it was filled with gas bags and there was very little space for people. That was a beginning, but the thing that helped the most was when Bob and I and the production manager went over to Germany and visited the museum they have at Friedrichshafen. They had fragments of the metal sections of the ship put together and pictures of the interiors that really gave me a feeling of what it was like. Seeing the pieces assembled, even though they were in small sections, put the whole picture together for me. Also, at that time, I began to figure what I would have to do to make the viewer feel that he was in the belly of the ship. It wasn't something you could just put on a sound stage floor. You had to suspend part of it, so that there would be a feeling of light and air flowing below it, because you could actually see light through the bottom of the ship.

They had no blueprints of the *Hindenburg* in the museum. They have a library there which must have a lot of material of that type scattered through it, but they hadn't assembled it. They may not have had the money to do it. But they also said that after the war

France took a big chunk of what they had. At any rate, I wasn't able to find any blueprints of any kind in Germany, but there were illustrations that could be studied.

The original structure of the *Hindenburg* had been built of duraluminum and we built ours of aluminum in very much the same way. Having to consider what it would all cost, we couldn't quite include all of the same details, but the main pieces were as exact as we could get them and I don't think that anyone except the men who built the original would be able to tell the difference.

There were millions of pieces and they all had to be assembled and riveted together. It was a big chore, but basically, once you recognized the system that had been used, it was simply a matter of getting a lot of labor to put all the pieces together in the right shape. We had no technical advisers available during the construction, but we did have a technical man come in once everything had been built. He was with the Goodyear Company and had been an observer who actually flew in the gondola of the real *Hindenburg* and before that, the *Graf Zeppelin*. He knew something about how they had handled the gondola and where the controls were, and he was of help with that, but we had no technical advice on the actual construction of the ship.

I had photographed individual pieces in the museum. Most of them weren't assembled, but I was told where they went, and that was the key to the whole thing. There were three

types of main structures and all the little pieces that went into them were similar, but of different sizes. It was being able to see fragmentary sections put together, even though they were small, that helped in forming the whole structure. Also, there were sufficient pictures of the passengers' living quarters to help us in constructing those sets. What we couldn't find were pictures of the paintings that had existed on the walls of the dining salon. The walls were made up of four-foot panels and there were originally paintings on all of the walls, paintings of the areas that the dirigibles flew over. They accounted pretty much for the decoration of that room.

The rooms on board the *Hindenburg* were not large. The complete living area — which included the lounge, the dining room, the writing room and the 25 staterooms — all fit into a total space of about 50 x 50 feet, extending midships of the dirigible, and the ceiling height was about 8½ feet. The staterooms, which were about 6½ feet square, each had two bunkbeds in them. The top one would fold up during the day to make a little sitting room. There was a little wash basin that folded up, with a mirror above it, a very small cubbyhole for a wardrobe and a little writing desk that was built into the wall also. There weren't any lavatories on that floor. You had to go downstairs to a lower floor where the showers and lavatories were located. That same lower floor had a smoking room, a small bar and the officers' quarters where they ate their meals.

We reproduced almost all of that — except that we didn't build every stateroom, only those that were necessary. But we built the corridors that come off of them in order to really create the feeling of the whole ship. We built the entire dining room and lounge areas. The dining room and lounge areas were located on either side of the ship and each had a 50-foot wall lined with windows. The smoking room, which was down below the passenger area, had its windows below, where the underbelly of the ship curved down, so the passengers in that room looked down, rather than across, in order to see the view. It was a very interesting structure.

The colors of the interiors on the dirigible were very plain. The basic tone was a sort of warm gray and the walls

One of the hundreds of storyboard drawings from the sketchbook of Production Designer Edward Carfagno. This shows the inner aluminum structure of the *Hindenburg* stretching, supposedly, for 800 feet. Every scene and set-up for the picture was meticulously storyboarded in advance.



BEHIND THE SCENES Continued from Page 35

Ninety men in double shifts were employed over a period of four months to build the components of the leviathan. The passenger areas — cabins, dining room, smoking room and writing room — were copied from the Hindenburg and were so faithful in reproduction that even the closest scrutiny of photographs of the movie set and the original showed no perceptible differences.

"The Hindenburg" began filming August 12, 1974, following earlier photography in Munich, Germany (doubling for pre-World War II Frankfurt), Milwaukee, New York City and Washington, D.C. El Toro Marine Base in Santa Ana, Ca., where two huge 1,000-foot hangars built for lighter-than-air ships still stand, doubled for the Lakehurst, N.J. Navy base. The deadly explosion was filmed on Stage 12 at Universal. A venting hole was cut in the roof to prevent a sound stage conflagration. The giant massive twisted skeleton of the Hindenburg was assembled for the final exterior scenes at El Toro Marine Base and it is against the surreality of the flaming, smoldering remains that the climax, with ground crews throwing water on the fire and survivors racing to safety, is played.

Robert Wise is no stranger to the film of size, scope and technical complexity. His "THE SAND PEBBLES", starring Steve McQueen, and his production for Universal of "THE ANDROMEDA STRAIN", based on Michael Crichton's science-fiction best seller, each presented weighty problems that were overcome by creative and technical ingenuity. Wise began his career at RKO as an apprentice sound effects technician, then became an assistant editor and film editor. He made his directorial bow at RKO with 1943's "THE CURSE OF THE CAT PEOPLE", and during his tenure at the studio directed the memorable "THE SETUP" in 1948. Joining 20th Century-Fox Studios that same year, he directed such critical and box office successes as "TWO FLAGS WEST", "THE HOUSE ON TELEGRAPH HILL", the science-fiction film classic "THE DAY THE EARTH STOOD STILL", and "THE DESERT RATS". Under the MGM banner came "TRIBUTE TO A BAD MAN", "SOMEBODY UP THERE LIKES ME" and "UNTIL THEY SAIL." Four of his outstanding films followed at United Artists: "RUN SILENT, RUN DEEP", "I WANT TO LIVE", "WEST SIDE STORY" for which he won Oscars for Best Picture and Best Direction, and "TWO FOR THE SEESAW". "THE

HAUNTING", which he directed at MGM, is considered by many movie enthusiasts to be the most chilling ghost drama ever filmed. In a return to 20th Century-Fox, Wise helmed "THE SOUND OF MUSIC", still the top grossing musical film in screen history, which won him additional Oscars for Best Picture and Best Direction. "THE SAND PEBBLES" and "STAR!" were his next efforts. Since "ODDS AGAINST TOMORROW", he has, with a single exception, produced as well as directed all of his films.

On May 6, 1937, three months after Adolph Hitler declared that Germany would no longer be bound by the Versailles Treaty, and two weeks after Generalissimo Francisco Franco declared a one-party state in Spain, the Hindenburg (LZ129) drifted slowly toward the mooring mast at Lakehurst, N.J. At 7:15 p.m., landing lines were dropped from the massive dirigible, hovering at 200 feet, to ground crews below. Ten minutes later an explosion ripped open the tail and forced forward the dangerous hydrogen that kept the ship aloft. In 34 seconds, the great sky queen was a jumble of twisted, steaming metal.

It was the 37th passage from Nazi Germany to the United States of the Hindenburg, named after Paul Von Hindenburg, President of the Weimar Republic. Until the moment of her destruction, she had been a veritable floating hotel, affording passengers a mode of travel that was luxurious and swift. There were staterooms for 70 passengers, a spacious dining salon with gourmet cuisine (fatted duckling, Bavarian style; grilled sole with parsley butter, venison cutlets Beauval, and the finest of German, French and Italian wines); a library, a lounge with a unique Bluthner piano made of light metal and weighing only 112 pounds; a smoking room, three bars, and a promenade deck with slanting windows that afforded breathtaking views of the Atlantic, polar icebergs, and the panorama of New York City. There was no sense of motion; noise and vibration were virtually absent. Even in storms, the Hindenburg rode steadily in the wind. There were never any cases of airsickness.

The flight was accomplished in two and a half days, far speedier than ocean liners, with a 52-hour westbound schedule and a 64-hour time table eastbound. Nearly 804 feet in length, with a diameter of 137 feet, the 242-ton dirigible was lifted by over 7 million cubic feet of hydrogen in 16 gas cells (the United States refused to sell Germany the safer helium.) Long dura-

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THE HINDENBERG FLIES AGAIN

To reincarnate the Hindenburg and make it fly again, a complex 25-foot miniature was constructed in such fine detail that it could do many of the same things as its full-size, real-life "Big Brother"

By CLIFFORD STINE, ASC

The miniature of the dirigible that plays the title role in "THE HINDENBURG" may not seem very "miniature" in view of the fact that it was 25 feet long, but that turns out to be a rather small scale when one considers that the real *Hindenburg* was 800 feet long. It was a beautiful miniature, however, and large enough to enable us to get a wide variety of effects. Glen Robinson was in charge of its construction and he's an extremely talented man in this field — an expert engineer, a very creative person and one of the finest men I've ever worked with.

The miniature was built with attention to the smallest details and was suspended by wires from overhead tracks on the largest stage at Universal City Studios, so that it could travel a distance of 200 feet. We had several excellent backgrounds of appropriate length against which to move the miniature.

We also had "cloud machines" to create the effect of clouds required in many of the scenes. Managing those clouds always takes a bit of doing, because you've got to cover the floor with dry ice in order to keep the temperature very low on the stage. On a hot day this is always more of a problem because the vapors tend to rise. All in all, however, cooling off the stage with dry ice held the clouds beautifully and they look very realistic on the screen.

There was one sequence that gave us something of a problem. In it the airship moves out of a very heavy storm and, as we travel with it across the stage, it goes out of dense clouds into more of a clear area. In the storm area

we wanted lightning, so way up at the top of the stage we had to clear a space to put the "scissors" for the lightning effect. I was gambling. I wasn't sure the effect would come off, and it was a lot of work getting it up there, but everything went along very well.

We had a control board on the floor of the stage which was connected to an overhead carriage by means of cables which travelled with this carriage, but were out of the picture, and this arrangement could control the movement of the miniature at any speed we wanted. It even made possible remote control of the dirigible's elevators and rudder. In actual practice, however, we never made use of that facility because the movement of the elevators on the real ship would be so slight that it would be practically imperceptible.

The miniature was very complete. It had two little motors on each side and lights inside the gondola and other areas of the ship that could be remotely controlled. Some very talented people worked with Glen Robinson in building these facilities into the model and they had to be almost like watchmakers in order to make all of the little details work.

Ordinarily, moving miniatures have to be photographed at several times normal speed in order to create realistic action, and the frame rate is directly proportional to the scale of the miniature. In this case, however, we found that the dirigible moved so smoothly when suspended from the overhead tracks that we could turn the camera at only two times normal speed; we didn't have to go up to real

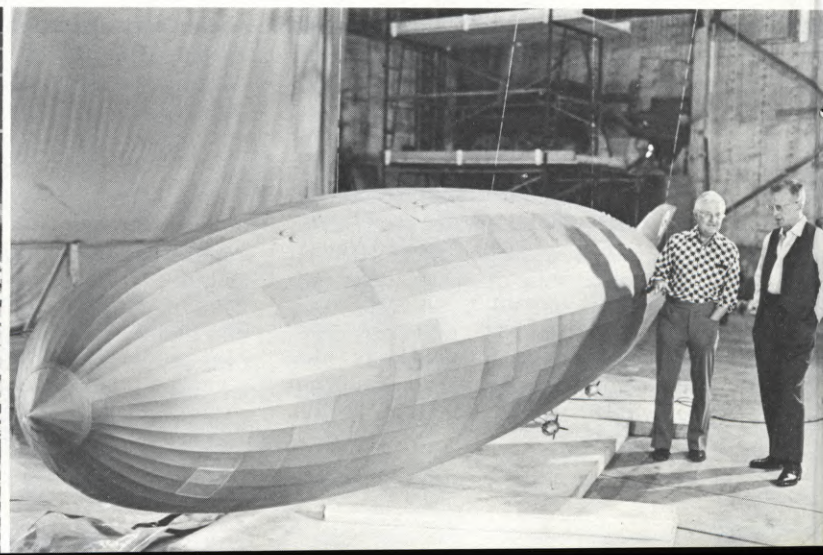
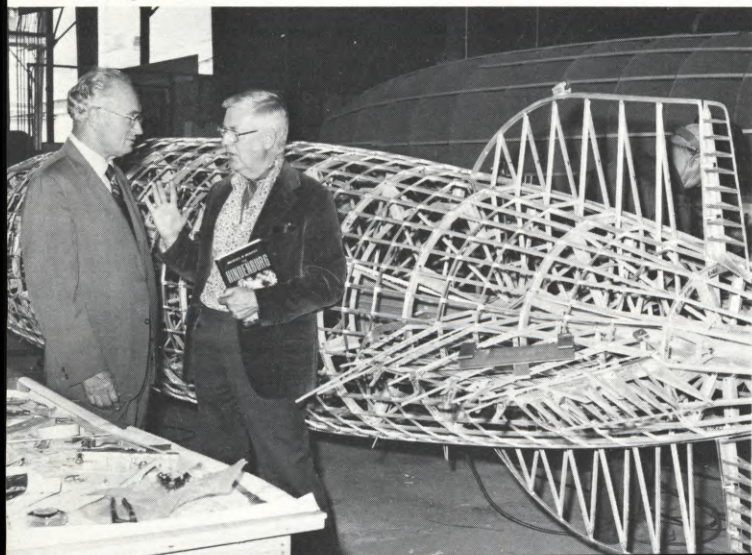
high speeds. Actually, the only reason for overcranking at all was to control the movement of the clouds. You put the clouds in and try to shoot when the formations look good, but they are usually moving a little too fast. After making tests we found that a speed of 48 frames per second was just right for controlling the cloud movements.

Lighting the miniature presented some initial problems. We made some preliminary tests using an improvised backing (which wasn't used in the picture). I used sky-pans so the entire area was illuminated by no direct source — just what appeared to be sky reflection. We couldn't put any lights on the floor of the stage because that was covered with dry ice and there was a lower cloud layer lying three or four feet above the floor. This reflected light onto the bottom of the airship just enough to give that shadowed area a little illumination.

There was one thing I didn't like about that lighting arrangement, however — namely, that it didn't create a good effect of a source of sunlight. That would be easy enough to do if the miniature were remaining in a stationary position or moving only a short distance, but when you have to travel it 200 feet you can't simply mount a Brute up there and keep the light source consistent. It would be changing all the time.

To solve the problem I had them build for me a kind of crane to travel right along with the overhead carriage supporting the dirigible. It had extensions on it so that it would go out

(LEFT) The exquisitely designed 25-foot model of the airship was constructed under the supervision of miniatures expert Glen Robinson. The nearly completed skeleton of the craft is shown here. (RIGHT) The completed miniature, with its silver skin covering, shown on the sound stage at Universal where it was filmed. It was suspended from a mobile carrier by four ultra-fine wires and could move 200 feet across the stage.



beyond the carriage about 70 feet on each end. A powerful light source was mounted on the crane, so that the light travelled right along with the airship, providing a constant spot of sunlight reflected off the tail or the nose or wherever we wanted it. We had a moveable parallel about 40 feet high so that the electricians could climb up there and adjust the lights. There was a lot of trial and error involved and it took a good deal of patience to get it rigged correctly, but it worked out fine.

The source that we used for the direct sunlight effect threw cloud shadows onto the airship, adding to the realism. For some effect shots, such as night or dusk, the sky-pans were used. I was using a base level of 300 foot-candles for the pans, but I had them rigged on dimmers so that I could change that. If I wanted to make it dusk, for example, I could bring the level down. In color, of course, you can't go too far in dimming without changing the color temperature drastically, but you can do a certain amount without getting too much into the reds. These dimmers were very helpful in certain shots where we wanted the airship to go from a hot area into another area where it was getting darker.

The miniature was, of course, suspended from the overhead carriage by means of wires, and whenever you have wires you can have problems if you're not very careful. In our first tests they used a very small gauge of cable to hang the miniature, and even though it was very small we had a little trouble with it. Of course, you paint wires to blend in with the background and we were quite successful with that even in our test. But we still weren't quite satisfied with the result, so they rustled around and came up with an even smaller wire that had plenty of strength. There were four wires — two on the bow and two on the stern — and these went up to the overhead traveller.

After they began using this new, smaller wire, the only problems we ran into were when an occasional white cloud would get behind the wires and tend to silhouette them. To solve this, I had a parallel right up behind the camera and out of the line where the airship had to travel. On that parallel were mounted three or four small lighting units. They were not strong enough to affect the lighting on the airship, but they served to front-light the painted wires so that they would blend in with the background and not stand out in silhouette. Of course, there was no problem with wires when the airship was 100 feet away, but as it came close to the camera that's when you could get into trouble and that's when those lights



Clifford Stine, ASC, Director of Photography on the miniatures sequences, lines up a low-angle shot. In this sequence the airship is shown soaring above an area of the north Atlantic which is studded with icebergs. The miniature was highly articulated, with tiny motors and lights that could be remotely controlled from the stage floor.

would take effect. It's actually possible to overlight the wires, also, but against a painted background you can judge the balance by what you see. Against a process screen it's a different problem.

Incidentally, on the same overhead carriage there were controls that could raise the nose of the ship as it was travelling — or you could raise the whole ship if you wanted to. The lights inside the ship's cabins were all controlled by rheostats so that the intensities could be varied for different effects. In some cases we put neutrals on the windows because the lights were too hot. We had little red and green running lights and engine lights and from certain angles they would be too bright, and from other angles not bright enough — so we'd occasionally have to pull them out and set them in slightly different positions.

In the picture the dirigible takes off from Germany at night. It rises by

means of its own lift to a certain elevation and then they are supposed to start the engines to make it move forward.

In shooting it, we had the ship rise and then we started the engines — this was all done from the floor. It was quite tricky to get the right speed for the engines, because we wanted the propellers to strobe, just as they do when you photograph a real prop airplane. If you let the little electric motors go as fast as they would turn, you would see nothing. We worked it out, by means of rheostats, so that the engines would start slowly and not just bang off at full speed. Then we made inserts of the engines as the airship started pulling out and created the illusion of forward movement by moving the camera instead of the miniature. As the camera went by the cabin you could see the silhouettes of little people in the windows. It was a good effect.

Continued on Page 80

INTRODUCING THE CANON ULTRA-FAST ASPHERIC PRIME LENSES FOR 35MM CINEMATOGRAPHY

Specifically designed for professional cinematography, these exciting new lenses are the result of an extensive and painstaking research program jointly undertaken by Canon Inc. and Cinema Products Corporation, in cooperation with the Research Center of the Association of Motion Picture and Television Producers.

Naturally, these lenses incorporate all the latest advances in modern lens technology, including multiple anti-reflective coatings on all elements, floating elements wherever required, etc.

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And, unlike any other series of high speed lenses currently available for motion picture use, every lens in the Canon series is aspheric.



24mm (T1.6)

35mm (T1.4)

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lower, with nothing but neon signs and street lamps for illumination, there's virtually no halation. The Canon aspherics just take the light in: penetrating the scene, holding all the detail.

The Canon aspheric lenses minimize uncontrollable flare (with its concomitant loss in contrast and resolution) and improve the definition and contrast of the scene *regardless of variation of light levels within the scene*. Even at the highest levels of illumination.

The result on film is photography that is remarkably clear and sharp, well defined and well balanced, with good color rendition and saturation, especially with regard to flesh tones.

Which makes the Canon aspheric lenses ideal for filming under any and all light conditions. Night-for-night with available light, as well as in broad daylight, or on a well lit sound stage.

The technological breakthrough

While the theory for the design of aspheric lenses has been known for quite some time[†], it was not until the advent of modern computer technology and the development of computer-controlled automated machinery that it became possible to design and grind aspheric lenses in such a way as to permit *consistent high quality manufacture at a reasonable cost*.

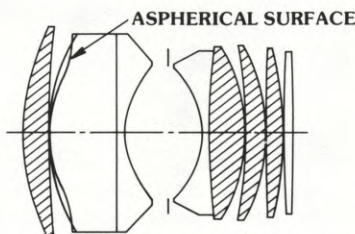
Which is what prompted Canon and Cinema Products to launch a development program for a series of ultra-high-speed aspheric prime lenses, all supplied with BNCR-type mounts, and covering the range of focal lengths most used in professional cinematography: 24mm, 35mm, 55mm and 85mm.

A great deal of money, time and effort went into this program. The final results are more than well worth it.

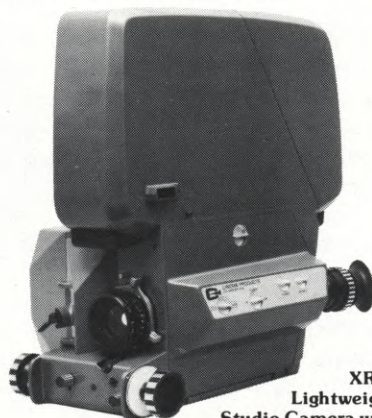
Aspherics — ideal for filming at all light levels

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Arrow points to aspherical surface. The deviation from the normal spherical curve is exaggerated for illustrative purposes.



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[†]Descartes, the French philosopher and mathematician, had already suggested that the use of non-spherical surfaces might reduce optical aberration. That was way back in 1638.

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AN AMERICAN FILM INSTITUTE SEMINAR WITH ERNEST LASZLO, ASC

Academy Award-winning cinematographer discusses elements of his technical expertise with aspiring young film-makers, while recounting background to a long career that is still going strong

As perhaps the most important aspect of education for the Fellows in training as film-makers, historians and critics at its Center for Advanced Film Studies, located in Beverly Hills, California, the American Film Institute sponsors conferences and seminars with top technicians and talent of the Hollywood film industry. These men and women, outstanding professionals in their respective arts and crafts of the Cinema, donate generously of their time and expertise in order to pass on to the potential cinema professionals of tomorrow the benefits of their vast and valuable experience.

In keeping with this tradition, Cameraman's Local 659 (IATSE) sponsors a continuing series of seminars with ace cinematographers. These men — both contemporary working Directors of Photography and some of the now-retired "greats" of the past — meet informally with the Fellows at *Greystone*, the magnificent estate which is the headquarters of the AFI (West), to present valuable information on cinematographic techniques and answer questions posed to them. Very efficiently introducing and moderating each of the individual seminars is "Emmy" Award-winning Director of Photography Howard Schwartz, ASC.

Through a special arrangement with The American Film Institute and Local 659, *American Cinematographer* will, from time to time, publish excerpted

transcripts from these seminars, so that readers of this publication may also receive the benefits of the information conveyed.

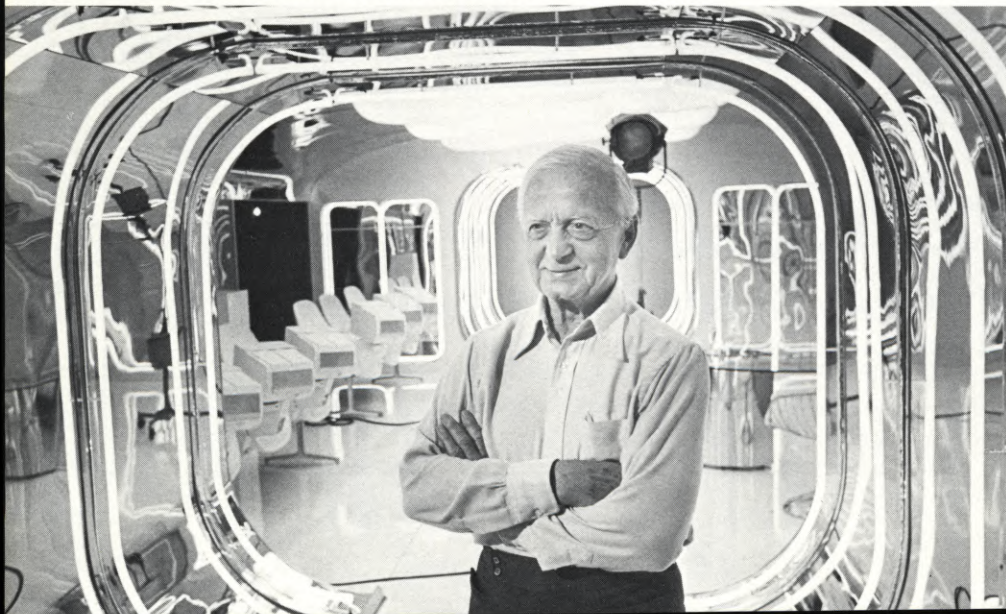
The dialogue which follows represents the essence of the seminar featuring Ernest Laszlo, ASC, winner of the Academy Award for his photography of "SHIP OF FOOLS". The seminar followed a screening of "INHERIT THE WIND", on which he was Director of Photography.

A native of Hungary, Mr. Laszlo came to the United States as a very young man, not knowing a word of English. Starting humbly on the very bottom rung of the motion picture industry ladder, he served a long apprenticeship, learned his craft well, and worked his way up to becoming one of Hollywood's most distinguished cinematographers.

Among the scores of films on which he has served as Director of Photography are such classics as "JUDGMENT AT NUREMBERG", "IT'S A MAD, MAD, MAD, MAD WORLD", "AIRPORT" and, most recently, MGM's spectacular science-fiction epic, "LOGAN'S RUN".

In the following discourse, excerpted from a transcript of his A.F.I. seminar, he shares some of his considerable expertise with the young cinematographers of tomorrow in residence as Fellows of the American Film Institute:

Ernest Laszlo, ASC stands in one of the futuristic sets of MGM's spectacular science-fiction adventure epic, "LOGAN'S RUN", on which he very recently completed his assignment as Director of Photography. A warm and witty gentleman with a charming Old World courtliness, he is a Past President of the American Society of Cinematographers. He is kept as busy as he wants to be and says: "I'm able to be selective . . . I work on pictures that I want to do and that I can be proud of and enthusiastic about."



HOWARD SCHWARTZ: Let's see, we have a list here of a number of Ernie's credits. That'll give you a few other pictures to ask about. He's done **JUDGMENT AT NUREMBERG**, and the last thing Ernie did, after his retirement, he . . .

ERNEST LASZLO: That's wrong. No retirement.

SCHWARTZ: No retirement. That's good.

ERNEST LASZLO: And there never will be a retirement. I love what I'm doing, and, fortunately, I'm able to be selective. In other words, I'm not hungry, and I work on pictures that I want to do and can be proud of and be enthusiastic about. Because if you're not, you know, it's slave labor, and I wouldn't care to be a slave to money.

SCHWARTZ: Well, that's wonderful. That's the best news I've heard. Because I remember a few months ago, you were considering it.

LASZLO: Well, I actually never was, but I didn't want to do anything that I might not be proud of or happy about.

SCHWARTZ: How many nominations have you had?

LASZLO: Seven.

SCHWARTZ: Seven.

LASZLO: Seven to one. Which is not a really good percentage, but it's better than seven to nothing.

AUDIENCE: (Laughter)

SCHWARTZ: A good group. Well, what were some of the other pictures? **NUREMBERG . . .**

LASZLO: With Stanley Kramer, I have done four pictures and part of a fifth. That's how I got acquainted with Stanley because I did part of a picture that was made in Australia. Can you think of the name of it because I can't?

SCHWARTZ: Yes, something about a submarine.

RESPONSE: ON THE BEACH.

LASZLO: Yes. So I did the San Francisco thing where everything is destroyed, and there's no living person and so on and so forth. I worked on it, on that particular sequence, for a week, you know, and we got on really well. So when this picture came up, they asked me to do it, and I rushed and hurried and ran, I was so glad for the opportunity of doing this picture. And then I did JUDGMENT AT NUREMBERG with him and IT'S A MAD, MAD, MAD, MAD WORLD and SHIP OF FOOLS. On every one of these four pictures I was nominated as best photographer. On SHIP OF FOOLS, I made it. Whatever it is. But I must say that, in my opinion, getting a nomination is probably more valuable than getting an Oscar, because the people who make the nominations are your own craftsmen, people who know photography. And when it comes to the finals, then the whole Academy votes, and you can imagine some of the musicians, some of the soundmen, some of the writers — how much do they know about photography? Even some of the directors don't know what good photography is. So, therefore, it's almost like a raffle. I was up for AIRPORT, and in AIRPORT the whole picture takes place in five-and-a-half hours in a blizzard at night — so, consequently, you have to light every single scene. Anybody can do exteriors, but the real test of a Director of Photography is when you get inside and when you have to light. You know, we spent complete nights in Minneapolis-St. Paul working on the airfield. And at times it was 36 degrees below. Also, on this picture — you may not want to hear about this, but I'll tell you anyhow — it's supposed to snow, a blizzard. And even in Minneapolis-St. Paul you can't expect it to snow every night. Even if it does snow, sometimes the flakes are so fine you can't photograph them. So we had to put our own snow in and wind machines and . . . oh, God! So enough of AIRPORT.

QUESTION: This film we saw today here — everyone's probably wondering how you did the split-focus shots that were in it.

LASZLO: For a lot of the split-focus shots, I had to build up the density of the light. A lot of times I worked at an f/5.6 or f/6.3 stop. And we just had to build up. That's the only way to carry focus.

RESPONSE: I would've thought you'd have to go even farther than that, wouldn't you?

LASZLO: I've never had to go any



When Ernest Laszlo (front row, center, with trophy) came to America as a very young man, he spoke no English, only Hungarian, so it was natural that he indulge his passion for football (soccer) by joining the team of the Magyar Athletic Club, of which (as shown here) he became Captain. Later, having learned to "speak American", he also played for the Los Angeles Athletic Club. Still an avid sportsman, his interests these days are directed toward breeding and racing horses.

farther than f/6.3.

SCHWARTZ: Something that was interesting was the fact that when you did stop down, you had just the right amount of fill and it was all balanced, so there wasn't any difference between the shots that were stopped down and the ones that weren't. Which is a pretty good trick to do.

LASZLO: We kept the camera moving, too . . . Of course, you really have to do it in a courtroom. You can't just settle for static shots — you know, cuts here and there. So we moved as much as we could. And, of course, moving the camera and lighting for that did create some problems that we had to overcome, but experience is a great teacher. Every time you see some of your work, you learn. That is why I believe in going and looking at your dailies. Because every time you look at your dailies, you learn something; you find that you've made some mistakes and you can really try and correct them next time.

SCHWARTZ: One of the things I was going to mention, is what Ernie brought up about moving the camera. Something we haven't talked about too much up here is the angle of light, and how, when you do start moving your camera around like that, you have to use a dimmer so you can balance it.

LASZLO: Well, you were able to use a dimmer when doing black and white photography. Now, in color, you don't use a dimmer; you have to get some help from your scrims, and you use

gauzes and diffusion, and so on and so forth, instead of using dimmers.

QUESTION: I read someplace in an old American Cinematographer magazine, and this is an old one, too, that Gregg Toland . . . and a gaffer (had) worked out a dimmer that you could use that wouldn't change the color temperature. And it explained how they did it.

LASZLO: Well, I'd like someone to explain to me how they did it.

RESPONSE: They were using it on arcs.

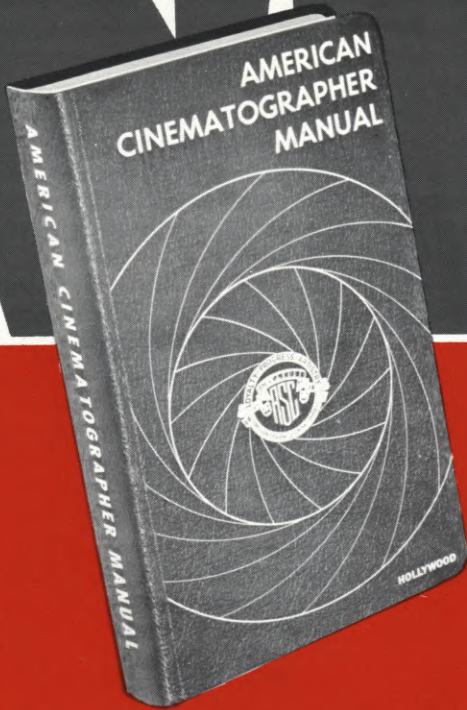
LASZLO: On arcs?

SCHWARTZ: One thing, if you have an overall key light that's fairly strong, and you're using your smaller lights for rimmers and kickers and things like that — well, you can work those pretty well. Because the overall fill, the overall key, will take care of the color temperature in quite a number of instances, but you still have to do a lot of clearing the nets. And then, also, a lot of times you can use dimmers in the sense that when you're off somebody, you can take the light in or out. Sometimes you can do it that way. You still use dimmers, even though you may not use them like you used them in the black and white days. Now you have to combine them with nets.

QUESTION: What would you use a dimmer for during a dolly move?

LASZLO: You know, your key light is
Continued on Page 61

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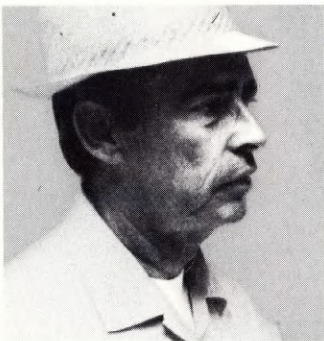
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Film speed enhancement at CFI

Comments by cameramen on CFI's AL200 and AL400 system with EK 5247 negative:

“We wanted to create a documentary look for *Streets of San Francisco*,” says Director of Photography Jacques Marquette A.S.C., in the August *American Cinematographer*.



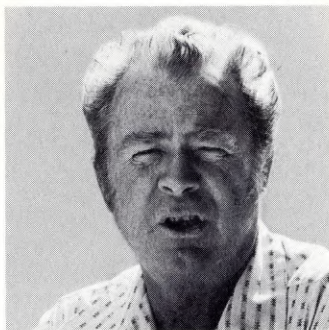
Jacques Marquette A.S.C.

200 or 400 ASA

“Our tests with CFI showed that 5247 could be rated at 200 or 400 ASA, using their AL200 and AL400 process. So we went with that for some location interiors and night scenes.”

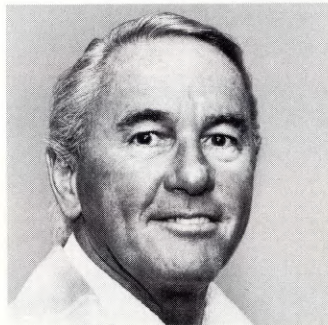
5 foot candles!

“On some problem locations, we were able to light as low as *five* foot candles,” says Mr. Marquette. “In general, minimal lighting gave us the realistic look, *and* it let us make faster setups.”



Jack Swain A.S.C.

Jack Swain A.S.C. says: “Using AL200 saves time and energy. Shooting *Cannon*, I use it all the time for ‘live’ interiors. It looks as good as footage shot at ASA 100.”



Robert Hauser A.S.C.

“On one feature that I shot, I had some 5247 forced at another lab — and there was grain running all over the place,” says Robert Hauser A.S.C.

Choose the lab

“The producers had a deal with that lab. But after I protested, they told me to send the footage for forcing wherever I chose.”

Night at 3 PM

“On another show,” says Mr. Hauser, “We suddenly got a hailstorm at 3 PM. The sky had to be in the background — and it was literally like *night*.”

Off the meter

“I had *one* light, pulled way back to balance the actor’s face against this black sky. I decided to go to AL400 — and even then... the reading was f/1.2.”

ASA 400 day ext

“So once again, I told the producers: If you want this shot, it has to go to CFI. It looked fine.”

CFI

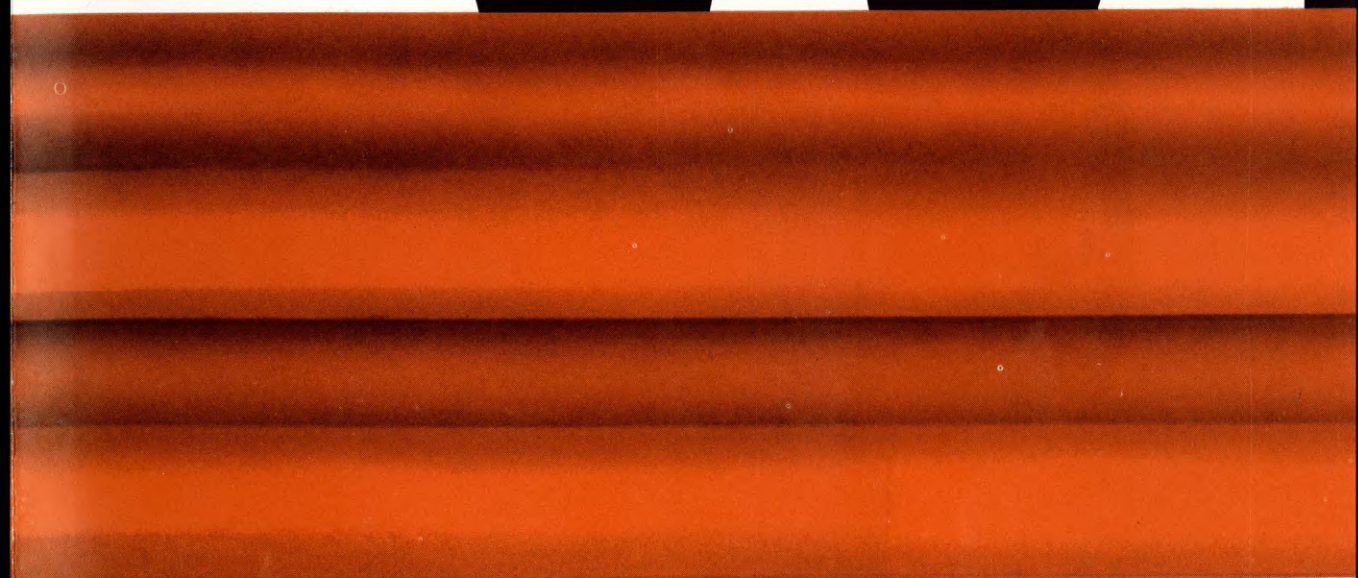
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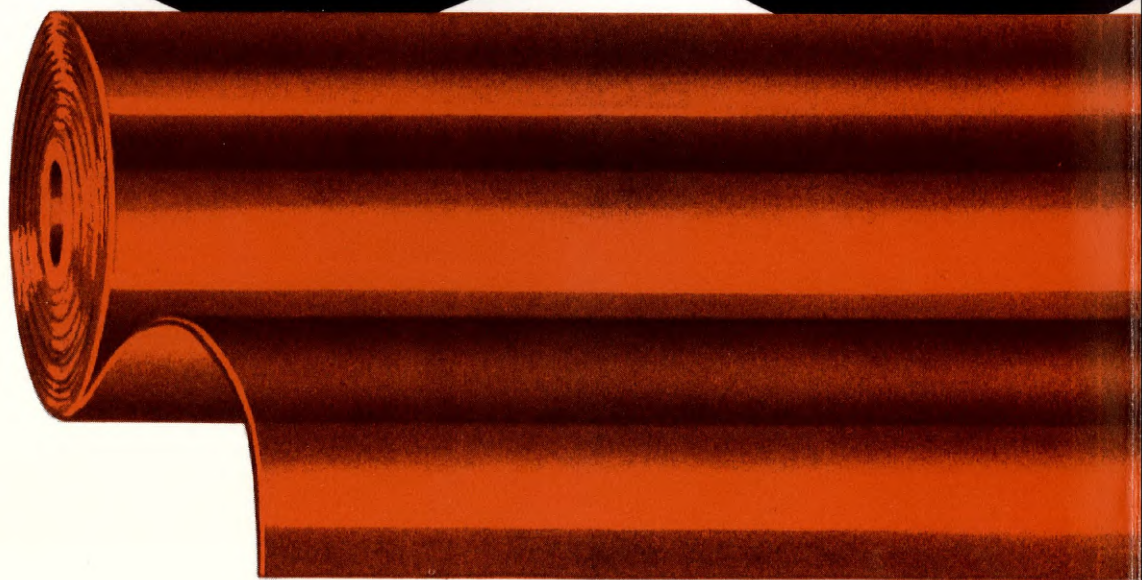
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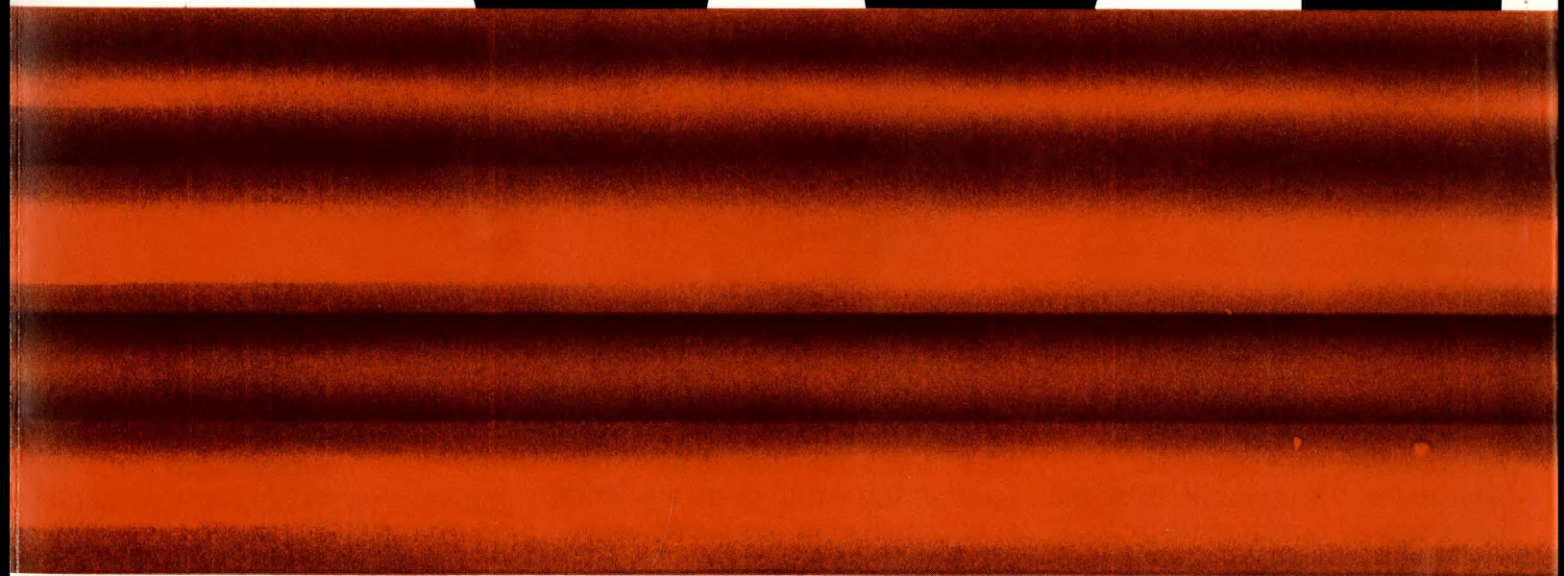
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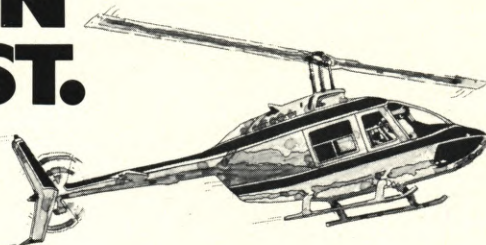
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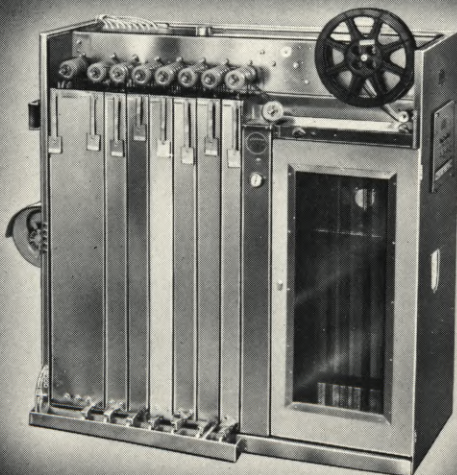
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ERNEST LASZLO AT A.F.I.
Continued from Page 53

naturally a hot light. Now, if you happen to move around to the key light side, it's all flat. It's not very complimentary, you know; it's very dark. So in that case you use a dimmer. And then when you do a 360-degree shot like I did in *JUDGMENT AT NUREMBERG*, I used two key lights. Shooting this way I used the one and as we went around, I used the other one. Actually, what I wanted to show today was a picture called *THE HITLER GANG*. I wanted to show it because that was my first picture as a first cameraman. John Farrow was the producer-director, and he just loved to live on a crane. In that picture we did some crane shots that are just hard to believe. We did a 360-degree shot on Stage 16 at Paramount. It was a Munich beer hall, and that was shot on the largest stage at Paramount. The complete stage was filled with the beer hall, so naturally we couldn't have anything on the floor because as you went around, you'd see it. So we had to light everything from up high. It was a very interesting experience. Now, would you like to know how I became a first cameraman?

RESPONSE: Yes, yes.

LASZLO: Well, I was an operator, you know, for 12 years, and I felt pretty much like some of you fellows feel, pretty discouraged. Will you ever get anywhere? So, again I'm coming back to John Farrow who was a producer-director, and I was an operator. Like I said he loved boom shots, crane shots. So he and I would get on the crane and work out all these shots while the first cameraman was lighting. So one day, John asked me, "Chum," — he was a Canadian — "how do you become a first cameraman?" I said, "John, there's only two ways of doing it. Either some of these old bastards die, or you have a producer ask for you." I realize I'm one of those old bastards now.

RESPONSE: (Laughter)

LASZLO: The interesting thing is that he did ask for me on this picture, *THE HITLER GANG*, and so I was assigned to do it. And the very first day, I got into the studio at 8:00 o'clock and started lighting. We had a shot in an Army hospital, where we open up on a man writing a name down in a book, and then we pull back and we pick up a doctor. We're in a hospital room, a great big, long hospital room, and this doctor goes to the bed and he sits down, and he looks at the man who's

lying there. And the man is Adolph Schicklgruber — which was Adolph Hitler — and he was, at the time, blind and so on and so forth. So then the doctor gets up and comes back, and we wind up on two big heads with these doctors talking about this case.

QUESTION: This is all in one shot?

LASZLO: All in one shot. Oh, that's nothing. However, what happened was that I started at 8:00 o'clock in the morning and when we got this shot it was 3:00 o'clock in the afternoon. So I figured, well, this could be your first and last day, but as it worked out, you know — particularly on John Farrow pictures — never at any time did anyone ask me, "How soon will you be ready?" Which is a great thing, you know? So I had all the time I wanted. Of course, I wanted to do it as quickly and efficiently as possible, but that was a very nice experience. I wish I could have shown you some of those shots. Talking about only long shots, I did another shot which is kind of remarkable on *TWO YEARS BEFORE THE MAST*. We opened up on a transparency background, and a man is supposed to look out for a ship's arrival. So we leave the transparency, and we tilt down and we pick up the hooves of a rider's horse and we finally wind up on the rider. At Paramount Studios, we had this set called the Boston street. So we followed the rider. The rider dismounts and ties his horse up. We're on a crane. On the second story, the ship's owner looks out, waiting for the rider. So the camera starts moving in on the ship's owner on the second story until we get a close shot. He turns, and as he turns, the walls go out and

we're inside his outer office. He dictates to the secretary and so on and so forth. Meanwhile, the horseman who's supposed to make a report comes in and he has some dialogue with him. Then the ship's owner turns — and there's a door about this big in size — so he turns, and again we go to a close shot, and he goes into this office. He opens the door, the walls go out, and we have 12 different camera moves in that office with the little boy and so on. Finally, we end up on an insert of a model of the ship, and from that model we dissolve into the real ship. So that was one shot.

QUESTION: Is that your particular style — to do those kinds of shots?

LASZLO: Well, I'll tell you. As matter of fact, speaking of style, when you are a Director of Photography you have to adapt yourself to all kinds of styles. You must know how to light a comedy, a drama, a musical or anything. You have to know how. Of course, it takes experience, but as far as style is concerned, I like to do them all. I'll use this word which has been overused so many times: it's a "challenge." I like to do a shot like this because it is a challenge.

QUESTION: In this film which we just saw, the style didn't seem to be big like that. It seemed to me that everything you did was to complement what was happening to the actors.

LASZLO: Right. Well, that was due to the size of the courtroom. You could only move so far.

QUESTION: There was a shot that

Laszlo at work on the set during the course of his first job in the motion picture industry, that of Assistant Cameraman for Christy Comedies. He worked unlimited hours for \$20 a week and his duties included: carrying the camera, loading and unloading the movie film, loading and unloading the still plates and shooting the still pictures. He also spent twelve years as an Operator before making the breakthrough to Director of Photography.





Laszlo behind the camera, while working on a series with Director Richard Thorpe at the old Selig Zoo, an animal compound-cum-movie studio which was a favorite shooting locale at the time. Judging from the lion in the foreground, it could just as easily have been an MGM picture. The varied experience he gained at the time, even though grueling, prepared the young Laszlo well for his fabulous career that followed.

goes from hands praying to the porter lighting his cigarette. Was that in the script? How did that shot evolve?

LASZLO: Well, sometimes you improvise. I'll tell you what I do when I'm working with Stanley Kramer. He's really a wonderful person to work with. Generally, what he does is have his sets all built maybe six weeks before the picture starts. And then I come on, and with him and a script girl, we go Scene Number One, and he works out scene number one — Number Two, so on and so forth. It takes about two or three weeks to go through the whole script. But, when you start the picture, you know exactly what you're doing. However, we'd do one thing as a concession to the actors. We'd bring them in about ten days or twelve days before we'd start the picture, and then we'd take them on the set, and we'd tell them just how we'd like the picture shot. If they had any suggestions — and if they were worthwhile suggestions — then we'd change the way we'd do it. So we were flexible. But we knew what we were doing, and for that reason, we were able to do an efficient job. There wasn't much wasted time because we knew what the first shot was, what the second shot was, and so on and so forth. Like I said, I've done four pictures with him and I enjoy working with him.

QUESTION: In the courtroom scene ...

LASZLO: Yes?

QUESTION: ... was that shot pretty much in sequence?

LASZLO: Yes. Yes, it was. It sort of demanded that it be shot in sequence.

QUESTION: All with a single camera?

LASZLO: Yes, all with a single camera.

SCHWARTZ: That's just what I was going to ask. It didn't look like the angles were cheated or anything. It looked like you probably had just one camera in there.

LASZLO: One camera.

SCHWARTZ: Did you have a hand in timing the release print on that?

LASZLO: Well, when I do a picture, I do go to the laboratory, and I sit with the timer and correct the prints.

QUESTION: In black and white photography, do you gray down white shirts and things like that, or do you let white shirts go?

LASZLO: Well, that's a very good question.

RESPONSE: I'm wondering how you control the range.

LASZLO: The range. You know, some

directors and dress designers are crazy about white, white, white. So I let them have white, white, white. But what I do, whenever I have an opportunity, in a closer shot or a medium shot, is put gauze on white to soften it. But I let them have their kicks.

QUESTION: Taking that question about white a little further, in the number of black and white films you've done for Stanley Kramer has there been a lot of use of makeup, excluding character makeup, or do you generally like to work with unadorned flesh?

LASZLO: Well, sometimes, like with Spencer Tracy, naturally, he wore no makeup whatsoever. Fredric March had to wear character makeup. Of course, the girls wore makeup. But the lesser people generally wore no makeup. Also, it depends on the kind of picture you're doing. If you're doing a sophisticated comedy or whatever, then you might have to use makeup. But otherwise, when you do real down-to-earth pictures, the heck with makeup. Makeup generally just gives you a lot of grief.

QUESTION: I have a general question about the low contrast in the film. Someone brought up the problem about carrying the focus, in deep-focus shots, and also about moving the camera. I wondered if using low contrast might make lighting those things easier to get away with in deep focus.

LASZLO: Generally, what you do when you want to carry focus, is to go softer on the important person. Let's say that you would use a 100 key overall; you'd probably use a 60 on the important person, because it helps a great deal to have a dark object. You won't have that much of a problem focusing on it.

QUESTION: I was just wondering if it would be more difficult to sustain depth-of-field in a low key situation?

LASZLO: Well, like I said, whenever there is a great distance between the people you photograph, you build up your key and then stop down to carry focus.

QUESTION: I think you mentioned in the question of moving the camera that you build up the fill ...?

LASZLO: You mean like on a 360-degree angle shot? Is that what you mean?

RESPONSE: Well, on any camera movement: If you build up the fill

enough, you don't have to worry about the key that much.

LASZLO: Well, actually, I don't believe in building the fill, because when you build the fill light up, you'll end up with flat photography.

QUESTION: In your black and white films, did you make much use of contrast filters?

LASZLO: No, no, I didn't, really. Exteriors are a different thing. You have to use filters, to cut the exposure down, but you don't use a high number of filters.

SCHWARTZ: Do you remember after all these years what filter you were using? A 21 maybe outside?

LASZLO: I used a 21.

QUESTION: I can only think of a couple of films I've seen shot by you that have low-key photography. Do you generally use high key?

LASZLO: No, I'm considered a low-key man. In every way.

AUDIENCE: (Laughter)

QUESTION: In BOWERY and BABY THE RAIN MUST FALL, there was striking contrast . . .

SCHWARTZ: Are you talking about key or contrast?

RESPONSE: Contrast.

SCHWARTZ: There's a difference.

LASZLO: You can have a 50 foot-candle key or a 25 foot-candle key, but the important thing is to have balance. That's something that a lot of people don't understand, balance. Also, I might bring up one other point. I was hoping that somebody would ask me if I like reflected lighting or bounce lights and stuff like that.

QUESTION: Do you like bounce lights?

AUDIENCE: (Laughter)

LASZLO: Thank you for asking. I'll answer your question with another question. Did Michelangelo use one big brush?

SCHWARTZ: But he didn't have a production manager.

AUDIENCE: (Laughter)

LASZLO: I believe that motion picture photography supposedly is, and should be, selective. So whenever I use light, I like to use lights of different sizes and sorts, but each light has to have a meaning. You don't just toss in a lot of light and let it go. Because, you know, famous painters didn't do that. They used little brushes and big brushes and everything in between. So I believe that every single light you use on a set should have a purpose. That, as far as I'm concerned, is my answer to bounce light.

QUESTION: Could you mention something about the differences between shooting for television and shooting for film? And do you pay attention to that?

LASZLO: Well, fortunately, I have no experience as far as shooting television is concerned.

QUESTION: The films that you shoot now, do you have any concern because eventually they're going to be on TV?

LASZLO: I really don't care about that.

SCHWARTZ: The thing is that the films that were shot years ago before they knew about television transmit very well because they have balance. And a lot of them that are shot for television today don't transmit so well. So that answers that one. Here's a question.

LASZLO: Yes?

QUESTION: How do you feel about the look of soft lighting? Not if it's just done with a large brush, but if the light is a soft light source? And also if there are lights used like "kickers" or rim lights that give it some depth and clarity, so it isn't just a gray. How do you feel about that?

LASZLO: Well, I think it's possible to use fill light that covers everything and give it some "kickers" and bounce light. But I still don't believe that that's the way to light. I just don't believe it. Like I said, you have to have a purpose. Each lamp you light has to do something for you.

QUESTION: When you see something that's lit soft like that with bounce light, how do you feel? Does it seem unreal to you?

LASZLO: Well, it doesn't seem real to me, truly. It doesn't. Maybe I'm of the old school, but I just don't believe in it.

QUESTION: I'd like to ask you a general question about the "old

school." It's built up a tradition over about 50 years, and the A.S.C. seems to be supporting this in some ways. I wonder what the A.S.C. has done to preserve this style that is now going out of fashion?

LASZLO: You mean about being old-fashioned?

RESPONSE: Well, films like AIRPORT and FUNNY LADY seem like a return to that classic period.

LASZLO: I think we are returning to it somewhat. I honestly believe that we're reaching a turning point where people will go more for entertainment than for sensationalism, like dope and violence and sex and all that nonsense. I really believe that. I think it'll help to bring the lost audience that we had back to the motion picture again.

QUESTION: Do you think we'll be entertained more by good photography?

LASZLO: Well, I would think so. I would hope so.

SCHWARTZ: Ernie, I'd like to say something if I might about that.

LASZLO: Yes.

SCHWARTZ: I think it's interesting to note what's happening to fellows like Zsigmond and Kovacs and John Alonzo, people like this who started out doing commercials and things of this sort, where they used a lot of flat light. Their first features were pretty much that way. They are coming around, and I think it's because they, at first, didn't know this other style of lighting and weren't that familiar with it. They hadn't worked in studios where they had all this equipment available to them and were able to light from parallels and scaffolds and things of that sort. Even some of the directors are coming around, so that now they're not so afraid to use the studios as they used to be; because they were embarrassed by the riches of having a set, and they didn't know what to do with it. As a result, they always wanted to go on location so that nobody could see that they weren't sure what they were doing. I think things have turned around, and a lot of these fellows have come around. A good example is PAPER MOON. There was a beautiful job of photography which was probably the first one that wasn't a soft light job that I've seen Laszlo Kovacs do. I think they're coming around to a more traditional way.

Continued on Page 79

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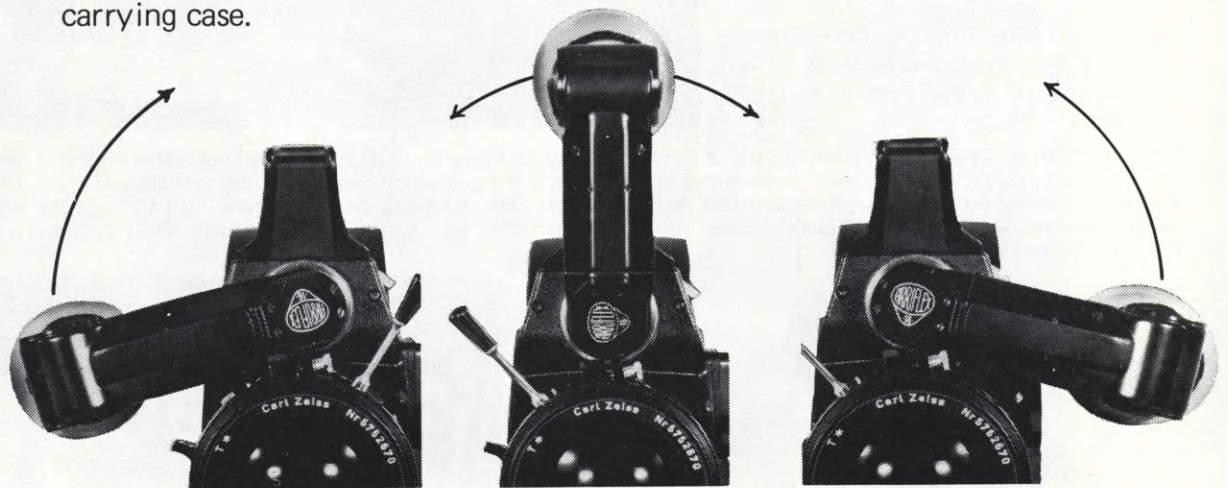
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THE FILMING OF "CHAC (GOD OF RAIN)"

By **ROLANDO KLEIN**

Producer/Director/Writer

The first thing that I am asked about CHAC (GOD OF RAIN) by people who have not seen the movie is whether it is a documentary. Shot under very unusual circumstances, fully on location, with a complete Indian cast in their natural environment, speaking their native dialect, it may sound like an anthropological study of a group of Indians of the South of Mexico. But in reality, CHAC is a normal feature, with a dramatic plot based on old Mayan legends and current traditions of the descendants of that race.

The Mayans had a very rich and colorful mythology. They developed into a very sophisticated culture, with advanced knowledge in astronomy, mathematics and architecture, with a stable government that avoided wars for almost 10 centuries, with methods of agriculture that fed their people and allowed them to build complex cities and ornate pyramids, and develop writing and the arts.

I had a basic script centered around a contemporary village, stricken by a drought, that is forced to revert to its ancestral knowledge to overcome it. I hunted for almost a year, searching for a village that was isolated enough to still hold the Mayan background, but that had easy access by road to allow for the shooting of a film under professional conditions. Finally I settled on the Tzeltal Indians of Tenejapa, a small village in the State of Chiapas near the Guatemalan border, just 25 miles away from San Cristobal de las Casas, a town of 20,000. Through the village president, who spoke perfect Spanish, I started recruiting the cast from the local market, choosing from among the

people who were willing to be photographed. During the first rehearsal I already realized that they were natural actors. Perhaps because most of them had never seen a movie, their purity of mind and unselfconsciousness allowed them to abstract and perform with a kind of natural absorption. We worked on the movement of the scenes for over four months, rewriting the dialog to their own thinking processes and enhancing it with their own superstitions and traditions. During that period I tried

to prepare them also for the hardships of shooting a movie, the need to respect continuity and the confusion of working surrounded by cables, slates, flags and technicians.

Then, in January of '74, during the dry season, we brought down a crew of 25 from the Churubusco Studios, with Alex Phillips, Jr. as Director of Photography and shot for eight weeks on principal photography, and for four extra weeks, with a crew of ten, in faraway inaccessible locations.



(ABOVE RIGHT) "CHAC (THE RAIN GOD)" is about a tribe of primitive Mexican Indians who appeal to their god of rain to end a drought plaguing their village. The "title role" is visualized in this effigy of the god which appears during the rain ceremony. (BELOW LEFT) Young Chilean producer/director/writer Rolando Klein (behind Arriflex 35BL camera), directs a scene. "CHAC" was the big winner at the Virgin Islands Festival, winning "Best Feature", "Best Film of the Americas" and "Best Director" awards. (RIGHT) Director of Photography Alex Phillips, Jr. takes a light reading.



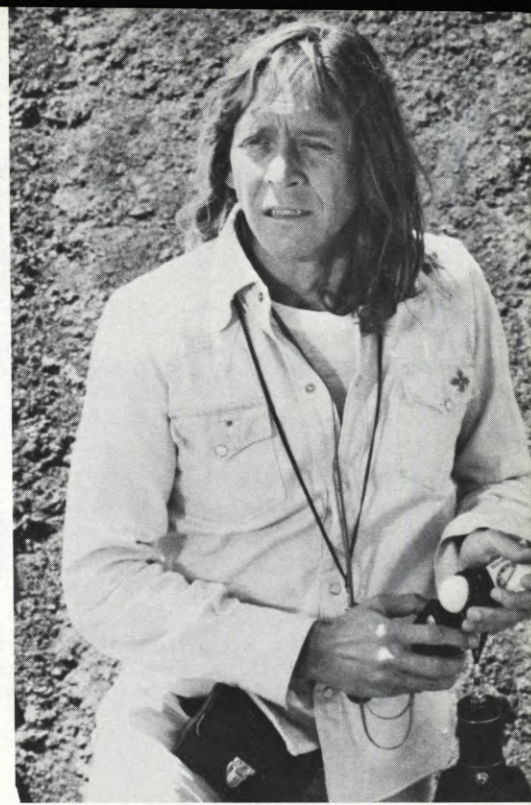


Looking like some sort of Mayan madonna, the face of this Tzeltal Indian woman expresses great strength of character and natural dignity.

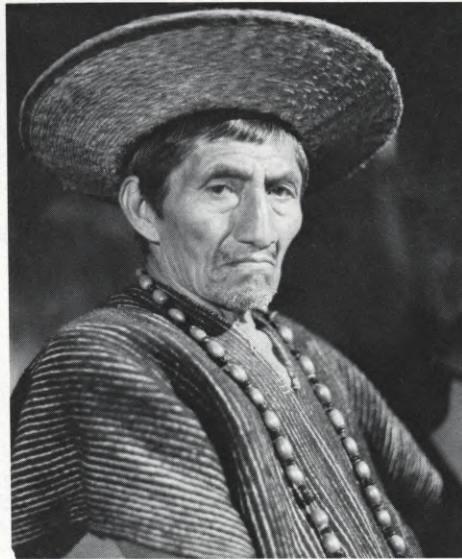
I have to admit that the logistics were very hard to control in those surroundings. I was determined to cover the scenes in a very traditional way. I wanted to create a feeling of timelessness, and for that the photography had to have a classic quality to it. We avoided hand-held shots or improvised set-ups. The actors hit their marks and their movements had to be timed to facilitate a classic editing style. I realized very soon that they would arrive to a peak in performance and, normally, after the fourth or fifth take, become mechanical in their deliveries and movements. I worked around that problem in many ways, sometimes by going to another setup that required the least amount of camera changes, and returning to it later for another try — sometimes by hitting them with new tricks. If I needed an element of surprise, at times the special effects man would prepare blasts of dynamite that would explode unannounced. But basically the emotions that I was asking from them were very primitive (fear, joy, anger, sorrow) in the context of a story they could relate to very well. The problems were compounded when we had to retake the scenes from various angles, while still trying to maintain the freshness of the performances. Nevertheless, we avoided the use of two

cameras, especially inside those tight huts, where camera noise could have affected our sound. (We only used two and three cameras during the big crowd scenes.) We had one Arri BL that, with a couple of heavy blankets suffocating the poor operator, gave us the cleanest quality of sound in interiors. We were dealing with an Indian dialect and we needed perfect sound on every take, because of the impossibility of dubbing afterwards. Besides, the Tzeltal dialect is so exotic and musical, that it adds a complete new dimension of remoteness to the film, and becomes a key mood element.

Mexicans are not used to recording direct sound on location, so the soundman, Bill Kaplan Jr., and the boom operator were the only two crew members that I brought down from the United States. They came down with their Nagra, fought for quality and they got it to such a degree that afterwards the mixers at Todd AO thought that the whole show had been shot on a sound stage. It is true that no jets cross those skies, but it wasn't so easy to keep the



Top Mexican cinematographer Alex Phillips, Jr. is the son of a famed Hollywood cameraman who helped pioneer the Mexican film industry.



(ABOVE) The Tzeltal Indians from the small village of Tenejapa, with their marvelous faces and flair for drama, turned out to be natural actors. (BELOW) Practically the entire village gathers for the sequence where they engage in a complex and authentically based fire ritual to exhort the rain god to come to their aid by ending the drought. Some of the Indians came from distant villages and had to walk three or four hours to make the shooting call each day.



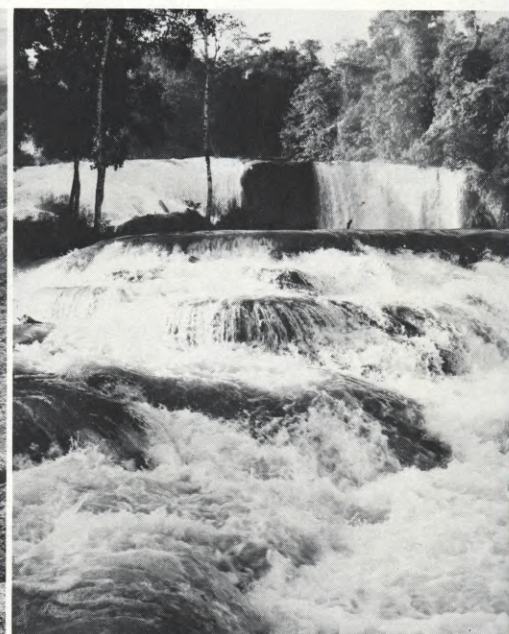
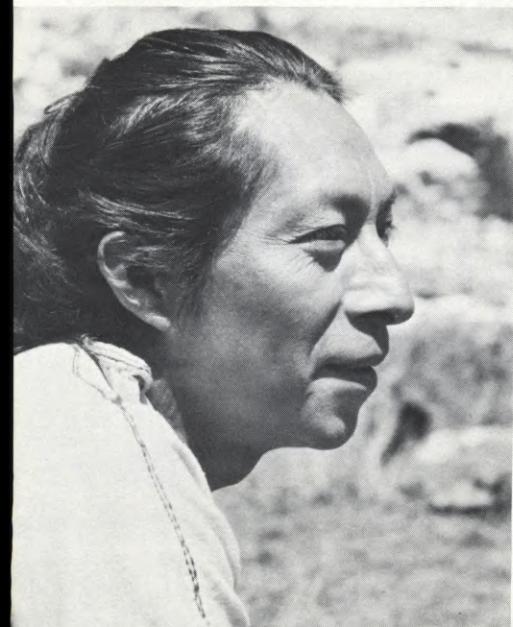


(LEFT) Director of Photography Alex Phillips, Jr. mans the sophisticated Arriflex 35BL camera. Great care was taken to record very clean direct dialogue tracks because, due to the exotic local dialect, it would have been impossible to loop lines later. (RIGHT) Rolando Klein gives instructions to village chief (who spoke Spanish), so that he can pass them on to his fellow "actors" in their own village dialect.

locals from gathering around the set commenting out loud on the strangeness of our frantic operation, while the cameras were rolling. Or simply turning on a radio, to promote a tip, when they picked up on our pleas for silence.

Working with Alex Phillips was another treat. In the beginning I was a little uneasy because I didn't feel that he was getting into the story itself, into the background of the Indians, into what I was into. But Alex is an intuitive person; he immediately grasped the feeling I was trying to convey. Besides, he was extremely inventive with the limited equipment we had. He lit those exterior night sequences with 300 extras, using a few 10Ks. Then, in the interiors, using small units, he re-created the natural feeling of the dark windowless huts. Using little fill, he brought out the rough skins and

Pablo Canche Balam, who plays the diviner (rainmaker) has the same classic Mayan features one sees on pyramids carved by his ancestors centuries ago.

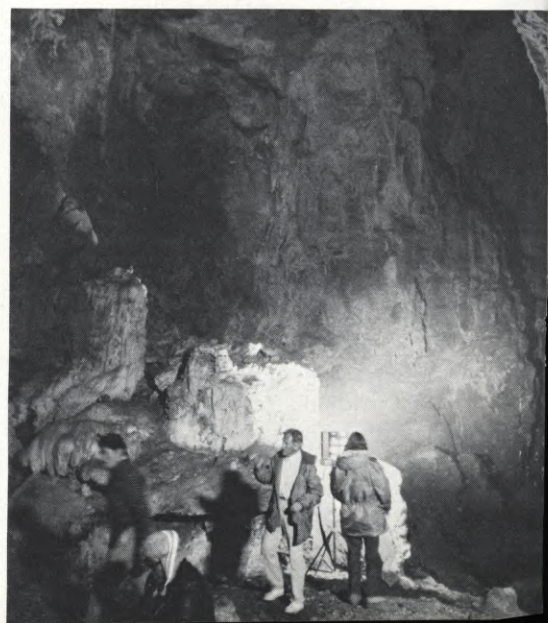


Klein made wonderful use of the natural locales. (ABOVE LEFT) A no-man's-land of volcanic ash. (RIGHT) The magnificent waterfalls of Agua Azul in Chiapas play a key role in sequence where Indians appear to walk on the water. Bridges built for the effect, a few inches above the torrent, were washed out by flood, had to be rebuilt. (BELOW) A cavern used for filming had to receive "clearance" from the gods before it was safe to shoot there.

expressive features of the Indian actors.

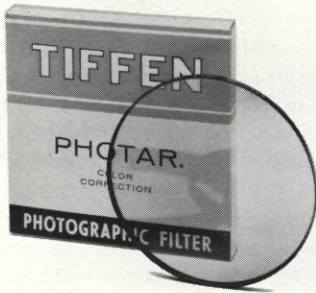
Most of the setups were done with the camera static. We had one complex dolly shot, a four-minute exterior night-for-night take circling in a spiral around the diviner (the rainmaker who supposedly has the powers to end the drought). He is shown telling an enchanting story to a group of men seated in a semi-circle around a fire. Out of plywood we built a track encircling everybody. The Arri mounted on an Elemack dolly with a 25-250 zoom, pivoting around the diviner, starts going round and round as the zoom pulls slowly in. The lights are mounted

Continued on Page 109



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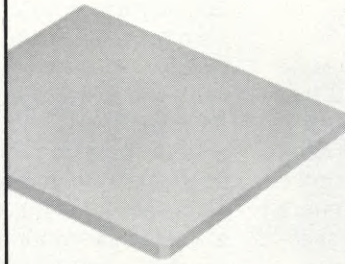
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"HINDENBURG" PRODUCTION

Continued from Page 37

luck. We had badly wanted and needed a technical advisor, somebody who really knew about airships and, hopefully, the *Hindenburg* — somebody who could not only help us with the construction of the ships and the sets, but who could also guide us in terms of the shooting with details about how people acted on board, etc. It happened that there were two or three former captains of the *Hindenburg* still alive in Germany, but none of them spoke English and I didn't want to get into a situation of having to work with a technical advisor through an interpreter. I knew that would be impossible, so I passed it up.

Then, fortunately, we were put in touch with a man named George Lewis who, as a young man in his mid-twenties, had worked on airships for the Goodyear company. At that time the Goodyear Company and the Zeppelin Company had a kind of joint venture going. They envisioned working together to build a growing fleet of airships to carry passengers, so Goodyear sent George and another of their young men to Germany to be around and observe during the entire building of the *Hindenburg*. He was over there for a year and a half, during which time he made up his own book of details, sketches and notes. He had also made about a dozen round trips on the South American run of the *Graf Zeppelin* and three trips on the *Hindenburg*. As a result of all this, he was able to fill in many gaps in our information.

In photographing "THE HINDEN-

Beginning his career as a "gofer" at RKO Studios in the 1930's, Robert Wise worked his way up through the editorial ranks and five years later made his first mark in the industry as Editor of Orson Welles' classic "CITIZEN KANE". His long apprenticeship in the technical phases of production enabled him to become the consummate film-maker that he has remained ever since. Far more interested in quality than quantity, he makes a film only every few years, taking all the time necessary to get the best possible result onto the screen.

BURG", Bob Surtees has done his usual wonderful job of capturing just exactly the right mood and the correct atmosphere on board the airship. He's a marvelous man to work with. The cabins of the dirigible were quite small and were illuminated by just one light in the ceiling, a sort of dome light — so we couldn't use a lot of modeled lighting. He used reflected light and worked it in to look realistically like just an overall light, and to hell with what it might do to the leading lady.

Bob's biggest problem on board the airship was photographing big sections of the interior of the hull, because it was a vast spiderwork of girders with a cover around it. There were huge gas bags hanging from above and no place from which to shoot down the entire length of it. There was no place to hide lights, so we had to have men scramble up like spiders and clip small lighting units to the girders just out of frame. Lighting inside that hull was a tremendous challenge, but Bob always managed to do it. He'd simply say: "It's going to take a little time to rig this one." If I asked for a shot showing the whole works from way back, he'd say: "Fine — we can get it."

The night shots of the interior of the hull had to be lighted for heavy mood and, by contrast, the daylight shots had to be lighted from below to give the feeling of sunlight filtering through the translucent skin of the airship. It was a great challenge, but Bob brought it off magnificently.

Although we were not shooting in an actual situation, our sets were built that way, so there was always the problem of hiding lights. You could raise a little

bit of the ceiling in the dining room but, aside from that, the sets were built like the real thing, so you had to approach them practically as if you were on the actual airship. Bob Surtees managed it beautifully.

Of course, one of the things that is so marvelous about Bob is his spirit of cooperation and his ability to work closely with a man like Al Whitlock. Sometimes you will run into a first cameraman who has some kind of chip on his shoulder about that, but not so with Bob. He's worked with Al before most cooperatively and he did everything he could to help everybody get the best things possible up there on the screen. Al had very special needs and demands in regard to the principal photography, so that it would tie in precisely with the paintings that he would have to do later and it was a big plus for him to be working with a man like Bob, because their relationship was very vital to this picture.

One of the oddities of this film is that we begin and end it with actual footage of the *Hindenburg* (including the famous newsreel scenes of the disaster) and that footage is in small-screen black and white, while the entire main body of the film is in anamorphic Panavision and color.

We start the picture with a three-minute small-screen black and white Universal Newsreel featurette announcing the maiden voyage of the second year of travel of the *Hindenburg*, which is scheduled to arrive in Lakehurst, New Jersey, the following week. Then we go into a short background sequence about lighter-than-air travel, bringing it quickly up to date. We felt this was necessary because we discovered that so many young people don't know what a dirigible is. They think it's the Goodyear blimp and they have no idea that 50 or 60 people would routinely fly as passengers across the Atlantic in one of these airships.

So we open in black and white, ending the segment with footage showing the building of the *Hindenburg* and then we go to wide-screen color shots of the ship in flight, with titles superimposed.

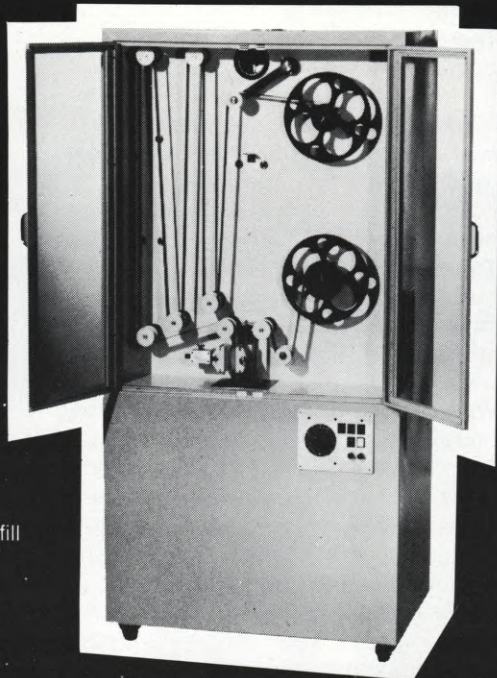
Later we get down to the end of the film and the time of the crash. We found, in planning this sequence, that in spite of the tremendous talent of our technicians, there was no way we could hope to reproduce with miniatures or trick effects the realistic impact of what happened. There were about three newsreels covering it, actually, and this footage is just so real and so sensational that we felt right from the beginning that there was nothing we could do

Continued on Page 102



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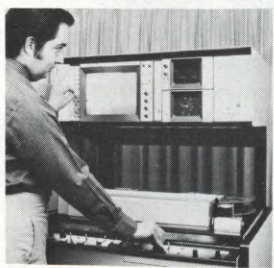
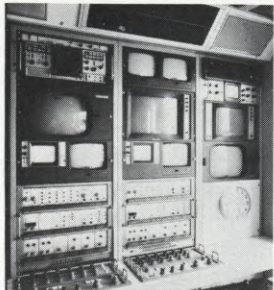
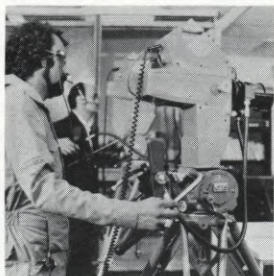
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FLYING JIGSAW PUZZLE

Continued from Page 45

them for further weight reduction, but each piece had a little roll on the edge, which made it very stiff, so that when all of these were assembled the structure became very strong. However, the frame itself wasn't a rigid thing. It had some give in it, very much like an airplane wing.

The frame was covered with a muslin-type of material that was laced onto the ship in six sections. It was painted first with a red oxide type of paint that was brushed on, not sprayed. Then it was given about three coats of aluminum paint, which wasn't composed of just thinner and aluminum; it had something else in it. However, the aluminum was so light that you could actually see shapes through the skin. For example, it would be possible to see clouds through it if you happened to be in the bottom section of the ship — or when there was lightning, you could see the flashes.

There were a couple of catwalks that ran the entire length of the ship and one of these was extremely narrow. If you weren't careful, and happened to step off to the side, you could fall right through the bottom of the ship. There was another catwalk that ran from the nose to the tail and they used this one

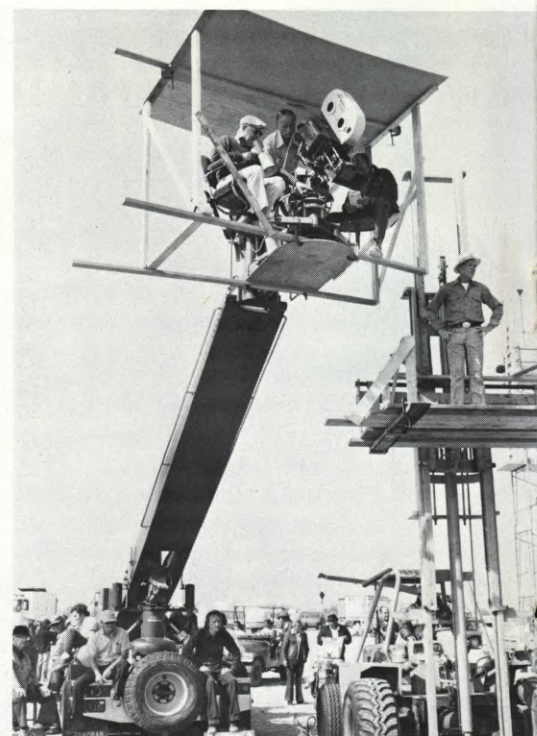
to inspect the gas bags for leaks, or whatever. There were three ladders that connected the lower catwalk to the middle catwalk, so that they could go up and travel the full length of the ship. There were also vents that ran from the bottom right out through the top.

The gondola, the actual nerve center of the airship, was not very large. It was only about 36 feet long and eight feet wide and tapered back almost to a point. The only people allowed in there were the officers and crew members. The members of the crew slept in the hull section. Their bunks were built in canvas-covered areas right over the structure of the ship itself and they were surrounded by the gas bags. Whereas, in the passenger section, there was a topping between the gas bags and the ceiling, to serve as a sort of shield, the crew members were literally surrounded by the gas bags. I imagine it was sort of scary, being hemmed in by all that hydrogen.

The Hindenburg carried fifty passengers originally. Later on they added a few more staterooms in the area down below. I believe that on the last crossing there were 96 people aboard, 50 of whom were passengers and the rest crew.

The kitchen was down in the section near the bar, but since the script had no action taking place in the kitchen, we

Producer/director Robert Wise examines authentic photographs of the actual Hindenburg. Prints were obtained from the lighter-than-air museum in Friedrichshafen, Germany and from the private collections of individuals who had flown aboard the Hindenburg or had some official connection with the dirigible. The museum had no blueprints of the airship available (or so they said) and the Production Designer had to work from small sections of struts put together.



The searching eye of the mobile camera, often moving in very close, demanded the utmost authenticity in the details of the production design.

didn't show it. They did have a full kitchen, although it was not large and they serviced the dining room directly above it by means of a dumbwaiter.

This film was completely story-boarded. Every scene was sketched out in advance. Al Whitlock, who is the best in the business, did a lot of matte paintings for various scenes and, in order to keep the picture in continuity, we had to work closely together. He couldn't go off and just do a shot; it had to be what was planned to fit the story. Certainly the actual work was his own, but all of the scenes were in story-board form.

The Director of Photography, Bob Surtees, and I also worked very closely together, just as we have on several other pictures. He's just marvelous to work with.

Even though the main sets were aboard the dirigible, there were a few others on solid ground and the most interesting of these was The Hofbrau. It was the place where all the people would meet before taking off, and it was supposedly near the airfield, which was outside of Frankfurt. That place is no longer in existence. There wasn't even the old hangar that the *Hindenburg* took off from. Everything was destroyed during the war period.

That left us with nothing that we could bring over from Germany to help us. It had all disappeared. Everything that went into the airship had to be constructed, because they just didn't have anything. ■

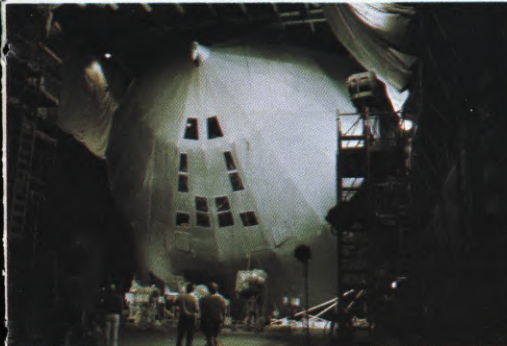




(LEFT) In a scene from the film, officers of the Hindenburg observe the airship's flight from the gondola control center. This set, authentic in every detail, was 8 feet wide and 36 feet long, tapering to a point at the rear. (CENTER) The dirigible, in miniature form, flies against a vast background on the sound stage. (RIGHT) Interiors of the airship are sparse and functional, just as they were in the actual craft.



(ABOVE LEFT) In a set depicting an actual hofbrau of the time located near the Frankfurt airfield, those about to make the last flight of the Hindenburg toast their voyage. (CENTER) The dining salon of the Hindenburg was 50 feet long and lined with windows along the outer side. (RIGHT) Passengers are entertained with a piano concert in the airship's lounge. The piano shown here was made of aluminum and covered with pigskin. (BELOW LEFT) The full-size nose-cone section of the craft was reconstructed on a Universal sound stage. (CENTER) Draperies simulate the cluster of gas bags buoying the craft. (RIGHT) The spiderweb aluminum maze of the airship's substructure.



(LEFT) George C. Scott climbs up one of the several vents which ran to the top of the airship. (CENTER) The complex superstructure of the craft was reproduced from photographs and small sections assembled in a German museum. (LEFT) Wreckage of the metal substructure as it smolders after the crash. Every scene in this film was story-boarded in advance of shooting.



**BEHIND THE SCENES OF
"THE HINDENBURG"**

Continued from Page 47

aluminum beams held together the enormous keel with its catwalks and ladders leading from the captain's room and control gondola forward to the crew room, the radio room, mail-room, passenger quarters, freight rooms, engines and control stabilizers aft. The Hindenburg's cruising range was 10,000 miles at the speed of 80 knots from four 13,270 h.p. diesel engines, and much farther at reduced speeds.

A scene from "THE HINDENBURG" showing Universal Newsreel cameramen of the time filming the arrival of the airship at Lakehurst, New Jersey. The footage which they shot as the giant dirigible burned and crashed is among the most dramatic news coverage of all time and is now regarded as a journalistic classic. It is used in the film to trigger the climactic sequence.

Access to the ship was via two retractable stairways lowered to permit passengers to ascend to B Deck, then continue up another large stairway to A Deck with its staterooms, each containing two berths. The public rooms for the passengers were located on A Deck; an electric kitchen over which the head chef and his five assistants presided, toilets, washrooms, showers and the smoking room were on B Deck.

The Hindenburg alone of all the Zeppelins featured a special fire-proof smoking room, equipped with one electric lighter. It was air-pressurized



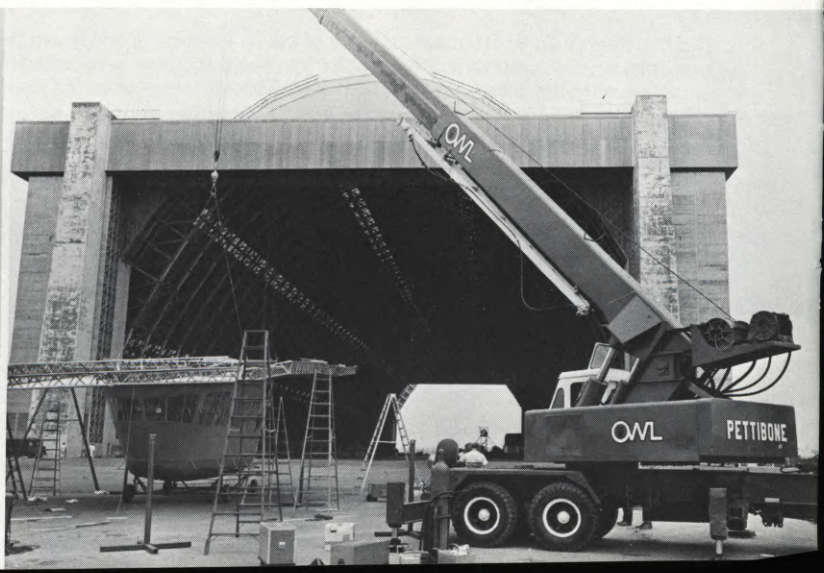
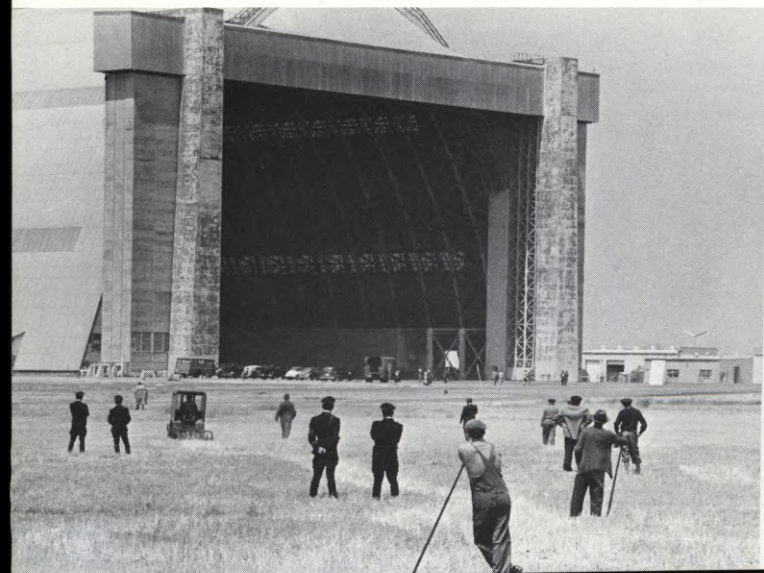
A stuntman, portraying a passenger, leaps or is ejected from the gondola of the dirigible as it explodes. The craft was 200 feet above ground at the time.

against the entrance of hydrogen with an air lock, but the "No Smoking" edict was enforced elsewhere in the ship.

From its first voyage to its last, the Hindenburg attracted passengers from all over the world and on one trip there were eleven different nationalities represented. Among the 1,042 travelers who crossed the Atlantic on the Hindenburg during her 14 months in service were Douglas Fairbanks, Sr. and his wife, the former Lady Ashley; prizefighter Max Schmeling (after defeating Joe Louis); New York Times correspondent Lady Grace Drummond Hay; explorer Sir Hubert Wilkins and Lady Wilkins; Carl von Weigand, of the Hearst Press, and Louis P. Lochner, of the Associated Press; Mr. and Mrs. Gardner Cowles (he was executive editor of the Des Moines Register at the time); Ben Smith, famous Wall Street operator; Roger D. Lapham, president



(LEFT) A scene shot to be enhanced later with the addition of a matte painting by skilled Universal artist Albert Whitlock. In the final scene the Hindenburg itself stands in the entrance to this giant hangar (filmed at El Toro Marine Air Base) as curious workers and German police watch. (RIGHT) A giant crane lowers into position a full-size gondola section of the airship. Whitlock later painted in the underbelly of the dirigible.



COMPARATIVE SIZES



Boeing 707



Blue Whale



Atlas Mercury



Hindenburg



Washington Monument



Queen Mary

of the American Steamship Lines; British financier Norman Holden; Elliot White Springs, pursuit pilot in the Canadian Air Force and author of the best seller "War Birds"; and Captain Otto Forster, Luftwaffe, a one-time member of Baron Ferdinand von Richthofen's Flying Circus Squadron.

A group of 84 top American financiers, industrialists, government officials and newspapermen were invited by Dr. Hugo Eckener, head of the German Zeppelin Company, for a

special one-day flight over New England on October 9, 1936. Aboard were Nelson Rockefeller, Winthrop Aldrich, Thomas Carter, four admirals, two generals, government officials, aviation leaders and the heads of many top American corporations. The formation of the German-American Zeppelin Company, with plans to operate four airships on the transatlantic route, was assured the same day.

Cargo and mail were important to

commercial operations on the Hindenburg and the Graf Zeppelin. Paris fashions were rushed to the United States on the sister vessels. Valuable animals, including gorillas, horses and alligators, were shipped to the U.S. via the fastest form of transatlantic transportation. On one Graf Zeppelin flight, a total of 101,683 pieces of mail was carried. Three stamps, picturing the Graf Zeppelin in flight went on sale in 1930: 65¢ for postcards and \$1.30 for **Continued on Page 96**

(LEFT) In a scene of chaos at the Lakehurst, New Jersey airport, the nose cone section of the airship burns furiously, as survivors and those trying to aid them scurry about in panic. **(RIGHT)** The charred skeleton of the once-proud airship stands in ghostly silence against the sky. This disaster marked the demise of the giant dirigibles, but today there is renewed interest in constructing lighter-than-air craft of this type.



THE VIRGIN ISLANDS INTERNATIONAL FILM FESTIVAL

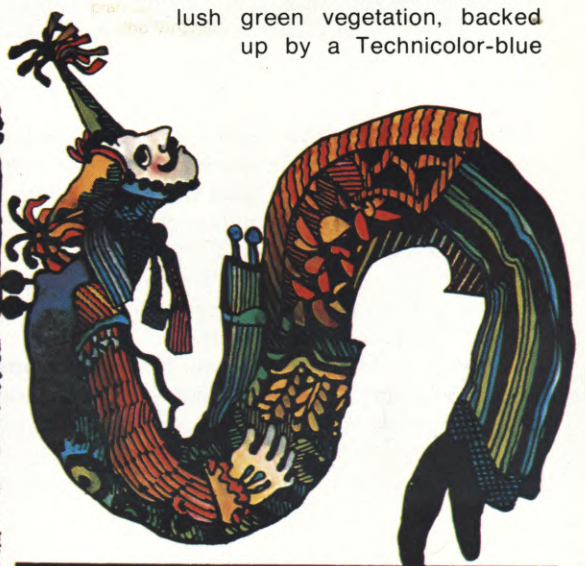
"THE FESTIVAL OF THE AMERICAS"

A famous international film festival, transplanted lock, stock and barrel to a distant locale, scores a spectacular success in its Caribbean debut

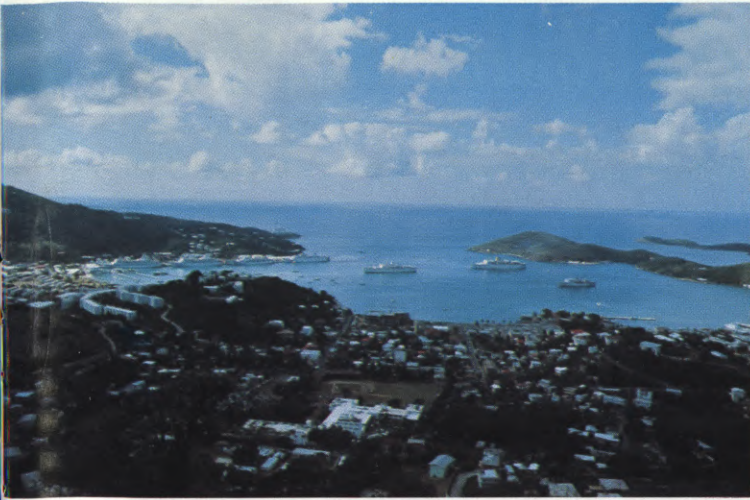
By HERB A. LIGHTMAN

ST. THOMAS, U.S. Virgin Islands

I step off the plane at the St. Thomas airport and am dazzled by the sight. Stretched across the facade of the air terminal is a gigantic banner with huge letters proclaiming: "WELCOME TO THE VIRGIN ISLANDS INTERNATIONAL FILM FESTIVAL". The sun shines in golden radiance on mountains covered with lush green vegetation, backed up by a Technicolor-blue



VIRGIN ISLANDS
NATIONAL FILM FESTIVAL
The Festival of Competition and Participation
The Festival of the Caribbean
The Festival of the Americas



(LEFT) A view of the harbor on St. Thomas, United States Virgin Islands, looking west from the mountains. This spectacular setting provided a Riviera-like atmosphere for the new Virgin Islands Film Festival, until very recently the Atlanta International Film Festival. **(RIGHT)** An amphibious aircraft of Antilles Air Boats, the largest seaplane airline in the world, lands on waters of the picturesque harbor. Only a few hours from major North and South American cities by jet, the U.S. Virgin Islands offer a Free Port atmosphere of unexcelled beauty.

sky full of puffy clouds. The temperature is a perfect 72 degrees, cooled by the gentle trade winds. Inside the terminal all is color and excitement. The spectacular posters of the festival adorn all the walls. Streamers of multi-colored material festoon the ceiling. There is a vibrant, almost Carnival atmosphere — vital, colorful, alive! Young aides and guides of the Festival surround the welcoming booth. Two of them — a his and hers — recognize me and say they have come to “collect” me and take me to my hotel. They welcome me, find my luggage, load it into the car — and we are off.

We drive past the magnificent crescent of St. Thomas harbor, where seven gleaming white cruise liners and countless smaller boats float on the turquoise-colored water. The traffic flows on the left side of the street (British style), but all the vehicles are left-hand drive (American style) — enough to drive a proper Englishman up a stump. The license plates read: “U.S. VIRGIN ISLANDS — AMERICAN PARADISE”. A “paradise” they assuredly would appear to be — any lotus-eater’s dream of a tropical never-never land. And “American” they are, too — a territory, not a state — but very foreign in many ways — barring the ubiquitous *MacDonalds*, *Dairy Queen* and *Colonel Sanders*. The older architecture is definitely European — evidence of the several flags which have flown over these islands through the centuries (Spain, England, France, Holland, the Knights of Malta, Denmark).

The town of Charlotte Amalie — the *only* town on St. Thomas — was named after the consort of a Danish king in the 18th Century and shows vestiges of several cultures, mixed in with the



The sleek new Frenchmans Reef Hotel, stunningly set on its own peninsula jutting out into the incredibly blue and clear waters of the Caribbean, served as headquarters for the Virgin Islands International Film Festival, as well as a billet for some of the invited guests. Others stayed at the very atmospheric Bluebeard’s Castle (said to be the former lair of the famed pirate of that name) and the Limetree Inn.

More than 700 film-makers, industry personalities, world press, producers and distributors gathered in the Grand Ballroom of the Frenchmans Reef Hotel for the final awards dinner. The list of movie stars present included Peter Graves (“MISSION IMPOSSIBLE”), Jason Miller (“THE EXORCIST”), Roy Scheider (“JAWS”), Ingrid Thulin (“CRIES AND WHISPERS”) and the ever-popular perennial “starlet”, Edy Williams (“BEYOND THE VALLEY OF THE DOLLS”).



modern buildings. The natives, anything but restless, are friendly, smiling, hang-loose folk who move to a beat that matches the lilt of their *calypso* speech.

But what am I doing here? And what's all this about a film festival? Well, for the first time in the history of such events, a major film festival (the erstwhile Atlanta International Film Festival) has moved lock, stock and barrel to another locale.

But why the Caribbean?

Why not? Looking about me, I'm convinced this is a perfect place for a

The top award, Golden Venus, for Best Film of the Festival was awarded to Jan Kadar's very touching Columbia Film, "LIES MY FATHER TOLD ME".



Win deLugo (LEFT) and Eric Matthews (RIGHT), of the Virgin Islands Film Promotion Office, shown at the Grand Awards Gala. It was through their initiative that the former Atlanta International Film Festival made its move to the Virgin Islands. Their office is set up to aid in every way production people who wish to shoot film or television in the islands. Both being filmmakers themselves, they have a unique appreciation of the problems involved and how to solve them.

VIRGIN ISLANDS INTERNATIONAL FILM FESTIVAL



film festival, an orgy, or whatever else you may have in mind.

J. Hunter Todd, the Festival's ebullient President and Founder, explains: "The Festival is moving for two major reasons: First, unprecedented backing, support and interest from all sectors of the U.S. Virgin Islands, including government, business, the private sector and concerned individuals. And second, the Virgin Islands offer to the film-maker a fantastic and unique setting for an international festival and Film Market. The beauty and excitement of the United States Virgin Islands exceed that of the locale of any other world film festival, including the Riviera."

I'll go with that.

"But where the hell are the Virgin Islands?" I asked myself, when first I heard of the move. The word "virgin" sounded vaguely familiar, an echo from my distant past. But where are they?

"They" (and there are *British Virgin Islands* nearby, as well) are at the east-

ern extreme of the Caribbean Sea, with the Atlantic Ocean on the other side of the islands.

To be a bit more specific, the United States Virgin Islands lie approximately 1,450 miles southeast of New York, 1,000 miles east of Florida and 40 miles east of Puerto Rico. They consist of three large inhabited islands (St. Thomas, St. John and St. Croix) and many small "cays" (pronounced "keys").

Discovered by Columbus in 1493 (his second voyage), they became a U.S. Territory in 1917, after purchase from Denmark for \$25,000,000. St. Croix (84 square miles) is the largest of the three, but St. Thomas (28 square miles) is where most of the action is — including the Film Festival. St. John (also 28 square miles) is a perfect gem of an island. Very mountainous, with a population of only 2,000, half of its area comprises the Virgin Islands National Park.

Continued on Page 81

(LEFT) Festival President and Founder J. Hunter Todd addresses the capacity crowd at the Grand Awards Gala. At left are Virgin Islands Governor Cyril E. King and Mrs. King. (RIGHT) Roy Schneider, star of "JAWS" and the ever-popular perennial "starlet", Edy Williams ("BEYOND THE VALLEY OF THE DOLLS") enjoy a light moment at the Gala. Entertainment for the chic event was provided by the Virgin Islands Ballet company.



ERNEST LASZLO AT A.F.I.

Continued from Page 63

LASZLO: Well, also, too, I think they've gained experience, which is a very important factor.

QUESTION: I can see that happening. But what I want to get at is how does the A.S.C. set standards and influence people to maintain certain standards?

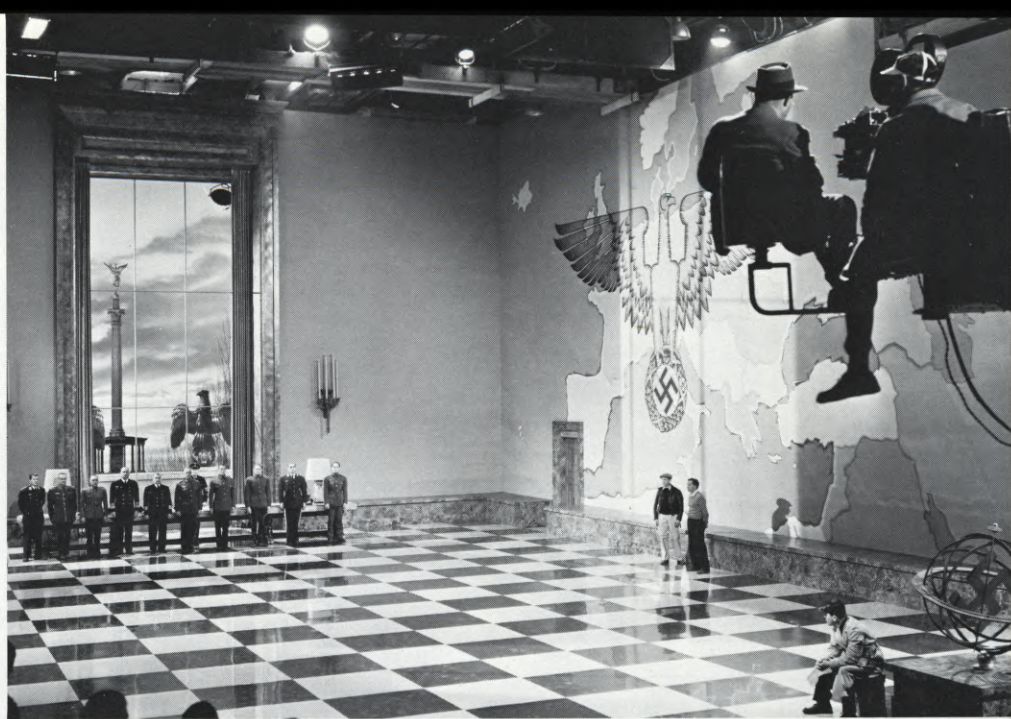
LASZLO: Well, we do not have any schools to teach photography, but we do have technical programs, so that any time any new equipment comes out, we have demonstrations. Just recently we had a showing of the new Eastman film. They told us all about how to force and what to do and what not to do. They don't approve of forcing it too much, maybe one stop. Although we are not a club, we are very interested in photography. In our magazine, we're trying to not necessarily teach people, but to tell people what is happening and what we're doing and how it's being done.

QUESTION: Have you had a gaffer with you over a period of time?

LASZLO: I have had such a gaffer. When I was at Paramount and after I left Paramount, I had a gaffer who worked with me for over 12 years. And if you believe or don't believe in mental telepathy, all I had to do was think about something I wanted, and he was out there doing it. Unfortunately, he's had a heart attack, several heart attacks, so he's retired. So everytime I do a picture now, I have a different gaffer always, and so far I've decided that I will change gaffers every time.

QUESTION: Do you find that a hard change to make — every time you use a new gaffer?

*LASZLO: No, it isn't hard, and I'll tell you why it isn't hard. I'm lighting. The gaffer is doing what I want him to do, and there's no questions asked. I'll just give you an example. I was doing *JUDGMENT AT NUREMBERG*, and I had a gaffer who had worked with me on one picture, and he seemed to be very, very fine. So I came back one day from lunch, and the gaffer was generally late, so I sat down and I'm sitting next to a young lady, and she asks me, "Where's the lighting director?" I said, "Who? The lighting director? Who's the lighting director?" So, anyway, to make a long story short, that was the last picture that he did with me. Because I believe in doing my own thing, and if*



A scene on the set of "THE HITLER GANG" at Paramount Studios, Ernest Laszlo's first feature as Director of Photography. He was promoted to the position at the request of Director John Farrow, with whom he had made several films as Operator. Farrow was addicted to complex crane shots, which Laszlo regarded as a stimulating challenge. On this picture, the harsh undercurrents of the subject matter inspired him to adopt an unorthodox, but highly effective photographic technique — he used no fill light in the entire picture.

you ever become a Director of Photography, I'd advise you to try not to copy anyone. Do your own thing, and be the boss, because it's your stuff that shows on the screen, and not the gaffer's.

SCHWARTZ: It's your own responsibility. When they go in there and look at the stuff, if it's good, you get credit for it, and if it's bad, you take the rap.

LASZLO: You can't say, "Well, my lighting director did it."

QUESTION: I would like to know what you think is the best way for a young person to break into becoming a cinematographer?

LASZLO: I can't tell you how to become a first cameraman. But I can only tell you, though, that if and when the opportunity arises, you'd better be ready. You know what I mean? In other words, work hard, learn all you can, get all the experience you can, so that when you do get the opportunity, you can do a good job.

QUESTION: What kind of advice do you have for a young cameraman when, for example, this young cameraman gets an opportunity with a temperamental or dictator-type director...

LASZLO: What to do?

QUESTION: ... that type of director or the prima donna type actor or actress?

How do you control your blood pressure?

LASZLO: Well, for a young man, for a young cameraman who is starting in the business, I would advise you to take all you can. But I know that if it happened to me, I'd tell the director to go to hell.

RESPONSE: Yes, but you are established now.

LASZLO: I know. Right, right. That's the reason I'm saying take all you can, but don't lose your dignity. Because when you do lose your dignity, that means your crew and everybody will look down on you. So stand up for your rights... and if you get fired, you have a clear conscience. You've got no job, but...

AUDIENCE: (Laughter)

QUESTION: In terms of learning the many things a Director of Photography needs to know, is there any particular position on a crew that a person should try to get into in order to see the most and learn the most?

LASZLO: Well, I would say no. I don't think you can learn by watching. I really don't think so, because, then, when you're watching, you're trying to learn the way a certain Director of Photography's working. That's what I'm saying. Imagination is the most important part of being a Director of Photography.

Continued on Page 108



Three different backings were needed to give a variety of moods for the miniature as it made its way across the 200-foot length of its traverse. (LEFT) A plain background was used for "normal" sky effects. (RIGHT) A backing with painted clouds was used for many sequences, including a storm. The miniature was supported by four thin wires which had to be carefully painted and lighted so that they would not be visible in the actual scenes.

HINDENBURG FLIES AGAIN Continued from Page 49

We used three different backings. We had a normal sky backing, a sunset backing and a stormy cloud backing. When we wanted night effects, we would simply dim down the lights and sometimes virtually silhouette the dirigible. For moonlight, we racked the lights up so that there was just a little glow on top of the airship.

In this picture — as I do whenever I'm shooting miniatures — I put a very light fog filter in front of the lens. It doesn't look like fog. It creates only a very slight veil that you can hardly see, but this gives a little more depth to the illusion. In reality, no matter how clear the day is, there's always a certain amount of atmosphere and, in shooting miniatures, if you don't put some little fog in front of the lens, they get too sharp and lose their reality. This filter also helps solve the wire problem.

I haven't seen the final cut of "THE HINDENBURG" yet, but I was talking to the editor and he was telling me how well everything cut together. As far as he's concerned, there's not a flaw in it — and that includes Al Whitlock's matte shots, our miniatures and the combinations of miniatures and mattes. He said that it had all worked out very well.

"THE HINDENBURG" was a

fascinating project to work on, and I'm very happy to have had the opportunity to work with Robert Wise. We've been good friends for many years. I've known Bob since he was an assistant editor and he's always been a fine

person. I wouldn't hope to work for a more pleasant producer/director than Bob Wise. I've always liked working with a director who is a stickler for as much perfection as it's possible to get — and who can still be a nice guy. ■

The Hindenburg in miniature moves out of storm clouds into the clear sunlight. In addition to the clouds painted on the backing, moving actual clouds were created by lining the floor of the sound stage with dry ice. These scenes were shot at 48 frames per second in order to slow down the cloud movements to a realistic pace. Lights providing a single sunlight source were on a movable platform that moved with the miniature.





Movie magic wizard Linwood Dunn, ASC, shown here with daughter Nancy, presented his fascinating Motion Picture Special Effects Seminar to a most appreciative audience.



(ABOVE) J. Hunter Todd and Peter Graves ("MISSION IMPOSSIBLE"), shown with Golden Venus statuette. (BELOW) Famed cinematographer Lee Garmes, ASC chats with fan following his seminar.



VIRGIN ISLANDS FESTIVAL Continued from Page 78

I get a warm welcome from Hunter Todd (absolutely bubbling over at the prospect of having the Festival in such a fabulous place) and an even warmer welcome (with kiss) from the blonde and beautiful Rikki Kipple, Assistant Director of the event.

Hunter tells me that there are more than 2,100 films entered in the six major categories (and almost 60 sub-categories) and that 38 nations are represented. Sixty features and 200 shorts will be screened in the next ten days, with programs at the Cinema One Theatre in town and the Grand Ballroom of the Frenchman's Reef Hotel.

Todd says that, concurrent with the regular Festival screenings, there will be continuous Film Market screenings at Bluebeard's Castle. "Uniquely enough, this is the only international Film Market in the entire Western Hemisphere," he points out. "There is no international Film Market in the United States, Mexico or South America — so the 'Festival of the Americas' provides the only Film Market, as well as being the only major *competitive* festival. As you know, there are major international festivals in New York, Chicago and Los Angeles, but these are all non-competitive. They are really screenings of very carefully selected film programs and just to be in them is considered to be an award in itself. Also, none of them includes a Film Market."

He pays special tribute to Win deLugo and Eric Matthews, of the U.S. Virgin Islands Film Promotion Office for initiating the Atlanta Film Festival move to the Virgin Islands.

"These gentlemen are interested in focusing international attention on this area, not only as a marvelous vacation spot, but as an incredibly beautiful locale for the production of feature films, shorts, commercials, documentaries and television productions," he says. "Through the Film Promotion Office, they will offer complete

Continued on Page 99



Mrs. John Peckham presents the John Peckham Memorial Award for Best Student Film, awarded in memory of her late husband, who was an outstanding writer/producer/director.



(ABOVE) Writer/producer/director Rolando Klein accepts one of three awards bestowed for his "CHAC — GOD OF RAIN". (BELOW) Jason Miller, star of "THE EXORCIST", addresses Gala audience.



"STUCK ON THE SCREEN"—A HOLLYWOOD FABLE

A funny and affectionate portrayal of Hollywood in the swinging 1920's takes top short subjects award at the Virgin Islands Film Festival

By KEN WHEAT and DAVE MADSEN

For the young independent filmmaker bent on directing theatrical features, the short film proves all too often to be a dead-end street. Though our past experience with documentaries and non-theatrical shorts had taught us a variety of styles and techniques, we still found ourselves waiting on tables and photographing school children to pay the rent — and it wasn't bringing us closer to our desired vocations.

Rather than continuing to produce either contract work or "festival films," it seemed that it was time for a more ambitious project. Though we lacked the funds (and perhaps the confidence) to attack a feature, we felt it would be possible to create a true "featurette": a 16mm short that incorporated many of the technical and dramatic aspects of a feature.

"STUCK ON THE SCREEN" was developed to be both an entertainment and an experiment — we wanted to present a diverting tale which could provide us with as many shooting situations as possible, yet still be made on a very limited budget.

Our first decision was to make this a period film. We would therefore be working with more adventurous sets, specific visual styles, interesting locations, and costumed crowds. We realized that we would be setting ourselves up for headaches, but the added difficulty was clearly offset by greater potential appeal. The other early watchword was *fantasy*. Film magic had always fascinated us, and we hoped to try a few effects that would keep an

audience on its toes.

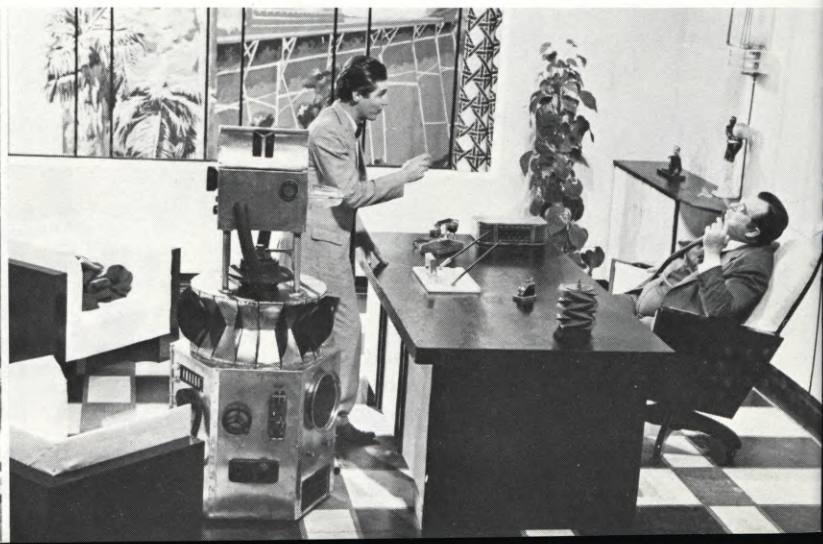
What we came up with was "STUCK ON THE SCREEN" — a comedy-fantasy about Hollywood in the 1920's. Initially a silent film (with piano accompaniment), it tells the story of Jack Wade, a vaudeville song and dance

man and would-be inventor who has created motion pictures with sound. He forsakes his stage life and chorus girl sweetheart, journeying to Hollywood to demonstrate his Rube Goldbergian invention to the Vice-President of Empire Pictures. The machine per-



Ken Wheat, behind the Arriflex, prepares to shoot the Model T truck doing its thing for "STUCK ON THE SCREEN", while co-director Dave Madsen checks the action. Because the head of the Super-Grip did not allow for panning, a box was improvised that bolted onto the Super-Grip. Standard fluid head could then be mounted to permit panning and tilting. Like many of today's young film-makers, the crew of "STUCK" was fascinated by the 1920's Hollywood that swung wildly long before they were born. The film, which adopts a photographic style of the period, is thoroughly professional in every technical aspect.

(LEFT) Setting up for a dolly shot on the elaborate producer's office set designed and built by Chris Henry (with Joyce Ehrenberg) in a stage area donated by Occidental College in Los Angeles. (RIGHT) Jack Wade, played by Douglas Leonard, makes a pitch to the producer about his invention, a disjointed Rube Goldbergian combination of juke box and movie projector. "STUCK ON THE SCREEN", which won the Gold Medal Special Jury Award for short subjects at the Virgin Islands International Film Festival, was screened at the most recent dinner meeting of the American Society of Cinematographers in Hollywood. The highly entertained audience included several cinematographers who were working cameramen during the period of the film.



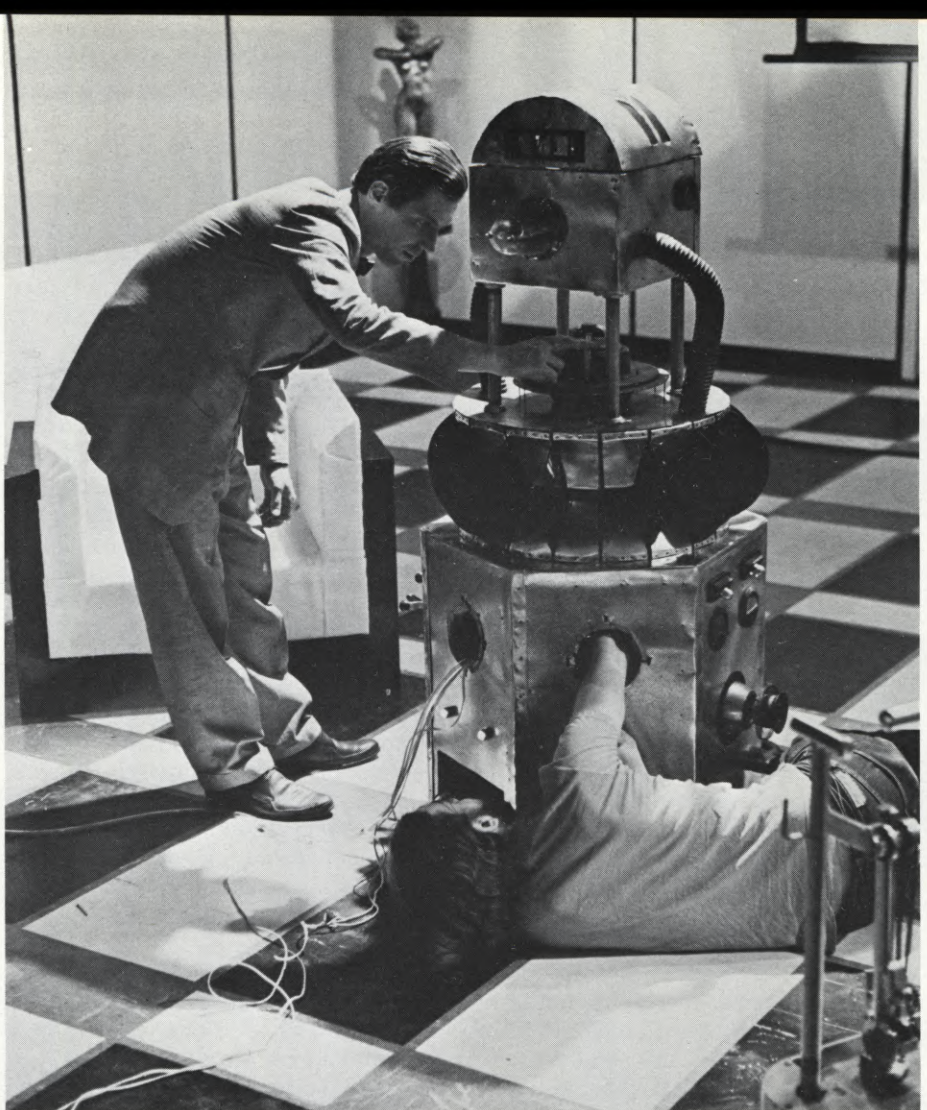
forms admirably at first — presenting a boffo song and dance routine — until fate intervenes in the form of a mischievous rodent. What had started out as a simple show becomes a curious catastrophe, and Jack finds himself heading home a failure. But not quite. After being dumped by Jack near some railroad tracks, the strange contraption finds its voice again in time to entertain the citizens of a nearby Hobo Jungle.

Needless to say, this story demanded some very specific attention to style. It seemed clear to us that to be most effective, the film would have to approximate the photographic style of the period. It must be admitted that the look of the film is based less on concrete research than on the fond recollections of period pictures we have seen over our lives. Our instructors were the directors and cinematographers of countless films.

The photographic style was partly controlled by shooting entirely with fixed focal length lenses (or zoom lenses at fixed focal lengths). As much as it was possible we stayed with a 25mm lens, rarely going wider than 20, and only to a longer lens when necessary. When we first shot the song and dance routine we were forced to shoot at 12mm for our full stage shot (we were using an existing stage in a little theatre with a shallow house), but the results were unacceptable. We ended up reshooting the sequence on a set with the standard lens and achieved far superior results.

The visual style was also heightened by de-emphasizing close-ups. We tried to cover as much as possible from long and medium shots to capture more of the actors, allowing them to play more broadly. It was for this reason that we used stage actors, and had those actors employ more of a stage than cinematic acting style.

Using the words "employ" and "stage actors" in the same sentence brings up a very significant point. This was a relatively low-budget show (though we would like to think it doesn't look it), and having a theatre background proved to be an invaluable boon. Ken's alma mater is Occidental College, a school known widely for both its drama department (Ken's major) and its loyalty to its alumni. Most of the actors in "STUCK ON THE SCREEN" are former Oxy Players who have gone on to bigger things — others are Oxy students and faculty members. The Drama Department donated shop area for construction and stage area for filming, not to mention lighting and sound equipment. And after months of searching for the "Empire Pictures"



The secrets of Jack Wade's sound movie machine revealed. All the electrical and mechanical functions of the machine were performed by Ken Wheat's two arms, as he lay sprawled on the floor, carefully positioned out of sight. After a mouse crawls into the works, the machine begins smoking and throwing records about, resulting in an hilarious sequence.

Jim Martin and Ann Dusenberry are cast as a Rebel soldier and his sweetheart, whose images are seen only in silhouette during the fantasy sequence of the film. A spotlight positioned behind the camera threw their shadows and those of a tree and picket fence onto the wall behind the producer's desk. The film incorporates several clever and complex effects.



gate and backlot, we realized that the 1920's architecture of Occidental College needed very little decoration to turn it into a bustling studio. Even the Hobo Jungle was built on a hill above the school. If this seems like a digression, the point is a clear one: Always look to old friends!

If there's one thing that serves the low-budget production best, it's preparation. Since we were borrowing space and using actors around their other commitments, we were compelled to make our shooting as organized as possible. Both because of budget and desire we were co-directing and co-photographing "STUCK ON THE SCREEN", so we had to try our best to tightly structure the filming. Shot-by-shot breakdown and storyboarding was followed as closely as possible, though there were inevitably times when refinement and rethinking came about while shooting.

We were very fortunate to have excellent help around us, again using theatre-trained talent who turned out to be ideal for the film. With the assistance of Rob Winter, J.P. Wheat served as our production manager, having to deal not only with complex preproduction and organizational tasks, but also with a ridiculously short crew. J.P. also produced the music, and had the great honor of being the rat wrangler. The

script called for a mouse to come out of a mouse hole, look around the office, run to the machine, enter through a vent, climb up inside, and chew on some wires. We discovered that mice didn't take direction at all, so we tried small brown rats. Rats don't take direction too well themselves, but with a patient rat wrangler at work, we managed to get an amazingly credible performance (with only one slowed-down, reverse-action "KRONOS"-type shot).

The sets were designed and built by Chris Henry (with Joyce Ehrenberg) — the most complex and ingenious of them being the producer's office. It was a large (21' X 24') room with a 17' wide picture window overlooking a backdrop of "Hollywoodland". All the walls except the window wall were on wagons and could be quickly and easily removed and rearranged into different configurations. Since we were limited in our time on this borrowed stage area, Chris designed this entire set — including a connecting secretary's office — as prefabricated units that could be put together in a very short period of time.

Another bit of advance work that made for speedier set-ups and shooting was a stage-type lighting design done by Ward Carlisle. After we supplied him with the floor plans of

camera set-ups and blocking, he designed and hung a huge number of units on the grid above the office which could be employed for four principal lighting conditions: daylight (curtains open), curtains closed, room lights, and projector light. Changing lighting from set-up to set-up was merely a matter of following a chart of pre-set dimmer levels. By augmenting this with a few rolling units, we were able to move at a very healthy clip, something our actors certainly appreciated.

Which brings us to our most harrowing task of the production: the filming and refilming of the office sequence. This sequence was filmed with a Mitchell 16mm camera, a fact that brought both joy and heartache to us. The Mitchell is an outstanding camera of paramount precision. We wanted it because we needed its ultra-steady dualpin registration for the shots which included the matted-in song and dance movie. For the demonstration film that Jack shows is not only a sound movie, it is a *color* sound movie — and this within a black and white film. This meant matting in the color dance within the surrounding black and white scene. Initially, we intended to do this with glass mattes — in fact, the screen was matted out by a partially blacked-out glass in the matte box when we filmed

Continued on Page 104

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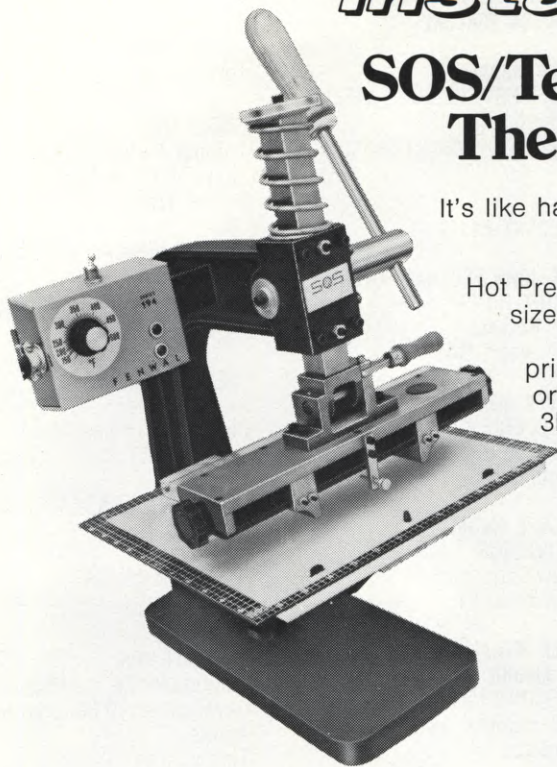
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MAJOR AWARDS OF THE VIRGIN ISLANDS INTERNATIONAL FILM FESTIVAL

(EDITOR'S NOTE: We regret that space limitations preclude our publishing a complete list of the almost 200 awards in approximately 60 categories bestowed at the recent Virgin Islands International Film Festival, especially in view of the fact that this festival's unique characteristic is its recognition of excellence throughout the entire spectrum of film production. What follows is a partial list encompassing the major awards and winners of Gold Medal Special Jury Awards.)

GOLDEN VENUS

Best of Festival
"LIES MY FATHER TOLD ME"
Columbia Pictures/A Jan Kadar Film

SILVER VENUS

BEST DOCUMENTARY
"A WALK IN THE FOREST"
Randal Hood, Seymour Films

SILVER VENUS

BEST SHORT
"SEE"
Robin Lehman, Opus Films, Ltd.

SILVER VENUS

BEST TELEVISION COMMERCIAL
"THE GOLDEN NITES"
John H. Meehan, U.S. Army Recruiting Command, N.W. Ayer

SILVER VENUS

BEST EXPERIMENTAL FILM
"TOWERS OF SILENCE"
Jamil Dehlavi, Pakistan National Film Development Corporation

SILVER VENUS

BEST FILM PRODUCED FOR TELEVISION
"THE EXECUTION OF PRIVATE SLOVIK"
Richard Levinson, Universal TV, Universal Studios

SILVER VENUS

BEST FEATURE
"CHAC: GOD OF RAIN"
Cientifilm, Rolando Klein

GOLDEN DOVE

BEST FILM DEALING WITH OR CONTRIBUTING TO WORLD UNDERSTANDING, PEACE AND COOPERATION
"BIG MO"
A Frank Ross-Douglas Morrow Production

THE AMERICAS AWARD

BEST FILM IN ANY CATEGORY PRODUCED IN CENTRAL OR SOUTH AMERICA
"CHAC"
Cientifilm, S.A., Rolando Klein

BEST ACTOR

MICHAEL YORK
"Conduct Unbecoming"

BEST ACTRESS

ISABELLE ADJANI
"The Story of Adele 'H'"

BEST DIRECTOR

ROLANDO KLEIN
"CHAC: GOD OF RAIN"

BEST SCREENPLAY

FRANCOIS TRUFFAUT, JEAN GRAULT, & SUZANNE SCHIFFMAN with Collaboration by FRANCES V. GUILLE
"The Story of Adele 'H'"

BEST CINEMATOGRAPHER

PETER SUSHITZKY
"Lisztomania"

BEST SUPPORTING ACTRESS

SUSAN GEORGE
"Out of Season"

BEST SUPPORTING ACTOR

RICHARD ATTENBOROUGH
"Conduct Unbecoming"

SPECIAL JURY AWARDS

"BETWEEN THE WARS"
A Janus Films Release, Australia

"THE BALANCE"

Poland

"PINK TELEPHONE"

Gaumont Distributions, France

"SMILE ORANGE"

Knuts Production Ltd.
Jamaica, W.I.

LEE ERWIN, Theatrical organist

for musical score of
"AMERICA 1776"—A
Raymond Rohauer
Film, U.S.A.

FEATURE FILM AWARDS IN CATEGORY

DOCUMENTARY FEATURE

GOLD MEDAL

"JAMES DEAN 1ST AMERICAN TEENAGER"
VPS Goodtimes
London, England

SILVER MEDAL

"PACIFIC CHALLENGE"
Robert Amram
A Concord Films Release

FIRST FEATURE

GOLD MEDAL

"DISTANCE"
Liberty Studios
George Coe and Anthony Lover

FOREIGN FEATURE

GOLD MEDAL

"LA MERVEILLEUSE VISITE"
Malanda Film
Directed by Marcel Carne

STUDENT FILMS

THE JOHN PECKHAM AWARD

"NIGHTRIDER"
Ron Horwitz
Hollywood, CA

SILVER MEDAL

"OLD FRIENDS"
Daniel Forsythe
Santa Barbara, CA

BRONZE MEDAL

"LOVESICK"
Drew Dennenbaum
New York, NY

GOLD MEDAL SPECIAL JURY AWARD

"SECONDHAND LOSER"
H.B. Halacki
Gardena, CA

"RONES DE PUERTO RICO"

Bonnie Louvau
Teleicentro Films, Inc.
San Juan, PR

"BLACK SHADOWS ON A SILVER SCREEN"

Ray Hubbard
Post-Newsweek Stations, Inc.
Washington, DC

"EVERYTHING'S ROSES"

Richard T. Kreuzer
Hadley & Miller, Inc.
Indianapolis, IND

"THE STRANGEST VOYAGE"

Raul de Silva
Lumiere-Cine International, Ltd.
Rochester, NY

"GLOBAL VILLAGE"

David M. Cooper
General Electric Co.
Rockville, Md.

"THE LAND ETERNAL: MT. MC KINLEY"

George Lukens
Pendleton Productions
Anchorage, AL 99501

"WAR UNDER THE PINE STRAW"

Christopher Dickey
Middleburg, VA

"PORTRAIT OF THE ARTIST AS A YOUNG MAN: EXPLORATIONS IN THE NOVEL"

Isme Bennie
Ontario Educational

Communications
Authority
Toronto, Can.

"WELFARE"
Jennifer Tarlin
Zipporah Films, Inc.
Boston, Mass.

"THE AMERICAN NATIONAL ANTHEM"

Richard Purdum
London, England

"SELF SERVICE"

Joanna Foster
Connecticut Films, Inc.
Westport, CT

"THE CONCERT"

Brant Sloan
Pyramid Films
Santa Monica, CA

"WAITING"

Kamran Lahiji
Institute for the Intellectual
Development of Children & Young
Adults
Tehran, Iran

". . . VOODOO"

Andrew Jaremko
Fullerton-Jaremko-Jeffrey-Kieken
Calgary, Canada

"STUCK ON THE SCREEN"

Ken Wheat
New Empire Films
Los Angeles, CA

"VIRGINIA . . . PURSUIT OF HAPPINESS"

Daniel Guntzelman
Alliance Pictures Corporation
Cincinnati, OH

"LETTERS"

Robert Wiemer
ITT Films and Broadcasting
New York, NY

"MONTANA OYSTERS"

Roberta Ostroff
Los Angeles, CA

"HUMAN ISSUES IN SCIENCE: EXPERIMENTING ON PEOPLE . . . ?"

Sara Maxwell
Scholastic Magazines, Inc.
New York, NY

"TRANSSIBERIAN EXPRESS"

Claire Maxwell
Richard Williams Animation Ltd.
London, England

"MITZIE & 100 GUYS"

Production Company, Hansen &
Schwam

"MANNIX"

Starring Michael Connors

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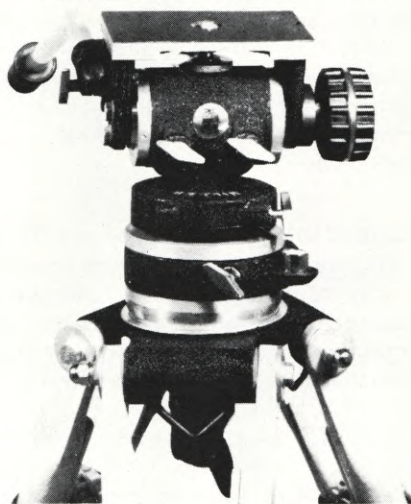
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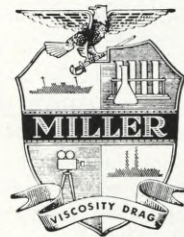
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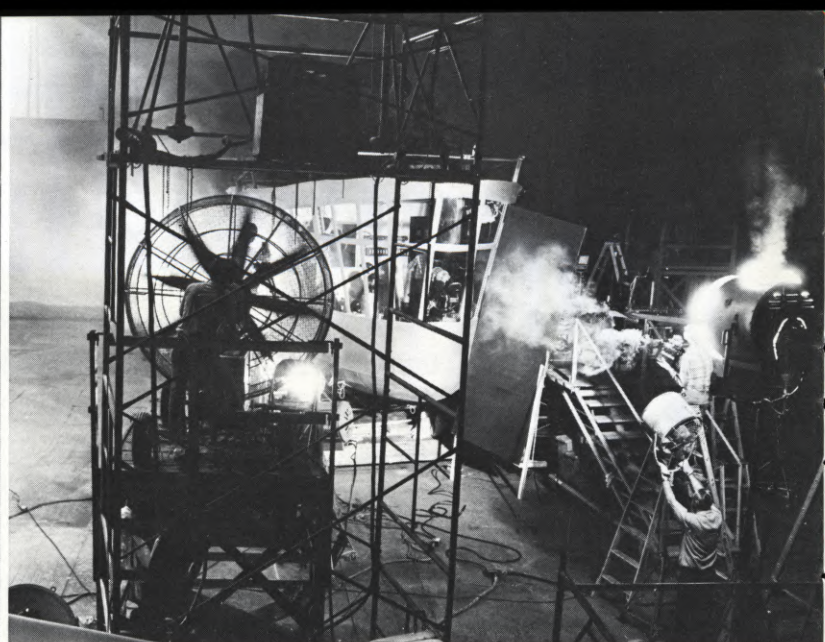
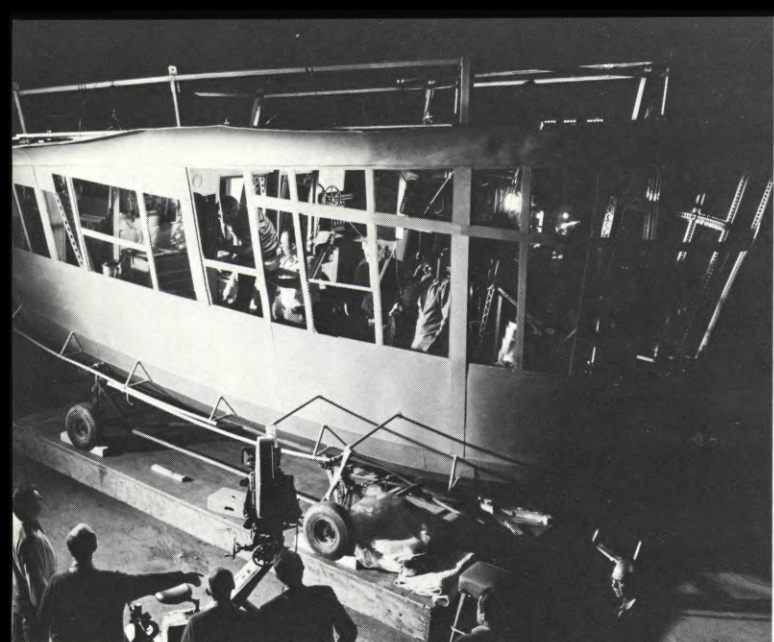
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(LEFT) Full-scale mockup of the Hindenburg's gondola is positioned for filming on the sound stage. After painstaking research, it was authentically fitted out with the same type of control instruments as those used on the real Hindenburg. (RIGHT) Wind machines blow artificially created vapor past the gondola to simulate its passage through clouds.

PHOTOGRAPHING "HINDENBURG"
Continued from Page 43

SURTEES: *The two effects are completely different, but I don't think the audience is aware of the difference. Half the time they don't realize what's going on. Using the zoom is like looking through binoculars. It's the same thing as progressively enlarging the frame. On the other hand, in a dolly shot, objects within the scene go around you during the move, instead of coming straight-on. That's the difference. However, sometimes that can be a great effect. We did a lot of that kind of stuff in "THE GRADUATE" and it was very effective. We didn't try to make it look like a dolly shot; we tried to create an effect of the guy floating as he walked.*

QUESTION: You spoke earlier of desaturating color and reducing contrast. It's the vogue these days to achieve such results through flashing — which you didn't do. Were you able to get the effect sufficiently through the use of a low-contrast filter?

SURTEES: *Oh, yes — more than enough, and I didn't use the heaviest one. In this picture everything was much better sharp — like the pictures in the newspapers. Of course, you can't use the same effect on every picture. I get objections and criticism from other cameramen who say to me: "You're not consistent." Well, I think that's the nicest thing they could say to me. I try to do every picture differently in some way, while keeping the style true to the demands of the story. And within a film, I like to do a sequence in some different way and then cut back to something normal. That's the only way you can get an effect.*

QUESTION: To achieve mood, did you utilize any extreme camera angles or unusually low angles?

SURTEES: *Such angles are not so unusual anymore, because they've been sort of overdone. The main thing is to photograph the action of your scene the best way possible, and you can overact with a camera much easier than you can with an actor and spoil the whole damned picture by getting a little too fancy and going beyond what is called for. The simplest thing for a new young director coming in is to lay the camera on the floor and shoot up all the time — for no reason. But where it means something it should be used. We had so many cameras working on this show that we couldn't miss any angles. Our main problem was keeping the cameras out of the shots of the other cameras.*

QUESTION: I should think that in the dirigible sequences — which make up most of the picture — the action patterns were restricted by the cramped character of the sets. How did that affect your photography?

SURTEES: *Most of our work was in the skeleton of the ship, where the main part of the story takes place. It was supposed to be 800 feet long and at least 30 feet wide, so the actors had sufficient room to move around in. Photographically, the main problem, as I said before, was: Where do you light from? How do you get a good effect without just moving outside the set and shooting in? The lighting turned out to be comparatively simple, because you just put a light wherever you could hide one. I'm not kidding. If I could hide a light, I could use it. There wasn't much*

choice — but somehow it always ended up looking good on the screen. I couldn't screw it up.

QUESTION: What would you say was your most difficult challenge on this picture?

SURTEES: *The night exteriors, I guess. They always seem twice as tough to me, and we had quite a few of them at the El Toro Marine air base.*

QUESTION: Why do they seem twice as tough?

SURTEES: *They're physically tiring, for one thing, and it seems that the night is never going to end. You've got to keep driving yourself, because there's a temptation to say: "Oh, hell, that will be all right. Don't monkey with it." You've got to drive yourself to keep from doing this, and you've got to drive the men around you, because they're tired too. It's always difficult to get a good night shot, because you can light only so far and then everything goes black. That's why, sometimes, I prefer day-for-night. Of course, it's hard to get day-for-night to look anywhere near real, too — so you're damned if you do and damned if you don't. When it's good, though, it can be really stunning. There have never been more beautiful scenes than the day-for-night shots Freddie Young made for "DOCTOR ZHIVAGO".*

QUESTION: There are scenes which take place inside the huge dirigible hangar. How did you manage to light such a vast structure?

SURTEES: *God knows, but we did. That hangar was 10 stories high, at*
Continued on Page 90

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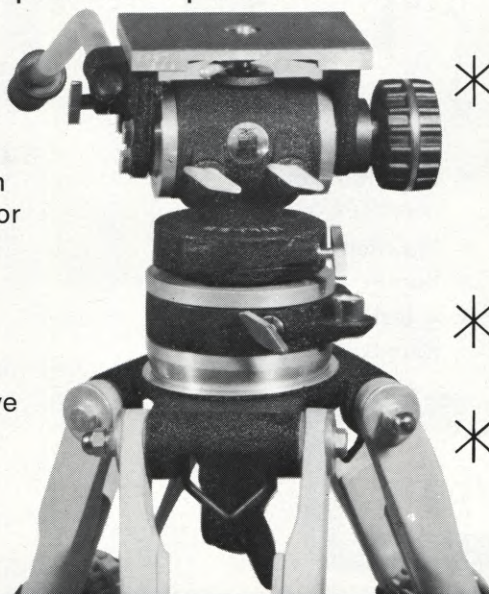
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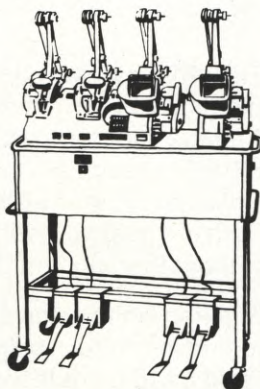
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THE PHOTOGRAPHY OF "THE HINDENBURG" Continued from Page 88

least 100 feet wide and 1,000 feet long or more. It was impossible to get enough lights in close enough to do the job. There was simply not enough photographic power left in the lights. Al Whitlock helped us out there and saved our necks. I'd say: "Hey, Al, I've got a job for you." Then I'd shoot a scene of the hangar with no people in it and undercrank like hell. Al would block out the areas that were still too dark and then paint them back in with "lighting" of the right density. Al is so good at it. He knows how to add little details for realism and which way the shadows should play. He's a great man and I appreciate working with him.

QUESTION: Let's talk a little bit more about your working collaboration with Robert Wise. How much shot-by-shot preplanning was done and to what extent were the set-ups broken down in advance?

SURTEES: With Bob everything is figured out and every set-up is sketched in advance, so that everybody on the crew knows what's happening. There is no lost time. If something takes time it's only because it's mechanically difficult to do. Bob Wise is the cameraman's friend. He's the ideal director for a cameraman to work with. Just look at "THE SOUND OF MUSIC" and "WEST SIDE STORY" and you can tell that he has a fine sense of composition. He's sensitive and he understands your problems. If there's something that's so difficult to do that it will take too much time and isn't worth it, he's already got an alternative way to do it figured out. He just jumps to something else.

Before the picture started and even after, when I wasn't actually shooting, I'd be in his office or down in the art department going over set-up sketches. I'd even indicate the lighting on the sketches for him, so that he could visualize the camera effects. Maybe a few of them wouldn't work when we got on the set later, but it gave us something to start with. Cameramen are always being asked by people: "How do you start? How do you know what to do when you walk onto the set?" The answer is that you just start working. That's not sarcastic or trying to be funny. You put a light on here and it may look flat. So you put a light on there and pretty soon it works out. I've never seen a shot yet that's been impossible to make. If you have the time, there's not a shot you can't make.

AN 800-FOOT SUPERSTAR
Continued from Page 39

ten feet. In such cases it was possible to use painted skies that could be moved in depth by making soft splits and moving those laterally across the screen. In order to do this, we had to again use our special dolly and track and, against black velvet, project into the air light-colored vapor clouds shot by the special effects people, and then introduce these into the shot in such a way that the airship would appear to be moving both in front of and behind clouds. In order to enhance this effect, we would pass shadows over the airship by means of gobos while we were tracking back. In this way, even though the ship was actually stationary, we could create the illusion of cloud shadows passing over it as it appeared to move through the skies.

In addition to shots like this, there were several that involved hand-rotoscoping. To provide just one example of how this technique was used, let's consider a shot of a man falling from the burning airship after the explosion. By means of rotoscoping, we could superimpose the figure falling from the burning nose cone over a background scene, shot from the hangar, of men running underneath. For each frame of the man falling, a separate black matte frame had to be precisely inked and painted by hand. The successive sequence of such frames — known as rotoscoping — added up to a hand-painted traveling matte to permit the combining of the two live-action scenes.

For those who may not be familiar with the technique of the traveling matte, the idea is that you shoot the object (in this case, the dirigible) against an illuminated blue screen of certain specifications. Then, by means of YCM separations in black and white, made from the color film, it is possible to produce a moving matte that will be, first, male and then female. In other words, a black background with a white "hole" corresponding precisely to the shape of the airship and, conversely, a white background with a black ship's image. With an optical printer it is then possible to use the male matte (which is the black image of the moving ship) and play that against whatever background you may have, and then afterwards, using the reverse matte, put in the information of the ship — in other words, its detail in color.

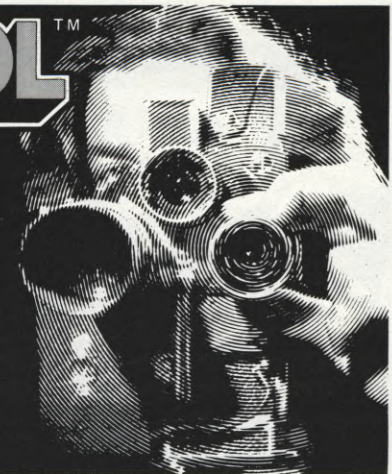
Our problem, of course, was not simply a matter of putting an object in front of a background, but of putting clouds in front of all of it, as well. This was a multiple problem and a compli-

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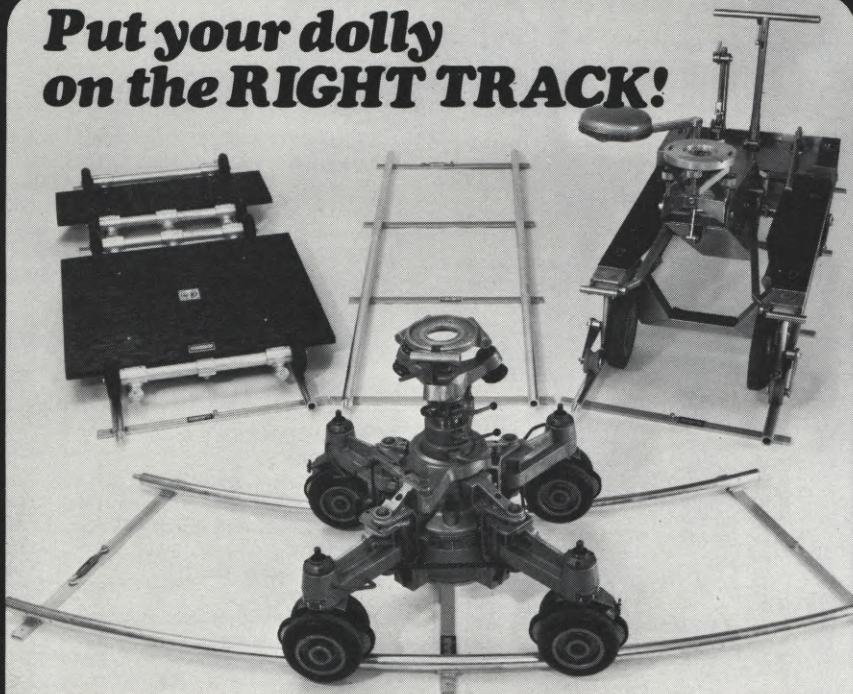
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cated one and I believe that we broke some new ground in doing it.

The cloud effects I've been speaking of were placed in front of the airship and were moving. In some cases you would have the clouds in front of the ship and, in the course of the scene, they would move on, leaving the ship clear. Producing white clouds against black velvet was simple enough, but if such a scene were used merely as burn-in, it would produce only a "ghost image" of clouds — not really sufficiently opaque to be acceptable to the eye. The problem was to create the feeling of an opaque cloud. In order to do this, we would make a reversal wedge of the white clouds on the black background — in other words, dark clouds against a completely clear background. This was done on color stock and, by going through the whole range of color and densities, we were then able to run these wedges in bi-pack through the camera while we were shooting our scenes, thereby creating an opaque area. The black cloud would obscure the ship in certain areas and then, by burning in after this, one got the realistic illusion of opaque white clouds.

At times we were bi-packing (or more precisely "tri-packing") three films through our camera which, fortunately, was an Acme, a very efficient camera capable of running three films. We would, for example, be running the male matte of the airship, and also the reversal of the clouds (dark image against a clear background) while shooting our background painting. Later, after burning the white clouds into the dark area, we would end up with a scene of the airship flying in space with infinitely painted clouds in the background and studio-manufactured special effect clouds in front of it. I leave it to the viewer to decide whether this illusion is convincing.

Some of the scenes involved putting together live action, a matte painting and a miniature shot. For example: a shot from high up inside the hangar showing people rendezvousing to make their flight in the dirigible, which was also in the scene. We had a 25-foot miniature of the dirigible and it served as a marvelous piece of reference for me to be able to say: "We're 70 feet in the air and we're tilting down at 25°." If we place the miniature in the correct light and compute our angle and our distance, we can shoot the miniature and get a perfect piece of information for placing the ship in the scene."

The still photographer that we used, Larry Barbier, was most helpful and he was able to get some stills that were so good that instead of setting myself the

task of using this information merely as reference and painting the whole thing, I finally did cut-out blowups from some of these still shots and simply painted the aerial perspective from the blowups. This resulted in an enormous saving, since we had such a large number of shots to do and the drawing was so difficult.

The explosion of the *Hindenburg* near the end of the film is, of course, the climactic sequence and dramatically the most important one. To re-create that explosion on the screen required a mosaic of many techniques, including live action, miniatures, paintings and actual newsreel footage of the real event. Staging the bits and pieces of the explosion in miniature to be superimposed on other types of shots created a special problem in that we were dealing with the explosion of a hydrogen capsule — a virtual bomb — 120 feet across, the entire width of the dirigible.

The explosion was shot in the high reaches of the Universal backlot against a night sky, which served the same purpose as a black velvet background. The special effects man made up a bag of explosives which had everything in it, including gasoline. The problem lay in the fact that you were trying to produce an effect on an enormous scale from an explosion that was actually not more than ten feet across. You were trying to up this in scale about a dozen times. One tends to think of an explosion as being something instantaneous but, in fact, when it's 120 feet across, it's anything but. The scene was shot at five times normal speed, which is about as far as you can push a camera without the risk of a camera jam that would ruin the whole thing. Obviously, a five-times-normal frame rate wasn't enough to make a 10-foot explosion look like one 120 feet across, so it was necessary to put the scene into an optical printer afterwards and make a three-times extension. In other words, each frame was printed three times in order to extend the scene and slow down the action by a factor of three. Watching the entire resultant scene, one can detect a slight rhythmic beat because of this triple print, but in the finished picture the cuts are so quick and there is so much else going on that the audience is not at all aware of it.

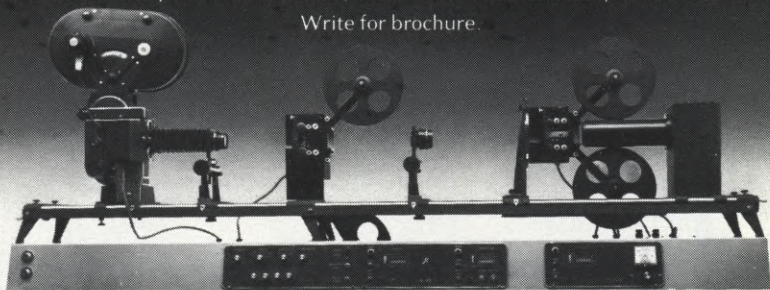
Some of the matte painting shots of the airship flying across the Atlantic showed the ocean in the background down below, but it couldn't be a static painted ocean. The water had to be moving realistically and, in some cases, rough water with whitecaps was required. Some of the quiet water back-

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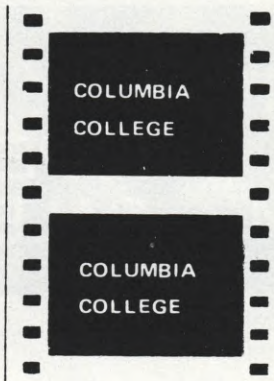
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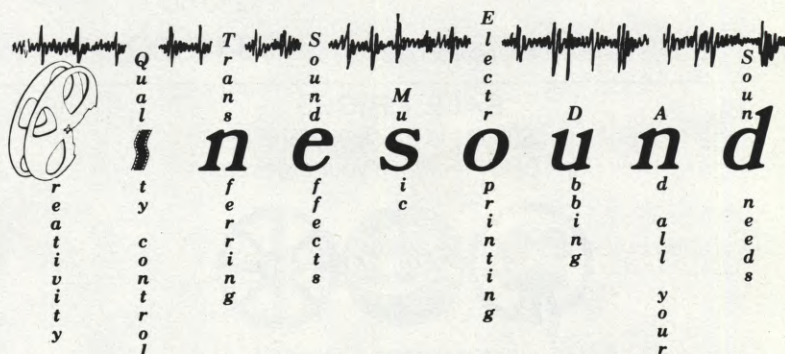
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grounds could be simulated by means of a ripple machine, but the rough water material was acquired by going to Anacapa Island and shooting from the high cliffs over there. This was done at a certain time of day when the white-caps and big seas were very evident and this footage was incorporated into the iceberg sequences and some shots showing the setting sun. By carefully preparing the shots and figuring the aspect ratios, we were able to get the needed water shots by shooting high up on Anacapa Island and Point Fermin. It took about three trips to each location in order to get everything we needed.

Among the most difficult special effects scenes to create for "THE HINDENBURG" were those showing the dirigible moving through night skies. Even live night scenes present an age-old problem in motion picture photography. I'm not speaking of day-for-night, which never really looks like night, but scenes actually shot at night when anything that isn't lit with incandescent light goes totally black — with the possible exception of bright moonlight.

Artistically, you have to ask yourself what kind of image you're looking for — and, ultimately, that's the only image that becomes acceptable. Obviously, the one image that counts for anything at all in a true night scene is a silhouetted image and that presupposes immediately that there has to be some kind of light in the sky. The sky, in fact, cannot be black (the way a night sky is most of the time) because black on black, as an equation, equals zero. In this film they shot some of their miniatures against dark backings, with just enough light on those backings to silhouette the airship. Then, of course, the lights in the cabins and the gondola became immediately recognizable and acceptable. But it's interesting to note that nobody seems to want to accept the fact that in a big shot you have to place a dark object against some sort of tone in the background. This requires planning ahead, because it's very jarring to cut from a scene shot against total blackness to one with a sky effect that has a tone in it. If directors would realize this in advance and ponder it, they could lighten the load on people like myself and the cameramen who are trying to supply them with the images they need to tell their story.

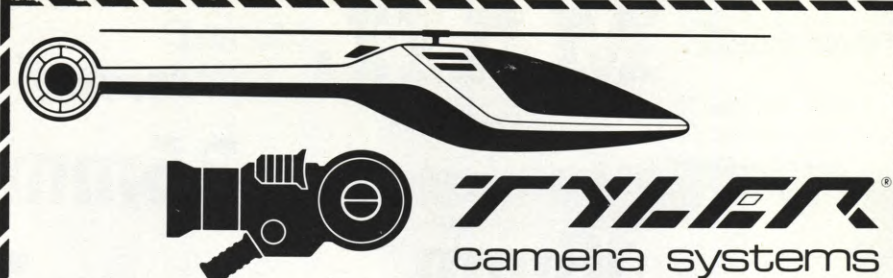
We had one night shot in "THE HINDENBURG" which called for a tricky solution. There is an insert in a sequence where somebody looks out the window of the salon and sees the vari-colored lights of Amsterdam going

by down below. This created a very interesting problem because it could not be solved by merely making a matte painting and moving it to create the illusion. Obviously, what was called for was some three-dimensional method of showing the millions of lights of the city moving by below — but how to do that without some sort of very expensive and time-consuming construction?

What started out as a big problem was solved by a neophyte assistant who suddenly said: "How about doing it with sugar granules — the kind that confectioners use?" And, by golly, that's what we did in the end. A table was built with a winch that could move it past the camera. The table was covered with black velvet and the whole thing was sprinkled with the kind of confections you put on Christmas trees — little globules of sugar of all different colors. They were pushed around with the straight edge of a ruler to arrange them in patterns that looked very much like those of streetlights you see from an airplane — or, in this case, a zeppelin. Moving the table past the camera and hitting it with a strong light that illuminated those little pieces of sugar created an image that was very interesting.

This bright idea came from a beginning assistant, which leads me to say that I've never worked on a picture where my own immediate crew meant so much to me as it did on this one. They were all links in a chain, and if one of them had ever been missing — and thank God they never were — I would have been totally lost. Even my new assistant became completely invaluable in making the tremendous logs that we had to keep and which are now just short of being Bibles because of all the information they contain. As I've said, this was a "chain job" as never before, and I don't know that I'd want to take it on again. If I knew about all the upcoming problems at this moment and had to do it all over again with a whole new crew, I think I'd have to bow out.

The thing that made this particular movie extremely interesting for me was the experience of working with Bob Wise who, I have to say, is the kindest, most appreciative man I've worked for in the whole history of my very long career. He was understanding of our problems, patient about all the delays and tremendously appreciative when we finally — if ever — did come up with something which he felt was good for him. The otherwise horrendous problems of shooting for a whole year to create the effects for "THE HINDENBURG" were made pleasurable by this very fact. He is a really marvelous man.

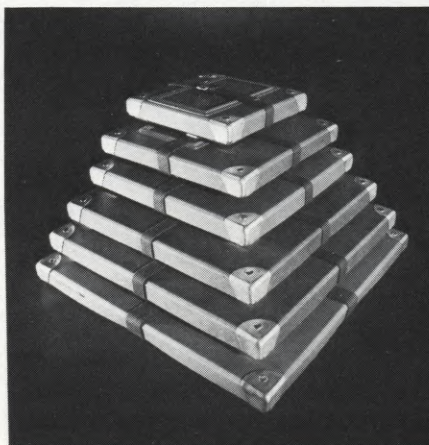
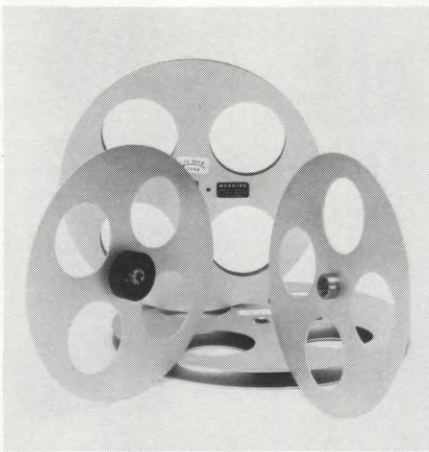


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BEHIND THE SCENES
Continued from Page 75

letters from Lakehurst to Germany; \$2.60 for round-trip letters mailed in the U. S. that would go to Germany by steamship, then to Rio de Janeiro and Lakehurst by dirigible. The three stamps which originally sold for a total of \$4.55 are now priced to collectors at approximately \$1,400. Dr. Eckener, who presented Franklin D. Roosevelt with a souvenir cover envelope of one crossing, revealed that seven of the historic flights had been achieved from the sale of stamps (\$100,000 to the Zeppelin Company).

When the Hindenburg first began carrying passengers across The Big Pond in 1936 (the Graf Zeppelin started in 1928), there were no trans-oceanic airlines carrying paying passengers. Later that year, Pan-American Airways inaugurated the first trans-Pacific flights, but it was not until three years later that airplanes began trans-Atlantic passenger service. Actually, the world's first passenger air transport line, known as DELAG, was established in 1910 by the Zeppelin Company, operating four airships between Berlin, Frankfurt, Hamburg and Dresden, and chalked up unprecedented safety and performance records. Between 1911 and 1914, the smaller Zeppelins, each carrying only 20 passengers per trip and without the luxurious accommodations of latter-day ships, transported a total of 9,300 people between the German cities.

The mammoths of the air took their name from the company's founder, Count Ferdinand von Zeppelin, a German cavalry officer who became interested in flying balloons while serving as a volunteer with the Union Army in the Civil War. He developed and flew the first Zeppelin in 1900. Of the 119 built by the Zeppelin Company, 103 were constructed for the German Imperial Army and Navy to use, mostly in raids on England between 1915 and 1918. One of the airships was designed to fly the Atlantic and drop bombs on New York, but the war ended before the maneuver could be attempted.

The Graf Zeppelin made history in 1928 by flying around the world from Friedrichshafen to Tokyo, to Los Angeles, to Lakehurst and back to Friedrichshafen in 300 hours and 20 minutes at a speed of 76 m.p.h. over the 21,100-mile course. William Randolph Hearst partially financed the flight by paying \$100,000 for rights to exclusive coverage in the United States.

With the death of the Hindenburg, the Nazi party lost an important propa-

ganda tool. The Graf Zeppelin had been used by Dr. Goebbels, Minister of Propaganda, to fly over Germany and urge the people to vote for the Fuehrer's policies via loudspeakers and pamphlets scattered from the air.

Robert Wise and The Filmmakers Group acknowledge a debt to technical advisor George Lewis, a mechanical engineer employed by America's Goodyear Zeppelin Company in the 1930s, who stood at the base of the docking mast at Lakehurst as the ship burst into flames. Lewis began traveling in German-made Zeppelins in 1934 in his capacity with Goodyear, occasionally relieving the German crew in the control car and often standing watch with the navigator. Copies of all of Lewis' reports on dirigibles filed to Goodyear became valuable source material to the movie-makers.

The contributions of Albert Whitlock, an Academy Award winner for his matte paintings for "EARTHQUAKE", confirmed his standing as the dean of Hollywood matte artists. Working with only six assistants, Whitlock, who does the actual painting himself, created some 70 paintings that are integrated into black matte areas of the frames through a complicated and costly process. The spectacular footage in Technicolor and Panavision of the graceful airship as it lifts into the sky from Frankfurt, passes over the New York City skyline of 1937, and appears in all its awesome beauty in the sky over Lakehurst N.J., is the result of a long period of painstaking work by Whitlock.

The on-the-scene reportage of Herb Morrison, covering the arrival of the Hindenburg at Lakehurst, N.J., is integrated into the climactic scenes, with Greg Mullavey portraying the news commentator of Chicago radio station WLS. Morrison's eyewitness account of the explosion stands as one of the most emotion-charged broadcasts in radio history. It has since chilled millions throughout the world via rebroadcasts and record album compilations of radio transcriptions that reflect highlights of the 20th century:

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"It's burst into flames . . . Get out of the way, please; oh, my, this is terrible . . . It is burning . . . It's falling . . . This is one of the worst catastrophes in the world . . . It's a terrific crash, ladies and gentlemen . . . It's smoke and it's

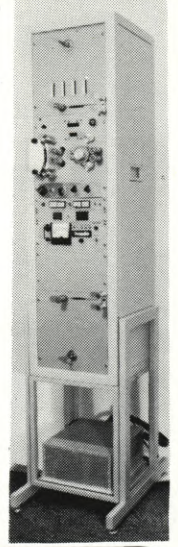
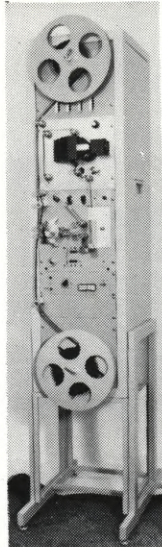
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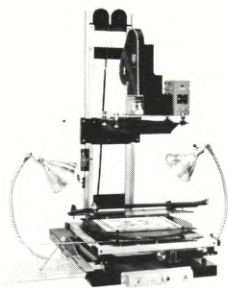
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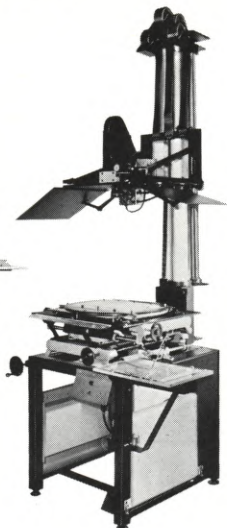
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flames . . . I don't believe it . . . I'm going to have to stop for a minute . . . This is the worst thing I have ever witnessed . . . All the humanity . . ."

Credit also goes to Director of Photography Robert Surtees, ASC, who evokes wonder, suspense and terror in image after image of the airship moving toward its doom with its human cargo; Clifford Stine, ASC, whose special photography is outstanding; Academy Award winner Dorothy Jeakins, who designed the colorful costumes of the period; film editor Donn Cambern, continuity illustrator Thomas Wright; Glenn Robinson, Frank Brendel, Andrew Evans and Robert Beck, responsible for special mechanical effects; and set decorator Frank McKelvey. The music is by David Shire, who also wrote the music for the song, "There's a Lot to be Said for the Fuehrer"; lyrics by Edward Kleban.

Many scientists, aerospace engineers, governmental representatives and clean-air advocates interested in the revival of lighter-than-air transportation, expressed strong interest in "THE HINDENBURG" during production phases, and a number of them predicted that the film will spur the return of buoyant and semi-buoyant aircraft. Even as final editing was underway, there was a tide of enthusiasm for a revival of the "Helium horse", refined by new technology from the rigid forms of the 1930s. Lighter-than-air committees were being formed throughout the world for the study of new air leviathans, to be used not only for travel but for ocean surveillance and the clean-up of marine pollution, disaster relief, firefighting, exploration, the transport of as much as 100 million cubic feet of natural gas directly to consumers from distant wellheads, delivery of outsized loads, and as aircraft carriers, missile launchers, command and control centers, and radar stations.

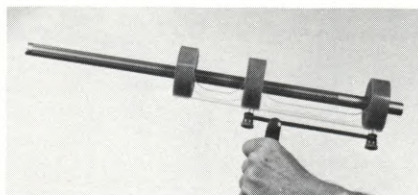
"THE HINDENBURG" had become not only a major motion picture entertainment but a symbol of the shape of things to come in aerospace development. ■

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VIRGIN ISLANDS FESTIVAL
Continued from Page 81

cooperation to producers who want to shoot here and will do everything to pave the way toward successful production."

Guests registering in are presented with a handsome Gucci-designed portfolio of simulated buckskin and a book of tickets for free cruises on motor launches, sailboats, catamarans and glass-bottom boats — as well as chits for free banana daiquiris and scuba diving lessons.

The Festival kicks off with a typical Todd touch of showmanship — a cocktail party on the outdoor terrace of the Frenchman's Reef, complete with multi-colored sky rockets bursting overhead. Then we are bussed to the Cinema One Theatre where a steel band is beating out the local *calypso* rhythms. It's amazing what sweet music these boys can pound out of a collection of oil drums.

Inside the theatre we are treated to a screening of "CONDUCT UNBECOMING", a unique and fascinating whodunit starring Michael York and directed by Michael Anderson.

During the days that follow, it becomes obvious that the local hospitality is something fabulous. There are three or four invitational parties each night staged in the sumptuous homes and private estates of residents delighted with the idea of having an international film festival on their doorsteps. For one soiree, rivaling anything I've experienced in Beverly Hills or Bel Air, we are flown over to St. Croix on the amphibious airboats which connect the islands.

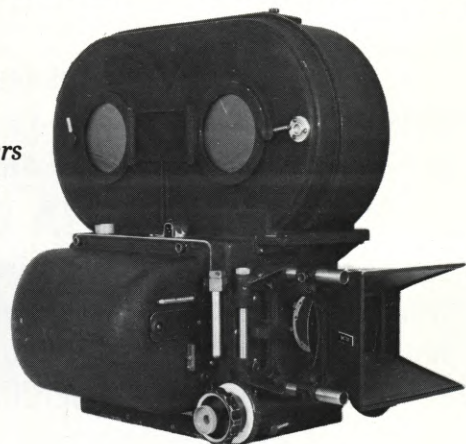
Being on the feature jury, and very determined to see all of the films in competition in order to judge fairly, I am forced to forego most of the parties and extra-curricular merrymaking, but I do manage to attend an afternoon pool party on the very impressive estate of famed American playwright John Patrick ("TEAHOUSE OF THE AUGUST MOON", "THE HASTY HEART", etc.) where Mr. Patrick is not only the genial host, but tells me, "I prepared all of this food myself." He slaps generous portions onto my plate and it's real gourmet fare, except for the nostalgic American touch of Coney Island hotdogs. A stunning feature of the estate is a venerable stone tower, a former sugar mill that has been converted into a wonderful party room and lush guest apartments. I am to see in the islands many of these stone towers which, fitted out with windmills in former days, used to grind the sugar cane to make the local rum.

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As the Festival progresses, there are, in addition to the regular program, retrospective screenings of films by D.W. Griffith and John Frankenheimer, plus a seminar by famed Hollywood cinematographer Lee Garmes, ASC, following the screening of "THE BIG FISHERMAN", on which he was Director of Photography.

Movie magic wizard Linwood Dunn, ASC delights the audience with the presentation of his spectacular special effects program — a real show-stopper which he has put on at many film schools and universities all over the United States.

Later in the week I have a chance to talk with Win deLugo and Eric Matthews of the Film Promotion Office, the two men who were so instrumental in getting the Atlanta Festival transplanted to these islands.

"We wanted to introduce a 'film atmosphere' down here," says deLugo, "and I think we've succeeded in doing that. It was particularly important to get a knowledge of how the film industry works across to the native Virgin Islanders and the government and I believe that has been accomplished by bringing the Festival here. They've had a chance to meet people from the film industry and to see that they are businessmen, as well as creative artists and this will make it easier for us to work on film projects down here. Also, it gives us exposure for our unique filming locations, so that, hopefully, there will develop enough demand to shoot here so that we can afford to stock sufficient equipment and facilities here to support a film industry in the Caribbean, one that will service other islands, in addition to these.

"We've even talked of someday in the near future having our own 'Cinema Boat' instead of Cinemobile that would provide a very mobile unit to go from island to island. It might include a lift-off container with flat-beds standardized on several islands, so that you could lift it off, drive it around and then plunk it onto a boat and take it out to sea. In other words, it would be taking the Cinemobile idea a step further, because we have water to cross and that's always a problem."

I know that the Film Production Office has been working in close cooperation with the Festival, but I ask just what form that cooperation has taken.

"Initially, as you know, we spear-headed the legislation to get the Festival here," says deLugo. "Then, while the Festival has been going on, we've served as the liaison between the Festival and any government organi-

Continued on Page 106

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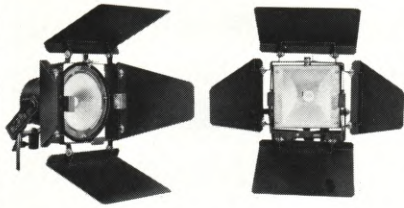
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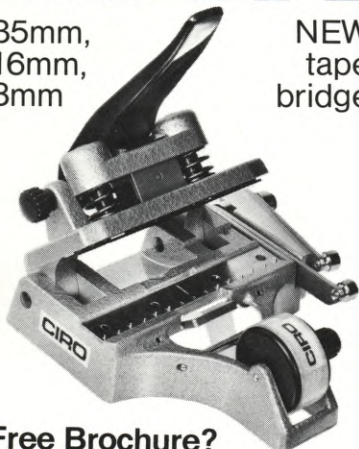
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"HINDENBURG" PRODUCTION
Continued from Page 70

except use it.

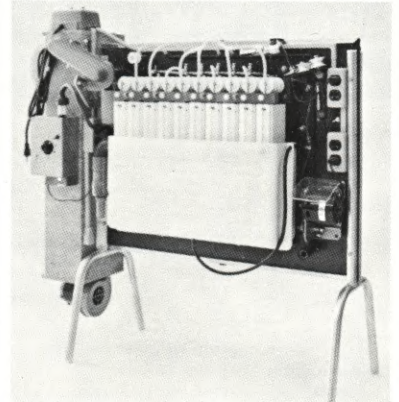
Before I came onto the project they had made some attempts to tint the black and white newsreel film in order to keep it in key with the color footage that precedes it, but although I felt that the efforts of the people who had done it were rather good, it just didn't look right; you felt uncomfortable with it. That newsreel footage had been seen so much and was so well-known and so identifiable that the minute you attempted to add something new, it appeared that the big, heavy and obvious hand of Hollywood had reached out — in the worst sense of the term. Also, interestingly enough, when you take footage that is pretty degraded — as this is, after 40 years — you accept it in black and white. It seems real. But the minute you add a tint, it becomes phoney. So, for that reason and others, we decided to keep it in black and white.

We thought at first that we could go back into the color footage 12 or 15 seconds ahead of the explosion and very slowly start to leave out the color — making the transition so imperceptibly that the audience would not realize it had happened. But because of the cutting pattern that we ended up with between George C. Scott and another character, we found that we had only six or seven feet in which to make that transition and it would have simply been too fast. So then we came up with the idea of just letting the explosion blow the color off the screen. As it is now, the explosion goes to white, filling the screen. Then we come back to black and white and stay that way until the very tag, when we go back to color again for a replay.

It's at that point that we use the famous emotional eye-witness dialogue of radio commentator Herb Morrison, who reported the catastrophe. We didn't want to use Herb's actual voice, but we got an actor who looked very much like him, Greg Mulavey, and he studied Morrison's recording of the actual event in order to get his voice quality and intonations correct. The way we handle it, when we get into our tag and tell what the results of the inquiry were, is to say that Morrison's voice was listened to many times by the board of inquiry. Then, as we do that, we pan up from the wreckage to the sky and go back into color, bringing the airship in now "reincarnated", so to speak, as Morrison's voice describes what happened. That's the end of the picture, and it's very effective.

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There have been several films released of late that fall into the category of "disaster pictures". It's easy to categorize and I do believe that films run in cycles. But even though some people might describe "THE HINDENBURG" as a disaster picture, I feel that we have far more to offer than just that. I don't mean to put the disaster films down, but to categorize "THE HINDENBURG" as a disaster picture is, we feel, wrong. It's a disaster film — *plus!* That plus is the challenge of having ten-and-a-half reels of action on the screen to hold the interest of the audience and involve them before we ever get to our disaster — which occupies only ten minutes at the end of the film.

I would hope — and I believe — that audiences will be interested and intrigued by the fact that the story of the *Hindenburg* has been so well told. I hope they will be interested in finding out what it was like to travel in a giant airship, and what might have gone on that led up to the catastrophe. I hope they will be interested in the characters and their involvements. I feel that our characters are very strong and that George C. Scott, particularly, developed his character marvelously. He plays the role of a Luftwaffe Colonel in Intelligence who is sent along on this trip especially to see if he can ferret out information about bomb threats. This is authentic, because the *Hindenburg* had many bomb threats made against her. She was a great propaganda symbol for the Nazis and both she and the *Graf Zeppelin* were subjected to constant threats of destruction.

Anne Bancroft plays a German countess who is going to America supposedly to see her daughter, but who actually intends to stay there because she doesn't like what is going on in Germany.

The suspected saboteur is a young crew member played by William Atherton, who was in "THE DAY OF THE LOCUST" recently and also in "SUGARLAND EXPRESS". He is just excellent. He and George Scott have some strong scenes together and he holds his own very well. All of the other roles are played by top actors also.

So "THE HINDENBURG", we believe, is far more than just another disaster picture. I think that the more films that are made in a certain category, the more difficult and challenging it is for the filmmaker to come up with one that will bring the audiences in, even though it may fall within a *genre* that they have been seeing a lot. I really feel it depends more upon the film itself than on the category.

I certainly hope that's so for a while anyhow — until this one gets out. ■

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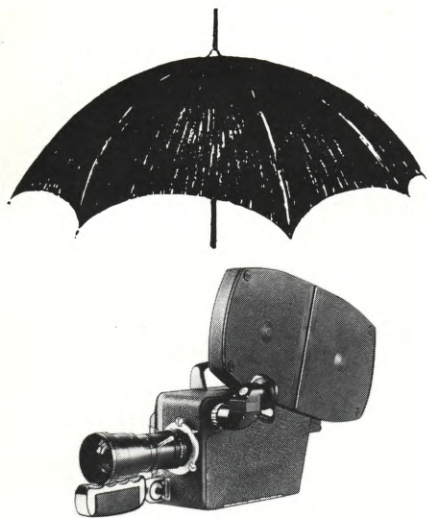
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"STUCK ON THE SCREEN"

Continued from Page 84

the black and white. We had intended to front-project the color dance and re-photograph it through reverse glass mattes, but decided later to go "modern" and roscope it. (Our superb optical work was done by Van der Veer Photo Effects.) Whichever way we went, we wanted rock-steady registration so there would be no chance of a matte jiggle, and the Mitchell provided that insurance. Unfortunately, it also provided us with a serious problem: a fault with the rackover operation. Being cameramen of a more modern age, reflex viewing was our experience. We had little trouble acquainting ourselves with the Mitchell's operation, and we moved along without mishap. And yet, ironically, we were cursed with what we were told was a freak accident: when in viewing position, everything was fine — image good, aperture clear — but during the racking over process, a tiny piece of the protective felt facing came loose and would fold into the corner of the frame. Not a big piece, just enough to show up in a most annoying way on the exposed film.

Since we were fitting into the actors' schedules, we shot this sequence over the final weekend of our time on the stage, and didn't get the rushes back until *after* the set had been dismantled and lights taken down. Of course we hadn't been foolish enough to put ourselves in such a spot without a backup — we had covered the whole sequence shot for shot on our Beaulieu. As fate would have it, however, sometime between the shooting of tests with the Beaulieu the week before, and the shooting of this sequence, the lens had been jarred out of alignment and all of the backup footage was N.G.! The sequence eventually ended up being shot correctly and turned out even better than it had the first time through — but the experience did reinforce the old rule: be sure of your equipment. Even if you're sure of it, don't trust in it for a minute.

Of course, after that disaster, nothing could have gone all that badly from there on out. Nothing did go *that* badly. Naturally the only sequence involving a crane (the hobo jungle) was ruined in one of those once-in-a-blue-moon bad soups at the lab, necessitating a reshoot. There was also another lens problem, and a leading actor with a toothache, but they seemed like holidays by comparison.

Actually, some of the scenes of which we were the most frightened went amazingly well. The sequence at

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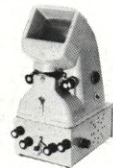
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the movie studio involved 65 costumed extras, two costumed directors, seven period cars, numerous bicycles, and few hassles. This was made possible largely through the efforts of our tireless costumer, Marguerite Topping, who also designed our backdrops and title art.

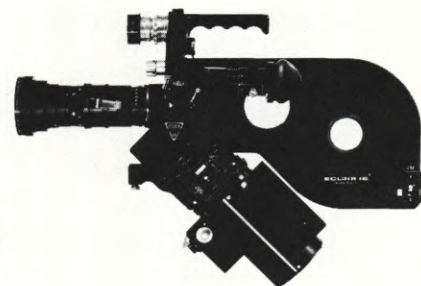
Filming Jack driving his faithful Model T truck sometimes proved to be a bit complicated. The thing is quite tricky to drive, and it was even trickier for us to track with the camera car. Fortunately we had rigged up a pan head adapter for a Super-Grip, and that helped immeasurably. When we discovered that the Super-Grip wouldn't attach to the old metal surface of the truck, we found ourselves improvising some daredevil handheld work — sitting on the front bumper, handholding from the running board and the like.

The script called for Jack to drive out of Los Angeles through some fairly remote areas that had specific geographical and structural features. We had to search many hundreds of miles to find a bridge passing over railroad tracks with a gentle hill that would lead to our hobo jungle. The one we found was great, but required careful composition for several of the angles, since it was next to a freeway and above a mobile home park.

At least we found the bridge — we never could find an elevator and hallway which would logically match the outside of the producer's office. We almost gave up on the shot until we decided to build a set of part of the hallway, and make a frame holding elevator doors which could be lowered in front of the camera. Completing the illusion was a sliding metal cage supposedly attached to the moving elevator car, but which was in fact the security gate around a stage.

Our final complication was the last shot of the film; the image of the color song and dance projected on a black and white hill across the tracks from the hobo jungle. At first we tried actually projecting the film image onto the hill. It seemed logical that, with a xenon projector, we could obtain an interesting image which could be rephotographed and printed together with the black and white hillside. After several nights of frustrating attempts, this brilliant idea failed miserably. We were left with what seemed to be an inferior solution, but it turned out to be more than satisfactory. We simply photographed the color image off a textured, angled screen of small size but in proper proportion to the supposed area on the hill. It was printed up with the black and white hillside, and presto!: "stuck on the screen." ■

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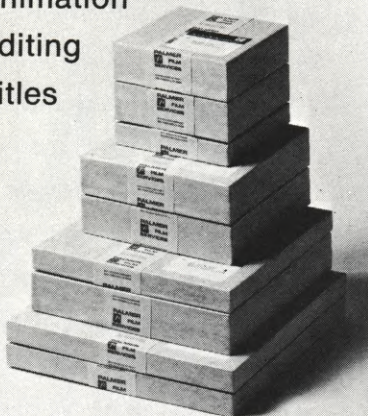



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VIRGIN ISLANDS FESTIVAL

Continued from Page 100

zation involved. For example, the Public Safety Department has had men working for us, beautifully coordinating traffic and rescheduling things to run more smoothly. They've been fantastic. Then we've been working with the airlines to track down films in transit. For example, up until five days before the Festival started we had 28 or 30 films missing and we discovered that it was simply because film had been arbitrarily given low priority. We got to the heads of American and Eastern Airlines and they sent people out onto the floors of the shipping depots to give top priority to every can of film. Now we've got only two or three still missing."

"To add to that, we've really been a kind of catalyst," says Eric Matthews. "Hunter calls us when he's in trouble. He says, 'Okay — the problem for the day is so-and-so.' It's a problem he's not capable of handling, because he's not in a position to do so — but we go to work on it. What Win mentioned is maybe just one out of 500 situations that have arisen in the past week. It's also our function to double-check in order to make sure that everything that has been promised is actually being done. Also, during the Festival, we've done a lot of talking with film-makers, people whose projects might be right for filming in these islands. Several have already said they are going to stay over to discuss specific projects. To get film-makers to make films in the Virgin Islands has been our main thrust during the film festival."

They are a very intelligent and competent pair, deLugo and Matthews, and, being film-makers themselves, they have a very special understanding of the problems involved and how to solve them.

As the Festival draws toward its close, I am bleary-eyed from wall-to-wall film watching, but it's a feast for the eyes. The rest of those attending the Festival are varying the film fare with swimming in the crystal-clear, just-the-right-temperature water, basking on the magnificent beaches, taking tours of the islands, boating, scuba diving, dancing to the *calypso* beat in the discotheques and swilling banana daiquiris.

Then the final night arrives and it's time for the Grand Awards Gala. First there is another round of fireworks (the Grand Finale Aerial Pyrotechnics Celebration), set off from the Old Customs House on nearby Hassel Island. Then the Grand Ballroom of the Frenchman's Reef is packed to the rafters with

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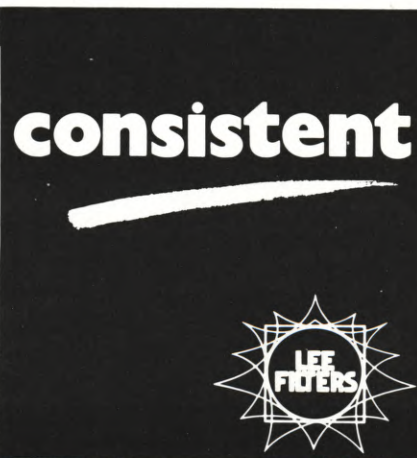
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a stylish crowd of award winners, movie
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The awards are read and bestowed
by a bevy of beauties. Considering how
many awards there are (almost 200), it
is carried off very smoothly and with
dispatch. This Festival has sometimes
been criticized for bestowing so many
awards, but I, for one, applaud the fact
that they recognize every sub-category
of film-making, instead of trying to
group apples with oranges, to employ a
ripe metaphor. As far as I know, this is
the only film festival in the world that
does so.

The "Best of the Festival" award
goes to Jan Kadar's endearing "LIES
MY FATHER TOLD ME" for Colum-
bia. But the really big winner is the
stunning "CHAC — GOD OF RAIN",
which carries off three top awards
("Best Feature", "Best Film of the
Americas" and "Best Director").

It's all over but the *post mortems*
and, in that respect, it must be admit-
ted that there have been a few snafus,
but considering that the Festival was
transplanted from Atlanta and organ-
ized in a completely different kind of
locale *in only five months* puts it into
the miracle category. Sure, the Virgin
Islanders, suffering from a kind of cul-
ture shock at having this complex
operation suddenly thrust upon them,
sometimes didn't have the shuttle bus
ready and waiting just when you
emerged from a screening — and,
sure, four or five features remained
lost, as Todd described it "in the San
Juan Triangle". But to criticize the
Festival for these small lapses would be
nit-picking — especially since they're
the kinds of things that can easily be
corrected the second time around.

What is important is that some fine
films got shown in a locale of spectac-
ularly exotic beauty. Everyone had fun
in an almost Carnival atmosphere, with
the warmest of welcomes extended by
extremely hospitable people. Taking
these facts into consideration (and
what more could you ask of a film festi-
val?), I'd have to say that this first
"Festival of the Americas" to be held in
the Caribbean was a smashing
success.

In fact, I would go so far as to predict
that next year the Virgin Islands Inter-
national Film Festival will be where
everyone who attends film festivals will
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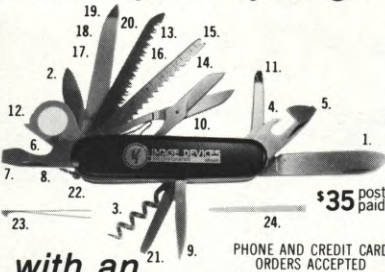
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ERNEST LASZLO AT A.F.I.

Continued from Page 79

QUESTION: Well, for instance, you spent 12 years as an operator.

LASZLO: Yes.

QUESTION: Don't you feel that in working with various cameramen, you learn a lot of things that will enable you to use your imagination?

LASZLO: Very, very true. That is what I call experience. But just as soon as I became a first man, I discarded all that I learned from certain cameramen. I wanted to be on my own. I wanted to do things my own way. Therefore, in photographing *THE HITLER GANG*, it was the type of picture on which I decided I would not use any fill light at all. I never used any fill light on *THE HITLER GANG* because it was that kind of a picture. And it worked out.

QUESTION: Did you ever work as an assistant?

LASZLO: Oh, did I. At \$20 a week. I sure did. Unlimited hours. I had to carry the camera; I had to load and unload the film; I had to load the still plates; unload the still plates; shoot the stills — and unlimited hours. Saturday nights, sometimes Sundays. \$20 a week.

SCHWARTZ: They put cots up in the studios because the guys would be too tired to go home on Sundays.

QUESTION: I do have a question that I'd like Ernie to answer. I quite often get some young people who don't quite see the necessity of going through all the steps of being a first assistant and then an operator, especially an operator. They say, "Well, it doesn't relate at all to the cinematographer's work. So why must we make this step?"

LASZLO: You mean that people, rather than learn from the bottom up, want to start at the top? Is that right?

RESPONSE: Yes.

LASZLO: Well, I think it's a great idea, but it very seldom works. Actually, you know, if you jump into being something like a Director of Photography, and you don't have any basic knowledge, then you're going to blow it. There's no question about it. So what I would again like to say, as I said before, is: Have patience, learn your business, and when the opportunity comes be ready for it, because you cannot start at the top. It's almost impossible.

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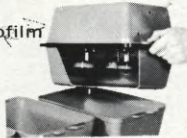
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"CHAC (THE RAIN GOD)"

Continued from Page 58

on high parallels hidden behind black cloth, so that the background remains black throughout the 360-degree movement. The spiral is a basic Mayan symbol, and in our film the diviner is the center of the Mayan knowledge. In this particular scene, throughout his hypnotic tale, he is transporting the men into other realities by means of his magical powers. As the diviner's story continues in a monotonous tone, the figures seem to start floating in limbo.

Once the rushes started coming back from Mexico City (about a week behind) and we screened them in the San Cristobal de las Casas movie house, I was reassured that we were going to have great photography. At that time the actors saw themselves for the first time on the screen. They laughed and joked like a bunch of kids watching the home movies of their last birthday party.

Most of the shooting was not fun for them, but very strenuous work at a forced pace that was very different from their timeless lifestyle. That is why the production logistics were always the toughest, having to work with a professional crew, at professional costs under very unprofessional circumstances. Some of the actors came from faraway hamlets and had to walk for three or four hours for the morning call. So we were forced to concentrate the main cast (with their families) in Tenejapa. Earning good wages, many took to drinking; others could not handle the strain and defected to their hamlets, leaving us with continuity problems. However, there were other complications. For example, on the very first day of shooting at the caves, Pablo Canche Balam, who plays the Diviner, slipped a hundred feet into the cavern, twisting an ankle. The natives attributed this to the caves being holy places where one should not enter without asking the gods' permission. They requested 19 candles to pray at the mouth of the cave to ask the gods for "clearance". The prop man had 11 large candles which he proposed cutting in halves to obtain the required 19. The actors became indignant at the suggestion. To cut a candle in two was equivalent to cutting the god's head off and this was an unforgivable sacrilege. So someone had to dash back into town to buy more candles.

Fortunately we had an excellent crew. The Churubusco crews work in teams — always the same gaffers with the same grips, propmen, etc. For them it is the functioning of the team as a whole that matters. So different depart-

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ments are always helping each other out. Under our working conditions, that unity of purposefulness created a solid family that managed to weather the adverse circumstances. This feeling of teamwork paid off, especially in far-away locations, in the middle of the jungle, where the only source of light was the moving spots of sun filtering through the tall trees, and the men had to run through the foliage, opening their way with machetes, to reset the reflectors every ten minutes. By then we were operating with a small crew. Alex had left to shoot "THE SAVAGE IS LOOSE", and Bill Kaplan (who, besides being a soundman, is also a very good cameraman) became the Director of Photography.

The last sequences we worked on were filmed at the waterfalls of Agua Azul, the most incredible system of rushing waters, located in the heart of the Chiapas jungle. I wanted to create the magical feeling that the actors walked on water across the falls. For that, an advance man had built a series of four bridges a few inches above the water level. Since it was the dry season, we were counting on a constant water flow. Unfortunately it rained, the water level rose and the current washed out half of the bridges downstream. They were rebuilt. The placement of the cameras, at low angles, to avoid the sight of the bridges was not an easy task either. Jumping on slippery rocks and holding onto ropes, at one point the assistant cameraman fell into the water with one of the Arris. By then, out of the main cast of 15 men, all but five had already deserted.

Then we had the rain. It was the dry season, but CHAC, the Rain God, kept on haunting us throughout the shooting. The region had the biggest flood in 80 years, they said. Perhaps, that is why I always felt that the theme of the story, with its pleas for rain, was mystically correct. ■

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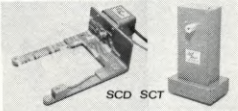
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NEW YEAR SALE: Arri IIC/GS, loaded \$6,500. Arri 120S blimp for Arri IIC, \$6,250. Cine-60 blimp for Arri IIC, \$1,795. B&H 2709 outfit, \$1,200. Eclair 16/35mm CM-3, \$1,500. Hulcher 70mm camera outfit \$1,500. New studio blimp for CM-3, \$2,900. Perfectone DC sync motor for CM-3, new \$980. Eastman 16mm Hi-speed, mint, \$1,200. Arri-BL, \$6,700. Arri-S, \$2,900. Arri-S, \$2,200. Auricon Conversion newsreel outfit, \$2,500. New Bolex Pro, \$7,500. Bolex EBM, loaded, \$2,500. Eclair ACL, \$6,900. Eclair ACL, \$3,900. Eclair NPR, \$7,300. Canon Scoopic, \$750. Mitchell-16, loaded, \$3,500. Ampex 1/4" 8-track recorder with Sync Lock, mint \$7,500. Omega M-3 portable 16mm recorder, \$1,200. Omega 16mm Dubber, \$900. Magnasync 16mm triple Dubbers, \$2,500. Magnasync 16mm rack recorder, \$1,595. Nagra IV-L recorder, loaded, \$2,900. Nagra III crystal recorder, \$1,695. Nagra SSN miniature recorder, loaded, \$1,900. Atlas 16mm 8-plate table editor, \$4,900. Atlas 16/35 B&W processor, \$1,500. Bolex 421 mag/opt projector, \$995. Many more bargains, ask for Free 1976 catalog. COMQUIP, Inc., 366 S. Maple Ave., Glen Rock, N.J. 07452. (201) 444-3800.

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Cash Paid for old cameras and accessories, any condition. Needed for repair parts. Eyemo, Cineflex, Mitchell, etc. (213) 985-4400.

WANTED: Maurer animation and wild motors. #1798, AMERICAN CINEMATOGRAPHER.

INTERLOCK Projection setup consisting of one 16mm projector and one or more 16mm magnetic recorder/playback units. Would prefer Bell & Howell and Magnasync, but will consider any combination. STOFFER PRODUCTIONS, Box 15057, Aspen, CO 81611 (303) 925-5536.

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WANTED CP16R or CP16 with or without side amp or lens. Excellent condition only. DON (512) 442-4387, nights.

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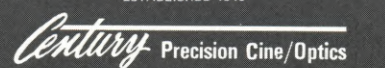


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Section 2
Page 52
News
Monday
Sept 21, 1975

NEW YORK, SUNDAY, SEPTEMBER 21, 1975

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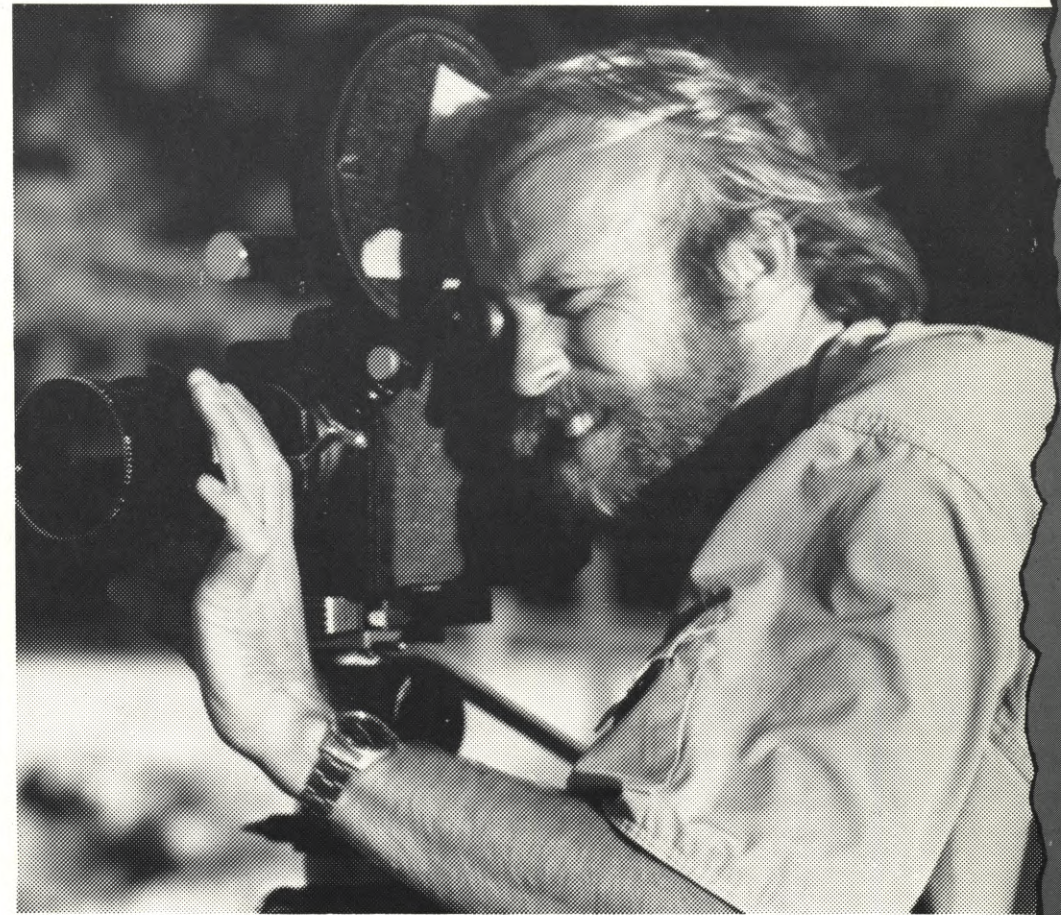
FREZZOLINI LW-16 16MM SOUND-ON- FILM CAMERA

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documentary now
showing on TV


by JIM CRAWFORD

HAWTHORNE, N.J., 1976—
The shooting ended in 1975 for
cinematographer Robert Elf-
strom on location in the Mid-
dle East on assignment for a
TV documentary film. Reliable
sources claim that Elfstrom
used a "Re-manufactured"
LW-16 Frezzolini® profes-
sional 16mm sound-on-film
ciné camera throughout the
filming, a report the cinema-
tographer confirmed as we go
to press. When asked what was
meant by the cryptic word
"Re-manufactured" Elfstrom
explained that *Frezzolini Elec-
tronics Inc.*, the manufacturer
of the cameras, can and will
"re-manufacture" many mod-
els of older Auricon & Frezzo-
lini® or similar types of 16mm
ciné cameras into *Newly-War-
ranted LW-16 models for a
great deal less than the cost of
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era.* Now, before you buy a
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film ciné camera check around
for the best. Frezzolini® Model
LW-16, newly-manufactured
in its plant in Hawthorne,
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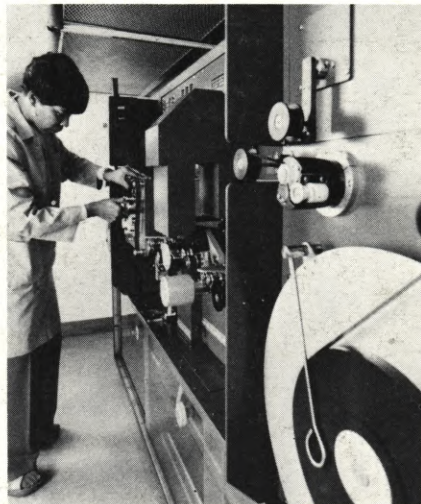
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