

# KODAK

A MAGAZINE FOR EASTMAN EMPLOYEES



**THE KERNEL**  
Soaked for fifteen hours  
(See page 4)

APRIL 1938



"ORCHIDS," by H. Lou Gibson, of Hawk-Eye. This charming child-study was a silver-medal winner in the Twelfth Annual Kodak International Salon of Photography, held in Sydney, Australia. Other pictures from the salon appear on pages 8 and 9, and inside the back cover

## IN THIS ISSUE

<b>Silver—Metal, Money, and Mixture</b> <i>It's photography's most vital raw material</i>	Page 1	<b>The Editor's Page</b> <i>The balance sheet; Francis Russell Hart</i>	Page 10
<b>Panorama</b> <i>Overtly exposed</i>	Page 4	<b>The K.O.R.C. Offers a Varied Fun Menu</b> <i>Somewhere on the list you'll find your dish</i>	Page 11
<b>Do You Belong to Kodak's Student Body?</b> <i>Our inquiring reporter lists "reasons why"</i>	Page 5	<b>New Additions to the 16-Millimeter Line</b> <i>Kodascope, Model G; Kodak 16 mm. Enlarger</i>	Page 12
<b>Activities Calendar</b> <i>"Cuff" these dates right away</i>	Page 5	<b>Industrial Machinery Creates Employment</b> <i>Reproducing an able exposition</i>	Page 13
<b>They've More than a Puff</b> <i>. . . about three Kodak giants</i>	Page 6	<b>Out of the Hat</b> <i>Dancer; voyager; singer</i>	Page 14
<b>More Power at Lower Cost at Kodak Park</b> <i>The pipe is 95 miles; the boiler rivals a house</i>	Page 7	<b>Kodak's Balance Sheet for 1937</b> <i>From the Company's annual statement</i>	Page 16
<b>The Twelfth Kodak International Salon</b> <i>Prize-winning pictures by Kodak employees</i>	Page 8	<b>"The Retired Poet"</b> <i>In the photograph gallery</i>	Inside Back Cover

# KODAK

Volume 17

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Number 2

## Silver—Metal, Money, and Mixture

### The Saga of a Precious Metal That Is Also Photography's Most Important Raw Material

"THE LUCK OF THE IRISH" is proverbial—but for Patrick M'Laughlin and Peter O'Riley, the day in 1859 when they struck gold in the Carson River Valley, in Nevada, amongst great chunks of queer-looking, heavy black rock proved anything but lucky.

A passing trapper named Henry Comstock took one look at the black rock, and made a deal with the two gold miners. They agreed to waive their rights to the claim and be content with the surface gold they obtained. The black rock, rich silver ore, assayed at nearly \$4,000 a ton.

A silver rush to Nevada followed and within a short time that greatest of all known silver-ore masses, the Big Bonanza, was turning out ore to the value of \$3,000,000 a month.

This was one of the occurrences of the nineteenth century which eventually made silver more plentiful and affected its use as a standard for money.

### In Chaldea's Tombs

The saga of silver begins in prehistoric times. Silver ornaments were found in the royal tombs of Chaldea, built four thousand years before the Christian Era. The use of silver as money dates back far enough to be mentioned in one of the earliest Biblical references to a sale—when Abraham paid Ephron in silver for land bought as a burial place.

So scarce was this metal in ancient Egypt that in the Fourth and succeeding dynasties it was more valuable than gold; but in the Eighteenth Dynasty trade with Mediterranean countries made it more plentiful and, therefore, cheaper than gold.

The most ancient silver mines of importance that are known to history were those in Asia Minor and the Aegean Sea area. The Romans obtained the greater part of their silver

supply from Spain, but in the Middle Ages the supplies became scarce.

Today about 80 per cent of the world's new silver comes from Mexico, the United States, Canada, and Peru. And here's something interesting: except for that mined in Mexico, little of our newly mined silver now comes from silver mines but as a by-product from copper, lead, and zinc mines. Thus, the more of these metals mined, the more silver there is available, and its production is not as directly related to demand as would otherwise be the case. A normal year's output of silver in the '20's was about 250,000,000 ounces. Last year 276,000,000 ounces were mined, creating a new record for world production.

In normal times the market for this silver is threefold. First, and largest, is the demand from India and China, the two great silver-hoarding coun-

tries. Second are the needs of industry and the arts for the manufacture of sterling silver, for plated ware, for photographic materials, and the chemical industries. Then come purchases for coinage, varying greatly in amount from year to year.

Silver is one of the few materials which has been important both for industrial and manufacturing purposes and also for its use as money. It forms, in combination with other materials, the light-sensitive element in photographic products, and as one of our essential raw materials its use in systems of currency is an important consideration in our manufacturing problems.

For a long period of time, silver was a leading standard of value in the world's systems of money and coinage. While both gold and silver have been used as the standards of value, silver has been ordinarily used for



Weighing silver bullion at Kodak Park: consuming some five tons a week, we are, next to the United States Mint, the largest single user of that all-important metal in this country





Into tanks of nitric acid goes the silver, there to dissolve into a fluid: this is the first step, after careful inspection, in the conversion of bar silver into photosensitive materials

coins for everyday purchases. The value of gold was so much greater that if it were used for ordinary coinage, the size of the coins would be too small to be practicable. Gold, therefore, has usually been held by governments in their treasuries and used as a security against which paper money has been issued. Prior to the extensive use of paper money, gold was, of course, used extensively in actual coins of greater value.

The system of using both gold and silver as a standard of value and as a reserve for the issue of money by the various countries is called "bimetallism." Under such a system it is necessary to establish a proportionate value of the two metals for coinage purposes. Both are then used as a security for the issue of paper money, and supplies of both metals are accepted by the government on a fixed basis of value for minting into coins. For three or four hundred years there had been about fourteen times as much silver produced as gold throughout the world.

The long-term value of silver as compared with gold was, of course, in relation to there being a greater supply of it, so that gold was worth at least fourteen times the value of silver, and the mint ratios were generally set at 14 to 1 or 16 to 1. But since both gold and silver were used for other purposes than money, this relationship often varied in different countries, depending upon changes in the supply or demand. This resulted in an unstable currency, for, as an example, whenever silver became cheaper in the world's metal markets than the fixed value set by

a government, that government would be offered large amounts of silver in exchange for gold, thus draining the treasury of gold and replacing it with silver.

The development of the natural resources of America created new supplies of silver. During the Napoleonic Wars a large amount of this silver entered Europe, largely from Mexico where new mines had just been opened. To a great extent this was needed by France to finance its war expenditures and build up its credit.

The result of this abnormally large amount of silver becoming available caused decreases in its actual value as compared with gold. Money based on a silver standard was worth less in terms of goods and the prices of goods bought with it rose rapidly. England, which was then developing its foreign markets, needed a currency that would not have such variations. Consequently, in 1816, it based the value of its pound sterling on gold exclusively. Of course, silver was still used for minting coins of smaller denominations.

#### Abandoned by Nations

This was the beginning of the decreased use of silver as a money standard of value. One by one, the other great nations of the world abandoned bimetallism and based their issue of money exclusively on gold. This meant that the various governments used relatively smaller quantities of silver, and as the production of silver increased considerably during the latter part of the nineteenth century, its value became very much less in terms of gold. No

longer did the old 16 to 1 ratio hold good—30 or 40 to 1 was more normal.

Among the last of the great nations to abandon silver as a standard were India and China which had for many years used silver as a standard instead of gold. The low purchasing power of the people in these countries required the use of small monetary units. Silver is also used in these countries as a means of saving. It is held in jewelry or in bars by all who are able to accumulate any savings. These countries began to receive increased amounts of silver because it was not being used so extensively in other countries. Their currencies, therefore, became less valuable and their commercial products rose in price as measured in the terms of their money. There appeared to be an increase in their wealth, but no permanent prosperity was derived. It amounted simply to inflation of the currency. India eventually abandoned the silver standard and in 1935 China did likewise. In 1933 gold was valued at eighty times the value of silver.

Because silver is no longer used as a standard does not mean that its use for certain coins has been given up. The United States Treasury has on hand over two billion ounces including the silver coins in circulation. Abandonment of silver as a standard means that silver is no longer accepted in unlimited amounts by the Treasury for coinage at some fixed ratio to gold.

In 1934, however, the United States Treasury entered upon an extensive silver-buying program. All newly mined domestic silver was to be purchased by the Treasury at a net price which has ranged from 64½ cents to 77½ cents per ounce. In addition, it became the policy of the government



After the plunge: a close-up of a rescued remnant—showing that silver is a good mixer; that acid is a consuming companion

to purchase other supplies of silver at the general prevailing prices outside the Mint until the Treasury had purchased an amount equivalent to one-third of its gold reserve or until the price of silver reached \$1.29 per ounce.

It is to be noted that our government pays at present 64½ cents per ounce for silver newly mined in this country, while the prevailing world commercial price is about 45 cents per ounce. The explanation of this phenomenon is another story. As a consequence, however, our Company's supply of silver comes from foreign sources.

### In the Treasury's Vaults

Acting under this program, the United States Treasury has purchased more than 1,400,000,000 ounces of silver since the middle of 1934. This amount is more than seven times the United States production and more than one and one-half times the entire production of the world for the same period of time. It is also equal to the total United States production for the 25 years since 1913. Comparatively little of this is used for the actual coinage of money. The greater amount is simply held in the vaults of the Treasury.

Next to what the United States Mint uses for the actual coinage of money, Kodak is the largest single user of silver in this country. This is no new distinction, either—we've held it since 1907.

Silver is photography's most vital raw material. In the days of the Eastman Dry Plate and Film Company, way back in 1885, the silver consumption was about forty pounds a week. Today, Kodak Park uses some five tons—in forty-pound bars—a week.

The discovery of its value as a sensitizing agent came about as the



Examining part of a week's supply of silver at Kodak Park: every week, five tons are used

result of long experiments for a very different purpose.

At about the time when a young man named William Shakespeare was becoming known as a playwright of promise, many a distraught housewife was telling her neighbors, "He's at it again." And if you were fortunate enough to ferret out her errant husband's hiding place, you'd find him bending over an array of pots and pans in some cellar or attic—trying to obtain gold by mixing base metals.

These strange alchemists never found gold resulting from their frantic mixings, but they did observe that silver nitrate and other compounds of silver were sensitive to light. Never once did it cross their puckered brows that they'd got something there. They merely recorded their observation as an interesting highlight of the day's work—and resumed the quest.

Along came a man who did see the value of their findings, however—a German named Schulze—and very soon he obtained a copy of writing on a sensitive surface of chalk and silver nitrate. That was the beginning—that crude reproduction was the forebear of photographic film.

Jumping to Daguerre's time, we find that good man being given a sanity test by an alienist at his own wife's behest, which shows that wives may sometimes be wrong, for Daguerre was soon doing a tidy business indeed as a photographer. The sensitive surface for his photographs was silver darkened by iodine fumes.

And another jump brings us to George Eastman, skipping Fox Talbot and Scott Archer on our way.

The use of silver for photographic purposes today consists of dissolving it in nitric acid and then crystallizing it preparatory for use in emulsion-making.

Every week at Kodak Park five tons of silver are dropped, bar by bar, into tanks of nitric acid, there to dissolve into a fluid. That is the first step, after careful testing of the silver for quality, in the making of solid silver into a part of the coating of sensitized goods. After 48 hours in the acid, it has dissolved and has also combined with the nitric acid—to form a solution of silver nitrate. (The nitric acid, by the way, is made at Kodak Park West.)

Next step is to the kitchen, which is not really a kitchen but an evaporating room. The silver nitrate solution is run into bowls set on heated tables in this room. The heat drives off water and concentrates the solution; when it cools, the silver nitrate crystallizes. Then, for purification, it is dissolved again in distilled water and again crystallized. This operation is repeated until all impurities are removed. Silver nitrate added to potassium bromide, becomes silver bromide. This, suspended in gelatine, forms the light-sensitive emulsion in photographic film.

Thus, a material used from the earliest times as a standard of value, for hundreds of years of greater importance than gold, and still of importance in the coinage of money, finds a great industrial use in the photographic industry. And because of its importance to our industry, its use as money, and the world's money policies are important to us.

### Once Again

SINCE THIS ARTICLE was prepared, silver once again has become front-page news. The recent government decision to stop buying it directly from Mexico, the decrease in its price in the world's markets, the reduction in the price our government pays for silver, other than that newly mined in this country, to somewhat below the 45 cents per ounce mentioned in this article—each is important to us.

Current events may alter the world's troubled silver situation; but photography's need of a constant supply remains unchanged.



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## Honolulu Hula

ON JANUARY 10TH, while we, shivering under the cold northern blasts, were braving the snows, our colleagues in Honolulu were whooping it up under blue skies, a smiling sun. That date marked the opening for the season of Kodak's hula dances at the Waikiki Natatorium. It was a week earlier than our boys out there had planned, but the populace was impatient, rarin' to go.

We noted this popular event before in our June, 1937, issue. Frederick B. Herman, manager of Kodak Hawaii, Limited, inaugurated it "to see how many people would turn out with cameras." It's now one of the big "draws" of the season. There were more than two thousand souls—men, women, and children—on hand for this year's kickoff with, Mr. Herman gleefully reports, more cameras by far than you could shake a stick at without coming down with a bad case of shaker's elbow.

The magic background of cocoanut trees and lazy tropical waters before which the hula girls cavorted last year has been improved by Mr. Herman to the tune of a Hawaiian hut (nine feet long, five feet wide, ten feet high—and collapsible); an outrigger canoe, with paddles and throw nets; and a Hawaiian boy to pound poi and, during intermissions, climb the cocoanut trees.

Poi—we know because we looked it up—is made from the root of the taro plant. The taro root is a vegetable resembling a sweet potato in appearance. After being cooked in ground ovens, it is mashed with a stone pestle, kneaded into a paste, and allowed to ferment slightly. It is considered very nutritious. The taro plant grows in temperate regions, too, where it is called "elephant's ear" because its leaves are like that.

P.S. to Junior: the young leaves are used like spinach.

## Longevity

CHRISTOPHER IBBETSON, of Kodak Limited, has presented us with some pictures made on film manufactured at Kodak Park 23 years ago and discovered recently in England. The film was in the familiar yellow box, and no special wrapping protected it.

With the pictures—quite good snapshots—came also some packages

of developing powders bearing the name of Kodak Limited and the address of our first London headquarters, Clerkenwell Road.

The powders, it turned out, were part of a batch found with the film and used in developing it.

Kodak film of even greater age than that has captured excellent pictures upon exposure—but when both film and powders do a bang-up job after a 23-year wait for their opportunity, it's something to put on record.

## Accidental Dousing

SPEAKING OF FILM, there's the case of the exposed roll Leonard Smart, of Building 13, Kodak Park, left in the pocket of his work jacket. Mrs. Smart took the jacket on washday and put it into the washing machine. About twenty minutes passed before she discovered the roll—escaped from the pocket and twirling merrily in the agitated waters—and retrieved it.

"Well, it's good-bye to these pictures," she thought—and we'd have been inclined to agree. But development proved otherwise. We've seen some of the prints, and except for a slight spot of fog around the edges, there's no indication of the film's accidental dousing.

## Sleeper's Slip

WE LIKE THE STORY a fellow employee tells against himself. Seems he was having a quiet nap at home one evening when the phone rang. He lifted the receiver and an unfamiliar but courteous voice introduced its owner.

"Oh, yes, Mr. Auslander," our friend answered drowsily. "What can I do for you?"

There was an embarrassing pause before the other end got going again, but soon everything seemed fine and with many a, "Yes, Mr. Auslander," and "No, Mr. Auslander," and so forth, our friend felt he was contributing his share to the doings.

Suddenly, however, there came another and longer pause, and then—in what our colleague describes as an exasperated voice—the question: "Why must you call me Auslander when my name happens to be Harpending?"

Answer, there was none. Our friend is still wondering who *Auslander* is.

## The Kernel

THE SUBJECT of our front-cover picture may look like some fearful prehistoric monster, but it happens to be nothing more terrifying than a kernel of evergreen corn germinating.

An out-of-the-ordinary photomicrograph was what Charles S. Foster, of the Advertising Department Studio, was after when he took the picture. He did himself proud, you'll agree.

A liking for corn on the cob, Mr. Foster freely admits, influenced his selection of the corn kernel as a model. From then on, he relied on his own ingenuity. He got the kernel, dry as a bone, in a biological supply store, took it home, and soaked it in water for fifteen hours. (There's no special significance in the number of hours: he just thought it was a good soak.) Then, he put it into a shallow dish with a little water, punched a few holes in the dish cover, and—not having a warming oven—set it on top of the furnace.

Three days later, when the little green stalk was "up" enough to suit Mr. Foster's fancy, he took the kernel out of the dish and set it, upside down (it looked better that way), on a microscope slide. So, in the picture—which is a 60-times magnification, by the way—the part that looks like a dinosaur's neck is really the root, and the tongue-like protrusion is the stem. The reflection is from the microscope slide.

Mr. Foster's picture-taking aids were a miniature spotlight, contrived from a 1-pound cocoa tin, a 32-candle-power auto-headlight bulb, and a 2-inch projection lens from an old Kodascope. Pieces of paper about a quarter of an inch square, folded and carefully placed, reflected the light onto the kernel's hills and valleys, throwing them into bold relief.

The entire job was done in Mr. Foster's cellar, in front—as he afterwards noted—of an open window. He still shudders when he thinks of what even a tiny puff of wind might have done to his fragile reflectors.

"The Kernel" has been around. To date, it's been seen in exhibitions in England, France, Czechoslovakia, Poland, Canada, Australia, and the United States. And a stack of requests for prints from scientists and students and ordinary baffled humans have followed each of its "showings."

# Do You Belong to Kodak's Student Body?

## Fifty Per Cent of the Tuition Paid for Approved Courses Is Refunded under a Company Plan

WHAT DO YOU DO EVENINGS? That's altogether your own affair, of course—but did you ever stop to think that you might be missing something?

For many years, Kodak employees, in Rochester and elsewhere, have been taking advantage of the Company plan under which half of the tuition paid for approved educational courses is refundable.

That Kodak's student body is sizeable is evidenced by attendance figures received from one of several educational institutions attended by employees in Rochester.

More than 800 employees, men and women, spend from one to three evenings a week in the schools of the Rochester Athenaeum and Mechanics Institute. Thirty-two Kodak employees—from the three plants and the Kodak Office—are among the 115 instructors at the Institute.

Our own inquiring reporter went the rounds and waylaid some of the Kodak students, obtaining a fair cross section of opinion on the merits of evening school. When asked why, with so many other attractions beckoning, they hurried home from work, ate an impatient meal, and made tracks for the Institute, for instance, they gave the following answers most frequently:—

"The evening courses help me to do a better job at the plant."

"I hope to use my training to get a promotion and earn more money."



Students in the Institute's machine shop



An evening class in photography at the Institute: in all, eighty different subjects are taught

"I get a lot of satisfaction from just knowing that I'm improving myself."

"My courses help me to understand more about the things that I and other Kodak people make."

Although some adults attend the Institute's evening school for general education, most of the students want courses that will help them in their jobs. The jobs done at Kodak represent more than half the major occupations listed by the national census. Kodak students range in age from 18 to 60.

The Company, together with others in Rochester, coöperates to the fullest with the Institute in establishing the many courses needed to fill the constant and growing demand both for short, specialized instruction, and long-time programs.

Now at the Institute, work is offered in 80 different subjects and 140 different courses are taught. Some of the fields covered include the electrical, chemical, photographic, mechanical, industrial management, applied art, home economics, retailing, and publishing and printing (it is the only newspaper publishing and printing school in the East). In the Photography Department alone, courses are available in elementary photography, portraiture, illustrative photography, color photography, pictorial photography, retouching, photographic coloring, airbrush work, photographic optics, and chemistry.

So far this year, 828 Kodak employees—one out of every twenty in Rochester—have taken nightwork at the Institute. Kodak Park employees

enrolled number 515; Camera Works, 207; Hawk-Eye, 77; and the Kodak Office, 29.

Most popular with Kodak people are the mechanical courses, with 303 employees enrolled. Industrial management and liberal courses are second, with 188. Photography attracts 112; and electrical courses, 95.

Nearly half of the Camera Works students are taking mechanical subjects. The Kodak Office students are interested primarily in photography. Hawk-Eye employees are heavily represented in industrial management. Kodak Park employees are heavily enrolled in practically all the departments at the Institute.

### Activities Calendar

April 20—Camera Works Girls' Bowling League banquet

April 24—Women's International Bowling Congress play-offs—in Cincinnati—with K. P. women's team entered

April 27—Hawk-Eye girls' annual party, at the plant.

April 29—Camera Club, closing date for entries for the Spring Exhibition and Evanoff-Trophy Competition

Late April—Kodak Office Bridge Club, annual spring party

May 12—Camera Club annual business meeting; presentation of awards in Spring Exhibition and Evanoff-Trophy Competition

May 16—Rochester Major Softball League, opening game; Kodak Park team entered

Early June—Kodak Office men's spring golf tournament



# They've More than a Puff

## Being a More or Less Intimate Description of a Famous And Towering Trio at Kodak Park

OFFHAND, a chimney might not appear to be anything worth while writing home about. Its job is to carry off smoke and fumes and if it's a good chimney, behaving as all good chimneys should—well, that's that, isn't it?

Is it? Take those giant chimneys at Kodak Park. The famous trio, so familiar to Kodak people the world over, has been turning in a notable performance for many years. A brief biographical note on each chimney would read: "North Chimney at Kodak Park: built in 1906, was for that year highest ever built in America. The following year, however, its 366 feet were topped, elsewhere.

"South Chimney at Kodak Park: built in 1911, is same height as North Chimney but appears shorter because its diameter is greater.

"Kodak Park West Chimney: built in 1920, only 350 feet high, tapers less than its brothers."

So, though they may be "look alikes" to the casual observer, they have got plenty of individuality.

They're plenty tall, too, and the reason for that is draft. Both the height and the diameter of a chimney are determined by the amount of draft needed. Draft is produced by the difference of weight in a column of cold air outside the chimney and the column of hot gases inside. It varies with the horsepower of the boilers, the amount of gases handled,

the velocity with which these gases move upward, and the fuel burned.

All the chimneys at Kodak Park have forced draft, which means that fans supply additional air for combustion. However, the natural draft is sufficient to take away the products of combustion except in the case of the new high-pressure boiler (see page 7), which has an auxiliary fan.

From time to time, various demonstrations have taken place throughout the country to celebrate the completion of a chimney. In one instance at least, all the executives of a company were hoisted to the top for lunch. At Kodak Park, however, no such celebration is on record. It's a pity, because the chimney would have been the last to groan.

The three towering smokestacks—composed of specially designed radial perforated bricks, curved to obtain smooth surfaces and strong mortar joints—are set in massive concrete foundations, each containing more than 600 cubic yards of concrete, that rest on solid bedrock. At the base, the main wall of each stack is forty inches thick; at the top, less than eight inches.

At Kodak Park a refractory lining, which is really a chimney within a chimney, is necessary. This is supported at section divisions about twenty feet apart vertically on supports known as corbels. There is also a 2-inch air space between it and the main chimney. Steel bands, imbedded in the brick, completely encircle the chimney at various heights.

Lightning rods carry off heavy discharges during an electrical storm.

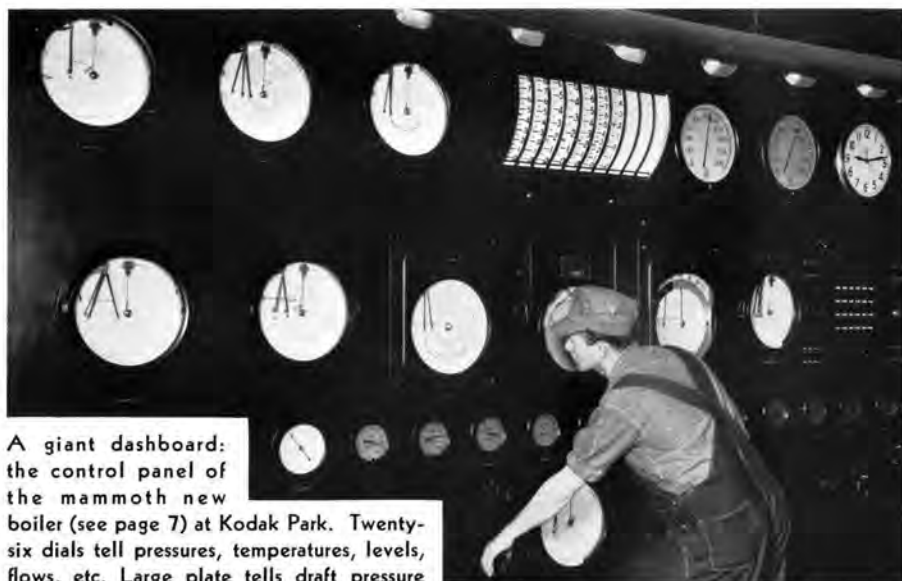


Member of a towering trio at Kodak: this picture shows the South Chimney at Kodak Park. The intrepid climbers are steeple jacks, scaling the steep steps of the stack

Those in Kodak Park are grounded to the water mains; those in Kodak Park West, to copper plates three feet square and a quarter of an inch thick, twenty-six feet below the ground level and immersed in running water.

There are certain days in the winter during which the outside air temperature is such that the steam from the north chimney is practically invisible. A higher gas temperature and dispersion of the particles of water vapor before condensation partly explains the reason for this, but don't let the weatherman fool you. Both chimneys are usually in operation whether or not you see them puffing.

Although the Kodak sign which once decorated the side of the north chimney in Kodak Park has long since been removed, these chimneys rise above the horizon, a symbol of Kodak loyalty, performing faithfully, 24 hours a day, their part in the production of Kodak's many products.



A giant dashboard: the control panel of the mammoth new boiler (see page 7) at Kodak Park. Twenty-six dials tell pressures, temperatures, levels, flows, etc. Large plate tells draft pressure



# More Power at Lower Cost at Kodak Park

## A Powerful Giant at Kodak Park Gets His "Nourishment" Through 95 Miles of Piping

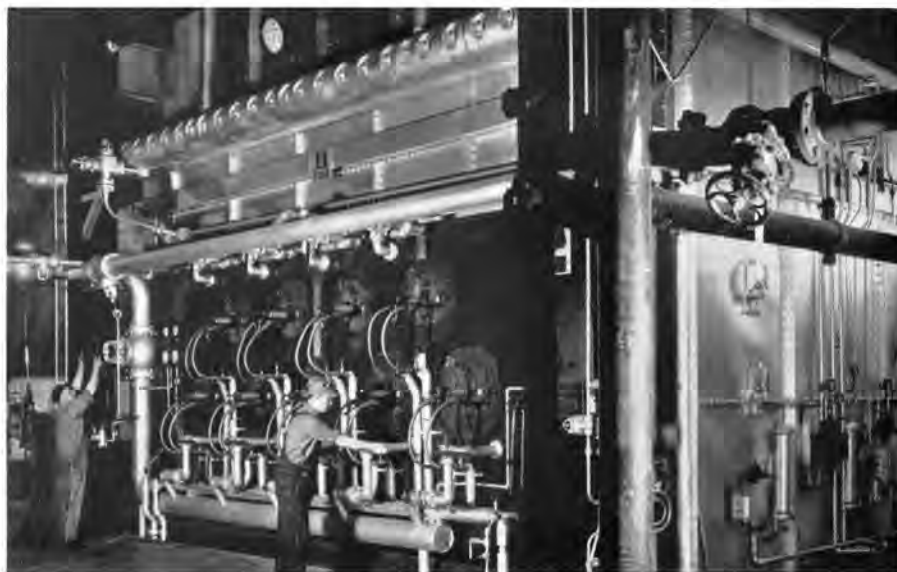
A TRANSFORMATION as noteworthy as any that has taken place at Kodak Park since the first ground was broken for that plant in 1890 occurred early last year, when natural gas was substituted for coal to fuel the steam-power boilers in Buildings 31 and 101.

Through a welded steel pipe the other end of which is 95 miles away, in Genesee, Pennsylvania, the fuel flows into Kodak Park. The pipe was laid by men and machines working towards each other for three months up over hills, down valleys, through rock, heavy timber, swamps, and streams; beset by rain, ice, and snow.

The evolution of power at Kodak was recorded in KODAK for October, 1936. The article, headed, "Looking Out Upon a Changed Scene," said in part:—

"Steam is supplied from two powerhouses. One, in which thirteen boilers are installed, develops 17,000 horsepower. The other, at Kodak Park West, develops 5,000 horsepower.

"Each of these powerhouses has overhead coal bunkers and coal-



Kodak Park's new boiler: its firebox would make a two-floor garage for six large automobiles

storage yards, with a combined capacity of 30,000 tons. Power-driven, automatically controlled equipment accomplishes the handling of coal and ashes and the burning of fuel. Mechanical stokers are fed at the rate of more than 700 tons of coal a day. . . ."

Once more the scene has changed. Adopted for reasons of economy and greater efficiency and cleanliness of operation, the natural gas has ended the long reign of "King Coal." The bunkers and mechanical stokers, the cinders and ashes and soot are no longer part of the powerhouse scene. In their stead are steel pipes feeding fuel directly into the boilers.

In step with this "streamlining" of the seat of energy that drives and lights and cools and heats the world's largest photographic plant came a tremendous increase in power when, in November, 1937, a mammoth new boiler was put into service. Though we call it a "boiler" here, the term, "steam generator," now often applied is perhaps more applicable to the maze of drums and tubes which distinguishes it from the single, round, tank-like affair that most of us know as a boiler.

### As Big As a House

The making of steam in modern equipment is vastly different from what it was in Watt's day. Surrounded by catwalks at three different story levels, the new boiler is as big as many a house. Its firebox is  $21\frac{1}{2}$  feet wide,  $17\frac{3}{4}$  feet long, and 31 feet high—large enough to make

a two-floor garage for six automobiles.

Operating at 825-pound pressure—the previous pressure was 265 pounds—with a steam temperature of 750 degrees, the boiler can transform 24,000 gallons of water into steam in an hour. Some idea of the steam temperature may be obtained from the fact that if the steam lines from the boiler were left uncovered and run through an unlighted room, they would produce a dull red glow.

### High Pressure at the Park

Yes, there's high pressure at Kodak Park—in the form of steam. But it's well under control:—

The new boiler feeds a turbine that can generate 6,250 kilowatts of electricity an hour (which is equal to the power required to lift a ton weight at a rate of  $2\frac{1}{2}$  miles a minute). The turbine exhausts at 150-pound pressure into the mains that drive most of the refrigeration and other compressors at Kodak Park. The compressors exhaust into the 3-pound, low-pressure steam system. This system, in turn, supplies most of the plant processing and heating steam-requirements. And finally the condensed steam is pumped back into the boiler and used over again.

More power at lower cost is the reason why the boiler was installed. Compared with the 265-pound system, it can produce more than one and a-half times as much power from the same amount of fuel; and it can produce nearly two and a-half times as much as could the old 150-pound system that served for many years.



Taking readings from the control panel of the boiler: 23 daily records of operation are made by the panel's ten recorders. The photograph was taken from the top catwalk

# T H E T W E L F KODAK INTERNA

Reproduced on these two pages are ten prize-winning pictures from the Twelfth Annual Kodak International Salon of Photography, which was held in Sydney, Australia. More than a thousand prints were entered and of these more than three hundred were chosen by the judges to go on exhibition. The premier award in the competition, the Eastman Medal, went to R. R. Bharadwaj, of Bombay, India. Other major awards were as follows: the Australian Trophy, to Ewald Spengler, Berlin, Germany;



"On the Balustrade," the Australian Trophy winner: this picture was entered by Ewald Spengler, of Berlin, Germany



"Furrows": entered in the competition by F. Husek, of Prague, Czechoslovakia, this pastoral picture was awarded a bronze medal



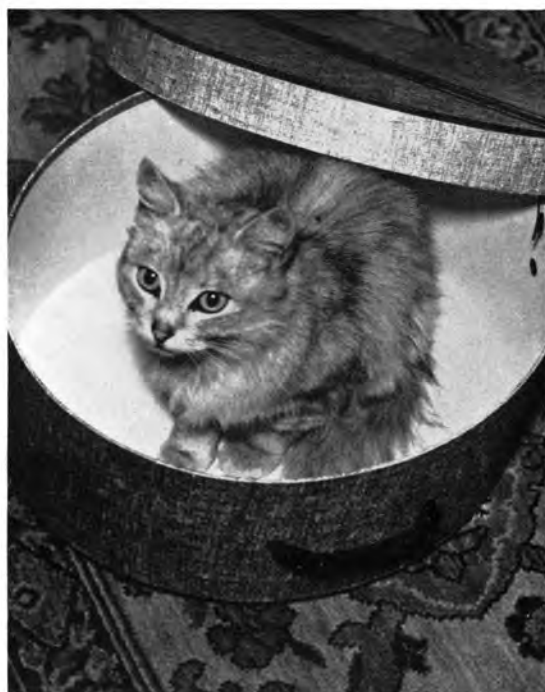
"Small Town": Gerhard Kusters, Berlin, Germany, won a bronze medal with his peaceful old-world street scene



"Gulls" is the title of this salon entry, by J. J. Jones, of Adelaide, Australia. An unusual picture, it brought its owner a bronze-medal award. The picture at the left, "Who Said Cats?" by Miss Audrey A. Heir, of Harrow, England, was named the winner of the Adolph Stuber Trophy

# H A N N U A L TIONAL SALON

the Rudolph Speth Memorial Gold Medal, to Charles F. Andrews, of Hawk-Eye; the Adolph Stuber Trophy, to Miss Audrey A. Heir, of Harrow, England; the Superintendents' Cup, to Dem A. Gasiades, of Cairo, Egypt; and the Hutchison Trophy, to E. G. Cuff, of Harrow. The salon was held in January of this year to coincide with celebrations marking the 150th anniversary of Australia's colonization. Other pictures will be found inside the front and back covers



"Mitzi": entered by Charles F. Andrews, of Hawk-Eye, it captured the Rudolph Speth Memorial Gold Medal, one of the six major awards offered for annual competition



"Jeunes Canards": this charming and informal portrait of a quartet of young ducks won a bronze medal in the salon for A. Denogent, of Lyons, France. L. W. Edwards, of Johannesburg, South Africa, won a silver medal with his photograph of a windmill. The picture (at the right) was titled, "At Rest"



Eastman Medal winner: "Life? A Delusion, My Son" is the title of this picture by R. R. Bharadwaj, of Bombay, India



"The Sign of the Golden Adler": this interesting entry in the salon, by E. G. Cuff, of Harrow, England, was awarded the Hutchison Trophy





# THE EDITOR'S PAGE

## The Balance Sheet

ON ANOTHER PAGE of this magazine is the Company's balance sheet for 1937, analyzed on a "per employee" basis. In other words, the various items listed are divided by the total number of employees. Thus, we can see at a glance what each item on the balance sheet means in relation to each one of us. . . .

It should be mentioned here that the tax item on the balance sheet does not represent the total tax bill of the Company for 1937. It is rather a provision for taxes that were unpaid at the year end. Our actual tax bill in this country alone was \$8,390,269. This compares with \$3,700,000 a year during the 5-year period from 1926 to 1930, inclusive.

Last year, our net profits were 9 per cent higher than the average net profits reported from 1926 to 1930. Taxes, however, were 126 per cent higher; and they amounted to more than 20 per cent of the salaries and wages paid to the Company's United States employees.

Total taxes for 1937, including all foreign taxes, amounted to \$10,870,924, or \$273.83 for each employee.

## Francis Russell Hart

THE PASSING OF FRANCIS RUSSELL HART, president of the United Fruit Company, New England banker, and a director of the Eastman Kodak Company, ended a long and varied career.

Born in New Bedford, Massachusetts, Mr. Hart went to Jamaica, in the British West Indies, following his graduation from Massachusetts Institute of Technology in 1889. Having served as an engineer on several agricultural projects in Jamaica for two years, he then moved to Colombia, where he became general manager and later president of the Cartagena-Magdalena Railway system.

In all, Mr. Hart spent more than thirty years in engineering and business pursuits in Latin America. During his journeys through the Southern countries, he collected a vast amount of historical and geographical data, became an authority on the history of the Caribbean Sea area, and wrote a series of books on the subject.

Mr. Hart was made a director of the United Fruit Company in 1901. Seven years later, he was appointed American Vice-Consul to Colombia. He was later made consul and he continued in this post until 1919.

A trustee and chairman of the finance committee of the Massachusetts Institute of Technology, Mr. Hart had been a director of our Company since 1936.

We are giving these figures because we feel that every employee should know how much the tax burden of the Company has increased during the past few years.

## The Twelfth Salon

THAT THE SIX MAJOR AWARDS in the Twelfth Annual Kodak International Salon of Photography went to employees in five countries—India, Germany, the United States, England (2), and Egypt—indicates the enthusiastic interest of Kodak people everywhere in this competition.

In addition to the Eastman Medal and the other major prizes, awards were offered for those prints that the judges considered worthy of special recognition. Five silver medals, ten bronze medals, and twenty-nine certificates of merit were thus distributed to employees in fourteen countries.

Ten of these awards went to employees in the United States. "Orchids" (see inside the front cover) brought a silver medal to H. Lou Gibson, of Hawk-Eye. Bronze medals were won by Harold A. King, of Eastman Kodak Stores, Boston, with "Winter's Covering," and by Alfred C. Robertson, of Building 14, Kodak Park, with "Susannah."

The following received certificates: Louis H. Bonehill, of the Kodak Office, for his, "Life's Light"; B. Fredric de Vries, of the Kodak Office, "The Lad of San Moritz"; Ralph J. Fallert, Sensitized Goods Division, "Three Musketeers"; Robert McCallum, of Hawk-Eye, "Fraidy Cat"; Roy J. Schueler, of the Research Laboratories, "Cactus Blossom"; Adolph Stuber, of the Kodak Office, assistant vice-president of the Company, "Determination"; and Miss Pauline Wolfe, of the Kodak Office, "Ronny."

## In the Spring

YES, SPRING IS IN THE AIR and eyes are brighter, steps are lighter—the earth's awake! It is but natural that this time of the year, more than any other, finds people planning to build.

The Company has long offered various facilities to employees who want to acquire their own homes. An architectural service is maintained to assist Kodak employees in selecting and planning the type of house they want to build. Frequent inspection during building insures the best possible job for the money. The Eastman Savings and Loan Association makes mortgage loans at reasonable rates.

Just now, desirable lots are available in the various Company tracts, as well as several completed houses.

Interested employees can obtain full particulars by calling William R. Challice, at the Kodak Office, and arranging for an appointment. His telephone is 43.

# The K. O. R. C. Offers a Varied Fun Menu



## From Ping-Pong to Bridge It Runs; and Somewhere On The List Is Your Pet Dish

WHAT with topspins, underspins, sidespins, flicks, block shots, and smashes (Phew!), the Kodak Office auditorium is a very lively spot these noon hours.

For the benefit of those who like to get at the root of things, let's switch over to Salem, Massachusetts. Time: the '90's. Place: somebody's parlor.

What are they doing—those well-petticoated ladies (the chairs are covered with horsehair, remember), those high-collared, magnificently mustachioed men?

Why, they're playing a new game a bunch of the boys thought up a few days ago. They use wooden paddles and a light ball covered with web (to protect the furniture and the ornaments on the whatnot). "Indoor tennis" they call it, and it looks like it's going to be a mighty popular game. . . .

Well, that's how it all started; and the prediction was right—a clergyman over in London was so smitten by the quick-spreading pastime that he got in touch with a sports shop and suggested that a celluloid ball would be faster. The ball was made. It was both faster and noisier—pleasantly noisier. It sounded like this: "ping-pong." So the game was re-christened.

Now, Ping-pong is one of the most popular games in the world, but nowhere is it played with greater zest and abandon—yes, abandon is the only word for it—than in the Kodak Office auditorium, under the auspices of the Kodak Office Recreation Club.

Yes, those lads and lassies in Salem started something, but they'd never recognize it as it's played at Kodak today. Even as spectators, they'd get a better workout than they did when batting that web-covered ball around the parlor. On Tuesday's (Ladies' Day) in the auditorium the atmosphere may be a whit less electric, the pings and pongs a whit less vigorous—but only a whit. They're splendid!

The K. O. R. C., be it hastily added, isn't exactly one-track-minded when it comes to recreational activities. Ping-pong being on the crest of the wave 'most everywhere at the moment, we give it first, and more or less detailed, mention. But there are plenty of other exciting things afoot for club members.

Noon-hour dancing, for instance, with the "Jeep" and the "Big Apple" and the "Suzy Q" predominating this season (next year, what?), throngs the floor and packs every seat. . . .

Basketball, shuffleboard, badminton, golf, and bowling are among other activities offered for those who want to keep sound in wind and limb come hail or shine. Also beckoning are less strenuous pursuits—like the Kodak Office Book Club (so far, for women only), and bridge—and several annual socials.

A newly launched activity of the club is a monthly snapshot contest—with emphasis on "snapshot." To quote from *The Dollar Bill*, the club's lively bulletin: "This is a contest for the 'dub' picture-maker. . . . You may do your own printing, but you don't have to. No tricky enlargements

or double printing allowed. The prints that will win the prizes will be the type of shots you take every month for your own snapshot album. We don't want salon prints—we want snapshots." (That's calling all cards!)

## K.O.R.C. Officers

President: Frank R. Knight, Jr.  
Vice-President: Eva M. Heuer  
Secretary: Ruth Harding  
Treasurer: R. Lynn Galloway  
Assistant-Treasurer: Laurence Greene

### Board of Managers:

Stanley A. Brady  
Walter B. Bull  
Robert G. Fisher  
William F. Shepard  
Lucille R. Carroll  
Jessie Natt  
Mary J. Owens  
Grace A. Waite

By and large, there's something on the club's varied menu to whet every manner of appetite, and at an all-inclusive price, too—one dollar. Each member's dollar is backed each year by one from the Company, which is one reason why such a splendid return for a small yearly outlay is possible.



Ping-pong: facing the camera, but intent on the pellet, are Karl T. Naramore, of the Patent Department, and Laurence H. Greene, of the Advertising Department, victorious team in a vigorous doubles tournament. Charles E. Thrasher, of the Sales Department, was manager

# New Additions to the 16-Millimeter Line

## The Kodascope, Model G, And The Kodak 16 mm. Enlarger

"Tops" in its class is the Kodascope, Model G, recent addition to Kodak's 16-millimeter line. Basically similar in design to Kodascope, Model EE, it sets new highs in ability, performance, and value.

Purchasers of the "G" have a choice of five lenses of different focal lengths, and three different lamps. One lens and lamp, in combination, will supply exactly the amount of light you should have for the size screen you use and the distance at which you use it. With this "tailor-made projection," proper lighting is



Kodascope, Model G: this new projector sets a new high in performance and value

no longer a matter of guesswork—it gives you all the light you need, yet not too much.

Finger-tip operation control is another feature of the "G." A single, four-position switch gives positive control over thread, light, motor, and projection lamp.

Reviewing of scenes or the creation of novel scene effects is easy with the "G." It may be snapped into reverse at any time during the forward projection of pictures. Likewise, at the touch of a lever, it is possible to show a "still" on the screen at any time during the projection of the film.

Positive framing and tilting controls, a motor speed adjustment knob, simplified focusing, and easy oiling

are among other noteworthy features of this new projector.

Like that of the Kodascope EE, the base of the "G" is designed so that it fits over the handle of its carrying case, thus transforming the case into a handy projection stand.

## The Enlarger

"Gee, how I'd like to have an enlargement of that frame!"

In answer to such wishes as this comes the Kodak 16 mm. Enlarger, enabling the amateur picture-taker who is also a home-movie maker to obtain enlarged negatives from single frames of 16-millimeter film positives—either from black-and-white or from Kodachrome.

With this inexpensive but surprisingly simple and efficient accessory, 2½-inch by 3⅜-inch negatives may be obtained. Contact prints or enlargements may then be made in the usual way.

Resembling the Jiffy Kodak in appearance, the Enlarger is fitted with a fixed-focus, 13-millimeter special Doublet Lens and a fixed ½-millimeter diaphragm. Attached to the lens mount is a hinged 16-millimeter film gate with locating pin and opal glass diffuser. The shutter is designed for time exposures only. Loaded with a roll of No. 616 size Kodak Film, eight negatives may be obtained.



The Kodak 16 mm. Enlarger: with this new Kodak product, enlargements can be made from single frames of 16-millimeter movies

Operation is easy. With the front of the Enlarger extended, and the film gate opened, the frame chosen is positioned—emulsion side up—over the mask opening. It is not necessary to cut the film. Four guide pins in the gate and a locating pin that fits one of the film perforations assure correct alignment. The film gate is then closed and an exposure made of about five seconds, with the film gate five inches from a No. 1 Photo-flood lamp.

## Hospital Service

GETTING DOWN TO CASES, picked at random from the files of the Rochester Hospital Service Corporation, we find:—

That ten days after her contract became effective a Kodak Office girl (names, of course, are not revealed) fractured her left leg while skiing, spent 21 days in a hospital, and incurred a total bill of \$127.50. This bill was paid under the plan.

That a Camera Works man who was hospitalized three weeks after signing up incurred a total bill of \$128.10. Of this amount, he paid \$15 for x-ray. The balance of \$113.10 was paid by the Corporation.

That a Kodak Park man, stricken down with pneumonia after three months' membership in the plan, received a bill for \$158.70 from his hospital. This amount was covered in full.

That a Kodak Park girl, involved in a motor smashup while vacationing in Georgia, spent 15 days in the

hospital. The bill, amounting to \$73, was paid under the plan.

That the same girl, involved in another accident after the second year of her hospital-service contract began, spent 22 days in the hospital, and incurred a bill of \$103, which was met by the Hospital Service. . . .

And so it goes. In all, hospital bills of 2,058 Kodak subscribers and their dependents paid by the Rochester Hospital Service Corporation up to December 31, 1937, totaled \$97,880. Under the hospital-service plan, less than five cents a day protects an entire family.

The cost to the subscriber is 65 cents a month. For an additional 35 cents, he may obtain coverage for his first dependent. Thirty cents more covers all dependent children.

Kodak subscribers to the plan numbered 9,407 as of December 31, 1937. These were distributed as follows: Kodak Park, 5,619; Camera Works, 2,043; the Kodak Office, 1,150; and Hawk-Eye, 595. Participation in the service is voluntary.



# Industrial Machinery Creates Employment

An article in KODAK for August, 1937, showed the important part played by machinery in Kodak's progress and expansion.

How machinery has influenced another great industry—the automobile—was graphically told by William J. Cameron in a talk given on the Ford Sunday Evening Hour.

Because we believe it will be of interest to Kodak people, Mr. Cameron's able address is reproduced here:—

RECENTLY an eminent British scientist advised a moratorium on invention; society, he thinks, is inventing itself into unemployment and other difficulties. One of our Congressmen has introduced a bill to prohibit labor-saving and labor-serving machinery. Another Congressman urges that machines be heavily taxed to discourage their use. To expose the absurdity of such ideas, they should be applied first to the two most common of our inventions and machines—the wheelbarrow and the clock.

At Dearborn we are working on an exhibit for the New York World's Fair next year to visualize this ancient controversy between handwork and machine work as to their effect on employment. A very simple object has been chosen for the illustration—the inner shell of the hubcap of a Ford car. This article, made by machinery, costs 12-and-a-fraction cents. But the dies to shape it cost \$13,328, and the automatic press to stamp it costs \$30,770—a machine costing \$44,098 to make a 12-cent article. That is merely the cost of the press, it does not include the cost of factory space to house it, of generating the power to operate it, or expert service and replacements to maintain it. To pound out that inner shell by hand would cost only \$24 for tools. So, in the Ford exhibit, an expert handworker will be installed, and a press will be installed beside him that will turn out 2,160 of these shells in the time it takes him to make one. The machine method and the hand method will thus appear in dramatic contrast. Those who view the exhibit will naturally think of the effect of machinery on employment. *And that is the intention.* What is the answer?

The first part of the answer is that machinery begins to create employment before ever it goes into production. Take this press. Divide its price by a day's wage of, say \$7—for every dollar of material cost is ultimately reducible to someone's work. At this



Here's a job that could not be done by hand: a specially designed machine that, using razor blades as cutting agents, slits sheets of Kodapak into required widths and automatically rolls them

rate, the press and dies represent 6,300 days' work, which, at 5 days a week, 52 weeks a year, amounts to 24 years, 2 months and 2 weeks of work. You may divide that amongst as many men as you please, but a total of 24 years of employment at \$7 a day has gone into that press and its equipment before it does a stroke of work. Whatever its after effect, you can see that the first effect of the machine is to create employment.

Now we put this press into production; it turns out 2,160 hubcap shells while a handworker is pounding out one. Would there be more jobs if only handworkers were employed?—for, really, it seems that this press, at this production, must be destroying 2,160 possible jobs.

## Hands and Hubcaps

Very well, let us consider making this article by hand. At first glance it seems to offer an advantage. Equipping a man with hand tools at \$24 would seem to be a great saving over a \$44,000 press. But, to produce as many hubcaps by hand, and to equip 2,160 men to do it, would cost \$7,742 more than the press. At once the cost of producing that shell would be increased by 17½ per cent for tools alone. Then, there would have to be a factory to house those 2,160 men, which at Ford standards would cost at least half a million dollars and about \$38,000 a year to maintain, not including the cost of its two acres of land. A press requires 360 square feet of space; the handworkers with

their benches would need 116,640 square feet of space.

But, let us say that for the sake of employment all this were done—you would expect to pay these men at least as much as men on the press are paid, wouldn't you?—for the handworker works *much* harder. In an 8-hour day, then, a man could pound out 2.7 hubcap shells. For the material used, and the day's wage of \$7.20 now paid on that work, those shells would cost about \$2.50 each. Pretty high for an article that can be made for 12 cents! Maybe you think you would be willing to pay that;—"in the interest of employing those men," you say, "I would pay that higher cost." But would you? We can say quite definitely that you would not. For if this principle were followed throughout all the manufacture of an automobile, you would not be buying a car at all. It is calculated that the cost of making a 1938 Ford car on this basis would be \$17,850. And at such a price, not 50 cars a year would be sold. There would not be work for one of those 2,160 men you are anxious about, nor for the 125,000 other men in the Ford industry alone. Without machinery there would be no automobile industry.

"Well," you say, "that would be bad. Could not you avoid that by paying for handwork just what it is worth?" Hardly, for under that arrangement a man on this hubcap shell job would earn about 18 cents a day—about what they pay in China.

(Continued on page 16)

# OUT OF THE HAT

## Dancer

Miss Geraldine E. Christ, of the Camera Works, can whirl 'round and 'round and 'round on one leg a hundred and twenty times without getting dizzy, which—no pun intended—is no mean feat.

Miss Christ is, as you've probably guessed, a dancer. Her doctor recommended ballet as a good exercise. She's been whirling and pivoting and leaping and whatever else ballet dancers do for more than ten years.



Miss Geraldine Christ: she can whirl

So well does Miss Christ like dancing that she's got her own studio in Rochester where, with a partner, she teaches children—the baby of the class is a two-and-a-half-year-old—and grown-ups ballet, toe, tap, acrobatic, and ballroom dancing. She presents her young pupils in a recital each year, creating all the dances and designing costumes and sets. It takes about six months' rehearsal to get the children "all set" for a public appearance. The recitals usually consist of four acts, with ten numbers in each. Usually, too, Miss Christ gives a solo performance.

Tap dancing is much easier than ballet according to this versatile Camera Works girl. There are just five fundamental steps: the shuffle, the stamp, the chug, the flap, and the hop. They all mean just what they sound like except for the chug, which

is shoving the weight forward on one foot, and the flap, which is "brushing" the floor with one foot and dropping the toe smartly upon it. "Master these steps," Miss Christ says, "and you can do any type of tap dancing."

## Voyager

They call themselves "Samelats," and their homeland, which isn't designated on the map, stretches across the north of Norway, Sweden, and Russia, from the Norwegian coast to the White Sea. A wandering people, to the rest of the world they are known as "Lapps," a name given them by the Swedish and meaning nomads.

Miss Jean Goucher, of the Research Laboratories, was up Lapland way last year, on a North Cape cruise.

First stop was at Reykjavik, capital of Iceland, the country of geysers and hot springs. Reykjavik is a modern city in a land whose language, spoken and written, is almost exactly the same as when it was colonized by the Norsemen in the ninth century.

About the size of Kentucky, Iceland is a treeless country, though Miss Goucher did spot a few shrubs during a jaunt into the hinterland. There are no railroads there, either, and most of the people get hither and yon on ponyback.

Clear-skinned and healthy looking, the people of Iceland are great athletes. Miss Goucher was especially enthusiastic about their national sport, a wrestling game called *glima*. It's quite unlike our wrestling: the con-

testants wear a harness around their waists and thighs, and each obtains a hold on the other's harness and tries to throw him. . . .

From Iceland, Miss Goucher sailed up into the Arctic Circle to Hammerfest, the city where night and day are of equal length—six months each. Situated on the island of Kvalø, it's the northernmost port in the world.

Next stop was the North Cape, near where Miss Goucher saw the midnight sun balance itself on the horizon for four nights in succession. "The Arctic Circle sounds cold," she says, "but the weather up there was so glorious that we had dancing on deck." She saw only one building at the Cape, a small post office that is open for the tourist season. . . .

From the Arctic Circle, the trail turned down along the Norwegian fiords, with stops at Trondheim and Oslo, through the Kattegat and up the Baltic Sea to Leningrad.

Miss Goucher spent a week seeing Russia, high points being the palaces and art treasures of Leningrad, and the hustle and bustle of Moscow. Then she rejoined her ship in Finland, ready for the homeward run.

Miss Goucher has many trophies of her trip: enamelware and hand-



Miss Jean Goucher: she sailed up into the Arctic and saw the midnight sun

woven rugs from Norway; hand-carved curios from Iceland; glassware and cutlery from Sweden; and a bevy of dolls of many nations.

### Singer

An airplane ride at night over Rochester holds Number One rating among the thrills of Miss Helen E. Stupp, of Hawk-Eye.

"I know that the view from the Kodak Office tower is superb," she says, "but from up there in the sky, looking down over the thousands of twinkling lights, and moving so smoothly and effortlessly that speed didn't matter—a hundred miles an hour or more seemed slow—I felt I was catching a glimpse of fairyland."

Miss Stupp went up again the next day, and she's winged over Rochester so often since that she can form a pilot's-eye picture of the city with her eyes shut.

On earth, Miss Stupp sings—very well, indeed. Soprano soloist in her glee club, and a member of the Kodak Choral Society, she has sung in four operas at the Eastman Theatre and in concerts at Kilbourne Hall.

Many Kodak people will recall Miss Stupp's appearances in motion-picture theaters. These engagements were the first-prize awards in competitions. Invitations to sign up for regular circuits followed, but despite the lure of the footlights she managed a firm "No," to each.

Miss Stupp likes fishing, knitting, skeet shooting, and crocheting. Her chief regret: "pinking" a woodchuck that happened into the line of fire while she was out practicing with an air rifle. Her companion was in the line of fire, too, but he ducked.



Miss Helen Stupp: her companion ducked

## The Lovejoy Trophy Winners



Victors and spoils: Hawk-Eye's bowling team, winners of the Lovejoy Trophy for the second year in succession. From left: Edward Greenauer, Chester Pero, Philip Klos, Norman Graham, Elmer Eckert, George Henchen, and Clayton Kreason. Each received a cigarette lighter

### How's Your Reading?

... And behind the gun was the leer-  
ing, sinister face of Jake the Gorilla.  
"Get over there!" he barked. "One  
squawk and you're quenched!"

*Jake the Gorilla! The killer!*

*Percival Meke got over—fast!*

That's the kind of stuff that John Smith tried so hard to avoid in his reading. John read a great deal, still does—he suffers from insomnia. But, too often, a kind friend would bring him a batch of books and, wandering through them one after another in the still watches of the night, before he knew it John would be up to his ears in some soul-searing, hair-raising, blood-and-thunder yarn. Which, of course, would mean jangled nerves and sleep farther removed than ever.

Well, John Smith—that's not his real name, by the way—does not have to worry any more. He got in touch with a readers' adviser, and now all his books are carefully selected, quiet, unexciting ones.

Solving that problem was the easiest part of one day's work for the readers' adviser, who happens to be at the Rochester Public Library, and whose job is answering all sorts of questions on reading.

Miss Louise B. Pratt, the adviser, deals with a wide variety of people—Kodak employees, dressmakers, teachers, hairdressers, bankers, housewives, students, domestic servants. . . . Most requests are for systematic reading lists on a particular subject.

Interested in reading? Then, this service is just the thing for you. What particular subject are you interested in—history, science, philosophy, art, geography, economics, music, languages. . . ? Do you want to know more about it? Maybe you'd like to "read-up" on your job? Perhaps you're keen on "light reading"? Maybe you want to found a worthwhile library of your own and don't know just where to begin?

Whatever the need, the Readers' Advisory Service fills it quickly. Just present your problem and your answer will come in the form of a selected reading list made up specially for you, with brief reviews of each book listed. Of course, if your question is merely, "Tell me an exciting book?" or, "What ought I give Mary as a graduation present?" Miss Pratt will probably answer you right off the bat. The advisory service is free.

### Industrial Machinery

(Continued from page 13)

No, it will not work. Three million men are normally employed in making, selling, and servicing cars, because with machinery cars can be produced at prices people can pay. And that, in turn, creates jobs at wages that enable people to buy. The cars, the jobs, the wages would not be there, were it not for machinery. From its very inception, down to the last turn of its wheels, industrial machinery creates employment.



# Kodak's Balance Sheet for 1937

Balance sheets are usually "tough sledding" for the average reader. That is why, following our practice in the two previous years, each item on the Company's balance sheet for 1937 is explained. It is also analyzed on a "per employee" basis. In other words, each item is divided by the total number of Kodak employees throughout the world, and thus is shown how large an investment was necessary—in terms of each Kodak employee—to operate our business during 1937.

## ASSETS (WHAT THE COMPANY OWNS AND WHAT OTHERS OWE IT):—

**Cash** (Needed to pay for the raw materials we use in producing goods, . . . to heat and light and maintain the buildings in which we work, . . . to cover our pay checks as they come due, . . . to pay taxes and insurance, . . . to pay for replacements of equipment, . . . to pay the costs of the employee-benefit plans, . . . and to meet many other necessary expenses.)

\$10,189,568.65; per employee \$ 256.66

**Marketable Bonds and Stocks** (Investments made by the Company for utilization of funds when their immediate expenditure is not necessary or desirable, . . . for storing away funds to finance increases in plant facilities and, as a safety measure, to enable the Company to operate in bad times and thus continue paying wages, dividends.)

\$12,397,851.92; per employee \$ 312.29

**Accounts and Bills Receivable** (Money owed to the Company for goods bought from us but not yet paid for. Selling on credit to our dealers allows us to sell more goods than if we sold only for cash. That means, of course, increased business.)

\$17,090,214.34; per employee \$ 430.48

**Inventories** (The raw materials and supplies we have on hand, . . . the goods we are working on now, . . . and the finished goods, in stock and in transit, that we have not yet sold. It takes many months from the time we buy the raw materials until we sell the finished goods.)

\$50,112,595.18; per employee \$1,262.28

**Investments and Advances** (This includes money invested in several companies affiliated with, but not wholly owned

by, Kodak; and advances to them [\$824,140.65]. Such investments and advances strengthen our Company's position. . . . Advances to customers of the Company [\$1,931,902.56] that are not due until after 1938 also appear here. . . . Included also is money advanced to the Kodak Employees Association and for employees' home projects [\$1,545,674.34]. Marketable securities that the law obliges us to deposit with workmen's compensation commissions amounted to \$382,560.12.)

\$ 4,684,277.67; per employee \$ 117.99

**Land, Buildings, Plant and Machinery** (The Company's investment in the buildings we work in and the equipment we use to do our jobs. The original cost of the property now in use was \$3,725.66 for each present employee; but buildings and equipment can't last forever—and therefore provision must be made during their useful life for their replacement when they wear out or when improvements in methods necessitate their replacement. After deducting the amount of this provision, the value of our land, buildings, and equipment is the figure shown.)

\$ 83,825,998.81; per employee \$2,111.49

**Deferred Charges to Future Operations** (Prepaid insurance, prepaid taxes, etc. Since this item represents payments made for things we haven't yet used, it is an asset, like inventories.)

\$ 1,087,257.14; per employee \$ 27.39

**Total Assets** (This figure, the total of the items listed above, is the amount of investment required to keep Kodak, with its 39,700 men and women throughout the world, in operation.)

\$179,387,763.71; per employee \$4,518.58

## LIABILITIES (WHAT THE COMPANY OWES, PLUS THE STOCKHOLDERS' INVESTMENT TO KEEP THE BUSINESS GOING):—

**Accounts Payable** (This item represents obligations of the Company for materials, supplies, power, heat, light, insurance, other expenses. An amount of \$3,421,160.18 to pay the wage dividend on March 1, 1938, is included. Also included is an amount of \$640,067.36 to protect the Company against exchange fluctuations on its commitments abroad.)

\$11,025,505.12; per employee \$ 277.72

**Provision for Taxes** (Set aside on the books for payment of federal, state, and local levies which were unpaid at the year end. This does not include the very large amount of indirect taxation involved in the cost of purchases, or taxes actually paid during the year.)

\$ 8,577,287.66; per employee \$ 216.05

**Dividends Payable** (Money due as the next quarterly dividends to our 38,642 stockholders—as payment for the use of the money they have invested to provide assets for the Company.)

\$ 4,594,327.50; per employee \$ 115.73

**Reserves** (Set aside on the books, over a period of years, as protection against possible losses which can not be foreseen. Workmen's compensation and sundry insurance reserves [\$1,206,368.13] are also included.)

\$10,011,836.94; per employee \$ 252.18

**Capital Stock and Paid-in Surplus; Earned Surplus** (This represents the amount that the stockholders—among whom are four or five thousand employees—have invested to permit the Company to carry on its business [\$2,423.24 per employee], as well as the surplus earnings, over the years, that the stockholders have allowed to remain in the business to permit growth and building without borrowing money and to provide a reserve against bad times [\$1,233.65 per employee]. The surplus is not, of course, a specific fund of money deposited in a bank, but exists simply in the general form of assets that let the business keep going: brick and stone, machinery, operating funds, reserve funds.)

\$145,178,806.49; per employee \$3,656.90

**Summing up**, this figure, in which total liabilities balance total assets, is the Company's investment—in terms of each individual among us—to maintain our business.

(\$179,387,763.71) \$4,518.58



"The Retired Poet": this interesting study, which was entered in the Twelfth Annual Kodak International Salon by Dem A. Gasiades, of Cairo, Egypt, was awarded the Superintendents' Cup, presented annually by a group of superintendents of the Company in Rochester for

the most praiseworthy portrait. "Judging of the Kodak Salon is looked upon, photographically, as one of the world's truly worthwhile honors," writes Walter Burke, F.R.P.S., judge of awards. "It proved to be one of the most interesting episodes in my long photographic career"





Next to babies and little children, pets are the most popular of all snapshot subjects. And they ought to be. For, whatever the mood or the situation, you are always sure of an amusing, intriguing picture... one you will often smile over, often show to your friends... one you will want to keep for remembrance. Don't wait...the snapshots you'll want Tomorrow, you must take Today.

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