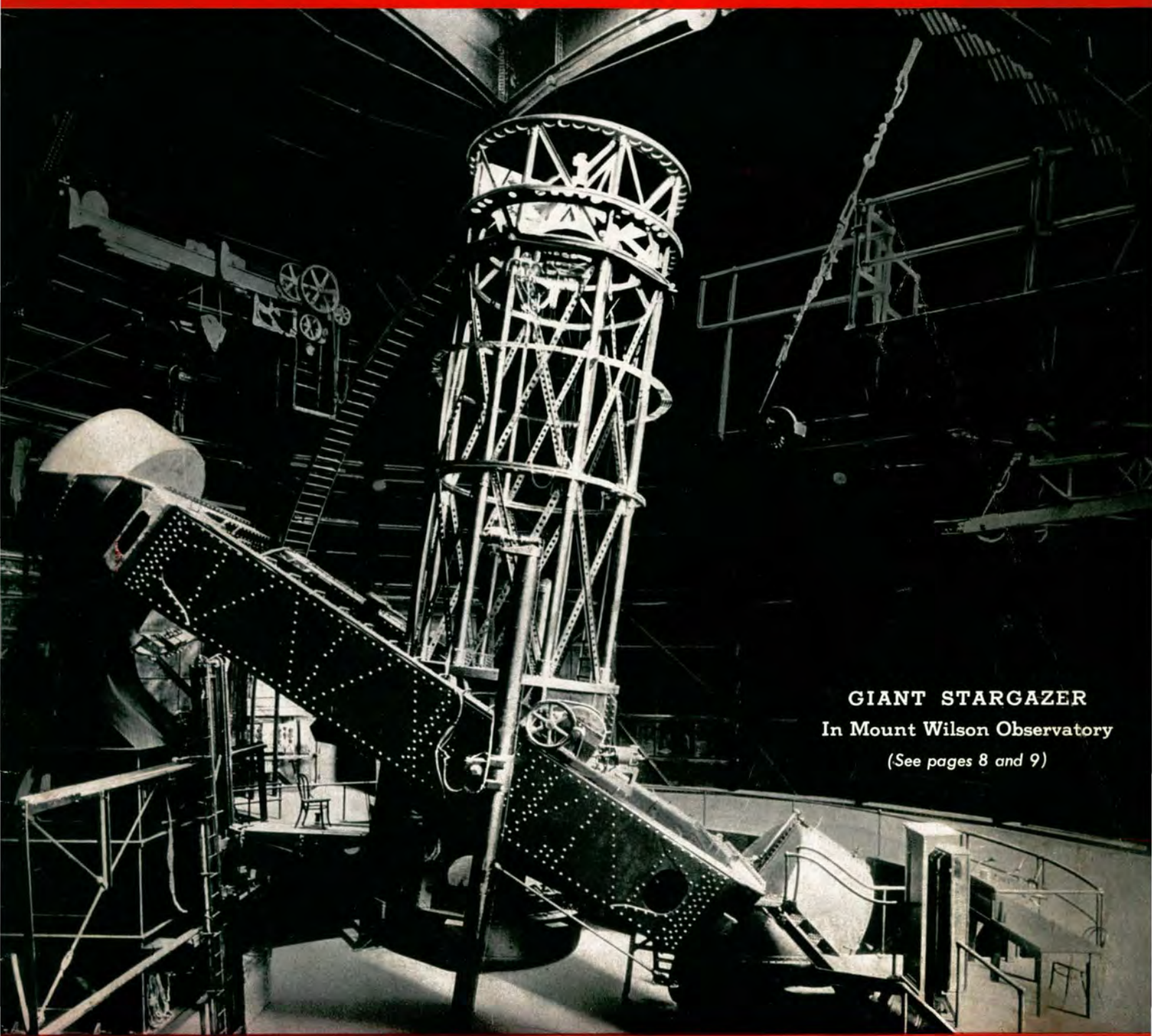
KODAK

A MAGAZINE FOR EASTMAN EMPLOYEES



GIANT STARGAZER
In Mount Wilson Observatory
(See pages 8 and 9)

OCTOBER 1939

"AT EVENTIDE": a setting sun, soft lights and shadows on the still waters, a lonely pier—a camera shutter clicks, and here's the truly excellent result. Exposure was 1/25 second at f/6.3. A sky filter was used

IN THIS ISSUE

The management of the Kodak Company believes that the following statement deserves the thoughtful attention of all who work in industry.

September 21, 1939

TO THE AMERICAN PUBLIC:

American Industry Is Opposed to WAR

★ ***American Industry Hates War.***

War destroys lives. War wrecks homes. Economic chaos and years of crushing depression are its inevitable aftermath. It imperils representative democracy. Free institutions are among its early victims. Ultimately no one can escape the ruin of war.

American industry wants peace. Peace is the life blood of progress. Peace must be the national objective.

Industry's position on this matter has been stated repeatedly and there must be no misunderstanding about it.

★ ***The United States can stay out of war.***

Emotionalism can betray us into war.

A public will to peace, coupled with wise public policies and affirmative action to this end by our government will keep us out of war. A fatalistic attitude that war is inevitable for us is absurd. It presupposes that America cannot conduct itself intelligently to preserve peace and its own interests.

★ ***Europe's problems do affect us, but our domestic problems still must come first.***

If yesterday industry was the only source of prosperity and reemployment, today it is as well the keystone of preparedness and peace. Under any conditions, America must depend on a smoothly functioning, efficient industrial system.

Manufacturers will not relax their efforts to achieve and maintain sound improvement in our domestic economy.

Industry opposes profiteering—the utilization of war psychology to boost prices for the purpose of making excessive profits.

As manufacturers we recognize it to be our responsibility and moral obligation to conduct our businesses so that the prices of the products we produce and sell are related equitably to production costs.

We pledge our energetic support to this policy.

The National Association of Manufacturers calls upon all its members to exercise vigilance against any price or profit policies not justified by actual cost and anticipated cost of replacement.

★ ***Months ago this Association said: "No sensible person believes that profit can come out of the wreckage of human life and economic dislocation."***

The use of this crisis as an excuse either to extort unjustifiable profits or to pursue partisan political objectives is not only indefensible and dangerous, but reprehensible morally. Nor should pleas of "emergency" be utilized as an excuse for reaching objectives which the American people would not sanction otherwise.

The present situation calls for agreement on common objectives, but the democratic process of consultation and criticism must never be abandoned. Otherwise, we shall be following in the footsteps of those who believe in government by coercion.

★ ***In a world distraught by force the best way to preserve representative democracy is to practice it.***

NATIONAL ASSOCIATION OF MANUFACTURERS
14 WEST 49TH STREET, NEW YORK, N. Y.

KODAK

Volume 18 OCTOBER 1939 Number 10

This Coat Kills Reflections

Some of Its Many Potential Uses in Photography As Well As in Other Fields Are Told

LIGHT IS THE EXTERNAL AGENT that stimulates the retina of the eye and makes things visible.

In a way, the eye in action is very like a camera. It has a lens behind the iris, which forms an image on a sensitive surface, the retina. Unlike film, however, the retina is not permanently changed when light falls upon it; it merely acts as a medium to transmit the sensation to the brain.

If, while you are reading these words, another person could look at the retina of your eye, he would see that an image of the page is formed on it, and that this image is inverted like all lens images. Your brain, however, considers this image right-side up.

If you're reading by daylight, the light that falls on your retina comes originally from the sun and is reflected by this page, enabling you to see it. In the same way, the chair on which you are seated, the table, the trees outside your window—all the objects in the world about you—reflect light and, hence, are visible.

Some materials—glass, for instance, or Kodapak, or film—are such that the greater part of the light passes through them. These are said to be "transparent," but this does not mean that they transmit all of the light. They reflect some of the light rays that fall upon them—otherwise, we would not be able to see them. (Think of the trouble one would have carrying an invisible sheet of glass down a crowded street.)

Each surface of ordinary glass reflects 4 per cent, or more, of the light that strikes it. You've seen "invisible glass" windows in stores, but these are panes so curved that reflections which normally would come to the eye are absorbed by black cloth below the window, giving us the illusion that there is no glass between us and the objects in the window. Think of the possibilities of glass made "invisible" without resort to curves or light-absorbing cloths. Eliminate the reflections and you've got it.

That's just what some clever physicists have done, by depositing on the glass a coating which, at a certain thickness, kills all reflection. The light which ordinary glass reflects is transmitted by the coated "invisible" glass. Perhaps 98 per cent of the light that strikes it passes through, whereas even the best ordinary glass will transmit only 92 per cent.

This is an unusual picture: it shows a lens surface, only the right half of which is reflecting light. The subject is the front components of the Ektar f/2, which has four air-glass surfaces. Of these, three have been completely coated to remove reflection, and one—the rear surface of the front element—has only its left half coated. Thus, there is reflection from the right half, but we can see through the left half

Why Not Lenses?

Why not increase the speed of lenses by means of this new process? Our research laboratories, among others, are now experimenting with this in view.

Because each surface reflects about 4 per cent of the light falling upon it, the loss of light increases rapidly with the number of surfaces used in the lens. The simplest lens consists of a single element, a glass disk with a curved surface.

Such lenses have small relative aperture. Larger lenses—that admit more light—are more complicated and they require more elements in order to focus the light waves accurately and get a good quality image. If, however, each air-to-glass surface in a lens reflects 4 per cent of the light, in a lens with 4 elements the total of light lost before the rays reach the film would be nearly 30 per cent. If we could get rid of this loss, it would be the equivalent of opening up the lens appreciably. Thus, an

$f/6.3$ lens would be made faster than an $f/5.6$ lens.

In more complicated optical systems like the gastroscope or stomach viewing instrument, for instance, which employs as many as fifteen lenses that reflect about 71 per cent of the light, the nonreflecting coating would show still more remarkable results.

Reflections and "Ghosts"

Besides increasing the speed of a lens, the application of the new coating to lens surfaces would cut out annoying reflections—lens flare would be eliminated. Likewise, applied to the front surfaces of ordinary mirrors, which are rear-silvered, it would eliminate the "ghosts" that have been their main disadvantage. Many of us are familiar with instruments where front-surfaced mirrors are used: reflex cameras, one-shot color cameras, range finders, stereoscopic apparatus of various types, compensation mirrors in continuous projectors, and so on. Rear-silvered mirrors, treated with the nonreflecting coating, would give quite satisfactory results.

Other possible photographic uses of the nonreflecting coating include: application to the upper lens of a brilliant finder; to the smooth surface of a ground glass; to the cover glass of a copy holder; to projection-booth windows in theaters; to the windows of sound-camera blimps; to test tubes or other containers for biological specimens; to microscope cover glasses; to spectacle lenses (when photographing the wearer); and so on.

And general uses would include: the protecting glass for paintings in galleries and museums—no more waltzing around to get away from that "shine" that prevents your seeing the picture; on windshields, to keep from blinding "the other fellow" with reflected sunlight, and on automobile hoods, to keep from blinding yourself; on showcases and shop windows; on reflector buttons of highway signs, to prevent waste of light; on diamonds and similar jewels, especially opal type, to give them depth. . . . The possibilities are almost as boundless as the human imagination. But let's get back to our own field—photography:

When the nonreflecting coating process is available for application to the front surface of a glossy print, it will increase the contrast. Similarly, it will increase the color saturation of color prints. And if it is applied to film base—especially in the case of films that can't use antihalation backing, such as are exposed through the base—it will diminish halation.

Again, the process may be used to oust unwanted Newton's rings between two adjacent glass surfaces, or between a glass and a film surface, by making one surface nonreflecting. Such adjacent surfaces are common in the negative holders of enlargers.

One modification of the nonreflecting coating has been developed which reflects certain colors and transmits others, thus acting somewhat like a color filter. If it were made to reflect all infrared light and transmit all other light, it would act as a heat filter. Indeed, such coatings having suitable selective reflection and transmission of colors might well be used wherever filters are now employed.

In any photographic process such as the recording of sound on film or ordinary enlarging, it is possible to sidetrack some of the light for monitoring purposes, that is, to control the intensity. A combination filter and mirror such as we have described would make it possible to sidetrack only the light that is not the color required in the main process, and thus afford more efficient operation.

The Idea Isn't New

The idea of "invisible glass" is not new. Back in '92 H. Dennis Taylor, noted English optical engineer, discovered that certain tarnished photographic lenses transmitted more light than new ones and thus were faster. But although many subsequent workers investigated various coatings for cutting out reflections from glass, not until recently were serious efforts made to exploit this knowledge commercially. If this process proves as successful as results to date promise, it will be of real photographic value.

Step Right Up: It's the Kodak Precision Enlarger

Attracting much attention in the Eastman Kodak Building at the New York World's Fair is this display which affords revealing close-ups of, left to right, the Supermatic Shutter, the Kodak Precision Enlarger, and Kodak films and papers. This picture was taken at a "preview" staged in the Kodak Office auditorium

The King of Indoor Winter Sports

Basketball Prepares to Take The Court for Another of Its Riotous and Exciting Seasons

It's a riot from the opening whistle. One of the fastest and most thrilling of games, basketball has become the most popular of our indoor sports. Kodak teams will soon begin another exciting season

Most of our sports have evolved from ancient forms of work, warfare, and play. Archery, for example, traces back to ancient times when the bow was bent in battle and the hunt. Some medieval wielder of a battle axe undoubtedly foreshadowed our modern home-run clouters. Swimming may well have got an unceremonious start when an inquisitive ape man leaned too far over the riverbank while absently watching minnows swim round. Fist fighting was unquestionably a purely utilitarian activity until the Marquis of Queensberry modified its manners and brought it into the open for the amusement of polite society.

There's one sport, however, that has no family tree. Basketball was made to order.

Birth of a Sport

Back in 1891, James Naismith, a student instructor in physical education, was seeking an indoor sport to fill the time between fall football and spring baseball. Having considered every available sport without finding one to fill the bill, Mr. Naismith put his ingenuity to work. With a couple of peach baskets and a soccer ball for equipment, he drew up a set of basketball rules which, with few exceptions, have remained unchanged.

The new sport caught the popular fancy at once, and basketball was soon being played throughout this country and in many foreign lands. Even the Chinese took to it with uncommon zeal.

At first, teams were unlimited in size. But the tendency of certain colleges to insure victory by wheeling an army of players into action—as many as forty players being used on a side—soon led to rigid restrictions. The number of players was then governed by the size of the court, a limit of nine being allowed to a side. Later, a standard court size was fixed, and from that time a basketball team has been composed of five members.

Professional basketball appeared about 1895, and six years later the first intercollegiate league was formed. The popularity of the sport grew so rapidly that basketball, in recent years, has attracted a far greater attendance than either baseball or football—a fact that isn't generally appreciated.

Basketball, both from the player and spectator angle, is a most satisfying sport. As Mr. Naismith pointed out, it calls for coolness, accuracy, good judgment, endurance, self control, and speed on the part of the player.

For twenty years, basketball has been a favorite sport at Kodak. In the early days, most of the games were played on outside courts since Kodak Park alone had facilities for playing indoors. With the opening of the Kodak Office auditorium in 1925, interest in the game jumped as all-star Kodak teams took the court against many of the country's leading teams. The forming of a Kodak League and participation in the local Industrial League have served to keep plant and office teams in active competition during recent years.

Early in November, four Kodak teams will again answer the referee's whistle as a new season gets under way. Camera Works, Hawk-Eye, Kodak Park, and Kodak Office will all be represented in the Industrial League. Kodak Park, as in the past, will play outstanding teams from other cities. Kodak Office will resume its noontime games with local combinations. Camera Works and Hawk-Eye also expect to engage in many extra-league contests.

So it won't be long before we'll again thrill to the banging of the ball against the backboard and the swish of the net as the ball plummets through. Mr. Naismith certainly started something.

Kodak Salon Postponed

Owing to the impossibility of obtaining prints from several European countries, it has been decided not to hold the 1939 Kodak International Salon. The salon had been scheduled for presentation in Rochester, December 7th to 10th.

Any entries that are now en route will be returned to the senders as soon as possible. If such prints arrive in sufficient numbers, tentative plans are to hold an informal showing in Rochester later this year.

KODAK PARK • NEW YORK • KODAK OFFICE • CHICAGO • KINGSPORT • PEABODY • TORONTO • SAN FRANCISCO • LIMA • HAWK-EYE • CAMERA WORKS
BUENOS AIRES • RIO DE JANEIRO • SANTIAGO • BARRANQUILLA • HAVANA • MEXICO, D.F. • MONTEVIDEO • PANAMA CITY • SHANGHAI • HONOLULU
MANILA • TOKYO • BERLIN • LONDON • PARIS • VINCENNES • CÖPENICK • VAC • HARROW • STUTTGART • DUBLIN • GLASGOW • COPENHAGEN
DAR ES SALAAM • NAIROBI • KAMPALA • CAPE TOWN • JOHANNESBURG • CAIRO • BATAVIA • ATHENS • BOMBAY • HAIFA • SINGAPORE • BEIRUT
ISTANBUL • ALGIERS • BRUSSELS • THE HAGUE • MILAN • ROME • MADRID • LISBON • LAUSANNE • GENEVA • VIENNA • PRAGUE • BUDAPEST • ZAGREB
BUCHAREST • WARSAW • GOTHENBURG • REYKJAVIK • OSLO • LAS PALMAS • HELSINGFORS • CASABLANCA • COLPETTY • MALTA • MELBOURNE • WELLINGTON

Stars

IN A "recapitulation of some of the personalities and events which have contributed highlights to this most enjoyable and successful season," Bill Toporcer, Rochester city tennis champion, and sports writer, says:

"John Hecker receives our nomination . . . chiefly for his excellent play in the semifinals and finals of the major title chase; and because his ability—although given few opportunities for demonstration this season—is unquestionably worthy of such ranking. Phil Michlin occupies the next niche, after Hecker, in our wall of tennis accomplishment, having reached the finals or semifinals of the six tournaments in which he engaged, as well as scoring a very high percentage of victories in interclub matches. The spot behind Phil is given to John Hanna for gaining and holding top place on the TCR board during a large part of the season, and for his fine play in reaching the finals of the undefeated bracket in the TCR championship tournament. An unfortunate accident prevented Johnny from competing in the city championships. It is earnestly hoped that the injury which caused his default in the first round of the singles will not curtail his activities on the court next year."

Messrs. Hecker and Hanna work for the Company at Kodak Park; and Mr. Michlin, at Hawk-Eye.

Camera vs. Rustlers

WE'RE ON INTIMATE TERMS with the gentle Ferdinand, lover of cork trees and sweet-smelling flowers. We've been intrigued by that Borden animal's invitation, "See me get milked on a merry-go-round." And that about sums up our acquaintanceship with the species *Bos taurus*. Nevertheless, here's a clipping from the Denver *Post* that we found mighty interesting:

Another application of one of the newest devices of science to control one of the oldest crimes of the west —cattle rustling—was revealed . . . by Earl Carpenter, inspector for the Wyoming Stock Growers association, stationed in Denver.

Carpenter said that thru the use of a camera he recently succeeded in detecting a case of "worked over" branding and in apprehending the persons who had stolen the cattle thus misbranded.

"I was suspicious of the brands on two animals offered for sale in the Denver stockyards and shipped from Wyoming," he said. "After clipping the hide over and around the brand, I took several pictures of the brand.

"The pictures showed clearly that an original brand had been worked over. I sent the pictures to Russell Thorp, secretary of the association in Cheyenne, and he was able to read the original brand.

"Both the original brand and the design that had been produced by the working-over were registered. It was easy to get in touch with the recorder of the original brand—a Nebraska stockman—and learn that two animals had been stolen from him.

"When the persons who had recorded the worked-over brand were confronted by the pictures, they confessed having rebranded the animals and charges were filed against them."

Carpenter took the pictures on his own initiative with a small camera. So successful was his idea that the association has supplied him and other inspectors with a special camera and has ordered pictures taken of all suspicious cases.

In order to confirm the results of the pictures, Carpenter obtained the hides of the two animals after they had been slaughtered and found the original brand on the underside.

"Cattle brands are always legible on the underside of the hide," he explained. "No amount of working-over the original brand will change it on the inside."

"The check for the two animals was sent to the Nebraska stockman from whom the cattle had been stolen," the *Post* informs us. And—just to give this story a photographic finish—we like to imagine that when the check was cashed the transaction was recorded by a trusty Recordak Junior.

Honolulu Up-Pour

KODAK'S HULA SHOW at the Waikiki Natatorium in Honolulu is still attracting the camera enthusiasts, both islanders and visitors, in droves. On a recent day, some twelve hundred picture-takers basked under a pleasant Hawaiian sun. The palms waved gently in the breeze. The grass skirts of the hula dancers swished to haunting melodies. When—but let this letter from Honolulu tell the story:

"Yesterday morning we had one of the largest crowds we have had this season at our hula show. . . . Just as the show was going smoothly, some employee of the park turned on the sprinkler system over the whole area, so you can imagine what happened. There were about fifteen or twenty sprinkler heads directly under the audience and it just about drenched everyone out there. One kindly old lady happened to be sitting on one of the sprinkler heads when it went off.

"You can imagine the commotion resulting from that number of people jammed in together and then having that shower of water come up under everyone. When it was all over, everyone seemed to get a laugh out of it and take it good-naturedly, but when it happened, it was not quite so funny.

"So far as we are able to determine one of the help around the park suddenly decided that the park should be watered and hence turned on the entire system. . . ."

And a further letter from Honolulu:

"Replying to your letter . . . we are sorry we cannot supply you with any snapshots taken out at our hula show when the taps were turned on. Everyone was more interested in looking out for themselves than they were in getting pictures at that moment."

Poser

BEST OF THE STORIES to reach us from the New York World's Fair recently is the one about the amateur photographer who asked: "What exposure should I give this afternoon—my camera is loaded with Mercurochrome?"

You're Fair Game for Pneumococcus

Most Prevalent of All Ailments, The Common Cold Can, With Care, Be Kept at Arm's Length

THERE'S A TOMBSTONE in New England bearing these words:

Here lies our wife Samantha Proctor,
She ketched a cold and would not doctor.
She could not stay, she had to go . . .
Praise God from whom all blessings flow.

Samantha was either a very stubborn patient or simply a very unwise one, for her catarrhal inflammation (common cold to you) should have had just as careful treatment as more serious ailments. Too often, we treat a cold as an annoyance to be patiently borne until it goes away. And, much too often, it thrives on our carelessness and develops into a serious condition. The role of the cold as a pathmaker for pneumonia, meningitis, influenza, scarlet fever, and other diseases is perfectly well known. Yet, we persist in treating our colds in the most matter-of-fact way.

A century and a half ago, Dr. Thomas Hayes announced that, in his opinion, colds were the result of "sitting in cold damp churches." Noah Webster, the dictionary man, concluded some years later that earthquakes and comets were responsible for this universal affliction. Just how the good doctor discovered that all cold sufferers spent such uncomfortable Sabbaths, or how Noah could blame irregular natural phenomena for the ever-present cold, we really don't know. But even today, medical men can't, with any assurance, tell us just what causes a cold. They can tell us that colds are contagious, caution us against practices conducive to colds, relieve a cold after we've caught it, and warn us of the serious consequences of untreated colds—but the germ that causes the cold is so tiny that they can't even find it under a powerful microscope.

That colds are contagious has been proved beyond all question. Experiments with apes—the only animal that suffers from the common cold—have shown that strict isolation from sources of contagion can definitely prevent colds. The inhabitants of arctic regions go through the severest winters without colds, only to start sneezing when the first boat from outside arrives in the spring. It is for this reason that doctors caution us to avoid crowds during cold epidemics, and ask us to stay at home when afflicted so that others will not be exposed.

Little Lulu obviously has the sniffles. She caught them from somebody else and now she's generously passing them on to others. She doesn't seem to know that one should avoid cold sufferers, stay home when afflicted. Reproduced by special permission of "The Saturday Evening Post," copyright 1935, by the Curtis Publishing Co.

Dodging the Cold Bug

No sure-fire preventive for colds has yet been discovered. Innoculation, vitamin tablets, sunshine and fresh air, a healthful diet, and plenty of sleep can strengthen our resistance, but none of these precautions can fully protect us from that mysterious little bug that sets us to sniffling and sneezing. Still, these preventive measures are well repaid, for they do lessen the chances of catching cold; and they may ease the severity of a cold, once we've caught it.

The Medical Department offers several rules for reducing the danger of catching a cold:

Watch your diet. Avoid sweets and excessive eating. Get plenty of Vitamin A by eating prunes, spinach, carrots, and cod-liver oil. Fortify yourself with Vitamin B by eating cereals, fruits, nuts, and vegetables.

Keep warmly clothed during severe weather. Avoid drafts, overheated rooms, rapid cooling after exercise.

Get plenty of exercise, and eight hours of sleep every night.

Avoid crowded places, and individuals suffering from colds.

Cut down on cigarettes and cocktails.

Avoid getting tired and run down. Fatigue probably causes more colds than any other single factor.

If, in spite of observing these precautions, the little bug still gets you, go to bed. That's the best way to cure your own cold and prevent its spreading to your companions.

How Eastman Employees Are Selected

There Are Sound Reasons For Strict Adherence to a Long Established Company Policy

INDUSTRIAL EMPLOYMENT has increased by leaps and bounds during the past fifty years. More jobs and a greater variety of jobs have been made available. But the broadening of employment opportunities has created certain problems.

The chief problem is the selection of new employees on the basis of their fitness for a specific type of work. To place a man in a job for which he is unfitted would clearly be unfair to him: he would be denied the opportunity to do his best work, enjoy his work, and earn promotion. It would also be unfair to applicants whose qualifications fit the job. And it would be unfair to the company since its employees must be satisfactorily placed if it is to operate successfully and provide steady employment. So, it has become increasingly important in the hiring of employees that both the individual abilities of the applicant and the employment needs of the company be taken into account.

Most large companies meet this problem through experienced personnel workers who give each applicant full and impartial consideration. Modern employment methods are based on sound and practical principles.

"What are my chances of getting a job at Kodak?" "What is done with my application form?" "Do you have to have influence to get into Kodak?" These questions are asked frequently in our employment offices.

Picture yourself in the position of a man looking for a job:

You've just finished high school, you have had no specific training, but you're young and healthy and ambitious—and you want a job. What kind of a job? You're not sure—office work maybe, you say, or something in the plant.

You're a metal worker with a good employment record that ended three years ago through no fault of yours, you're forty and you have a family to support—and you want a job. What kind of a job? Metalworking, naturally, if there's a vacancy, but you're willing to try your hand at something else.

Many Applications

You're a secretary. . . . You're a carpenter. . . . You're a salesman. . . . You're a machinist. . . . You're skilled. . . . You're unskilled. . . . You're twenty. . . . You're fifty. . . . By the score, your names and applications are added each day to those already on file in the Company's employment offices. And jobs, when they become available, are filled from the files.

How good are your chances? Just as good as your qualifications, measured against those of other applicants, provided a job for which you are suited is available. Several individuals are usually qualified to fill the same job. If your qualifications, as shown by such gauges as the application form and personal interview, indicate that you are the man for the job, you get it.

Applicants for work at Kodak plants are requested to fill out an application form. Later, these forms insure the applicant of receiving due consideration when positions open for which he is qualified

The application form—on which you set down such information as your name and address, the number of your dependents, the amount of schooling you've had, a record of previous employment, and the kind of work you seek—is an indispensable aid in the selection of new employees. Cross-referenced and held in file for as long as two years, it insures that each qualified applicant gets due consideration when a job for which he is qualified is available.

Repeated visits to the office are neither necessary nor helpful: you will be notified when a position for which you are suited is available. For that reason, it is well to remember that in case of a change of address or any other development that may modify the information you have given on your form, the office should be notified as soon as possible.

What about the applicant who has a recommendation? Will he be favored over the applicant who hasn't any?

Many applicants, both men and women, visit the employment offices of our company each day. Impartial selections are later made on the basis of their individual fitness for such positions as become available

Regardless of who recommended him, his application is judged by the same impartial standards as the others. Only in this way can the Company be assured that favoritism is never shown toward anyone. Now this does not mean that recommendations are ignored. In making selections, the employment officers are aided by the opinions of persons in whom they have confidence. But the fact remains that every recommendation must be supported by the personal qualifications of the applicant. No applicant is ever hired simply because someone has recommended him.

Factors Weighed

Every job calls for certain abilities in the man who fills it. These are the factors that are weighed when a job is open. The Company will not hire anyone below the age of sixteen, or anyone below the age of eighteen for manufacturing departments; but it has never set an age limit above which it won't give employment.

Some jobs may demand a broad educational background, others special skills and training, others certain physical characteristics, others can be performed by any person of average intelligence regardless of experience or training. Every applicant is considered qualified and deserving of some kind of work, even if we are not able to offer it.

There are many more applicants than there are jobs available. And the best qualified man gets the job. The first of these statements is only too obvious; the second, as has been pointed out, is the Company's policy. But the best qualified man is not the *only* qualified man. The other applications will be considered in the same way when further opportunities offer.

The New Employee

Interest in new employees does not end with their selection for positions. Kodak's employment officers have a keen interest in the welfare of each individual they employ. If a new employee were to be placed in an unsuitable job, they would consider themselves responsible for the mistake and would strive to correct it by transferring him to another job better suited to his qualifications.

(*Continued on page 16*)

Helpful Hints for Halloween

Halloween is a great time for pictures. Spooks flit hither and yon. But even witches can't escape modern wide-latitude film, and night can be conquered with Photoflash or Photoflood lamps and short time exposures

Silhouettes and such, caught by a 1A Pocket Kodak at f/6.3, with the aid of a Photoflood and "SS" Pan Film

The gay close-up above was taken on "SS" Pan, f/16, Photoflash; while Jack's dental work was recorded on Verichrome at f/6.3, "bulb"

A Photoflash and an ever-ready Kodak—set at the combined distances of subject to mirror to camera—clicks at f/16

Portraits of two pumpkins—and their happy owners, taken on "SS" Pan, f/16, Photoflash

Final checkup before the fun fest. And Dad records the event on Panchro Press Film, 1/100 second, f/6.3

3,000,000,000,000,000,000,000 Miles

It's Quite a Distance, We'll Admit—but the Camera Shoots Stars Fully that Far Away

IS YOUR IMAGINATION FREE and in good working order? We're going to tax it for a moment with an adventure that's likely to leave it dizzy.

It's three thousand years before Christ—the millenium of the Pyramids. We step into a rocket ship and, hands firmly on the controls, zoom away from Mother Earth and head for the nearest star. We fly unerringly toward our goal at the rate of ten thousand miles a minute. As we travel, a wireless set keeps us in touch with earthly affairs. After many years we learn of the rise and fall of the Greek and Roman civilizations—the long sleep of civilization through the Dark Ages—the brilliant career of Charlemagne—the discovery of America—the American Revolution—the meteoric rise of Napoleon Bonaparte. Finally we reach our goal.

It was a long ride certainly. We had to spend almost five thousand years in that speeding rocket ship—for the nearest star proved to be twenty-five thousand billion miles away. And yet, that distance shrinks to nothing when we consider that the most remote stars yet observed are about one hundred million times as distant from the earth.

Of all the stars sprinkled throughout the vast universe, only a few thousand are visible to the naked eye. Through great telescopes, the astronomer can see millions. With a camera attached to the telescope, he can find a great many more. In fact, next to the telescope, the astronomer's camera is his most valuable tool. It has enormously increased the range and accuracy of his work. Let's consider the reasons why photography is so valuable to the stargazer.

Though just faintly visible to the eye, the Great Nebula in Andromeda is actually about a billion and a half times as bright as the sun. All nebulae are vast distances away, far out beyond the Milky Way

Storing Up Light

The most amateurish picture-taker knows that moonlight isn't bright enough to permit snapshots with his Brownie. But he does know that if he fixes his Brownie on a firm support and opens the shutter for a time exposure of several minutes, he can get a fully exposed negative on a moonlight night.

The reason for this is simply that a photographic film or plate *adds up* the effect of the light entering the lens. Unlike the eye, which sees only by the light that strikes the retina from instant to instant, the camera "sees" by the accumulated light that strikes the film throughout an exposure.

This fact, while of considerable importance to any picture-taker in that it determines the length of his exposure, is of the utmost importance to the astronomer, for it enables him to photograph stars that cannot be seen by the eye with even the most powerful telescopes.

Seeing the Invisible

Photography has, by virtue of this power, vastly extended man's vision in his search through the measureless depths of space. No longer does the stargazer sit with his eye glued to the eyepiece of the telescope. Today, he focuses the instrument on any desired region of the sky, sets delicate machinery in motion to compensate for the earth's rotation, clamps a photographic plate into position, and exposes his picture for minutes, or hours—or even for two or three nights. Thus does he discover stars

far too faint to be seen; and thus, with his camera, does he add many pages to the thrilling story of the universe.

But photography, in addition to finding stars invisible to the eye, has many other astronomical chores.

By photographing the spectrum of a star, the night observer can determine its composition, its age and size, and even the speed at which it is rushing toward or from our solar system. The color of a star may be deduced from its action on the sensitized plate. Planets and asteroids moving in distant orbits around the sun have been discovered by comparing photographs taken at different times. Indeed, the bulk of astronomical information is gleaned today from photographic plates.

Early Celestial Photography

Astronomy was one of the first sciences to make use of photography. Daguerre himself attempted to make a daguerreotype of the moon; and Draper, in 1841, did produce a series of clear daguerreotypes of our nearest celestial neighbor. In 1851, Bond made the first photograph of a star when he captured brilliant Vega on a daguerreotype plate after an exposure of two minutes. These were crude beginnings, to be sure, but they marked the start of a scientific investigation of the heavens that has depended upon and matched the progress of photography itself.

Light travels at a speed of about eleven million miles a minute. Yet, so remote are certain stars that their light, which the camera sees today, started on its long journey millions of years ago. In fact, astronomers will tell you it's quite possible that stars can be photographed tonight that no longer exist, the reason being that while their light has been racing through space for ages, they may have burned out or exploded. The idea of photographing something that doesn't even exist is, indeed, amazing.

Photography has pretty definitely settled the age-old question—"Is there life on the other planets?" As a result of spectroscopic and infrared investigations, we now know that atmospheric conditions on Mars and Venus could never support life of our kind. The larger planets, much farther from the sun, are cold and lifeless and their atmospheres consist largely of ammonia and menthane gases. So photography, you can see, has kindly stilled our fears and apprehensions over a possible invasion of the Earth by Martians!

Spectacular visitors from outer space, many comets return at regular intervals to thrill mankind by their fiery presence. Most famous of all is Halley's comet, seen here through the Yerkes 40-inch telescope

Without the aid of photography, the planet, Pluto, would probably never have been discovered. While astronomers had guessed its existence from gravitational disturbances among the outer planets, this tiny body (indicated by arrows) was only found by a comparison of photographic plates exposed at intervals

THE EDITOR'S PAGE

The War of 1939

ONCE AGAIN war is being waged in Europe. Once again the roar of cannon drowns out the pleas of millions of innocent people for peace.

There is a certain grim irony in this war of 1939. It is the fact that nations drawn closer through the rapid advance of communications on land, sea, and air are yet so far apart that reason and peaceful arbitration seem doomed to give way to the sword. That the very means which science and industry have devised to aid progress should now be employed to spread unrest and destruction.

"All the problems of the world could be settled easily, if men were only willing to think," said a famous American educator.

That advice is worth pondering in these critical days. The air is filled with claims and counterclaims, fact and fancy. Newspapers and radio commentators have been careful to emphasize this, to stress the need for considered thinking and the acceptance only of proven facts. "Let reason and not emotion decide your opinion," is an important rule to remember.

Although America's position has been made clear, it is well to bear in mind that while war may be localized, the repercussions of war are widespread. The war of 1914 left its mark upon the entire world.

What problems this war will bring and what marks it may leave we do not know. But we do know that they can be faced effectively only by a calm and considered approach.

NOTE: As we go to press, a statement prepared by the National Association of Manufacturers and addressed to the American public is being posted on the bulletin boards in the Rochester plants and office. Because we believe that it will be of interest to all employees, we are reprinting it for distribution with this issue.

Evolution of an Industry

FIFTY YEARS AGO last month, the Eastman organization discovered a practical method of producing from nitrocellulose a transparent, flexible material suitable as a film support. This discovery made possible amateur and professional photography in their broadest senses. In addition, it gave a young inventor in Orange, New Jersey, the material he needed to carry out his idea of motion pictures. The purchase memorandum of the first strip of Eastman film that Thomas A. Edison's assistant, Dickson, bought bears the date, September 2nd, 1889.

"That's it! We've got it!" Edison exclaimed when he saw the film. "Now work like hell!"

The first peep shows were opened in New York on April 14th, 1894. In 1896, Edison introduced a commercial projector called the Vitascope, developed by Thomas Armat; and on April 23rd, 1896, the first public showing of motion pictures was given in a theater. The public went wild about the "pictures that moved." Vacant stores were snapped up and transformed into crude theaters.

Such simple demonstrations of action as a horse eating hay, street scenes, and children at play were the subject of the first motion pictures, but no vaudeville show was considered complete without them. The first picture with a plot was introduced by D. W. Griffiths. And in 1902 the first theater devoted entirely to motion pictures opened its doors in Los Angeles.

Today, the motion-picture industry is one of the world's greatest enterprises. In the United States alone, according to the Department of Commerce, one hundred firms, employing 28,500 persons, produce an average of 500 feature films and 800 short subjects each year. Two hundred and seventy-six different industries, arts, and professions are involved in the making of a single picture; more than twelve thousand persons are employed in the distribution of pictures; and more than two hundred and forty thousand are employed in the motion-picture theaters.

Number of Employees

FOR THE INFORMATION of Kodak employees outside of Rochester, we reproduce here a Company bulletin that appeared recently on the bulletin boards in the three Rochester plants and the Kodak Office:

Last year at this time, a Kodak News Bulletin reported the number of Kodak employees in the United States, a subject in which there is widespread interest.

To bring the record up to date, here are the figures for August 1st of this year, compared with last year:

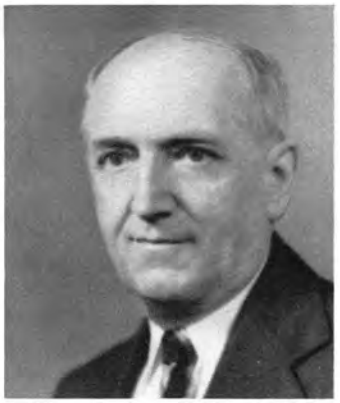
Kodak Employees	August 1 1939	August 1 1938
In Rochester	18,605	16,349
In Kingsport, Tennessee	4,239	3,857
In the rest of the United States	3,212	2,759
Total in the United States	26,056	22,965

And the upward trend continues. On September 15th, the latest date for which figures are available, the number of Kodak employees in Rochester was 18,854.

Employees Who Have Recently Retired

Wolfgang Kerscher, Kodak Office

William E. Stanton, Kodak Park



George H. Morrow, Jr., Taprell Loomis

Seth A. Barrett, Kodak Park

William H. Ward, Kodak Park

Burton L. Taylor, Kodak Park

Oliver D. Stiles, Kodak Park

Bruce A. Twillegar, Kodak Park

Andrew Kraus, Kodak Park

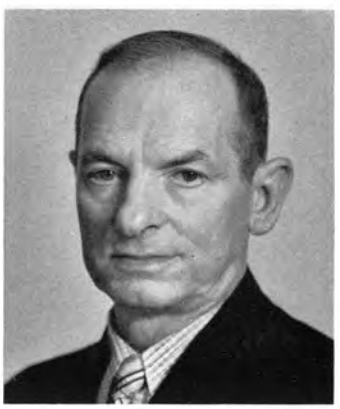
Henry C. Langlois, Kodak Park

Henry Kalmbach, Kodak Park

Fred W. Wagner, Kodak Park

Andrew McGuidwin, Kodak Park

Charles W. Holloway, Kodak Park



Frederick D. Wootton, Kodak Park

Robert T. Porter, Kodak Park

Yesterday in the World of Tomorrow

In the Kodak Building at The New York World's Fair, Time Is Turned Back Many Decades

The only daguerreotypist in the United States, Charles H. Tremear, of the Edison Institute, at work in his laboratory in Greenfield Village, where he has charge of the Tintype Gallery

A FEW WEEKS AGO, visitors to the "World of Tomorrow" witnessed a unique demonstration of how pictures were made a century ago.

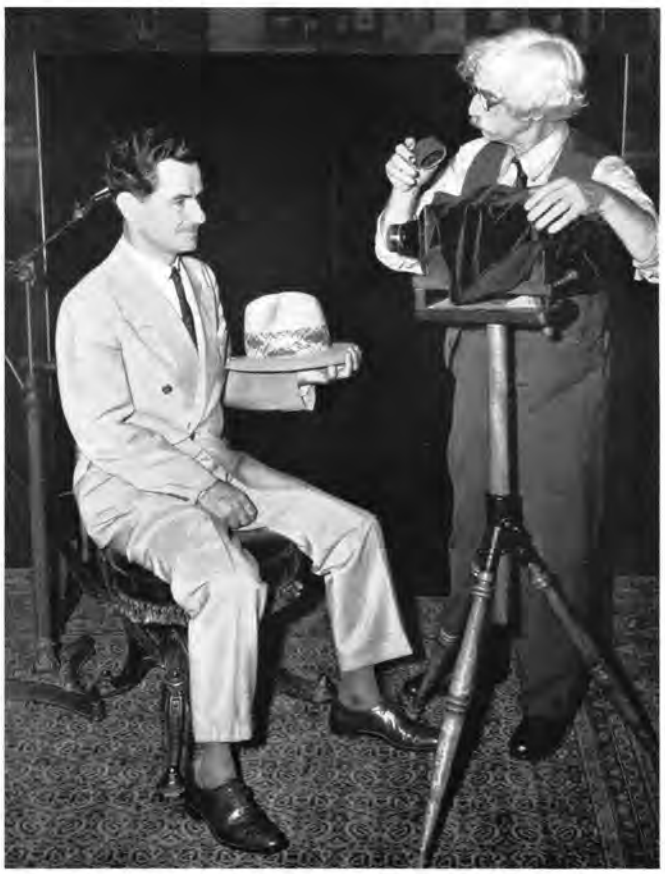
Through the courtesy of Henry Ford and the Edison Institute, Charles H. Tremear, the only daguerreotypist in the United States, had his daguerre outfit set up in the Eastman Kodak Building at the New York World's Fair as part of an exhibit commemorating the 100th Anniversary of Photography. The exhibit was hailed as the finest display of daguerreotypes, pioneer equipment, and early photography ever assembled in this country. (See September KODAK.)

Guest of honor at ceremonies commemorating the formal announcement of daguerreotypy by the French Academy of Sciences on August 19th, 1839, was the French Ambassador to the United States, Count de Saint Quentin.

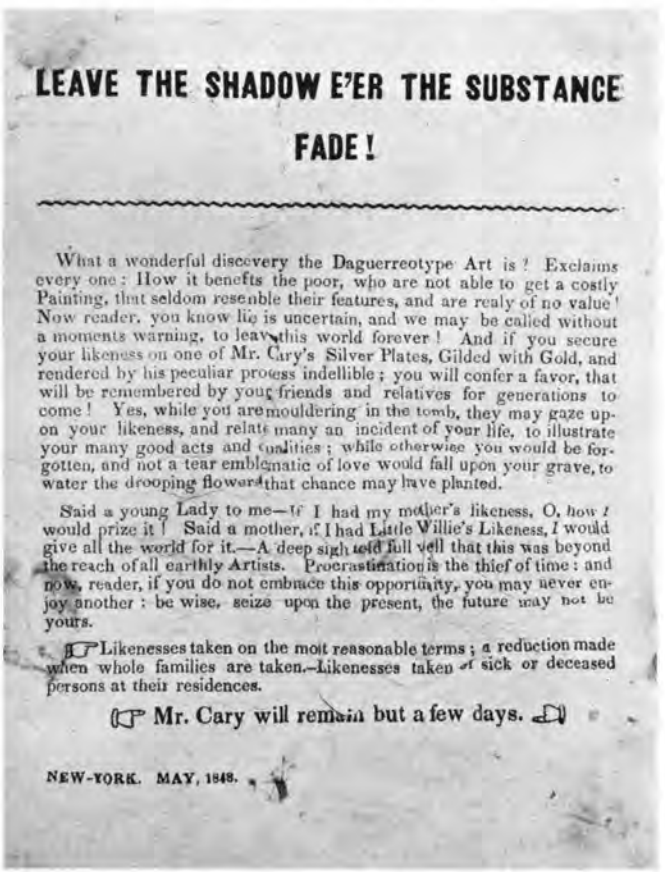
The feature of the celebration was the making of a daguerreotype of the Ambassador (see page 13). As a symbol of the advance in photography during the past century, a copy was sent by wire to newspapers in this country, and by radio to France.

A picturesque figure of seventy-four, Mr. Tremear was "the hit of the show." His life story makes interesting reading. Born in Canada, he worked in the office of a mill after finishing public school. Then for three years he taught a one-teacher country school, and in 1886 he went adventuring across Canada, working on the snowsheds over the newly constructed Canadian Pacific Railroad tracks in British Columbia.

By 1888 he had moved to the United States and settled in Detroit, where he began studying photography under William J. Walker, early photographer, who had a studio at 120 Michigan Avenue. Mr. Walker took in seven or eight pupils who paid him to give them instructions. But he did not permit them to help him: he was the Master Photographer and he did all his own work himself. The



Head clamps in position and hat nicely balanced, Lowell Thomas, noted radio commentator, poses for his daguerreotype in the Eastman Kodak Building



LEAVE THE SHADOW E'ER THE SUBSTANCE FADE!

What a wonderful discovery the Daguerreotype Art is! Exclaims every one: How it benefits the poor, who are not able to get a costly Painting, that seldom resemble their features, and are realy of no value! Now reader, you know life is uncertain, and we may be called without a moments warning, to leave this world forever! And if you secure your likeness on one of Mr. Cary's Silver Plates, Gilded with Gold, and rendered by his peculiar process indellible; you will confer a favor, that will be remembered by your friends and relatives for generations to come! Yes, while you are mouldering in the tomb, they may gaze upon your likeness, and relate many an incident of your life, to illustrate your many good acts and qualities; while otherwise you would be forgotten, and not a tear emblematic of love would fall upon your grave, to water the drooping flowers that chance may have planted.

Said a young Lady to me—if I had my mother's likeness, O, how I would prize it! Said a mother, if I had Little Willie's Likeness, I would give all the world for it.—A deep sigh told full well that this was beyond the reach of all earthly Artists. Procrastination is the thief of time: and now, reader, if you do not embrace this opportunity, you may never enjoy another: be wise, seize upon the present, the future may not be yours.

☞ Likenesses taken on the most reasonable terms; a reduction made when whole families are taken.—Likenesses taken of sick or deceased persons at their residences.

☞ Mr. Cary will remain but a few days. ☜

NEW-YORK. MAY, 1848.

Paging the populace: with advertisements like this one, Mr. Cary and his fellow daguerreotypists packed them into the studio for a likeness

neophytes learned by observing him in action.

Here, Mr. Tremear made his first tintypes, the boys photographing each other. Soon he felt he knew enough about the business to set up for himself. He persuaded a photographer friend of his to help him build a specially constructed wagon, nine feet wide and almost twenty-nine feet long, and equip it as a studio. The studio wagon was unique enough to attract passing Detroiters, and Photographer Tremear was soon making tintypes of the citizens. He also did some copying and "viewing" as he calls it. "Viewing" was taking pictures of houses for their proud owners.

A wanderer at heart, Mr. Tremear tarried but a few years in Detroit and, appropriately enough, on Labor Day, 1891, he hitched four horses to his wonderful studio wagon and clippety-clopped to Dearborn.

For a time, residents of Dearborn and the soldiers stationed at Fort Dearborn arsenal came by to have their faces recorded for posterity by the tintype route. Then Mr. Tremear cried "giddy-up" once more. For seven years he roamed up and down a forty- by sixty-mile area between Dearborn and Toledo, in his studio wagon or in portable studio houses which he found easier to transport, snapping away at all comers. To cover country fairs, he devised a studio tent that he could whip up in a jiffy wherever he pleased.

Now he presides over the Tintype Gallery in Greenfield Village, picturing the thousands of visitors each year who like to poke around the old-fashioned studio recapturing the atmosphere of their parents' or even grandparents' time. And doubtless many a grandfather, watching a youngster proudly bearing home a tintype, remembers the day when he and "the missus" posed in a studio wagon for the same photographer.

The French Ambassador to the United States, Count de Saint Quentin, poses for Mr. Tremear before a background of modern Kodaks and accessories in the Eastman Kodak Building at the World's Fair . . .

. . . and a copy of the daguerreotype was sent by wire and radio to newspapers here and in France

It Took 100 Years to Develop

This is said to be the earliest known sun print

THE PICTURE reproduced beside these words is described as the earliest existing "photograph." It was included in an exhibition held in London some months ago to commemorate the centenary of the invention of photography.

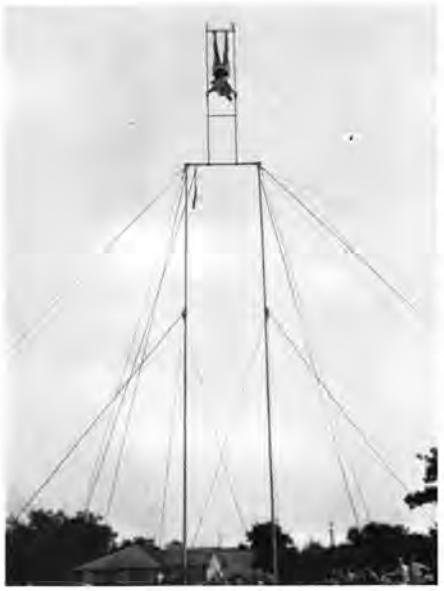
This particular exhibit is a shadow portrait that was produced by the bleaching action of the sun on the colored paper backing of a miniature —probably on ivory—of one of the early Dukes of Hamilton. The "photograph" evidently took about a hundred years to develop, for it was discovered in 1799 by Lady Ann Hamilton, who brought it to the attention of her scientific friends.

The history of this unique exhibit is authenticated by a letter, written about eighty-nine years ago, which gives an account of its discovery.

And now, a snapshot: Frank W. Lovejoy, president of the Company, with the French Ambassador

OUT OF THE HAT

Acrobat



Atop the tower: Mrs. Pat Hegnauer

IT'S A LONG WAY from film inspecting to aerial loop the loops, but Mrs. Pat Hegnauer, who inspects portrait film in Building 12 at Kodak Park, has done both.

Seems that some years ago, Mrs. Hegnauer took instructions at the Turn Verein in tumbling, acrobatics, and unicycling. She became so expert at them all that several offers for jobs came her way. After considerable hesitation, she decided to go on the road for a summer. So in 1936, as a member of the Williams and Lee troupe—she really wasn't a Lee at all—she toured the midwest, appearing at carnivals and fairs.

Her chief stunt consisted of being pulled to the top of a 40-foot tower while hanging by her teeth, and there doing an act billed as the "Death Defying Loop the Loop." It was a pretty breath-taking act, to be sure, but Mrs. Hegnauer still feels badly because the public was exposed to such extravagant ballyhoo about it. Wasn't as dangerous as it looked, she explains. However, she did have a rather harrowing experience on one occasion by getting caught in a guy wire while being pulled to the top. Her mouthpiece was yanked out and she just managed to save herself from a nasty fall by grabbing a rod.

One season on the road proved enough. "It was fun, and I would never have been satisfied if I hadn't tried it," she says, "but it did seem awfully good to get back into regular work."

Athlete

ABOUT FORTY WOMEN gathered on a recent Monday night for the first meeting of the Women's Hawk-Eye Bowling Club. It was a grand turnout, and the success of the club was largely the result of vigorous promotion by a charming member of the Payroll Department—Miss Anna Mae Colbert.

Miss Colbert is a pretty fair bowler herself, having clicked off a neat 228 recently for her best score to date. Her average, 142, is a sound figure in any woman's league.

Athletics appears to be Miss Colbert's consuming interest. She's frequently on the tennis court during the summer season playing a dashing game. During the badminton season, she's down at the office auditorium almost every Monday night with other Hawk-Eye Works enthusiasts.

Activities Calendar

October 13—Camera Works, World's Fair trip sponsored by the Recreation Club

Mid-October—Kodak Office, opening of men's Ping-pong singles challenge tournament

October 19—Camera Club ciné group, regular meeting

October 20—Kodak Park, World's Fair trip sponsored by the K.P.A.A.

October 23—Kodak Choral Society, at the Rotary Club Intercity Banquet, Powers Hotel

October 26—Camera Club print critique, for color transparencies

November 2—Camera Club, regular monthly meeting

November 6—Kodak Office Book Club, first fall meeting

November 9—Camera Club print critique for black-and-white prints

Miss Anna Mae Colbert: the rains came

Swimming's a favorite activity, too, though Miss Colbert admits that her diving technique isn't all that it should be. Lands flat, she explains, which leaves her sore in spots. She started to take up horseback riding once, but there was something about the behavior of a horse that unnerved her and she didn't take to that sport at all.

Sports, Miss Colbert relates, did bring one great disappointment into her life. For years she had wanted to see the Army-Notre Dame game, which is one of the biggest events of the football season. Two years ago, her great desire seemed sure of fulfillment. In company with friends and with tickets in pocket, she traveled to New York for the big day. Morning broke to the accompaniment of rain. It was no passing shower. All day long it simply teemed, and few people braved the weather to watch the game. "We just stayed inside the hotel," Miss Colbert sadly recalls, "and waited until it was time for us to start back again for Rochester."

Their Promotions Are Announced

Donald McMaster, Kodak Limited

William R. Webb, Kodak Limited

New Duties in Kodak Limited For Employees Both of Whose Careers Began at Kodak Park

PROMOTION of two employees who spent their first years with the Company at Kodak Park was recently announced by Kodak Limited. William R. Webb, manager of the Harrow Works, has been appointed assistant European general manager. Donald McMaster, assistant works manager, has been appointed works manager.

Mr. Webb was graduated in 1914 from the University of Michigan. During his last two years at the University, he was part-time instructor and a research fellow in organic chemistry.

He joined the Company in 1915 and was appointed assistant superintendent of the Chemical Plant Laboratory at Kodak Park. In 1927, he was named superintendent; and later that year he was transferred to Germany, where he became manager of the Cöpenick factory of Kodak A.G. He went to England, as manager of the Harrow Works, in November, 1930.

"To each of these positions," says the Harrow *Bulletin*, "he has brought his infectious good nature, a real flair for organization . . . and an uncanny skill in sorting out the essentials of technical problems."

Mr. McMaster was graduated from Cornell University in 1916. Joining the Company in 1917, he worked in the Industrial Laboratory and the Film Emulsion Coating Department. During the War, he saw service with the Flying Corps, returning to Kodak Park in 1919. The following year, he was made assistant superintendent of the Film Emulsion Coating Department. In 1931, he was appointed assistant general superintendent of the Film Manufacturing Departments. Two years later, he was transferred to the Kodak Office, and in 1935 he went to Harrow as assistant works manager.

Mr. McMaster has always been deeply interested in athletics. He was the president of the K.P.A.A. for the year 1922-1923.

Sports Notes

KODAK PARK: After scoring a 7–0 victory against the Baltimore Nate-Leons in their opening game in the national softball tournament at Parichy Field, Chicago, the Kodak Park team—New York State softball champions—were eliminated, 1–0, by the Washington, D. C., ten. . . . Winners in the K. P. A. A. girls' golf tournament were Patricia Haag, Gertrude VanZandt, Thelma Lay, Effie Slater, Dorothy Hart, Mary Stevener, Grace DeSmit, Gladys Seely, and Grace Graumenz. . . . Dr. John Hecker won the men's singles elimination tennis tournament. Runner-up was John Schilling.

HAWK-EYE: The baseball boys finished a good third in the Industrial League and laid aside their bats well satisfied with the season's work. . . . With sixteen teams in action the bowling season got off to a good start on September 11th at Ridge Hall. The Hawk-Eye boys have won the Lovejoy Trophy in interplant play three years in succession, hope to retain it. Manager Betty Meagher has five girls' teams earnestly putting the ball to the maples on the East Side alleys.

CAMERA WORKS: The softball team finished in first place in the National Division, but was eliminated in the league play-offs by the Graflex team, 4–3. . . . Five bowling leagues are rolling as follows: Supervisors, with 80 enthusiasts, at Ridge Hall; No. 1 League, with 40, at Franklin Hall; No. 2 League, with 30, at Ridge Hall; 4-K League, with 30, at Carbonneau Alleys; and the Girls' League, with 40, at Columbus Hall. . . . A team will be selected to represent the plant in the Industrial Bowling League.

Did You Know?

THAT A PACK-A-DAY SMOKER of cigarettes pays $29.20 a year in taxes in New York State?

• • •

That between 1900 and 1930, the greatest thirty-year period of invention and technological improvement the world has known, employment in the United States increased by more than twenty million jobs?

• • •

That the annual registrations of passenger cars, trucks, and busses show that the world total advanced for the sixth consecutive year to the all-time record total of 43,819,929 vehicles in operation as of January 1st? "The attainment of this record total," says *Commerce Reports*, "is attributed to an advance of 7.1 per cent in the motorization of countries outside of the United States. . . ."

New Fashions in Kodaks

A Splendid Line of Six-20 And Six-16 Kodak Vigilants And Kodak Monitors Is Announced

NEWEST AND WORTHY MEMBERS of the 50-year-old family of Kodaks, the Kodak Vigilants and Kodak Monitors are now being presented to the public. Available in the popular Six-20 and Six-16 sizes, the twelve models reach a new high in handsome design, top-flight performance.

The Kodak Vigilants offer four lens and shutter combinations—the Kodak Anastigmat *f*/8.8 lens and Kodex shutter; Kodak Anastigmat *f*/6.3 lens and Kodex shutter; Kodak Anastigmat *f*/4.5 lens and Kodamatic shutter; and Kodak Anastigmat Special *f*/4.5 lens and the brilliant new 9-speed Supermatic shutter. All are available in both the Six-20 and Six-16 sizes.

Outstanding design and construction feature these new Kodak Vigilants. A new and more rigid type of bed brace gives unusually firm support to the lens and shutter. Both reflecting waist-level and folding eye-level finders are standard on all models. The body shutter release has a large rounded head that fits snugly against the side panel when the camera is closed, thus preventing unintentional exposures.

The Kodak Monitors are offered with two lens and shutter combinations—with Kodak Anastigmat *f*/4.5 lens and Kodamatic shutter; and with Kodak Anastigmat Special *f*/4.5 lens and Supermatic shutter.

Both models feature a chromium control housing containing a plunger-type release, folding eye-level finder, range-finder clip, double-exposure-prevention mechanism, automatic film stop, exposure counter, and in the de luxe models a depth-of-field scale.

The winding is greatly simplified in the Monitors. After the first exposure, the film is wound until it is automatically centered for the next exposure; a counter dial indicating the number of the exposure.

The aluminum cases of the Kodak Anastigmat *f*/4.5 models are covered with a rich morocco-grain Kodadur, while the de luxe models have genuine pin-grain leather covering. The retail prices of the Monitors range from $30.00 to $48.50.

All in all, these new members of the Kodak family are smart and able picture-takers.

A new face in the Kodak family, the Kodak Vigilant is offered to picture-takers in eight handsome models. Ranging in price from $14.50 to $42.50, these smart cameras reach new highs in performance

The chromium control housing of the Kodak Monitors distinguishes them from other folding Kodaks. Priced from $30 to $48.50, these modern cameras bring many new features to the discriminating snapshooter

Camera Club Classes

SCHOOL IS IN FULL SWING once more at Kodak Park as members of the Kodak Camera Club avail themselves of the truly excellent facilities which that organization offers to the photographer, beginner and advanced alike.

Primarily pictorial, with emphasis on the fundamentals of photography, including a thorough discussion of the practical uses of Kodak films, plates, and papers, is Practical Photography II, under Dr. H. C. Staehle.

The practical processes of color photography and their applications are the subject of Practical Photography IV, with Hugo Kurtzner as instructor. The laboratory work scheduled for this course includes the making of color-separation negatives and prints on paper by the Eastman Wash-Off Relief Process, directly from the subject and from Kodachrome.

Practical Photography V is a course in applied sensitometry in which Gerald E. Johnson discusses such important characteristics of photographic emulsions as speed, contrast, latitude, exposure, color sensitivity, filter factors, graininess.

The above-mentioned classes are now under way.

John W. McFarlane will conduct Practical Photography I, a course for beginners who have had little or no experience in practical photography, commencing January 8th, 1940.

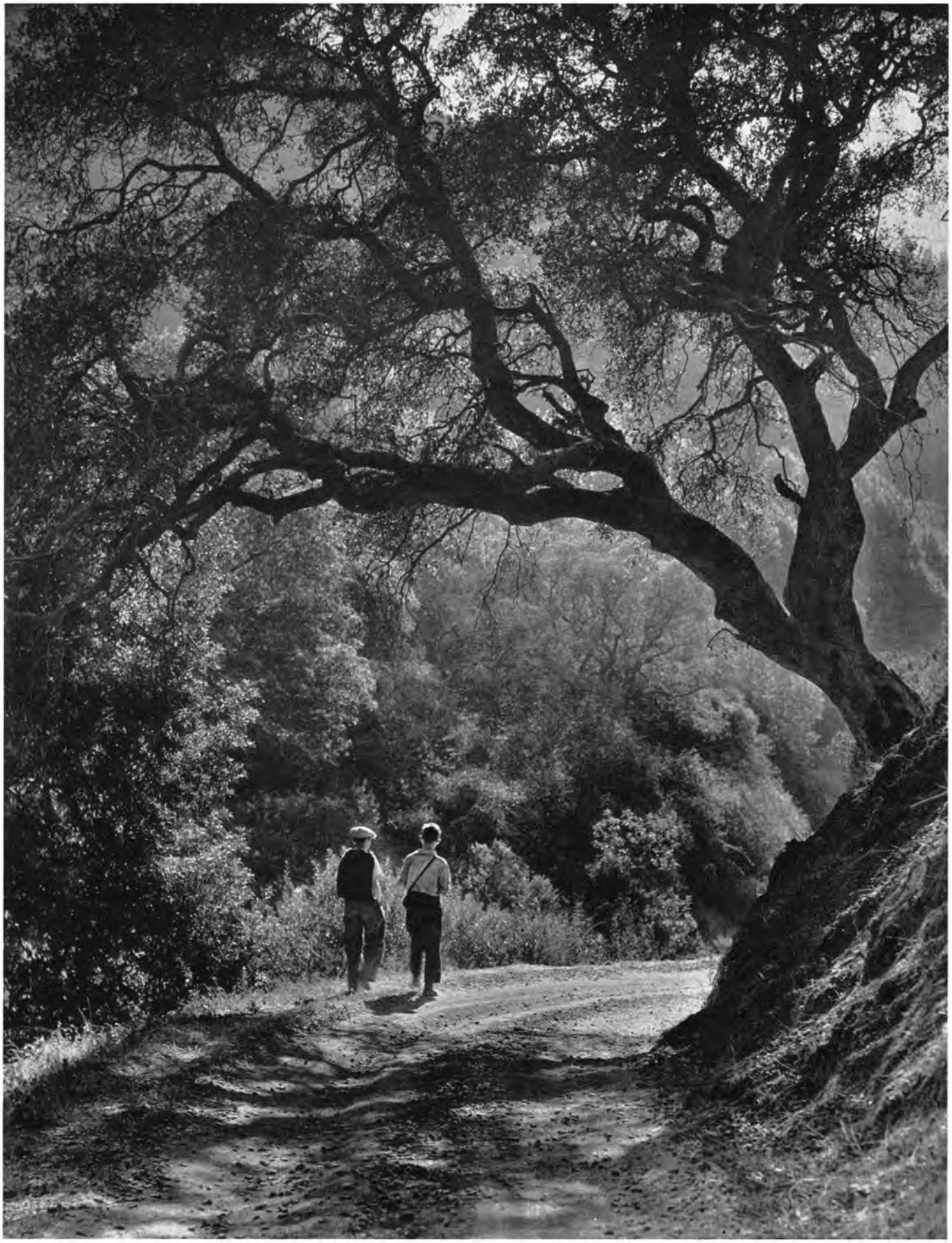
On January 10th, 1940, Practical Photography III begins, with Albert K. Wittmer as instructor. The course is designed primarily to afford members an opportunity to develop the use of photography in portraiture.

Employees Are Selected

(*Continued from page 7*)

As long as he remains with the Company, each employee should feel free to ask the advice of the employment officers concerning personal problems, whether they relate to work or to other matters. It's part of their job—and an important part—to give such advice, and to give it in strict confidence. No Kodak employee jeopardizes his standing in bringing his problems, or complaints, to the attention of an employment officer.

The work of the personnel and employment departments is most important to each member of the Kodak organization. The success of the Company and the security of our jobs depend to a great extent on the selection of the right persons to fill the positions that may become available.



"ADVENTURE": two lads, a country lane, a smiling sun—and all the world to conquer. This picture, which, no doubt, will evoke many a nostalgic sigh, was among those seen in the 1939 Kodak Exhibit by thousands of visitors. It was taken on Eastman Portrait Panchromatic Film, Exposure 1/25 at f/11

PRINTED IN U.S.A.
AT KODAK PARK

Only a movie camera gives you the complete record

IT'S a great moment in life when that youngster of yours and her beloved dog step forward to receive the children's handling award at the kennel show.

Keep a movie record of it—for her sake as well as yours. In hundreds of thousands of homes today, people are using their movie cameras to make a living history of events, experiences, that are precious to them. You, too, can build up such a record—and some day it will have a value beyond price.

Only Eastman gives you Complete Equipment and Service . . . Ciné-Kodak—the home movie camera exactly suited to your needs . . . Ciné-Kodak Film . . . Processing Service that's world-wide and included in the price of the film . . . Kodascope—the projector that shows your movies clearly, brilliantly—Eastman all, and all designed to work together. Your dealer will show you the range of Eastman home movie equipment and project sample movies for you . . . Eastman Kodak Company, Rochester, N. Y.

TO MAKE 16 MM. MOVIES . . . Ciné-Kodak "E," the low-priced "sixteen" that has so many high-priced camera features, $39.50. Ciné-Kodak "K," most widely used 16 mm. home movie camera, $80—a new low price. Magazine Ciné-Kodak, 3-second magazine loading, $117.50.

TO SHOW 16 MM. MOVIES . . . Kodascope Model EE, Series II, capable, low priced, from $65.45. Kodascope Model G, Series II, Eastman's newest precision-built projector, from $112.95. Both complete with lens and lamp.

Ciné-Kodak

EASTMAN'S
FINER HOME MOVIE CAMERAS

This Eastman advertisement appears in the November "National Geographic Magazine"