

KODAK

A MAGAZINE FOR EASTMAN EMPLOYEES



KODAK BUILDING
In the "World of Tomorrow"
(See page 1)

MARCH 1939



"DIRT BANDS ON THE MALASPINA GLACIER": an aerial picture taken by Dr. Walter Clark, of the Research Laboratories, in Alaska last summer (see the story on page 8). The Malaspina Glacier, 1,500 square miles in area, is one of the most notable in Alaska. The peak at the right of the picture is towering Mt. St. Elias, which rises to a height of 18,024 feet practically from sea level

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KODAK

Volume 18

MARCH 1939

Number 3

Kodak in the "World of Tomorrow"

A Description of Our Building At the New York World's Fair

WITHIN the past hundred years, and particularly in the last fifty, photography has become an influence touching every phase of modern life, the hobby and entertainment of millions, an invaluable aid to physicians, scientists, and educators—and a vast industry, providing work and security for thousands of persons throughout the world.

All these broad developments are presented in graphic, detailed form in the World's Fair Exhibit of the Eastman Kodak Company. In the Eastman Kodak Building, visitors to the "World of Tomorrow" will find a complete, vivid survey of photography today. There, many will first realize its tremendous scope and appreciate why historians have described it as one of the greatest boons yet granted to mankind.

Centering about a spectacular showing of color photography, Kodak's exhibit seeks to cover every conceivable shade of interest in this vast field. Technical displays are presented in clear, diagrammatic form, so they can be grasped at a glance. A trained staff is on hand to discuss new developments and methods of manufacture, to demonstrate cameras and to provide advice.

A Brilliant Display

The Kodak Building is located on Plaza 4 of the "World of Tomorrow" grounds. As the visitor approaches from either end of Rainbow Avenue the first feature to catch his eye is a slender tower, 68 feet tall, on which colored lights play in rhythmical progression. The tall shaft is triangular, and from it project ten fins on which twenty huge photo-murals are mounted, each picture, or mural,

8 feet wide and 11 feet high. At the base of the tower, there are three revolving photo-murals, each more than 7 feet wide and 9 feet tall.

The building itself is monumental, white and vigorously modern, with a total area of 22,000 square feet. Somewhat semicircular in form, it has an irregular wedge-shaped wing extending to the east and the south. It is set in a landscaped plot of more than 42,000 square feet in area.

The visitor passes under the picture tower along a canopied promenade, on the walls of which are more striking photo-murals. This promenade leads to the main entrance, where a display of small Kodachrome transparencies heralds the color spectacle inside the building.

Passing through a dimly lighted foyer, he enters the Hall of Color,

a majestic, semicircular room 55 feet in radius with a total area of 6,500 feet. Here, he will see an extraordinary pageant.

An enormous screen, 22 feet high and 187 feet long, extends along the entire inner circumference of the great hall. Along this screen, in single panoramic views and in groups of pictures, there passes a great show of color photography.

Across the screen, at one stage in the show, the visitor will view a Grecian frieze in formal black and white, which suddenly dissolves into the same scene in beautiful full color. A second dissolve and each character in the frieze appears, still in full color and in similar pose—but in modern dress.

Seasons change before the spectator's eyes. A beautiful summer



The Photographic Garden is a beautifully landscaped plot where visitors to the exhibit may take souvenir pictures in interesting and attractive settings—some with photo-mural backgrounds of striking subjects. The outside wall of the Hall of Light is of plate glass, affording an unobstructed view of the garden



Reproduced, like the picture on the preceding page and the one on the front cover, from a photograph of the model, this illustration "previews" from another angle the mammoth, semicircular Kodak Building

panorama "wipes out" in a fraction of a second from left to right—and a winter view of the same scene follows it smoothly across the 187-foot screen. A majestic western scene progresses from dawn to midday to twilight and nightfall—all in a few seconds.

These huge screen pictures are projected from small full-color transparencies little larger than a special delivery postage stamp—the familiar Kodachrome transparencies which thousands of amateurs with miniature cameras make every day.

On the screen, each small transparency appears at a magnification of approximately 60,000 times its area. To provide adequate illumination for such magnification, special projectors developed by Kodak technical and engineering experts were employed. A single cycle of this remarkable show of natural-color photography lasts for 10 minutes, and during it more than 2,000 full-color slides are projected.

The "Kodak World"

After viewing the color spectacle, the visitor passes into a semicircular exhibit promenade which half encircles the great Hall of Color. First to greet his eyes is a large lighted globe, slowly rotating in a 7-foot wall aperture. On this globe small lenses mark the locations of Eastman factories, branches, stores, and servicing stations throughout the world. Large transparencies showing Eastman factories in this and other countries flank the globe, and related industrial motion pictures are shown on Translux type screens on either side of it.

At the right of this "Kodak World" exhibit, another display offers details of the Company's pioneer work in providing employee security. Transparencies with accompanying texts describe such Kodak policies as the wage dividend, retirement and insurance plans, steady employment, encouragement of home ownership, and health and recreation activities.

Three exhibits, adjoining the employee exhibit, demonstrate the use of photography in the fields of medicine and dentistry. One of the outstanding features of the medical exhibit is a life-sized, full-color projection of a young woman, which dissolves into a life-sized x-ray of the same subject. After these exhibits, the visitor sees a dramatic illuminated display demonstrating the similarity between the camera and the human eye. Intermittently illuminated sections, following in automatic sequence, show the parallels between a photographic film and the retina of the eye; between the eye lens and the camera lens; the camera diaphragm and the iris of the eye; and between the eyeball and the camera shell and bellows.

The historical display adjoining this traces 100 years of photography. By an interesting illusion device, a camera such as Daguerre used is replaced by a specimen of the first Kodak, introduced in 1888; and that, in turn, is succeeded by the finest Kodak made today.

Passing from the historical exhibit, the visitor is confronted by a sensitized-materials demonstration which

includes an actual darkroom in operation. Other features of the exhibit emphasize the uniformity and standard quality of Kodak's more than 100 films and more than 300 varieties of print paper; and demonstrates the value of such Kodak film characteristics as fine grain, high speed, exposure latitude, and balanced color sensitivity.

Across the promenade there is a large alcove devoted to the Tennessee Eastman Corporation, organized by Kodak in 1920 to insure an unfailing supply of the finest raw materials obtainable for the manufacture of acetate film. From these unexcelled raw materials, this company now manufactures, not only raw materials for films, but also high-grade acetate rayons widely used today in the manufacture of men's and women's wearing apparel, and a broad range of modern plastics. Examples of these rayons and singularly beautiful plastics form an important part of the Kodak exhibit.

Other Highlights

Every type and variation of camera made by Kodak, including those manufactured for export. . . . Eastman shutters and lenses. . . . An animated home-movie display. . . . A display of commercial photography. . . . An exhibit of photofinishing. . . . Exhibits of photo-accounting. . . . A display dealing with photorecord projection. . . . An exhibit dealing with filing and recording by photography. . . . The graphic arts. . . . An aerial-photography exhibit. . . . Professional motion pictures. . . . These are some of the other highlights of the exhibition which will attract wide attention during the New York World's Fair 1939.

Fair Facts

THE NEW YORK WORLD'S FAIR grounds cover an area of 1216½ acres. The main exhibit area, alone, has an area of 390 acres.

There will be approximately 1,300 exhibitors at the fair, representing 40 major industries.

Eighty restaurants on the fair grounds will cater to an average daily attendance estimated at 300,000.

The fair's amusement park, with thrills galore for young and old alike at every step, is 280 acres in area.

American Progress: a Revealing Close-Up

And a Tribute to the Effective Co-operation of Science, Labor, And Industry for Human Welfare

ONE HUNDRED and fifty years ago, George Washington became the first president of the United States. Under his leadership, a few struggling colonies began to work toward a national goal of individual freedom and happiness. The early years of that struggle were scarcely encouraging for, under the primitive living conditions of colonial times, each family had to produce for itself almost everything it consumed.

Farming was then the chief occupation. Our forefathers cleared the land and erected crude buildings from the trees they chopped down. They raised their own food and spun the wool for their clothing. They applied homemade remedies in times of sickness. When crops failed for lack of rain, or winter brought severe weather, they suffered extreme misery.

It is very difficult for us to realize that life was so hard only a few generations ago. The richest families in pioneering times underwent privations which we now would consider unendurable. Many of our simplest conveniences were then undreamed of.

Progress Personified

This year, the New York World's Fair will celebrate Washington's inauguration by showing the great progress that has been made in our living standards since the days of his administration. This great exhibition will illustrate how scientific research, the specialization of labor, and the development of great industries have freed us from the hardships of a life in which each family fought alone to wrest a living from nature. It will point to the ideals and forces that have brought about our present comfortable existence in which the individual, no longer subjected to long hours of heavy physical exertion, works as a unit in an industrialized society.

The fair will be so laid out that each of the chief problems of our existence will be treated separately.

A large sector of the grounds will show modern methods of preparing food for market. While the farmer

was once required to raise all the foodstuffs necessary for his family, he now often specializes in the growth of one crop which he sells in the market. With the money thus earned, he buys the necessities of life which other people produce. The various food exhibits will also show the methods of preservation and distribution, and the increasing variety and wholesomeness of the foods we buy each day.

Another part of the fair will deal with clothing. Our forefathers raised sheep and spun the wool into cloth for making their clothes. Today, under our industrial system, attractive and comfortable clothes are available to all of us at reasonable prices. The family is no longer required to spin and fashion uncomfortable ill-fitting clothes as was done only a few generations ago.

Housing Exhibit

New ideas in home construction and home furnishing will be displayed in another section of the World's Fair. In striking contrast to the roughly built houses of a hundred and fifty years ago, the modern home offers conveniences unknown to our ancestors. Running water, central heating, electric lighting, glass windows, cook stoves—all the home conveniences we now take for granted were once unattainable luxuries. Science and industry, by making them possible, have contributed

greatly to an easier and more comfortable life.

Very important, too, are the methods of industrial production and distribution of the commodities we use daily. At the fair we can see certain industrial products being made just as they are in the factory. We can also see how transportation has been developed to bring these things to our door. The development of highways, railroads, steamships, and air transports has played a necessary part in the improvement of our standard of living, for the products of agriculture and industry must be cheaply and swiftly transported to market. Closely identified with progress in this field is the introduction and improvement of the automobile which has given us an inexpensive and pleasant means of travel—striking contrast, indeed, to the oxcart and horse and buggy of other days.

All of these exhibits at the World's Fair will serve to show how each one of us has come to depend more and more on the labor of others for the products and services we daily require. They also show how we repay this labor of others by ourselves producing something which others need. This theme of Man's interdependence will be symbolized by the great Perisphere which represents the world, and by the "World of Tomorrow" panorama to be seen inside the

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A recent general view of the New York World's Fair, with the Perisphere and Trylon, which form the fair's theme center, standing out distinctly from the surrounding buildings on the great 1,216-acre site

KODAK PARK • NEW YORK • KODAK OFFICE • 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 • BERLIN • LONDON • PARIS • VINCENNES • COPENHAGEN • VAC • HARROW • STUTTGART • DUBLIN • GLASGOW • COPENHAGEN
 BAR ES SALAAM • HAIROBI • KAMPALA • CAPE TOWN • JOHANNESBURG • CAIRO • BATAVIA • ATHENS • BOMBAY • HAIFA • SINGAPORE • BEIRUT
 ISTANBUL • ALGIERS • BRUSSELS • THE HAGUE • MILAN • ROME • MADRID • LISBON • LAUSANNE • GENEVA • VIENNA • PRAGUE • BUDAPEST • ZAGREB
 BUCHAREST • WARSAW • GÖTTENBURG • REYKJAVIK • OSLO • LAS PALMAS • HELSINGFORS • CASABLANCA • COLPETTY • MALTA • MELBOURNE • WELLINGTON

Comparisons

TALKING about our export field, F. Preston Root, export sales manager, had some interesting comparisons to make after a recent trip to South America.

"The voyage was impressive to me," Mr. Root says, "particularly as my first venture in the export field was in 1915, when it was my privilege to open Kodak Argentina, Limited, in Buenos Aires, the first of our South American export subsidiaries.

"At that time, the quickest and best route to Rio and Buenos Aires was via Europe, but, due to the war, it was decidedly less hazardous to go directly by the only line then serving the east coast.

"Mrs. Root and I left by the SS. *Vauban* of the Lamport & Holt Line. I mention this to bring out some of the contrasts that are so outstanding to me. We were twenty-six days en route from New York to Buenos Aires. Some of this time was consumed by going eastward from our course to avoid submarines or raiders reported in southern waters, but the average voyage was twenty-four days.

"Six days flying from Miami to Buenos Aires and five days returning from Buenos Aires to Miami—eleven days were all that were consumed in the round-trip flight on my recent journey!

"Flying is not new to me, as I was the first passenger to cross from Buenos Aires to Montevideo in 1918. Traveling by transport plane, four-motored and capable of a speed of 160 miles an hour in what is termed 'the economical lane,' was quite a different experience."

Some of the precautions taken for the safety and comfort of passengers and cargo were of especial interest to Mr. Root.

An instrument similar in appearance to a slide rule is used by the copilot (in the control room at all times are a pilot, copilot, radio operator, and mechanic) to trim the plane while on the surface of the water and determine the exact angle at which the take-off should be made. This is accomplished by stowing lug-

gage and seating passengers so as to obtain the position indicated by the "slide rule." After the passengers are seated, safety belts are adjusted.

The take-off usually requires about ten minutes. Belts are then removed and not used again until the plane is going to land. The average ascent takes some forty-five minutes, and about the same time is allowed for the descent. Not an ear buzz in a plane load with that generous time allowance, Mr. Root assures us.

Cinematographer

CUBAN ELECTIONS, Paul Favour, of the Kodak Office, informs us, supply the spark for noisy and joyous celebrations.

Havana elected a mayor while Mr. Favour was there in 1926 (see story on page 5) and the following day the whole city rose to do honor to the new dignitary. Milling throngs gathered in front of his home on the magnificent Prado where the mayor and his family were graciously smiling and bowing from a balcony.

Mr. Favour, Ciné-Kodak in hand, joined the celebrators and attempted to stand up on a marble bench from where he might film the riotous scene. But each time he got set to take his pictures, the milling mob would throw him off balance. Mr. Favour was about to abandon his cinematographic intentions when a distinguished appearing gentleman plucked at his sleeve.

"You weesh to take ze picture of ze mayor?" he courteously inquired.

Upon Mr. Favour's earnest assurance that he did, the kindly stranger disappeared, returned immediately with a mounted policeman—and in a trice Mr. Favour was escorted through a sea of frenzied humanity and on up to the mayor's balcony. The great man and his family willingly posed for Mr. Favour's movie camera, while the crowd below cheered their hero to the echo.

"I later sent the mayor a duplicate of those pictures," Mr. Favour relates. And thus Kodak earned official good will while Kodak Cubana was still in the early formative stage.

Film Paradoxes

A FRIEND of ours returned from Hollywood the other day with as fascinating a list of "believe it or nots" as we've clapped an ear to in many a day. Here goes, in brief:

Fog sequences are filmed on clear days with artificial fog. It photographs better.

The best hot-weather scenes are made in winter, because real perspiration isn't so good as a nujol spray.

Blank cartridges record better on the sound track than real ones. The sound of the real thing is too high-pitched.

The most successful ocean liner sequences are made on dry land on a special set. A real liner is apt to roll too much.

False whiskers look better on the screen than home-grown ones.

Artificial tears look more real than real ones.

Buckshot makes better film caviar than real caviar. The genuine stuff spoils too quickly under the hot lights.

The best fight scenes are "phony." Real fights don't look real enough.

By the same token, love scenes are better if the actor and actress do not love each other in real life. Real lovers are unconvincing on the screen—too self-conscious.

Snow sequences are best when made on a sound stage with artificial snow. That's because you can control the "prop" snow.

A black eye painted on by a make-up artist looks more convincing on the screen than one acquired by running into a fist.

Cork gravel is better than real gravel, which makes too much noise when people walk on it.

Cold tea is better for barroom sequences than whiskey, not because tea looks more like whiskey than whiskey does but because the players may have to drink a lot of it before the director is satisfied with the take.

"Compiled from the experience of years by Ernie Haller, ace Hollywood cameraman," our friend says of his list. "Mr. Haller was filming a rain sequence on a dry day when we met."

The Story of Kodak Cubana, Limited

It Starts with a Hurricane That Followed Close in the Footsteps Of Two Kodak Representatives

WHEN, late in October, 1926, Paul Favour and the late Domingo E. Delgado, of the Kodak Office, arrived in Havana, they were somewhat mystified to find that ancient city feverishly engaged in boarding up its windows, nailing down everything movable, and acting generally as if preparing for a siege.

These mysterious goings-on were soon explained. The two Kodak representatives and a hurricane had arranged to visit Havana at the same time. The hurricane hadn't yet arrived.

That evening the storm broke. Mr. Favour and Mr. Delgado in their rooms at the Seville Biltmore Hotel listened all night to the roar of the tropical storm—one of the worst in Cuba's history. At daybreak they descended eight flights of stairs down which water was rushing in a cascade.

Making their way into the dining room, they found the crew of hotel employees hurriedly re-enforcing the walls with large timbers.

With the world literally crashing all about them, the two men calmly ordered their breakfast while the



A typical Cuban store of the interior, known as a "tienda mixta," where Kodak films may be purchased

distraught manager begged them to run for their lives. His dire threats of impending catastrophe seem to have had some reason for breakfast was hardly on the table when one of the walls blew in. Mr. Delgado, with that imperturbable calm so well remembered by his friends, quietly remarked, "I think we shall be forced to have our breakfast elsewhere."

Eventually, the great storm abated, Havana dug itself out from under the wreckage, and the Messrs. Favour and Delgado went about their business: a survey to determine whether

conditions were favorable for the establishment of a Ciné-Kodak processing station and a Kodak subsidiary.

A preliminary survey proved so encouraging that Mr. Favour stayed on to arrange for leasing an office building to hold a Kodak subsidiary designed to serve the photographic needs of the island. By carrying on negotiations by cable with the absentee landlord in Spain, he leased space in an apartment house on Zenea Street. This building is still occupied by the Company, though the name of the street has been changed to Neptuno.

With an office building available, the work of getting settled might have progressed smoothly enough, but unfortunately the laboratory equipment which had been brought along was at the bottom of Havana Harbor. The storm had sunk most of the boats at their piers. Luckily, Hold 4 of the boat in which the Kodak shipment was stowed had held out the water, and the equipment was rescued unharmed.

During the early months of 1927, organization of Kodak Cubana, Limited, went ahead under the direction of F. Preston Root, our present export sales manager.

Today, Kodak Cubana operates very much like a miniature model of the parent company in Rochester. While it does no manufacturing—it buys its goods directly from Rochester—it is, in other respects, a self-

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The attractive headquarters of Kodak Cubana, Limited, on Neptuno Street in Havana. From this building Eastman products, received from Rochester, are distributed to dealers throughout the Island of Cuba

How We Handle Customers' Orders

Many Steps that Demand Speed And Accuracy Are Required To Insure Their Prompt Shipment

YEARS AGO, crude industrial methods and poor transportation facilities generally limited the manufacturer to a local market. Since he produced only enough goods to supply the surrounding territory, he found it easy enough to handle his customers' orders and to deliver his products. As time went on, however, the development of industry and transportation permitted the manufacturer to receive large quantities of raw materials from distant points, turn them into finished goods, and then ship his products to distant markets.

This industrial expansion brought new problems of distribution. The manufacturer could no longer pile his goods into a delivery wagon and distribute them to a few near-by customers. His widening field of operations called for a new method of handling orders.

Orders Pour In

The Eastman Kodak Company, like all large industries, has had to develop an efficient organization for handling a great volume of orders coming from near and far points. This

nation-wide demand for Eastman products has resulted both from the efforts of our research and production departments in producing quality products and from the work of our sales and advertising departments. Amateur and professional photographers, having been convinced of the merits of our goods, go to Eastman dealers for their supplies. The dealers, in order to maintain their stocks of our products at a level sufficient to give good service to customers, replenish them continually by sending in hundreds of orders daily, some of them containing scores of items. As these orders pour into Rochester, we must be prepared to handle them properly. The Order, Stock, and Shipping Departments are organized to do this in close co-operation with one another.

We are going to find that incoming orders, to be handled properly, must go through a seemingly complicated series of steps. These steps are taken to make certain that each order will be filled and billed *accurately* and shipped *promptly*. The necessity for prompt and accurate shipment is made clear to us when we consider how very important these orders are to the success of our company. Many of these are rush orders from customers for immediate shipment of certain Eastman products which they



After the customer's order has been "edited," it is typed on a fanfold form producing six copies of the invoice. After a final checking, three copies are sent to the Shipping, three to the Billing Department

need and which we have to sell. Whether large or small, urgent or not, customers' orders keep goods moving off the stock-room shelves at Rochester and the branches. If they are not given careful attention and handled to the customer's satisfaction, we might easily lose his good will and even his business.

How They Come

These orders come to the Kodak Office in several ways. Most of them arrive by mail, though a considerable number come by telephone, teletype, and telegraph. To fully appreciate the work involved, we must single one out of the morning's mail and see how it is treated.

We'll begin at the point where an industrial photographer in Detroit has received a call from an automobile company for a half dozen exhibition prints of a negative he has previously made for them. He calls his Eastman dealer and orders a dozen sheets of Illustrators' Special Double Weight, size 30 by 40 inches. The dealer doesn't have this little-used size of the paper in stock, so he adds the item to a long order which he has ready to send to Rochester. This order may include cameras, chemicals, films, papers, and sundries.

The order is received by the Mail Department at the Kodak Office the



Every order received by the Order Department is recorded on an indexed card under the customer's name. At the same time, special shipping and billing instructions are transferred from the card to the order



Cases of cameras from the Camera Works are conveyed along roller tracks in the Stock Department. Here, they are stored with other supplies until needed by the Shipping Department to fill customers' orders

following morning and rushed to the Order Department. How would you expect it to be handled from this point? Of course, a messenger might take it down to the Stock Department, hunt up the various items, carry them over to the Shipping Department, wrap them up, and send them to the address given on the order. But suppose the messenger found part of the order unintelligible—suppose the Illustrators' Special wasn't in stock—suppose the order had to be traced back later. Obviously, such simple handling would lead to errors, confusion, and, eventually, to a highly dissatisfied customer. So it is necessary for the Order, Stock, Shipping, and Billing Departments to be organized in a well co-ordinated system for handling the Detroit dealer's order and all other orders that come to Rochester.

Safeguarding the Order

Every precaution is taken in the Order Department to insure accurate handling. The Detroit order is given an invoice number, photographed in a Recordak, registered in numerical sequence with other orders. If necessary, an order is referred to the Credit Department for approval. It is then carefully checked and typed on a fan-fold form so that six invoice copies are made. Involved as these steps prob-

ably seem, they are necessary to insure that the customer will get what he ordered, get it promptly, and be billed for it accurately.

The Stock Department

Three copies of the invoice are sent to the Stock Department by pneumatic tube. Here, piled in crates and cartons or arranged on shelves, can be found almost every product of our manufacturing plants. If an item on the Detroit dealer's order is not in stock, an order for it is teletyped to Kodak Park or sent to Hawk-Eye or the Camera Works, as the case may be. Certain of the items, cameras and sundries, are checked off a perpetual inventory which shows at any time just how much of a particular product is on hand. The order is then sent to the Shipping Department.

The Shipping Department is very closely related to the Stock Department, for its shelves, carrying a limited supply of our regular items, must be constantly replenished from stock to balance the outflow of goods that fill customers' orders. Goods are continually flowing from the Stock Department by a spiral chute to keep the Shipping Department supplied.

The "laying out" of the Detroit dealer's order is an interesting operation. It is stamped with the time of receipt, and then clipped to a basket

which travels around the department on a roller track. As it moves along, each item on the order is dropped into the basket and checked off the list. At the end of its journey, the order has been filled. The goods are given a final check against the order, packed with a shipping memorandum enclosed, and shipped out by express, freight, parcel post, or motor truck.

The Detroit dealer's order is now on its way, but its handling is not yet completed. The Shipping Department returns a copy of the invoice to the Order Department and sends another to the Billing Department.

If the order has been completely filled, the Order Department simply enters the shipping date on its records. However, if an occasional item was temporarily out of stock and therefore not shipped, a back order is made out, cross-referenced with the original order, and then generally sent to the Shipping Department to be held until the back-ordered item is again in stock.

We have seen that the Shipping Department has also sent a copy of the invoice to the Billing Department which had previously received three copies from the Order Department. After the charges have been figured,

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A customer's order goes the rounds of the Shipping Department. As the basket travels along, each item appearing on the order is taken from the shelves, placed in the basket, and then checked off the list

With a Camera in Alaska

Here's an Interesting Story of the Glacier Country, as Told For KODAK by Dr. Walter Clark, of the Research Laboratories

ALASKA HAS THE SHAPE of a dipper standing on its handle. It is about one-fifth the size of the United States. And yet its population is only one-sixth that of Rochester. The "handle" stretches for 850 miles down the coast of British Columbia, cutting out part of that province from the sea by a narrow mountainous coastal strip.

Our first base in Alaska was at Cordova, 4,100 miles from Rochester, via train to Seattle and the weekly boat of the Alaskan Steamship Company from Seattle north. The sea journey is probably one of the most exquisite in the world. The boat takes the inside passage between the mainland and the long chain of islands that fringes the northwest coast of the continent. Imagine the Norwegian fiords, magnified and strung out for over 1,000 miles, and you have an impression of this majestic coast.

We were favored with fine weather until we reached Ketchikan, our first port of call, at seven in the evening on the third day out. Here, it rained cats and dogs, but we were able to spend a few hours in the town itself. There was much excitement, as the salmon were running, and the great canneries were working night and day. More salmon are canned in Ketchikan than in any other city in the world; its normal population of just over 4,000 is appreciably swelled by the influx of Filipinos and others who come in for the canning season.

Totem Poles Ahoy

Next morning we arrived at Wrangell, an old Russian settlement, with an early fort and a modern school and a rather dilapidated water front. The chief interest here was in the old totem poles, and the house of the troublesome Indian Chief, Shake. Totem poles, religious and social symbols, dot the coastal region of British Columbia and the Panhandle.

Top: Dr. Clark (right) and his fellow explorers beside the landplane that carried them on most of their picture-taking expeditions. Center: Turner Glacier and Mt. Cook. Bottom: Mrs. Clark inspects an Indian food cache, built on stilts to protect its contents against snack-loving Alaskan animals

At five o'clock next morning we reached Juneau, the capital, and one of the largest towns, with over 4,000 people. Here, we made a hurried trip inland to make our first contact with the Alaskan glaciers. The Mendenhall Glacier is a great field of ice, 20 miles long and $2\frac{1}{2}$ wide, and is readily accessible from Juneau. It is a most impressive sight to view this huge mass with the first rays of the rising sun tinting its séracs with a warm orange glow.

Magnificent Vistas

The coast scenery around Juneau is magnificent, with great mountains on either hand, capped with glaciers sending their feelers of ice down the deep narrow valleys. We soon entered Icy Strait, the air cooled, and icebergs floated by, carried by the current from the great glaciers of the Fairweather Range which we were approaching. Soon, mighty Mt. Crillon reared its icy head for nearly 13,000 feet, and we experienced the thrill of our first contact with the great mountain range that we were later to get to know so well. But the view was only fleeting, for a cold fog came down, and we saw nothing more until, two days later, we entered Prince William Sound, turned into Orca Inlet and tied up at Cordova.

Here, we were met by Bradford Washburn, Kirkpatrick (the local airman), and Dr. Hanna, who had just come in from a geological expedition. That night we stayed up until the late morning hours, developing the films that Washburn had exposed the previous week on an epoch-making flight over the great St. Elias Range.

With the co-operation of Marvin P. Roark, the local Kodak dealer—strange places you find these enthusiastic people—and Kirkpatrick, who runs the Cordova Air Service, and who piloted us on all our flights, photography was as simple as if one were in New York or Rochester. All aerial films were developed in a portable Fairchild tank, and dried, in their 75-foot lengths, on a wooden drum which Dr. Hanna had built in his spare moments. Mr. Roark de-



veloped and printed the small black-and-white negatives, and, incidentally, with a quality that is not exceeded in any photofinishing plant anywhere. All we had to do was expose pictures, and the rest was easy.

At Cordova, we unloaded our baggage. We had sent ahead most of our photographic materials. Among the equipment we had on board were two Ciné-Kodaks, a Special and a Model K, two Retina Series II, a 4 by 5 Speed Graphic loaned by the Folmer Graflex Corporation, and a Recomar. Our only problem with cameras was to know how to use them all. I had sent the films ahead: 16-millimeter; Retina and Cut-Sheet Kodachrome, and some specially spooled for the aerial cameras; Infra-Red and Panchromatic Aerial Film; Panatomic Film Packs; and Super-XX and Panatomic-X for the small cameras. There were also Kodaflectors and lamps for indoor work, developer specially packed by the Chemical Plant at Kodak Park so that it could be dropped to the bottom of the Pacific without damage (we were not able to try this out), acid fixing powders, and a multitude of odds and ends we felt we might need.

Up in the Clouds

We slept well after our night of developing films; and next morning the weather was good, and there was some equipment to be brought over from Valdez, up the coast, so we hopped into "Kirk's" plane, and arrived at Valdez at the same time as the boat, which had left Cordova the day before. On this trip, we had our first view of Alaska from above. There were great fiords coming down to the sea, and innumerable glaciers, and the thrill of flying over mountains, and through clouds, and trying to pick a path between two peaks as the clouds milled about.

Next day we made a flight over new territory. An interesting thing about Alaska is that there is so little of it on the map. Within an hour's flight from Cordova you can be over coun-

(Continued on page 16)

From the top: Hubbard Glacier and Mt. Hubbard, with an unnamed glacier and peak at left. Indian boys in front of an Alaskan roadhouse. The bucket line of a gold dredge: each bucket holds a ton of gold-bearing gravel. The dredge itself: despite its I'm-here-to-stay appearance, it roams about, wrestling thousands of dollars' worth of gold from the rich Alaskan soil. Main Street in Fairbanks



THE EDITOR'S PAGE

A Sturdy Youngster

TEN YEARS AGO last month, continuous filaments of cellulose acetate rayon were spun for the first time in the plant of the Tennessee Eastman Corporation, at Kingsport. We were reminded of this by a letter that came to our desk recently.

"While in New York last week," it read, "I noticed hanging on the wall in the office of Dr. Smith, technical director for A. M. Tenney Associates, a framed reproduction of a rough scrawl, reading as follows:

4:40 P.M.

Feb. 8

1929

"When asked about this cryptic inscription, Dr. Smith briefly told me the story back of it:

"On February 8th, 1929, Perley S. Wilcox [president of Tennessee Eastman] and some of his associates were out in the plant at Kingsport attempting to spin continuous filaments of cellulose acetate rayon, but so far without success. Every time the process was started, the filaments would break.

"Finally, late in the afternoon, the filaments of acetate rayon began to come steadily from the machine without

breaking. After an uninterrupted run of several minutes, Mr. Wilcox picked up a nail, walked over to the tar-paper wall of the building, and scratched on it the time and the date.

"Later, when this building was torn down, Herbert G. Stone [general superintendent] had the tar paper cut out, framed, and hung in his office at Kingsport. Dr. Smith saw it there and obtained Mr. Stone's permission to have it photographed and framed."

Our Kingsport subsidiary was organized nineteen years ago to insure a steady supply of wood alcohol for use in the manufacture of film at Kodak Park. Later, its facilities were expanded to the manufacture of cellulose acetate, primary material of safety-film base. How it entered upon the manufacture of Eastman Acetate Rayon—among other products—is a fascinating story that has already been told in KODAK.

Anniversaries, however, are occasions for reminiscence; and there are many of us who, remembering the first small plant on a 35-acre site beside the Holston River, contemplate with astonishment its growth to an 86-building factory on a site of 372 acres. Within the past nine years alone, its pay roll has increased from some four hundred employees to more than thirty-eight hundred.

The Wage Dividend

THE 27TH WAGE DIVIDEND, voted by the directors of the Company in November of last year, will be distributed on March 27th.

Calculation of the dividend follows a formula that has been in effect for many years: For each dollar by which dividends declared on the Company's common stock during the year exceed \$3.50 a share, the wage-dividend rate is $\frac{1}{2}$ of 1 per cent of salaries and wages received by qualified employees within the five calendar years immediately preceding the date of its payment. Employees who are otherwise eligible, but have less than five years' service, receive payments based on their earnings up to the end of the year preceding payment of the dividend.

Dividends declared on the common stock during 1938 totaled \$6 a share—\$2.50 above the minimum required before the wage dividend may be voted—and therefore the rate of payment will be $1\frac{1}{4}$ per cent.

The wage dividend is a recognition of the contribution that Kodak employees make toward the success of the Company. Payment of this year's dividend will bring the total sum thus distributed since the plan went into practice in 1912 up to approximately \$43,000,000.



Near relations: Eastman Acetate Rayon and home-movie film are both made from cellulose acetate, manufactured by the Tennessee Eastman Corporation

A Picture from Vac Works



This hitherto unpublished photograph shows Mr. Eastman conducting a gypsy orchestra at the Vac Works during his visit to Europe in 1928. "Quite a selective number of Hungarian tunes were played and Mr. Eastman appeared to thoroughly enjoy the music," Mr. Luty, manager of the Vac Works, recalls

Activities Calendar

- March 9—Camera Club ciné group, regular meeting
- March 10—K. P. A. A. men's smoker, in the assembly hall
- March 14—Kodak Park Foremen's Club dinner, in the assembly hall
- Mid-March—K. P. A. A. women's book review
- March 16—Camera Club print critique and monthly competition
- March 20—Kodak Office Bridge Club, opening of pair tournament for the President's Cup
- March 23—Kodak Office Recreation Club, girls' annual party
—Camera Club ciné group, regular meeting
- Late March—Hawk-Eye Athletic Association St. Patrick's party, in the Kodak Office auditorium
- April 1—Hawk-Eye Camera Club 10th annual banquet, at the Hotel Rochester
- April 3—Kodak Office Book Club, regular meeting
- April 6—Camera Club meeting

How We Handle

(Continued from page 7)

one is sent to the dealer. Another is used for keeping records of accounts owing to us. A third copy is used for preparing statistical studies of the Company's business. The branches at Chicago, New York, and San Francisco also send invoice copies to Rochester so that a complete record of our domestic business can be kept.

We can readily see that from the time an order arrives at the Kodak Office until the goods are shipped and the customer billed, considerable effort has been required to handle it accurately and promptly. Every order, no matter how small, receives the most careful attention. This attention reflects the Company's appreciation for the dealer's business and our concern in handling his orders in a businesslike way. Prompt and accurate handling of each order does much to keep a valuable customer satisfied.

outlying dealers periodically. Contact with photographers and doctors doing x-ray work is maintained through demonstrators whose work is similar to that of Eastman demonstrators in this country. Most of the advertising is prepared in Rochester.

Many of the Kodak dealers in the interior are proprietors of a *tienda mixta*, a type of general store selling

everything from gasoline to lottery tickets. Here, and in more modern stores in the cities, the residents, as well as the thousands of tourists who visit the island each year, buy their Eastman supplies and leave their films for developing and printing. At the main office in Havana, a processing laboratory handles exposed Ciné Kodak Film.

Keeping Kodak Out Front in India



This Kodak Limited stall attracted wide attention at a salon of photography held in Madras, India, in December of last year. On the panels at either side are listed Kodak contributions to photography

Kodak Cubana, Limited

(Continued from page 5)

contained organization. A strictly wholesale business is carried on through some sixty dealers scattered throughout the island. Havana dealers are visited by the manager, Ivo Moneda. His assistants visit the

How Hollywood Makes a Movie

Enjoy that Feature? Herewith, A Bird's-Eye View of the Main Steps Involved in Its Making

EVERY PICTURE tells a story, and this goes for motion pictures too. In fact, the story is the first important requirement in making a film; and finding a good story—one that has plenty of visual interest as well as a good plot—is one of the most difficult problems that a motion-picture studio has to deal with.

When a story is selected by the head producer of a studio, it is adapted for the screen by a professional writer, who may be either an employee of the studio or a free lance. The writer collaborates closely with the director of the picture—the man upon whose shoulders rests the responsibility of turning out a successful picture, of making the story live on the screen.

The Production Unit

While the script is being prepared by the writer—many drafts are necessary before the story is ready for the cameras—the production unit is selected. Then, the production schedule is prepared, fixing the time needed in each set or location, the number of days each character in the movie will work, and other details.

Now, production costs are estimated, the casting director selects "bit" players and extras, the art department designs sets, and a hundred and one other important duties are undertaken by some thirty different departments.

The production schedule is designed to save both time and money, and the director follows it like a blueprint. Scenes, usually, are not filmed in the order that they may appear in the script, but according to the production schedule, which indicates them according to set or location. Several scenes widely separated in the finished picture may be played on the same set one after the other.

On the Stage

When work on the stage gets under way, the head cameraman—or, to give him his longer name, cinematographer—consults with the electrician about lighting, the sound engineer busies himself with the microphones and recorders, and the scene is rehearsed by the actors until the director is satisfied with their performance.

At last, the final precise adjustment of lights, camera, and sound has been made, the last halting line or awkward gesture has been smoothed over, and the director is notified that all is ready. The actors take



All set: before each "take," a signal board giving the numbers of sequence and take, and other data, is held before the camera and photographed. This picture is reproduced by the courtesy of Radio Pictures

their positions, and the camera and sound recorders are started.

Just before the action begins, an assistant cameraman steps before the camera and claps two boards together. This action is registered both on the film and the sound track to insure synchronization. He then steps back quickly and the actors go through their parts—often many times before the director is satisfied.

Viewing the "Rushes"

When the day's shooting is over—the work may represent only a few minutes on the screen in the finished production—the pictures are developed and rush prints are viewed by the director, the editor, or "cutter," as he is also called, and other studio officials. If a scene is rejected, it must be retaken. This inspection of "rushes" goes on each day, scene by scene, until the shooting is over—a feature movie usually takes about a month to film.

The editor now assembles all the scenes of the picture in order and projects it for the producer and the director. If it is approved, the production crew and actors are released and the sets are taken down. The negative is all that now remains of an investment that even for an average feature movie may easily run to the sizable amount of \$500,000.



On location: to a cave halfway up the side of a cliff in the picturesque Ozarks, near Pineville, Missouri, went a company to make some of the sequences for the 20th Century-Fox picture, "Jesse James"

But there is still much to be done. Almost every picture has a musical background in one scene or another. So, the musical director and his orchestra make their bow. The complete musical score is not composed until after the picture has been edited, because it must be timed to fit the scenes. Sound effects may also be added—"dubbed in," to put this very delicate operation in the picturesque language of Hollywood—and now the picture is almost ready for the public eye.

An Audience Decides

Audience reaction at the "sneak" of a movie is studied closely. Is the picture ready for release? Does it still need editing, or even retakes of certain scenes? This first public showing will supply the answer. Retakes are made only in extreme cases. Finally comes the formal preview at a Hollywood theater and distribution to movie theaters throughout the world.

The average feature picture runs from seven thousand to ten thousand feet in length, but in its making from one hundred thousand to two hundred thousand feet of film may be used—not a little of it let drop on the cutting-room floor so that the screen story will flow smoothly; some of it sharing perforce the fate of discarded "takes"; and all of it designed to add a worthy product to the endless line of a great industry.



Editing a film: to the film editor falls the very important job of arranging the different sequences of a motion picture as effectively as possible. A Moviola enables him to both hear and see the film. Reproduced by the courtesy of 20th Century-Fox



Camera, lights, action: a sequence under way on a Hollywood set. By the courtesy of Radio Pictures

Did You Know ?

THAT, according to the Chamber of Commerce of the United States, about a hundred years ago, in 1837, the cost of Federal Government was a little more than \$2.25 per person? Fifty years later it was about \$4.50 per person. In 1937 it was \$62.91 per person. The cost of all classes of government—federal, state, and local—was, in 1937, \$130.75 per person.

That the New York World's Fair officials estimate that paid admissions will total approximately 60,000,000? It is expected that 11,000,000 "out-of-towners" will visit New York because of the fair. Studies of expenditures of out-of-town visitors to the Chicago Fair in 1933 and 1934 revealed that the average visitor spent \$45 in Chicago. If the visitors to New York spend an equal average sum, the city will experience a spending windfall of \$495,000,000.

That Tenite II, the new plastic molding compound manufactured by the Tennessee Eastman Corporation, is both beautiful and tough? Available in a wide range of grades and colors, it has particular resistance to distortion under varying degrees of heat and humidity. Articles made from one grade of the new material can withstand as much as five minutes'

boiling in water without marring the surface finish.

That the Metropolitan Life Insurance Company estimates that 11,000 fewer people were killed in accidents of all kinds in the United States during 1938 than in 1937, a decline of more than 10 per cent from the 106,000 accidental deaths in 1937?

American Progress

(Continued from page 3)

Perisphere. This great panorama showing a city and its surrounding country will illustrate how all types of workers—the farmer, the miller, the banker, the mechanic, the business executive, and the scientist—combine their efforts to produce our American way of life.

The almost unbelievable progress from the hardships of colonial life to the comparative luxury of today is a wonderful tribute to the effective co-operation of science, labor, and industrial management. By a broad combination of all these forces, we have achieved a freedom and prosperity unequaled at any other time or in any other country in the world. This is the story to be told by the exhibits at the World's Fair which many of us will visit this summer. The Kodak exhibit will tell that part of the story which deals with the ever-growing photographic industry.

Now Showing: the 1939 Kodak Exhibit



Many notable examples of modern photography are to be found in the 1939 Kodak Exhibit, in which scores of photographers, both from this country and abroad, are represented. Especially interesting to us are those pictures which were taken by Kodak employees. Four examples are shown: "San Francisco Bay," a brilliant night shot of searchlight beams from naval boats riding at anchor, was taken by George Waters, Kodak Office; "In the Spring," a poetic and appealing study, is the work of George Maloney, Kodak Office; "Ice Carnival," an interesting shot of skaters, was contributed by Gilliam Rudd, Kodak Park; and "Future Captains," an understanding study of dreaming boyhood, was taken by Thomas H. Miller, Kodak Office. Other Kodak employees are also represented by pictures of equal merit in this exhibit, now on tour



A Splendid Display of Striking Photographs and Many Eastman Products Is Now On the Road

THE THIRD annual Kodak Exhibit opened in the Kodak Office auditorium on January 4th. Following its two-day showing in Rochester, the exhibit left on an extended tour which will cover eighteen major cities in the East, Midwest, and South.

This year's exhibit includes a really notable group of pictures taken by Eastman employees and outside pictorialists of high reputation. Such well known photographers as Edward Steichen, Morris Rosenfeld, and John Hutchins are represented in the salon group.

Reflecting the latest developments in amateur photography, the exhibit includes many fine demonstrations of Eastman products. Color photography is emphasized. Over two hundred Kodachrome transparencies and color prints are shown. The use of the Eastman Wash-Off Relief Process is illustrated by a display of the progressive steps taken in making a color print from a Kodachrome original.

An impressive showing of cameras stresses the new and growing family of miniature-size Kodaks. The tone control of pictorial studies is illustrated by several examples of prints treated by various toning baths, by the bromoil process, and by printing from paper negatives.

In each city, experienced salesmen and demonstrators from the locality are on hand to answer the questions and solve the photographic problems of camera-minded visitors.

As in the past, the 1939 Kodak Exhibit has been prepared and will be managed by the Kodak Office Sales Department. Its various features are designed to show the highest achievements in modern photography and to demonstrate the advantages gained by using high-quality Eastman products. Many thousands of enthusiastic amateur picture-takers will view the exhibit during its tour. It will serve to give them further proof of the Eastman Kodak Company's position as producer of the finest photographic supplies and equipment available.

OUT OF THE HAT

Fisherman

MOST FISHERMEN are satisfied, even grateful, to be able to enter a sporting-goods store and buy poles, lines, leaders, bait, and any other equipment they may need for following their piscatorial proclivities. Not so, Earl M. Lowry, of the Research Laboratories. He's the most ingenious angler we've run across in many a long day.

To begin with, Mr. Lowry makes his own fish poles—beautiful, split-bamboo rods which rival anything you can buy at the store. He uses 4-foot butts of Tonkinese cane which comes from Indo-China. The butts are split, he explains, the nodes filed down, each piece worked into a triangular shape, and then straightened by heating. Six of these pieces are expertly fitted and glued together to make each section of the rod. It takes a full evening of painstaking work to shape one of these pieces—and you have to make eighteen of them for a single rod.

In addition to his fishing rods, Mr. Lowry also produces his own silk leaders, using the caterpillar of the *Cecropia* moth—our native silkworm, though its silk is commercially valueless since it can't be unraveled from the cocoon. But Mr. Lowry wasn't dismayed by the fact. "I decided I'd just see what could be done about it," he relates.

So he hunted up several cocoons, allowed the moths to emerge, and held them captive through the mating season. Presently, he had a nice crop of eggs which looked like coffee beans. In the course of time, caterpillars were hatched and Mr. Lowry raised them carefully until they were ready to spin their cocoons. He removed their silk sacs and stretched out the viscous contents into long threads—about 18 feet to a caterpillar. These, when allowed to dry and harden, made excellent leaders, some of them having a tensile strength of ten pounds.

Mr. Lowry isn't yet satisfied with his piscatorial self-sufficiency. He explains that a fisherman, by hunting for a hatch of eggs along the river he



Earl M. Lowry: he isn't satisfied

is fishing, can judge exactly what the fish are biting. "Then all you have to do is sit down and *make* a fly to resemble the ones that you've just found. I'm going to try that the next time I go fishing," he declares.

Compiler

IT SEEMS rather fantastic to think that you could get two or three copies of a publication for which you had sent in a single subscription simply because one of your ancestors changed his name several hundred years ago. Yet Lewis J. Sforzini, of Building 23, Kodak Park, has had this experience many times.

To get to the root of the matter, far back in the early 15th century, an Italian condottiere named Giacomo or Murzio Attendolo gained command of a band of adventurers by whom he had previously been kidnapped. Rising rapidly to power, this able leader signalized his new importance by assuming the name of Sforza, meaning "the Strong." His son, Francesco, and later descendants played an active part in the turbulent history of medieval Italy. For many years, the Sforza family ruled over the Duchy of Milan.

Today, one branch of this famous family is known as Sforzini or "Sforza the Younger." This name, Mr. Sforzini explains, seems to trip almost

everyone who tries to spell it, and he has ample evidence to prove that fact. After enduring this consistent misspelling of his name for years, Mr. Sforzini finally started to compile a list of these misspellings. Between May, 1927, and May, 1935, the list grew steadily until it had passed the hundred mark. This was List No. 1. List No. 2 has already added 38 more spellings to the swelling total. "I'm sure that I overlooked another couple of hundred spellings before beginning to list them," Mr. Sforzini declares.

Among the misspellings, we find such fanciful examples as Schwartzini, Sforzinik, Starzina, Spangina, Forami, Szwargini, and (cross our hearts) Fort Seneca.

This difficulty in spelling the name Sforzini correctly apparently throws file clerks into great confusion, for many of the publications to which he subscribes arrive in duplicate, the name in the address being spelled in different ways. "Life sends me two copies for the price of one," he told us, "and many other publications arrive by two's and three's because people just can't get the name straight." So you can see, Mr. Sforzini's daily life is affected to some extent purely because that adventurous ancestor of his decided to change his name.



Lewis J. Sforzini: the name trips



A view in the heart of Alaska: Gakona roadhouse and airport, Copper River Valley, and Mt. Sanford

With a Camera

(Continued from page 9)

try that nobody has ever seen before. It is quite inaccessible on foot. Alaskans are probably the most air-minded people in the world. Most small towns have their local pilots, who fly men, provisions, and machinery to the mines, and schoolteachers into the inland villages.

On this flight we followed the Copper River, turned into the unknown mountain and glacier district of the Chugach Range, and, believe it or not, found an entirely new gold deposit. That is, we thought we did, but it is a little difficult to confirm it because it is impossible to land a plane, and nobody could reach it on foot. However, we optimistically named it the "Golden Princess," and staked our claim by throwing some empty Kodak film-pack cartons overboard. This flight was a continuous orgy of photography in black-and-white and color, and will last long in my memory, because I was nearly frozen to death. Not because I was lost in the arctic wastes, but it was almost as bad, sitting in the rear end of the plane with the side door out, flying over glaciers and dodging icy peaks and holding a heavy metal camera. That night we developed all the black-and-white films, especially a roll of 100 aerial negatives on infrared film, which showed a vista right down the 200 miles of the ice field behind the St. Elias Range.

The most exciting time in Cordova was on a seven-hour flight down the coast over the great Malaspina Gla-

cier, 1,500 square miles in area. On the way we passed towering Mt. St. Elias, which rises 18,000 feet, practically from sea level, and came down to about 5,000 feet to photograph some interesting geological formations, and the marble-like maskings on the Malaspina surface.

We were over the middle of a large ice field, 70 miles across, in a seaplane, and the chance of landing safely was about equal to that of landing on downtown Rochester roofs. For the ice does not form a surface like a skating rink. It is crossed in all directions by enormous cracks, like streets in a city, with jagged pinnacles rising between, and great bands of boulders which have been carried down from the surrounding mountains.

We photographed furiously, and had no time to think of landings, and then flew ahead to the Hubbard Glacier and on down to the little Indian fishing village of Yakutat, where there was a cache of gas. Half a dozen Indian boys held a rope attached to the tail and prevented the plane drifting out to sea, while we took on gas from five-gallon cans. We hurried, because the sea was getting choppy, made a safe take-off, and then followed the coast line back.

From Plane to Car

We spent ten days in all at Cordova, then took the boat to Valdez, the "Glacier City," of about 200 inhabitants, at the start of the Richardson Highway, a dirt road which follows the trail of the old miners to Fairbanks, 870 miles in the interior.

At Valdez we picked up the Ford station wagon which Washburn had shipped up earlier in the season, loaded our baggage and started up the trail. There is not one foot of paving on the road, and in the dry summer it is like the Sahara. We wrapped all cameras, put them in their cases, covered them with tarps, and locked them up in the back of the car—and then had to brush the dust from the inside of them every time we wanted to use them.

Fairbanks, with a population of about 2,100 souls, grew up overnight in the great gold rush of 1903. It is the only large town in the Alaskan interior, and is essentially a mining town. It has a few fairly good hotels, restaurants and stores, and an airport known to all the world as the place where Howard Hughes landed on his round-the-world flight, and to the inhabitants as the place where he scarcely cleared the treetops when he took off.

The Homeward Trail

After a week in this city, we said farewell to Washburn, took his station wagon, and made the return trip down the trail to Valdez, which by this time had developed a permanent rainstorm. We crated all of our material, waited for a boat slightly delayed by storms and cargos of salmon, and went home to Cordova with the car on board. Here, the rest of our equipment was packed, and we waited for the next boat, passing the time in more photography and in collecting specimens of copper ore. When the boat turned up, we made the trip to Seattle by the same route down the inner passage by which we had gone North.

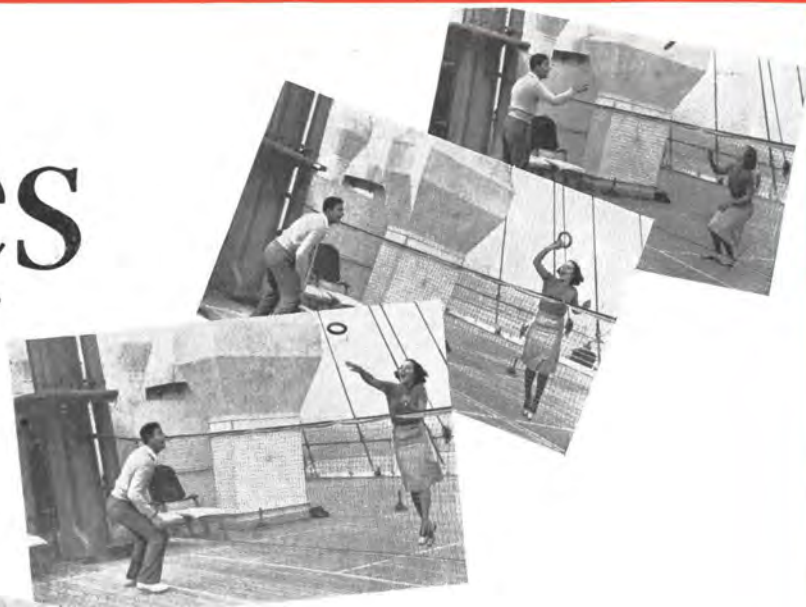
The trip more than fulfilled our expectations. We have done enough photography to last for a lifetime, but it gives us a wealth of unique pictures in black-and-white and in color, and an experience of photography under expedition and flying conditions which we could have scarcely obtained in such concentration in any other way. Our recollection of Alaska is that it is the most colorful country in the world, with mountain and glacier country unequaled anywhere, and inhabited by a group of big-hearted people, in the visiting of whom any delay would be too long. The Glacier Land is warm.



"TUBA PLAYERS": a lighter moment in the Alaskan adventure which is described on page 8. Bradford Washburn, several of whose pictures appeared in January "Kodak," and Kirkpatrick, who runs the Cordova Air Service, give a stirring performance on their "tubas"—the oxygen cylinders that are such an important item in the equipment for high-altitude flights—for the camera's benefit. Development of aviation in Alaska has been notably rapid and parts of the country that formerly could be reached only by grueling dog-sled treks of two months' or more duration are now easily accessible in a few hours by airplane

Movies

you make yourself
are no strain on
travelers' budgets



MOVIES carry you back, any time at all, to enjoy the ship, the ports, the people all over again. And movies can be so inexpensive nowadays. Ciné-Kodak Eight, the "economy movie maker," gives you a complete movie sequence for a dime or less—and such fine pictures, too. A sequence runs as long on your screen as the average scene in the newsreels, and the Eight makes 20 to 30 such sequences on a roll of film costing only \$2.25, *finished, ready to show.*

... AND FOR PROJECTION. To show your pictures at their best, use Kodascope, the Eastman-made projector which teams up beautifully with Ciné-Kodak Eight. See both at your Ciné-Kodak dealer's... Eastman Kodak Company, Rochester, N.Y.

Going to the New York Fair?

Be sure to take your Ciné-Kodak. Stop at the Kodak Building, where Eastman experts will advise you what to take and how to take it. And there you'll see the unique and gorgeous Cavalcade of Color—the GREATEST PHOTOGRAPHIC SHOW ON EARTH. Nothing like it has ever been seen before. Don't miss it.

Ciné-Kodak EIGHT

Now at a new low price—\$29.50

On ship or ashore, a Ciné-Kodak takes brilliant movies with perfect simplicity. This "ad" is in "Time" for March 6th, March 13th "News-Week"