



## FPS know all the answers

in Colour or Black and White

for 8mm prints from 16mm

A & B rolls • All other 8mm

release printing • Sound

transfer and recording facilities

• Production planning • Cutting

in single, A & B or Chequerboard

• Titling, animation and all

artwork

● ALL PRODUCER SERVICES



**FILMPRINT**

*Write, phone or visit*

**FILMPRINT SERVICES LTD**

**71 GROSVENOR ST • LONDON W1**

**SERVICES**

**ENGLAND • Tel: MAYfair 2456**

**Cables: Filmprin, London**

**LIMITED**

*Specialists in 8mm conversion*

Send your productions to the address above, giving full details of requirements and description of film (for customs). They will be returned, air freight, promptly, and to your entire satisfaction.

**PRICE including Air Freight.**

8mm colour prints from 16mm A & B roll colour originals 14 cents per foot.

8mm B/W prints from 16mm A & B roll B/W originals 9.4 cents per foot.

*This folder giving full details of service and prices mailed on request* ➔



## Cineramic New York

New Motion Picture System  
to Show State at the Fair

**T**HE NEW YORK STATE exhibit at the World's Fair will have incorporated into it a unique motion picture system which will give Fair visitors an unusual and exciting panoramic view of the state. Coleman Productions, Inc., of New York City, will be the producers of the picture and will also function as the operators of the exhibit.

Harry Coleman, president of that firm, engaged the Cinerama Camera Corporation to design a unique motion picture camera which could photograph "in the round" — that is to say, with a panoramic 360 degree picture. Cinerama Camera undertook the task in the early part of April of this year, and has already delivered the camera system, which is now being used for the production of the film.

"Spacearium" at Seattle Fair

Cinerama's Special Projects Department has produced such unique exhibits as the Spacearium, the hemispherical projection system which took viewers on a motion picture trip to outer space. The film was located in the United States Science Pavilion of the Seattle World's Fair. It had been developed by a Cinerama Camera team under the direction of William D. Liitschwager, who is now Director of Marketing for the company.

Coleman recognized that such talent was needed for the development of the New York State Exhibit and contracted to have his cameras built by them. Coleman, in conjunction with Gerhard Lessman, Cinerama Camera's Director of Engineering, and with Mr. Liitschwager, worked out the detailed specifications of the system.

360-degree View of State

The motion picture system envisioned for the exhibit was to be a panoramic picture of New York State projected onto a cylinder 80 feet in diameter and 20 feet high, in a 360-degree panorama. To accomplish this it was necessary to first design and develop a multiple camera system which could photograph in this configuration. It was decided that six Mitchell Mark II cameras would be mounted in tandem on a pedestal. This would provide six 35mm single frame exposures to cover the 360-degree panoramic view called for.

(CONTINUED ON PAGE 64)

**PARTHENON PICTURES**  
HOLLYWOOD

**FILM —**

### A MULTIPLE-USE TOOL

Few businessmen realize the variety of problems which film can help them solve, and the objectives which film can help achieve . . . and at an honest dollar profit. Test your own awareness by checking the uses below:

### PUBLIC RELATIONS

#### CORPORATE IMAGE

"Fire and the Wheel" (Mobil Oil)  
"Fools of Telephony" (Western Elec.)  
"In Touch With the Future" (GenTel)

#### INSTITUTIONAL

"Had the Heart" (Borden Company)

#### PUBLIC SERVICE

"Holiday for Bands" (American Oil)  
"Collectors' Item" (Int'l. Harvester)  
"Man With a Thousand Hands" (I.H.)  
"Television in Education" (AT&T)  
"Fair Chance" (Planned Parenthood)

### SALES PROMOTION

#### "SOFT" PROMOTION

"Case of the Bewildered Bride"  
(Carnation Co.)  
"Happy Holidays Along the Potomac"  
(American Oil)

#### DIRECT SELL

"Communication Services for FIV"  
(American Tel. & Tel.)

#### PRODUCT DEMONSTRATION

"Modern Basic Refractories" (Kaiser)

#### SALESMAN TRAINING

"The File On Henry Royall" (Bank Am.)  
"The Hardest Case" (Ford Mktg. Inst.)

#### CUSTOMER GOODWILL

"Headline for Harper" (Int'l. Harv.)

#### FACILITIES & CAPABILITIES

"Weston Hydraulics" (Boig W. Sub.)

### EMPLOYEE RELATIONS

#### EMPLOYEE MORALE

"The Independent" (USITA)  
"May I Help You?" (AT&T)  
"In Touch With the Future" (GenTel)

#### NEW-EMPLOYEE ORIENTATION

"Elsie & Co." (Borden Co.)  
"A Hotel Is Born" (Hilton Hotels)

#### EXPLANATION OF CHANGES

"This Is Standard Oil" (Indiana)

#### EMPLOYEE RECRUITING

"Three For Tomorrow" (API)

### AND: TRAINING

#### DEALER GUIDANCE

"You B-Line" — Stu Erwin (IH)

#### IN-SERVICE "SKILL" TRAINING

"An Answer For Linda" (AT&T)  
"First Impressions" (Bank Am. slidefilm)

#### EMPLOYEE INFORMATION

"Outside That Envelope"  
(Conn. Gen. Life Insurance)

#### SUPERVISOR TRAINING

"Locked On" (Gen. Dyn. Astronautics)

#### POLITICAL ACTION

"Physicians in Politics" (AmMed.PAC)

**PARTHENON PICTURES**

Cap Palmer Exec. Producer  
2625 Temple St. • Hollywood 26  
DUnkirk 5-3911

## EASTERN STATES

### • MASSACHUSETTS •

Cinema, Inc., 234 Clarendon St., Boston 16.

### • NEW YORK •

Buchan Pictures, 122 W. Chipewa St., Buffalo 2, N. Y.

Crawford, Immig and Landis, Inc., 480 Lexington Avenue, New York 17, New York.

The Jam Handy Organization, 1775 Broadway, New York 19.

S. O. S. Photo-Cine Optics, Inc., 602 W. 52nd St., New York 19.

Training Films, Inc., 150 West 54th St., New York 19.

Visual Sciences, 599BS Suffern.

United World Films, Inc., 1445 Park Ave., NY 29, TR 6-5200

### • PENNSYLVANIA •

Appel Visual Service, Inc., 963 Liberty Avenue, Pittsburgh 22.

Audio-Visual Center — Rentals, Sales, Repairs, 27 South 17th Street, Philadelphia 3, Pa. Phone: LOcust 3-6572.

Oscar H. Hirt, Inc., 41 N. 11th St., Philadelphia 7, WALnut 3-0650.

James Lett Company, 221 N. Second St., Harrisburg CEDar 3-5651.

J. P. Lilley & Son, Inc., 92S N. Third St., Harrisburg.

The Jam Handy Organization, Pittsburgh. Phone: ZENith 0143.

## SOUTHERN STATES

### • GEORGIA •

Colonial Films, 71 Walton St., N. W., JA 5-5378, Atlanta.

United World Films, Inc., 287 Techwood Dr., NW., Atlanta.

### • LOUISIANA •

Delta Visual Service, Inc., 715 Girod St., New Orleans 12. Phone: JA 5-9061.

### • MARYLAND •

Stark-Films (Since 1920), Howard and Centre Sts., Baltimore 1. LE. 9-3391.

## MIDWESTERN STATES

### • ILLINOIS •

Robt. H. Redfield, Inc., 1020 So. Wabash Ave., Chicago 5.

The Jam Handy Organization, 230 North Michigan Avenue, Chicago 1.

Midwest Visual Equipment Co., 3518 W. Devon Ave., or 27 N. Franklin St., Chicago.

United World Films, Inc., 542 S. Dearborn St., Chicago 5.

### • MICHIGAN •

The Jam Handy Organization, 2821 E. Grand Blvd., Detroit Zone 11.

### • MISSOURI •

Swank's, Inc., 621 N. Skinker Blvd., St. Louis 30, Mo.

### • OHIO •

Academy Film Service, Inc., 2100 Payne Ave., Cleveland 14.

Films Unlimited Productions, 137 Park Avenue, Mansfield.

Fryan Film Service, 2929 Prospect Ave., Cleveland 15.

Sunray Films, Inc., 2005 Chester Ave., Cleveland 14.

Twyman Films, Inc., 329 Salem Ave., Dayton.

### LIST SERVICES HERE

Qualified audio-visual dealers are listed in this Directory at \$1.00 per line per issue on an annual basis only.

M. H. Martin Company, 1118 Lincoln Way E., Massillon.

## WESTERN STATES

### • CALIFORNIA •

#### LOS ANGELES AREA

Coast Visual Education Co., 5620 Hollywood Blvd., Hollywood 28.

The Jam Handy Organization, 305 Taft Building, 1680 N. Vine St., Hollywood 28.

Photo & Sound Company, 5515 Sunset Blvd., Hollywood 28.

Ralke Co., Inc. A-V Center, 849 North Highland Ave., LA 38. HO 4-1147.

S. O. S. Photo-Cine Optics, Inc., 6331 Hollywood Blvd., Hollywood 28.

Spindler & Sauppe, 2201 Beverly Blvd., Los Angeles 57. Phone: DUmkirk 9-1288

United World Films, Inc., 7374 Melrose Ave., Los Angeles 46

#### SAN FRANCISCO AREA

Photo & Sound Company, 116 Natoma St., San Francisco 5.

Westcoast Films, 255 Minna, San Francisco 3.

### • COLORADO •

Cromars' (formerly Audio-Visual Center) 922 Bannock Denver 4

### • OREGON •

Moore's Audio-Visual Center, 1201 S. W. Morrison, Portland 5, Oregon.

United World Films, Inc. 5023 NE Sandy Blvd., Portland 13

### • TEXAS •

United World Films, Inc., 2227 Bryan St., Dallas 1

### • UTAH •

Deseret Book Company, 44 East South Temple St. Salt Lake, 10.

## N. Y. STATE FILM:

(CONTINUED FROM PAGE 20)

... The cameras are driven by a 26-horsepower, 28-volt motor with a variable speed control. This control enables the cameras to run in steps of 8, 12, 16, 24 and 48 frames per second. The cameras are mounted on a pedestal with a 26-inch center which results in a complete camera unit being 44



Producer Harry Coleman (at left) checks Cinerama camera with William D. Liitschwager of Cinerama's Special Projects Department.

inches high with an overall diameter across the magazines of 52 inches. The total unit weighs over 500 pounds.

The cameras are mounted vertically and photograph into a turret of 45-degree angle mirrors. Special optics were designed to accomplish the 360-degree horizontal coverage and the 27 degree vertical coverage.

Coleman Productions, Inc. won the assignment to do the New York State production because of the company's familiarity and experience in travel films. The principal cinematographer engaged for the production, said to be one of the few able to handle a brace of six cameras at once, is Chuck Austin, formerly employed by the Mitchell Company, and one of the men instrumental in the design of the Mark II.

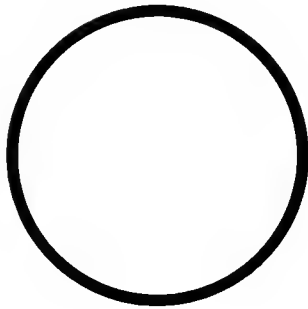
Tests having been successfully completed, the camera system is now being employed in photographing New York State in all seasons for an exhibit which promises to be one of the most popular attractions of the Fair. ☐

\* \* \*

### Writer Carl Pugh's at Home

☆ Script writer Carl Pugh is now located on his own mango and avocado plot at 13123 South West 64th Court, Miami, Florida. His phone number remains the same: MOhawk 1-9440, A C 305. ☐

## **RECIPE FOR EXCITEMENT!**



- Take six Mitchell Mark II motion picture cameras with anamorphic lenses
- Add design and engineering by Cineromo Camera Corporation of Los Angeles
- Mount gently for mobility
- Spice with Coleman Productions, Inc. creativity and experience
- Film the wonders of New York State
- Show at the New York State Pavilion—World's Fair of 1964-1965.

**RESULT — A 360-DEGREE VISUAL ENCIRCLEMENT  
IN MAGNIFICENT COLOR!**

Your production may not be as ambitious as this.  
But, large or small, Coleman Productions ingenuity  
goes into each project to give you the finest  
in Motion Pictures.

### **COLEMAN PRODUCTIONS, INC.**

75 West 45th Street  
New York 36, New York

ONE OF THE MOST novel and successful films being shown at the Fair is *A-Round New York*, a 14-minute Theaterama 360-degree production being presented in the New York State Pavilion.

Produced by Coleman Productions, Inc., the film treats viewers to a whirlwind tour of the state, highlighting significant scenic, industrial, cultural and entertainment centers. The feeling of presence experienced in the 360-degree film is extraordinary.

#### A New 360-Degree Approach

This process differs from earlier attempts at reproducing a total 360-degree field of view in several substantial areas. Most significant, it utilizes 35mm film, rather than the previous 16mm, which permits a projected image of sufficient dimensions to do justice to total all-encircling panorama.

Additionally, because the Mitchell Mark II cameras are equipped with identically-matched anamorphic lenses, only six cameras are required to complete the 360 degree horizontal coverage, rather than the 10 or 11 cameras required by other processes. This advantage is immediately obvious. The biggest obstacle to be overcome in multiple projection is edge-matching. By using only six units, the number of edges to be matched is reduced by nearly half.

#### Special System Was Built

In order to more adequately fulfill his conception of Theaterama, Harry L. Coleman, president of Coleman Productions, Inc., commissioned the Cinerama Camera Corporation, of Hollywood, to design and construct a multiple camera system to certain of his own specifications.

The result of their combined efforts is the 60-pound camera set-up approximating the shape of a cylinder — 48 inches high by 52 inches in diameter, including 1000-foot magazines.

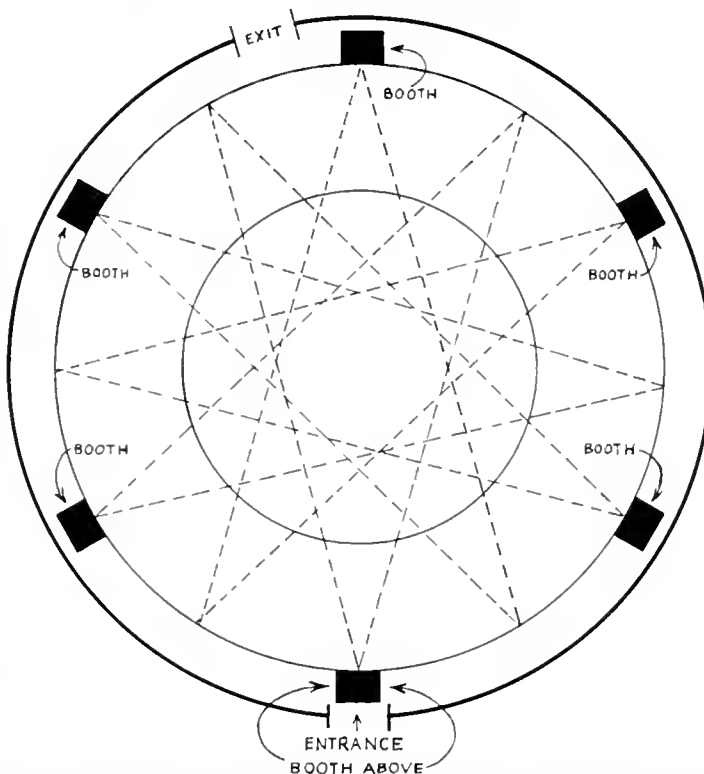
The six Mark II's are mounted vertically on a pedestal, shooting up into a turret of six front-sur-

*Circular Theaterama building in which Coleman-produced 360-degree film is shown. Examples of "pop" art are used around outside walls.*



## A 360-DEGREE TOUR "A-ROUND NEW YORK"

*encircling vistas of the Empire State put viewers right "in" the action*



*Sketch of New York State "Theaterama" building shows how the six 35mm Norelco Pulse-Lite projectors cover equal number of 20 x 42-foot screens, encircling viewers who stand in center on marble floor.*

face mirrors, arranged to present a 45 degree surface to each lens. Without this feature, the cameras would necessarily be mounted hori-

zontally, shooting outward like spokes of a wheel.

In the latter arrangement, the edges of the angle of view origi-

nating at the nodal point of each individual lens could not possibly correspond. Thus, at close range, a subject passing from the field of view of one camera to that of another would be lost from sight during that interval.

#### Avoiding the Loss of Field

By establishing an effective nodal point for all cameras (hypothetically dead center of the system) and reflecting the field accepted at this common point into each individual lens, there is no loss of field at any distance from the lens, from minimum to infinity. This is the value and necessity of the optically-correct, perfectly-aligned turret of mirrors.

Reducing the number of cameras, thereby providing more uninterrupted screen in projecting 360-degrees, created optical problems which challenged the best engineering minds in the business. Since each of the six cameras must accept a full 60-degrees of horizontal coverage, a lens with a focal length of not more than 40mm is required. A 40mm lens could not accept the necessary anamorphic addition without vignetting.

#### Lenses Were Ground Overseas

The problem was reported, with recommendations to an overseas optical manufacturer. The solution received was a set of six (CONCLUDED ON PAGE 76)

*View of the New York State area with Theaterama ticket booth in foreground. A modest 25c admission is charged for the 42-minute picture.*



(CONTINUED FROM PAGE 47)

identical 40mm matched lenses, with built-in anamorphics. This feature permits angle coverage in excess of the 60-degrees per camera required, and then is masked in projection.

The cameras are collectively driven by a single motor, interlocked to the drive shafts of each camera. This mechanical interlock insures identical operation of all cameras. Power for the outfit is supplied by a 28-volt re-chargable storage battery. The various speeds of the motor are absolutely controlled by a servo amplifier, which is accurate to plus or minus a tenth of one degree. This servo amplifier was originally engineered for delicate speed controlled devices for the armed forces. Its application is ideally suited for constant camera speed controls.

#### Required 17-Conductor Cable

The remote control system, a single panel box connected to the camera by a 17-conductor cable, permits on-off control, variable camera speeds from 8 fps to 48 fps, full range control for diaphragm settings (a feature which proved invaluable during aerial photography at dawn when the camera was suspended 20 feet below the cameraman, and the rising sun changed light values every five minutes), and indicator lights to warn immediately should one or another of the six cameras develop malfunction. Harry Coleman is presently designing a radio-controlled remote device which will permit even greater flexibility in the use of the camera.

The camera is supported on a hydraulic dolly for field use, and can be moved directly in a Corvan truck for transportation. In order to get travel shots from the truck, a square opening was cut into the roof, and the camera is raised through it hydraulically. Most of the exciting shots were taken in this manner and give audiences a sense of participation so realistic that they inevitably gasp when the truck drives over a bump in the road.

Supervised by William Drohan

The film was produced for the New York State Commission On The World's Fair through William J. Drohan, project director. A circular theatre was designed and built, having an 80 foot diameter. The screen size is 20 feet high and 251 feet in circumference.

It was important to use projectors which do not have a shut-

## NEW YORK STATE IN THEATERAMA



Intricate camera gear used to film 360-degree "Theaterama" production for New York State's World's Fair exhibit pictured at Madison Square Garden as cameraman Hal Seiden (right); assistant cameraman Don Shapiro prepare for a sequence featuring New York Rangers ice hockey team during a game.

ter in order to reduce flickers, which become more apparent through peripheral vision. For this purpose, six Norelco FP-22-S projectors were ordered. Corresponding to the identical operation of all cameras, an interlocking device for the projectors was designed and installed by Magna-Tech Electronic Company. Identical frame-for-frame registration on all projectors is necessary in order to insure proper reproduction.

#### Effect on Audiences Notable

The result of this cooperative endeavor is clearly evident on the faces of the audience. Just as the film transports the spectator deftly from the quiet serenity of an evening boat ride through the Thousand Islands to a thrilling "shoot-the-rapids" in Ausable Chasm, from a pleasant drive along a country road to a spectacular helicopter trip past the nose of the Statue of Liberty, so do the emotions of onlookers run the gamut from quiet appreciation to wild adventure. Each showing is invariably punctuated by sighs of delight, oohs of revelation, or squeals of fright. Whatever the impression, it is a lasting one.

Undertaking the production of a film of this nature was a challenge squarely met by Coleman. It necessarily involved a broad imagination in concept, and the ability and confidence to break all the established rules for motion picture production. Old ideas had to be discarded left and right, and new ones developed and put to work, often right on location.

The experience was found to be gratifying, however. With one Theaterama production under its belt, the company is now negotiating future presentations using the same medium. The 360-degree technique would be particularly effective for tent shows at state fairs and similar attractions.

\* \* \*

#### Wilding Inc. Sales, Profits Show Gains in First Quarter

☆ Shareholders of Wilding, Inc. have received that national communications company's quarterly report for the period ending March 31st with the gratifying news of a sharp upturn in comparative first quarter sales (\$3,987,464 v.s. \$1,645,911 for the same period last year). There was a corresponding increase in net earnings which totaled \$128,474. The company reported a loss of \$38,924 for the comparative 1963 first quarter. Net earnings of Wilding, Inc. were 32¢ a share for the first quarter of 1964.

**SHARP,  
CLEAR  
PICTURES  
IN  
DAYLIGHT  
WITH**



### LENSCREEN REAR SCREENS BY POLACOAT

Use of rear screen conceals projector, eliminates distractions, speeds understanding and learning. **LENSCREEN** is ideal for:

**Briefing, Training, Display of Data and Information, Tracking Systems, High Speed Film Analysis, and for Exhibits, Displays, Sales Presentations.**

**LENSCREEN** is available in glass, plexiglas, other plastics — may be ordered as material by the square foot. For full information about screen materials, permanent in-wall screens, rear-screen uses, order your free **LENSCREEN** kit today.

## POLACOAT, INC.

**MAIL THIS COUPON TODAY**

POLACOAT, INCORPORATED

9725 Conklin Road, Blue Ash, Ohio

Please send the Lenscreen Information kit.

Name .. Position ..

Company ..

Address ..

City .. State .. Zip Code ..