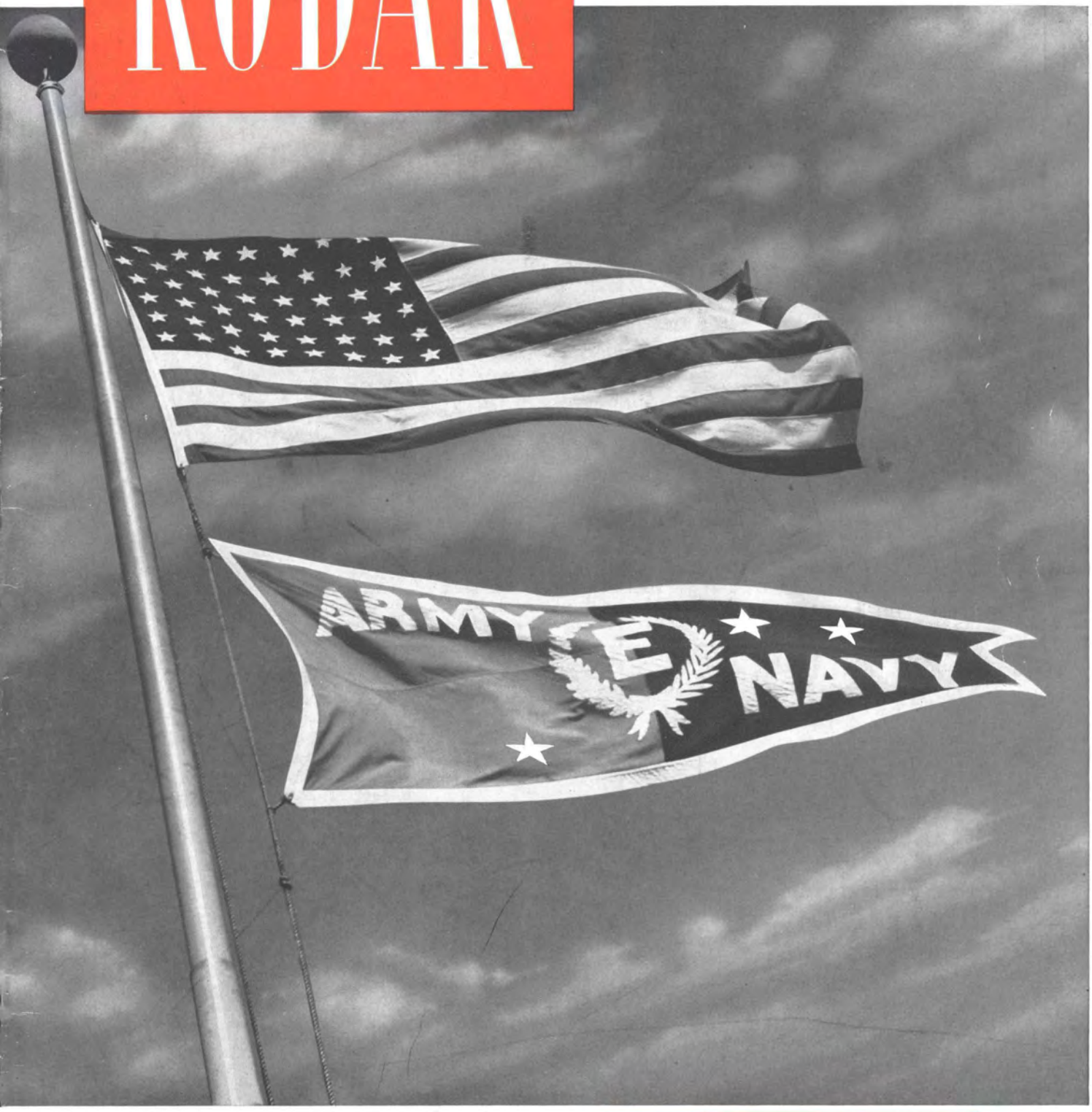
KODAK

A Magazine for Eastman Employees



Our Battle Flags

JULY • 1944

Into action: troops issue from the giant, gaping jaws of an LST to land on a New Britain beach. In the European invasion, as in the Pacific thrusts, the LST's—affectionately known as "ugly ducklings" and "reluctant dragons,"—carried men, tanks, supplies, and even small boats to the Liberation beaches

IN THIS ISSUE

KODAK

VOLUME 23 • JULY 1944 • NUMBER 7

Covering the Air War on All Fronts

Official War Department report summarizes the activities of our combat cameramen in all theaters

ACCOMPLISHMENTS of Army Air Forces motion-picture cameramen, who have sent home vivid pictorial records of air war from fronts all over the world, and who have photographed the inner recesses of complex aerial equipment to speed the training of thousands of new technicians, have been summarized for the first time in a report made public by the War Department.

Hundreds of thousands of feet of film, divided into training subjects and combat reports, have been taken by AAF field units and processed by headquarters detachments. Officers have been able to view at first hand not only their own air battle, but those from combat theaters on the other side of the world. The accomplishment of the AAF in short-term training of expert air and ground crews has been greatly facilitated by specialized training films. Much of the most exciting air-combat footage has been shown to the public through the major newsreels, although the predominant percentage is for military uses only.

Official U.S. Army Air Forces Photograph

Tied in by a cord around his waist, the commanding officer of a USAAF overseas camera unit is seen in position to shoot motion pictures from the catwalk of a B-24 Liberator bomber. The camera is suspended by three rubber cords attached to the top of the plane, and by pressing down on these cords, he can keep the camera taut and "pan" and tilt it at will, without vibration

In Prewar Days

Prior to Pearl Harbor, Air Forces motion-picture activities were confined to a technical unit of the Matériel Command, operating out of Wright Field, Dayton, Ohio. Training and record films were lumped with mapping, reconnaissance, and other technical functions. Expansion occurred in 1942 with the acquisition of the old Vitagraph Studios in Hollywood, California, for the purpose of turning out basic-training films. Due to difficulty in obtaining equipment, the unit took over the fully equipped Hal Roach Studios in Culver City, California, where it is still operating.

In October, 1942, the first overseas photography was undertaken by a small special unit sent to Latin America. The first actual combat units were activated at the end of the same year and assigned to the 5th, 9th, and 12th Air Forces.

During late 1942 and early 1943, AAF motion-picture activities, in the growing stage, were complicated by

Official U.S. Army Air Forces Photograph

A typical motion-picture cameraman of the U.S. Army Air Forces is seen here in the "bubble" in the tail of a B-25 Mitchell bomber. These flying photographers must be able to shoot a gun as well as a camera, and many of them have manned machine guns in emergencies on missions

the difficulties of founding a military organization without precedent. Personnel was a tremendous problem. AAF photographic schools, such as that at Lowry Field, Denver, Colorado, were to furnish some cameramen and technicians, but for the most part the Training Unit and the Combat Units were staffed with specially recruited experts.

Since Hollywood was the natural labor pool, original recruiting was handled from an office at the Warner Brothers' lot. After a cadre was formed, personnel headquarters were moved to the production studio at Culver City.

Most of the men recruited in the early days did not need training as cameramen. They did need intensive training, however, as *military* cameramen, especially those who were destined for the combat-camera units. A bivouac was established in the Hollywood hills under field conditions. Special planes at the Lockheed terminal in Burbank, California, were assigned to teach the men the intricacies of shooting in the air. Aerial combat photographers were turned out in record time.

The first Combat Camera Units sent overseas were assigned directly to the Commanding General of the 5th Air Force in the Southwest Pacific, and the 12th in the Mediterranean. Latest to report was the unit assigned to the 7th Air Force in the Central Pacific. In most cases, the units are broken down into a headquarters detachment and a group of teams which are attached to groups and squadrons in the field.

All-Round Men

They're all-round men, these combat photographers. In many cases, they had to start from scratch and construct their own quarters. The 5th Combat Camera Unit, for instance, obtained its own lumber and built its own buildings, with officers and men doing carpenter work side by side. The 13th Unit in the South Pacific found the sun so devastating on delicate equipment that they had to construct special lean-tos to shade practically every ground setup.

Not all the photography made overseas by these men is good photography. Many an historic scene which can never be photographed again has been ruined by the deterioration of emulsion under tropical conditions, when the film has not been properly protected. There's many a heartbreak for the cameraman who must practice his art in the places where much of this war is being fought.

There's heartbreak, too, for the families of many a fighting AAF cameraman. Five photographers of the 8th Air Force alone have been killed on the job as they recorded the air war over Europe. Over Attu, over Burma, and New Guinea, over many a fiery front they have died at their cameras. A lieutenant and a sergeant were killed while filming "Memphis Belle" with the 8th Air Force.

Cameras and Guns

Combat cameramen on bombing missions must be able to man a machine gun in emergencies. They've accounted for a total of three ME's, one F-W, three Zeros and a Jap tanker, together with three other enemy planes probably destroyed. They've earned a total of 70 medals, 2 Silver Stars, 5 DFC's with 2 Oak-Leaf Clusters, 26 Air Medals with 23 Clusters, 4 Purple Hearts, and 8 Presidential Unit Citations.

Newsreel patrons have seen much of the air war over Europe through the work of the unit attached to the 8th Air Force. Special work by this

(*Continued on page 14*)

Tonsil Twisters Are Deep in Turmoil

Which is merely our irreverent way of introducing this story of synthetic organic chemicals at war

M-I-CROOKED LETTER-crooked letter-I-crooked letter-crooked letter-I-humpback letter-humpback letter-I—Mississippi," so you chanted triumphantly as a child. Remember? Well, try your ingenuity on a few of the following and see how you come out.

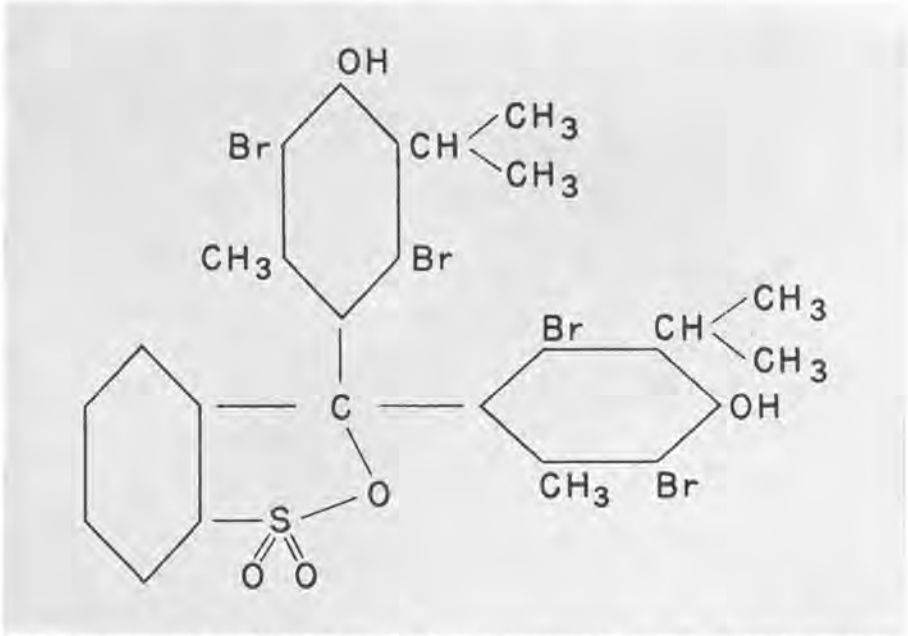
Ethyl Iodophenylundecylate (Iodophenyl-undecylate)

Sodium 2, 6-Dichlorobenzenoneindophenol (Di-chloro-benzenone-indo-phenol)

Para-Amino Dimethylaniline Hydrochloride

Para-Amino Benzoic Acid

How're you doing? Unless you're an organic chemist, or have some knowledge of their patter, we can hear you answer, "Not so well!" But we think you'll still be interested in knowing that these are just a few of the Company's many synthetic organic chemicals that, directly and indirectly, are aiding in the war.



Not a crossword puzzle, but a bit of chemical shorthand for a widely used indicator to test the acidity of solutions. In case you want to try another two-dollar tongue twister, the structural formula above represents Dibromothymolsulfonphthalein, which is a hydrogen-ion indicator

Medical Aid

You're probably familiar with the last one listed, because of the publicity it received at one time as a possible anti-gray-hair factor; and the later announcements, when its value for such use was acknowledged to be very questionable, if not actually disproved. But do you know that one of its greatest uses is in the medical field, in connection with studies of the sulfa drugs?

The chemical listed second from the bottom is widely used by the medical units of our armed forces as an efficient staining agent in the microscopic identification of certain germs.

Kodak has had Government contracts for the supply of both of these chemicals, as well as for numerous others not listed.

Ethyl Iodophenylundecylate, more commonly known as "Pantopaque," is particularly interesting. In a broad sense, it's a Rochester-made product. It was developed at the University of Rochester's School of Medicine and Dentistry, with whom Kodak cooperated by supplying the drug in small quantities for research purposes.

Previous to the war, it was entirely in the experimental stage. A number of well-known neurosurgeons throughout the country were working with it, however, including Dr. R. Glenn Spurling, of Louisville, Kentucky, who, as Lt. Colonel Spurling, now heads up all the Army's neurosurgical work. (Neurosurgeons, as you may know, work on the nerves, brain, and spinal cord.) Many of these doctors, when called into the services, found the Pantopaque they had been working with to be superior to anything then available to them. Through the Surgeon General's office, they requested the Company to make Pantopaque available.

To Fill a Need

Actually, Kodak hadn't planned to enter this particular field at all. We weren't even ready to manufacture the chemical on a commercial scale—but the doctors in the services wanted it, badly. We went to work. In co-operation with the proper authorities, and at the request of both the Army and Navy, we are now supplying it. Up to the present, however, its sale is limited entirely to the services, where it is used extensively in the examination or x-ray visualization of the spinal canal. It shows up the outline of the spinal column, indicating any irregularity in the canal that may have been caused by an injury.

The use of Pantopaque in our military hospitals brought it to the attention of other Allied military services, and as a result, considerable quantities are now being made for use in the Canadian Army, while some goes also to New Zealand and to England—again, strictly for service use.

While a number of our organic chemicals are supplied for medical-analytical work, and for use as diagnostic mediums, chemicals are also supplied to the services for general research work. Some problem comes up. A group of researchers gets an idea. They need to try out something. Frequently, they come to Kodak for some of the chemicals required—and they're apt to order any one of the more than 3,300 organic chemicals the Company puts out. What's more important, they get the chemicals they order—and some of them may be pretty unusual.

Recently, a series of orders has been received for all sorts of organic chemicals, to be shipped to Russia for

(Continued on page 13)

Panorama

PONTOON NOTE

WITH KODAK-MADE pontoons seeing plenty of action these days, it's good to read that pontoons manned by Navy Seabees during the invasion of Kwajalein Island were "lifesavers in getting heavy equipment, ordnance, and material ashore with dispatch." The quotes are from a report by Admiral Alva D. Bernhard, USN, Atoll Commander.

While the Seabee specialists were on Kwajalein, all materials unloaded from LST's traveled over pontoon causeways. Two floating docks constructed from causeways furnished a permanent means of discharging cargo much sooner than would have been possible with any other form of construction.

The Seabees also employed pontoon causeways to improvise a ferry system. With one causeway coupled to an LST as a landing and loading platform, a second was used as a barge. Two bulldozers provided "ferry power."

In a Smoke Shell

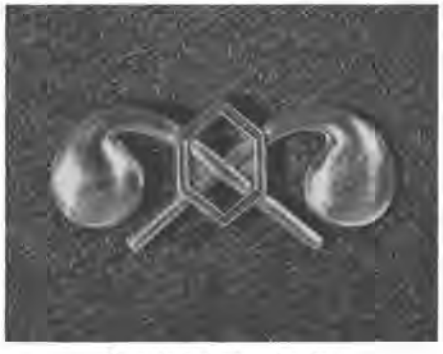
"News in a nutshell" is a time-worn phrase but "news in a smoke shell" is an up-to-the-minute reality along the Italian front, where Army 105-millimeter howitzers are speeding the latest war news to the enemy.

Base-ejection smoke shells are used. The smoke canisters are removed from the interior of each shell and a time fuze with a small charge of black powder replaces the point-detonating fuze normally employed. A shell thus prepared for its news-delivery assignments holds about three hundred neatly rolled news sheets of six- by nine-inch dimension. The fuzes are timed to "go off" over the enemy lines, the black-powder charge pushes the leaflets out the back of the shell to flutter downwards —a veritable rain of newsworthy items from the various war theaters.

Latest reports, from war prisoners, are that the pamphlets are well received by German front-line troops.

During the North African campaign, the smoke-shell technique was used to drop "Surrender" leaflets over enemy territory. Alert Arabs saw in these barrages a golden opportunity, gathered up as many leaflets as they could, and sold them to German soldiers at one franc each, stating that the Germans needed these "passports" to assure them safe passage through the American lines. Large numbers of Germans surrendered, "passports" held aloft for inspection.

Service Symbols



Chemical Warfare Service

Another in our growing list of military insignia—and one that isn't too frequently seen—is that of the Chemical Warfare Service. This was adopted during World War I.

The insignia consists of a benzene ring superimposed in the center of two crossed retorts. (If you'll think back to your high-school chemistry days, you'll remember that in its simplest form a benzene ring or nucleus is a six-sided ring of carbon atoms believed to exist in the aromatic compounds, to which six hydrogen atoms—or other atoms which may replace them—attach themselves. The retorts, which originally got their name from their bent shape, were the vessels into which you put substances to be distilled or decomposed by heat.) Rather nice symbolism here, we're sure you'll agree.

Chemical Warfare, we are told, is concerned with research in and development of chemical warfare, procurement and supply of chemical warfare materials to the Army, training in offensive and defensive procedure, and the organization and operation of special gas troops.

Photographer's Report

The following story was written by Private, First Class, Burt B. Balaban, of Rye, New York, a Marine Corps Combat Photographer:

Pearl Harbor, Territory of Hawaii, March 15—(Delayed)—Last night Truk was really caught off guard—Truk which had been termed invulnerable and untouchable, an ocean stronghold of the Japanese Empire. I wouldn't have believed it if I hadn't seen it. But let me tell the story from the start.

It was early evening when we took off for this first bombing of Truk by land-based Liberator bombers of the Seventh Army Air Force. Once in the air, I immediately began to feel cold. The night air and the high altitude made the trip out seem unbearable. I nearly froze.

About 3:30 in the morning I saw what looked like a city aglow off in the distance. My first thought was that perhaps we had flown to California by mistake. A base in the heart of the Pacific with all its lights on? Impossible! But I was soon informed that the island was Truk.

Factory lights were on. Moving dots of white suggested that cars were moving about on the streets. Could it be possible they didn't know we were directly above them? It certainly was possible, for we dropped 12 bombs and started four large fires before they even began to black out.

At this point, a barrage of antiaircraft fire came up to us. At the briefing meeting, we had been told to expect light ack-ack fire. It wasn't quite that way, for all the vessels in Truk's harbor, plus the shore batteries, began to fire on us. Then they turned the searchlights on us.

I was leaning out the gunner's hatch to photograph the fires below when the suction of the wind pulled on my camera, then on me. It all happened very quickly. Then the

Fifty Years in Photography Is His Record

Kodak Australasia executive is saluted throughout organization

FIFTY YEARS' SERVICE in the photographic industry is the proud record of Frederick E. Manning, managing director and deputy chairman of Kodak Australasia.

In 1894, Mr. Manning, then a young lad fresh out of school, was engaged as shop boy by the firm of Baker and Rouse, a small retail and manufacturing concern in Abbotsford, on the outskirts of Melbourne. Mr. Eastman acquired for the Company a majority interest in the firm, in 1908, and the thriving Abbotsford plant has the distinction of being the only Kodak factory south of the equator engaged in the manufacture of photographic materials.

Through the years, Mr. Manning has seen the Abbotsford plant grow from the single original building to its present size—occupying a seven-and-a-half-acre site on the banks of the River Yarra. The land was originally a pasture, and part of the old homestead still exists and is used as a dining room.

Frederick E. Manning, a managing director and deputy chairman of Kodak Australasia, recently marked his fiftieth year in the photographic industry

Closely associated with the late J. J. Rouse, whose son is the chief managing director of Kodak Australasia, Mr. Manning had an intimate part in the building up of the company. His record, marked by "splendid organizing ability," was fittingly saluted at ceremonies in Sydney and in Melbourne.

"Many congratulatory cables, telegrams, and letters were received from London and Rochester," says a report of the ceremonies, "as well as from Australasian capital cities, conveying greetings from Kodak branches and from officers of photographic associations and prominent commercial organizations. One letter referred to the fact that, fifty years represented almost one third of the life of Australia."

"Rochester Park," Mr. Manning's home in Bundanoon, N.S.W., is noted for its rare trees and shrubs—long a hobby of its owners.

Mr. and Mrs. Manning have a son and a daughter. The son is now on active service overseas as a Flying Officer with the Sunderland flying boats.

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plane banked sharply. I was hardly able to draw myself back in. Truk is one place I don't want to land on alone.

The bombers did a great job on Truk. The Japanese hit only one of the planes.

Wake Island was a different story. When we took off for that bombing, it was in the early morning of March 11. Although the sun was shining, it was still cold up there above 10,000 feet.

This time I saw our target long before we reached it, and the Japs saw us long before we got there. They were well-alerted.

I opened the camera bay, an opening in the floor of the plane, and prepared to take films. There was nothing separating me from Wake Island except thousands of feet of space, straight down. I stood with one foot on either side of this opening and began to make shots as soon as bombs were away. I heard loud explosions around us and felt the plane bouncing around in the air. I didn't know at the time that it was heavy antiaircraft fire exploding near us.

One shell burst within a few feet of us and the concussion knocked the plane higher into the air. When this happened, I lost my footing and started to slip through the hatch. My carbine slithered past me through the opening. Right behind it went my canteen. My gas mask went next. I was lucky. I grabbed a part of the plane structure and stopped my fall.

With the United Nations on the offensive on all fronts, it is increasingly important that the workers of America maintain and intensify their splendid effort to insure that our soldiers go into battle with enough of the finest equipment possible to turn out.

In a prize fight, if you want to score a knockout, you have got to take advantage of the moment when your opponent is groggy. If you ease up, you give him a chance to recuperate and stall for time. A champion strikes hard, fast, and with every ounce of his strength to deliver the knockout blow.

Our fighting men know that the biggest part of their job is ahead. I am certain that every American is ready to give his best efforts to war production in order to help our soldiers, sailors, and airmen smash the enemy at the earliest possible moment. The bigger every war worker's personal effort is now, the safer will be some American fighting man a few months from now as he faces the enemy. With that thought in mind, America cannot fail to come through with a new surge of energy that will carry us through to the day of unconditional surrender by the enemy.

DONALD M. NELSON
Chairman, War Production Board

They Serve with the "Pig Boat Patrol"

Yet another wartime role of the Kodak 35 and Magazine Ciné-Kodak is played beneath the waves

CAMERAS THAT LOOK DOWN and around from the skies over the world's fighting fronts have their "opposite numbers"—cameras that look up and about from the ocean's depths.

The job of these underseas instruments is to record the results when our far-roving submarines release their torpedoes at enemy shipping. Thus, the Navy has been compiling a record on film, both in "still" and movie form, of our hits and sinkings.

The pig-boat-traveling cameras, made by the Company for the Navy, are specially fitted for their task. The two different types of camera, of peacetime fame, have for some time been winning wartime praises for their performance beneath the waves.

They are, with suitable adaptations, the trim, sturdy Kodak 35 for stills and the Magazine Ciné-Kodak for 16-millimeter movies. Both cameras are also on other operational fronts.

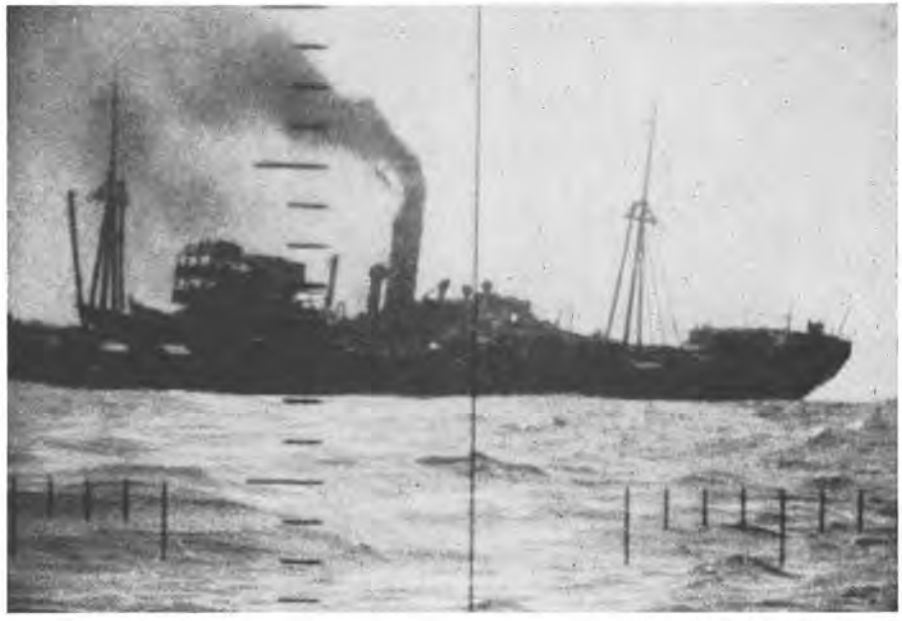
Shooting surface action from the inside of a submarine is a different matter from taking a back-yard snapshot or movie sequence. So, for its undersea job, each camera has been equipped to operate through a 40-foot periscope, with due allowance for the rolling of the narrow craft.

Where Speed Counts

Action's swift in warfare, on sea as in the air. Mere seconds may see a proud ship sent on its shattered way to Davy Jones's locker—seconds of vital action that the camera alone can record in all its vivid reality. Thus, speed of operation was an essential qualification of the still camera that would fill the Navy's needs. Kodak 35 had it. In action, the submarine commander holds the 35 to a matched mount on the periscope eyepiece to time the ship's roll and snap the picture, all within ten seconds. There is no focusing or setting of the diaphragm; any variance in light is compensated for by changing the shutter speed.

Using a portable darkroom outfit and special photographic paper pre-

(Continued on page 13)



Official U.S. Navy Photograph

End of a Japanese transport: a submarine of the U.S. Pacific Fleet gets a periscope picture of one of its victims just before sending her to the bottom. Such photos are invaluable records

Official U.S. Navy Photograph

Ready for an underseas assignment: a Kodak-manufactured periscope camera, in case, is received by Commander F. O. Johnson, USN, from Joseph L. Boon, of the Development Department

Getting the Goods from Here to There

Highlights of this business known as "Traffic" indicate its complex nature, its importance in the war

"Puffing Billy" of Kenilworth Colliery, near Newcastle upon Tyne, was the first successful "iron horse." Put through his ponderous paces one memorable day in 1814, Billy proved the power of steam, won world renown for his inventor, George Stephenson.

Ponderous, too, was that railroad line at Quincy, Massachusetts, over which rolled the granite-bearing cars on their way to the site of the new monument at Bunker Hill. That line, however, marked the initiation of transportation by rail in the United States. Just a little more than a hundred years ago.

A Thrilling Story

The saga of transportation—in which the railroad has played a particularly important, and romantic, part—is as thrilling as any that has ever been penned. Man has shrunk the globe time and again since Stephenson's Puffing Billy made his bow; since the first steamship sailed out of Savannah for Liverpool, on May 22nd, 1819; since the Wright brothers took to the air at Kill Devil Hill, in December, 1903.

And the twentieth century, especially, has witnessed almost incredible achievements in the all-important job of getting the goods from here to there—and on time. By land and sea and air the world's goods move to their destinations. Great merchant ships plow the waves of the seven seas. Swift trains roar over vast networks of track. Giant cargo planes speed from border to border, continent to continent, in a matter of hours. The annihilation of space commenced by the locomotive and steamship, continued by the telegraph, telephone, automobile, airplane, and radio, goes on apace.

In War as in Peace

From a Kodak warehouse to the far corners of the globe—on schedule. Routine stuff, in peacetime. And even now, with all the dislocations and limitations of wartime, maintained to a surprising degree.

It's a smaller world: symbolizing man's "shrinkage" of the globe by his inventions of the various modes of transportation, from the first crude hand-drawn sledge of primitive man to today's swift, sleek motor-powered monarchs of land, sea, and air. Incidentally, *Kodak* would appear to be more than usually global-minded this issue, as demonstrated by cuts on pages 8 and 10

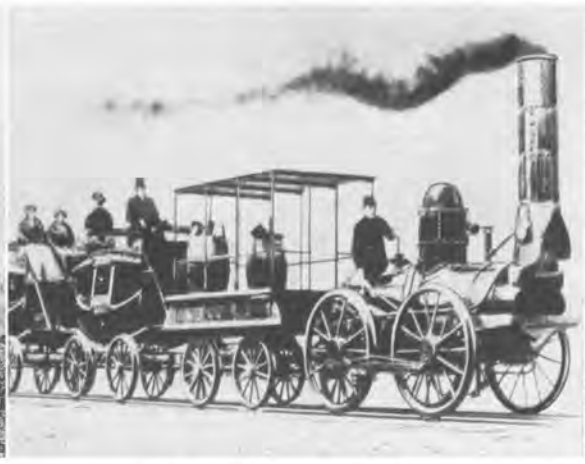
The Traffic Department, with headquarters at the Kodak Office, is the hub of the Company's transportation—of that often quite complex business of getting the goods from here to there, wherever that may be.

A big job, this. A job that demands careful planning, and timing. Now, as never before, when lives may depend on a steady flow of supplies, there must be no unavoidable delay in getting the raw materials of production to the production line, in getting the finished goods to the armed forces.

Big shipments, small shipments, raw stuffs, finished products. Railroad, steamship, barge, motor carrier, parcel post, special messenger, express, air transport. Add them all up for your picture of America's goods on the move, every moment of the day and night. Transpose your picture to schedules and maps, and tariffs and reports, and you have a fair inkling of the routine of the Traffic Department.

It's a job that involves plenty of bookkeeping, this business of Traffic: freight and express statements to be audited, for instance; or claims for shortages and damage to be handled, or route information to be supplied to shippers; or reporting on rates and services; or—

Baltimore and Ohio Railroad



New York Central Railroad

Cunard

Examples of transportation progress through the years are recorded by artist and photographer. From left to right above: the primitive travois of the Indian; th Cunard Lines' "Britannia," a paddle-wheeled mail steamship, in 1856; a stagecoach on the famous overland route in pre-transcontinental-railroad days; and a

since even the best plans sometimes get fouled up—tracing shipments. Then there are voluminous and complex traffic regulations issued by the Interstate Commerce Commission, the Office of Defense Transportation, and other regulating agencies to be observed—these require careful study and analysis.

As purchaser for the Company of a service—transportation—that wartime has rendered very scarce indeed, the Traffic Department's business is to buy it at the lowest legal price commensurate with the type of service required on particular shipments. But this is not enough: the transportation must also be speedy, and it must be reliable. Thus, the routing of freight is a very important function of the department.

Routing, in Traffic men's parlance, means the selection of carriers (railroads, motor carriers, or others) for our goods—and there's a full story in that one job alone. Train, plane, highway, waterway? Selecting the type of carrier is often a very important duty. No less important is deciding on the over-all route of our shipments, for the right route, or routes, may mean considerable savings in freight charges, in time, in the number of handlings between shipping department and destination, among many other things. A record showing the in-transit time of all inbound cars on the various routes is maintained by the department, and those routes which prove to be unduly slow are avoided.

Auditing of all freight bills is an exacting duty of the Traffic Department. Received daily from the railroads and at regular intervals from the truck lines and other freight carriers, the bills are immediately checked. No freight bill is paid until its correctness as to rate and charges is verified and of course none is paid until the shipment it covers has been made or received. In the case of bills where errors are discovered after payment, claims are prepared and submitted to the carriers. Thorough auditing of our transportation costs—as in the case of our actual production costs—may result in quite substantial savings over a period of time.

Nerve center of Kodak's transportation: Part of the general office of the Traffic Department is shown here. "Traffic" is a job that calls for plenty of desk work, that is especially complex in wartime, when demands on the nation's shipping facilities are particularly pressing

Following Up

"Right on its trail" and "right on its tail," are phrases at which the rather precise Traffic Department staff may shudder. They are employed here to describe in a nutshell two of the department's functions that are particularly important in these days of overladen traffic lines and at the same time the necessity of "full speed ahead." The functions are tracking down, or tracing, lost or delayed shipments and speeding forward, or expediting, urgent shipments. Here again, training and experience—and not a little diplomacy—are necessary. Now that congested conditions prevail in the freight

l Lines Union Pacific
ıe DeWitt Clinton, pride and joy of New York Central in 1831;
n early Wright-brothers airplane, being shown to Army, 1909

At right, a merchant ship of the C-3 type, plying between North and South America. A far cry, this swift steamer, from the slow though sturdy, paddle-wheeled "Britannia" of less than ninety years ago. Symbolic of modern streamlined progress, the Capitol Limited is shown crossing the Potomac at historic Harpers Ferry. Monarch of the air, an American Airlines flagship demonstrates air progress since the early Wright-brother days. Photographs by courtesy of: Moore-McCormack Lines, Inc., Baltimore and Ohio Railroad, and American Airlines, Inc.

terminals, the department does not trace shipments unless it is felt that they have had ample time to reach their destination. For the same reason, the department does not make a practice of expediting shipments unless they are extremely urgent.

The Traffic Department, besides handling the transportation of goods, also has the important duty of getting people from here to there. Travel reservations for all business trips out of Rochester establishments of the Company are handled by the department at the rate of some five hundred a month. For extended trips, complete itineraries are arranged by this travel-wise section of Traffic.

Just highlights, these, of the Traffic Department's "desk work," for in any of the functions mentioned—as well as in the work of the Stock, Shipping, and Receiving Departments, which are headed up by the general traffic manager—there is a full story for future issues of KODAK. These highlights, however, do indicate the importance of the role the department plays in the distribution of our goods, whether they leave the plants in freight-car lots or in small units.

With this effective illustration, *The Kodak Salesman* **directed readers' attention to an important Kodak war story: our film production**

THIS SPECIALLY PREPARED COVER ILLUSTRATION of the May-June issue of *The Kodak Salesman*, a Company publication, called readers' attention to our enormous output of film for war purposes, demonstrated why film for civilian use is on a rationed basis.

"This is an air war, a naval war, a mechanized land war, a production war, and in every phase a photographic war," concluded the *Kodak Salesman* story, after a recital of some of the chief applications of photography throughout the different branches of the services, as well as on the home front.

Thousands of Miles of Film

Referring to our output of film for the Army and Navy and for other direct war uses, the story pointed out that this war-production job is measureable in the thousands of miles—specifically, 142,000 miles—a year.

"Can you imagine a roll of film that long?" the *Salesman* asks. "It could encircle the earth five times and still leave thousands of miles to spare. Actually it's enough film to make 2,270,000,000 album-size snapshots. It represents the amount of Kodak Film of all types supplied yearly for the Army and Navy, and for other uses directly connected with the war. . . .

"In this war the camera has full military status. Reconnaissance pictures are made and studied before each move on land or sea. Film is the accurate and trusted recorder of military objectives, war action and results, —on land, at sea, and from the air.

"Through training films, photography helps ready our troops for action, gives them priceless experience in advance.

"Film is the key to V · · · – Mail, quick, sure way to get letters to men at the front and for them to reach home.

"On X-ray Film is an indispensable part of the'medical history' of every soldier or sailor. For the wounded, X-ray Film points the way to treatment, from the clearing stations, through the hospitals, until recovery.

"In the war plants, X-ray Film dissects visually the metal and workmanship of weapons and war machines—to discover imperfections. [For an interesting example, see June KODAK.]

"Plans, specifications, records throughout war industry are condensed, transmitted, and preserved on microfilm. . . ."

Speaking of Film

Such is the interesting story, as told by *The Kodak Salesman*, and highlighted by the above picture, of the strip of Kodak Film that could be wrapped five times around the world. And speaking of film, don't overlook the official report that begins on page 1, summarizing the activities of America's war-movie makers.

George Eastman 1854-1932

Kodak's founder, born ninety years ago this month at Waterville, New York, gave the world a new system of photography, . . . a system that transformed an arduous pursuit, limited by its own handicaps to the few, into a science, an indispensable tool, and a universal pastime, . . . a system that is one of our most powerful weapons in the war.

George Eastman rose to world fame as the builder and guiding genius of a great industry, but he was ever solicitous for the welfare of the men and women of Kodak, and the Company's "square deal" policy is based in large part upon his business principles.

The pioneering spirit and the high ideals that imbued George Eastman remain his noblest memorial, our priceless heritage to cherish and to perpetuate.

Task Force—*Coast Guard Film Tells of Action-Packed Service*

AN AMERICAN INVASION FLEET is steaming into action. Raiders, cutters, troop transports, escorts, supply vessels—hundreds of ships in all—ride the waves towards the enemy shore. Aboard each cutter—that small but sturdy craft of the U.S. Coast Guard—constant vigil is maintained, with keen eyes and ears ever on the alert for the enemy.

Suddenly comes the command, "Action stations!" A cutter tracks down an enemy submarine, fixes the U-boat's position, closes in for the kill. Depth charges are fired, find their underseas target. . . .

The great convoy steams on towards the enemy's shore line.

Once again, "Action stations!" Dots on the horizon this time. Twenty of them, just tiny specks, hardly visible to the naked eye. But each dot's an enemy plane, and from the decks of U.S. ships planes roar into the sky to engage them. Soon the sky is a place of fury, of death-spitting planes and the lazy-looking smoke puffs of antiaircraft shells from the ships' guns far below. . . .

The tropic night falls swiftly and the Navy's big guns speak, softening up the shore. . . .

Then, in the first gray hours of the dawn, the invasion is on. Silently, soldiers of the landing party file from their ships. Swiftly the men of the Coast Guard (in time of war operating as a part of the Navy) shuttle them ashore in shallow landing craft.

Official Coast Guard Photograph

Behind the cloud of smoke and water is a German U-boat, brought to the surface by a depth charge tossed from the U.S. Coast Guard Cutter, *Spencer*, on mid-Atlantic convoy duty

Official Coast Guard Photograph

Effectiveness of the fire of the *Spencer*'s gunners shows in this close-up of the U-boat during brisk battle that resulted in submarine's doom. Ships of convoy lined the horizon as raider perished

That, in brief, is the theme of the motion picture, "Task Force," which was among the films screened recently for Rochester employees. The film, produced and edited by personnel of the motion-picture unit of the U.S. Coast Guard, is an effective documentary record of the Coast Guard's heroic participation in this war.

A Kodachrome Record

Filmed in 16-millimeter Kodachrome, in various war zones, "Task Force" has been released, in its original story and picture form, for professional screening in 35-millimeter Technicolor. A thrilling sequence, the sinking of a German submarine by the cutter, *Spencer*, was shot by Captain Harold Berdine, USCG, captain of the cutter and an amateur camera fan. Some of the landing scenes were filmed at Salerno and the Solomon Islands.

For those of us who have envisioned the operations of the Coast Guard as a mere matter of monotonous, if very necessary, shore patrol, "Task Force," in all the realism of full natural color,

furnishes a stirring and effective correction. It is a worthy salute to the far-roving men and ships of the USCG, not least among whom are the seemingly nerveless cameramen who shot the combat sequences with their Ciné-Kodak Specials and Magazine Ciné-Kodaks. Several of the cameramen, the Coast Guard reveals, were Kodak employees before entering the service.

They Serve

(Continued from page 6)

pared by Kodak, the commander may see his stills a few minutes after the 35's shutter has been snapped.

Similarly adapted for submarine service, the Magazine Ciné-Kodak is mounted on a plate which is snapped into place on the periscope. The "built-in" dependability of this Kodak product makes it unusually well qualified for its underseas assignment. The Ciné-Kodak has proved itself particularly useful for photographing shore lines, a topographical feature in which submarine commanders are known to have more than a passing interest.

Picture-taking through a periscope, prior to the advent of submarine cameras, was very much a hit-or-miss proposition. You held a camera against the eyepiece, snapped the shutter, and—metaphorically, at least—kept your fingers crossed. With the reliable Kodak 35 and the Magazine Ciné-Kodak on the job, hit-or-miss is "out." These specially fitted instruments afford as steady and accurate a view of surface happenings as does the periscope itself.

Tonsil Twisters

(Continued from page 3)

rehabilitation work in the reconstruction and reoutfitting of chemical research laboratories in some of the destroyed areas.

Some of our chemicals are sold directly to contractors, for use in the production of war materials. We'll save you from more of the jaw-breaking names. For security and other reasons, little can be said either about the chemicals themselves or the specific manner in which they are being used; but it's interesting to know that Kodak supplies a certain chemical used in the preparation of chemical fuzes. Another, a specially purified chemical, is used in a particular product put out by several large companies which, under wartime conditions, is used in the electrical equipment of airplanes.

Tanks, Too

Another chemical—one that is not available commercially—is used in connection with the construction of tanks and planes. It is vital to the lives of the men using this equipment.

Still another finds extensive use by our British allies. One of the requirements of their services is that woolens, felts, and so on, shall be treated with a substance that will prevent mildew. We make a chemical which is used for this purpose.

Sounds like "black magic," doesn't it?

Many of our organic chemicals find their way into civilian use as well—and some of the uses are not only fascinating, but almost unbelievable—but we'll save that for a later story. This time, Kodak's organic chemicals have gone to war.

English Pastoral, 1944 Style

Photo by U.S. Army Signal Corps

Fruit of the fields: rows of high-explosive bombs line this peaceful English country lane awaiting their turn to blast an objective along the road to Berlin

Between the Eyes

The following story comes to us from India, land of mystery:

When tigers began to ravage their village in India, the terror-stricken natives appealed to an English colonel for help.

The colonel was famed as a crack shot. And he had a method. He'd tie a goat to the foot of a tree at dusk, make himself comfortable on a platform above, and wait for his prey. When the tigers came for the goat, the colonel would shoot at the flash of their eyes. In the morning, as sure as shooting, the tigers would lie dead on the ground, drilled straight between the eyes.

The colonel followed this procedure the first night; but although he fired several times, when morning came the goat was gone and there were no dead tigers.

Three nights running, the colonel had the same poor luck. On the fourth night, instead of firing at the flashing eyes of the tigers, he turned a powerful searchlight on them. To his amazement, he saw six tigers advancing in pairs, each with one eye closed. (Astute beggars, tigers, what!)

After the Guns Have Spoken

Photo by U.S. Army Signal Corps

Shell heap extraordinary: the guns have spoken and thousands of ammunition cases make a huge salvage heap at Nettuno, while a smoke screen hides activities from German eyes

Covering the Air

(Continued from page 2)

unit includes the gunnery film directed by Major Clark Gable, of Encino, California. The ex-M-G-M cameraman who did most of the shooting on that assignment has received the Air Medal.

In the South Pacific, the combat-camera unit of the 13th Air Force shot more than 150,000 feet of film in the battle of the Northern Solomons and the Bougainville campaign.

Operations of the Combat Camera Units can hardly be classified, they're so varied. The 12th Unit ground away for 24 hours filling every detail of a record-breaking engineering job, in which a landing field was completely constructed in that time in Tunisia. The resulting product proved invaluable in giving tips to air force engineer groups elsewhere.

At Oro Bay in the South Pacific a combat camera team filmed a delicate operation on a wounded gunner.

All the footage of the Combat Camera Units is rushed by the first available transport plane to the 1st Army Air Forces Combat Film Detachment in New York. Here expert writers and cutters, sound and music editors process the material and assemble it into usable finished products, a busy operation when it is realized that from one combat theater alone 100,000 feet of film was received in one month. In a year 750,000 feet—many hours of looking and listening—passes through.

Officers of the detachment are combination producer-writers. They comb intelligence reports and interview returned veterans to obtain background which will give sequence to the combat film. Assisted by enlisted-men technicians and a small civilian staff, they add commentary and sound and maps and charts which will make each finished film an authentic—and—militarily usable—whole.

Air and Ground

Roughly half the product of Combat Camera Units is actual combat footage; the remainder is of ground operations. Air Force personnel view the classified combat material first in a quickly but carefully edited *Weekly Digest*. Department chiefs have access to the more complete footage on subjects which concern them. Units in the field, of course, see their own footage plus that of other Air Forces which may contain valuable lessons.

The reels which are not combat are chiefly technical—modifications in aircraft, improvisations in the field, air evacuation and other medical procedures, parachute supply, airport construction. They represent the primary function and are called AAF Film Reports. Filming of entertainment stars at remote outposts is an example of miscellaneous production for morale purposes. Newsreels are provided with timely unclassified subjects through the War Department Bureau of Public Relations. The Joint Chiefs of Staff, the White House, the Air Staff, the Office of Education, the Petroleum Administrator for War, and other Government agencies have access to AAF footage for special-purpose films.

Training Films

Visual education in a hurry for thousands of pilots and navigators, armorers and mechanics is the function of the 1st Motion Picture Unit at Culver City, training branch of AAF Motion Picture Services. Culver City has turned the flickering screen from a medium of entertainment into a forceful introduction to the grim realities of battle. In the safety and calm of the projection room, hundreds of thousands of youths have learned speedily and efficiently the complexities of their assignment.

Sixty-three training films have been completed by the unit, on subjects ranging from "Interrogation of Prisoners" to the newest animated cartoon instruction for gunners, "Position Firing." Twenty-three more have been handled partially. Fifteen are in process of production, and a backlog of over 100 subjects waits for action.

The function of military motion pictures differs for an army preparing for combat, an army in limited combat, and an army in total combat. The AAF has completed stages one and two and is in the midst of stage three. Perfecting men and machines to a finer edge, on the basis of films taken in the crucible of combat performance, is the continuing, vital mission of the movies for the AAF.

✪ *Kodak Employees in the Armed Forces* ✪

Pfc. R. E. Eberhardt, Hawk-Eye

Pfc. G. C. Jones, Camera Works

Pvt. M. V. Brouwer, Kodak Office

Corp. Philip L. Klem, Kodak Park

GM 3/c John E. Baur, Kodak Park

Pvt. A. G. Vermeire, Kodak Park

S 2/c H. W. Platt, Camera Works

Lt. Comdr. C. L. Resler, Pittsburgh

Pvt. Roy E. Huff, Camera Works

Pvt. L. C. Grusehow, Kodak Park

Pvt. J. W. Hughes, Camera Works

Pvt. D. Provenzano, Hawk-Eye

S 2/c R. Kieliszak, Camera Works

HA 1/c H. P. Tillack, Kodak Park

Sgt. Harold E. Rose, Kodak Park

Corp. W. Reilich, Camera Works

✪ *Kodak Employees in the Armed Forces* ✪

Pfc. Thomas A. Nicol, Kodak Office

Lt. G. Schottmiller, Kodak Park

Pvt. Dorothy Francis, Camera Works

Lt. Stuart Wright, Chicago Store

S/Sgt. Robert E. Duff, Kodak Park

Capt. A. W. Coapman, Kodak Park

Sgt. Lewis J. Barnes, Kodak Park

Sgt. Walter E. Andress, Kodak Park

Pfc. R. M. Ralph, Camera Works

S 2/c William E. Snyder, Hawk-Eye

Pvt. W. T. Nixon, Camera Works

Corp. C. A. Madsen, Kodak Park

Corp. J. G. Crimmens, Camera Works

Pvt. Willard D. Baker, Hawk-Eye

Pfc. John P. Donoghue, Kodak Park

QM1/c D. W. Sweeney, Camera Works

✪ *Kodak Employees in the Armed Forces* ✪

Lt. R. Robinson, Camera Works

Pfc. Lois M. VanGeison, Kodak Park

Pvt. Marvin Tjornhorn, Minneapolis

Capt. J. P. Reidenbach, Hawk-Eye

Corp. M. J. Doyle, Kodak Office

A/C Frank A. Comstock, Hawk-Eye

S/Sgt. T. S. Woodard, Kodak Park

Pvt. David Dolin, Camera Works

S 2/c G. J. Spillman, Kodak Park

Corp. T. J. Spillman, Kodak Park

SOM 3/c E. Mambretti, Camera Wks.

A/C William Stewart, Kodak Park

Lt. Russell H. Ferrey, Kodak Park

Lt. Jerome B. Elman, Kodak Park

AOM 3/c W. J. Weaver, Camera Works

Lt. Melvin J. Hamann, Kodak Park

Landing Signal Officer on Flat Top. Official U. S. Navy Photograph.

This page is "Kodak" in more ways than one

To PRINT THIS FULL-COLOR KODACHROME PHOTOGRAPH, four separate printing plates are made *photographically*—each a complete record of one of the basic colors. The colors are then printed in succession, one over the other, as shown above.

FROM the snapping of the picture itself on Kodak Film . . . through a succession of photographic processes (for which Kodak supplies materials) . . . the illustration finally reaches the printed page.

This procedure is followed in the making of thousands of magazine and newspaper illustrations—editorial as well as advertising. They are produced through photoengraving, photolithography, or photogravure. As you see, "photo" is common to all.

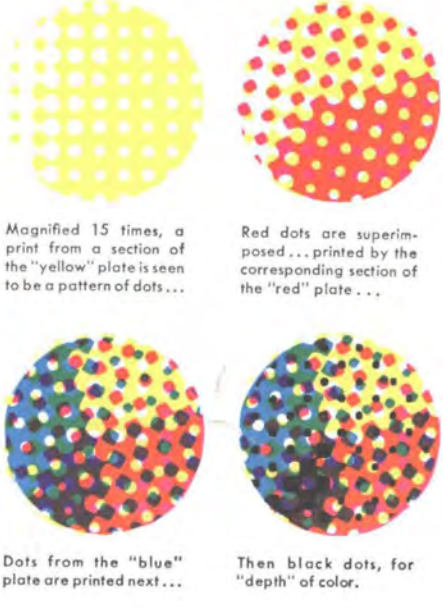
In a sense, therefore, almost any page might be called a "Kodak page"—whether it happens to be a Kodak advertisement or not.

So, as you go through your magazines and newspapers, it is *photography* which reports to you the war and other news . . . adding to your knowledge and entertaining you a dozen times a day.

One important reason why magazines and newspapers are so "readable" and "lookable" is that Kodak has long been a leader in developing materials for improved reproductions.

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

REMEMBER THE U.S.S. ATLANTA? . . . How in the fighting near Guadalcanal—with one-third of her crew wounded or slain—she fought on until the enemy had been routed?—how, after sinking a destroyer—though her engine-room was flooded, her top-side a shambles—she went after a cruiser and sank that too, before her battered hulk slid under the waves?—A stern example for us at home. BUY MORE WAR BONDS.



Magnified 15 times, a print from a section of the "yellow" plate is seen to be a pattern of dots . . .

Red dots are superimposed . . . printed by the corresponding section of the "red" plate . . .

Dots from the "blue" plate are printed next . . .

Then black dots, for "depth" of color.

Serving human progress through photography

PRINTED IN U.S.A. AT KODAK PARK