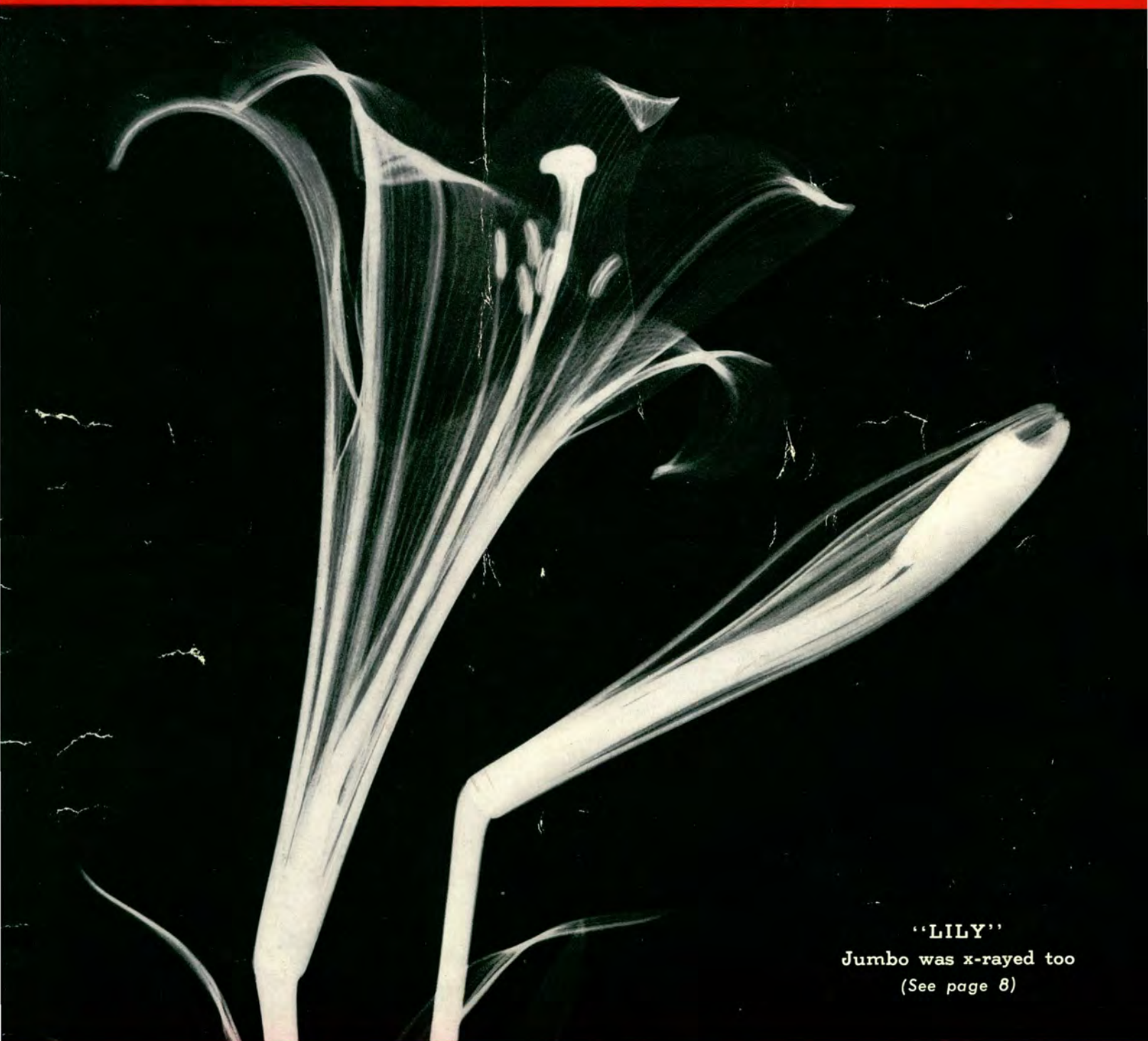


KODAK

A MAGAZINE FOR EASTMAN EMPLOYEES



"LILY"
Jumbo was x-rayed too
(See page 8)

SEPTEMBER 1940



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OLD FAITHFUL GEYSER

KODAK

Volume 19

SEPTEMBER 1940

Number 9

"The Spirit that Inspired Him"

An Appreciation of the Founder Of the Eastman Kodak Company

The article that follows is a reprint from an editorial that appeared in the "British Journal of Photography," July 21st, 1939.

IN TIMES LIKE THESE, when it is hardly an exaggeration to say that the whole world is preoccupied and anxious, doubting and troubled, it is an exhilarating experience to look back and consider for a few moments the stature, the attributes, and,

above all, the achievements of a man like George Eastman.

We have been led to do so by a long article in *Industrial and Engineering Chemistry*, from the pen of Dr. Walter Clark, bearing the title, "Growth of an American Industry around a Major Product." It is the story of the Eastman Kodak Company, of Rochester, New York. Maybe the fact that photographic materials are looked upon in America as a major product will cause surprise over here: if so, we can affirm that the claim is fully admitted and thoroughly justified, and, what is more, the story of how that came to be so is in large part the life story of the one man, George Eastman.

A Vast Debt

Just what photography and the photographic industry owe to him can never be computed; all that one can say is that the debt is as vast as it is incalculable. It is but natural in such a case to seek for evidence of some special power or genius, some magnetic quality the possession of which would explain the amazing success which attended his efforts. Yet, unless we are greatly mistaken, such a search will be in vain. What will be revealed will be a man of great determination but gentle manners, with high ideals and commercial as well as personal integrity, with an intense appreciation of the rights of others as well as his own, of simple habits and desires, and, above all, a philanthropist to whom great wealth brought but the greater opportunity to serve his fellowmen.

It was never our privilege to know George Eastman personally, but we number among our friends some of those who collaborated with him in the early years at Rochester, and



George Eastman, founder of the Eastman Kodak Company

Mother Nature Spells It



Wherever the traveler goes, he sees the familiar Kodak sign. Here's the word, "Kodak," as achieved by prankish nature—aided and abetted to some degree, we suspect, by the alert photographer

from them we have a picture, which, although communicated many years ago, is still fresh in our mind. It is that of one endowed with a singularly even and kindly temperament, slow to anger, but swift to bestow justice, keen to appreciate what tomorrow would want no less than what today called for. Farsighted with wisdom because always striving after simplification. Quick to recognize the value of applied science, yet patient with the often slow development which scientific work demands. Impatient only when quality or integrity were in question.

Apart from his life work, his interests lay in nature and music, and

later in furthering the study and practice of medicine, especially preventive medicine, and in fostering technical education. . . .

Today Kodak Park, Rochester, covers 400 acres, has over six million square feet of covered floor space, nine miles of streets and the same mileage of railways, and twenty-five miles of water mains. It has its own water works and filtration plant with a maximum capacity of a million gallons an hour, or even more than sufficient for a city of a quarter of a million inhabitants. It has the largest refrigerating plant in the world, with a daily output of 28,000,000 pounds of ice. Of its products there are 75 varieties of plates, plus 100 more made for special scientific purposes. There are 190 different kinds of film, 400 types of photographic paper and 100 varieties of cellulose nitrate or acetate. One hundred and forty photographic chemicals are produced in 633 packings, and over 3,000 synthetic organic chemicals are manufactured for research laboratories all over the United States.

Justice and Fair Dealing

What a monument to any man! Yet as the years pass we venture to think that it is by less material things than this vast fabric that George Eastman will be remembered. There is one feature of his life work that is specially worthy of note. Just as his great works spread out all over the world, here in England, in France, Germany, Hungary, Australia, and Canada, so, too, did his benefactions;

so, too, did that tradition of justice and fair dealing, that sense of partnership and fellowship among all who worked with and for him.

It is the thought of that great organization and of the spirit upon which it was founded and which rules it today that moved us to write at some length of the man who created it because there is a lesson for the world in the story. Not merely a lesson, but encouragement that the day of human endeavor toward other than purely material things is by no means on the wane. There are not wanting signs that the spirit which inspired George Eastman lives today; we know it here and we see frequent evidence of it, but now and again it is well to be reminded that almost every generation provides outstanding figures who in their lives achieve magnificent success, not by the possession of special genius, but by the steadfast practice of human virtues common to us all if we will but practice them.

Did You Know?

THAT THE "ATLAS MOTH," a native of India, Java, and China, often has wings a foot long? The moth balls and cannon please, James!

. . .

That by law, on the island of Madeira, if you cut down a tree you must plant one in its place? The scenery is unusually picturesque there, and the tree ordinance is one reason why.

. . .

That the first motorcycle, invented by W. W. Austin, of Winthrop, Massachusetts, in 1868, was driven by steam? The boiler was suspended amidships.

. . .

That if all the patents applied for by American inventors in 1938 flowed into the Patent Office in a steady stream, there would be one every two minutes, forty hours a week for the year?

. . .

That when safety pins were first put on the market they cost ten cents a dozen? Improved production methods have reduced costs so that now fifty can be bought for a thin dime.

Activities Calendar

September 13—Camera Club, first meeting of class in Photography 5—Elementary Sensitometry

September 14—Kodak Office men's golf tournament, at Locust Hill

September 18—Kodak Office Dramatic and Cinema Club meeting

Late September—Camera Works men's golf tournament, at Stafford Country Club

—Kodak Office girls' golf tournament, at LeRoy

October 3—Camera Club, first regular monthly meeting

October 7—Kodak Office Bridge Club, first fall meeting

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

—Kodak Office Recreation Club, opening of badminton season

"To Form a More Perfect Union"

★ We the people of the United States, in order to form a more perfect Union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity, do ordain and establish this Constitution for the United States of America. ★ ★ ★ ★

UP THE BROKEN COAST of the Carolinas and Virginia and over rutted inland roads came the fifty-five men. By packet boat and stage-coach they traveled slowly toward Philadelphia, to hold convention in that colonial metropolis of 28,000 people and the home of Benjamin Franklin, himself a delegate.

The crude accommodations of the city's hostelrys—the Indian Queen, the City Tavern, Mrs. House's boarding establishment—were thrown open to the two Pinckneys of Carolina, Hamilton of New York, Madison and Blair of Virginia, and their no less distinguished associates.

A Critical Time

These men must have been grave and preoccupied as they met in Philadelphia under the leadership of George Washington. It was a critical time in the history of the infant nation, and as delegates to a constitutional convention, they were entrusted with the future of the struggling States.

To understand the ominous condition of affairs in that year of 1787, we must go back to even earlier days in the life of the young republic. Eleven years before, when the colonies were barely started in their fight for independence, John Dickinson, of Delaware, had drawn up the Articles of Confederation, embodying a plan for union of the thirteen colonies. These articles were submitted for ratification in the following year—a nice example of Yankee intrepidity when you consider that the struggle for freedom was far from won at that

time. After the victory of Yorktown in 1781, the Articles of Confederation were adopted by the States, but during the next six years they proved a poor foundation on which to build a strong and enduring nation.

The Federal Government, then located at Philadelphia, had no practical power over the States. Burdened with a war debt of twenty-four million

dollars, it was denied the power of taxation. Threatened by outside enemies, it was denied the right to raise an army. Money and men could only be requisitioned from the States, and the government was unable to command their support.

At the same time, the States, torn by sectional jealousies, were deeply

(Continued on page 13)



Independence Hall, the birthplace of American freedom, sheltered the Constitutional Convention of 1787. Seeking a solution to pressing domestic problems, the state delegates drafted a "Constitution of the United States"

BOSTON • NEW YORK • MOORE • CHICAGO • KINGSFORD • PEABODY • TORONTO • SAN FRANCISCO • LIMA • HAWK-EYE • CAMERA WORKS
 BUENOS AIRES • RIO DE JANEIRO • SANTIAGO • BARRANQUILLA • HAVANA • MEXICO, D.F. • MONTEVIDEO • PANAMA CITY • SHANGHAI • HONOLULU
 MANILA • TOKYO • PEKING • LONDON • PARIS • VINCENNES • COPENHAGEN • LAGOS • HARROW • STUTTGART • DUBLIN • GLASGOW • COPENHAGEN
 DALLAS • SACRAMENTO • NAIROBI • KAMPALA • CAPE TOWN • JOHANNESBURG • CAIRO • BATAVIA • ATHENS • BOMBAY • HAIFA • SINGAPORE • RERUT
 ISTANBUL • ALGERIA • BRUSSELS • THE HAGUE • MILAN • ROME • MADRID • LONDON • LAUSANNE • GENEVA • VIENNA • PRAGUE • BUDAPEST • ZAGREB
 BUDAPEST • FARSA • GOTTENBURG • REYKJAVIK • OSLO • LAS PALMAS • HELSINKI • CASABLANCA • COLTITI • MALTA • MELBOURNE • WELLINGTON

Baby Brownie

A MEMBER of the Advertising Department tells this story. We hasten to pass it along, for it does seem to emphasize the value of instruction manuals.

Seems that our informer, while visiting at the cottage of friends, sauntered down to a crowded beach to enjoy a swim. Catching sight of a young lady about to photograph her dog with a Baby Brownie, he paused to observe unobtrusively her photographic endeavors.

Obviously this charming miss wasn't thoroughly familiar with her camera, for she couldn't seem to determine whether it was the round lens in the front or the round film window behind through which the picture should be made. Unfortunately for the success of her picture-taking, she resolutely raised the camera to position wrong side to, burying the lens in her cheek and sighting through the finder from front to back.

Having made an exposure in this rather unorthodox manner, she was on the point of repeating the procedure when our friend stepped up and tactfully suggested that there were other and more profitable ways of snap shooting with a Baby Brownie.

Happenings

A RECENT "digest of dizzy doings," compiled and prepared by Gladwin Hill, Associated Press feature writer, noted the following incidents:

"The City of Zurich, Switzerland, banned an American cowboy movie because there was 'too much shooting in it.' . . . And a human cannon ball from Askam, Pa., applied for service in the Air Corps because he was 'tired of artillery.'

"McKeesport, Pa., officials discovered that one of the city water-meter readers had just been guessing the figures for five years. . . . And after sweltering on one of the hottest nights of the year, the Klamath Falls, Ore., City Council discovered the radiators were on.

"A Scottsbluff, Neb., man got a hole-in-one and didn't make much

noise about it—because his wife had got a longer hole-in-one on the same course!

"At about the same time the temperature at Moran, Wyo., was 26, at Hampshire, Wyo., it was 105.

"A vulture was retired from the New York Zoo after 38 years because of—corns.

"A five-year-old Nebraska City girl got a set of false teeth, . . . and two movie stars set a camera-kiss record of 56.2 seconds.

"In New York, a 200-pound woman barricaded herself in a phone booth for several hours. . . . And the police were called to make a boy take his bath."

And, not that we want to go Mr. Hill one better, we'd like to record an incident we noted not so long ago: A youth emerged from an ice-cream parlor, ice-cream wafer in hand. He stuffed the wafer in his hip pocket, mounted his velocipede, and blissfully rode away.

Howlers

RESPECTFULLY SUBMITTED by our Schoolboy Howlers Department are the following choice morsels:

A tripod is what seeds grow in when there are three of them.

Radius is the distance you can get on your radio.

Periphery is what a submarine boat looks out of when it cannot see where it is going.

Oxygen is what you become when you are eighty years old.

Rations are the movements of objects, such as migrations, vibrations, gyrations, etc.

A marsupial is an inhabitant of Mars.

An orchid is what fruit trees grow in.

Omission

THE ABSENT-MINDED PROFESSOR of anecdote and cartoon fame had nothing on a gay group—many of them from Kodak—of whom we saw a good deal at a recent wedding. The festivities ran well into the night, and when we reluctantly dragged

ourselves off to our room, the bright young things were still going strong.

"Indefatigable bunch," we mused, enviously, as we puffed up the stairs. We had barely closed our eyes, or so it seemed, when came a knocking at our door.

"Golf! Golf!" cried a chorus of happy voices. It was a beautiful morning, crisp and clear—but we were tired, and with a hearty, "Golf my eye!" we went right back to sleep.

Several hours later, refreshed and full of pep, we wandered down to the breakfast table. The bright young things were all there, but their chatter sounded a little forced, the laughs leaned toward the hollow side.

"Greetings young'uns!" we boomed. "Had a good round this morning?"

"Ask Doc," was the gloomy reply. "He's the one who got us out there."

We asked Doc. His cryptic reply may not be recorded here; but it seems that the golfers—a baker's dozen of them—reached the course only to find that not one of them—not even Doc, mind you—had remembered to bring clubs.

Misunderstanding

FOR SOME TIME we've been meaning to tell you the following story, told us by a Kodak employee who desires to remain anonymous. It all happened a few years ago, when he was assigned, temporarily, to a new office.

"It had everything except a place to hang my hat," he said. "So, I called up and asked for a costumer. I noticed that my request seemed to puzzle the person at the other end of the line, but in a moment or so he assured me I'd have one as soon as possible."

When a week or so passed and the costumer had not yet made its appearance, our man called once more.

"It's over at the Camera Works for chromium plating and you'll have it in a few days," came the baffling reply.

And a few days later a messenger appeared in his office, bearing a large-sized, chromium-plated spittoon.

Activities In and Around the Plants

As Summer Bows Out, Kodak Pastimes Prepare to Start The Seasonal Migration Indoors

HAWK-EYE HAPPENINGS: About six hundred employees and guests turned out for the 22nd Annual Picnic of the Athletic Association, held at Willow Point Park. An entertaining program included races for all ages, ball-throwing contests for the ladies, special races and relays, dart throwing, tug of war, and dancing. Featured attractions were tennis exhibitions by city champions, and a doubles table-tennis match between crack Hawk-Eye and city players. It was the biggest outing in the association's history. . . . Largely as a result of able promotion by Messrs. Young and Greenauer, a sixteen-team bowling league has been organized. Play will start on September 12th on the alleys of the new Webber Hall, Plymouth Avenue South.

KODAK OFFICE HIGHLIGHTS: Plans are under way for the coming bowling season, and pins will start to fall late this month. Two men's leagues will bowl on Tuesdays at Franklin Hall. Chandler Kron and Phillip Fradl head the "A" and "B" leagues, respectively. The Girls' Bowling League, with Lois Augustine as president, will turn out on Tuesday evenings

starting early next month. . . . The K.O.R.C. will hold a fall dance about the middle of November. . . . The Dramatic and Cinema Club held its first meeting at a picnic at Crescent Beach on August 21st. Harris Tuttle heads the group for the coming year. . . . The Bridge Club will hold its first meeting on October 7th with a lesson at 6:45 p.m. and a practice session at 8:00. Play will start for the President's Cup on the following week. . . . The Home Bureau will begin its winter activities with the first of its Monday meetings late this month. Mrs. Scanlan is president of the bureau.

CAMERA WORKS ITEMS: The final men's golf tournament was held on August 24th at LeRoy. Places were determined on a handicap basis. . . . The Major Softball League team finished a close second for the season, winning twelve of its last fifteen games. As we go to press, the team is a strong contender for the city championship. The Camera Works entry in the Industrial League was in third place, having shown marked improvement since the beginning of the season. . . . The new shuffleboard and horseshoe-pitching courts are in great demand. Noontime schedules in three shifts are being followed under the direction of Bob Burchard. . . . With the Plant Softball League

moving toward the season's end, the Fourth Floor was leading the pack, with the First and Sixth Floor teams close behind. Play-off for the season's championship was to take place on the Kodak Park diamond. . . . The annual picnic of the Supervisors' Bowling League will be held at Island Cottage on Saturday afternoon, September 14th.

KODAK PARK REVIEW: Frequent showers failed to dampen the spirits of 203 golfers who competed in the second tournament of the season at LeRoy. Low-gross honors went to F. Harter, Building 29, with a net 76, while the low-net winners were: A. Glasoc, Class A; J. Burnett, Class B; and A. DiAntonio, Class C. Jack Johnston, of the Film Emulsion Coating Department, and a member of the K.P.A.A. team holding the Interplant championship, earned distinction in local golfing circles by winning the R.D.G.A. Senior Tournament, at Lake Shore. The annual girls' tournament will be held September 14th, at Lake Shore. . . . During August, the City Softball Tournament held the spotlight on the Kodak Park diamond, under the supervision of New York State Softball Commissioner "Tex" Erwin. The Park Team, present State Champions, did not compete in the city elimination, but defense of the state title began on August 30th. The winners are representing New York State in the National Tournament which opened in Detroit on September 5th. In the Twilight leagues, the Box Department is leading the Lake Avenue Diamond League; the Ridge Construction is ahead in the Ridge Field League. The Ridge Construction won the first half of the Noon Hour League. The newly organized Noon Hour League on the Ridge Road field is being led by Building 53. Building 30 and the Roll Coating are tied for third place in the Trick-workers League. . . . The K.P.A.A. Girls' Picnic at Willow Point Park saw approximately 250 light-stepping lassies joining in the games and dancing. . . . Dr. John Hecker successfully defended his Kodak Park men's singles championship, defeating John Schilling in the finals, 7-5, 2-6, 6-2.



Fair exponents of miniature golf at the K.P.A.A. Girls' Party, held at Willow Point Park last month

The Police-and-Fire Telegraph

Allows Our Personal Bodyguards To Go into Speedy and Effective Action When They Are Needed

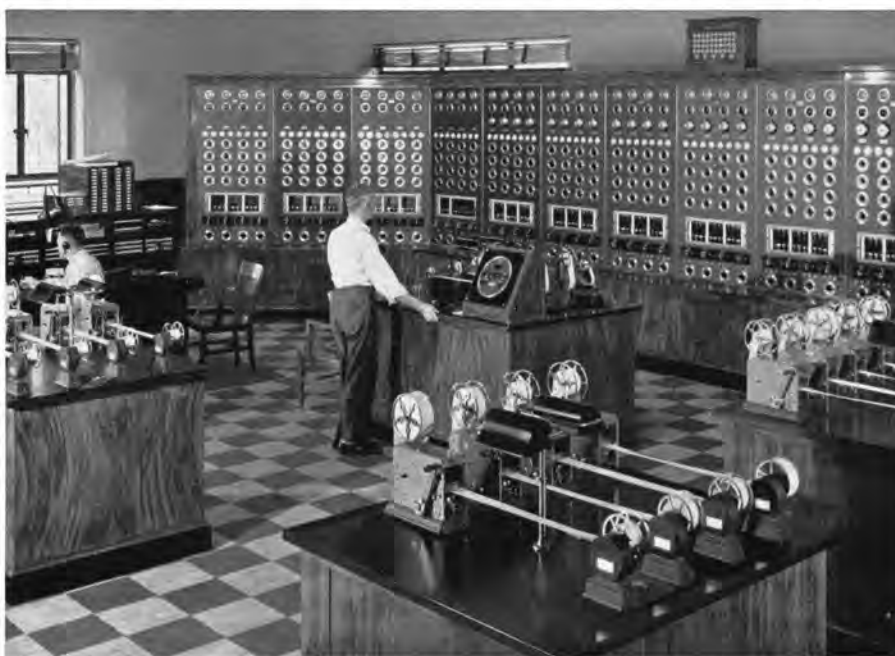
NERVE CENTER of the city's fire and police operations is the split-second communication system known as the police-and-fire telegraph. "Main 34," the fire telephone number, and "Main 59," the police, are familiar to every citizen. But these are only part of the communication network that links the fire and police forces with every section of the city.

Let's see this complex and important system in action:

All is quiet at the firehouse. The firemen go about their regular round of indoor tasks. Fire trucks shine like the pots and pans in a well-kept kitchen. The captain fills in his daily report sheet.

Suddenly, an alarm "hits," and instantly the entire building is athrob with action. Firemen hurry from upper rooms, slide down poles, and take their places on pumpers and trucks. Engines roar, sirens scream, and in a matter of seconds the fire-fighting battalion is "rolling."

Fire, like time and tide, waits for no man. That is why a complex system is needed to link every part of the city to fire headquarters and carry the grim warning without delay.



Nerve center of the fire-alarm system is this operating room in fire-alarm headquarters on Cumberland Street. From here, a sensitive network of more than two million feet of wire spreads to every part of the city

All of us are familiar with the red fireboxes that dot the city's streets. There are 551 of them all told, each bearing a distinguishing number. To send an alarm, you break a small glass, turn a key to the right, open the door of the box, and pull a lever.

At the fire telegraph headquarters, on Cumberland Street, this is a call to action. On a large board, a light flashes, indicating which of 36 circuits

is bringing the alarm to the station. A small bell automatically beats out the number of the box and an automatic recorder punches the number on a paper tape.

The operator on duty sets the number on a dial, and presses a button that relays the alarm to the firehouses. He then repeats the alarm over another set of dials, to make sure that it gets there.



Twenty-four-hour-a-day vigilance is maintained in the fire-alarm headquarters and in every firehouse and police precinct. Here, a fire-telegraph operator is shown beside one of several elaborate alarm-recording devices

At the Firehouse

Meanwhile, at the firehouse, the alarm first sent from the central station rings a bell and punches the box number on tape. At the first tap of the alarm bell, the fireman on watch pushes a button that rings a gong and turns on all the lights in the station. After the firebox number has been recorded twice on the tape, the engines "roll." Then comes the clanging that most of us think of as the fire alarm. This is the alarm that the operator sent out to make sure that there was no failure in the first one: it usually rings to an empty house.

Last year, 744 fire warnings were flashed from the fireboxes to the central alarm board; 1,802 warnings were received by telephone.

Besides handling the fire-alarm system, the police-and-fire telegraph

bureau has other—and equally important—jobs to perform. Actually, it maintains four complete communication systems: the fire alarm, fire telephone, police telephone, and police radio. Each of these protective services is “on tap” 24 hours a day. The bureau mans the switchboards; maintains the two-million feet of wire in the fire-alarm system; tests each of the 551 fireboxes every month; synchronizes and services the traffic lights at 151 intersections; and operates Station WPDR, the police radio. To maintain these various services, a staff of thirty is required. With the exception of three general helpers, this staff is appointed from civil service lists by the commissioner of public safety.

At Police Headquarters

The police division of the bureau of police-and-fire telegraph operates from police headquarters. Direct hook-ups are maintained between the telephone switchboard and the City Hall, the Street Railways and other services, as well as, of course, the fire headquarters. A prowl car is sent in response to every fire alarm, in accordance with police regulations. Another important circuit is the bank-alarm system, designed to bring the police officers on the scene in a twinkling if ever hold-up men or burglars should pay any of the city's banks a visit.

Each day, and each night, brings many different calls over the police telephone. Young Tommy Twirp has



The switchboard at the police end of the fire-and-police telegraph system. Here are received many calls from citizens each day, ranging from trivialities easily handled to urgent calls for police assistance

somehow managed to lock himself in the bathroom—“Won’t you please send an officer over right away?” implores his worried mother. “I’m calling to report a tree down in my street.” “There’s a strange man in my back yard and he refuses to go away.” “Accident at High and Garrison, looks bad.” “Boys playing ball on Main Street.” . . . So go the calls, many of them, every day and every night.

As each call is received, the telephone operator jots down on a special form the time, the name and location of the caller, the nature of the complaint, and other details. This in-

formation is then passed over to the police-radio operator who is in constant touch by two-way radio with the prowl cars. He glances at the sheet, then turns to the microphone: “Thirty-two,” he announces. “Thirty-two,” comes the response from the prowl car that bears that number. “Go to 1934 Orchard Boulevard. Child locked in bathroom.” “Thirty-two” repeats the message, and is on his way to restore Tommy Twirp to his anxious mother. When he gets back to his precinct, he will radio his return to headquarters.

Speed Is Vital

While special accident cars are allotted to various sections of the city, a precinct car always accompanies them when the dread appeal, “Accident, come immediately,” is received. When an emergency sick call is received by the police operator, he calls a city ambulance. . . .

Speed is the watchword of the bureau of police-and-fire telegraph. In a matter of seconds after an alarm is received, the firemen are on their way to protect life and property; in a very few minutes after a citizen picks up his phone and calls “Main 59,” the prowl car in his district is rushing a police officer to his aid.

The total operating cost of this important subdivision of the Department of Public Safety last year was \$85,413—about 26 cents per capita.



This is Station WPDR, the broadcasting system of the Rochester Police. Installation of two-way radio communication, bringing prowl cars in direct conversational touch with headquarters, took place last year

The Case of the Irritable Elephant

And Several Other Interesting Pieces of Keen Detective Work, As Performed by a Super Sleuth

"TOUGH AS AN ELEPHANT'S HIDE" means plenty tough—but not where the x-rays are concerned. Witness the Case of the Irritable Elephant:

Jumbo, a captive beast employed on a rubber estate in Ceylon, had become increasingly restive and dangerous. He was obviously in pain. But how to find out what was wrong?

Arrangements were made to have him x-rayed. After a march in easy stages, he reached Colombo General Hospital, where he was examined in the presence of many doctors, newspaper reporters, and other spectators.

There was a nervous moment when Jumbo tried to touch the delicate x-ray apparatus with his trunk, but he remained philosophically passive during the examination. The radiographs revealed a small bullet—relic of his wild jungle days—which had penetrated his skin near the ear. It was successfully removed, and Jumbo returned to his work on the rubber plantation, serene and safe.

The x-rays have long been indispensable as a diagnostic aid to



Photographs show how a painting, attributed to Pourbus the Younger, appeared before (left) and after cleaning

doctors and dentists, but their usefulness by no means ends within these fields. Take the Case of the Altered Portrait for instance:

For 31 years a portrait of Laura Secord, the Canadian heroine, hung in the Ontario Legislature's Hall of Fame. And for almost 31 years rumor had it that all was not what it seemed to be—that the portrait was originally a likeness of Sir George Ross, one-time premier of Ontario.

The premier's portrait, so the story went, was painted and submitted to

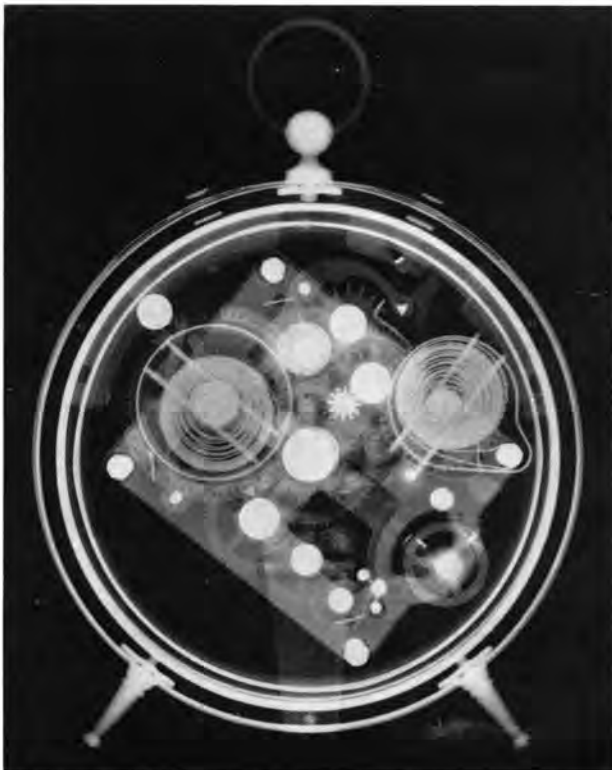
the legislature, but the lawmakers would not authorize the expenditure, and it was sent back to the artist.

The painter then submitted the portrait of Laura Secord, who gained fame by walking 21 miles to save the British forces in the War of 1812. This was accepted. But soon the rumor began. . . .

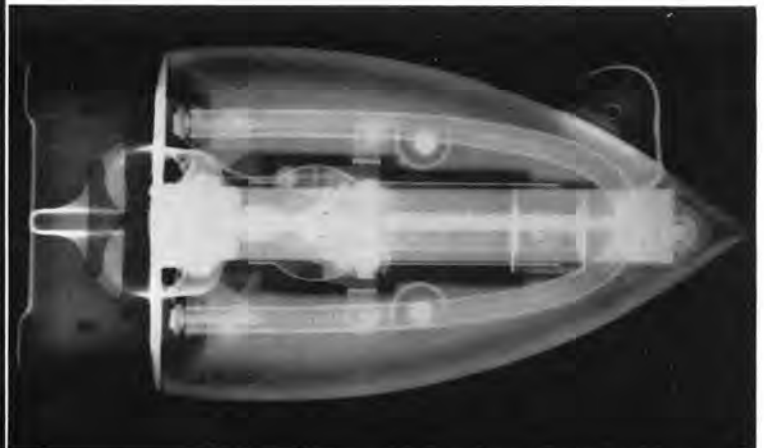
Eventually, in February, 1936, to be precise, radiography of the portrait, under the supervision of an art expert, revealed that the good Laura Secord was indeed Sir George in disguise. The artist, according to the reports, had merely painted out Sir George's beard and added a bonnet and a lace collar!

The x-rays have rendered yeoman service to the art expert. Writing in *The Artist*, Alan Burroughs, of the Fogg Museum of Art at Harvard University, says:

"We know that any picture may have been painted by an old-time



Here's how two familiar household objects appear under the relentless scrutiny of the x-rays. Left is that well-nigh indispensable bedside chanticleer, the alarm clock, innards bared for all to see. Below is an electric smoothing iron, similarly exposed in an excellent and interesting x-ray study. Radiography is a most useful tool in industry, where its applications are becoming wider daily





Radiograph taken before picture was cleaned shows condition of paint. Courtesy: Metropolitan Museum

artist, by a pupil of the master, or by a well-meaning copier; or it may have been repaired out of all semblance of its original condition by a restorer who felt it his duty to supply what time, bad material, or accident had accomplished in effacing the original surface of the paint. Or the painting may be a forgery, made recently for sale to a more or less innocent buyer.

"Each of these possibilities will leave some clue as to the truth on the x-ray film. If the picture is original in some parts and restored in other parts, the x-ray will indicate those areas. If the painting is painted by a copier and then completely repainted by another who wished to improve the work, the x-ray will disclose that fact. The best use of the new method depends only on understanding the clue when it is observed.

"The powerful x-rays penetrate wood or canvas, paints, varnishes, glazes—everything of which a picture is made, excepting heavy coats of white lead or zinc. The film is exposed

by the rays, so that the shadows of materials used in the painting are caught on the film according to the density of the materials themselves and their thicknesses. White lead, being very dense, is impervious to short exposures and leaves a very heavy shadow. Lamp black is shot through by the rays so easily that it leaves no trace on the film. Earth colors and mineral colors, with varying densities, cast shadows of varying strength. Modern chemical paints and vegetable colors cast shadows so faintly that they can scarcely be seen.

"This, then, the x-ray reveals: It shows the difference between several kinds of paints. It shows how these paints were put on, it shows what the interior of the picture is like, it tells what is the condition of the surface on which the paint is applied, it calls attention to any changes in the course of painting the picture, it outlines sharply all cracks or holes hidden under the restorer's brush, and it records something of the artist's style through and through."

No less eagle-eyed are the x-rays

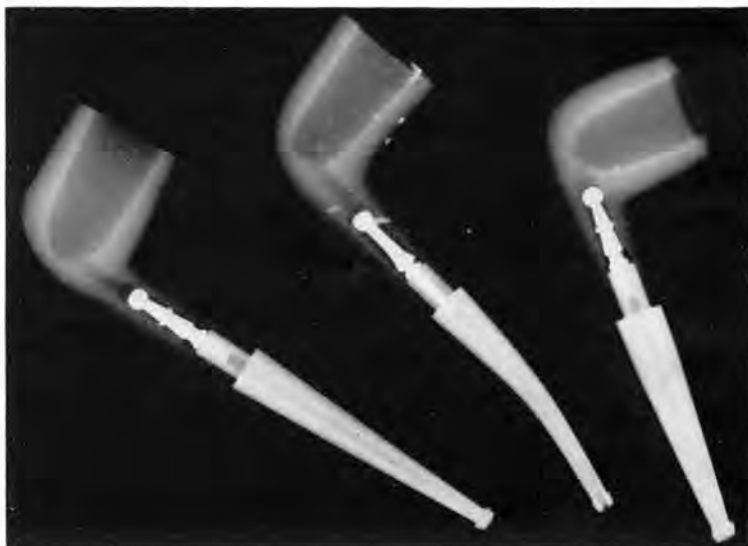
At right is a radiograph of that intriguing member of the genus *Hippocampus*, the sea horse. It aptly demonstrates the value of the x-rays in biological studies. By this method, the biologist is enabled to study every bone, even the finest, of the subject in which he is interested, and dissecting is rendered unnecessary. The radiograph below shows what pipes look like under the skin, important knowledge for the manufacturer, who is interested not only in good grains but also in freedom from strain or other manufacturing flaws



In veterinary work, too, the x-rays render highly important service. A horse's hoof is shown here

in the service of industry, where they find many applications, from the examination of the interior structure of airplane struts to determining the symmetry of the elastic rubber centers of golf balls (watch that bounce!).

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THE EDITOR'S PAGE

Government in 1800

UNDER THAT HEADLINE, a clipping that comes to our desk just before we go to press makes an interesting footnote to the article on page 3. The story it tells goes like this:

On May 16th, 1800, President Adams issued orders for removal of the government from its pleasant quarters in Philadelphia to Washington, which seemed, by contrast, a camp in the wilderness. The six cabinet officers and their 132 subordinates made their journeys overland during the summer. In October, the government archives arrived, occupying about six large boxes. These boxes, together with the official office furniture, were brought from Philadelphia by water in a small boat. The boat tied up at the mouth of Tiber Creek, the sluggish stream that wound through the lowlands and swamp which extended from the hill on which the Capitol was placed to the smaller hill a mile to the west on which the President's "palace" had been built.

The whole population of three thousand turned out to greet the arrival of the sailboat. Amid cheers, the ringing of bells, and occasional blasts from an antique cannon, the cargo was brought ashore. The portion belonging to the Treasury was taken to a two-story brick building, which looked rather like a warehouse, and stood at the southeast corner of "the President's grounds."



"I suspect that television station they built near by."

This cartoon is reproduced by the special permission of "The Saturday Evening Post," copyright, 1940, by the Curtis Publishing Company, Philadelphia

Records belonging to the Army were taken to the War Office, a similar brick structure, only partly completed, at the southwest corner of the President's grounds. The records of the postal service, the head of which did not then enjoy cabinet rank, went into a partly completed private house in which only four rooms had been plastered. The Secretary of State, the Secretary of the Navy, and the Attorney General had to operate from their lodgings.

And that's how Washington "made the map." Now it is saluted as one of the loveliest, and most dignified, capitals in the world.

Walter L. Farley

THE DEATH ON August 11th of Walter L. Farley, superintendent of the Finished Film Department, was a profound shock to his friends and colleagues. His sudden passing came two days after he was stricken with pneumonia.

Mr. Farley was born in Rochester in 1883. He attended the old Rochester Free Academy and Pratt Institute, Brooklyn, where he specialized in machinery design. He was superintendent of the Eureka Foundry Company for some years before he came to Kodak, as assistant superintendent of the Finished Film Department, in 1912. He became superintendent in 1928.

Mr. Farley's son, Walter L. Farley, Jr., is an employee of the Company in the Hollywood offices.

Appreciation

ROCHESTER EMPLOYEES responded generously indeed when Walter G. Bent, head of Kodak Limited, cabled two months ago to ask if they would take into their homes, for the duration of the war, some of the children of employees of the British Company. The first contingent of more than a hundred children has already made the long journey from Kodak in Harrow to Kodak in Rochester.

A letter from Harrow reads: "To appreciate what relief the splendid and spontaneous offer of assistance from the Eastman Kodak Company has given, it would be necessary to be in England or, better still, at Harrow, today. The news has not only made all employees at Kodak realise just what great friends they have on the other side of the Atlantic, but it has also caught the imagination of the press. One paper I saw had the story in big headlines. Moreover, it has made us over here realise more than ever how close are the bonds of comradeship that exist in the Kodak organization. . . ."

Housekeeping for Seventeen Hundred

You'd Be Surprised at the Work Required to Maintain an Office Building in "Apple-Pie" Order

PERHAPS YOU'VE GONE down State Street in the dead of night and noticed many of the nineteen floors of the Kodak Office cheerily ablaze with light. If you assumed that someone had carelessly neglected to turn them off, you were entirely mistaken. Even at midnight and into the small hours of the morning, there's work to be done at the Kodak Office. While you're cozily asleep in your bed, the night force of the Maintenance Department is doing a gigantic job of housekeeping.

Through the day, upwards of seventeen hundred employees are working in the different departments of the Kodak Office. Their comfort and working efficiency depend to a large extent on the attention given to the offices in which they work. Clean floors and windows, well-arranged furniture, proper ventilation and heating, good lighting, and regular elevator service are only a few of the services which the Maintenance Department works twenty-four hours a day to supply.

On the Job

Every night of the work week, as office employees clear their desks and leave for home and dinner, the Maintenance Department starts to clean up and make things shipshape for the coming day. Wastebaskets are emptied, windows closed to shut out dirt, lights and floors cleaned, and furniture dusted. Between 5:15 P.M. and 1:45 A.M. the night crew moves along, leaving each office neat and tidy.

But this nighttime routine isn't the Maintenance Department's only responsibility by a long way. All through the day there are men on call to handle emergency orders. A radiator trap is leaking, . . . an electrical switch has broken down, . . . office equipment needs to be shifted from one floor to another—promptly some member or members of the department are assigned to the job. A carpenter, plumber, electrician, painter, steam fitter, and telephone repairman are on constant duty to handle promptly every type of call.



It takes a great many services to keep an office running smoothly. Such requirements as lighting, heating, ventilation, telephone and elevator service are regularly handled by members of the Maintenance Department

Window washing is another important task for the Maintenance Department. Three employees devote all their time to keeping hundreds of large windows clean and shining.

Jobs likely to cause interruptions in the office work—alterations in office layout, soundproofing of ceilings, changing of telephone connections, and so forth—are done at night and during the week end. A complete department—furniture, files, and all—can be moved without the slightest inconvenience or loss of time to its members.

At night, on holidays, and over the week end, watchmen regularly make their rounds through the buildings as a precaution against fire and trespassers.

Facts and Figures

The extent of the work done by the seventy-five members of the Maintenance Department may be judged by the amount of supplies required for their operations. Over a year's time, they handle almost 3,000 pounds of powdered soap, and nearly 2,000,000 paper towels. They service over 3,700 lighting fixtures, more than 400 electrical motors and machines, and about 700 telephone stations. Every year they salvage 600,000 pounds of waste paper. In the tower

building alone, they bring four elevators to more than 1,750,000 stops a year while running them a total distance of more than 14,500 miles.

One of the homey duties of the department is the setting of mouse-traps to catch nocturnal callers. And not long ago, the department had

(Continued on page 16)



Keeping the various offices in close touch with one another is largely a matter of adequate telephone service. At the Kodak Office alone, there are nearly eight hundred telephone stations to be serviced

Stretching Time Like a Rubber Band

The Movie Camera Will Record Action That Is Too Fast Or Too Slow for the Human Eye

WHAT IN THE WORLD could the stick for a candy sucker, the wheel of a locomotive, and the rib of a ship at sea possibly have in common with one another? It isn't really our purpose to tax your imagination with this question. But if we were to pop right out with the answer you'd probably be more confused than ever. For it appears that these three unrelated things have had the common experience of crossing paths with a movie camera. Not a standard Ciné-Kodak, out for pictorial effects, but a specially designed or altered Ciné-Kodak, out shooting for trouble . . . but let's get along with our story.

Better Methods, Products

Through his scientific knowledge, his manual skill, and his inventiveness, man has produced some very wonderful things in this industrial age. The products of his machines and instruments have been made possible by a remarkable development of precision methods. Nothing ever seems good enough to suit him; he's forever trying to make things better. Each year automobiles are built to run more smoothly and give

longer service; clothing is made more comfortable and from better materials; radios give increasingly better reception; and foods grown far away come to the table with garden freshness. These advances are all the result of greater precision and better techniques developed from year to year in man's way of doing things.

Eye Can't, Camera Can

But it must be remembered that a great many problems must be solved in clearing the way for such progress. One of these problems is the inability of the human eye to see and follow some of the faster processes and operations which must be so accurately controlled. Machines may run too fast, and plants certainly grow too slowly, for the human eye to observe their action. Because of this visual limitation, important information was once denied to workers in many fields. But now the movie camera, through its ability to extend or contract time, is serving as a substitute for the eye. It is contributing more and more to the refinement and performance of many man-made products.

We all know how a movie camera can play amazing tricks with time—how a slow-motion camera can cut down flashing speed and stretch it out

over time, and how time-lapse photography can turn imperceptible plant growth into a motion visible to the eye. We know how these things are done—but we probably haven't considered how they can be utilized to improve the quality and correct the faults of our industrial products.

To better understand how the movie camera plays its role as a booster of improved products, it will be necessary to go far afield.

Some time ago, a large manufacturing concern decided to conduct exhaustive tests on the action of locomotive drive wheels. To do this, it was necessary to observe the action of the wheels at high speed. That *was* a problem, for even if an observer could be safely put in a position to watch them, the speed of the wheels wouldn't allow him to see anything clearly.

Slowing 'Em Down

The Eastman Kodak Company was appealed to for help. One of our mechanical engineers was promptly dispatched to the scene. On special platforms between the cowcatcher and pistons, he mounted motor-driven high-speed movie cameras and focused them on the driving wheels. Down a straight track the engine roared while the cameras, controlled from the baggage car, watched with keen eyes to see what happened. When the film was developed and projected, those speeding wheels had been reduced to a leisurely gait. Their performance on the rails could be seen clearly. Railroad travel has been speeded up and rendered safer as a result of the observations of those high-speed cameras.

Sucker-Stick Trouble Solved

And take thought of those safety sticks for a candy sucker. A manufacturer had designed an ingenious machine for rolling the sticks out of paper. These were good sticks, worthy to hold the finest candy sucker, but some of them were frayed at the ends when they came off the machine. It was perfectly obvious that something wasn't working properly, but the machine operated entirely too fast for the eye to discover the trouble. What to do about the matter?



Preparing setup for slow-motion filming of a locomotive drive wheel in action. On the improvised platform between cowcatcher and piston is the Eastman technician who co-operated in obtaining highly successful results



Two specially designed Ciné-Kodaks, electrically controlled from the baggage car, on side of locomotive, with telephoto lenses focused on the front drive wheel



High-speed motion-picture photography is frequently used in our own plants to observe action. This is a shot of a stock Ciné-Kodak under operating tests

Again, our technician to the rescue. Slow-motion pictures of the machine in operation spied out the trouble in jig time, a cam was repositioned, and young America had nothing further to fear about the supply of paper sticks for its suckers.

But the ability of the movie camera to slow down motion isn't the only reason for its value as a trouble shooter. Take that straining rib of a ship at sea. When a boat is going through its test runs, strain gauges are installed at various positions to indicate the amount of stress developed by pounding waves and rapid turns. An observer can easily make recordings from each of these gauges, but it is essential to have all the recordings perfectly synchronized with one another. That was a practical impossibility until the movie camera offered a solution. Now eight or ten cameras can be focused on strain gauges throughout a ship and electrically controlled from a central control point. When the tests are over and the film developed, the recordings of all the gauges at any specific time can be readily compared with one another. The art of ship-building forthwith enjoyed a boost from the movie camera.

Time Harnessed

Here, then, are three examples—they can be multiplied many times—of how men have learned to check and improve their work by letting the sharp-eyed movie camera observe motions which the eye cannot follow. Time has been harnessed and speed

reduced or raised to visible motion.

In our own plants, quality control, technical improvement, and even the safety program are leaning more and more heavily on this dependable accessory to human vision.

A More Perfect Union

(Continued from page 3)

bemired in local difficulties. Paper currencies, all but worthless, were flooding the country and forcing business into chaos. Discontent, rife among the people, had flared into open rebellion in Massachusetts. The Union was threatened with complete and final disintegration. . . .

Crushing indeed were the problems that the Philadelphia assemblage undertook to solve. But they were ready for them. The rigors of colonial life, the bitter struggle for independence, and the arduous work of guiding the young nation had tempered the delegates with qualities of wisdom and courage such as the world has rarely seen.

Out of that summer-long convention of 1787 came the Constitution of the United States. It provided for a strong central government, not of states, but of the people. By its provision for a separation of powers, it zealously guarded against political corruption and the infringement of personal liberties. A two-house legislature was designed to give both large states and small an equitable representation. An executive branch was created to enforce the laws of the people. A judicial branch—headed by a Supreme Court—was established.

Within the articles of the Constitution we can find far more than a mere code of laws. Read with sympathetic understanding, it reveals the creed, the hopes, and the aspirations of a free people—a people devoted to the preservation of their liberties against every threat.

Having finished their work, the delegates submitted the Constitution to conventions elected by the people of each State for ratification. Months of debate followed. Hamilton, Madison, and Jay, throwing themselves into the battle for ratification, produced the Federalist papers, which remain the most eloquent and able arguments for our form of government.

Ratification of the Constitution—the consent of nine States was required for its adoption—proceeded slowly. Finally, on June 21st, 1788, New Hampshire became the ninth state to sign, thus making it the law.

A Firm Foundation

A century and a half have passed since then—a relatively brief period in the long history of civilization. The original thirteen states have grown to forty-eight. A four-million population has increased to more than thirty times that number. Under the initiative and drive of personal liberty, a free people have built a strong and prosperous nation. Civil war and other crises have sometimes menaced the structure of our government, but a firm foundation—laid by those fifty-five men at Philadelphia in 1787—and the alertness of the people have preserved this nation against every threat that has arisen.

Cottage: Collapsing Contest



This snapshot was made during a balloon-bursting competition among Camera Club members at the club's cottage on Lake Ontario. About 240 members bought season tickets this year, and what with volleyball, badminton, horseshoe-pitching tourneys, and beach parties, it's as lively a spot as you'd find in a day's walk. Hikes to Allegheny State Park on August 3rd and to Old Forge over Labor Day were other highlights of the summer season. First monthly meeting of the Camera Club's 1940-41 season is scheduled for October 3rd. Attendance last year averaged 500 a month, with a peak of 900 in December, officials of the club announce

Chin Up and Chest Out's a Good Rule

IT MAY BE that the Pollyanna philosophy of a recent song hit, "The Best Things in Life Are Free," was a little too broad in its assertions. While it's quite true that many desirable things don't cost money, the fact still remains that you can't pick them off trees, either. They often have to be paid for

in terms of hard work, regular habits, concentration, patience, and self-denial.

This is certainly true for the individual who wishes to acquire and maintain a correct posture. While it's one of the most valuable possessions to be had, and while it doesn't cost

money to acquire, it does sometimes demand a good deal of determination and effort. Nevertheless, good posture is worth many times the cost. It's an aid to good health, attractive appearance, tireless vitality, and even a feeling of confidence and self-respect. The body that is held in proper position generally works better, looks better, and feels better.

Just Remember

The factors which help to maintain good posture and correct faulty posture should be kept in mind. First is the body balance that results from an even distribution of weight about an imaginary central axis following the backbone up the trunk. When in motion, the weight masses of the body are shifted by the muscles to maintain balance.

Exercise gives the muscles practice in moving the bones with speed and ease. Walking, and participation in games and sports, will normally supply all the exercise needed by a healthy person. But special and corrective exercises may sometimes be necessary to correct faults in posture.

Poor posture and fatigue go hand in hand. Work and play should never be carried to the point of exhaustion.

Inadequate nutrition, resulting in poorly developed bones and muscles, leads to poor posture. That's why growing children should be given one of the fish-liver oils to supplement the Vitamin D obtained from ordinary foods.

Clothes Right?

Tight clothing and improperly designed furniture are common enemies of good posture. Clothing should allow freedom of movement; shoes should be carefully fitted for comfort and, when necessary, for proper arch support.

Defective eyesight, impaired hearing, bone defects, and even a secret unhappiness can cause poor posture. Emotional conflicts and worries, hurt feelings and grudges will tend to make a person careless of the way in which he holds himself.

Actually, there's a lift to be had in standing and walking erectly—chin up and chest out, abdomen in and feet straight forward. Graceful movement and firm balance pay valuable dividends in joy and contentment.



If you want to observe correct posture at its ceremonious best, just watch a parade! But to enjoy its benefits fully, correct posture should be exercised day in and day out by everyone, young and old

OUT OF THE HAT

Cricketer



Horace W. Blackwell: it's just an old custom

WHAT BASEBALL is to an American, cricket is to an Englishman. In one form or another, it has been played on England's green turf since the middle of the 13th century. Its name, according to the great Samuel Johnson himself, is derived from *cryce*, the Saxon word for a stick.

An enthusiastic exponent of this venerable game is Horace W. Blackwell, of the Camera Works. Mr. Blackwell has played each season since 1905, when he first carried his bat for the Burwell XI, his home-town team. He came to this country in 1911, and to Kodak in 1912. He is secretary of the Rochester Cricket Club, which he joined 27 years ago.

With at least one fixture a week, the club follows a busy schedule from the latter part of May through September. Interest in the game is growing, Mr. Blackwell reports, and with the exception of a few engagements with Canadian elevens, the fixtures are with teams from near-by cities. Two states, he points out, meet annually on the cricket field: Rhode Island and Massachusetts.

The Brooklyn Cricket Club is only slightly less famous than that city's noted Dodgers.

The United States has produced some outstanding cricketers, Mr. Blackwell reminds us, notably the Newhall brothers, who shone in the seventies, J. A. Lester, who captained the renowned Philadelphians in 1904, and J. B. King, who was rated one of the best bowlers in the world. The first cricket match recorded in this country was at New York in 1751; and the first professional team that ever left England toured here in 1859.

Mention of such famous cricketers as Hobbs and Sutcliffe and Hammond starts Mr. Blackwell off on an intriguing trail of reminiscences. Among his boyhood heroes was K. S. Ranjitsinghji, the late Jam Sahib of Nawangar, who was one of the greatest batsmen of all time. "Ranji" would place a gold sovereign on the middle stump of the wicket, take his position, and challenge any and all bowlers to knock it off, the one who succeeded in doing so to get the money. "It was as safe a challenge as was ever made," Mr. Blackwell says with a smile.

Many persons think of cricket as a slow game, but when Mr. Blackwell settles down to a description of the various styles of bowling—calling for amazing control of the ball—and batting, it sounds anything but slow. Actually, the cricketer, no less than the ball player, must develop perfect muscular co-ordination.

"And if we do take time out between innings for a spot of tea," says Mr. Blackwell, "it's just an old and very refreshing custom."

Reporter

DAVID R. BROWN, of the Advertising Department, likes to recall his not-too-remote boyhood in a small town in central Kentucky. In those days, that section of the state was not immune from "moonshining" activity, and many and humorous were the escapades of the "knob-country" farmers in their not-too-infrequent skirmishes with the federal agents.

"This outlaw industry had its amusing effect on educational progress, too," Mr. Brown remembers. "A gangling lad who attended our high school had never enjoyed a high grade in his studies. One day, in writing an English composition, he astutely chose a subject with which he was thoroughly familiar. His paper, 'How to Make Moonshine Whiskey,' was really a humdinger, and our schoolmarm was compelled to rate it highly for its obvious technical accuracy."

After leaving college, Mr. Brown wrote for his home-town newspaper—a weekly founded by his father in 1900—for three years. The paper ran from eight to twelve pages an issue, and he was both editor and reporter. "It was lots of fun," he says.

Next, Mr. Brown joined the reporting staff of the Louisville *Courier-Journal*. One of his assignments for that paper took him down, with pencil and camera, into the depths of Mammoth Cave, probably the most famous cavern in the world.

It seems that two guides, while doing some exploring during a bus-

(Continued on page 16)



David R. Brown: it was lots of fun

Softball, Soccer Champions



Champions of the Rochester Major Softball League: back row, from left, Castle, Flynn, L. Gallagher, Streb, Gears, Coach Coogan, and Beane. Center row, Saver (mascot), Farrell, Tinsmon, Witzigman, and Slattery. Front row, Stevens, Sparks, Krembel, Reisinger, and Manager Minella. The following members of the team were on vacation when the picture was taken: Clark, Sutphen, Norton, and J. Gallagher



Rochester and District League Soccer Champions: back row, from the left, Hauser, Flynn, Burmeister, Jutsum, Cummings, Cunningham, and Hawkins. Front row, Zubert, Woods, Gray, Wheeler, Lembeck, and Manager Fyfe. Team members absent when this photograph was taken: Darling, Williamson, Hoobing, and Gray

The Irritable Elephant

(Continued from page 9)

The higher the voltage of electricity used, the greater the penetrating power of the x-rays. Often more than 200,000 volts must be employed in order to penetrate metals

and reveal their internal structure.

Some inspections, such as that of foods, necessitate the use of fluoroscopic apparatus, designed for continuous duty. In such inspections, the x-ray tube is usually mounted below or behind a moving belt that carries the articles between the tube and a

chemically treated screen. The chemicals on the screen emit a greenish-yellow light of an intensity depending on the x-ray energy that reaches the screen. Thus, a shadow image of a package of candy, for instance, would clearly indicate any foreign body that might have been included in the package by accident.

An especially interesting use of the x-rays is in the botanical field, where they reveal the delicacy, the complexity of structure, and the beauty of line and form of flowers and the plants that bear them. Rays that are less penetrating than those normally employed are used in this work.

These rays find industrial uses too: cork, felt, plastics, and wood have been successfully examined by soft x-ray methods.

Out of the Hat

(Continued from page 15)

man's holiday, came across the perfectly preserved body of an Indian. Reconstructing the red man's story, archeologists reasoned that he had entered the cavern more than a thousand years ago and, while chipping gypsum off the walls, had been struck by a falling boulder. Discovery of his body was rated one of the most fortuitous and important events in American archeological records, and Mr. Brown is duly proud of his scrapbook of pictures and newspaper stories of the event.

Housekeeping

(Continued from page 11)

to match wits with hungry pigeons. Seems that after the searchlights atop the tower are cleaned, the lenses must be caulked to keep out the water. The caulking in use proved to be a great delicacy to feathered visitors and a new type had to be sought out.

The Maintenance Department offers still another service beyond those we've mentioned in behalf of the well-being—and peace of mind—of office employees. On the first floor, it maintains a Lost-and-Found Department where mislaid articles—purses, glasses, billfolds, rubbers, and innumerable other things—are safely stored until their grateful owners drop in to identify and claim them.



"AROUND THE CAMPFIRE": scenes like this afford excellent picture-taking opportunities



Life is a movie... save its fleeting moments with a movie camera

LIFE flashes by so fast . . . how often you wish you could recapture some precious moment, to experience it more fully.

With a movie camera you can. Home movies bring back the very feeling of past events—their charm, interest, change.

Today hundreds of thousands of people are learning the fascination of home movies. Own your own movie camera—have the thrill of making living records for the future.

Only Eastman gives you complete equipment and service . . . Ciné-Kodak—the home movie camera exactly suited to your needs . . . Ciné-Kodak Film . . . Processing that's convenient and included in the price of the film . . . Kodoscope—the projector that shows your movies brilliantly—Eastman all, and all designed to work together.

Your dealer will show you the range of Eastman home movie equipment and project sample movies for you . . . Eastman Kodak Company, Rochester, N. Y.

KODAK'S NEW COLOR SHOW—AGAIN THE HIT OF THE NEW YORK WORLD'S FAIR



Millions of people have marveled at the beauty and drama of Kodachrome full-color pictures projected on a 187-foot screen, longest in the world. . . . Also at the Kodak Building—expert advice on picture taking at the Fair. Don't forget your Ciné-Kodak.

TO MAKE 16 MM. MOVIES . . .

Magazine Ciné-Kodak, pocket size, effortless 3-second magazine loading, emphatically simple yet thoroughly versatile home movie camera, \$117.50. Ciné-Kodak "K," most widely used 16 mm. home movie camera, \$80. Ciné-Kodak "E," the low-priced "sixteen" that has many high-priced camera features, \$39.50.

TO SHOW 16 MM. MOVIES . . .

Kodascope Model EE, Series II, capable, low priced, from \$65.15. Kodoscope Model G, Series II, Eastman's precision-built projector, from \$112.65. Both complete with lens and lamp.

Ciné-Kodak

Eastman's finer home movie cameras

