

# KODAK

A MAGAZINE FOR EASTMAN EMPLOYEES



"FLORESCENT SALVO"

It took its own portrait

(See page 4)

JUNE 1941





"LIFTING FOG": One of the three prize-winning pictures submitted by Joseph Hale of Kodak Park which, together, won the Evanoff Trophy in the Annual Spring Competition

## IN THIS ISSUE

Elected to New Offices <i>Seven appointments are noted</i>	Page 1	The Editor's Page <i>The Spring Competition</i>	Page 10
It's "Thumbs Up" Down Under <i>Snapshots from Kodak Australasia</i>	Page 2	How to Buy Defense Savings Bonds <i>The "S. &amp; L." is a participant</i>	Page 11
Kodak Development Speeds Defense <i>It's Eastman Matte Transfer Film</i>	Page 3	Action Stations!!! <i>A survivor's story</i>	Page 12
Panorama <i>In black and white</i>	Page 4	Activities Calendar <i>Listing what's ahead</i>	Page 12
Guiding a Great Trusteeship <i>Is the job of this city department</i>	Page 5	Hawaii: Paradise of the Pacific <i>Commemorating an important date</i>	Page 13
Participants in K.O.R.C. Quiz <i>The contest was keenly waged</i>	Page 5	Out of the Hat <i>Greek holiday</i>	Page 14
Machines that Make Machines <i>In peace or in war, they are vital</i>	Page 6	In the Garden of the Gods <i>Mementos of a holiday in Greece</i>	Page 15
The Spring Competition <i>. . . and the Kodak National Salon</i>	Page 8	Activities In and Around the Plants <i>Reports from the recreation clubs</i>	Page 16

# KODAK

Volume 20

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Number 6

## Elected to New Offices



Albert F. Sulzer, vice-president and general manager of the Eastman Kodak Company. Mr. Sulzer was the assistant general-manager since 1936



William G. Stuber, honorary chairman of the board of directors. Mr. Stuber was president of the Company for nine years, the chairman since 1934

### Following Action of the Board Of Directors, Appointments In Management Were Made Known

SEVEN KODAK MEN were elected to new offices last month by the board of directors.

Frank W. Lovejoy, president and general manager of the Company for the past seven years, was elected chairman of the board, succeeding



Frank W. Lovejoy, chairman of the board of directors. Mr. Lovejoy was the president and general manager of the Eastman Kodak Company since 1934

William G. Stuber, who was elected to the newly created office of honorary chairman.

Mr. Lovejoy's successor as president of the Company is Thomas Jean Hargrave, secretary since 1928 and vice-president since 1932.

Albert F. Sulzer, assistant general-manager of the Company since 1936, succeeds Mr. Lovejoy as general manager. Mr. Sulzer was elected vice-president of the Company in 1934.



Thomas Jean Hargrave, president of the Eastman Kodak Company. Mr. Hargrave became secretary of the Company in 1928, vice-president in 1932



Albert K. Chapman, vice-president and assistant general manager of the Eastman Kodak Company. Dr. Chapman was production manager since 1930



*William F. Shepard, assistant secretary*

Dr. Albert K. Chapman, assistant vice-president since 1936, and production manager for the past eleven years, was elected vice-president and assistant general-manager.

Milton K. Robinson was named secretary of the Company; and William F. Shepard became assistant secretary.

The new chairman and the honorary chairman are veterans of more than forty years' service with the Company. Mr. Stuber, who was in charge of emulsions and photographic quality during Kodak's formative period, came to Rochester in 1894

from Louisville, Kentucky, at the invitation of Mr. Eastman. In 1925, he succeeded Mr. Eastman as president, remaining in that office for nine years. He was elected chairman of the board of directors in 1934.

Mr. Lovejoy, who came in 1897 as a young chemical engineer to take charge of Kodak Park's film department, later became manager of that plant, general manager of manufacturing departments of the Company, vice-president and general manager, and, in 1934, president and general manager. He is a graduate of the Massachusetts Institute of Technology.

Mr. Hargrave has been secretary and general counsel of the Company for the past thirteen years. He is a graduate of the University of Nebraska, and of the Harvard Law School. During the last war, he served in France as machine-gun captain, winning the Distinguished Service Cross and the Croix de Guerre.

Mr. Sulzer came to Kodak Park as an assistant chemist in 1901, soon after his graduation from the Massachusetts Institute of Technology. After successive promotions, he became assistant manager of the plant and then manager in 1929.

Dr. Chapman is a graduate of Ohio State University. He earned the degree of doctor of philosophy, in physics, at Princeton in 1916. After service in the Army Air Corps during the last war, he came to Kodak in 1919 and was in charge of the De-



*Milton K. Robinson, secretary of the Company*

velopment Department until 1921. He was assistant to the general manager for nine years until his appointment to the position of production manager in 1930.

Mr. Robinson and Mr. Shepard are both members of the Company's legal department. A graduate of the University of Rochester, Mr. Robinson served in France during the last war and joined the Company after returning in 1919. Mr. Shepard attended Colgate University and is a graduate of the Law School of New York University. He has been at Kodak since 1931.

## It's "Thumbs Up" Down Under, these Snapshots Tell Us



*Trench mortars, anti-aircraft guns, and other weapons of war lend a realistic note to the fete held on the grounds of Kodak Australasia's factory at Abbotsford, near Melbourne. The fete was in aid of the Kodak Comforts Fund, which was established for the benefit of employees who are on active service*



# Kodak Development Speeds Defense

## Eastman's New Matte Transfer Film Permits Metal Patterns To Be Made Photographically

RECENT PRESS DISPATCHES reveal how America's largest airplane manufacturers have been enabled to step up production of vital defense contracts by a new application of photography. It is pointed out that the time required to turn out a new type of aircraft has been shortened by from two to four months, while the cost of getting a new plane into production has been reduced by \$20,000 and more.

Behind these newspaper accounts, so heartening to a nation tense with war alarms, lies a story of Eastman research and development which has recently led to the introduction of Eastman Matte Transfer Film. The importance of this new film to industry and the defense program can be readily appreciated when we see how it is used.

Up until now, the making of metal templates or patterns for industrial production has required that the original mechanical drawings be redrawn on a metal sheet by hand—a long and laborious procedure. This time-consuming method of preparing the metal template has now been displaced by a photographic method which is both more efficient and more accurate.

By this new method, which makes use of Matte Transfer Film, engineering drawings can be printed either by contact or by projection on photosensitive metal plates. After processing, the plates may be sent directly to the Template Department, where the photographic image is cut out by means of a saw or mechanical shears.

### Fluorescent Coating

When contact prints are to be made on the photosensitized metal, the engineering drawings are made on metal plates which have been given a coating of a material that will fluoresce in the presence of x-rays. This coating has a matte surface which can be readily drawn on. If positive prints from the drawings on this metal are desired, a photosensitive glass plate is placed in contact



*This apparatus has been designed to laminate metal sheets with Eastman Matte Transfer Film. After lamination, the sheet is printed from a glass negative and the resulting image cut out to form a template or pattern*

with the treated surface of the plate bearing the drawing and an exposure is made by x-ray through the back of the metal plate. The glass negative, after processing, is then printed onto a sheet of photosensitized metal in the usual way. If a reverse or mirror-image negative on metal is desired for the templates, the photosensitized metal sheet is placed in contact with the sheet of metal containing the drawings and exposed through the back of the metal by x-ray. Such "mirror" images may, of course, be made into "right" images simply by turning the finished template over.

With proper equipment and accurate lenses, photo templates can be made with a tolerance of 1/1,000 inch to the foot. In this projection process, the mechanical drawings are made directly upon lacquered metal sheets. These mechanical drawings are next photographed on glass plates in a

special camera designed for the purpose. The glass negatives are then enlarged onto photosensitized metal sheets. Photo templates as large as 4 by 12 feet have been made by this method.

Eastman Matte Transfer Film offers the simplest and most effective method of photosensitizing these metal sheets. The emulsion and its thin film support are stripped from a protective paper backing and laminated by pressure and cement onto the metal. The matte surface of the film can be readily marked with a pencil, thus providing for any changes or additions to the processed photographic image.

Theoretically, there is hardly any limit to the size of templates which can be produced by this photographic method. Transfer film is furnished in widths up to 34 inches, and with

*(Continued on page 15)*



### "Florescent Salvo"

WHAT WITH the Fourth of July but a few weeks away, we decided to grace the front cover with an appropriate picture. The editor of *Pictures*, a Company publication for the amateur photographer, graciously gave us the freedom of his files—and the rest was easy going.

"Florescent Salvo," the *Pictures* editor tells us, is the result of an exposure during which a complicated barrage of skyrockets exploded. Like lightning, fireworks take their own portraits very well indeed. You just set up your camera on a tripod or any other firm support, and aim it at that part of the sky in which the display will blaze in all its glory. Then, when a salvo is sent forth, open the shutter, and leave it open for as many bursts as you want to record. The spectacular and beautiful front-cover shot was made with a simple camera, set at Time and  $f/11$ , using Verichrome Film.

Incidentally, it may not be a whit too soon to caution the youngsters about the dangers of fireworks in unskilled hands—the total number of fireworks injuries of all kinds on the Fourth of July last year was 4,462, according to the American Medical Association. Many States, among them New York, have enacted laws against the use of fireworks by children—or grownups for that matter—and, anyway, it's even more fun to watch a well-planned major display.

### Unsatisfactory!

FROM WILMINGTON, OHIO, comes a letter to the Company that commends itself for reproduction:

"By today's mail I am returning Kodak to you which has proven unsatisfactory. I have never had any trouble with this Kodak until this week and I have had it only about thirty-eight years. I have some wonderful snapshots which I have taken with it during this time.

"I purchased it from the Arcade Jewelry Store in Blanchester, Ohio, at a closing-out sale for \$8.33, and

aside from letting it fall out of a buggy and running over it with one of the wheels, and once letting it fall out of a boat into the river, I have taken good care of it.

"If you had used better glue maybe it wouldn't have gone bad so soon! I used it last week while on a vacation in Williamsburg, Virginia, and Washington, and I am sorry now I did not offer it to Rockefeller or the Smithsonian for their museums.

"Many photographers have remarked about what a fine lens this Kodak has and I thought maybe you could use it again."

The long-lived camera that survived (1) a fall from a buggy, (2) a runover by a buggy wheel, and (3) a ducking in a river is a No. 2 Bulls-Eye, a model that was discontinued years ago.

### Deluge

AS DELIGHTFUL an alliterative deluge as we've been swamped by in many a moon poured from the lips of B. Frederic de Vries, of the Advertising Department, and penetrated every nook and cranny of the Kodak Office auditorium on the occasion of the K.O.R.C. quiz contest last month. Contestants were teams representing the Order and Stenographic Departments.

"Get set," exhorted the genial Mr. de Vries, who conducted the battle of wits, "to digest one of the dizziest, most devastating, and dazzling debacles of a decade—K.O.R.C.'s deuce Quick-silver Quiz. . . . It's destined to be dynamic and delicious.

"Dozing dreamingly in the dinkies just behind me, you see the near-dozen dear and dauntless diplomats who have been dragged from beneath or behind de luxe desks to defend their departments.

"Soon, these duodecimals will daringly dive into a double-decked dipper and draw from its dizzy depths a disconcerting ditty to be decoded and deciphered. For the death-defying demons who deduct, dispose, and define the daffy dictates of the

dyspeptic dispensers who have delivered the dithering diphthongs to Dean de Vries, it will be diploma day—diplomas of dollars. One for each of the defeated dodoes—double dough for the deserving defeaters.

"But let's dispense with this diabolical dribble and direct our dawdlings to the duty of the day—that of divulging to you the identities of the dainty dears, determined to do or die in this defray."

So, if memory and a notepad serve, went the appealing preamble to a trigger-quick duel that saw the Stenographic team emerge the victor by the narrow margin of seven points. You'll find a picture of the contestants and the quiz conductor on the opposite page.

### Hornblower

SOMETIMES, to our chagrin, we hear how some resourceful person has mastered a trying situation that, under similar circumstances, would have found us sadly wanting. Take, for example, that frequent experience of meeting up with an impatient driver who stabs you from the rear with piercing blasts of his horn, when he should know perfectly well that you're powerless to move ahead. We've always yearned for some answer to such orneriness, but being somewhat ineffectual when confronted by such noisesome emergencies, we've taken it meekly and gone our way with a vague sense of frustration weighing us down.

But one ingenious soul, whom we're right proud to acknowledge as a better man than we, didn't react so supinely on a recent occasion. While waiting out a stream of cars, he was approached from the rear by a horn-tooting demon who, without delay, started to lay on his two-toned bugle. Calmly, our friend reached into the glove compartment and withdrew a pair of pliers, got out of his car, walked to the rear and raised the hood of the offending motorist, snipped the wires leading to his horn, carefully reclosed the hood, and returned to his own vehicle amid a heavenly peace.

# Guiding a Great Trusteeship

## The Department of Law, Both Counsel and Attorney for The City, Protects Our Interests

A GIANT CORPORATION with assets of more than \$125,000,000 and an expenditure of some \$30,000,000 a year—such is the city of Rochester.

The income of the city is derived largely from taxes—for the most part, real-estate taxes on homes and places of business. Thus, as taxpayers, we have a direct interest in the way the city's business is run. And the city likewise, as trustee for its thousands of taxpayers, has definite responsibilities towards them. Indeed, by very reason of this trusteeship, its official actions are governed by many different laws.

To see that the business of the city is transacted in accordance with the existing laws is the principal duty of the Department of Law, which is one of the seven major units in the city government.

### Advices, Represents

Headed by the corporation counsel—the chief attorney for the city—this department acts as legal adviser for the various agencies of city government and represents them in any litigation in which they may become involved. In this, its job may be likened to that of the legal department of a business concern. Its routine duties, as even a quick review shows, are wide in scope.

These day-to-day activities include: scrutiny and approval of all contracts and bonds to which the city is a party; action on all complaints concerning violations of building-and-zoning ordinances; following through cases arising under the workmen's compensation act; drafting bills for the city council; and collecting delinquent taxes.

Add the drawing up of local laws and resolutions and ordinances, and the writing of legal opinions on a host of different matters. The sum of these activities still does not give a comprehensive picture, but it is sufficient to show that the law department, in its dual role as counsel and attorney for the city, handles a diverse and large volume of work. And now for a

few "close-ups" of the department in action:

Each year, from four thousand to six thousand laws are introduced in the State legislature, and of these approximately a thousand affect the city. To the Department of Law falls the responsibility of examining these laws and supporting those that would be of benefit to the city. Often, too, the city will initiate State legislation, preparing the laws and enlisting public support to insure their passage. The department also does much staff work guiding administration of laws, both old and new.

### Confers with Citizens

Because citizens have ideas about their city government, and have criticisms and suggestions to offer the men who manage that government for them, conferences with private individuals have a prominent place on the department's daily schedule. Such meetings between John Q. Citizen and his city lawyers number several thousand a year.

Enforcement of building-and-zoning ordinances (see MAY KODAK) demands considerable attention by the Department of Law, which is legal adviser to the building board

and the zoning board of appeals. Last year, for instance, more than two hundred violations were dealt with.

Collection of delinquent taxes is yet another civic duty in which the Department of Law plays an important role. At the end of the second year after the city tax is first due, the city treasurer sends to the department a list of all properties on which the tax remains unpaid. Notices are then served on the owners of these properties; and if the taxes are still unpaid after a reasonable time limit, foreclosure actions are begun.

Sometimes, too, the city must go to court in its own defense. Many claims are filed against it. In these, as well as other types of litigation, the Department of Law protects the interests of the city and its taxpayers.

"Let's look at it this way," a department official said: "John Q. Citizen—you or I, or any of our neighbors in this large community—may do just about what he likes with his money. It's his. The use of it is his own affair. He may do business with whom he will, as he will, and when he will. But the city in handling your money and my money—the taxes we pay on our property—has a

(Continued on page 16)

## Participants in K.O.R.C. Quiz



It was easy enough for Quizzer B. Frederic de Vries, who had the answers neatly jotted down, easy enough, too, for the gay quizzees, as evidenced by their expressions. Left to right: Joan Harding, Betty Wilmat, Maurine Travis, and Shirley Houston, of the Order Department; Jeanne MacDonald (at mike), Hilda Blowers, Marie Crandall, Mary Hartman, and Virginia Kupferschmid, of the Stenographic



# Machines that Make Machines

**Necessary in the Manufacture Of Peacetime Products, and Vital To Production for Our Defense**

ALMOST EVERY DAY in our newspapers there is some reference to machine tools in connection with the national-defense program. To those of us who are not familiar with what machine tools are, and what they do, this may be somewhat of a mystery.

The answer is simple. War today is fought with machines—airplanes, tanks, antiaircraft guns, range finders, submarines, and many other new and complex mechanisms. And machine tools are the machines that make machines.

Now, any machine—from an airplane to a vacuum cleaner—is composed of a number of parts. Many of these parts are manufactured by removing metal.

To illustrate, let's turn to carpentry. Suppose you want to make the leg of a chair. You take a piece of wood and you cut it down to the size and shape desired. You may do this

with a saw, a plane, a knife, a bit—even with sandpaper. By any one of these methods, you are removing wood by means of a hand tool in order to make the product you want.

This is exactly what machine tools do in the case of metal. They remove the metal from the piece which is being worked, until it finally takes the desired shape. But since metal cannot be removed efficiently by hand, power has to be applied to the cutting tool. In other words, the metal-removing tool is a "machine tool," in contrast to a hand tool.

There are five major classifications of machine tools:

*Milling machines* remove metal by means of a rotating cutter with multiple cutting edges.

*Planing machines* remove metal by moving the work backward and forward under a stationary cutting tool.

*Lathes or turning machines* remove metal by rotating the metal to be worked, and applying a cutting tool to it while in rotation.

*Drilling or boring machines* cut



*Milling machine finishing a rectangular-shaped, cast-iron part—to be used in another milling machine*

holes in metal by means of a rotating cutting tool.

*Grinding machines* shape a piece of metal by bringing it into contact with a rotating abrasive wheel.

In normal times, machine tools are used for the manufacture of peacetime products, such as cameras and vacuum cleaners and refrigerators and automobiles. They are also used to make a good deal of industrial equipment. And, strange as it may seem, machine tools are likewise used to make machine tools.



*The picture at left shows a drilling operation on a machine frame. Drills cut holes in metal, boring cutters enlarge the holes. Picture below shows a lathe turning a shaft for an electric motor. The pictures on this page and the one at the top of the opposite page are reproduced with the courteous permission of the National Machine Tool Builders Assn.*





The fact is that since machine tools are the machines that make machines, they are used in the manufacture of practically every kind of machinery—whether that machinery is for use in a factory, in a home, on the highway, or on the ocean.

Since machine tools are so necessary to the manufacture of the machines of peace, it naturally follows that they are equally necessary for the manufacture of the machines of war and defense. They are vital to the production of airplanes, tanks, anti-aircraft guns, battleship equipment, and a thousand and one other items of national defense. According to estimates, more than 97 per cent of the machine tools being built in the United States today are expressly for national-defense purposes.

### Speed Contrasts

The speed of today's machine tools—they range in size all the way from some no bigger than a hatbox to some the size of a two-story house—is amazing by comparison with that of the machine tools of twenty years or so ago. Now, 75-millimeter shells, for instance, can be roughed out in 38 seconds. During the last war the same operation took 12 minutes—almost twenty times as long.

Machine tools used for the production of national-defense equipment must be capable of extreme accuracy. In the making of such items as airplane engines, accuracy is a basic necessity. Not only would an airplane be unsafe, it simply wouldn't function unless the component parts of its engine fitted together with the utmost precision. Thanks to its precision, the machine tool makes possible the production of interchangeable parts, enabling manufacturers to make large numbers of parts and then assemble them at random into final products. This principle has made possible our modern system of mass production, wide distribution.

### Less than a Hairbreadth

Many machine tools used in the manufacture of airplane engines, tank motors, and range finders for guns must be capable of turning out work to an accuracy of  $2/10,000$  of an inch. This is less than one-tenth the diameter of the human hair.

Obviously, the operators of machine tools must be carefully trained



*Machining flat cast-iron parts on a planer. The table supporting the parts (foreground) is moved back and forth under the cutter, which the operator is adjusting*

men, with a high degree of skill and judgment. An untrained man, with a reasonable degree of intelligence and aptitude, can learn to operate one certain type of machine tool satisfactorily within two to three months, provided he has a supervisor who can teach him the hundreds of things he must know, and to whom he can turn with questions whenever he is in doubt. But in order for an

operator to learn how to run well all of the different types of machine tools in a fair-sized plant, three to four years' time is usually required.

In this age of mechanized warfare, the factories of the nation constitute the first line of our national defense. The men who operate the machines in our industrial plants today are making what it takes to defend their country in time of need.



*Precision grinding one of the main parts of an electric locomotive. Both the parts and the abrasive wheel are rotated. Picture by courtesy of Westinghouse Electric & Manufacturing Company*

# A Photographic Foursome: The Club Beginners, Advanced, and



"Rush-hour," by Herbert Johnson, Kodak Office, won third in Advanced, a certificate in Evanoff



Jeannette Klute, of the Research Laboratories, won an Advanced certificate with "Magnolias in the Sun"



"Bozo" won third in the National for Marshall Sigford, of Eastman Kodak Stores, Minneapolis



"Doorway—Capistrano" won second in the National for Richard B. Crain, A.R.P.S., Kansas City Stores



"Laddie," by John G. Mulder, Bldg. 29, K. P. Second in Advanced, a certificate in Evanoff



"Design," by J. B. Hale, Bldg. 14, Kodak Park, won first in the Evanoff, a certificate in the Advanced



"The Schemer," by J. B. Hale, Kodak Park, won an Evanoff first, and an Advanced certificate



"Provincetown Pier," by R. McCallum, of the Hawk-Eye Works, was entered in the Advanced



"Inside Story" was entered in the National Salon by John H. Clay, of E. K. Stores, Los Angeles



# Kodak National Salon; Camera and Evanoff-Trophy Competitions



"Myra" won first in the Beginners group for Carl W. Herrmann, of Building 48, Kodak Park



"Watching for the Birdie," entered in the National by F. R. Crane, of Eastman Kodak Stores, San Diego



Daniel H. Lee, Bldg. 6A, Kodak Park, won a certificate in the Beginners group with "Come Back!"



"Downtown," an entry in the National Salon, by Paul V. Arnoldi, Eastman Kodak Stores, New York



Thomas A. Hale, of Camera Works, won a certificate in the Beginners with "Meditation"



George W. Scott, Bldg. 7, K. P., won third in the Beginners with "Dream of Loneliness"



"Broad Reach," by Jack E. Fogg, Bldg. 14, Kodak Park, won second prize in the Beginners group



"Realm of Ice," entered in the National Salon by Frank L. Oglesby, of Tennessee Eastman, Kingsport



A National first was won by Lewis Grayner, of E. K. Stores, Washington, with "After Benda"

# THE EDITOR'S PAGE

## The Spring Competition

THE KODAK CAMERA CLUB OF ROCHESTER is to be heartily congratulated on the success of its twentieth annual Spring Competition, which this year included the Kodak National Salon of Photography, open to all Kodak employees in the United States.

Entries in all sections of the competition totaled 1103, and were well up to the high standards that have been set in this keenly contested annual event. The winners in the black-and-white classifications are reproduced on pages 8 and 9 and inside the front and back covers.

Judges of the black-and-white prints were the following: Dr. Michael Ombreski, of Syracuse; Miss Janet Weston, of New York; and John Rowan, of Baltimore. In the color section of the competition the judges were: Ken L. Henderson, of Rochester; Alfred DeLardi, of Philadelphia; and Harry K. Shigeta, of Chicago.

Seventeen trophies were awarded in the contest, as well as prizes offered by the Kodak Camera Club. Fifty-four certificates of merit were also presented. The trophies were as follows:

Lovejoy Trophy: grand award for black-and-white prints in Spring Exhibition and National Salon; the Stuber Trophies, for first, second, and third in the National Salon; Huse Trophies, for the first three in the black-and-white section, Spring Exhibition; Mees Trophy, the grand award for 2 by 2 transparencies in Spring Exhibition and National Salon; McGhee Trophies, first and second awards for 2 by 2 transparencies in National Salon; Hutchison Trophies, for first and second in 2 by 2 transparencies, Spring Exhibition; Sulzer Trophies, for first and second large color transparencies in Spring Exhibition and National Salon; Hurst Trophies, first and second for multicolor prints in Spring Exhibition and National Salon; and the Evanoff Trophy, for best three black-and-white prints by any one exhibitor.

## Letter from England

*The letter that follows tells what staying "on the job" in a bombed area is like. It was sent to Kodak Limited by the manager of an associated developing-and-printing concern, and forwarded to Rochester from London. The dashes indicate censorship of place names.*

YOUR LETTER of Monday arrived on Wednesday (Post is taking some time still). However, we're alive and on the job and here are a few more details.

The Works was gutted by fire caused by an incendiary bomb in adjoining premises, and resulting in the burning

down of the other houses in the square. All this occurred on the Thursday night. I have never seen such a cleaning out by fire and explosive before. The raid lasted from 8:40 P.M. till 1 A.M., and it was like "Hell let loose."

On Friday morning after considerable difficulty I got to ---. Delayed-action bombs were still going off and more were being found every minute.

I saw that our place was a complete "write off" and sent my clerk by train to get Lamb moving. In anticipation of possible trouble certain chemical solutions had been made up to be ready for a possible blitz on ---.

Our D. & P. mail delivered to me on Friday was taken to Hearsters', where I commandeered a room for a temporary office. We had no sooner started there when we had to clear out for a delayed-action bomb, and when we got back on Saturday morning Hearsters' premises and our bag of mail had disappeared!

This raid (Friday night) was worse than Thursday's. Add to all this the dislocation of every sort of service plus the continuous discovery of time bombs and you will gather that an enjoyable time was had by "one and all."

I got off circulars, Saturday, to all dealers and persuaded three girls to go to --- that day, and on Sunday recovered my messenger boys and borrowed cycles to start collections from dealers on Monday. All stuff collected is being sent by train and delivered again by boys on return next day.

Out of the G.P.O. [General Post Office] chaos I recovered two days' mail and went to --- with it. While I was arranging final details with Mr. Lamb for everything, he was handed a telegram telling him that his father had died and calling him back at once.

When I got back on Monday night all busses had stopped and I had 8½ miles to walk home to a family who thought I had been caught by a time bomb. Time bombs were going off all that night and some still are! I've walked more miles since Thursday last than I've ever walked before.

Well, that's the story of the blitz on --- and everyone is standing up to it very well. No matter what happened I was determined on "business as usual," although I nearly drove some people mad in my effort to keep things moving.

As I mentioned at the beginning of this epistle, the Works is a complete "write off." We may salvage the name plate, but that will be all—it will take the assessor about two minutes to earn his commission.



# How to Buy Defense Savings Bonds

## The Eastman Savings and Loan Is Among the Voluntary Agents In this Nationwide Campaign

*An inducement to save more money, and an opportunity to contribute significantly to the national-defense program by lending the savings to the Government—such is the purpose of the recent issue of defense savings bonds and stamps.*

*Representing in the national-preparedness program the counterpart of the Liberty Bonds and stamps of the last war, the new Treasury issues went on sale throughout the nation on May 1st. The Series E Bonds, which are available through the Eastman Savings and Loan Association, are described in this article.*

KODAK EMPLOYEES in Rochester may buy defense savings bonds through the Eastman Savings and Loan Association, which last month received due authorization to sell the bonds. Banks and savings-and-loan associations are participating voluntarily as agents of the Treasury in the national campaign.

Through the sale of the bonds, as well as of savings stamps, the Government expects to raise within the next year an amount estimated variously between three billion and six billion dollars.

The bonds available through the Savings and Loan range from \$25 to \$100. It is pointed out that these bonds—they are designated as "Series E"—are virtually the same as the so-called "baby bonds" issued by the Government for the past six years, except that they are taxable. They may be either bought for cash or by turning in savings stamps which may be purchased at any post office in the country. The stamps are available in five denominations ranging from 10¢ to \$5.

### Mature in Ten Years

Likewise issued in five denominations, the Series E bonds mature in ten years from date of purchase. They are sold at 75 per cent of maturity value. Thus, a \$100 bond costs \$75. If the bonds are held for maturity, the interest will amount

### Why Savings Bonds?

A Treasury Department pamphlet cites three "principal reasons for the defense savings-bond issue, as follows:

"1. It is a good thing for the country to have as large numbers of its people as possible with 'a stake' in their Government, as many people as possible who can stick out their chests and say that they are holders of Government bonds. Such people are likely to be especially interested in protecting our American system of freedom and justice, which makes this country such a good country and these bonds such good bonds. This is first-rate insurance for the democratic form of government in which we all believe.

"2. Wide buying of Defense Savings Bonds will have a steady influence on the cost of living. Experience shows that when people's earnings increase suddenly they begin buying things which they do not need. At a time when much of our manufacturing is being used for National Defense, and not to make articles for sale to the people, too much buying of luxuries is likely to increase the cost of living. It is better to buy Savings Bonds with your extra money.

"3. The money spent on Defense Savings Bonds is money 'put aside for a rainy day.' After the European war is ended, there are likely to be serious changes in business conditions in the United States while many industries which have completed their 'defense orders' are getting back to 'business as usual.' During that time of adjustment, it will be a great help to many of you if you have Defense Savings Bonds which you can quickly turn into money. It will help you and it will help the shopkeeper, the wholesaler, the manufacturer, and the farmer—all along the line."

to 2.9 per cent a year, compounded semiannually. They are nonnegotiable, which means that they cannot be assigned as collateral against loans and carried by borrowing from banks.

The defense savings stamps present a handy means of acquiring savings bonds, since they may be saved up and exchanged for bonds of equivalent value. The stamps pay no interest until they are turned in for a bond, however.

Denominations of the bonds and their purchase prices are as follows: \$25, purchasable for \$18.75; \$50, purchasable for \$37.50; \$100, purchasable for \$75; \$500, purchasable for \$375; and \$1,000, purchasable for \$750. While the bonds may be cashed at any time after sixty days from the purchase date, they do not bear interest until they have been held for a year.

### For Your Convenience

For the convenience of employees, plans are under way as we go to press, whereby purchases of the defense savings bonds may be arranged at the plants. Details of these plans may be obtained through the plant pay roll departments.

"A good investment and a grand opportunity to all of us of sharing in the national-defense program," says Arthur P. Bartholomew, secretary and treasurer of the Eastman Savings and Loan Association. "Employees may, of course, use our savings-shares plan to build up the purchase price of a bond, just as you'd put by a little every week towards any other purchase. And there is no doubt that the program should have a special appeal for employees whose usual earnings are supplemented by overtime pay during this emergency period."

### Did You Know?

THAT ALASKA, with a gold production last year of \$25,375,000, set a record which passed even the great gold-rush days? The total gold production in Alaska, from the beginning of recorded mining in 1880, thirteen years after the territory was purchased, has amounted to \$561,311,000.

# Action Stations!!!

## A Survivor's Story

**"It Was a Relief When I Heard The Guns Start Thundering And Knew We Were Hitting Back"**

*What's it like when an enemy torpedo finds its mark? How does one react as the guns speak in defiant answer?*

*Frederick G. Bishop, who worked for Kodak Limited before joining the English Navy, gives the answers in the following vivid recital of his experiences on a torpedoed ship. His story appeared in the "Works Bulletin," published at Harrow for employees of Kodak Limited.*

I WAS ALREADY AWAKE when the first torpedo struck. It was a stunning, sickening sensation and the ship seemed to jolt to a standstill just as if she had run up against a cushiony wall. The shock flung me out of my bunk. While I was picking myself up, my ears still ringing with the explosion, the alarm buzzers started.

I heard afterwards that this first torpedo had shattered the steering gear and screws, rendering the ship helpless. It had also ripped open the afterhold, throwing most of the buoyancy cargo out into the sea, and had wrecked the wireless aerial. The ship was settling by the stern.

I went at once to my action station in the sick bay two decks below, saw the attendants assembled, and started laying out morphia syringes and bandages, collecting surgical instruments and stripping the operating tables for the arrival of the doctor.

Of course I didn't know what had happened except that it was some-

thing serious, because after a colossal din the engines had stopped and we were rolling so heavily it was hard to keep on one's feet. I remember thinking it would be a tough job for us when the casualties started to come. But I kept busy on the routine jobs of preparation because that helped to keep one's mind off wondering what was happening upstairs.

All the same, it was a relief when I heard the guns start thundering and knew that, whatever it was, we were hitting back. . . .

### Second Explosion

It seemed only about ten minutes had gone by (afterwards I knew it was nearly half an hour, but it's amazing how quickly time passes when you are concentrating like we were) and I was having a last check-over when I noticed that the instrument dishes were not big enough for my liking. I remembered that I had a very big developing tray up in my cabin (I go in a bit for photography in my spare time). Going across to the doctor and bawling above the noise of the gunfire, I asked permission to go up and get it. I reached my cabin and had just got my hands on the tray when the second explosion occurred. That was the two torpedoes blowing up the magazine near the sick bay.

It was the most terrific bang I have ever heard in my life and it knocked me out for a moment. I came to, lying on the floor in total darkness because all the lights had

gone out. The sudden list the ship had taken had slid me up against the bulkhead, but strangely enough I was still clutching the developer tray.

Groping, I found the door and got it open. Volumes of smoke and cordite fumes blew in. Still groping along in the blackness and leaning sideways against the list, I found my way along the alleyways down towards the sick bay. I thought: "What's the use, they must all be gone now and the ship's going, too." But of course your action station is your action station until relieved or ordered away. And the guns overhead were still thudding away.

There was one bad moment at the last companionway down. I put my foot out from the top step and there was nothing there. Luckily I was holding the handrail. Pulling myself together, I went round another way and got into the dispensary, and there, like an absolute miracle, were the others, the doctor holding a torchlight. Apparently they had followed the doctor into the dispensary to carry out some more materials when the explosion took place. The ambulatory (dressing centre) where they had stood a few minutes before was now a gaping hole right down to the interior of the ship. Everything had vanished, floor, tables, and all.

### To the Boats

Following the doctor's torch, we made our way up to the main promenade deck and there learned that the order had been given to take to the boats. The ship was now leaning right over with the edge of the main decks awash. With my sick bay party I went forward towards my boat station, but very slowly in case there were wounded to be picked up and attended to among the wreckage.

We passed gun crew after gun crew still at it and up to their waists in water. A lot were stripped down to pants and shirt in case they might have to swim for it. But they grinned at us as we passed. Looking out over the sea towards the great plumes raised by our shells, I noticed it was covered with floating barrels that had been blown out from the ship's insides. As we passed the last gun crew I actually heard them singing above the noise of the firing, bawling "Roll Out the Barrel!" as they were passing the shells and ramming them home.

### Calendar of Recreation Activities

June 12 and 13—Combined Spring Exhibition and Evanoff-Trophy Competition, and the Kodak National Salon, in the Kodak Office auditorium

June 14—Camera Club cottage opening, at 1080 Edgemere Drive, Island Cottage

June 21—Camera Club open house, at the cottage

—Camera Works golf tournament

June 28—Camera Works annual family picnic, at Genesee Valley Park

July 11—Kodak Park Athletic Association summer smoker, on the athletic field

July 12—Camera Club beach party, at the cottage

—Kodak Park Athletic Association men's golf tournament, at LeRoy



# Hawaii: Paradise of the Pacific

## A Great Warrior Brought Unity To the Hawaiian Islands, Now A Territory of Our Country

FROM THE TIME-FORGOTTEN LANDS of his origin, man spread slowly over the earth, lured across land and sea by a vision of greener fields and a richer life. For countless centuries, the bold outriders of early human society led their fellows farther and farther into the unknown places beyond the horizon.

An amazing chapter of this globe-covering migration was written many centuries ago when brown-skinned Polynesians of the South Sea Islands, conquering more than two thousand miles of open water in tiny craft, came to the islands of Hawaii.

We do not know when this epic journey, made against prevailing winds and currents, was first made. But there are indications that the last of these migrations took place about five hundred years ago, when the long sea route from Tahiti to Hawaii was frequently traveled by the hardy islanders.

### Cook Appears

For centuries after the last migration from Tahiti, the Hawaiians lost all contact with the outside world. Then one day in early 1778, the British explorer, Captain James Cook, appeared off the islands while on a journey from the South Seas to the northwest coast of America.

Cook was greatly impressed by the splendid people he found there—tall, superbly healthy, good-natured natives who greeted the white-skinned strangers as gods and friends. Cook named his latest discovery the Sandwich Islands in honor of his patron, the Earl of Sandwich.

Returning eight months later from his northern explorations, Cook again landed at the Hawaiian Islands to make further observations. Unfortunately, a quarrel broke out between the Englishmen and natives that cost the lives of Cook and several of his followers.

In the years that followed, ships came more and more frequently to the islands. Traders from Europe and America bartered with the Hawaiians



Characteristic of the modern Hawaii and her commercial progress is the beautiful new headquarters of Kodak Hawaii, Limited, located on Kapiolani Boulevard, between Honolulu and Waikiki Beach

for the valuable sandalwood which grew on the slopes of the volcanic peaks, and whalers landed to refresh their stores with meats and vegetables.

It was during this period, immediately after Cook's discovery, that the greatest figure in modern Hawaiian history rose to power. Long beset by civil strife, the islands had never been united under a single ruler. But now a young prince, Kamehameha, waged a successful war to consolidate all the islands into one kingdom—his campaign being facilitated by the use of guns and boats he had acquired from the English.

But this new-found national unity could hardly serve to hold back the growing influence of the white foreigners who were gaining in power on the islands, nor could the Hawaiian Government offer effective resistance to the growing demands made on them by European powers whose warships frequently touched their shores. The presence of troublemaking filibusters from California and a series of unreasonable demands made by the French Government filled the people with a great fear of foreign aggression.

As these problems grew more pressing, there was a growing desire among the natives for annexation to the United States. In 1854, Kame-

hameha III ordered his minister of foreign relations "to take such immediate steps as may be necessary and proper, by negotiation or otherwise, to ascertain the views of the United States in relation to annexation thereto of these Islands, and also the terms and conditions upon which the same can be effected, with the object of being fully prepared to meet any sudden danger that may arise threatening the existence or independence of Our Kingdom."

It wasn't until the closing years of the nineteenth century that circumstances finally brought Hawaii into the United States. Queen Liliuokalani had reigned for two troubled years when, in answer to an attempted *coup d'état*, the people formed a provisional government to which the queen was forced to surrender her authority. Soon after, five commissioners were sent to Washington to negotiate a treaty of annexation.

With the inauguration of President McKinley in 1897, negotiations for annexation were speeded, and on June 16th of that year a treaty providing for annexation was signed at Washington and later ratified by Congress. The islands were organized as a territory—an integral part of the United States—on June 14th, 1900.

## OUT OF THE HAT

### Greek Holiday

A LITTLE MORE than three years ago, Dr. Leslie G. S. Brooker, of the Research Laboratories, visited a number of places in Greece which in recent months were very much in the headlines. Invited to spend Easter in Lamia with the family of a Greek friend of long standing, he landed at Patras, in the Peloponnesos, on Good Friday and reached his destination on the afternoon of the following day.

"Here, a state of great excitement prevailed, for Easter is the most important festival of the Orthodox Church and is the season when family reunions take place, much as at Christmas with us," Dr. Brooker relates. "That night, there was an impressive service in the cathedral, and at midnight the congregation streamed forth in a procession—each member carrying a lighted candle as a symbol of the resurrection—and the service was continued in the adjoining square.

"The next day saw more services and processions, followed by visits to friends who were celebrating Easter in the traditional way—by roasting lambs whole over open charcoal fires. The inner organs of the animals are cut into small pieces,

spitted on long iron skewers, bound round with the entrails, and roasted too. Then, pieces of this decidedly strong-tasting delicacy, called kokoretsi, are handed to the guests with small glasses of resinous Greek wine."

Although it was originally a city state, one of the famous independent communities of Ancient Greece, Lamia is less well known than the famous Pass of Thermopylae, which lies within easy walking distance from it. Considerable geographical changes have taken place there since Leonidas, the Spartan king, and his small band defended the pass against the Persians in 480 B.C. But the steaming springs of volcanic origin that gave the pass the name of "hot gates" are still active.

After the Easter holidays, Dr. Brooker and his hosts went on northward over the Othrys Mountains, across the Plain of Thessaly, and up through Larissa and Trikkala as far as Kalabaka, at the opposite end of the plain.

"Kalabaka is a small town built in a region of tremendous precipitous cliffs, and it almost suggests Tibet in the way in which it huddles around the base of some of these immense vertical rocks," he reports. "In the fourteenth century, monasteries were



Dr. Leslie G. S. Brooker: the scenery was superb

founded on the summits of some of these cliffs. At one time, there were twenty-three of them, but only about half a dozen remain, and these house a mere handful of monks.

"In former days, travelers were drawn up in a net by means of a windlass to most of these monasteries, but the apparatus now looks extremely decayed and my party not unreasonably elected to visit only those which were provided with firm ladders and stairs.

"After retracing our steps through Trikkala, we spent the night at Larissa and next day visited the Vale of Tempe, which runs between the sides of Mount Olympus and Mount Ossa. The guidebooks invariably save their most extravagant epithets for this place, but I'm afraid I can only record that I found it not at all the dramatic place I had imagined. The Plain of Thessaly has for centuries been a prize of conquest, and it certainly is much more fertile than the mountains that surround it, but a very large proportion of it is swampy.



A traditional Easter rite in Greece: roasting lambs whole over open fires (more pictures on page 15)



"On May 1st, my hosts and I departed on another trip, this time to Delphi; and we traversed some of the most superb scenery it is surely possible to find anywhere. The road leads over two passes in the Lokris Mountains and finally emerges on the Gulf of Corinth at the little port of Itea. Delphi itself is a few miles inland, magnificently situated in a very steep valley on the southern slopes of Mount Parnassus. It was the headquarters of the Greek cult of Apollo and the home of the famous oracle.

"Although practically nothing of the Temple of Apollo remains erect, an idea of the perfection of its construction can still be obtained from the extreme accuracy with which the massive foundation stones are laid. The icy spring near the basin in which pilgrims to Delphi were in the habit of washing is still running briskly, and we all took deep drafts in order to acquire the alleged inspiring power of the water."

## Speeds Defense

(Continued from page 3)

care can be laminated in strips onto plates running to wider widths. It is expected that the development of equipment for applying the transfer film to larger plates will extend the use of the metal to increasingly larger template sizes.

The advantages of the new transfer film for the rapid and accurate production of metal templates will not be limited to the aviation industry alone. Automobile manufacturers are alive to the possibilities offered by this advanced method, while many other industries using metal templates will undoubtedly switch from the older and less-efficient methods of preparing them.

It is interesting to consider that this modern contribution of Eastman research to industrial progress bears a striking relationship to the early photography of Daguerre. A century ago, photographs were being made on metal which had been coated with a light-sensitive emulsion. Today, we are again taking pictures on metal—sensitized by far more advanced methods, to be sure—and where Daguerre's primitive work bore the outlines of human faces and pictorial studies, the sensitized metals of today bear the impression of vital designs.

# In the Garden of the Gods



Mementos of a holiday in Greece: the top snapshot shows Athens, with Mount Lykabettos in the background, as seen from the Acropolis; in the center is the Acropolis of Athens, famed memorial of the ancient Greek gods; below, the town of Kalabaka, dwarfed by gigantic cliffs that are typical of that region of the country. These pictures were taken by Dr. Leslie G. S. Brooker, of the Research Laboratories (see page 14)



## ACTIVITIES



**KODAK PARK ACTIVITIES:** The Tennis Team was off to a flying start in the newly formed Industrial Tennis League by defeating Stromberg Carlson, 13-0. William Tucker is captain of the racket wielders. . . . The softball season is here again. Impressive ceremonies marked the opening of the Noon-Hour League, which finds John Trahey installed as president for the third year. Four teams will play on the Ridge Road Field. Two twilight leagues of sixteen teams each opened play on the 20th of May. The Trickworkers' League, using the Ridge Road Field, opened on the 26th. The Kodak Park Team met Camera Works in the curtain raiser of the Rochester Major Softball League on May 19th. Gunnar Wiig, popular broadcaster, acted as announcer and master of ceremonies. Tex Irwin, New York State Softball Commissioner, was on hand. Joe Minella will again pilot the boys as manager. Kodak Park also has a team in the Rochester Industrial Softball League. With Ed Flynn as manager, the team opened on May 16th against I.B.M. Officers of the Rochester Major Softball League are: Clayton Benson, president; Earl McGill, 1st vice-president; John Doyle, 2nd vice-president; Al Little, secretary; and Joe Minella, treasurer. . . . The first of the men's golf tournaments was scheduled for June 7th. Dates for later meets are tentatively set for July 12th and August 16th. . . . The outdoor summer entertainment will be held at 8 o'clock on Friday evening, July 11th, at the Athletic Field. The program will include orchestra, six top-notch vaudeville acts direct from New York, and door prizes for the ladies. In case of rain, it will be held over until the following night. Each K.P.A.A. member may bring one guest. Efforts are being made to arrange for an afternoon performance for the entertainment of trickworkers and the children of K.P.A.A. members. . . . K.P.A.A. League bowlers scored a 2823 in the 5-man event at the State Tournament on May 10th. Carl Groh and Frank Falzone rolled 651 and 648, respectively, in the singles. League



William Bradbury, of Receiving Department, Kodak Office, won the singles championship in City Bowling Tournament. Rolling a sparkling 663, Bill's handicap of 90 gave him a top score of 753 for a \$50 cash prize

bowlers drew down about \$750 in prizes during the City Tournament. . . . The Girls' Tennis Class, under the tutelage of William Tucker, is meeting every Tuesday at 5:15 and 6:15. . . . A full story of the new Gun Club will appear in next month's issue.

**KODAK OFFICE ITEMS:** A team has been entered in the Maplewood "Y" Softball League. Playing weekly on the "Y" grounds, the boys are being managed by Oliver Metzger. Play opened on May 8th, with a victory chalked up for the first game. . . . The first of the men's golf tournaments, held on May 17th, will be followed by a second and third, slated for July 19th and September 20th. All will be held on the usual handicap basis. . . . The 13th Floor is planning a picnic for Friday evening, June 13th.

**HAWK-EYE HIGHLIGHTS:** Entering upon a new season, the Camera Club now boasts an active membership of 450. At its annual banquet in March, John Phelan was chosen to head up activities for the coming year. Last

month's activities included a talk by Fenwick Small, of the Sales Service Department, and an early Sunday morning hike at the Bird Sanctuary of the Burroughs Audubon Club. Adrian TerLouw of the Kodak Office has helped to line up an interesting program for the summer season. . . . The annual spring party of the Athletic Association, held on April 26th in the Kodak Office auditorium, was well attended. Jack Vass headed the committee in charge of activities. . . . Members of the Tennis Team are receiving instruction from Phil Michelin—classes being held every Wednesday night at Franklin High School.

### Guiding a Trusteeship

(Continued from page 5)

sacred trust. This sacred trust is implemented by literally thousands of rules of law. Nearly everything it does, and nearly every way it does it, is prescribed or limited by some law. In carrying on its business, it must obey these statutes even though in a particular case such obedience does not seem to be for the best interests of the city or even does not seem to be fair. The legislators make the laws, not the executive departments. If this were not so, we would have a government of men, not of laws. It is for the best interests of all concerned that public officials be limited by laws.

"For example, to pay claims without full and proper investigation, not only of their merits but of their legal validity, would be a violation of a trust and a violation of law. Regardless of how real the damage sustained may be, a claim may not be paid unless there is legal liability. The city government, as the trustee of the taxpayers' money, may waive no defense of the taxpayer, no matter how technical. Similar care must be exercised in the various other functions of the city government. The responsibility of advising all city officers and departments so they may not unwittingly violate any statutory provision, therefore, becomes a very important purpose of this office."





"FLIRT" Mexican Style: Earl Esty of Kodak Park won the Lovejoy Trophy with this splendid study. Other winners—pages 8-9



**Fleeing Bride...  
falling Bouquet—  
the movie camera  
got it all**

*Film cost only 10¢*



ONCE "expense" might have been a reason for doing without home movies.

But no more! Ciné-Kodak Eight, the "economy" movie camera, has made it easy for the most modest of budgets to support a whole lot of movie making.

Shoot with the "Eight," and each \$2 roll of movie film gives you 20 to 30 separate scenes—any one of which could catch the bride from the time she started up the steps until she turned and tossed her bouquet to the bridesmaids.

**This means movies at 10¢ a "shot."** 20 or more shots—each the length of the average newsreel scene—on a single black-and-white roll costing \$2, *finished, ready to show*. And full-color Kodachrome movies cost only a few cents more a scene.

From the famous Ciné-Kodak Eight-20 (illustrated)—only \$28.50 with fine *f*/3.5 lens and built-in exposure calculator . . . to the superb new cartridge-loading Magazine Ciné-Kodak Eight *f*/1.9 at \$95, the "Eight," as made by Eastman, is a beautiful, dependable, long-lived movie camera. At your dealer's . . . Eastman Kodak Co., Rochester, N. Y.

**Ciné-Kodak Eight only \$28<sup>50</sup>**

**MAKES MARVELOUS MOVIES AT EVERYBODY'S PRICE**

*In the spirit of the season: this advertisement will appear in "Time" for June 16th*