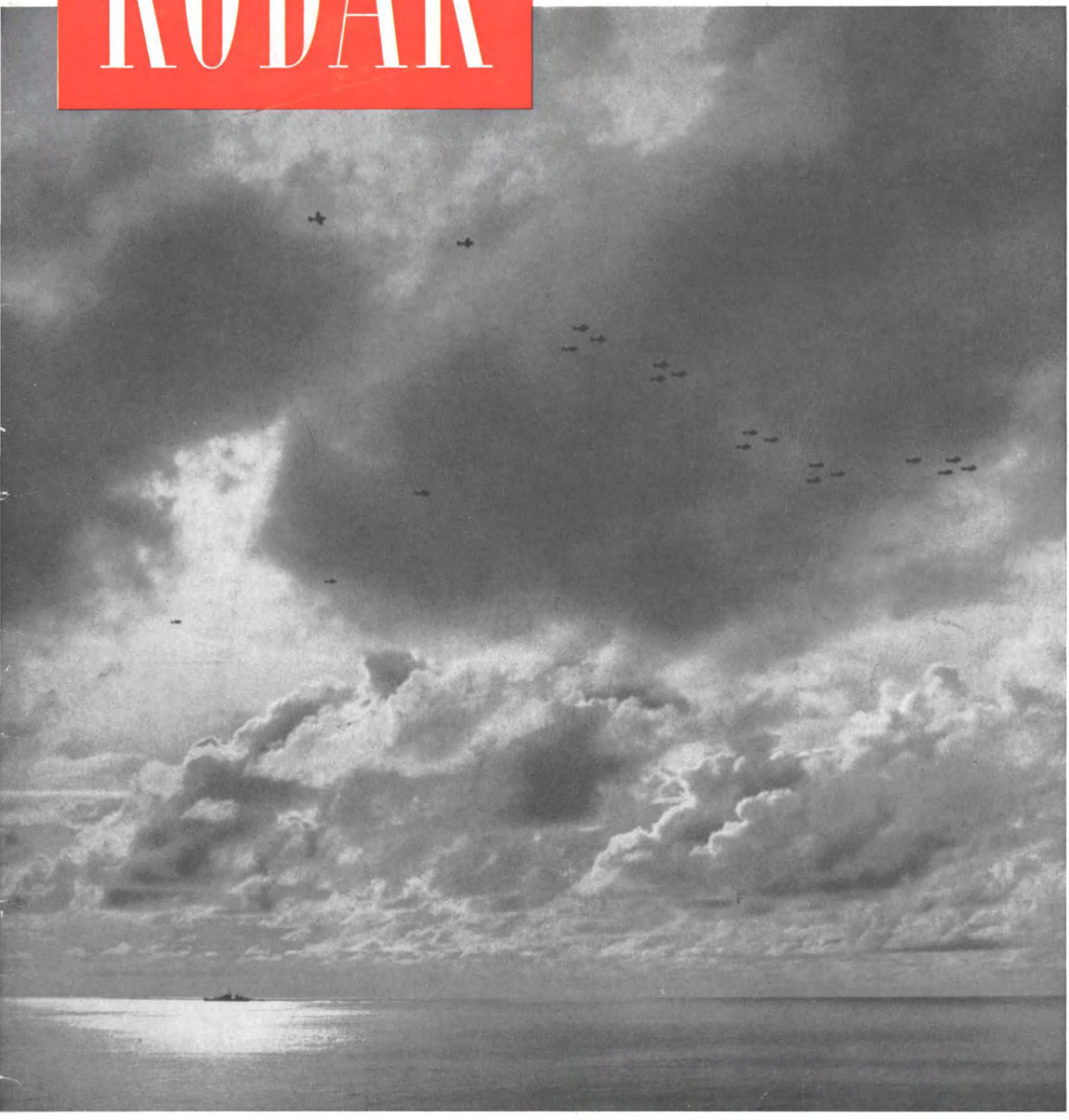
KODAK

A Magazine for Eastman Employees



MAY ★ 1944

Not monsters from Mars, but Flying Fortresses of the 8th Air Force leaving their vapor trails in the substratosphere. The curved trails, leading upward, were made by the fighters accompanying the B-17's on the raid. Deadly machine guns, bristling from the leading Fortresses, are visible against the light reflected from the trails

IN THIS ISSUE

Front-Cover Picture: Escorted by fighter planes, bombers roar out from the USS *Saratoga* for a raid on Rabaul, the preliminary to an attack that rendered the naval base useless to the enemy as a major naval stronghold

KODAK VOLUME 23 • MAY 1944 • NUMBER 5

Some Highlights of Wartime Britain

Donald McMaster, director of Kodak Limited and manager of the Harrow Works, tells here how the people of Britain have maintained "chins up" through long years of war, taken restrictions in stride

WHEN, on September 3rd, 1939, Britain accepted the challenge of A. Hitler & Co., she had but a rudimentary army and a small air force. Her war industry was still in the blueprint stage. She was, in a word, unprepared.

Hitler, in contrast, had been preparing for war for years. Germany's reserves of war materials were vast—since as far back as 1935, her armament factories had been working 24 hours a day. Her dreaded Stukas blackened the skies of Europe.

Britain lost most of her armored equipment in France. More tragic still, she lost her European allies.

Germany fattened still further on her conquests, acquired untold booty to increase her already mountainous stock piles. And just a few miles of sea lay between her and Britain.

But Britain fought on. Despite blitz and blackout, she fought, until she'd outfought Hitler's best—and that was plenty good—on both fighting front and production front.

Grim Days

"We received a terrific battering after the fall of France," relates Don McMaster, manager of the Harrow Works. "From August of 1940 to the summer of 1941 one out of every five houses in Britain was damaged. But despite this, production went forward at an immense rate. Just about every available building in the country was utilized for war work and there was complete mobilization of the people."

Highlights of the British home front, as described by Mr. McMaster:

All men, from 18 to 65, and all women, from 18 to 55, are registered under the national manpower draft.

Every able-bodied man in the country between the ages of 18 and 41 is in the armed forces, unless exempted for essential war work.

Special War Duty

In addition to his daily work, every able-bodied man in Britain carries out some essential war duty, up to 48 hours a month, or more.

For purposes of placement, the women are listed under two headings: mobile and immobile. Mobile women are those—usually single—who may be sent from their homes to jobs in any part of the country. Immobile women, those whose removal would disrupt family life, are given work in their neighborhood.

Snapped at the Food Production Show last fall, admiring visitors inspect some of the exhibits in the Horticultural Section of the Kodak Recreation Society at Harrow

There are four main types of service for women: the uniformed forces, including civil defense and police; nursing and its allied services; land workers; and industry. The last is the largest service.

Nine out of ten single women between the ages of 18 and 55 are in uniformed forces, munition factories, or essential war industry. One out of every four married women is in war industry.

Women are trained for industrial work at government expense at 25 training centers and 150 technical colleges, the courses lasting from 5 weeks to 3 months.

The Women Take Over

You'll find women taking the place of milkmen, mailmen, meter readers, truck drivers, porters. In London, 7,000 women are conductors. More than 105,000 women are working on the railroads.

While restrictions, many of them irksome after nearly five years in force, abound in Britain, there's very little grumbling on the part of the average citizen. He'll tell you that these restrictions are there simply because he and his fellow citizens demanded them.

Working hours are long. Leisure hours very short. Coupons and ration books are more important than money. For example: The full clothing-ration allowance for adults is 48 coupons a year, but a man's suit takes 26 coupons; a shirt and tie, 6 coupons; undershirt and shorts, 10 coupons; pair of woolen socks, 3 coupons. A woman's woolen dress, 11 coupons; cotton dress, 7 coupons; pair of shoes, 5 coupons; pair of artificial silk stockings, 3 coupons.

There is a tax of 100 per cent on luxury goods.

"So you see things have been rather tightened up," Mr. McMaster says with a rueful smile. "I can assure you, however, that the people of Britain have, from the very beginning, done a truly remarkable job despite blitz and blackout and all the other hazards and inconveniences. But facilities have been strained to the utmost and we, over there, have had to look more and more to America —to the American people and to American industry—for aid of many kinds."

Harrow Carries On

Describing wartime conditions at the Harrow Works, Mr. McMaster sums them up in typically terse fashion as, "rather strenuous." "With about sixteen hundred employees in active service," he says, "there are only the very young and the older folk left to carry on."

(A detailed account of Harrow in wartime appeared in November, 1943, KODAK.)

Mr. McMaster is not a little proud of Harrow's giant Victory Garden. "Our twenty-two acres provide a big share of the food used in the canteens, thanks to the wholehearted efforts of our nine land girls and some of our retired employees. Every morning, the head gardener sends over fresh vegetables to the canteen supervisors, and we even have green corn and pumpkins. We also have six hives of bees, yielding about 40 pounds of honey a hive. We have our own rabbits, too."

A fruit lover, Mr. McMaster saw his "first banana in four years," when he arrived in Rochester. "We've missed our fruits a great deal," he says, "particularly citrus fruits. You know, too, how important fruits are for children. Well, there are thousands of young British children who have never seen an orange or a banana. That's one of the minor deprivations they have experienced, however."

Telling It to the Judge

A certain judge in California was trying a case wherein a woman sought to recover a diamond ring she had, in a fond moment, given to a gentleman friend.

"When you gave this ring, didn't you think him the finest fellow in the world?" asked the judge.

The woman blushed, hesitated, and finally admitted that she did.

"Now be honest," continued the judge, "didn't you think him the handsomest man you had ever known?"

The woman blushed again, then leaned over and whispered something to the judge. Presently he instructed the jury to find for her.

Of course, everyone wondered what it was that the plaintiff had whispered to the judge but His Honor wouldn't tell. Later, however, the court stenographer let out the secret. The woman had whispered, "Not half so handsome as you are, judge."

There's Something about a Snapshot!

Picture taking is a serious matter when one has just turned two—and is caught with Mother's very best hat!

"Sunday in the Park"—and recorded for all to see is the generous number of self-appointed chaperones to this little tete-a-tete

Right: So those were the "good old days"! No "pencil-slim" silhouettes here. At any rate, there was no shortage of material

Above: Swings are what you make them—or should we say, "What made you?" It took a lot of muscle merely to "hang on"—to say nothing of the footwork required to keep going. Left: Um-m-m . . . let's see. An interested spectator checks up on a picture whose roundness proclaims it to be a product of one of the first Kodaks—probably taken about 1890. Right: Perhaps you had a "gym suit" like this yourself back in the school-day period? The picture isn't as old as it may look

Panorama

GEORGE DID IT!

WHETHER SOMEONE SAID, "Let George do it," is not recorded, but George certainly did it—and how!

On June 6th, 1844, George Williams, a brisk young draper's clerk in London, met with eleven companions and founded the Young Men's Christian Association. Seven years later, the movement had spread to this continent, "Y's" being opened in Montreal and Boston.

And today, Y's are numbered by thousands—ten thousand, in fact—and their members by millions (United States and Canada alone: 1,400 Y's, more than 2,500,000 participants). Yes, the movement that George started reaches into 68 different countries on every continent, presenting a well-rounded program of recreational, educational, social, and religious activities.

The YMCA has pioneered in many worthy activities and enterprises. Among them: the first organized social work for young men in American cities; summer camping for boys; the first national swimming and life-saving campaign; and the introduction of two of our most popular indoor sports, basketball and volleyball.

In the war emergency, too, the Y's are well to the fore in their field, as evidenced by their work in the USO (of which they are a founder-organization) and by their war-prisoner's aid, a service with headquarters in Geneva, Switzerland, providing recreational, educational, and religious activities in prisoner-of-war camps. The YMCA has aided millions of civilian refugees in Europe and the Far East, providing refugee centers, food, shelter, clothing, and medical supplies in co-operation with other agencies. It has also provided leadership for the rehabilitation of bombed and invaded cities.

Truly, the Young Men's Christian Association next month enters its second century of service with a remarkable record of accomplishment in every part of the world.

To repeat: George certainly did it!

Service Symbols

The "line" star

The gold star, frequently seen above one or more gold stripes, on the sleeves, and on shoulder marks of naval personnel, indicates officers of the "line." (The star occupies the same position on the uniform as does the staff officer's corps device, or the Coast Guard shield.)

The number and width of stripes indicate the rank of the wearer. A single stripe, as shown above, indicates an Ensign. One and one half stripes—a standard stripe plus a narrow stripe—indicate a Lieutenant, junior grade; two stripes, a full Lieutenant; two and one half stripes, a Lieutenant Commander; three, a Commander; and four, a Captain. A very wide, solid stripe with one narrow stripe above indicates a Rear Admiral; and a wide stripe with two narrow stripes above, a Vice Admiral—though we hardly need go into this, for Admirals of any kind are few and far between.

A line officer is qualified for command at sea of a specified vessel or of a class of vessels—and, in matters pertaining to the ship's operation, he outranks a staff officer.

Reconnaissance

The following story by War Correspondent Cyrus L. Sulzberger is reprinted by kind permission of the editors of *The New York Times:*

Marauders bombed Florence . . . because aerial reconnaissance had disclosed a vast amount of German military traffic on the rail network centered in that famous city. Army and Air Force headquarters decided that it must be stopped. Before the bomber pilots took off they were carefully briefed on a long list of buildings that must not be damaged at all costs. All church sites were marked with crosses and such buildings as the Archæological Museum, the Baptistry of the Campanile and the Pitti, Medici, Uffizzi and Vecchio palaces were carefully outlined. All this was done by a photographic reconnaissance unit.

Just as the eye of the Army is the Air Force, the eye of the Air Force is the reconnaissance plane. The eyes of the Mediterranean Allied Air Force are supercharged, immensely fast Lightnings and Mosquitoes under Col. Karl L. Polifka, commanding a photographic reconnaissance wing in Italy. His pilot-cameramen have been ferreting out the enemy's innermost secrets from the Balkans and France to Poland, taking pictures of them and accurately mapping the targets for remorseless pounding by British and American bombers.

Colonel Polifka's unit includes some extremely unusual and daring characters. They rely on the speed of their planes to get away with their snooping and some of them fly without guns. When the pilots were first assigned to this work, they were generally disappointed that they could not attack enemy aircraft. But soon they realized that the camera was a potent weapon for exposing the Germans' most secret intentions.

A member of this group, until recently, was the French author and flier, Antoine de St. Exupery, who went on several missions. But he is in the late forties and too old for high-speed prying into the stratosphere. He is now grounded. Two South Africans, flying a Mosquito in clouded weather above Poland, went as far as Sweden to find where they were and returned to Italy with just enough gas for a cigarette lighter.

The Camera Is a Weapon

General Henry H. Arnold, commanding general of the U.S. Army Air Forces

PEOPLE TODAY are inclined to regard the airplane purely as an instrument to carry blockbusters or as a highly mobile platform on which to mount machine guns or cannon. Those are prime functions, it's true, but we should not let them obscure the many other functions of our air arm—functions which are equally essential and without which successful conduct of this war would hardly be possible. Often, a camera mounted on a P-38 has proved of far greater importance than a P-38 with its normal complement of guns.

It is a clearly defined responsibility of the Army Air Forces to provide the necessary aeronautical charts for military operations. Early in 1941, it became apparent that existing map information was entirely inadequate to compile charts covering the principal transport airlanes of the Western Hemisphere. This was a year and a half after Germany attacked Poland. Expansion of the air arm was necessary, but we were suddenly brought face to face with the fact that our own country, as well as our neighbors to the north and south, did not have map coverage suitable for pilotage charts at a scale of one inch to 16 miles.

The Air Forces' first move was to plan the charting of Alaska, and this assignment was handed to the First Photographic Squadron, under Colonel Kaye. Some experimental work in this area had been conducted by Colonel Fitzgerald and members of the Geological Survey.

Their big problem was one of method and equipment. Tremendous areas had to be mapped in very short order—but how? Under such pressure, they developed, by early spring of 1941, a suitable camera installation and photographic compilation method. It was the start of the trimetrogon system. By the time the Japs struck at Pearl Harbor, more than 500,000 square miles had been photographed and charts were being prepared from these photographs by the trimetrogon method.

Actual entry into war created the same urgent needs in this field as in all others, the task of providing the air arm with aeronautical charts increased one hundredfold. Less than one fifth of the land area of the world was mapped in sufficient detail to make the small-scale charts that we required if we were to avoid unnecessary loss of our military aircraft.

Under the impetus of war, photographic aviation swung into action under the direction of Colonel Fitzgerald, and with Colonels Kaye and Cullen, trimetrogon compilation units were enlarged, trained, and equipped, and sent on their assignment as rapidly as possible. An area larger than the entire United States has now been photographed and nearly 1,000 photogrammetrists are compiling these photographs into charts and maps. The Army Air Forces Aeronautical Chart Service is now publishing more than 4,000 different charts and distributing a total of 33 million copies yearly to the Air Force units engaged in training, transport, and combat.

Today, our air arm is the greatest in the world—and growing larger—while the German Luftwaffe can no longer maintain her offensive strength but has, in effect, become a defensive force. As such, however, it is still powerful.

Victory will come easily neither in Europe nor in Asia. It will require all the effort and ingenuity of which we are capable. The magnificent effort of our men in combat must be matched by those who supply them with the instruments of battle—the airplanes, the guns, and the maps.

Classroom Films *The Story of a Kodak-pioneered Project*

Envisioned by George Eastman, these teaching aids are now firmly established in many countries

KODAK'S RECENT DONATION of some three hundred 16-millimeter, "silent" classroom films to the University of Chicago marked the completion of the pioneer stage of a significant educational project that was started more than fifteen years ago.

In future, the films will be distributed through Encyclopædia Britannica Films, Inc.—an affiliate of the university, and related to the encyclopædia as well—which also distributes "sound" motion pictures of the recently acquired Erpi Classroom Films.

In making public the decision to donate the films to the university, the Company expressed its gratification that its "pioneering efforts in the field of classroom motion pictures are culminating in the present development. . . . It can now quite safely be said that the place of motion pictures in the field of visual education is firmly established . . . and the Eastman Kodak Company can bow out."

Many employees readily recalled with the announcement of the transfer that, "As early as 1923, Mr. Eastman envisioned the use of motion pictures produced specifically for classroom instruction, but found little prospect at that time that any organization with sufficient resources would enter upon a program to produce films of this type."

That being the case, Mr. Eastman considered whether the Company might logically undertake the project. With characteristic thoroughness, he decided that experiments to determine the value of motion pictures in classroom teaching should be conducted, and results ascertained, before a final decision to enter the field was reached.

Dr. Ben D. Wood, of Columbia University, and Dr. Frank N. Freeman, of the University of Chicago—both outstanding in the field of educational tests and measurements—were selected to head the experiment, which was sponsored by the Company, with the sanction of a committee of the National Education Association.

Nation-wide Tests

Twelve cities were chosen, scattered from New York to San Diego, and from north to south. Educators in each of the cities gave unstinting co-operation. Approximately 11,000 public-school children participated in the initial ten-week test period conducted in the study of geography and of general science.

Children and teachers selected were of as nearly equal ability and background as possible. They were divided into two groups: "control" classes, taught in the usual way *without* the aid of films; and "experimental" classes, taught *with* the aid of films.

Safety Films Used

Sixteen-millimeter "safety" films were used so that they could be projected right in the classrooms without the use of projection booths, and at the exact time when they would best fit into the lesson period. This was to avoid the confusion of having classes pass to and from the auditorium or special projection room in the middle of a lesson or discussion.

Both control and experimental classes used the same study guides and were given identical tests.

Ten geography and ten general science films were made for the experiment by the Company, under the direction of the late Dr. Thomas E. Finegan, formerly deputy commissioner of education in New York State, and superintendent of public instruction in Pennsylvania.

The Subjects

The geography films covered such widely varied subjects as "New England Fisheries," "Wisconsin Dairies," "Bituminous Coal," and "Irrigation." General science films dealt with such subjects as "Hot Air Heating," "The Water Cycle," "Sand and Clay," and "Reforestation."

The films were carefully planned. No attempt was made to have them "entertaining" in the accepted movie fashion. Their purpose was, rather, to stimulate the student's interest, to point the way, and to encourage further study by a dynamic showing of the particular subject under discussion. In short, to make learning easier and quicker for the student.

A cedar waxwing feeds its young with ripe cherries carried in its throat. From a full-color film in the nature-study group, "How Birds Feed Their Young"

Left: Lincoln debates with the "Little Giant" in a scene from the historical film, "Abraham Lincoln." Center: Tea pickers in Ceylon; from one of the three films on India, in the geography series. Right: A scene in an alchemist's workshop; from the general science film, "Historical Introduction to the Study of Chemistry"

The report issued at the close of the experiment noted the "marked superiority of children taught with films over children taught by other classroom methods," and suggested that if properly planned classroom films could raise pupils' marks by an average of 24 per cent, as in the experiment, many failures would be turned into passing marks, since the great majority of failures were of less than 24 per cent. Since the average cost of keeping a child in school for one year was, at that time, $100, the report noted also that the saving of much time required for repeating courses would mean the saving of large costs to municipalities.

"In this experiment," the report continued, "we have studied the films not as a panacea to be substituted for present instrumentalities of the schools, nor as a means to revolutionize the aims of education, but as an addition to the present pedagogical devices of the schools which may help in the attainment of currently accepted goals."

Eastman Teaching Films

Results were so overwhelmingly in favor of films as a regular classroom aid, that the Company decided to continue the work. Accordingly, in 1928, Eastman Teaching Films, Inc. was formed, with Dr. Finegan as president.

An editorial staff of experienced teachers was assembled, film scenarios were prepared. Cameramen were sent out to film the actual scenes. The films were developed and edited; and finally, "Teachers' Guides" were written to aid the teacher when using any particular film.

Through the years, other fields of study were entered. Films were prepared in agriculture, applied art, English, health, history, nature study, religion, and medicine.

In 1932, the official motion-picture life of George Washington was produced for the Bicentennial Commission. The film is distinguished for its historical authenticity as well as for its vivid story. Many of the scenes were taken at the places where the original events actually occurred during Washington's life. Incidentally, Mount Vernon, for the first time in its long existence, was opened to motion-picture cameramen.

The Work Goes Forward

Work on classroom films was carried on even through the severe depression of the late 20's and early 30's, though, of course, at a considerably slackened pace. In all, close to three hundred films were prepared which have found their way into schools in almost all sections of the country.

Before the war, the films were in use in thirty foreign countries. They were also available in several foreign languages, as well as in English.

In 1941, teaching films entered a new field with the production of a Kodachrome sound film teaching manufacturers of certain peacetime products how to make the implements and materials of war.

Our company's pioneering efforts in the field of classroom motion pictures culminated with the mid-April transfer. Encyclopædia Britannica Films, Inc., holds a commanding position in its field, and has the assurance of Robert M. Hutchins, president of the University of Chicago, that the film organization will have the full experience and knowledge of the university to draw upon.

WAR FRONTS OF THE WORLD
Russia (3 reels)
Germany (3 reels)
India (3 reels)
Japan (2 reels)
The Philippine Islands
Manchukuo
The Dutch East Indies
Turkey (2 reels)
Glimpses of the Near East
Finland
Hungary
Bulgaria
Denmark
Yugoslavia
Siberia (2 reels)
Poland
Alaska
The Panama Canal
The Hawaiian Islands
Washington—the Capital City
London

HEMISPHERE SOLIDARITY
The Continent of South America
Argentina
Bolivia
Brazil (2 reels)
Chile
Peru
Central America
Mexico
From the Bahamas to Jamaica
Puerto Rico
From Haiti to Trinidad
Coffee

WAR INDUSTRIES
Aluminum
Iron Ore to Pig Iron
Pig Iron to Steel
Copper
Tin
Producing Crude Oil
Refining Crude Oil
Rubber
Anthracite Coal
Bituminous Coal

Mechanical Training
Elementary Operations on the Engine Lathe (2 reels, sound . . . $36 per reel)
Principles of Flight
Four-Stroke Cycle Gas Engine

ON THE HOME FRONT
First Aid
Care of Minor Wounds (¼ reel)
Carrying the Injured (¼ reel)
Control of Bleeding (¾ reel)
Life Saving and Resuscitation

Home Nursing
The Bed Bath (½ reel)
Routine Procedures
Special Procedures (¾ reel)

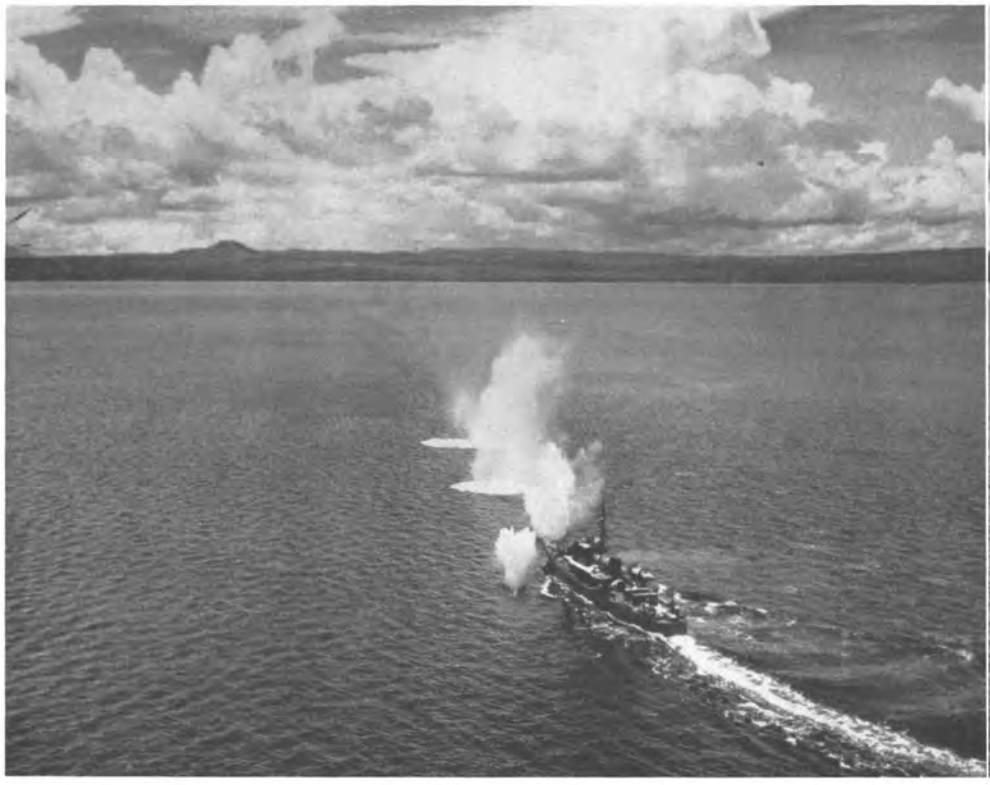
Fire Protection
Fire Prevention
Fire Protection
Fire Safety

Nutrition and Health
Vitamins (2 reels)
Child Care (2 reels)
Cleanliness (4 half reels)
The Eyes (2 reels)
The Feet
The Teeth (3 reels)
Posture

Education
Free Schools—The Hope of Democracy

Safety
Safety at Home
Safety at Play
Vacation Safety
Street Safety (2 reels)

Classroom films include a surprising amount of material, and in most cases are useful in connection with more than one subject. The films listed can be used to advantage to document current-events discussions with "reviews" of the geographical, historical, and topical facts needed for an understanding of today's headlines

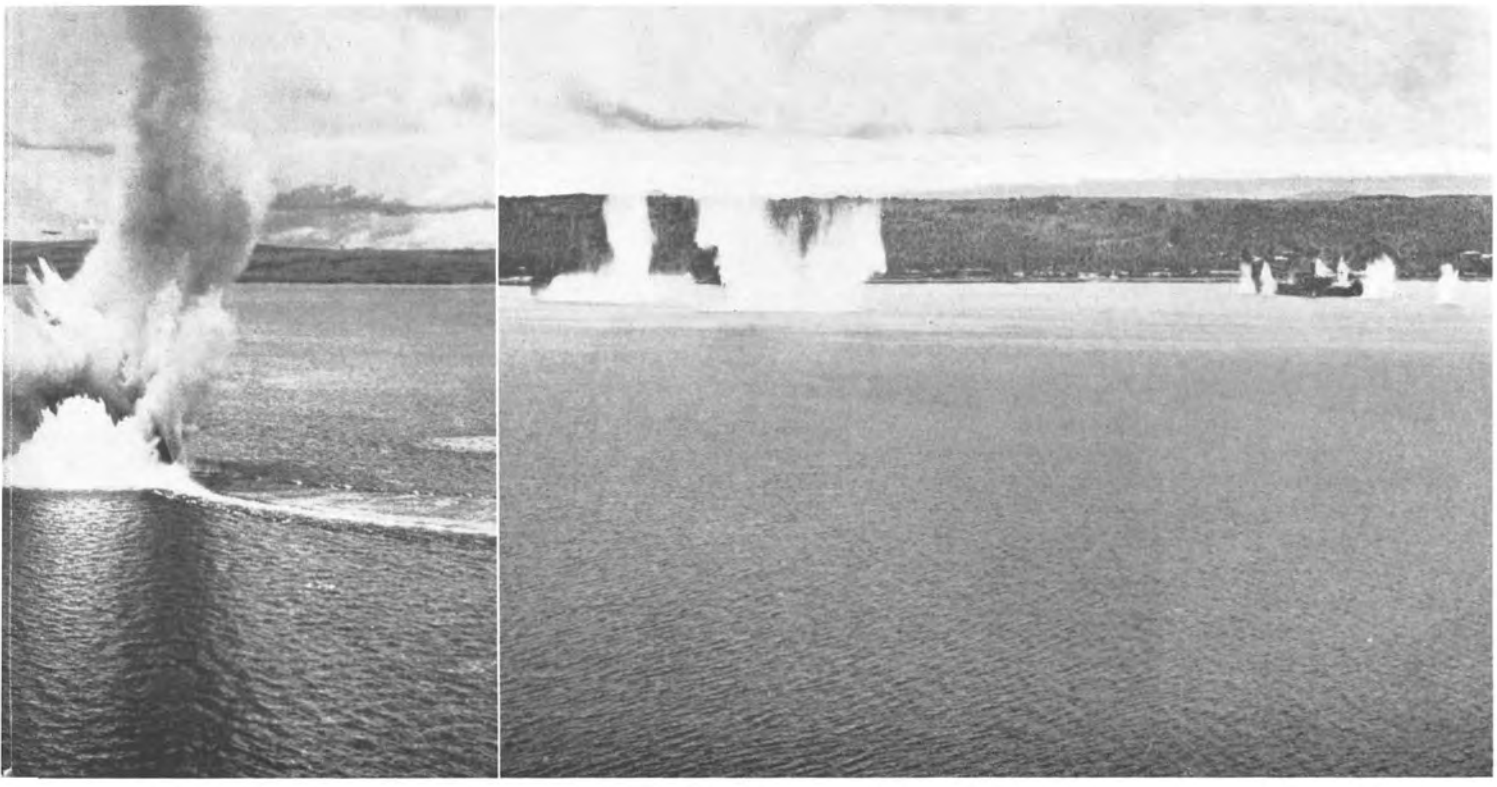


The Jap corvette in photo above did some fancy side-stepping to escape the neatly laid bombs from Fifth Air Force planes, barely visible at left and center of picture. In center picture, bomb finds its mark squarely on careening corvette

War Pool News Photograph

Somewhere on the hard-fought Italian front a U.S. sergeant yanks the cord of a 105-mm. howitzer to blast an enemy position. The telescope used on this gun is the M-12, which is made in large numbers by Kodak

KOD
PROD
in a



At right, a Jap transport is bracketed by a stick of bombs that exploded a few seconds after photo was made, lifting vessel clear out of water. Many of the optical systems for the famed American bombsights are made by the Company

Official Photographs, U.S. Army Air Forces

U.S. Maritime Commission Photo

An officer of an American ship sights through one of the fire-control telescopes that the Company makes for the Navy. For a close-up of this high-precision instrument, see the April issue of this magazine

DAK
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The Editor's Page

THERE'S SOMETHING ABOUT A SNAPSHOT!

THE OLD-TIME snapshots reproduced on page 3 were among more than 350 viewed by thousands of persons during a ten-week display in the Museum of Modern Art, New York. Chosen from the Company's extensive amateur-snapshot files, the exhibit covered the history of snapshotting, from the round pictures made with the first Kodaks 'way back in the eighties to the products of today's vastly more versatile, compact, abler instruments and infinitely superior films.

But, one and all, the prints were probably the most eloquent and at the same time unstudied portrayal of our life and times that have been assembled since George Eastman's first Kodak and roll film opened to millions the joys of picture taking; since the magic slogan, "You press the button, we do the rest," first flashed around the globe to signal the end of drudgery in photography.

To quote from the specially prepared exhibit booklet:

"For some fifty years now the hand-held camera, with its instantaneous shutter, has been recording the American scene in infinite, spontaneous detail —the new baby, the family group, the home, friends, small and large adventures, discoveries. In so doing, the simple camera has become a real factor in maintaining the unity of the American family, the solidarity of the nation. Snapshots enclosed in letters to the boy in camp, the marine in New Guinea, the soldier in Italy or Alaska, the girl in the Service or away from home in war work serve to tie the family together more effectively than written words.

The wartime function of the snapshot camera is merely an extension or an intensification of the work it has been doing for years.

"The casual camera has done another thing. It has given the millions —all of us—a medium of graphic expression. With our snapshot cameras, we make pictures of anything that interests us—a cobweb in the morning sun, the Grand Canyon, a timberline tree, or the pattern of windows and bricks in the building across the way. The subjects are as various as our own interests; the pictures reveal, as pictures almost always do, whether our eyes are perceptive, our minds alive.

"The snapshot has become, in truth, a folk art, spontaneous, almost effortless, yet deeply expressive. It is an honest art, partly because it doesn't occur to the average snapshooter to look beyond reality, partly because the natural domain of the camera is in the world of things as they are, and partly because it is simply more trouble to make an untrue than a true picture. . . ."

Therein lies the uniqueness, and strength, of this great "American Snapshot" exhibition, this picture story of America yesterday and today, by Americans young and old. The exhibit closed in New York on the tenth of this month, but it will be seen by more thousands during an extensive tour of the country.

It's a great show—first and last, because there's something about a snapshot!

Did You Know:

That tests on airplane engines are so thorough that one company uses 955 gallons of gasoline in trying out every airplane engine before it is delivered to the Government? And the parts of that engine have already passed under the relentless eye of the x-ray?

★ ★ ★

That, unlike Ol' Man River, a soldier's uniform doesn't keep rolling along but it does last fairly well? On the average, under normal conditions, the soldier's woolen coat has a 33-month life; his woolen trousers are good for 14½ months; his overcoat, for 36 months; his shoes, 5 to 7 months; his woolen shirt, 6 months?

V Adding Wings to Overseas Letters • • • —

THE OLD WAY

50 PLANES CARRYING ORDINARY LETTERS

V-Mail Has Made A Notable Record in Its First Two Years of Service

Time- and space-saving V-Mail is chalking up a splendid service record in this war. It follows American troops everywhere, slicing days off transit time between home and battle front, at the rate of more than 12,000,000 letters a month.

"Surveys reveal that servicemen prefer the shorter V-Mail messages to ordinary mail because they contain fresher, more recent news from home," says a recent OWI release. "V-Mail has the further advantage of saving cargo space." The charts on this page, prepared by the OWI, demonstrate how, when V-Mail is used, one cargo plane can do the work of 50 similar planes carrying the same number of standard and air-mail letters.

Since Kodak-created-and-developed V-Mail made its bow in June, 1942, its use, according to official estimates, has resulted in a saving, up to last February, of 4,964,286 cargo pounds. And that saving, we are reminded, is equivalent to the weight of 469,428 Garand rifles, or 62,209,392 rounds of 30-caliber cartridges, or 32,876 men.

Figures released just as we go to press reveal that all previous monthly records were broken in March, when the Army Postal Service handled 61,252,856 individual V-Mail letters, approximately half of them being received from members of the U.S. armed forces on the various battle fronts.

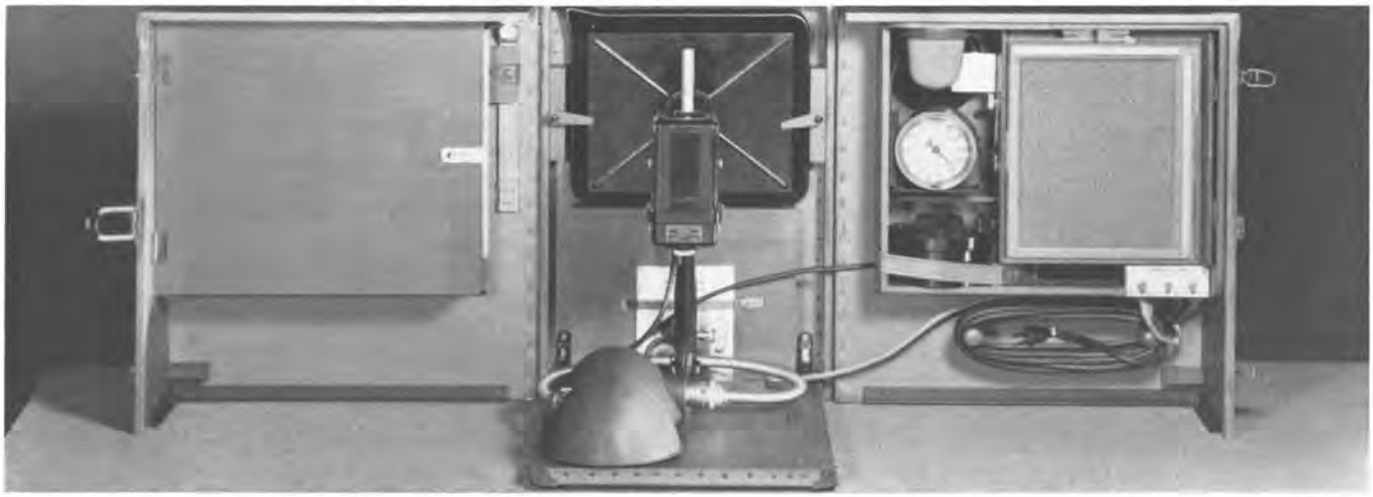
The March figures swell to 451,054,940 the number of V-Mail letters handled by the Army Postal Service since V-Mail was inaugurated. Of this combined total, 237,728,688 represents V-Mail letters dispatched overseas, with the remaining 213,326,252 being received from overseas.

V-MAIL WAY

1 PLANE CAN CARRY SAME NUMBER OF LETTERS

49 PLANES CARRY WAR SUPPLIES

A Photographic Laboratory in a Suitcase



This view of the Photographic Field Kit reveals its trim compactness. The kit is made by Kodak and is in use by the Army, Navy, and Marines

A boon to the combat cameraman is this handy Kodak-made outfit

THE COMPACT OUTFIT pictured on this page is the Photographic Field Kit mentioned in the Kodak 35 advertisement on the back cover. It is now seeing service with the Army, Navy, and Marines—but postwar adaptation of this "lab in a box" to civilian requirements is highly probable.

Just about everything the combat photographer needs to take and process pictures is contained in the kit. It's shown here open for business, but when closed, it's a mere two cubic feet of sturdy usefulness.

Equipment for taking pictures includes a Kodak 35 (seen in its field case in the left-hand section below), supplementary lenses and filters, a Kodapod, film, flash synchronizer, batteries, and a cable release.

Then, for developing and printing, there are chemicals, trays, a safelight, a timer, clips, a thermometer, a daylight-loading tank, an adjustable easel, and a portable miniature enlarger.

An electric exposure meter for film and a Kodak Projection Print Scale for paper are aids to correct exposure which are also included in this well-equipped portable "laboratory."

Two reflectors attached to the enlarger base for use in copying, with the camera replacing the enlarger on the column (see below center), and instruction manuals complete Kodak's wartime photographic laboratory in a suitcase.

Incidentally, the advertisement on the back cover is the current one in the Company's widely read series designed to keep the nation informed of photography in the war. The series was described in KODAK for November, 1943, and the individual advertisements are presented month by month in KODAK for the information of our readers.

This month's advertisement points to the fact that the highly popular Kodak 35 quickly won a preferred rating as a war weapon because "the Army . . . Navy . . . Air Forces . . . and Marines . . . needed a camera which does precisely what you, in civilian life, want your camera to do." And again quoting the advertisement, "From trim black and silver finish into non-reflecting black and olive drab—that was the only change in the 35."

A good example, this, of a Kodak peacetime product, geared through its high quality in workmanship and performance to war's strenuous demands.

Here, the handy compartments, shelves, and drawers of the laboratory in a suitcase are shown. Equipment for taking pictures includes a Kodak 35

A New "Platform" for Flying Cameras

THE SPEEDY LIGHTNING P-38 long-range fighter, stripped of its guns but carrying an array of cameras, has become one of the "eyes" of the Army Air Forces in its new role as the F-5 Reconnaissance plane.

Essentially the same in outward appearance as the Lockheed Lightning fighter, the F-5 is, however, strictly an unarmed aircraft whose sole function is to make successful combat possible by doing what is regarded as the world's best aerial photographic mapping.

Choosing a "Platform"

Development of the F-5 started late in 1941 at the Matériel Command Photographic Laboratories, Wright Field, Dayton, Ohio. The P-38 was picked as a "platform" for the flying cameras because it has tremendous speed, getaway, and range, all extremely necessary factors in a ship which must work deep in enemy territory without fighter protection.

The conversion of P-38 to F-5 required no structural changes. Guns and firing mechanisms which weighed about 900 pounds were removed, and cameras and equipment which weighed about 500 pounds were installed. The saving in weight increased the ship's speed and range, and a further boost in speed came from the smoother nose, made possible by removal of gun ports.

Through a Window

Cameras shoot through special glass windows set flush with the fuselage and located at angles which depend on the cameras used. On some F-5's, two cameras take overlapping pictures, shooting straight down from a single window. The most common camera setup is the trimetrogon method, consisting of three cameras which shoot three different surface views. One film is parallel with the ground, flanked by two other cameras whose optical axes are depressed 30 degrees below the horizontal. Result is a series of photographs which take in a path from horizon to horizon over any territory the F-5 flies.

For most aerial mapping, three basic types of cameras are used. In the trimetrogon method, K-17's are usual. This camera can be equipped for focal lengths of 6, 12, or 24 inches, and uses a between-the-lenses shutter of the compur type. K-22 cameras may also be used with a focal length of 24 inches and 40 inches with a certain type shutter.

For reconnaissance work, the longer focal lengths are preferable, since longer lenses are telescopic, show more detail, and less area. For charting and mapping, where less detail is required, shorter lenses, which have greater coverage, are used.

Ideal altitudes for the F-5 range between 20,000 and 36,000 feet. These high altitudes enable cameras to take in more territory and yet give map makers sufficient detail.

Warming Up

Cameras in the F-5 are electrically operated. The pilot, chosen and trained for this special work, must be adept at precision flying and an expert navigator. He can adjust his cameras for most conditions from the cockpit. The cameras are set for a 60 per cent overlap of negatives, but the interval can be changed by remote control.

One major problem encountered by Matériel Command photographic experts was the cold at high altitudes. Cameras worked sluggishly when temperatures dropped to 40 below zero. A tube from the engines carrying coolant fluid to a small "radiator" in the camera compartment solved the problem—so well that test pilots flew in the below-zero altitudes in their shirt sleeves.

Official Photograph U.S. Army Air Forces
Stripped of its guns, the speedy Lockheed Lightning P-38, long-range pursuit plane of the U.S. Army Air Forces, has become one of the "eyes" of the Army in a new role as the F-5 reconnaissance plane. Strictly an unarmed aircraft, sole function of the F-5 is making successful combat possible by performance of its job of aerial photographic mapping. The guns and firing mechanism of the P-38 were removed to make room for the camera and photographic equipment (see lower picture). Cameras are adjustable for most conditions by remote control from the cockpit

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Always Willing

The solicitous visitor approached the soldier and asked: "My good man, you are now willing to die for your country, aren't you?"

"Naw," he grunted, "but I'm willing to help some Jap die for his."

✪ *Kodak Employees in the Armed Forces* ✪

Pvt. Donald Parry, Kodak Park

Pfc. C. R. Guidic, Camera Works

Lt. S. D. Cornell, Kodak Office

Sgt. Milton H. Stahle, Hawk-Eye

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Pfc. Thomas T. Bain, Camera Works

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F 1/c R. L. Walters, Kodak Park

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M 2/c R. L. Anderson, Kodak Park

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Sgt. E. L. Einspahr, Denver Store

Lt. C. R. McCarthy, Hawk-Eye

Lt. W. C. French, Pittsburgh Store

Lt. (j.g.) T. C. Roberts, N. Y. Store

Corp. Fred L. Roberts, N. Y. Store

Lt. Homer J. Nelson, Kodak Park

Pfc. Earl Ras, Kodak Park

S 2/c Robert F. Welker, Hawk-Eye

Lt. R. V. Thiriot, Salt Lake City Store

Pvt. Walter L. Coon, Kodak Park

Pfc. T. J. Brunette, Camera Works

Pfc. A. N. Brown, Camera Works

Ph.M 3/c D. Maslyn, Kodak Park

S 2/c W. I. Pressley, Camera Works

Corp. J. A. Kaster, Minneapolis Store

Official photograph,
U. S. Signal Corps

Kodak 35

your "Civilian Miniature" *is with the Army... Navy... Air Forces... Marines...* in Uniform

WHEN production of cameras for you stopped short, Kodak 35 —owned by numbers of America's miniature camera enthusiasts—won a preferred rating. Production of the 35 "in uniform" sped ahead, on Government order.

The reason being that the Army . . . Navy . . . Air Forces . . . and Marines . . . needed a camera which does precisely what you, in civilian life, want your camera to do.

From trim black and silver finish into non-reflecting black and olive drab—that was the only change in the 35.

Kodak 35, making pictures in either black-and-white or Kodachrome, offers more "picture capacity" than the average person usually needs. Yet it's simple to operate—not too much of a handful for a man who's excited . . . under fire. And it is dependable—can take some banging around, and still get the pictures.

Kodak 35 is the heart of the Photographic Field Kit designed and made by Kodak for the U.S. Signal Corps, which is responsible for Army photography in ground operations. A complete photographic laboratory in a "suitcase."

If you are not one of those who own this smart little Miniature, you can look forward to that as an "after the war" experience.

EASTMAN KODAK COMPANY
ROCHESTER, N. Y.

REMEMBER LIEUTENANT ALEXANDER R. NININGER, JR. . . . first man awarded the Congressional Medal in this war?—how on Bataan, he was three times wounded—but fought his way into the enemy positions again and again, wiping out whole groups single-handed?—how after the battle they found him dead . . . surrounded by dead Japs? A stern example for the rest of us. BUY MORE WAR BONDS.

Serving human progress through photography

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