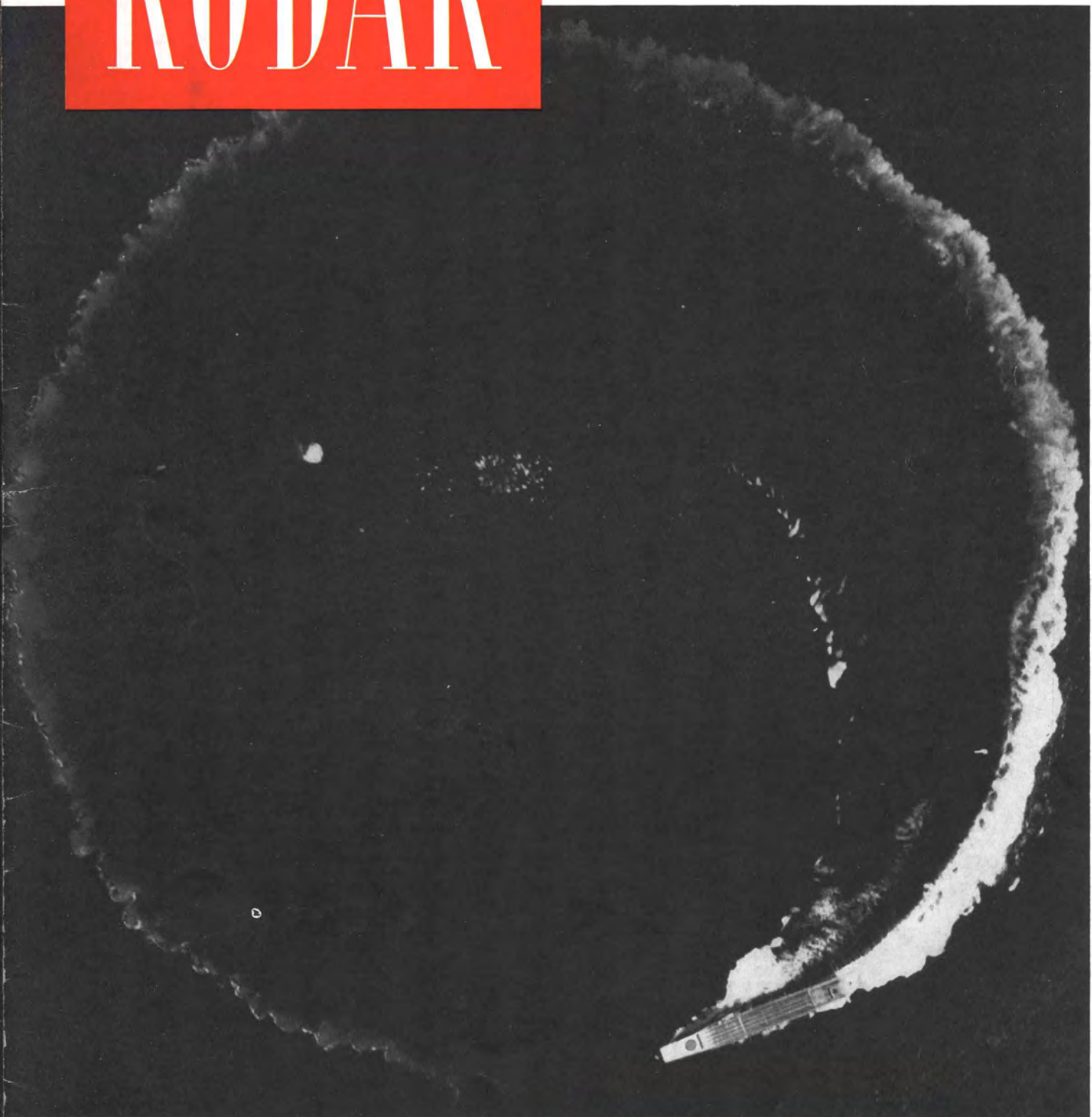


KODAK

*A Magazine
for
Eastman Employees*



APRIL * 1944



In This Issue

Finale—*All that remains is the picture (see legend, page 8)* Cover

Wartime Operations During 1943
—*Reprinting the production section of the Company's annual report* 1 to 9

The Editor's Page—*Kodak Today and Tomorrow: briefing a recent address by the general manager of the Company* 10

Camera Looks at Telescope Production—*Quick report on a Hawk-Eye war job* 12

Employees Who Have Recently Retired—*Names and portraits of former colleagues* 13

Panorama—*Don't forget!* 14 and 15

The New Chief Executive of Kodak Limited—*His career commenced at Kodak Park* 16

Kodachromes from Tarawa—*Reproducing enlargements from 16-millimeter frames*
Inside Back Cover

★ ★ ★

← This view of bombs falling on the Messerschmitt plant at Wiener Neustadt, near Vienna, affords evidence of excellent photographic quality being obtained in routine record pictures of raids. The new Kodak rare-element glass has been instrumental in improving "definition" in aerial photographs. Official Photograph, U.S. Army Air Forces

Home Front and War Front—*Give for Both!*

Rochester Community and War Chest Campaign

May 8th to 15th

Wartime Operations During 1943

Reprinting the production section of the Company's annual report

THE EASTMAN KODAK COMPANY attained in 1943 the high level of war production toward which its policies and energies had been directed since the onset of the defense program. Under the impetus of war demands, the total output of each of the Company's major manufacturing divisions in the Western Hemi-

sphere, and in England, was larger in 1943 than in any previous year.

In the Rochester plants, the increase was the result of substantially larger requirements by the Government both for standard photographic products and for special nonphotographic war equipment. The latter production utilized most of the capacity of the camera and optical plants and of the mechanical shops in the photographic-materials plant.

The activity of the Tennessee Eastman Corporation was extended to include the operation of large Government-owned plants on special work.

Some important production programs undertaken for the Army and the Navy have been entirely or largely completed. Many others are continuing at full or increased volume. In relation to the completed or reduced undertakings, the Company is co-operating with the armed serv-

Close to a peaceful and orderly plantation of coconut palms, this Japanese transport was photographed listing and burning in a New Guinea harbor after being struck by bombs from American bombers

Official Photograph, U.S. Army Air Forces





A cameraman on the *Spencer* caught the firing of a depth charge, first blow in a battle that ended in victory for the cutter over the submarine. Ships of the *Spencer's* convoy may be seen in the distance

Official U.S. Coast Guard Photo

ices to the end that production can be resumed on the original scale if tactical considerations require it.

Meanwhile, facilities that became available as production programs were reduced or terminated have been employed for other important war-production projects. The net result of this has been to maintain the Company's total production for the military and naval services and other essential war purposes at a high level.

Photography in War

The Eastman Kodak Company and its associated companies have supplied the major proportion of all the photographic materials for the military and naval services of the United States and the United Nations. In addition, they have continued to provide photographic materials for industrial, medical, governmental, and other essential civilian uses. . . . The Company's film-manufacturing facilities have been operating at capacity, with the large military demands limiting the amount of film available for normal civilian

distribution. The Company has endeavored to distribute films for civilian use in an equitable manner and is appreciative of the wholehearted co-operation of dealers and customers in effecting this program.

About This Review

The text and the illustrations in this review of the Company's operations are from the annual report for 1943. In addition to the pictures reproduced on these pages, others from the report appear on the front cover, inside the front cover, and inside the back cover.

The financial section of the report was reviewed in *KODAKERY* for March 14th.

The actual experience of war has fully established the critical importance of aerial photography. Reconnaissance photography, proving so valuable as to justify use of the fastest American planes and the most versatile pilots, is supplying the

source material of military intelligence, leading to attack on the ground, by sea, and in the air. . . . Aerial photographs of a 4500-square-mile area were made in a single morning of flying before the final attack on Bizerte and Tunis. From the interpretations of this photographic survey, the Allied artillery was able to destroy the enemy gun positions in this area and to crush enemy resistance. . . . On the very day of the naval battle of Kula Gulf, in the Solomon Islands, 1500 aerial photographs were made and converted into a mosaic chart of the gulf and its dangerous reefs. During the victorious battle that night, no American ship ran aground. . . . The recent successful attack on Truk followed a spectacular reconnaissance mission by two American photographic planes. Aerial photographs made during the raid recorded the results of the bombardment.

Products and Uses

Since Pearl Harbor, the Army Air Forces have made mapping photographs of areas totaling nearly three

times the size of the continental United States; and finished charts have already been prepared and printed from more than half of these photographs. This project will have an influence on postwar commerce, because the maps cover, in addition to war zones, large areas of Alaska, Mexico, South America, and Africa, and of Asia and the Pacific, for the benefit of the air-transport services. Much of the inaccessible and remote territory thus charted appeared on previous maps only as blank spaces. The Eastman products involved were not confined to large quantities of aero film and photographic paper, for map photographs are manually co-ordinated into large charts on cellulose-acetate sheeting; and a photolithographic material made by the Company is used in printing the finished multicolor maps.

As the principal source of supply, the Company continued to manufacture film for the motion-picture industry in accordance with War Production Board regulations. The output of that industry, in the form of entertainment films for the Allied armies and navies all over the world, served a purpose beyond providing the motion pictures shown in thousands of civilian theaters.

Hundreds of training films—another use of motion pictures—have been made by the military and naval services themselves and by the motion-picture companies on contract, carrying the training of soldiers and



Official U.S. Navy Photograph

Photographers in uniform have moved all over the world with the military and naval forces to record the war for the public back home and to supply photographs for purposes of military intelligence. Many striking portrayals of action have been among the hundreds of thousands of pictures they have made. This night photograph is a splendid example. It shows two American destroyers throwing streams of anti-aircraft fire at enemy planes covering a Japanese attempt to land troops on Vella Lavella Island

★ ★ ★

The tension before an infantry attack is portrayed here by an Army photographer. Army, Navy, and Marines all maintain schools for combat cameramen, and their graduates have served heroically

Photo by U.S. Army Signal Corps



Through a village an American assault section moved to take up its position at the crest of a wooded hill. Rifles were carried ready for instant use if snipers were encountered. A grim setting, despite bright Italian sunshine, . . . and from it a soldier photographer made a picture worthy of any salon

Photo by
U.S. Army
Signal Corps

sailors all the way from their first salute to the operation of intricate military and naval instruments. The present uses of training films by the armed services and by war industries suggest significant applications of photography after the war. Instruction by this means may well prove an important tool of industrial reconversion from war to peace.

The armed services' demands for 16-millimeter film, the home-movie size, have been substantially expanded. In addition to its uses for distribution copies of training and entertainment motion pictures, this film is being employed extensively for gun cameras and in the V-Mail service. . . . In flight training, gun cameras are used in place of guns to record combat-practice results; and they are standard equipment on fighters, operating when the guns fire and substantiating claims of enemy aircraft shot down. Together with film for gun cameras, the Company has produced for both the Army and the Navy large numbers of the mechanical magazines within which the film is inserted in the cameras. . . . V-Mail has grown to monumental proportions. This system

devised by the Eastman Kodak Company is carrying American soldier and sailor mail all over the world to the extent of thirty-five million letters a month.

X-ray film for medical, dental, and industrial purposes was well established for many years before the war; and large quantities have been manufactured during the war years for civilian and military purposes. This extended employment of x-ray film, especially for industrial uses, may be expected to provide impetus for still wider peacetime use than previously.

Manufacture of photographic paper, an important product of the Company, continued well above normal peacetime rates. As an example of consumption of photographic paper for military activities, the mapping of one theater of war—an area the size of Texas—required a million and a quarter contact prints and forty-four hundred enlargements. It is also worthy of note that all letters received by V-Mail and by Airgraph, the equivalent British process, are in the form of photographic prints on Eastman paper.

Scientific research by the staff of

the Kodak Research Laboratories continued energetically through 1943, with emphasis on special photographic processes of potential value in the prosecution of the war. Many of these developments will have important applications in peacetime.

Because of intensive war use of plant facilities and strict limitations of materials, there was no manufacture of photographic apparatus for the general public in 1943. Some items of equipment were supplied with War Production Board approval for essential civilian uses, and appreciable numbers of the Company's standard photographic-equipment items went to the military and naval services. The Kodak Medalist, the Kodak 35, the Magazine Ciné-Kodak, the Ciné-Kodak Special, the Sound Kodascope, the Recordak, and several types of professional apparatus were the principal standard items made for the services. Certain special photographic instruments and items of equipment were produced as war projects, including photographic equipment for the V-Mail system.

In World War I, the Company built aerial cameras and first adapted film to aerial photography in place

of glass plates. Aerial-camera production has been resumed during World War II; but the manufacture of aerial lenses was continuous between the two wars and is now very greatly expanded. Use of the Eastman rare-element optical glass in this equipment is a material factor in the photographic clarity and detail that permit effective interpretation of Army and Navy reconnaissance pictures. All lenses made by the Company are treated with nonreflecting coatings, in the development of which the Eastman optical-research staff was a leader. A new lens cement, proving in 1943 its ability to withstand extreme changes of temperature, is another Company innovation applied to aerial lenses.

Nonphotographic Production

Beyond manufacturing the items of photographic equipment mentioned in the preceding section, the Company's mechanical and optical facil-

ities continued to produce special military and naval equipment. Space for production of high-precision non-photographic instruments was extended last spring by the occupation of a large seven-story addition to the optical plant, erected by the Army Ordnance Department and leased to the Company. In this addition and in the previously existing facilities, the manufacture of optical instruments for the Army and the Navy was carried on at a rate maintaining the Company in the forefront of suppliers of lenses and optical devices.

Most of this production consisted of instruments for the control of gunfire: various aiming telescopes, panoramic telescopes, and gunsights; artillery aiming circles; and anti-aircraft height-finders, in the manufacture of which device, described as "the most difficult optical instrument to make," the Company has been especially successful. Certain optical instruments were also made

for war purposes other than fire-control. Eastman military optical devices have been in combat ashore and afloat all over the world. The application of modern large-scale-production methods to the manufacture of these complex instruments, with no sacrifice of the highest precision standards, delivered the final blow to the legend of German supremacy in this field.

Optical parts and subassemblies were made for other producers, including most of the optical systems for American bombsights, which have shown the enemy the bitter meaning of "high-altitude precision bombing." Another example is optical systems for the gun-aiming mechanisms of new types of aircraft.

To provide increased capacity for the manufacture of fire-control instruments for the Navy, a seven-story building in the center of Rochester was acquired by that service late in 1943 and is being remodeled for

Far from Main Street, U.S.A., this American sailor watched a ship loading in an Australian port . . . and a Navy photographer saw in the scene the possibility of a symbolic and affecting picture
Official U.S. Navy Photograph





1. Two Axis supply ships are sighted by Flying Fortresses . . .



2. Bombs away! They strike the larger vessel, which explodes . . .

operation by the Camera Works. A large number of new employees are being added by the Company for work in this building.

In addition to high-precision instruments and components of instruments, the Company used its mechanical facilities to fill other specialized requirements of the Government and of other producers of war equipment. Extremely accurate fine-pitch gearing for fire-control instruments was important in this respect.

The development department, with the function of experimenting along mechanical and optical lines, con-

tinued to co-operate with the Government on developmental projects. Work under experimental contracts was similarly done by the Kodak Research Laboratories—in addition to their principal scientific work on photographic processes—and by certain other experimental departments. This contractual development activity covered a wide range of projects. The plants also did development work in connection with optical instruments and with photographic equipment and materials for which production contracts had been undertaken.

The Tennessee Eastman Corporation

The Tennessee Eastman Corporation, at Kingsport, Tennessee, made major contributions to war production and the wartime economy in the manufacture of its regular products, and especially in its services to the War Department as designer and operator of important Government-owned facilities.

The acetate-rayon products of the plant, Koda and Teca, found military uses in tow targets, mosquito netting, and officers' uniforms, beyond their extensive employment in civilian textiles. The molding compositions, Tenite I and Tenite II, met increasing demands during the year for incorporation in a wide variety of plastic war products, among them bayonet scabbards, steering wheels for jeeps, control parts of aircraft, and machine-gun ammunition rollers.

An important part of the Tennessee Eastman Corporation's output of cellulose esters was used by the Eastman Kodak Company in the manufacture of safety film and transparent sheeting. Additional quantities were marketed for the manufacture of airplane lacquers, wire-insulation, and transparent bomber noses and blisters.

Other significant items of production were hydroquinone for photographic developers and for use in the manufacture of synthetic rubber, chemical inhibitors for aviation gasoline and for eighty-octane all-purpose military fuel; acetic acid and related chemicals; and dyestuffs for acetate rayon. Lumber produced and sold by Tennessee Eastman was used in the construction of such war necessities as landing barges, PT boats, and Army trucks.

The Holston Ordnance Works, a Government-owned facility near Kingsport manufacturing a new explosive, went into production during the year under operation by Tennessee Eastman. Both the experimentation on the product and the design of the plant were done by that company. During the year, Tennessee Eastman accepted responsibility for the operation of another large and important Government-owned facility. More than seven hundred persons from the production and experimental staffs of

the Tennessee Eastman Corporation and, to a less extent, of the Eastman Kodak Company have been transferred to the operation of these Government-owned plants.

The Tennessee Eastman Corporation and the Holston Ordnance Works took their place in 1943 alongside the Rochester Eastman plants as winners of the Army-Navy Production Award.

Personnel

The average number of hours for work schedules in the Company's three Rochester plants increased slightly during the year, and more than 95 per cent of the people in these establishments were working 48 or more hours a week at the end of the year. The total of Rochester employees, and the United States total, continued to grow. The proportion of woman employees in the Rochester plants and office, which was 25 per cent in 1940 and 34 per cent in 1942, increased to 39 per cent in 1943. The proportionate growth in the number of woman employees was even more marked at Tennessee Eastman, where the increase was from 10 per cent in 1940 to 35 per cent in 1943.

Looking Ahead

Without slackening the efforts necessary to sustain war output, the Company commenced during the year to plan systematically for the postwar future. Detailed consideration is being given to the problems of resuming large peacetime operations quickly in order to supply the accumulated demand for photographic goods and to reabsorb the Company's service men and women into the organization as fairly and advantageously as possible.

Basic assumptions have been made as to the postwar level of general business and the Company's postwar volume of sales; and they have served as a foundation for estimates of the postwar needs for employment and new capital equipment. Prospective changes in Company organization to meet the anticipated conditions are being given attention, with special regard for such matters as placement of employees returning from service, development of new products, and research in sales and distribution. Study is being applied to utilization of plant facilities,



3. Then comes the smaller ship's turn. Another direct hit . . .



4. Thus ends the usefulness of many tons of enemy ammunition
Official Photographs, U.S. Army Air Forces

simplification and improvement of operating methods, and factory reconversion.

Public interest in photography throughout the country has been growing during wartime. Development of the quality and usefulness

of photographic products will continue, and the Company believes that there will be a large market demand after the conclusion of hostilities. The Company is facing with confidence the problems involved in achieving production to meet this demand.

Keep on



BACKING THE ATTACK



at Kodak!

Pict
from
Pac
Fro



Above: The essence of invasion, the swiftness and stealth of an early-morning attack in the tropics, marks this dramatic photograph of Marines going in for their landing on Empress Augusta Bay, Bougainville. Official U.S. Navy Photograph



Above right: Rabaul harbor, shortly before much of the Japanese shipping shown was sunk by bombing. This composite photograph and the photograph below are typical reconnaissance "shots" for intelligence. Official Photograph, U.S. Army Air Forces



Right: Japanese fighters and medium bombers may be seen here in blast bays of the airdrome of Kavieng, New Ireland. An object of Allied attack, the runway was under repair when the picture was taken. Official Photograph, U.S. Army Air Forces



Front Cover: This Japanese aircraft-carrier described almost a complete circle in trying to evade American planes overhead; but in vain, for the photograph was all that remained of the enemy ship after the battle. Official Photograph, U.S. Army Air Forces



ures
n the
cific
ont



Summing It Up

These are the concluding paragraphs of the annual letter submitted by Mr. Lovejoy and Mr. Hargrave to the stockholders of the Company.

THIS REPORT WOULD NOT BE COMPLETE without full recognition of the splendid work of the Company's employees throughout the year. Their loyalty and sustained effort have been among the chief factors that have made possible the achievement of a commendable record of production during the period since the start of the war. More than nine thousand men and women have left the employ of the Kodak companies in the Western Hemisphere to become members of the armed services. Many more—their number is not known—are in the service of other allied nations. We of Kodak are proud of them and of their records.

We are also pleased to acknowledge with most sincere appreciation the co-operation that all departments of our company have received from representatives of the armed services with whom they have been brought in contact in connection with our war contracts. Their co-operation has been most helpful.

Not fewer than 44 employees of the Company who have entered the armed services have given their lives to their country. We express to the bereaved families of these men the most sincere sympathy of all the officers and employees of the Company.

The Editor's Page

KODAK TODAY AND TOMORROW

Following are excerpts from a recent address by Albert K. Chapman, vice-president and general manager of the Company:

KODAK TODAY, of course, means Kodak at war. At the outset we pledged our unreserved efforts to the service of waging total war and winning total victory. That that pledge has been kept is attested by our original Army-Navy "E" Award, and the stars which have been added subsequently. It will continue to be kept until the final victory has been won.

The sensitive goods and chemicals produced by Kodak Park are used by every branch of the armed services and they have permeated every nook and cranny of essential industry. Kodak Park has long been working at capacity and our quarterly production schedules are under the control of the War Production Board. So far as I know we have met every essential demand made upon us for sensitive goods. The quantities of photographic film, paper and chemicals turned out have been huge, even when measured by the standards of the world's largest photographic manufacturing plant.

Volume Demands

With the record of the Camera Works, the Hawk-Eye Works and the Engineering and Maintenance Department at Kodak Park, you are no doubt familiar. I group them together because their output is mechanical, or optical, or a combination of the two. Here the job to be done was twofold. We were called upon to make a large and diverse group of totally unfamiliar products, many of them requiring precision of a very high order. We were asked to produce these things in a volume which meant a tremendous increase in total plant output. Involved in all this was much plant rearrangement or rather successive rearrangements. No sooner had one expansion been completed than we had to do it all over because

of ever increasing requirements. There were thousands of people to be trained, many of whom had never before worked in industry. You know, of course, that after we ourselves had built two new buildings at Hawk-Eye, the Ordnance Department provided a third.

I should like too to pay tribute to the work that has been done by the Development Department, the Research Laboratory and by the various development groups in the plants. As you might expect their work has been largely of an experimental nature, a great deal of it under the auspices of the Office of Scientific Research and Development. Much of it has been of the greatest importance and a considerable proportion has eventuated in production, some of it in our own plants. Most of it is of a highly confidential nature so that it can be spoken of in the most general terms only. As a consequence the achievements of the men involved must, for the moment, go unheralded and unsung.

You may be interested in hearing something about the activities of the Tennessee Eastman Corporation. The Kingsport plant has grown to the proportions of a young city. . . . In it are produced a multitude of products, with many of which you are familiar. Without exception, these products have gone to war, some of them in odd and unexpected ways [Note: see also page 6]. Our cellulose-acetate rayon yarn and staple fiber goes more or less into everything under the sun. Our plastic, Tenite, can be found on all of the battle fronts on land and sea, as well as in the air. . . .

In June, 1942, the Tennessee Eastman Corporation was charged with the responsibility of designing and procuring the production equipment, and of operating what is now the great Holston Ordnance Works. There are produced daily tons and tons of an explosive which is being applied in a very personal way to the enemy. . . .

In Toronto, there is, on a smaller scale, the counterpart of our Rochester war production in that Canadian Kodak is devoting a major share of its productive capacity to the requirements of the Canadian government. The sensitized-goods divisions of the plant have long been working at capacity, just as we have at Kodak Park. The mechanical divisions formerly devoted to the manufacture of photographic apparatus and to plant maintenance are turning out products of the same general character as those produced here at the Camera Works and the Hawk-Eye Works.

Of all these things we are justly proud. Our job is being done and being done well. But—and this is a very large and important but—let us never forget the men and women in our armed services—your husbands, brothers, sisters, sons and daughters, your friends and mine, among them nine thousand Kodak men and women. They are enduring the rain, mud, snow, thirst, hunger, the malaria. Theirs are the wounds, the pain and the horror of war. If what we can do here helps them to see it through, we shall have had our reward. They are fighting our battle even unto the last full measure of devotion.

Looking Ahead

What of Kodak tomorrow—Kodak in the postwar world?

Personally, I think the public has been oversold on the miracles that are going to take place on the morning after V-Day. Undoubtedly, as we progress in the postwar era, many new and improved products are going to put in their appearance. If that were not true, this would not be America. But the production of these new and improved things requires first, design and development work, then tooling, as well as plant rearrangement and conversion. These things all take time. It seems to me inevitable, therefore, that the backbone of postwar production in American industry will be the resumption of prewar products.

I should like to tell you something of the new developments which will take place in our own business, not at 12:01 on the morning after V-Day, but in a reasonably short time thereafter:

In the first place, we are going to emerge from the war era, I believe,

with a greatly strengthened organization. Not only has it been augmented in numbers, but, under the pressure of necessity, we have acquired knowledge and skill at a greatly increased tempo. This is true all along the line from research, development and engineering straight through to production. After what we have accomplished in our war effort, we are justified in facing the postwar era with confidence.

To be more specific, let us consider for a moment color photography. . . . As regards color photography in general, there is little doubt that we are in the relatively early stages of rapid commercial development. We now have many successful color products. There will be improvements in them, and there will be new color products. Color is going to invade new areas of the whole photographic field. Kodacolor Film and Paper prints were announced in 1942. Civilian production has, of necessity, been small. But there is ample evidence that Kodacolor prints have found enthusiastic public acceptance. Upon such things much has and is being done by the Research Laboratory, the Emulsion Department, and the production departments at Kodak Park.

Out of War

Then too, many of our regular peacetime products or adaptations of them have been required by the armed services. Development work on such things, as well as work on improved methods of production, has gone on during the war at even an accelerated pace. It is to be expected, therefore, that many important new things are going to flow directly out of our war work. In some cases they can make their appearance at a relatively early date. This is particularly true of the process plants, such as Kodak Park and Tennessee Eastman, where our wartime products and methods have been similar to those of the prewar era.

The war years have witnessed a remarkable increase in what might be called the business and industrial uses of photographic methods, both still and motion picture. Recordak and Micro-File have become accepted tools of business and industry and further developments of a far reaching nature are likely to ensue. V-Mail is

an example of one that has only recently taken place. It is perhaps significant to note that the London *Daily Mail*—transmitted by V-Mail, and reproduced on this side of the Atlantic—makes its appearance in New York only a short time after its issue in London. Industrial X-ray



Albert K. Chapman, vice-president and general manager of the Company

Film has become one of the great tools of wartime industry. Matte Transfer Film and the making of templates by photograph has made a significant contribution to the speedy production of airplanes. A recital of this sort could be continued indefinitely. The point of it is simply this—that there are under development sensitive materials, both film and paper, as well as apparatus, all calculated to lead to further and important commercial and industrial uses of photography.

In spite of remarkable improvements made in the last decade, we have been rather accustomed to thinking of photographic paper as a somewhat static, stable part of our line. I think it is safe to say that development work already done promises in the period immediately before us not only great further progress in methods of manufacture, but new types of sensitive paper which will lead photographic methods into new fields.

I shall make no attempt to tell you in detail of new or improved products from Tennessee Eastman.

You will believe me, I know, when I say that the men who have built that splendid enterprise to its present proportions, in spite of their preoccupation with war work, have not ceased to work and plan for the future. Synthetic fibers in total have long since become one of the great raw materials of the textile world. Their consumption now exceeds that of wool and, in the visible future, cotton may have to look to its laurels. New and improved products now definitely in sight at Kingsport promise that we shall be well near the forefront of the parade of progress. We are told that we live in a plastic age. Tenite, our cellulose ester plastic, is one of the reasons for that statement. Tenite has always led the pack in its particular field and the people of T.E.C. aim to keep it there. With their usual foresight they have presented to us a complete plan for their postwar expansion.

For the Public

Just before the war we were embarked at the Camera Works and Hawk-Eye Works on an apparatus development program of considerable proportions. Many new and interesting items were in various stages of completion. Fortunately some of them had reached the tooling stage and for one or two of importance the tools had been partially completed. These things can be introduced early in the postwar period. The development work on others can be finished in a relatively short time. On the whole, therefore, it is safe to say that we shall have a good deal of new and improved photographic equipment to place before the public. Naturally the timing all depends upon the course of the war, the rapidity with which our war orders are cancelled and the time required for reconversion. You will understand, of course, that at both the Camera Works and the Hawk-Eye Works there is a major job of reconversion to be done.

In both these plants war work has taught us much by way of new and improved manufacturing methods. We have long made the optical parts for our own apparatus, but during the war we have successfully undertaken the quantity manufacture of intricate optical instruments

(Continued on page 16)

Camera Looks at Telescope Production



From top left, clockwise: Joseph Ambros places a Navy telescope in cradle that will bear it over rollers on its trip down a Hawk-Eye conveyor line. Albert DeGraff guides instrument onto workbench. George Reimuth removes a telescope from the conveyor line for inspection. Franklin D. Leffler sights a telescope on a distant target to check its precision and cleanliness. Note, incidentally, Kodak Park's twin chimneys visible through window. At left is a general view of the conveyor line with (left background) Joseph Wardynski and Astrid Coene, and (at right) Mary Ann Vallone, Helen Stremick, Lucille Peters, and Dorothy Linkner working on the Navy telescopes. Hawk-Eye's use of assembly-line technique in the production of these high-precision instruments has increased output without lowering quality



Employees Who Have Recently Retired



William H. Maddock, Kodak Office



Mrs. Neva Burgdorf, Kodak Park



Miss Helen Sullivan, Hawk-Eye



Charles H. Rogers, Camera Works



J. McGregor Young, Camera Works



Simeon L. Empey, Kodak Park



Frank Wells, Kodak Park



Charles W. Short, Kodak Park



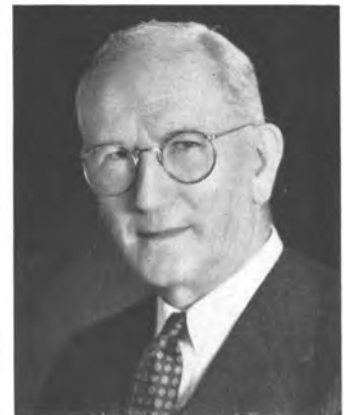
C. Willard Smith, Kodak Park



Fred Rahn, Kodak Park



John H. Bliss, Kodak Park



William D. Fennessey, Kodak Park



Charles H. Young, Camera Works



Frederick W. Rath, Kodak Park



Frank L. Weber, Kodak Park



T. Francis Prendergast, Kodak Park

Panorama

DON'T FORGET!

ONCE UPON A TIME there was a Swell Egg named Joe Zilch who worked in a Large Plant where he was Popularly Known as Good Old Eagle Eye because he was Always Alert for Hazards. There were many regulations in the Safety Book but Joe Knew Them All and Several of Them even were there because of His Suggestions. Joe was truly a Samson in the Safety Field.

But his Home—Boy what a Mess that was from the old S. V. (safety viewpoint, to you). It was Full of Hazards. And it might Still Be except that One Fine Day Mrs. Zilch shouted, "Joe, oh Jo-o-o-o-e, where On Earth *are* You?" and he answered from the Attic, "Coming right away, *Dear*," and then there was the Most Horrible CRASH that shook the Whole House. And when Mrs. Zilch removed the Mops and Brooms and Old Magazines and Lots of Other Stuff, there was that Swell Egg named Joe and he A-Swearing Something Awful to Hear.

And One Day in the Hospital when he was Feeling Nicely Thank You he wrote down a Reminder to Myself. It was:

You can Apply at Home many of the Safety Rules and Regulations you observe every day in The Plant.

N. B. Now that spring is here and the folks at home in the midst of that annual cleaning frenzy, we've a better than usual opportunity of giving the house a top-to-bottom grooming for hazardous conditions.

* * *

Pacific Notes

Reporting from somewhere in the Pacific, Lieutenant Vernon M. Howe (Kodak Park) writes:

This is a far cry from Kodak, yet it is still all around me. Kodapak in my gas-mask diaphragm, protective ointment from Kingsport, and D-72, D-11, F-5, and Insurance Bromide Paper to work with 24 hours a day! How is that for keeping my hand in?

Censorship, like the income tax, is always with us, so my discussion must be limited to innocuous subjects, mostly personal in nature.

Housing is of the "open air" variety. Doors are always open and many windows have a chicken-wire screen in lieu of glass. This provides maxi-

mum ventilation. Movable screens provide what little privacy there is. We have mosquitoes—big ones. And persistent. I sleep in a magnificent four poster with a glorious canopy of mosquito netting.

I'm living with another officer in a flat. Ordinary house to you. We have a native "boy" (about 60), who sweeps out the place, makes the beds and repairs the mosquito nets. When our morning milk comes in bluer than usual and piping hot, we know that the milkman has not shown up. Powdered milk, it seems, reconstitutes—whatever that is—more easily in hot water.

Indian boys, silent and picturesque, wait on table. They are quite dark and wear immaculate white trousers, white mess jackets adorned with

rows of gleaming brass buttons, topped off with a red or blue silk sash—and bare feet. Our Hindustani is not so good but we can say "big dish" for anything that is especially nice—and get results! The boys all have poetic and musical-sounding names but all answer to Yehudi!

Another addition to the dining room is Herbert, an immense tiger tom cat. Herbert—or 'Erbi as 'e is known 'ere—is on the hefty side, due to his very successful panhandling. He is a paragon of furs, purrs, and virtue, except when another cat questions his reign. Nothing like a full-grown cat fight under a table-for-four to pick up a meal!

The natives are friendly and good natured. When we meet them on the road, they smile broadly and say, "good day," in their language and we reply in kind. Both men and women wear skirts. You can tell them apart because the women are more modest. They wear underskirts which extend about six inches below the outer ones and are of a contrasting color. The men don't bother with such furbelows! They all go barefoot and it is funny to see them kicking a football or digging with a spade through heavy clay and stones, apparently without any discomfort. They are all as straight as a ramrod and carry themselves beautifully. We unconsciously straighten up and throw our shoulders back when we meet them on the road.

For excitement, there is a dance at one of the camps every Friday night—if you can get a partner. We do have movies. They look different over here: leaning against a grass hut on a hillside, with Jupiter high in the sky and the Southern Cross low on the horizon just to one side of the screen. From time to time the moon peeks from behind a cloud and bathes the whole scene in near daylight.

Haircuts are a constant source of amusement. For various reasons we prefer not to patronize the native shops. We are exclusive—we go to the leading "beauty saloon," where an "Aussie" lady with a contagious sense of humor cuts our hair. She strops her razor with a malicious gleam in her eyes and you always feel as if you should cross yourself before she starts working around

your ears. With a hot towel and thinning shears, she polishes off a thoroughly business-like job—and you say a little prayer as you struggle off the chair. I'm getting used to it now.

Interesting Course

Skies were never more blue than in those first hand-colored prints turned out by the embryo Maxfield Parrishes who gathered in the Camera Club at Kodak Park, one cold Thursday evening in February, for the course in "Hand Coloring." Such hues were never seen on land or sea—but the fearless painters plunged on. Distant hills, near-by trees, streams, roads—all received their fair share of color. Nor did the instructor, Herbert S. Thorpe, of the Paper Service Department, Kodak Park, lose patience, or despair. His motto might well have been, "All's well that ends well," for only he could have suspected, from those first attempts, some of the really lovely work that would be done by many members of the class during the next few weeks.

One of eight different courses offered by the Camera Club during the 1943-44 season, two of which have had to be run in two sections because of the number of people eager to enroll, there was no doubt about the popularity of the course in hand coloring, right from the start. Early announcements had stressed that but twenty prospective pupils could be taken; but on the opening night some 37 young hopefuls turned up—and the Camera Club (and Mr. Thorpe!) being ever eager to oblige, finally split the class into two groups. Meetings are being held each Wednesday and Thursday evening for thirteen weeks.

After the first tryout, Mr. Thorpe took the class in hand, and, by means of short lectures and actual examples, instilled the know-how in the would-be artists. Primary, secondary, and tertiary color combinations were made up and studied. Warm colors and cool ones, advancing colors and receding ones, color families, and their influence on our everyday lives were discussed. The creation of color harmonies and color contrasts, and the part they play in producing pleasing pictures, was studied.

Instruction in the use of Kodak Transparent Water Colors was given



The course in hand coloring, snapped here in session, is one of the most popular of the Kodak Camera Club offerings this season. Explaining a finer point is Herbert S. Thorpe, instructor

during the first half of the course. The last half is being devoted to learning how to work with Eastman Transparent Oil Colors. Class periods are almost entirely work periods, with additional outside work optional.

Results—for better or for worse—can be seen right from the start. It is agreed that the course is a welcome and worth-while addition to the regular Camera Club program. And we suspect quite a number of prospective students were both surprised and delighted to find one course listed without the accompanying, "Photography I a Prerequisite."

April Dates

William Shakespeare was born at Stratford upon Avon on April 23rd, 1564. . . . In Lexington and Concord, Massachusetts, on April 19th, 1775, were fought two of the major battles of the Revolution. . . . Congress established the mint, in Philadelphia, on April 2nd, 1792. . . . Mutiny raged on the good ship *Bounty* on April 28th, 1789, and Captain William Bligh, with eighteen of his sailors, was set adrift in a launch. . . . At Federal Hall, New York, George Washington was inaugurated President on April 30th, 1789. . . . Napoleon, creator of the Little Corporal role, was exiled to Elba on April 28th, 1814. . . . Abraham Lincoln was assassinated by John Wilkes Booth on April 14th,

1865, in Ford's Theatre, Washington. . . . Spain declared war on the United States on April 24th, 1898, and the favor was promptly returned. . . . A great earthquake on April 18th, 1906, resulted in the razing of much of San Francisco. . . . On her maiden trip from Southampton, New York bound, England's great steamship, the *Titanic*, struck an iceberg on April 15th, 1912, and was wrecked with heavy loss of life. . . . The United States declared war on Germany on April 6th, 1917. . . . On April 9th, 1940, German troops poured into Denmark and Norway in another of the swift moves that characterized her early war effort. . . . Tokyo, Nagoya, Yokohama, and Kobe were bombed in broad daylight by a squadron led by Brigadier General James H. Doolittle, on April 18th, 1942.

Mystery Solved

Not long ago on an island in the South Pacific, Signal Corps troops found huge chunks of telephone wire missing. No matter how often they repaired the breaks, the depredation continued, and they could find no clue as to what was happening. The mystery was cleared up when a group of these Signal Corps men happened to attend a native banquet. One of them noticed that the strings on a native banjo looked familiar. Closer investigation confirmed his suspicions!

The New Chief Executive of Kodak Limited

A FORMER KODAK PARK EMPLOYEE has become the chief executive of Kodak Limited. His name: Walter G. Bent. His new office: chairman of the board of Kodak Limited.

It was on June 12th, 1905, that Walter Bent came to Rochester shortly following his graduation from the chemical-engineering course of the Massachusetts Institute of Technology. He had already earned a distinction—that of being the youngest graduate in M.I.T. history. This academic crown was later wrested from him—by his brother.

The youthful chemical engineer was employed by Mr. Lovejoy, who was then works manager, and he reported for work in the Chemical Laboratory on June 13th. That day was a Tuesday, incidentally, which means that Mr. Bent missed the proverbial Monday-morning start in his new job; and it was a "thirteen," which might cause the superstitious to shudder. But in Mr. Bent's case, well, here's what the records reveal:

In all, he worked at Kodak Park for fourteen years, reaching the position of assistant superintendent



Walter G. Bent, chairman of the board of directors of Kodak Limited and general manager of European companies, spent his first years in the organization as a chemist at Kodak Park, where he worked for fourteen years

of the Sensitized Paper Department. Then, in 1919, he went to England as assistant manager of the Harrow Works. Later, he was appointed manager of the Harrow Works, a

post he held until his appointment to the position of manager of all European factories. Since 1939, he has been deputy chairman of Kodak Limited; and since 1930, general manager of Kodak establishments in Europe, Africa, and in the Far East, with the exception of China, Japan, and the Philippines.

New England born, Mr. Bent still retains, despite his twenty-five years' residence in England, more than a trace of the brisk, pleasant accent of his native Massachusetts. A man of wide interests, he puts gardening high on the list of his recreations, with riding and "just rambling about" with his dogs tying for second place. He's an ardent collector of pewter ware and of ivory and hardstone figurines, picking up some of his pieces in the course of his travels for the Company. In prewar days, his business took him to many parts of Europe and Northern Africa.

KODAK joins his many friends throughout the organization in extending to Kodak Limited's new board chairman our congratulations and good wishes.

Kodak Today and Tomorrow

(Continued from page 11)

of high precision. Traditionally such things have been made by the methods of the instrument maker and the highly skilled optical craftsmen. They could be made in no other way. We didn't know that, so we proceeded to make them by modern methods of quantity production, using a high proportion of workers of little previous experience. The import of this, with reference to our own future, is that many ingenious new methods have been devised so that in the next few years we anticipate nothing less than a young revolution in our optical manufacture.

Perhaps enough has been said to indicate that our difficulty is not a lack of ideas for future development, but rather the reverse. Companywide, we have in front of us a tremendous development program which should be translated in the postwar period into many new and improved products and, by the same token, into a relatively high volume of sales. We of Kodak are fortunate in being in

an industry with such horizons.

I want to bring my remarks to a conclusion by saying something about that intangible but nevertheless very real catalyst of all our efforts which we are pleased to call the Kodak Spirit. But for it, we should not have arrived at our present position. Without it we cannot attain the full measure of success for which we hope in the postwar world.

A Vital Force

What is the Kodak Spirit? I am sure that I know, but I am not sure that I can tell you. I am equally sure, though, that you know too. The Kodak Spirit is one of those intangible, vital, forces that animates men's souls and makes them what they are. It is said that a successful business is but the lengthening shadow of a man. For us that man was George Eastman. He was not very articulate, but by his deeds and his policies he brought the Kodak Spirit into being. It has been cherished and preserved by those who have followed

him throughout our vast organization. That's why our customers say we are good people with whom to do business and that's why Kodak is known as a good place in which to work. The Kodak Spirit means a square deal.

During the war period new faces have appeared in our ranks to a very great number. There will be many more. We should make them feel at home, help them in learning their unfamiliar duties, and show them that the Kodak Spirit means something definite and tangible. There is still a long rocky road ahead of us with a great deal of plain hard work to be done. As some one has aptly said—the war is all over, except the fighting. But eventually we shall go into the postwar period of readjustment. None of this is going to be easy. There will be troubles and disturbing conditions for all of us to cope with. It is to you men and women of the Eastman Kodak Company that this heritage—the Kodak Spirit—is entrusted. Preserve it—for it is priceless.



Kodachrome motion-picture scenes from Tarawa. With a foothold on the beach already gained, Marine reinforcements are seen wading ashore toward a pier.



Three Marines on the attack may be discerned passing a Japanese blockhouse. . . . Action films in 16-mm. Kodachrome by the Signal Corps, the Navy, and the Marine Corps have been enlarged to theater size for nationwide projection.

OFFICIAL U. S. MARINE CORPS PHOTOS

You press the button . . . it does the rest



Kodak's K-24 Aircraft Camera is completely automatic. In reconnaissance, you push a switch button on your "stick" and the camera, in the nose or tail, clicks away. In a bomber, it is in the plane's belly, connected, through complex electrical controls, with the bombsight itself. Its focal plane shutter, power operated, has speeds of 1/50, 1/450, 1/900, and "time." It is

fitted, as are most other aerial cameras, with Kodak aerial lenses, including Kodak Aero Ektars incorporating elements of Kodak's revolutionary new optical glass . . . interchangeable in a range of focal lengths and speeds for different missions. Uses Kodak Aero Films in pre-threaded interchangeable magazines holding 56 feet, enough for 125 pictures, 5 inches square.



K-24 Aircraft Camera,
built by **Kodak,**
"runs its own show"

Bombardier, at left, is hunched over his bombsight which is electrically coupled with the camera, automatically taking pictures every time bombs are released. At right is a gunner.

TANGLING with fighters and flak while making a bombing run . . . or scurrying over enemy country at low altitude on a reconnaissance job . . . the last thing you have time for is "keeping a snapshot record of your trip."

Yet in reconnaissance, that's really what you're out for—and in bombing, you want to bring back "picture information" on the relation of your falling bombs to the target . . . for the camera makes a record of details you couldn't possibly see and remember.

Pretty hopeless, without a camera that "runs its own show" . . . Kodak's K-24 does just that.

On a reconnaissance flight—with no bombs to unload—you press a button for each picture, operating the fixed-position camera by remote control. Or, if you want a series, simply hold the button down, and the camera takes 3 pictures a second.

"Chalking up the score" in the training of bombardier and pilot is another vital phase of the K-24's activity—to know how good you're

getting to be, you consult the photographic evidence.

The K-24 is no hero—the pilot and crew play that role. But it does take a lot off a hero's mind.

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

REMEMBER THE PLOESTI RAID?—how at the cost of more than 500 trained fliers, our Liberators fought through one of the most heavily fortified areas in the world, to drop the bombs that knocked out one-third of Germany's oil supply?—how some of the pilots who missed the target on their first run turned back and flew through solid sheets of flame to try again? A stern example for us at home.

BUY MORE WAR BONDS

Serving human progress through photography