

# One Hundred Percent Arc Lamps

By WALTER STROHM



Batteries of the newly developed silent arc lamps were necessary to film the Ice Cream color fantasy of "Kid Millions," Eddie Cantor's fifth annual screen musical comedy for Samuel Goldwyn. The new three-tone Technicolor process was used for this novel sequence.

**I**F the executives of the United Artists Studios were to ask: "Is it practical to use arc lamps exclusively in the production of a major feature," the answer would be positively in the affirmative. Large quantities of arc lamps were used in the Technicolor sequences of the "House of Rothschild" and also in Eddie Cantor's picture, "Kid Millions." In most of the scenes the sound and pictures were taken together. Where the sound was added later it was because of the humming of hundreds of youngsters—in the Ice Cream Counter scene in "Kid Millions"—and not due to fear of humming of arc lamps. If proper precautions are taken it is practical to utilize the present arc lamp equipment in large quantities; however, a reasonable appropriation for bringing the equipment up to date will cut the cost of operation considerably.

For the past several months there has been a growing demand on the part of cameramen for 80 ampere rotary arc spots and for sun arcs, but it was not until Darryl Zanuck, of Twentieth Century Pictures, decided to photograph a part of the "House of Rothschild" in Technicolor, that we had the opportunity of using all types of arcs in large quantities.

The Reception Hall set in the "House of Rothschild" contained 16,000 square feet of floor space and the lighting plan called for the following equipment: 99 80 ampere rotary arc spots, 42 24" sun arcs, 16 36" sun arcs, 40 arc broadsides, 25 arc scoops, and 28 effect lamps. For this particular set it was necessary to rent

considerable outside equipment which also had to be adapted to sound requirements.

The preparation work included a thorough inspection of the studio's arc lamps. Each lamp was fitted with a snap switch so the operator could cut off the arc control motor during the actual "take" if he found it necessary to do so. The arc control motors were equipped with special carbon brushes to eliminate the possibility of squeaking from that source. The contact brushes were well cleaned and graphited. Electrolytic condensers were connected across the line in the generator room, and a number of choke coils secured for use on the set. The new type broadsides and scoops were obtained because of their silent features and increase light output.

The key electricians were picked for their previous experience with arcs. Robert Comer, set electrician, on the "House of Rothschild," and James Portevin on "Kid Millions," took the responsibility of seeing that the equipment not in perfect condition, or equipped with cutout switches, was kept in the background or removed from the set.

It was a reasonably simple matter to meet the lighting requirements of Ray Rennehan, in charge of Technicolor photography, because of their accurate methods of light measurements. The problem of the sound department, however, promised to offer some difficulties. To bring this under control choke coils were connected to the lamps located near the microphones, some lamps were shifted around and the operators graphited the carbons

(Turn to Page 25)

## ONE HUNDRED PERCENT ARC LAMPS

(Continued from Page 14)

in some cases. The only difficult interference credited to arcs was caused by the public address system.

The entire Technicolor portion of the "House of Rothschild" was taken with arc lamps and the sound and pictures were made together. A viewing of this picture will satisfy any skeptic that arc lamps, even in their present condition, can be successfully used with sound.

The preparation work necessary on the "House of Rothschild" can be greatly reduced by the expenditure of a reasonable amount of money to modernize existing arc lamp equipment. When this work has once been done it will pay for itself many times over by the saving in time on the set.

Considerable work has been done in the past few years by the studio electrical departments to quiet arc lamps. The electrolytic condenser and the choke coil for the elimination of commutator ripple were developed in the studios. Some of the spotlamps and sun arcs are already equipped with cutout motors. It is quite possible with the aid of fibre gears, graphite brushes and built-in choke coils, to make these lamps meet any requirement of the sound department.

Due to the recent demand for arc lamps, manufacturers have produced improved arc lamps and carbons. The new type broadsides and scoops used in the "House of Rothschild" and "Kid Millions" delivered 210 foot candles at 15 feet as against 55 foot candles with the old type equipment. They are silent and one operator can handle a large number of them. On a recent picture, "Nana," Gregg Toland used a new model carbon arc spotlamp within two feet of the microphone.

[If the new photographic technique calls for mixed lighting, or even for 100% arc lights, the electrical department is prepared to supply the equipment.]

## PAUL PERRY LEAVES US

Mrs. Paul Perry, wife of one of the pioneer camera-men aces of the motion picture industry of America, and for years operating in Hollywood, a brother of Harry Perry and popular among his fellows, departed September 11, for San Francisco whence she will sail for Manila.

She goes to join her husband in Manila, where he

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Hollywood, California

has opened a color laboratory for the processing of film shot in the Oriental countries.

Paul Perry is by no means a stranger in the Orient, where he has been on location many times for Hollywood studios, shooting stuff from India to China and Japan.

Paul, here's good luck to you and your new venture. We shall miss you here at the old homestead.

## BAUSCH &amp; LOMB FOLDER

A new six-page folder on Bausch & Lomb Tessar Lenses has just been issued at Rochester. This folder is illustrated with examples of photography from this series of lenses and carries schematic drawings showing the arrangement of the elements in the barrel.

A series of magazine advertisements is being released on these lenses.

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