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Map of Bible Lands

Oregon Finds New Riches With 15 Illustrations and Map

LEO A. BORAH

"Where Rolls the Oregon" 28 Natural Color Photographs

RAY ATKESON

Syria and Lebanon Taste Freedom With 37 Illustrations,

21 in Natural Color

MAYNARD OWEN WILLIAMS

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With 2 Illustrations HERNDON AND MARY HUDSON

Paris Lives Again

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Mending Dikes in the Netherlands

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LAWRENCE EARL

Fairy Terns of the Atolls

With 9 Illustrations

LEWIS WAYNE WALKER

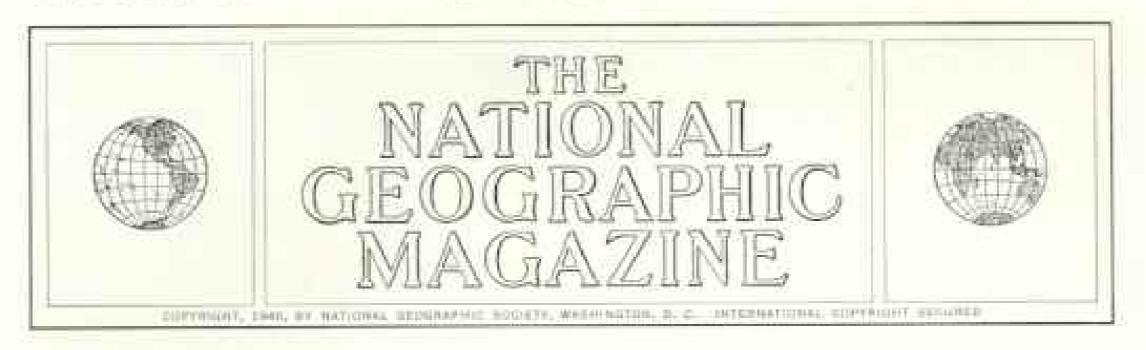
The Society's New Map of Bible Lands

Forty Pages of Illustrations in Color

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Oregon Finds New Riches

By Leo A. Borah

With Illustrations from Photographs by Ray Atkeson

INDUSTRY explored Oregon during the war. It discovered there opportunities the most enthusiastic residents had never suspected—unexploited wealth capable of providing livelihood for ten times the present population of the State.

Of course some war-born undertakings ceased functioning with the return of peace; but phenomenal success over a short span had fired the imagination of Oregon citizens and convinced them that they have unlimited raw materials, superabundant cheap power, easy transportation outlets by sea and land, and a climate so equable that it insures pleasant living conditions for workers (map, pp. 686-7).

Instead of letting no-longer-needed war plants remain moribund, they began promptly to convert them to peacetime use. New enterprises, now springing up throughout the State, are employing virtually all veterans who apply for work and at the same time absorbing most of the labor dislocated by the cessation of war production. In numerous towns veterans are setting up businesses of their own.

Portland Awakened by Roar of Industry

Portland, as I saw it often before 1940, was a conservative, rather somnolent city of gracious homes and leisurely living. When I visited it in May, 1945, it was a prodigy of industry, working at furious tempo; although—thanks to its clean hydroelectric power from Bonneville Dam—it never lost the charm of smokeless skies over tree-clad hills. Old-timers, showing me velvet lawns and rose gardens, expressed nostalgic hope even then that things would get back to normal before long.

For this reason, when I stepped off the

Union Pacific streamliner City of Portland one morning last July, I half expected to find the city reverted to its prewar quiet. But the streets were as crowded as I had seen them a few weeks before V-J Day.

"It looks as busy as ever," I said to "Mac"
McNeil, who was at the station to meet me.
"The depression hasn't relieved traffic."

"What depression?" he inquired.

"Why, the papers have been carrying stories about your record unemployment and relief rolls ever since the shipyards cut down."

"Well," laughed Mac, "we'll try to get you a hotel room, and then you can go out and

look for the depression.

"Between 1940 and 1944," he informed me, "our city population increased from 305,394 to more than 400,000; and the metropolitan area, including Vancouver, Washington, went up from 400,000 to nearly 650,000. The population of the whole State of Oregon was less than 1,100,000 in the 1940 census. About 50,000 outsiders have left the area, but Portland itself still has at least 400,000 people.

"Since V-J Day 106 entirely new industries have started here from scratch, and probably twice that many old concerns have gone into business they never attempted before. The shipyards that hired 125,000 men and women at wartime peak are employing only about 8,000 now, but most of the workers they dropped have found good jobs in small plants. All over town local capital has been building little factories that need help.

"Latest figures show 23,500 unemployed in

* See "Wartime in the Pacific Northwest," by Frederick Simpich, National Geographic Magazine, October, 1942.



For Christmas Decorations an Oregon Girl Likes Giant Pine Cones

These were gathered from the sugar-pine forests and bung to season in a warehouse at Medford. Touched with gilt, silver, or other colors, they adorn door wreaths or lend the finishing touch to gift baskets of the famous Rogue River pears. Sugar pines, largest of the native pines, have a limited range in southwestern Oregon.

the three counties around Portland, but a lot of those are returned servicemen who are taking vacations on their terminal-leave pay, or women who have given up welding and gone back to their kitchens. If anyhody really needs a job, there are plenty of farmers crying for fruit pickers."

The first factory we visited was making wooden desks for children. On a long assembly line these educational toys, cleverly designed with saddle seats attached to upright

stands, were moving rapidly.

"We have plans for other products," one of the owners told me, "but the inexpensive little desks are selling so fast that we haven't had time to start anything else. We are shipping them out by the carload."

"This is new stuff," Mac put in. "What

were you making last year?"

"Ventilating equipment," was the unexpected reply, "When priorities got tight, I started east to see what could be done. A man on the train gave me the idea for wooden toys and I turned back from Chicago. When I got home, we bought a tract of timber and a sawmill and changed our business."

Yankee Ingenuity in the Northwest

"This reminds me of Connecticut," I remarked as we left the factory. "It looks as if Yankee ingenuity had come to Portland."

In the next few days we saw numerous other establishments that strengthened this opinion. One which had contented itself with job machining for years had gone into production of ingenious loaders for farm use and hydroelectric plants which will operate with a two-foot head of water and supply electricity for all needs of an average farm.

Another machine shop began making twowheeled trailer carts of one-ton capacity for farmer customers. Soon the carts turned the

job shop into a big production plant.

An irrigation pipe concern started as an experiment the manufacture of socket devices for putting up wooden scaffolds without nails; utility mixers, for either stock feed or concrete; and cement block machines for home use. Instantly successful, these sidelines pushed the pipe business into the background.

A company recently organized is making trim 14-foot 6-inch boats from plywood, with ribs composed of thin strips of Douglas fir, glued and laminated and bent to precise shape on machines devised by one of the proprietors. Also molded to form are the

plywood hulls.

In a downtown office building we found Dan Calkin and his wife working on tiny gas engines for toy aircraft. Dan has a secret method of sandcasting aluminum by which he makes fittings so precise that his engines require no gaskets. With planes powered by his one- and two-cylinder models contestants have won many flight competitions. He set going for us his latest triumph, a four-cylinder engine no larger than my fist.

From the Calkin shop we went to the factory of the American Junior Aircraft Company, which turns out model planes of all sorts and sizes from the smallest and cheapest to radio-controlled marvels used by the armed

forces as practice targets.

Jim Walker, the proprietor, is an inventive genius who takes a boy's delight in flying toy planes. The first one he showed us was a folding model which he shot high into the air by means of a rubber band. About a hundred feet up, it spread its wings and sailed off gracefully into a gully.

"I ought to charge the National Geographic 35 cents for that," Jim said. "But at Lloyd's

golf course I'll fly one I'll not lose."

He picked up his kit: a yellow balsa-wood plane equipped with a one-cylinder engine; a curious contraption that looked like a combination saw handle and fish reel; and a case containing dry-cell batteries, tools, and spare

parts.

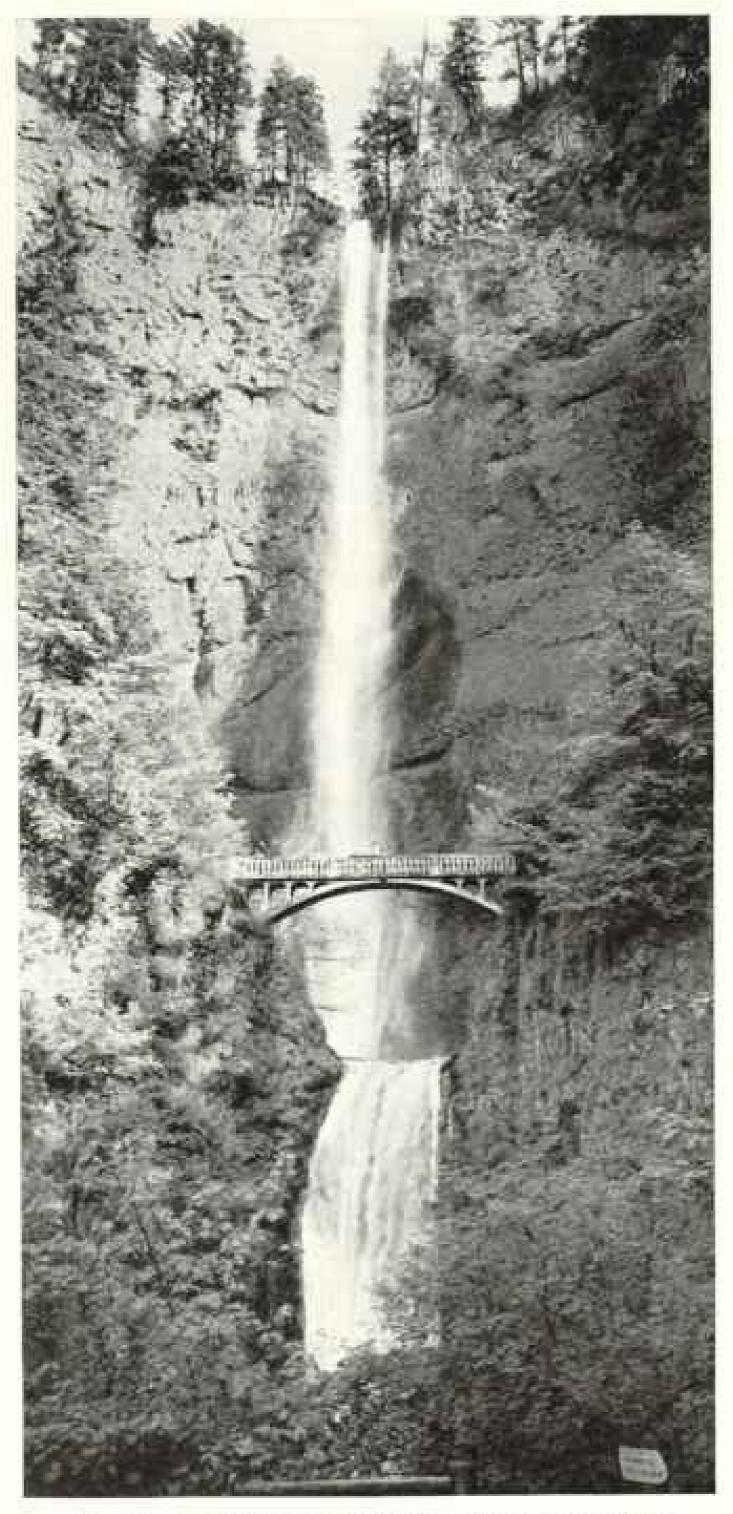
On a lawn beside Lloyd's high-fenced driving course Jim prepared for his demonstration. "Oregon mist" was falling steadily, but he seemed unmindful. He gassed the engine with fluid from an oversized medicine dropper, inflated the tires with a hypodermiclike pump, unreeled a few feet of the two strands of thin copper wire coiled on the "saw handle," fastened the ends of the wires to the plane, sparked the motor with the dry-cell batteries, and spun the propeller.

As the little engine began to roar, he stepped back and played out wire from the reel. The three-foot plane took off smoothly and rose till it was flying horizontally in a circle perhaps 150 feet in diameter and 50 feet in the air.

A Disabled Soldier Learns to Fly

Then Jim began doing tricks with the sawhandle reel. He let out the wires until the flying arc was more than doubled and made the plane climb straight up, swerve sharply, then dive like a bomber at the windshield of the car in which Mac and I were sitting to keep out of the rain. As we dodged and flung up our hands, the plane shot upward, missing the top of the car by inches.

"This 'U-Reely-Control' handle works pretty well when you get on to using it," was Jim's response to our ejaculations of wonder. "I brought some disabled veterans out here and



No Oregon Visitor Should Miss Multnomah Falls

Only a short drive from Portland on the Columbia River Highway, it leaps from the cliff in a plunge of 680 feet, interrupted briefly by a ledge, and drops into a glade only a few feet from the payement (page 716). A new truck road under construction close to the river will soon leave the scenic route entirely to pleasure travel.

One poor fellow was a permanent wheelchair case, and I gave him extra attention. When his plane outdid the rest, he got a great boot out of it.

"I'm taking on a lot of disabled soldiers at the plant. If they have one good hand or even a foot, I can find some-

thing they can do."

Just a few years ago an inventor came into the studio of two Portland commercial photographers with an idea for a stereoscopelike device of molded plastic to show in three dimensions color-film transparencies mounted in pairs in circular paper disks.

Long since abandoned is the commercial photography. The studio has grown into a big

factory.

With the development by eastern interests of enormous deposits of alumina-bearing ore discovered just west of Portland, quantities of aluminum hitherto undreamed of will be available for manufacture. The Beall Pipe and Tank Corporation is already embarked on big-scale production of "Walk-in" aluminum refrigerators and deep-freeze cabinets. Other concerns are making aluminum boats aluminum ladders, and aluminum clothes dryers.

The Pacific Chain and Manufacturing Company, which performed yeoman service for the Navy in wartime by high-speed production of anchor chains, keeps going about as fast fabricating smaller chains for domestic purposes and conveyor belts for factories.

Woolen Goods Known the World Over

Among the older businesses in Portland are two that have made Oregon woolen goods world famous: the Pendleton Woolen Mills company, makers of "Pendleton" blankets, virgin wool suitings, and "lumberjack" shirts; and the Jantzen Knitting Mills, whose swimming suits

bearing the red diving girl label are popular not only in the United States but in many foreign countries.

At the Pendleton Woolen Mills' city plant Vice President Clarence M. Bishop showed me a Pendleton blanket that had kept its traditional Indian design undimmed through 40 years of service.

When I called on J. A. Zehntbauer, founder and president of the Jantzen Knitting Mills, he was starting a half-million-dollar addition to the Portland plant (Color Plate XVII).

"We'll have a new sewing room 350 feet by 200," he said. "The roof will be supported by wooden arches made in Portland."

Timber Structures, Inc., which had the contract for the arches, specializes in struts formed of board laminae bent to the desired shape and glued together to make timbers of whatever thickness is required.

Since Oregon has more virgin timber than any other State, manufacture of wood products is hig business in Portland. The Doernbecher Manufacturing Company was making furniture on a five-mile assembly line when I went through the plant.

In factories I saw trucks that looked as if they were on stilts straddle piles of lumber or steel, lift them intact, and roll away with them slung under the carriages (page 706).

"These granddaddy-longlegs on wheels save hours of stacking and restacking," I remarked to Mac. "Where do they come from?"

He took me to the plant of the Hyster Company, which produces machinery for any kind of lift or pull.

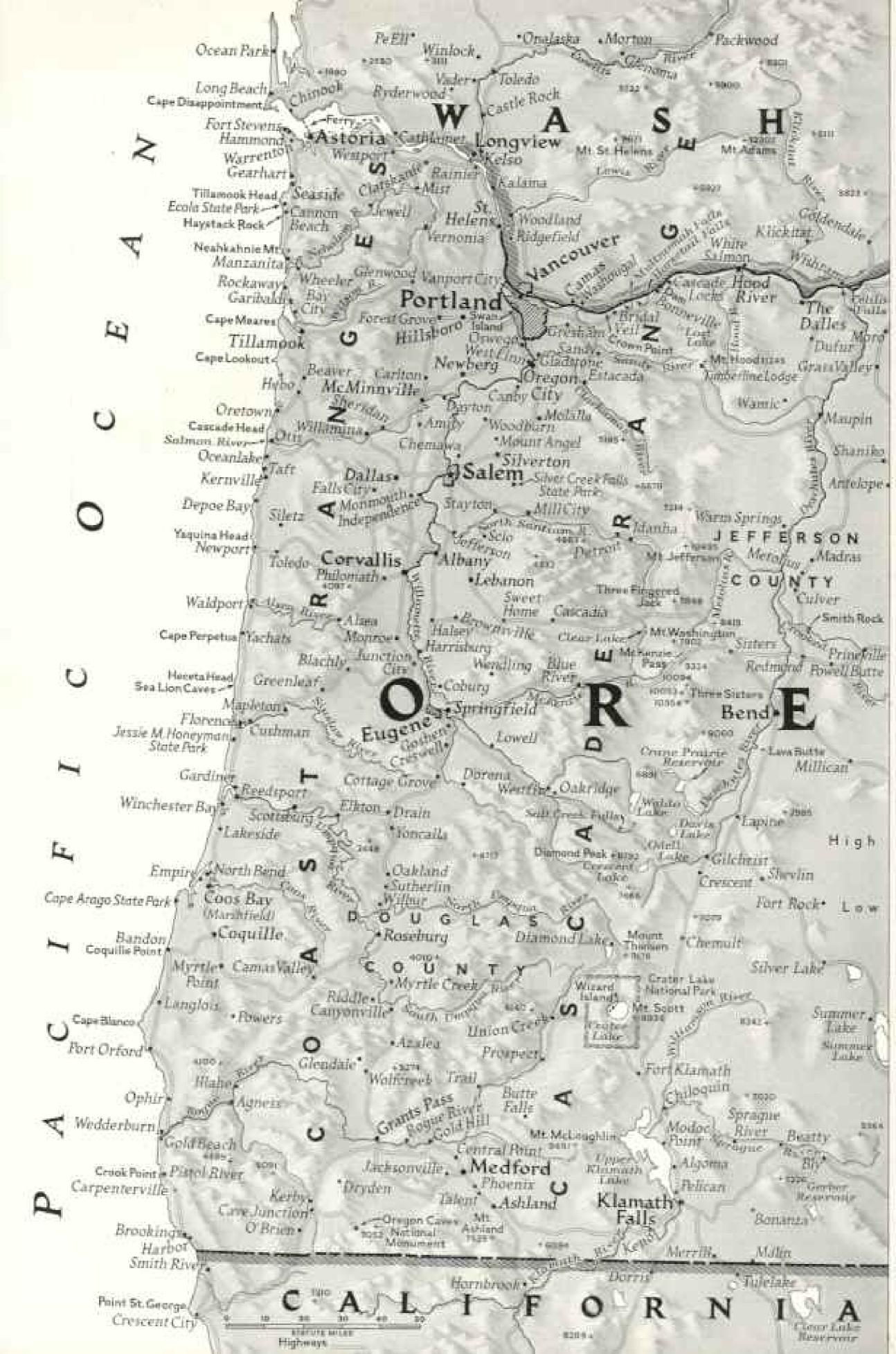
These are only a few of the industries, new and old, that are making Portland a great manufacturing center. There are hundreds more.

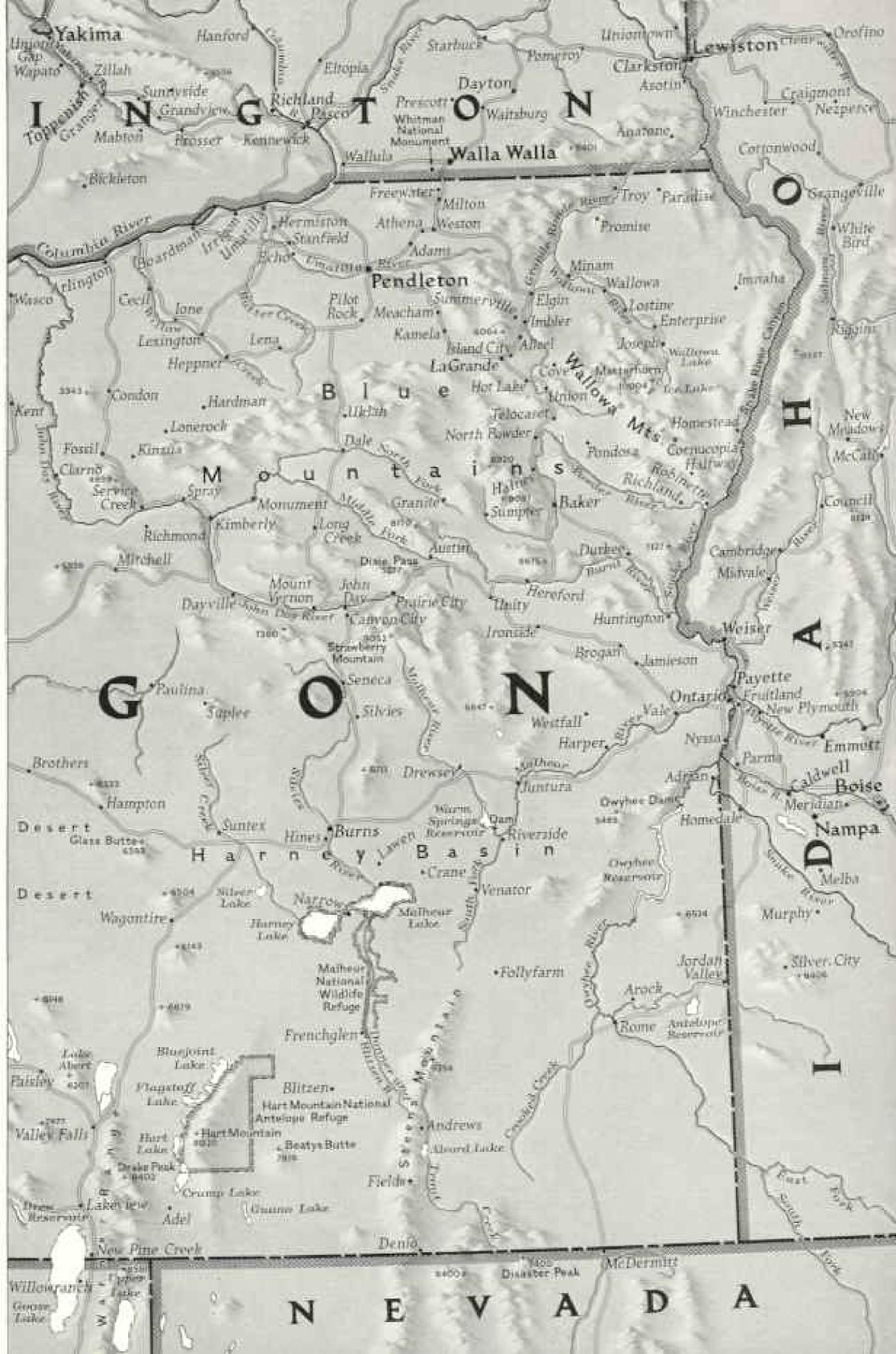
One Saturday afternoon we took a quick run around the



In Cool Storage Tillamook Cheese Is Aged

The Oregon coast is rich dairy country, and there are 17 Creamery Association plants in the county of which Tillamook is the seat (page 715). For fine quality this Cheddar has won national recognition. As a treat, visitors are often permitted to taste the cards in the hig aluminum wats where the fresh milk is processed.





industrial district. We saw at every turn new concrete structures going up, some just started, others nearing completion.

"Construction of a lot of these buildings

seems to be halted," I commented.

"It is," Mac admitted. "The difficulty is in the holding back of materials—that and

the housing shortage,"

Henry Kaiser's mushroom Vanport City, which I had seen last when it was home to nearly 10,000 families of his shipyard workers, still had almost half as many. Eventually the whole place, \$300,000 high school and elaborate day nursery included, is to be cleared for factories and warehouses.

Portland, Like Helen of Troy, Launched a Thousand Ships

During the war the six principal shipyards in the Portland area (five in Portland and one in Vancouver, Washington) completed 1,189 major vessels and converted 20 more. All save 19 of the new ships were built for the U. S. Navy and the U. S. Maritime Commission.

The Kaiser Company's Oregon Shipbuilding Corporation set the highest speed records with a total of 463 vessels.

Mac and I had attended the launching of a Victory ship sponsored by Union College, Schenectady, New York, at Oregon Shipyards in May, 1945, and had ridden down the ways at Swan Island on a tanker, the Grants Pass. Each time we had seen the keel of a new vessel being laid on the vacated ways before the launched ship had hit the water.

The scenes that afternoon last July were quieter. At Oregon Shipyards the Kaiser Company was building three combination cargo and passenger ships for the Aluminum Company of America, and the U. S. Maritime Commission was using some space for storage. We were told that Kaiser expected later to centralize all operations at the Swan Island yard where drydock facilities would aid in a proposed repair and conversion program.

As we rode along the water front, I missed the feverish activity of a year before. Then, at wharves crowding the rim of the deep harbor near the mouth of the Willamette River, steel cargo vessels bearing Soviet insignia had been loading with Lend-Lease goods for Russia. Hundreds of these, as well as U. S. Victory ships and tankers, had been steaming constantly out of the Willamette and down the Columbia to the Pacific a hundred miles away. War had made the inland city of Portland one of the key seaports of the world.

Gone were the war vessels, but the harbor was still busy. Since Oregon has found its strength, and the world has learned the way to its door, Portland has a promising future as a gateway of foreign commerce (p. 711).

Despite the tremendous growth of the industrial districts, the "City of Roses" still glories in the serene beauty of residential streets which climb above the business area. Picture windows of hillside bomes frame unsulfied views with the glistening snow peak of Mount Hood in the distance (Color Plates II and IV-V).

Roses bloom from early spring until Christmas (Plate III). Summers are never hot, winters never cold. The drinking water is used in batteries without distillation. For recreation there are delightful lakes cupped in green hills, evergreen parks and golf courses, and drives of only two or three hours to ocean beaches or mountain skiing slopes.

To enjoy the beauty of the City of Roses, one does not need great wealth. Mansion and cottage alike share the views of flowerdecked landscape and matchless skyline.

We rode one day for luncheon to Timberline Lodge on a 6,000-foot shoulder of Mount Hood. Rising gradually for 60 miles, the fine highway winds through fertile farmlands and orchards and climbs forest hills bright even in midsummer with profusion of wild rhododendron and azalea. Patches of snow, still lingering by the roadside, became larger as we neared the castlelike stone lodge.

Built by the Federal Government to give employment during depression years, the great edifice is furnished throughout with handcraft. Wide verandas on two levels look over unbroken forest to Mount Jefferson, 50 miles to

the south.

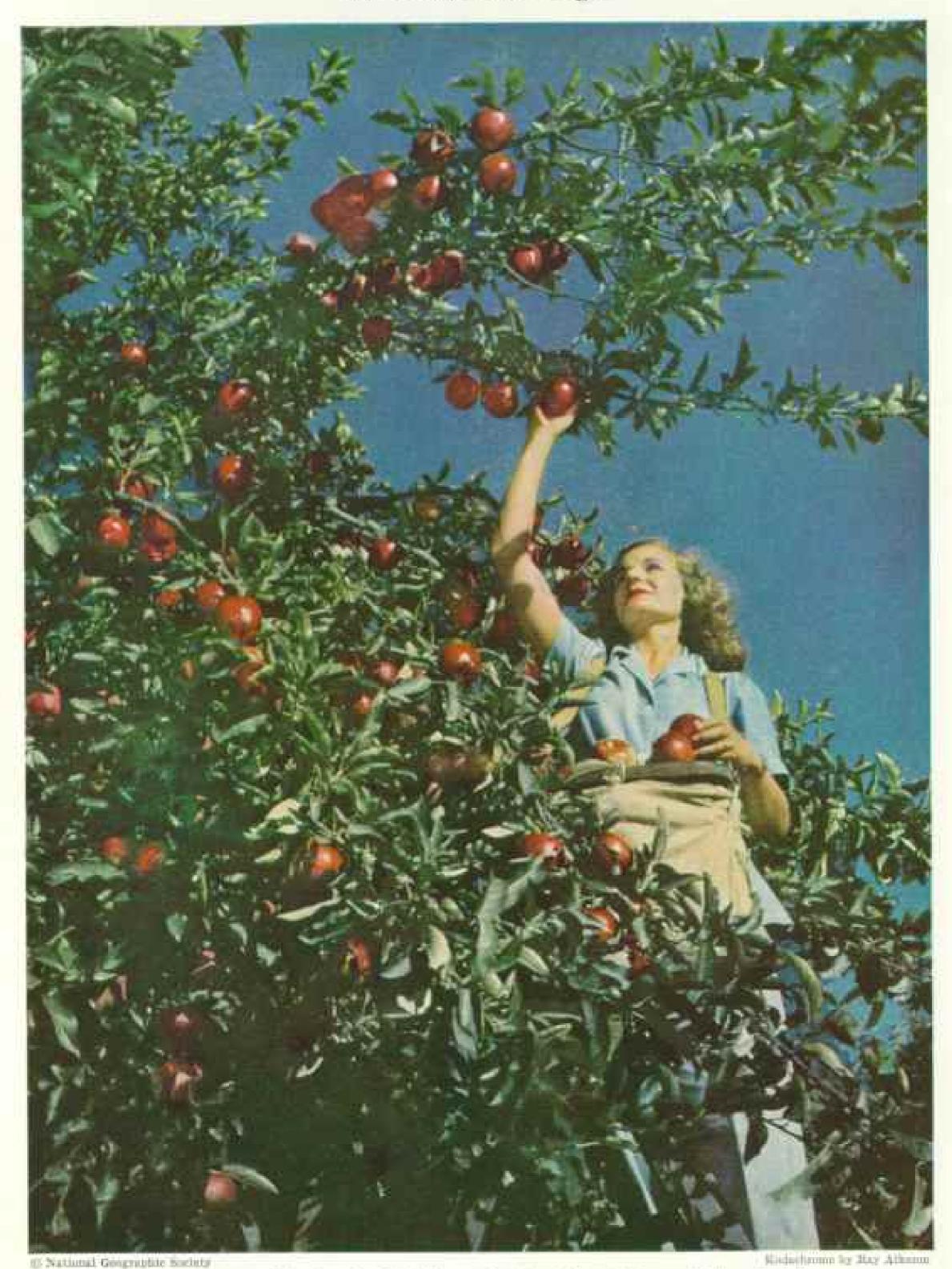
Mount Hood, Pride of All Oregon

After luncheon we took a ride on the ski tow which rises a thousand feet in one mile to the lower reaches of the eternal snowcap. The sun was hot, and skiers were climbing farther toward the summit to find snow dry enough for the best sport. Mount Hood, 11,245 feet, is scaled every year by thousands of people. Though arduous, the ascent by the established trail is not dangerous.

The panorama spread out before us as we stood at the top of the tow was breath-taking. We looked south over thousands of square miles of the finest virgin timber yet remaining in North America. So clear was the air that snow mountains half the State away seemed within walking distance.

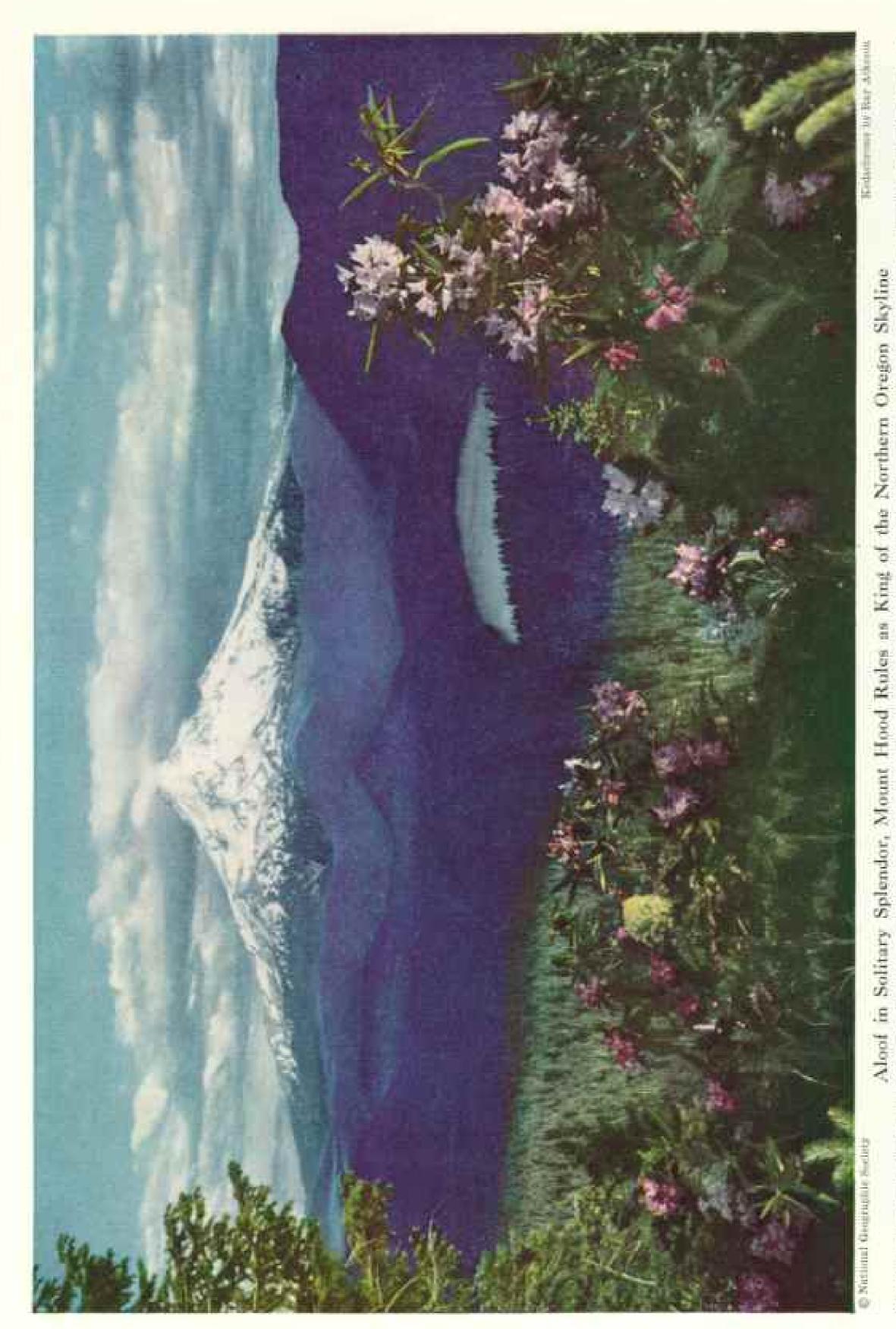
Back in Portland, I telephoned State Parks

^{*}See "Lend-Lease and the Russian Victory," by Harvey Klemmer, NATIONAL GEOGRAPHIC MAGAZINE, October, 1945.



With Autumn Tinting the Delicious Apples, Hood River Valley Is Eden

Laden orchards stretch for miles over the smiling landscape sheltered by Mount Hood. Lest trees become too tall for convenient picking, they are pruned annually. The crop is marketed by a growers' cooperative association. In this fertile area, pears, cherries, strawberries, peaches, and other fruits are produced also in large quantities.



No other tall peaks thrust up near it to dispute its reign; it stands alone above the dense forests of the Cascades, rising almost abruptly to a height of 11,245 feet. In Portland, 50 air miles away, living rooms are built with picture windows framing its snowy summit. On the lower reaches, wild rhododendrons bloom. Lost Lake at right,



For a week cach June the City of Roses is best to visitors from all over the world. The spectacle, discontinued during the war, was presented again in 1946 to the largest crowds in its history. The procession, three miles of more long, winds through downtown streets and suburban ways flanked by ever-blooming gardens.



Setional Geographic Society

Hoary Mount Hood Seems to Don a Purer Whiteness above a Flowery Tide

This scene of breath-taking loveliness greets the traveler who ascends the hills above the little city of Hood River.

Behind him the mighty Columbia, swollen with melting snow, rolls through its rocky garge.



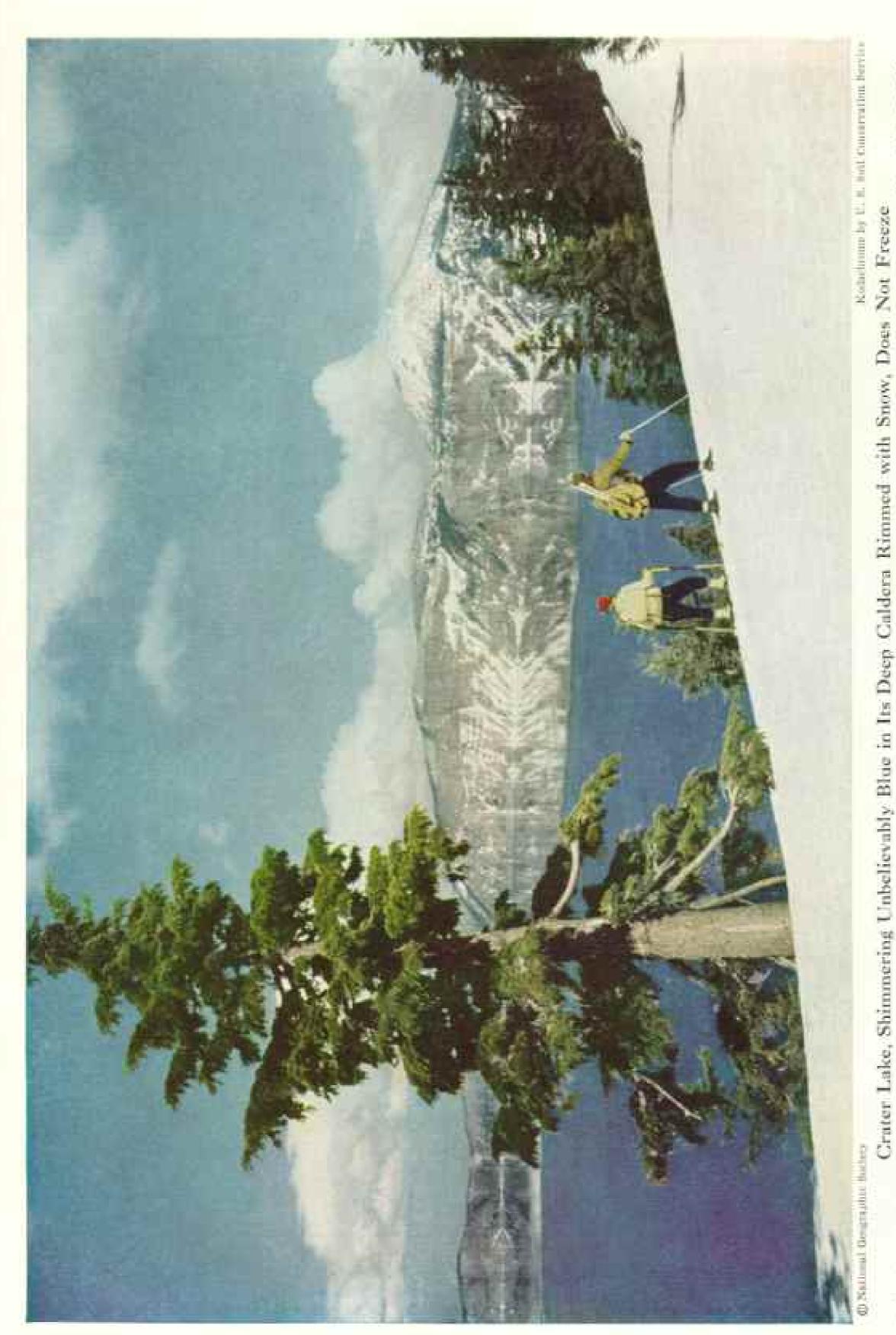
Kideshroms by May Athesen

Pear and Cherry Trees Burst into Springtime Bloom in Hood River Valley

Orchards sweep to the far horizon where Oregon's best-loved snow peak glistens in clear sunlight at midday or glows with reseate color at dawn and dusk. Trees in the foreground are oaks.

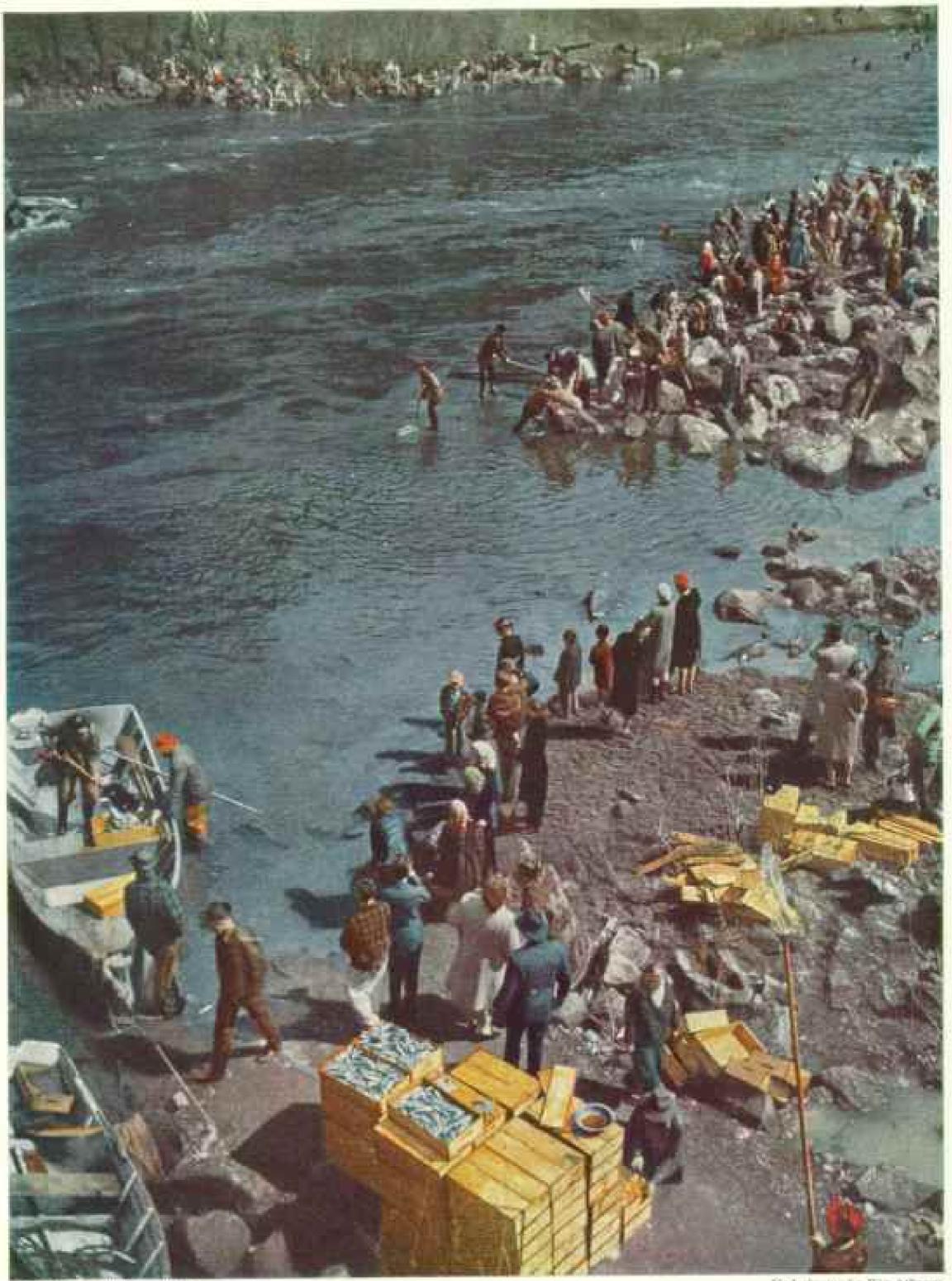


It was built in 1938 at a cost of \$2,500,000 to replace the old State House, which was destroyed by fire. Decorative motifs feature the pioneers of the Oregon Trail. Furnishings and carpets are of materials produced in the State. Rog patterns represent leading industries—agriculture, lumbering, fishing, and mining.



Lake elevation is 6.164 feet, depth of water 1,996, and altitude at edge of cup about 7,005. Here a 100-inch snow pack is considered a "short crop" by U. S. Soil Conservation Service surveyors. They measure its depth in winter to give water users in the valleys advance information on the summer supply.

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Koderhume by Hay Atkreen

Anybody Can Catch Fish When the Smelt Run Is On in the Sandy

With dipnets, buckets, shopping bags—even window screens and woven-wire bedsprings—throngs from Portland and neighboring towns and countryside clamber along the rocky banks of the little river to haul the swarming smelt. The 1945 crowd was the largest in history, but the record was broken again in 1946.

"Where Rolls the Oregon"



Rollations Ut Hay Atlanta

Winter Makes Wizard Island a Pearl in the Aquamarine of Crater Lake In midsummer the snow disappears, but for most of the year it lies deep, emphasizing the rich blue of the water.

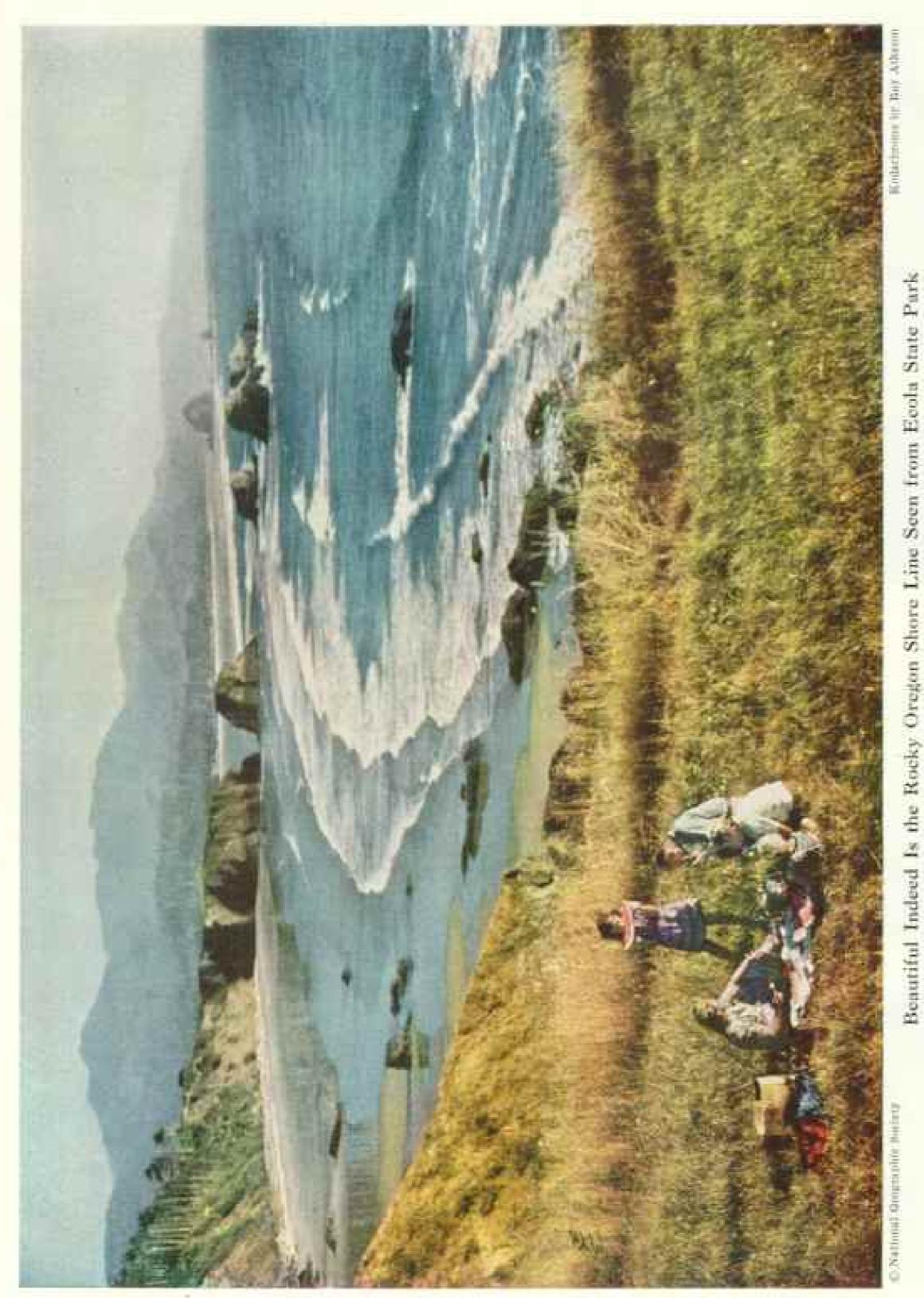


C National Geographic Selection

Kemeteren by A. P. Burber

For a Trip to Crater Lake in Winter, the Sno-Cat Is a Jolly Steed

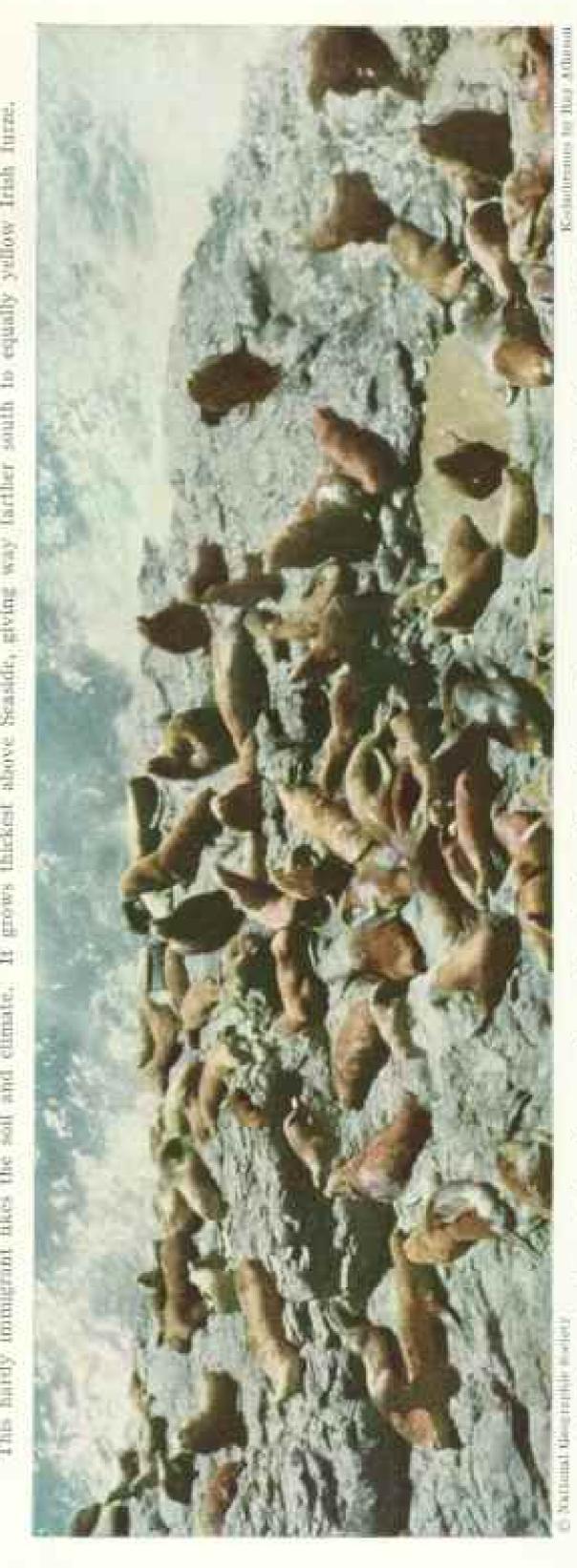
With skis interchangeable with its front wheels, and with caterpillar tracks gripping the show, it goes merrily over drifts that bury the lodge and other buildings. The little machine travels steep ski runs at ten miles an hour.



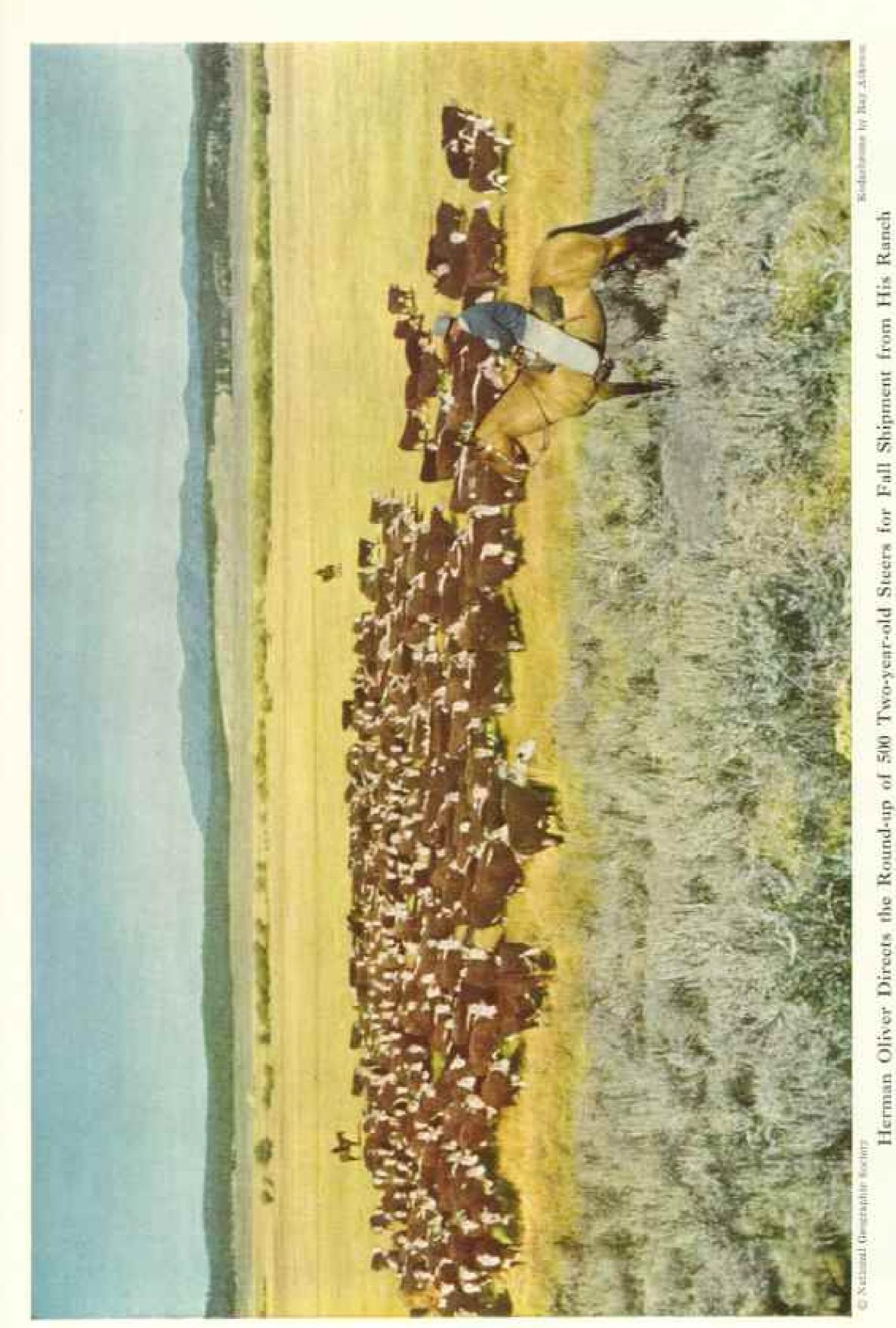
The picnickers have spread out their luncheon on the grassy hillside above a crescent beach. For miles beyond the first line of characteristic offshore rocks stretches Cannon Beach, so named because a big gan was rolled asbore there in the early days. Haystack Rock juts from the sea in the distance.



It grows thickest above Seaside, giving way farther south to equally yellow Irish furze. for Many Miles Between Unbroken Banks of Golden Scotch Broom The Oregon Coast Highway Passe This hardy immigrant likes the soil and elimate,



Hundreds of Sea Lions Congregate During Migration and Mating Seasons On Rooky Ledges of the Oregon Coast



On luxuriant wild grass of mountain meadows near John Day he feeds about 5,000 blooded Herefords. A cuttleman born and reared, he scorned a gold dredging company's offer of a fortune for creek bottom lands, saying, "My father started this place 60 years ago, and I'll not have it ruined by strips of barren rocks."



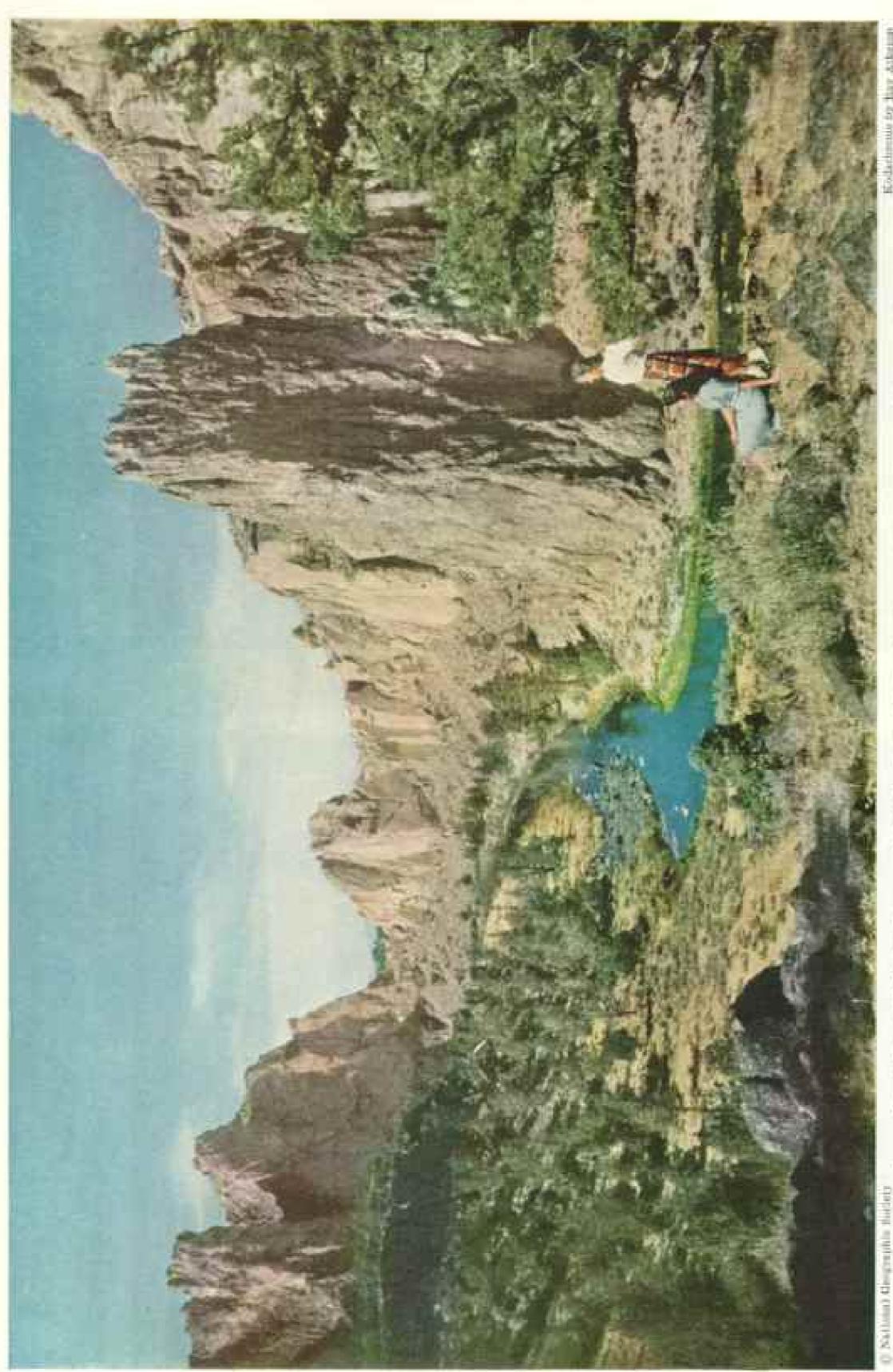
Royal Annes Make Salem the "Cherry City

@ National Generolphin Beeletty

produced more of Canneries employ the bumper crop of Oregon In the fabulous Willamette Valley near Occgon's capital is p this fuscious fruit than in any other equal area in the State. I hundreds of workers. In 1946 help was so scarce that much of went to waste in the orchards.

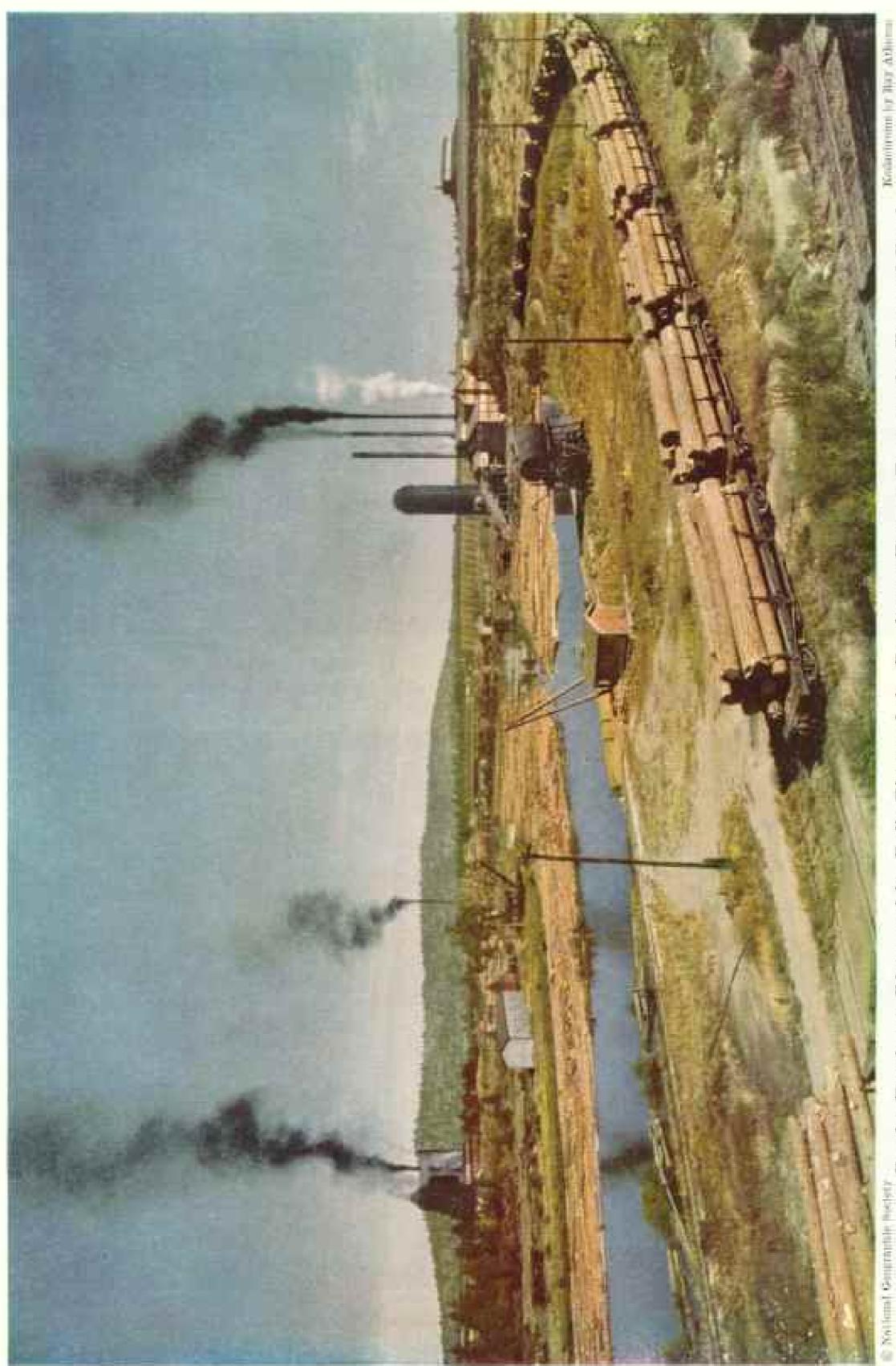
In Pendleton Saddles Are Made to Suit Any Buyer's Fancy

boys can get special models to serve different needs, and decorations to please the most bizarre taste. Orders for hand-tooled leather goods pour in from all over the world (Plates XVIII and XIX). Mass production has no place in this plant in the "Round-up City," Cow-



Bryce Canyon in Utah. This little stream, twinting like a shake, has cut a deep gorge, on the walls of Blazing with Color, Weird Spires and Cliffs of Smith Rock Tower Above Crooked River Near Redmond Some central Orogon formations rival the glowing figures of Br which prologists can read much of the story of creation.

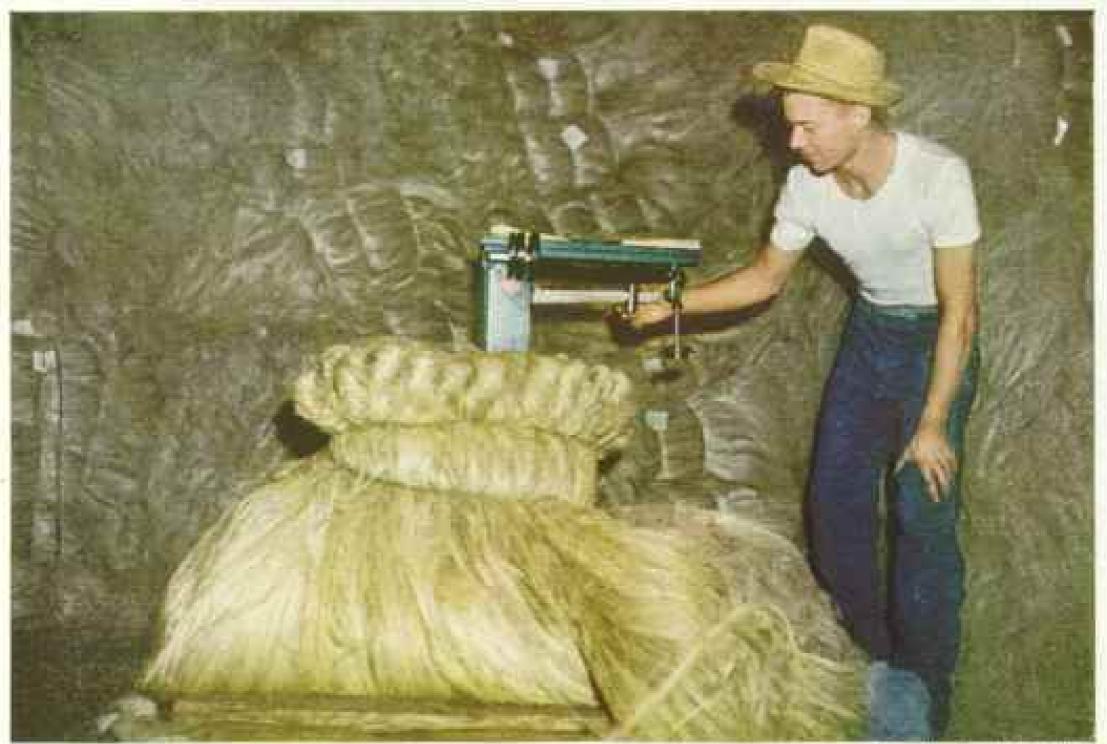
The State has established overlooks, but this wild area, off the beaten path, is fittle known,



The Sheviin-Hixon and Brooks-Scanlon mills roar day and night making bumber from western yellow pines felled in eastern and central Oregon. In one mill a pilot plant dries furniber with acctone flowing over and through it. Resins, fatty acids, and other by-products are salvaged. By the Deschutes River and by Rail, Giants of the Ponderosa Forests Come to the Town of Bend

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The National Geographic Magazine



Kachebrane by C. G. Schultz-

Long-fiber Flux Is Produced in the Willamette Valley

One mill near Salem makes lifetime rugs and mops of tow, and another specializes in twine, but most of the fiber goes to the East for spinning and weaving.



C National Geographic security

Birdedirmin by Blay Adminis

From Wedderburn Fishermen Take Catches Home in Cans Labeled with Their Names Only sportamen fish the Rogue River, which teems with steelhead trout and chinook in season. The angler can have his trophics and cat them too by patronizing this cannery across from Gold Beach. Superintendent Samuel H. Boardman in Salem, the capital of Oregon. He volunteered to show us some of his beloved parks,

Since the parks are under the authority of the State Highway Commission, he has facilities for acquiring desirable tracts, beautifying roadsides, establishing overlook areas, and keeping fine scenic places free of signboards, shack restaurants, and other unsightly developments. His newest project is the creation of freeways to make the approaches to cities attractive to travelers,

"I wish I could live another hundred years," he sighed as we started toward Salem.

To do the fabulous Willamette Valley justice would require a book. The charmed land is a cornucopia of fruits and flowers, vegetables and grain, dairy products and lush grasses, mighty timber and manufactured goods of all sorts (Plates XIII, XVI, and XXIII).

As we drove along the broad highway through orchards of cherries wasting on the trees for want of pickers, prune and pear orchards, groves of filberts and walnuts, fields of trellised hops and loganberries, acres of vegetables, green pastures dotted with dairy cattle and sheep, billowing reaches of flax and grain, and clean, prosperous towns humming with industry driven by power from the river, Sam asked:

"Why should anybody long for city streets? This is the sort of life people were meant to live."

Salem seems to me an ideal capital for vigorous young Oregon. Sparklingly clean under skies undimmed by smoke, its residential streets bordered by fine old trees, it forms a green setting for the new capital which gleams in chaste whiteness at the center (Plate VI).

Water Power Keeps Salem Clean

Power from the Willamette River turns the wheels of numerous factories, but there is not a trace of ugliness in the entire city.

Of special interest to me was a new establishment which is making lifetime rugs of tow. The proprietor told me that he is contracting in several States for this once-despised waste from flax mills. Since the resumption of foreign trade, competition with Irish and Belgian growers threatens flax farmers in the Willamette Valley, for they cannot pay current wages and make a fair profit.

In a three-hour trek in the foothills of the Cascades east of Salem, we saw Silver Creek Falls State Park, where North Silver Creek drops 136 feet to break on huge basalt boulders, Winter Creek falls spraylike 134 feet into a canyon, and South Silver Creek

plunges with a thundering roar 177 feet into a sapphire pool. The 1,500-acre park contains 14 fine waterfalls. Here the State has provided delightful picnic grounds (p. 708).

"It doesn't cost visitors a cent for admission or parking fees," Sam said proudly. "Oregon wants its guests to enjoy its beauty free."

Talking with some Salem men, we brought up the subject of unusual farm products. A banker laughingly asked us if we had ever seen dandelions grown commercially.

Although I suspected a hoax, we let him take us to a 40-acre truck farm near town. Our jocose offers to give the farmer all the dandelions from our lawns elicited a tolerant smile. He actually had a three-acre field of neatly cultivated dandelions.

"They are not the lawn pests you boys were expecting," he told us. "These are aristocratic greens for garden planting. I sell the seed to the big seed houses."

Dandelion Farm Harried by Birds

He snapped a long wire which was stretched taut along the edge of the field, and a row of birds sprang from it into the air.

"Wild canaries," he said." "They pick open the heads. Flipping them off their perch scares them away for a while."

"How do you clean the seeds?" I asked. The farmer led us to a shed where he had set up a homemade fanning machine.

"This gets the fluff off," he explained. "I take it out of the hopper in bags and sell it to a company that makes life preservers."

"What about the roots?" somebody asked.
"I'll give you all the guesses you want," was
the reply. Then, when nobody ventured an
idea, "I dig them in the fall and sell them
to the maker of one of the oldest proprietary
remedies on the market."

His profit in one year from the three acres of dandelions had been \$3,800.

"But don't go into it, boys," he advised us as we started back to town. "It's a headache. I can't get enough pickers when I need them, and the wild canaries keep me twanging that wire all the time."

Adjoining the capitol grounds is the campus of Willamette University, the oldest institution of higher education west of the Rocky Mountains. It was chartered by the Oregon Legislature of 1852-53.

In the Salem area is the big experimental plant built by the United States Government for extracting alumina from clay. The experiment was successful in obtaining the

^{*}These "wild canaries" are really goldfinches. See "The Book of Birds," published by the National Geographic Society.



For Moving Stacks of Lumber, the Straddle Truck Is Unsurpassed

This granddaddy-longlegs on wheels picks up the piles and sets them down intact. In shipyards such machines were used for carrying sheets of steel 50 feet long and 90 inches wide. The plates, set on edge, were slung under the carriages and whisked through crowded shops at a rate which helped make possible the wartime prodigies of shipbuilding (page 685).

alumina, but the process was too costly for commercial use. Now the plant produces chemical fertilizers.

We went from the capital to Albany, one of the fastest-growing towns in the State, and seat of a county that has a \$2,000,000 annual income from production of grass and vegetable seeds. The day before our visit one long-established processing concern had shipped out its thousandth carload of seeds.

Turkey raising is big business in the area, and four plants provided processing facilities for more than 11 million pounds of turkey marketed in Albany in 1945.

Second only to agriculture in volume is lumber manufacture. We went through an up-to-the minute plywood plant where giant lathes literally unwound Douglas fir peeler logs into long sheets of wood a sixteenth of an inch thick. When the plies were spread with glue and laid together to form panels of the desired thickness, they were placed in 600-kilowatt "radio station" presses. The radiated heat dries the glue from within in 12 minutes. As explained to me, the process is like cooking a roast from the inside out.

Corvallis, where the splendid Oregon State College is located, is first of all a sedate college town with fine homes on tree-shaded lawns, but it, too, shares in the industrial awakening. A new factory we visited there was making refrigerator cabinets from slab-wood formerly burned as worthless.

In a novel-type mill the slabwood is shredded into what looks like fine excelsior. It then goes into a stream of water which carries it as pulp into a soaking vat. From the vat a vacuum device lifts upon its flat undersurface an evenly distributed, two-inch coating of the wet fiber and deposits it on a frame which slides into a high-power press. This press flattens the two inches of fiber to



As a Hobby, Sheriff H. A. Casiday of Lakeview Collects Indian Arrowheads

On high plateaus where red men roamed, he has picked up nearly 7,000 specimens, of which several hundred are displayed in these designs. South-central Oregon is now a cuttle-ranching and lumbering land of far horizons, fault cliffs, and broken mountains. Summer Lake, near Lakeview, disappears altogether in periods of drought, but when rains are heavy it may reach a length of 20 miles.

a panel a quarter-inch thick yet so hard that it can be cut only with a metal saw.

At Eugene we ran into a rush of traffic altogether out of keeping with the wonted scholastic calm of this home of the stately University of Oregon.

The city, in an area with 61 billion board feet of standing merchantable timber, was experiencing an unprecedented expansion of lumber manufacture; and Springfield, which virtually adjoins it on the east, was in a boom occasioned by the opening of a huge Casein Company of America plant for resin glues and formaldehyde. In Springfield also a \$3,000,000 Federal Government distillery for extracting ethyl alcohol and valuable by-products from waste wood was nearing completion.

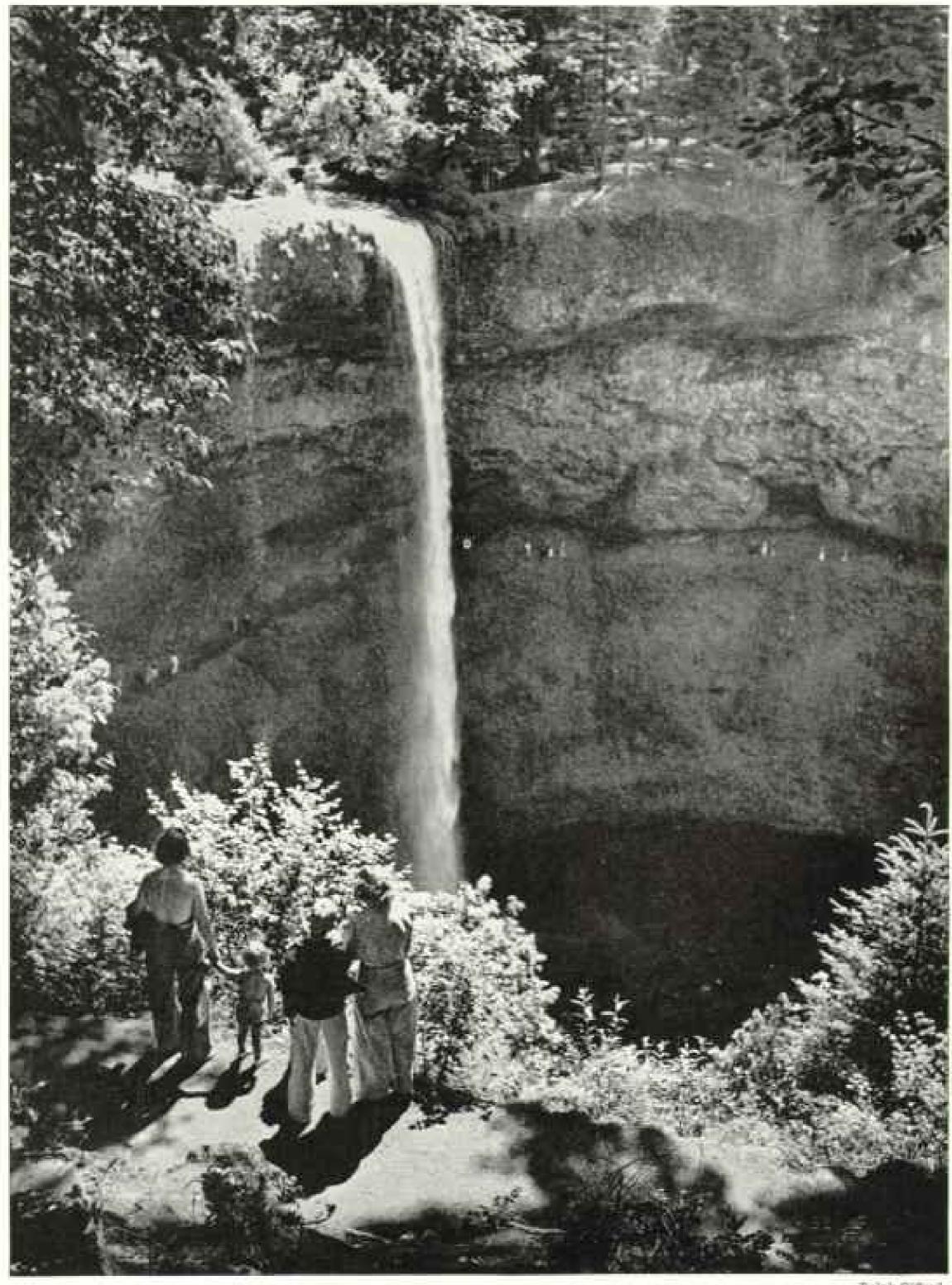
A restful contrast to industrial scenes was the Chase gardens on the outskirts of Eugene, where in fields aglow with flowers stood row upon row of greenhouses. Walking for a mile or more through the glass-roofed buildings, we saw thousands of hothouse roses, gardenias, and orchids grown for shipment to florists.

I had to admit in response to some goodnatured raillery that the hot humidity of the electrically heated orchid rooms made me feel at home, for it reminded me of a July day in Washington, D. C.

Road Pursues the McKenzie

Coming into Eugene from the east is the spectacular McKenzie Highway, which traverses mile-high lava beds, tunnels through virgin forests, and sweeps perilously along cliffs overlooking icy mountain lakes and gorges of "white water" streams as it pursues the racing, tumbling McKenzie River from the summit of the Cascades to the Willamette Valley. I had found that road blocked by snow in late May, 1945.

Salt Creek Falls, with a sheer drop of 286



Balph Giffurd

An Easy Trail Takes Hikers Under the 177-foot Falls of South Silver Creek

In Silver Creek Falls State Park, near Silverton, there are 14 cataracts ranging in height from 5 feet to 178 feet. The area of 1,500 acres is a mountain fairyland of majestic timber, white water, and wild flowers. Here the State has developed one of the finest picnic grounds in the West. One spring gushes sparkling soda water.

feet, and Clear Lake, revealing in its crystal depths a submerged forest, are among the thousand beauty spots within a few hours' drive of Eugene. Although the Willamette Valley floor, on which the city lies, is intensively cultivated vegetable and fruit land, the broken skyline is forested mountains.

Sam, who had shared with his assistant and driver, Bill Goyette, a corner hotel room above the street leading toward Springfield, was eager to be on the road early next morning.

"Eugene is one of the prettiest towns in Oregon," he said, "but those trucks rumbled through my room all night. We'll find some

peace in the Umpqua Valley."

Roseburg, however, near the junction of the two forks of the Umpqua River, was just as busy with lumber manufacture as Eugene. Here had been fashioned the 130-foot piles sent to Hawaii to help salvage the ships sunk in Pearl Harbor. The timber in the county accounts for a sixth of the virgin forests remaining in the State.

To many residents of Roseburg the highly profitable lumber business is less important than their rose gardens. They have an annual rose festival, and rivalry among the

rosarians is keen.

We swung northwest from Roseburg on a fine highway and were soon speeding along the Umpqua River, which flows swiftly through a low pass in the Coast Ranges to the Pacific Ocean. All about us was the majesty of Douglas fir forest. Sam had established overlooks at numerous vantage points, and was developing a new park in a particularly beautiful tract of timber.

Famed Myrtlewood Is a Laurel

We began to see shiny-leaved myrtlewood trees scattered through second-growth forest on logged-off lands. Not, as some advertisements assert, genuine myrtle, which is found only in the Old World, these trees are California laurel. In southwestern Oregon they often grow 50 feet tall or more and up to six feet in diameter at the base. Exquisitely grained and so hard that it takes a brilliant polish, the wood is in great demand for making novelty articles such as trays, bowls, and even costume jewelry.

Sam has preserved rows of these trees along both sides of a stretch of the Oregon Coast

Highway to form a "myrtle lane."

At Reedsport, at the mouth of the Umpqua, we came out upon the wonderful Oregon Coast Highway and turned south. This highway, which parallels the Pacific shore from Astoria at the north to Brookings at the south, often clings to the very edge of rocky promontories hundreds of feet above the open ocean or climbs high on the sheer sides of mountains that rise precipitously from the sea. Sometimes it dips almost to the water's edge and runs for miles along sandy beaches or turns a little way inland among mirrorlike lakes and forest glades (Plates X and XI).

The State owns all but 23 miles of the 325mile coastline, and over much of the distance the right of way for the road extends to the water. For this reason Sam has power to keep most of the highway and the beaches

free of commercial establishments.

Fibber Attests to a Fish Story

In Coos Bay, Arch B. Sanders, manager of the Oregon Coast Association, was waiting for us. He had planned to take us out in a boat to fish for the enormous striped bass for which the bay is famous, but to my disappointment we were too late for the trip.

"It looks as if I'm fated never to go fishing on the Oregon coast," I said, "Remember the ride we took with Bob Elliott up the Rogue River from Gold Beach to ten miles above Illahe when you counted 40 fishing boats with people trolling for chinook and we saw two men land a 4-foot beauty on a

gravel bar?"

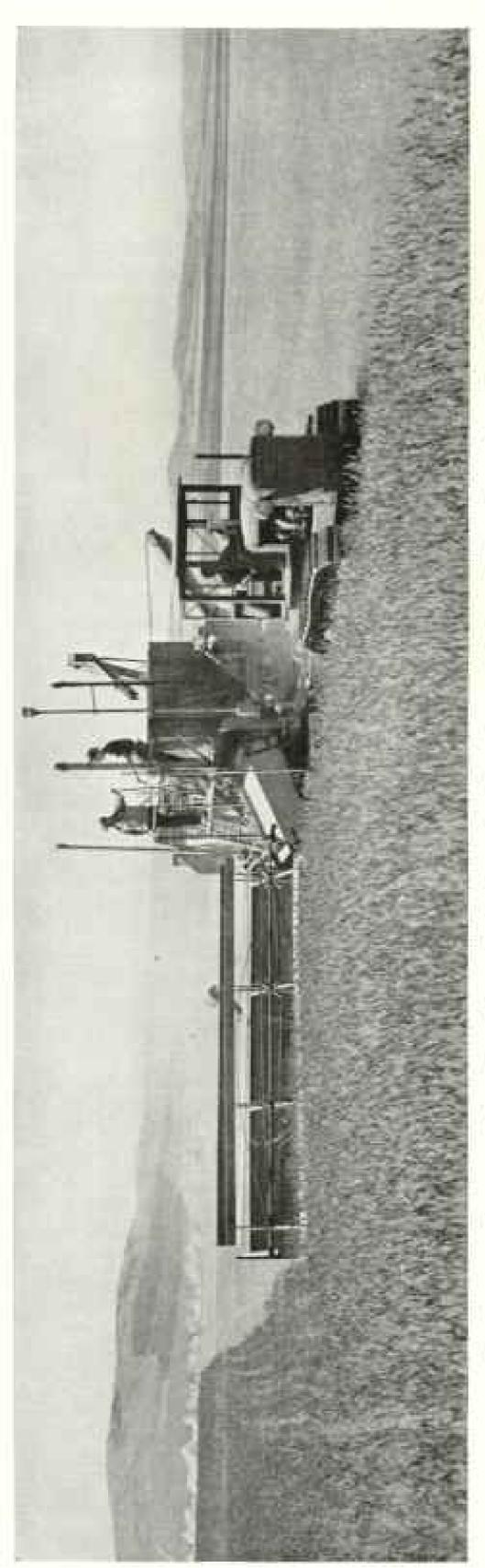
"Yes," Arch laughed. "And remember the fellow in the inn at Gold Beach who was getting everybody to sign a statement that he had caught a 30-pound chinook? The couple at the corner table told him their signature wouldn't do him much good, but he insisted. I'll never forget the look on his face when they signed 'Fibber McGee and Molly'."

At Wedderburn fishermen can have their quarry canned on the spot and labeled with their names (Plate XVI and page 717).

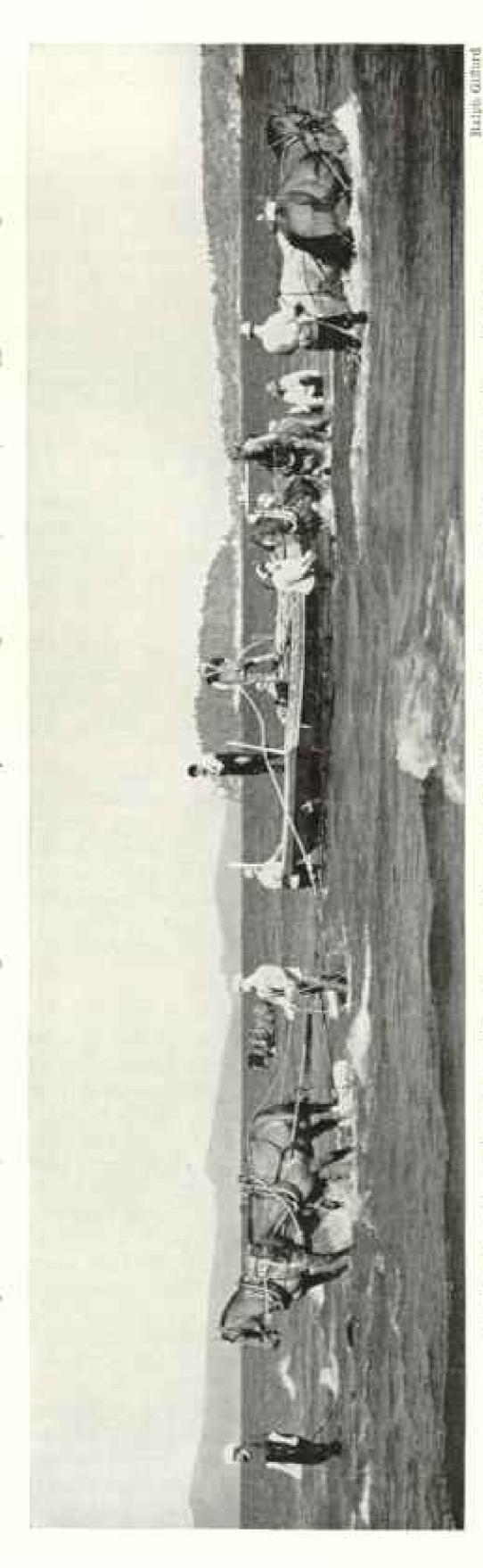
That ride up the rollicking Rogue was a thrill. Bob Elliott, ex-cowboy and big-game hunter, personally conducted Arch and me in a fast motorboat which he steered among the dangerous rocks with so little space to spare that we were constantly expecting to be wrecked. He showed us a tree high on the side of Copper Canyon, near Agness, where he had moored his boat when a cloud-burst in the mountains had raised the river 75 feet in a matter of minutes.

Sam had duties to perform at Cape Arago State Park, a bold headland near Coos Bay. While he was gone, we went down the road a little way to see some fields of Easter lilies.

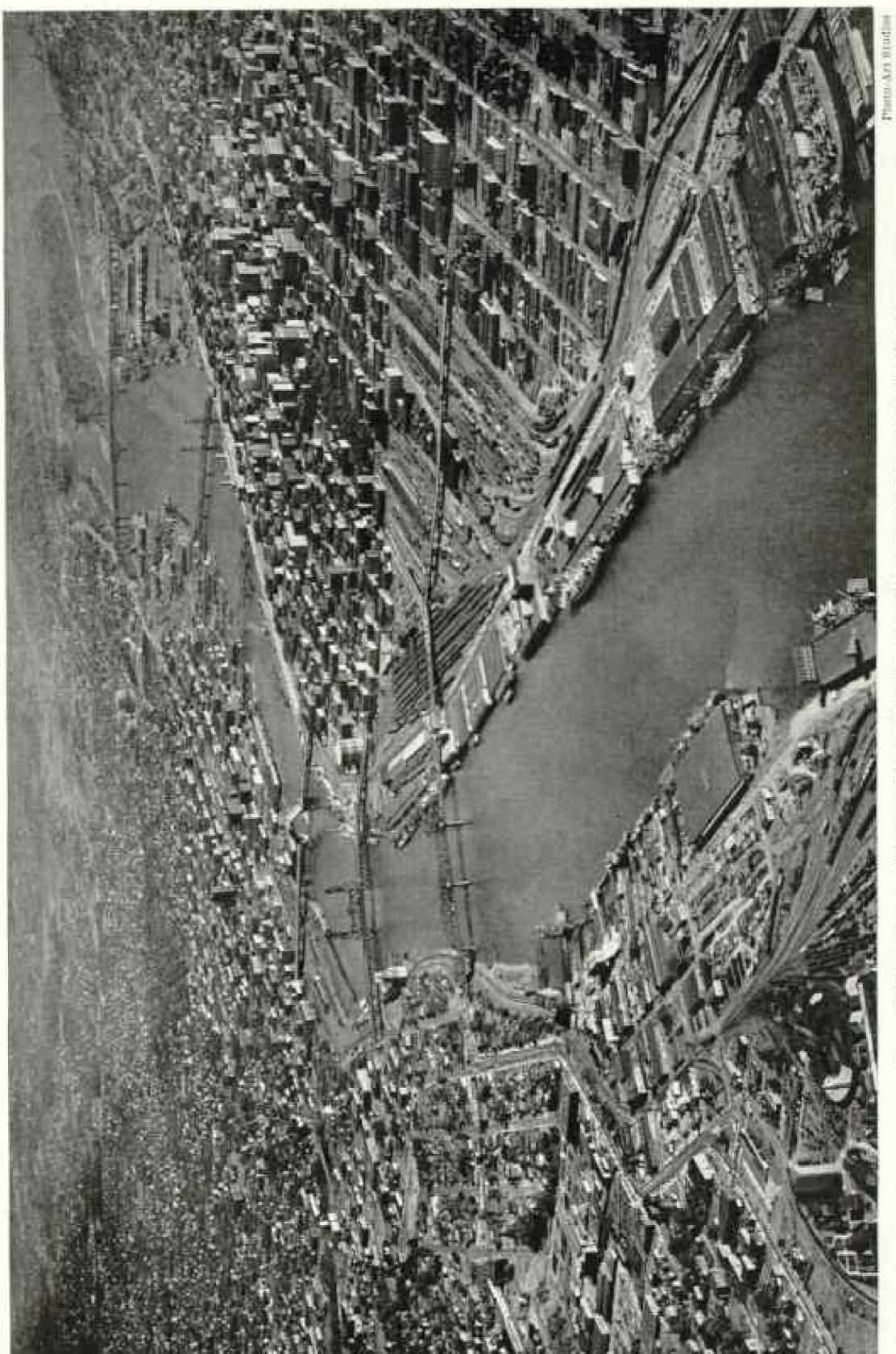
Only a few years ago cutover land along the lower Oregon coast sold for \$10 an acre or less. It was not considered even good grazing land, for undergrowth of alder, Oregon grape, salal, salmonberries, and huckleberries



This ranch alone yields some 50,000 bushels in a single season. In one operation the grain is cut, threshed, and bagged for hauling to market. In Eastern Oregon Huge Combines Roll Over Golden Seas of Wheat That Stretch to Far Horizons

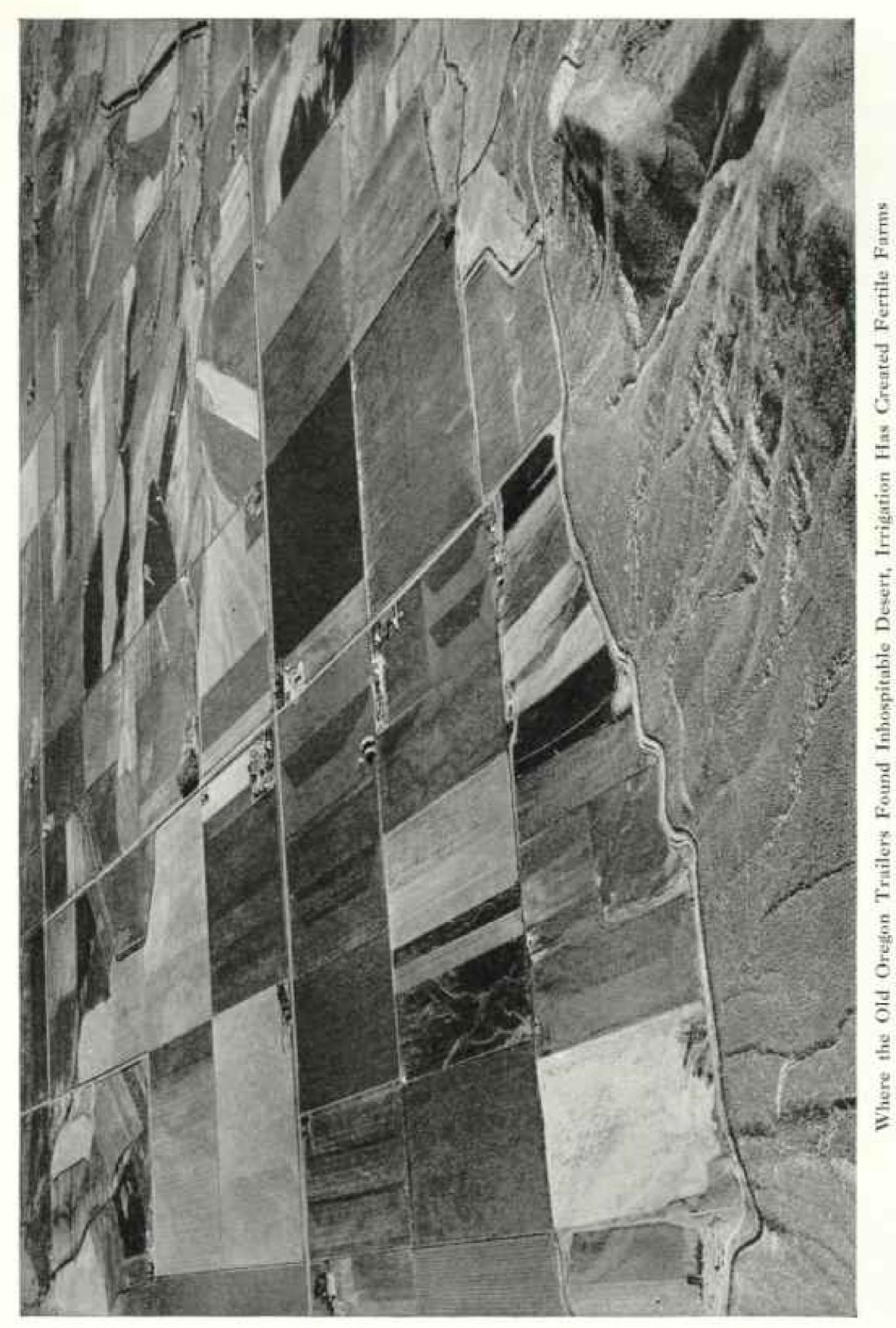


The mighty river of the West, which widens to 10 miles near Astoria, Oregon fishing capital, is gateway to spawning-bound fish from April to October. At the Mouth of the Columbia, Horses Draw In 2,000-foot Haul Seines Bulging with Chinook Salmon

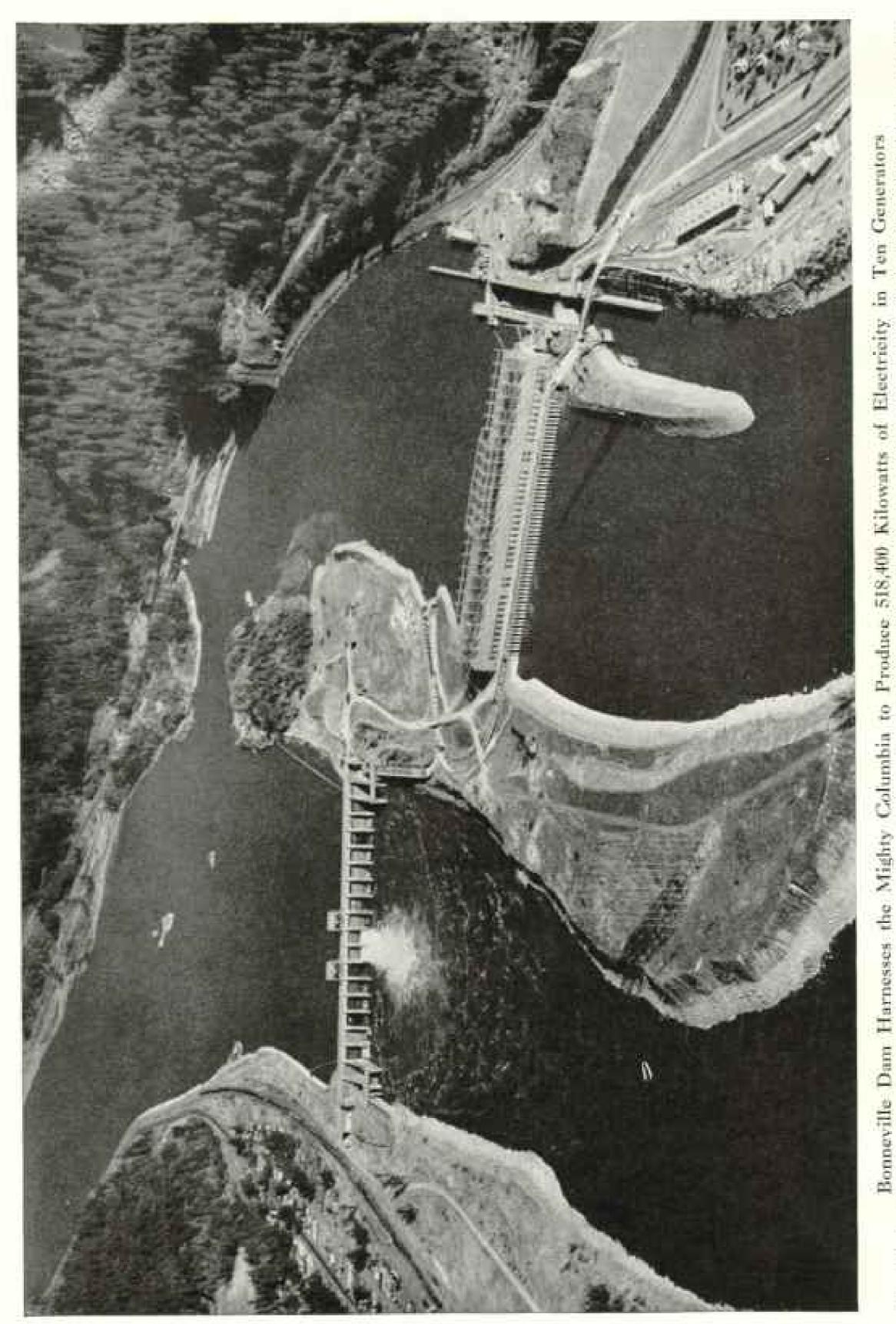


hat goes more than 100 miles down the Columbia to the Pacific. Many great bridges span the stream, and war aprawt near the mouth (page 688). On hillsides above the business district lie the residential streets. industrial Portland Is the Broad, Deep Willamette River life-giving Artery of

It affords a roomy harbor at the bead of the 35-foot channel the others are planned. Shipyards which made records during the



The pioneers who drove their ox teams through wilderness in the 1840's crossed the Snake River mear Ontario, center of this Owybee Reclamstion Project. But they toiled toward the Rood and Willamette River Valleys.



The lock at right lifts ships 66 feet to by pass the powerhouse. By the Bradford Island fish ladders (center) salmon pass around the obstruction on the by the Bradford Island fish lock on the Oregon bank. Two electric fish elevators are seldom used, to spawn. Other fishways go up the Washington side (left) and to the right of the lock on the Oregon bank. Two electric fish elevators are seldom used.

crowded out grass. The Oregon man who developed the Croft Easter lily discovered that soil and climate in the cutover areas were ideal for growing the bulbs (p. 716).

Now the once almost worthless land sells readily for \$600 an acre, after the stumps are removed by bulldozers. Crops of 18,000 to 20,000 bulbs to the acre are not unusual.

Coos Bay was booming like all the other cities we had seen. At the Evans plant, which makes battery separators and Venetian blinds of the far-famed Port Orford cedar, there had been steady expansion since V-J Day. Other lumber-manufacturing establish-

ments were enlarging their mills.

Not only lumber but dairy products contribute to prosperity in Coos Bay. The cooperative creamery and cheese factory handles milk from an extensive dairying country. Much of the milk is delivered by boats which come down the Coos River and deposit their cargo on wharves built out from the back of the creamery.

From Coos Bay we went north on the

Coast Highway.

Twice on the way Sam spied signboards on trees in restricted areas.

"Make a note of that, Bill," he said each

time. "We'll take care of it."

At Cape Perpetua we turned off the highway and drove two miles up a twisting, narrow road among Douglas firs 200 feet high and 10 feet in diameter until we emerged on a promontory 800 feet above the ocean. We got out of the car and walked to a lookout on the very edge of the cliff,

Below us the highway looked like a ribbon. We could see the rock-bound shore for miles north and south, the white town of Yachats gleaming in the sunlight above a placid sea.

Jessie M. Honeyman State Park, just south of Florence, is, I believe, Sam's favorite among the 219 areas he supervises. Here in a beautifully wooded tract of 522 acres are two fine lakes. At one the State maintains a public bathing beach with a well-equipped lodge and bathhouse. On the other are picnic grounds, drinking fountains, wood stoves in a covered pagoda, and tables and benches at the water's edge. Picnickers actually fish with hook and line while they cat their luncheons.

Wild rhododendron trees 25 feet tall make the park a riot of color in springtime, and huckleberry bushes are higher than a man. Here calla lilies grow wild. The park is named for an Oregon woman who devoted most of her life to the preservation of fine scenic areas for the enjoyment of the public.

From Taft to Otis there was feverish building activity along both sides of the highway. Resort hotels, cabin courts, and amusement places were going up everywhere. Sam, who had no jurisdiction here, looked glum.

"Industry!" Mac ejaculated. "That's what

the public wants."

"You're a hair shirt," grumbled Sam.

At Otis we turned from the Coast Highway and drove toward Portland through timber and fertile farm lands of the Salmon River Valley. Historic old Oregon City, first provisional and territorial capital, first town incorporated west of the Missouri River, and scene of the first use of water power in Oregon, is today a fast-moving industrial town, with large paper and woolen mills driven by power from a dam across the Willamette.

Here in 1849 the original plat of San Francisco was sent for registry, for Oregon City at that time had the only organized government west of the Rocky Mountains.

Lewis and Clark Wintered Near Astoria

In May, 1945, I made motor trips in Oregon totaling more than 5,000 miles. The first of these was from Portland to Astoria, thence down the northern part of the Coast Highway to Tillamook, and back to Portland over the Wilson River Highway.

Historically, Astoria is interesting because it occupies the site of the first permanent white settlement in Oregon (1811). Lewis and Clark wintered seven miles southwest of the present city in 1805. Spiraling around a tall tower set in an Astoria park is a series of pictures illustrating dramatic incidents in the early history of the Pacific Northwest.

Commercial fishing, a \$25,000,000 a year business in Oregon, centers in Astoria and other coast points, Astoria alone processing annually about 60 million pounds of fish (pages 710, 715). Although this industry began with the handling of Columbia River chinook salmon exclusively, the tonnage of tuna (albacore) now processed exceeds the salmon pack. Quick freezing of filets from several kinds of bottom fish and production of vitamins, particularly from shark livers, are newer enterprises making rapid growth.

Albacore, which until recently were found seldom north of California, are now taken in large quantities off the Oregon coast by fleets sent out from Astoria.

West of Astoria is Fort Stevens, in the general direction of which the Japanese fired several shells from a submarine in 1942. An Astoria man told me he stood on a hotel roof and saw the flashes from the shells, which burst harmlessly in swampland near the coast.

The Coast Highway climbs around the side of Neahkahnie Mountain south of Sea-



Working on Shares, Salmon Fishermen Often Make \$100 a Day

Nets set at the mouth of the Columbia when the spawning run is on may bring in two or three tons of fish at a haul. For draws on open parts of the seining grounds, horses are used (page 710), but in smaller areas men hoist the catches into boats by hand. Spawning-bound between mid-April and mid-October, the fish seek no food but will strike viciously at a shiny spoon. A chinook's average weight is about 24 pounds, but some go as high as 75 (page 717).

side, affording a magnificent view of rocky shoreline, ocean, and sky from a vantage hundreds of feet above the breakers. North of Seaside it is "the golden highway" as it dips almost to sea level and passes for miles between walls of yellow Scotch broom (Color Plate XI).

End of the Old Oregon Trail

At Seaside, most frequented beach resort in Oregon, is the monument marking the end of the Oregon Trail. The salt cairn built by men sent out by Lewis and Clark in 1805 to obtain salt by boiling down sea water still stands, a heap of brine-encrusted rocks protected by an iron railing.

Tillamook, center of a rich dairying region,

is famous for its cheese (page 685). Here, too, are big lumber mills, and signs "No Calked Boots Allowed" are posted in places where loggers gather on Saturday afternoons.

The Wilson River Highway cuts through the scene of the greatest forest fire in the history of Oregon (Plate XXIV). In 1933 flames started by sparks from a steel cable being wound on a logging drum swept relentlessly through the virgin forest, destroying 10 billion feet of saw timber. The area is a wilderness of charred tree trunks.

Where the highway passes between high canyon walls, I was shown places which had been mined with high explosives as defense against threatened Japanese invasion. Oregon was an armed camp during the war,



From Coast Stumpland Come Fortunes in Bulbs

The Croft Easter lily, developed by the man whose name it bears, brings top prices (page 714). Here at Harbor an officer of the growers' association grades his crop. Large bulbs are marketed and smaller ones are replanted to multiply and grow to maturity.

In the southwestern part of the State occurred the deaths of the only persons killed in the continental United States by enemy action. A minister's wife and five Sunday school children were victims of one of thousands of parachute bombs floated on wind currents from Japan in an attempt to set fire to American forests,

On a trip around eastern Oregon we left Portland early one morning on the famous Columbia River Highway. Cut into the side of the towering river wall, it affords an almost constantly unobstructed view of the mighty river rolling between basalt bastions.

We paused at Vista House on Crown Point, an eyrie 725 feet above the river, from which we could see the Columbia for many miles east and west.

Between Crown Point and Umatilla eleven gleaming waterfalls leap from the cliff which rises almost sheer above the south side of the road. Most spectacular of these are the Multnomah Falls, which drop 680 feet into a glade almost at the roadside (page 684), and Horsetail Falls, which lash downward over a rock wall into an excellent fishing pool so close to the highway that their spray drifts across the pavement,

At Bonneville Dam (page 713) we stood a moment beside the fish ladders watching chinook salmen fighting their way upstream toward spawning grounds. Some of the great fish leaped four feet above the water as they ascended the On the walls steps. clung hundreds of lampreys, flopping their ungainly bodies along as they too struggled upstream,

Army engineers told me that the Columbia can produce easily as many kilowatts of elec-

tricity as the total now supplied by all the harnessed waterpower in the United States."

Four Columbia Dams Proposed

A new development program calls for four dams. If built as planned, these will open a channel for large ships as far as Lewiston, Idaho, control floods, open vast irrigation projects, and furnish cheap power for every manufacturing purpose. Construction of the first of the proposed dams, McNary, is scheduled to start at Umatilla. Under consideration is one at The Dalles (Plates XX-XXI).

* See "Columbia (River) Turns on the Power," by Maynard Owen Williams, NATIONAL GEOGRAPHIC MAGAZINE, June, 1941. The little town of Boardman, in an area now irrigated, was named for Sam; for it was built on a homestead he once owned.

"When I came here,"
Sam said, "the country
was desert. I bought
\$12 worth of onion
seeds, and a neighbor
and I made a drag out
of timber and spikes
and scratched them
into the ground. A
week later one of those
Columbia Gorge winds
came along and blew
my seeds and dragged
soil right over to Walla
Walla, Washington.

"I had to plant trees for protection. Right away jack rabbits started eating the bark, I took my shovel and set circles of cactus around the trees. I didn't mind the rabbits' getting a little bark. but I didn't want them to sit down while they were eating. But the weather fooled me. That winter we had two feet of snow and the rabbits just sat on top of the drifts and girdled my trees higher up."

We turned southeast from the river and drove across wheat country to Pendleton,

the "Round-up City" (Plates XIII, XVIII, XIX). Here in late summer cowboys vie for national championships in broncobusting and other Wild West contests. Principal business in this thriving city are flour mills, pea canneries, and woolen mills. Billowing fields of wheat and field peas carpet the countryside from Pendleton to Umatilla.

Wallowa Lakes in Untamed Mountains

La Grande, seat of the Eastern Oregon College of Education, is the trading center for the Grande Ronde Valley, which produces fruit, grass seed, livestock, and lumber. Here, too, is the take-off for hunting and fishing trips into the Wallowa and Blue Mountains.



Elem Hustific

Meat Shortage Will Not Worry Them for a While

On a few hours' excursion up the Rogue River in an outboard-motor trolling boat, these Wedderburn housewives caught a 43-pound chinook. They will have the big salmon canned at the private cannery established by the husband of Mrs. Ike Smith, left (Plate XVI and page 709).

The Wallowa lakes east of La Grande are in an unspoiled mountain wilderness where within an area of less than 350 square miles ten peaks tower more than 9,000 feet in height. There are 50 large lakes, cold, crystal clear, and teeming with fish (page 719). To reach many of the finest, one must go into the forest by pack trails. Deer, elk, and mountain sheep are plentiful among the higher mountains.

At the Wallowa Lake resort we watched rainbow trout swimming undisturbed in a clear stream that flows into the lake. Because this country is national forest land, streams and lakes are closed to commercial fishing. It is a sportsman's paradise.

For a State park, Sam last summer ac-

quired all the land around the north end of Wallown Lake outside national forest jurisdiction. In eastern Oregon he had set out more than 5,000 trees—Russian olive, poplar, and willows.

"A tree will fight for you," he told us.

Between La Grande and Baker we passed miles of willows along a roadside irrigation ditch.

"The State College had a lot of young trees they didn't know what to do with," he said, "and they gave them to me to use for fence posts. Those trees are the posts."

He became botly indignant at sight of some of his trees which had been cut back ruthlessly by linemen of a power company.

Born of the eastern Oregon gold rush in the '60's, Baker is still the principal mining center of the State. Mines near by have produced more than \$150,000,000, and dredges now operating in the area are turning up valuable deposits.

At the First National Bank is displayed a collection of gold nuggets from the early days. One weighs 89 ounces and is valued at \$3,000.

Though gold mining is no longer the leading industry, the bank still maintains a bullion department.

Agriculture and stock raising in the vast area around Baker now are the basis of the town's prosperity.

The Owyhee and Malheur irrigation districts have for their trade center Ontario, near the point where the Oregon Trail crossed the Snake River to enter Oregon (page 712).

The drive on a graveled road from Baker over the Blue Mountains to the John Day country was thrilling, for the road cuts through untrammeled wilderness. Coming down from the mountains, we paused at John Day for a chat with Herman Oliver, who was grazing more than 3,000 blooded Hereford cattle on his valley ranch (Plate XII).

At Canyon City we saw the house where Joaquin Miller, the poet, lived while acting as county judge.

Canyons Yield Prehistoric Bones

A great stretch of desert of intense interest to geologists lies northwest of Canyon City. Near the village of Fossil we called on an elderly desert dweller who brought from a guarded cellar a remarkable collection of bones and teeth of prehistoric creatures.

A few hours' drive south of Canyon City is the sawmill and cattle town of Burns, a bit of the old Wild West. The Malheur National Wildlife Refuge near by is one of the largest and most interesting in the Northwest.

Down in the southeastern corner of the

State is Jordan Valley, famous for sheep raising. The sheepmen here are mostly Basques from Spain (Plate XIX).

We went from Burns over a high sagebrush plateau to Lakeview, the cattle and lumber town that never knew depression even in the gloomy days of the early '30's. Here we stayed overnight in a hotel heated by water from natural hot springs. We enjoyed the warmth, for though the time was late May the night was chill.

To impress upon us the rigors of Lakeview winters, a young lawyer told us of a Portland man who had lodged one December night in the old hotel. The rooms, our informant said, were each furnished with a wood-burning stove, but only a little fuel was supplied. The Portland man soon ran out of firewood and had to take refuge in the lobby. Firemen had just come in from fighting a blaze and icicles were hanging from their clothing. The Portland man looked at them commiseratingly and asked, "Which room did you fellows have?"

Where Fleet Pronghorns Find Refuge

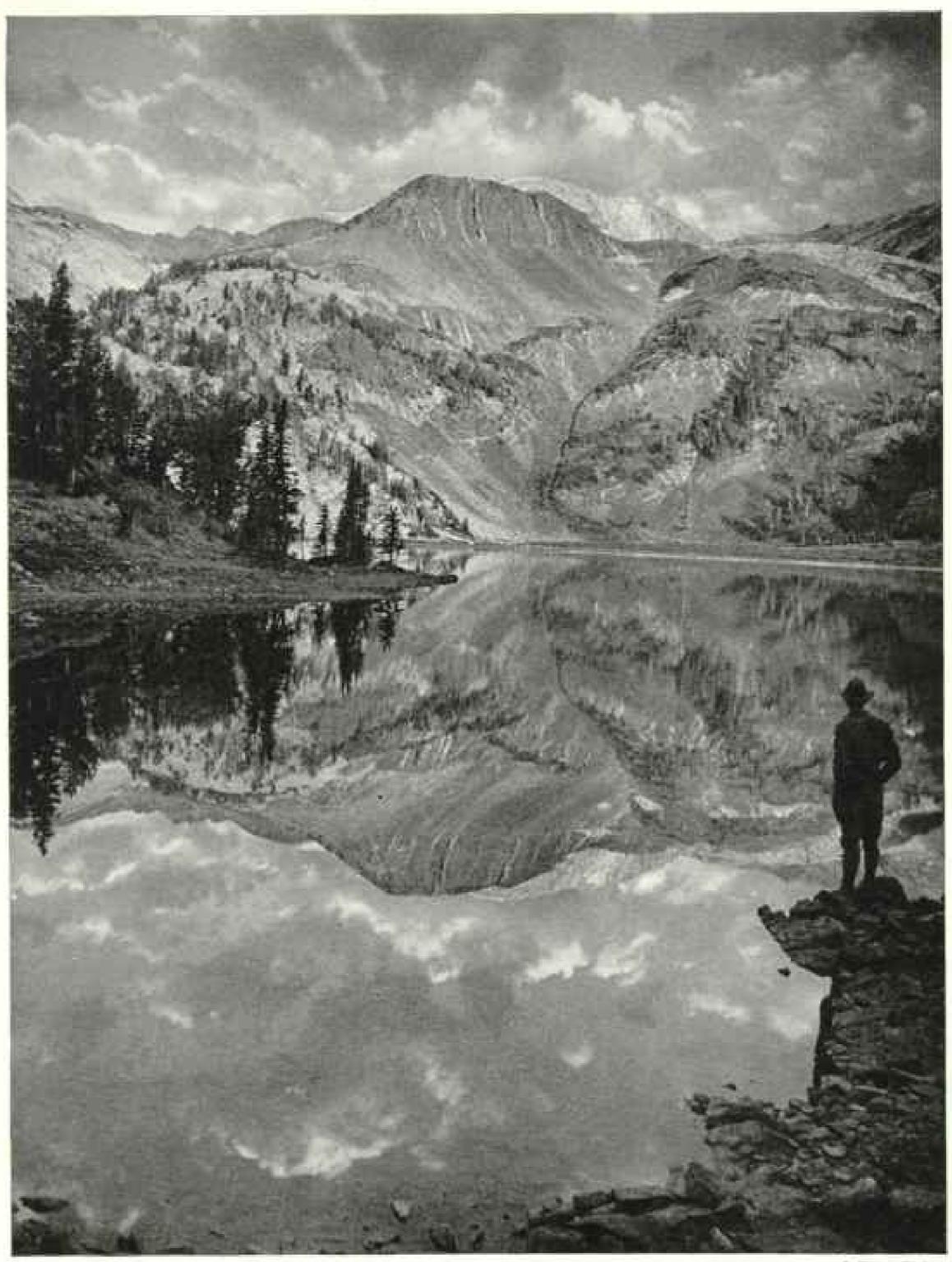
Near Lakeview is Hart Mountain National Antelope Refuge, Here several hundred of the fleet-footed pronghorns live unmolested save for one week end in summer when members of the Order of the Antelope from all over the State come to the mountain for a barbecue. Not only antelope but mule deer, mountain sheep, and many other manimals as well as birds are protected here.

On May 28, 1945, we stood atop Lava Butte looking at the matchless skyline of 14 snow peaks that glistens over Bend, the "Saw-mill City." A sudden storm swept down upon us and in a few seconds the butte was covered with four inches of snow and ice. We skidded slowly down from the butte. In Bend, 10 miles away, a warm rain was falling.

Lava Butte is a part of an area of many square miles covered with blackened lava from a volcanic eruption ages ago. As I looked out over the scene of desolation, I was reminded of Poe's lines, "Scoriac rivers that roll... their sulphurous currents down Yaanek in the ultimate climes of the pole."

Two of the largest sawmills in the West are in Bend (Plate XV). Despite its busy manufacturing, however, the town is a mecca for sportsmen and lovers of mountain scenery. From our windows in a fine old inn set in a garden of flowers we could see across the garden the still glory of the Three Sisters and a host of neighboring snow peaks.

One week end I was a guest of J. A. Zehntbauer at his magnificent ranch house on the



J. Rither Pinlay

Mirroring Matterhorn, 10,004 Feet, Is Ice Lake in the Wallowa Mountains

Fifty-odd large lakes and three times as many smaller ones adorn this natural wonderland of northeastern Oregon (page 717). Ten peaks, one solid marble, rise to an altitude above 9,000 feet. Mostly national forest, the country is protected from exploitation, but it is open to sightseers and sportsmen. Comfortable quarters are available at a lodge on Wallowa Lake, and camping places have been established for pack trips.

Metolius River, almost under the shadow of Mount Jefferson. We went fishing for Dolly Varden trout in the little river which frolics around the foot of the hill just in front of the house. Evidently I was inept, for I was the only one in our party who did not get a strike.

The trip back to Portland took us across the Deschutes River on a one-way road that climbed down the sheer west wall of the thousand-foot canyon and up the east wall

an equal distance within eight miles.

Jefferson County was once a famous dryfarming wheat country, but rains in recent years decreased until the land became almost desert. On May 18, 1946, Deschutes River water was turned on from the "fabulous furrow" irrigation project to end drought on 50,000 acres of the onetime dry-farming land around Madras.

Near the lively lumber and railroad city of Grants Pass in southwestern Oregon are the Oregon Caves, subterranean chambers adorned with some of the most beautiful colored rock formations in the world.

Center of a world-famous pear-growing district is the gracious city of Medford. Two large fruit-packing plants here put up the delicious pears in fancy baskets for mail shipment throughout the United States.

For drinking purposes Medford pipes water directly from gushing mountain springs. The advertising slogan, "Spring Water from Your

Kitchen Tap," is simple truth.

To Crater Lake in a "Sno-Cat"

Because of gasoline rationing during the war, the road to the rim of Crater Lake was not kept open by snowplows the year around. It was still blocked by snow at the time of my visit.

To my delight Ernest P. Leavitt, Superintendent of Crater Lake National Park, volunteered to take me up to the inn in a "Sno-

Cat" (Plate IX),

We drove from Medford to the park entrance, but less than a half mile inside scattered drifts stopped our car. Arch Work, of the U. S. Soil Conservation Service, was waiting for us with the strange little caterpillar tractor which wears skis interchangeable with its front wheels. Since there were eight of us, he had a sled on skis as a trailer.

We piled into the queer conveyance, and away it chugged, rubber front wheels on the ground where there was no snow, skis sup-

planting them on the drifts.

Near the 7,000-foot-high rim of the caldera the snow was at least 10 feet deep on the level, and some drifts completely covered lodge buildings. We crowded into a small cabin almost buried under the snow, made hot coffee and ate the lunches we had brought along, then headed for the rim.

That day was freakish. One minute the sky would be clear blue; the next it would be overcast. Now warm rain was falling, now

blinding snow,

The changes of light worked magic with the color of the unbelievably blue lake, turning it in a trice from turquoise to deep indigo (Plate VII)."

We went down from the rim by way of a ski run that looked perilously steep, but our doughty Sno-Cat took the precipitous downgrade like a skilled mountain climber.

Two men from the Park office in Klamath Falls had come up to meet us. One of them, Tom C. Parker, assistant superintendent, had been ranger at Zion National Park when I was making a survey of Utah. Instead of going back to Medford, I rode with Tom down the other side of the mountain to Klamath Falls.

Klamath Fulls on State's Largest Lake

On the shore of Oregon's largest lake, the lively city of Klamath Falls has a splendid location. The country around it is irrigated potato land and magnificent western yellow pine timber. Naturally, lumber manufacture is a major source of income.

Gleaming on the skyline to the south is Mount Shasta in California. The climate here is so salubrious that the U. S. Navy has built near the town recuperation barracks for Marine veterans convalescing from ma-

laria and filariasis.

I went back to Portland from Klamath Falls on a fast highway that passes through some of the finest stands of western yellow pine timber yet standing in the United States.

In all my travels in Oregon, I never rode over a highway that did not reveal glorious scenes, whether in the rain forest of the coast, the Willamette Valley, the high mountains, or the arid plateaus of the east. The old advertising slogan, "Every Prospect Pleases," kept coming to my mind.

Flying from Portland to Seattle last July, I looked back for a last glimpse of Oregon. The plane rode above a cloud sea that blotted out all save the peak of Mount Hood, proud

symbol of a rich and virile State.†

*See "Crater Lake and Yosemite Through the Ages," by Wallace W. Atwood, Jr., National Geo-Giaphic Magazine, March, 1937.

† See also, in the National Geographic Manazine, "A Native Son's Rambles in Oregon," by Amos Burg, February, 1934.

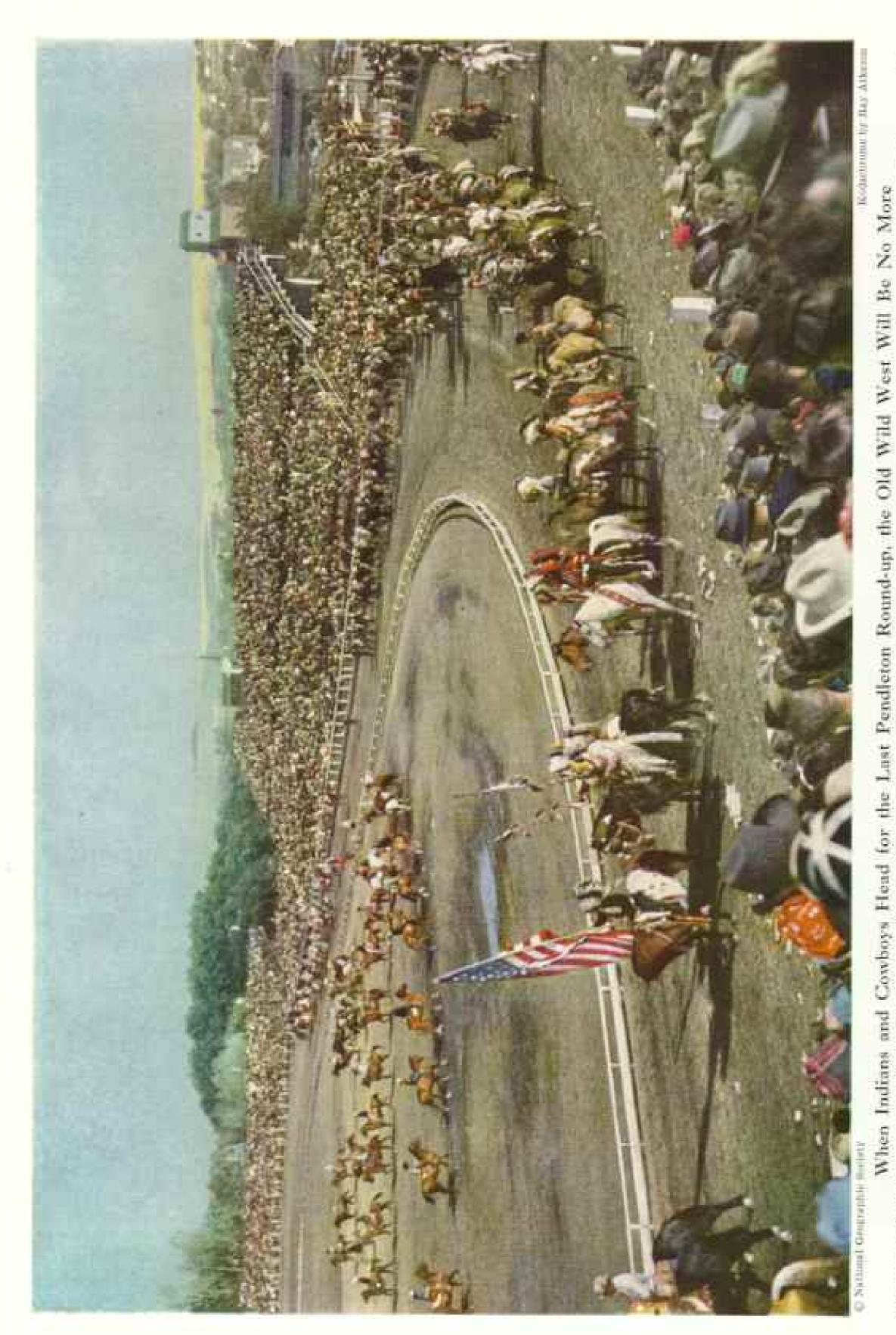


42 National Geographic Bothty

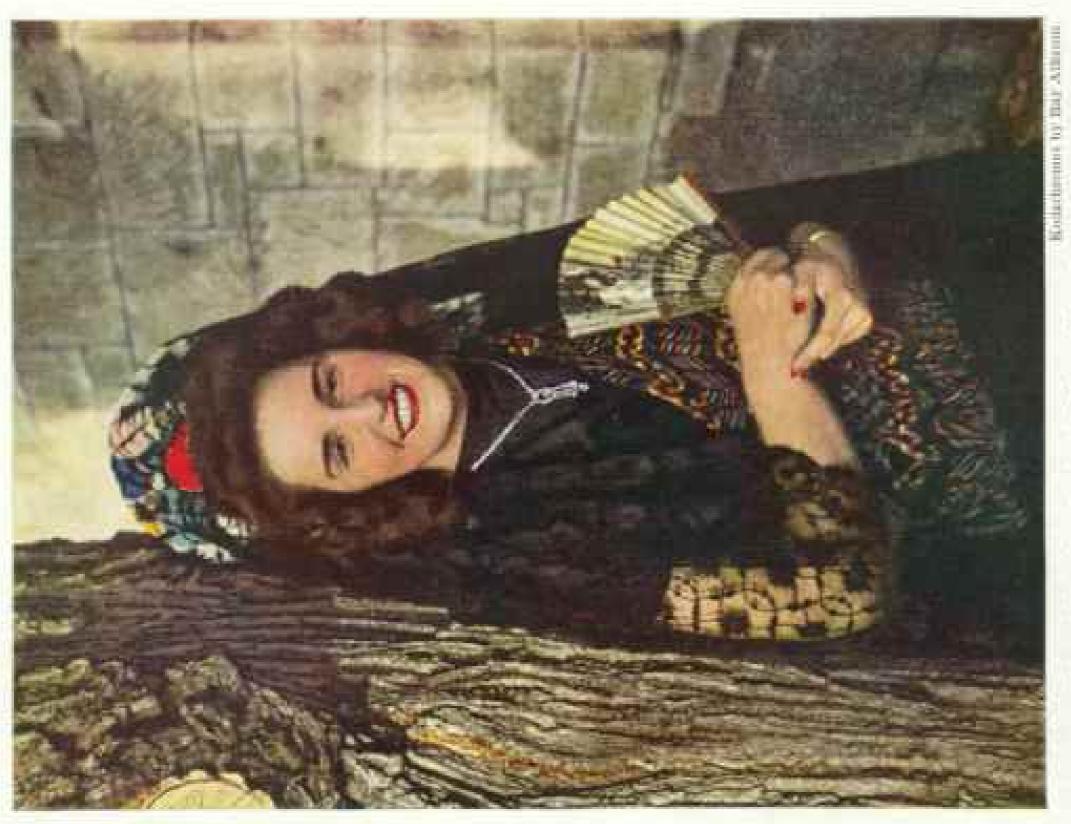
Kedachronie by Bay Atknown

Beach Fashions Are Created on Comely Models in Jantzen's Style-developing Auditorium

These were in vogue in 1945. Started as a small shop, the knitting company whose "swim suits" made the term "bathing dress" obsolete has become the world's largest manufacturer of these garments. Its ultramodern home plant in Portland is being doubled in capacity.



Throngs gather in this castern Overgon city for four days in September to see more than 2,000 of the real red men remaining in America parade in their tribal finery, and to watch broncobusting, stoor buildogging, brint throwing, western pony racing, and other thrilling contests (Plate XIII).

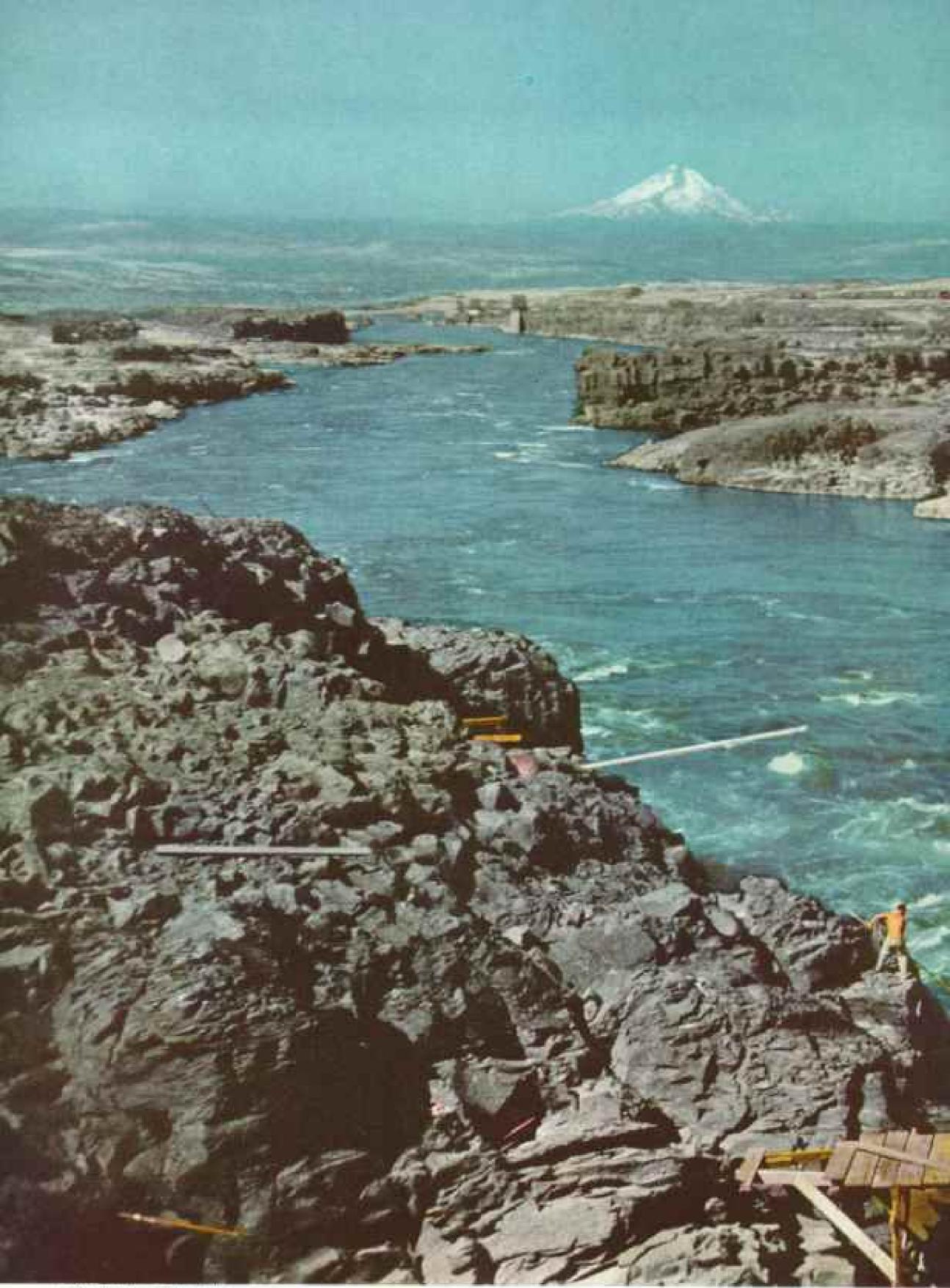


Pillar Elorriza Is the Belle of Jordan Valley

On festival occasions her people, who live in the Basque settlement in south-eastern Oregon, revive in their adopted land the customs of old Spain. This girl wears one of the finest of the priceless costumes brought from the homeland.

Indian Beauty Queen Dolores Stevens Reigned in 1944

Wearing an heirloom costume treasured in her family for generations, she captivated visitors at the Pendleton Round-up. The dress is of soft buckskin, the bead and quillwork exquisitely done in traditional designs of her tribespeople-



C National Governable Burlety

The Columbia Roars Through Its Gorge Near The Dalles in a Torrent Deep as Wide A canal carries some light traffic past the rapids. Now engineers propose a dam at the "big eddy" (downstream, left background) to furnish power and to make possible the passage of larger vessels.



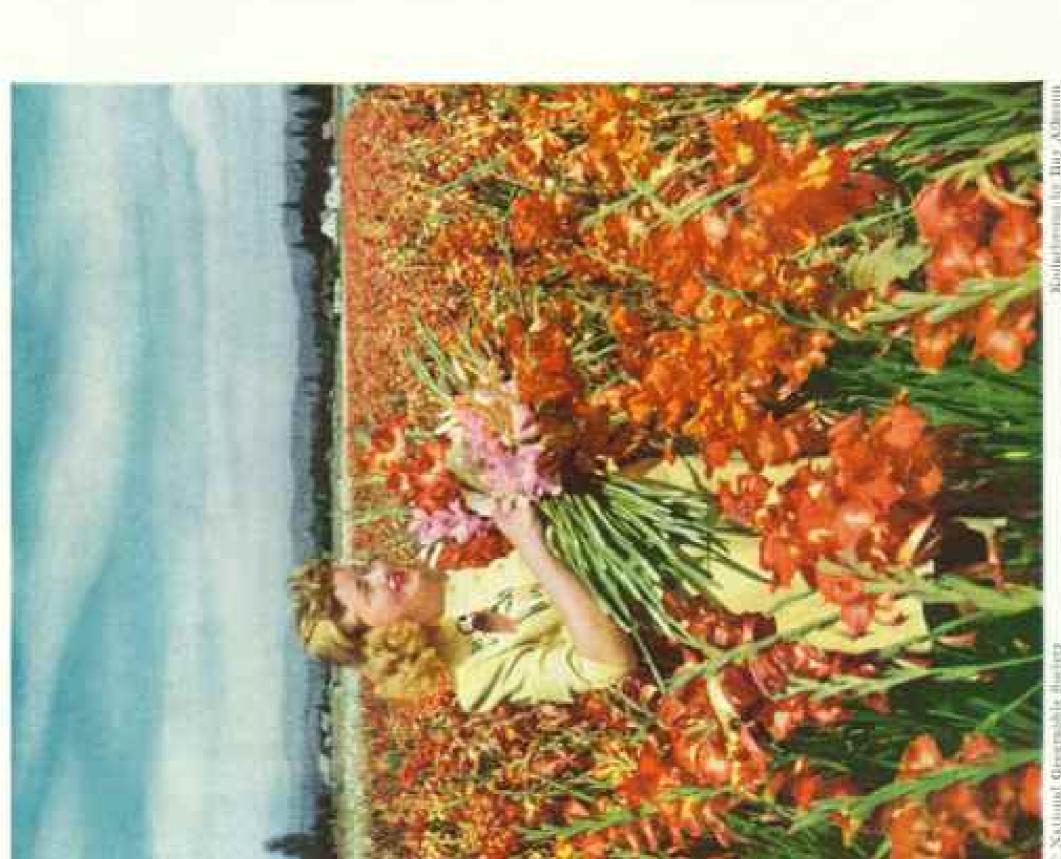
Kintechrome by Ray Athence

Waters Lash in Fury in a Channel Narrowed to Little More than 200 Feet

By a treaty long in force, Indians, and Indians only, are entitled to fish the river at Celilo Falls. They stand on outjutting rocks or on platforms built above the rushing stream, and dipnet spawning-bound salmon.



When war stopped importation from the Netherlands and Japan, the Northwest vastly extended its acreage of bulb plants. The cutover areas along the southern part of the Oregon Coust Highway were found ideal for Easter filles, and now vast stretches of white blossoms smile where only a few years ago was useless stumpland.



Near Grants Pass the Redland Gardens Feature

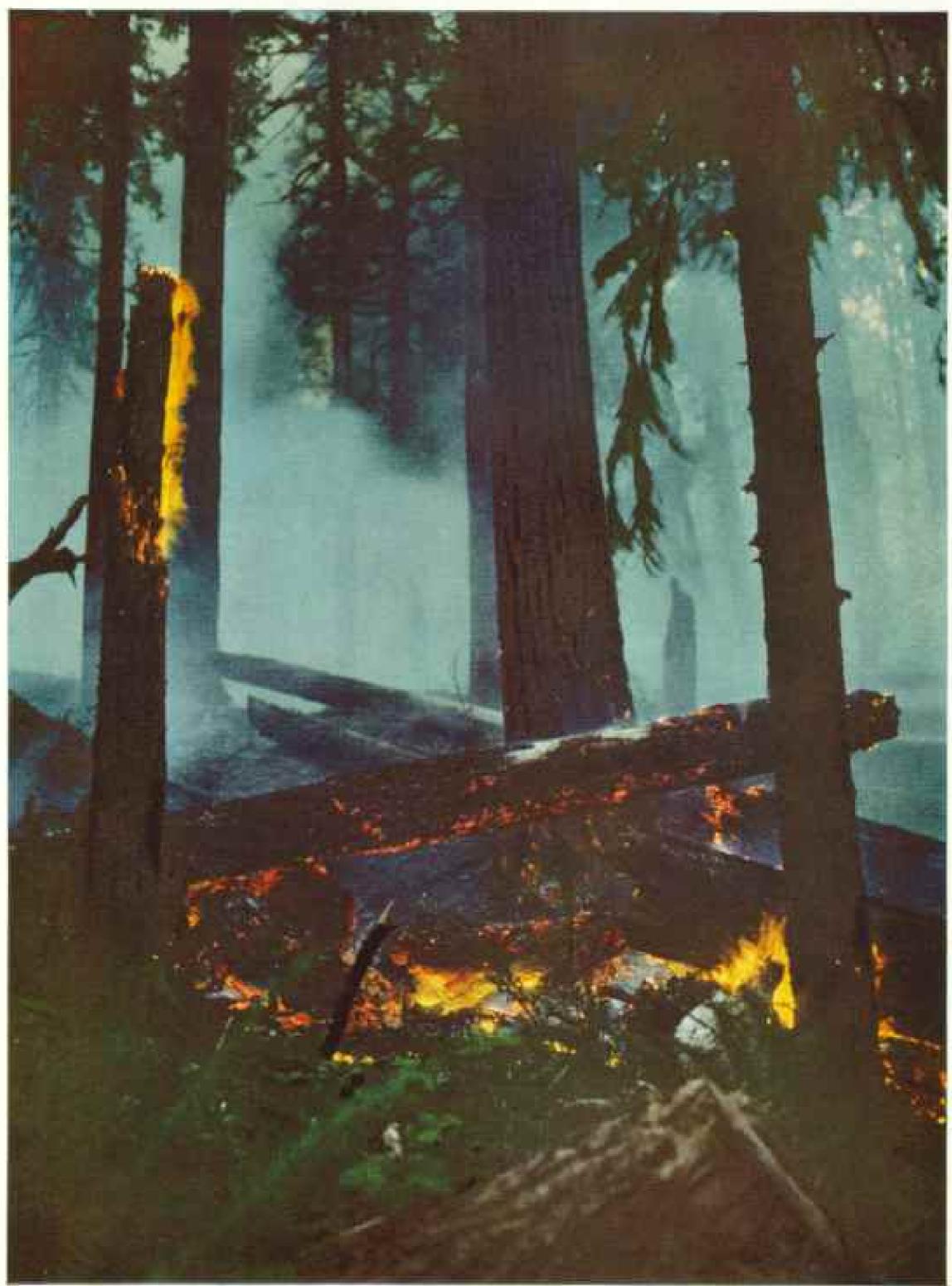
Gladioli

Bulb plants of all sorts thrive in western Oregon. Where mighty forests once rang to the ax, vast fields of flowers now yield their owners greater profits per acre than the timber barons ever knew.



Willamette Valley Has Some 19,000 Acres of Hops

When the picking season is on, whole families from near and far are called to help the regular workers in the harvest. The vines, hardy perennials, in to help the regular workers in the harvest, are supported on permanent trellises.



D Nathanil Genruphic Secletz

lookasteems by Alfred A. Monney

Worst Enemy of the Magnificent Forests Is the Demon Fire

Once a blaze is started, it leaps with incredible speed from tree to tree. The Tillamook calamity of 1933, greatest in Oregon history, killed 10 billion feet of saw timber. Taking refuge in a small river, a resort keeper was nearly scalded to death in the bot running water. The area was partly reburned in 1939 and 1945.

Syria and Lebanon Taste Freedom

BY MAYNARD OWEN WILLIAMS

With Illustrations from Photographs by the Author

STROLLING along a backwater of the Euphrates, I talked with a young Arab in Deir ez Zor, Syria.

"I am interested," he said, "in comparative constitutions; in the documents through which human liberties are protected and preserved. And where better than in free America can I study such a subject?"

"This is the Euphrates, not the Potomac,"

I had to remind myself.

"Do you think I can live at an American

college on \$3,000 a year?" he pursued.

"That's too much if you want to get the most out of it. Better make it fifteen hundred."

Beside us strolled Bedouins who probably never saw that much. Their sons, selling cotton to Aleppo mills, may become rich.

Today, Syria and the Lebanon, repeatedly under alien rule, enjoy full independence.

"America" a Potent Word

Here "America" is a potent word. Correspondence between Syrians and Lebanese and their relatives in North and South America has been going on for generations, and American educators, missionaries, doctors, engineers, and scientists have left their indelible impress upon these ancient lands.*

Syria, an agricultural and grazing country about the size of Iowa, is largely desert, though it includes vast areas which may be brought under the plow. When Damascus lacks rain, American farmers sell wheat to this onetime granary of Rome. Possibly two-thirds of Syria's three million inhabitants, including many free-roving Bedouins, are Moslems, traditionally more hospitable to guests than to innovations.

In mountain-draped Lebanon, smaller than Connecticut and much more rocky, one is seldom beyond the sound of church bells, for a majority of the one million-odd Lebanese are Christians, hospitable to Western thought and practices. As when the Phoenicians sailed from its ports, the Lebanon still faces overseas, serving as intermediary between the desert and the world beyond.

Between V-E Day and V-J Day, as I rode along the Lebanon range, I was rediscovering a land where lone horsemen of an earlier generation, looming up in the dusk, had so often broken the ominous silence with that heart-warming salutation "Leiltak sa'ideh" (May thy night be happy!). But now, as elsewhere, a meeting on the road is a swish of motors and a cloud of dust.

Syria and Lebanon in 1945 were in the throes of obtaining their independence from France. Disturbances had occurred in the capitals, Damascus and Beirut, Fire-black-ened ruins, or signboards from which all but Arabic words had been blotted out, told of tension. As we followed the coastal road of ancient conquerors, free people cheered.

On our GI-punished, Army-surplus truck waved the Stars and Stripes. Sniping was still going on, and it was an advantage to be known as an American.

At the sight of our flag, small boys raised their fingers in a V for victory, and little girls blew kisses as we passed.

Tiny Lebanon, though long familiar with Christian thought, speaks the eloquent language of the Koran. But many of its inhabitants understand French and English. Workmen along the Beirut water front may meet the visitor more than halfway by Babelizing several languages, and even cultured folk prefer forceful phrases from many tongues to prosy competence in one.

Beirut, Between Mountain and Sea

Lebanon's ancient ports of Tyre and Sidon have been largely supplanted by Beirut and Tripoli.

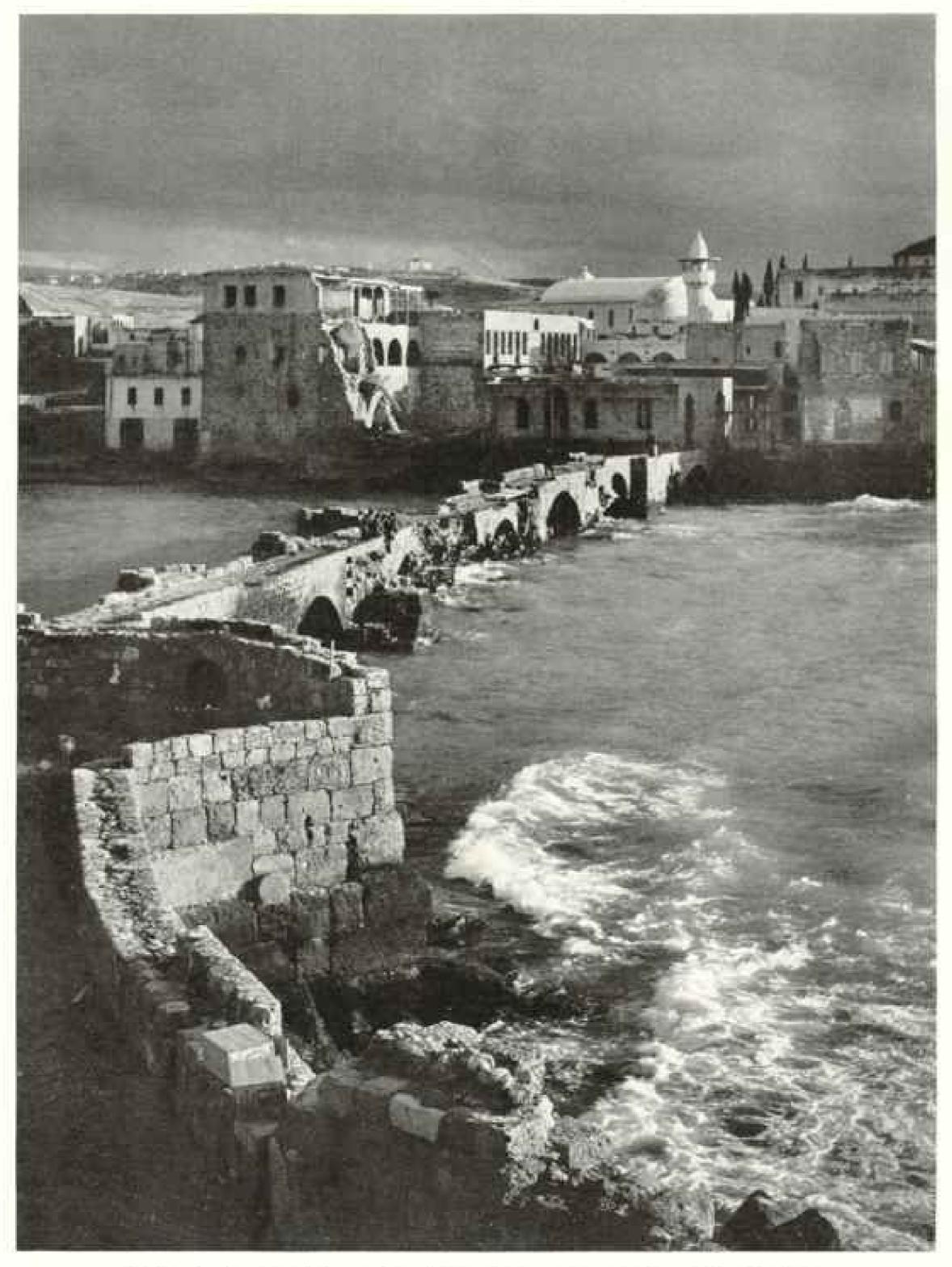
Poised between mountain and sea, Beirut, the Lebanese capital, is a triumph of man over environment. Its natural port was inadequate. Sand dunes menaced the city from the south. Insignificant Beirut River aroused more fevered thirst through malaria than it appeased.

Trail and railway were pushed across the Lebanon. The artificial harbor was twice enlarged. Red sand was spiked down with growing pines. Banana groves spread along the sea. Excellent water was piped in from Nahr el Kelb (Dog River).

Along the walls of this narrow stream is a boastful gallery of "I-done-its." Here one can listen to the tramp of Egyptian, Assyrian, Greek, French, and English history, illustrated by inscriptions carved in the mountainside.

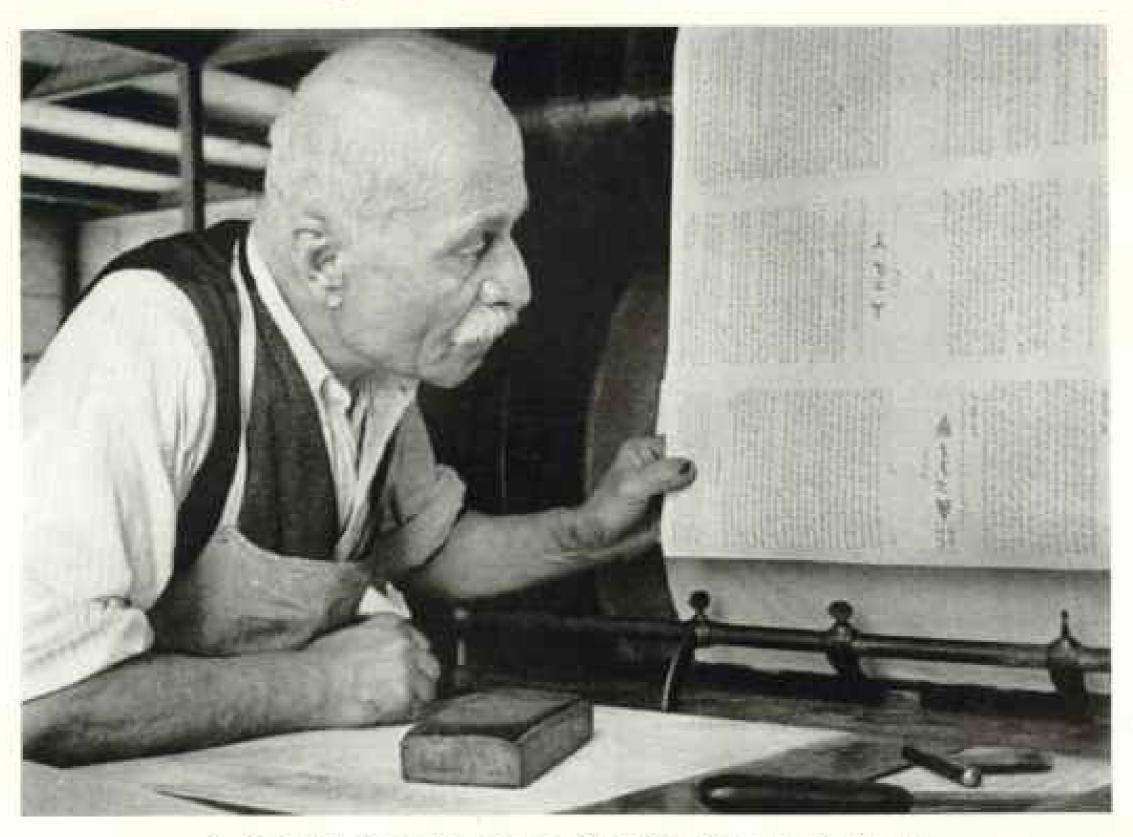
Beyond the matchless curve of Juniye Bay is the river of Adonis, whose water still runs red during the rains of spring. Geologists say

* See page 764 and "American Alma Maters in the Near East," by Maynard Owen Williams, NATIONAL GEOGRAPHIC MAGAZINE, August, 1945.



Vanished Are the Bible's Sidonians; Their Famous Port Crumbles Answ

Centuries before Christ, Sidon and its daughter Tyre were rivals. Now Beirut far eclipses both. The island from which the picture was taken sheltered Crusaders. Today it is a storage depot; boxes litter the causeway (lower left). The rectangular white building on the central horizon is an American mission school (pages 736, 747).



A Beirut Printer Examines a Christian Pamphlet in Arabic

His employer, the American University Press, distributes Bibles to the entire Arabic world. Ben Hur. Robinson Crusoe, Swiss Family Robinson, and an elaborate Arabic dictionary are other good works of the Mission Press. Lately English-letter linotypes have entered Syria; Egypt has Arabic linotypes. The Arabic alphabet consists of 25 characters. Next to the Latin, it is the most widely diffused geographically.

mourned by Venus,

The legend still clings to this somber gorge. My waitress at the Adonis Cafe once asked, "You think me pretty like Venus?" So lingers the aroma of mythology amid the scent of gasoline!

Through Beirut's Place des Canons pour cosmopolitan crowds. Brown male gowns and hobnailed clodhoppers match strides with nylon hose and high-heeled shoes. Thin veils add mystery to Mohammedan cheeks but kill the flash of lustrous eyes. Incidentally, it costs money to be a Moslem; for Christian girls go barelegged, Moslems not.

For money Beirut has an astonishing disdain. With the cost of living index at 590, compared to 100 in 1939, almost anything can be had—for a price. But with money a drug on the market and shelves almost bare, why should a dealer sell?

One much-desired item is a \$5 gold piece. When gold went up from \$20.67 to \$35 an ounce, \$5 gold pieces should have been worth

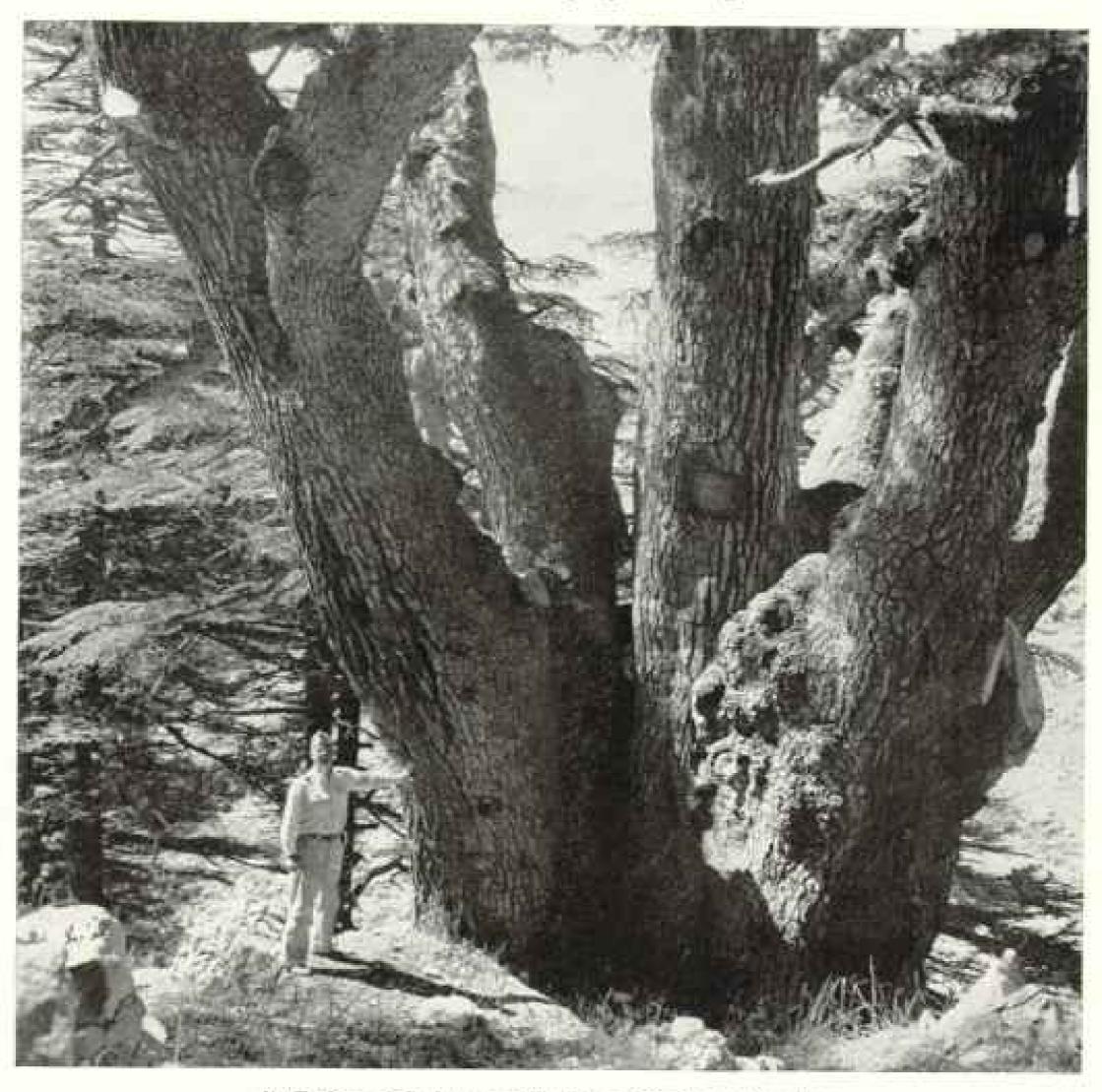
iron ore colors the flood. Poets know it is about \$8 each. Actually, in Damascus and Adonis's blood, spilled by a wounded boar and Aleppo, they were selling at about \$23 at the legal rate of exchange.

To a Lebanese or Syrian, a gold dollar in the hand is worth three greenbacks in the bank. When I bought my first Oriental rugs, every transaction was sealed with the clink of gold coins. English sovereigns, Turkish liras, French napoleons, and American eagles were handled in scoops, like sugar or flour,

Even Here They Clamor for New Cars

There is an insistent demand for American goods, ranging from photographic film and fountain pens to typewriters and motorcars. Some Americans ask, "Why deprive ourselves of these scarce commodities?" George L. Bell, our Deputy Director for Trade Promotion, replies, in the language of Genesis, "We cannot afford to sell tomorrow's birthright for today's porridge."

Beirut owes its very existence to an ascending spiral of economic life in which American cars, bought on the installment plan, now play a conspicuous part. Hence, Lebanese love of



A Cedar of Lebanon Dwarfs a Six-foot American

In Solomon's time, when Hiram's cedars roofed the Temple at Jerusalem, the groves were immensely vaster. Later, wasteful timber cutters turned tree-green hills into naked rocks. This grove of 400, known as Cedars of the Lord, grows at 6,500 feet near Bsherri. The largest, 80 feet high, are thought to date from Crusader times. One measures 47 feet around the trunk (page 745).

luxury and a Beiruti's desire for transportation to a cool night's sleep near Jebel (Mount) Sannin combine to benefit the hat-check girl at Detroit's Book-Cadillac.

President Bayard Dodge of the American University of Beirut opposes selfish display, which sometimes leads to economic as well as moral bankruptcy. But cocky courage, sustained by love of show, developed Beirut's busy port. Its trade now helps support General Motors, Bing Crosby, and du Pont's sleek nylons.

Close to mosques and churches of varying creeds, blatant movie posters face a memorial to Lebanese soldiers who died in World War I. On the monument a veiled Moslem woman and an unveiled Christian woman clasp hands in common sorrow.

Between Beirut and Damascus the Lebanon barrier rises to 8,622 feet in Jebel Sannin. But the cogwheel railway, burrowing through tunnels, reduces its highest hurdle to 4,880 feet, and the French so greatly improved the roads that motorcars cross from the seaport to the desert port in two scenic hours (Plate XV).

Half an hour from Beirut the tired businessman can sit on a cool terrace, look down on the sweltering city, and think how comfortable a warm blanket will feel.



Carpet Spread, Shoes Removed, and Face Washed, the Moslem Is Ready for Prayers

Five times a day the faithful are summoned to prayer by muezzins crying from the minarets. Ablution is a ritual as well as a sanitary institution. City mosques provide tanks for the purpose. In the desert the use of sand is permitted. At this Damascus mosque prayers are said in the court during summer (page 761).

The Lebanon has become the summer Switzerland of the torrid Near East. Baghdadis and Cairenes summer under umbrellatopped stone pines at Brummana or Esh Shuweir (Plate XIV). Hot music and cool breezes lure the young to 'Aleih, Bhamdun, and 'Ain Sofar, where music tickled out of a fat mandolinlike and by a goose feather is giving way to the swooning saxophone.

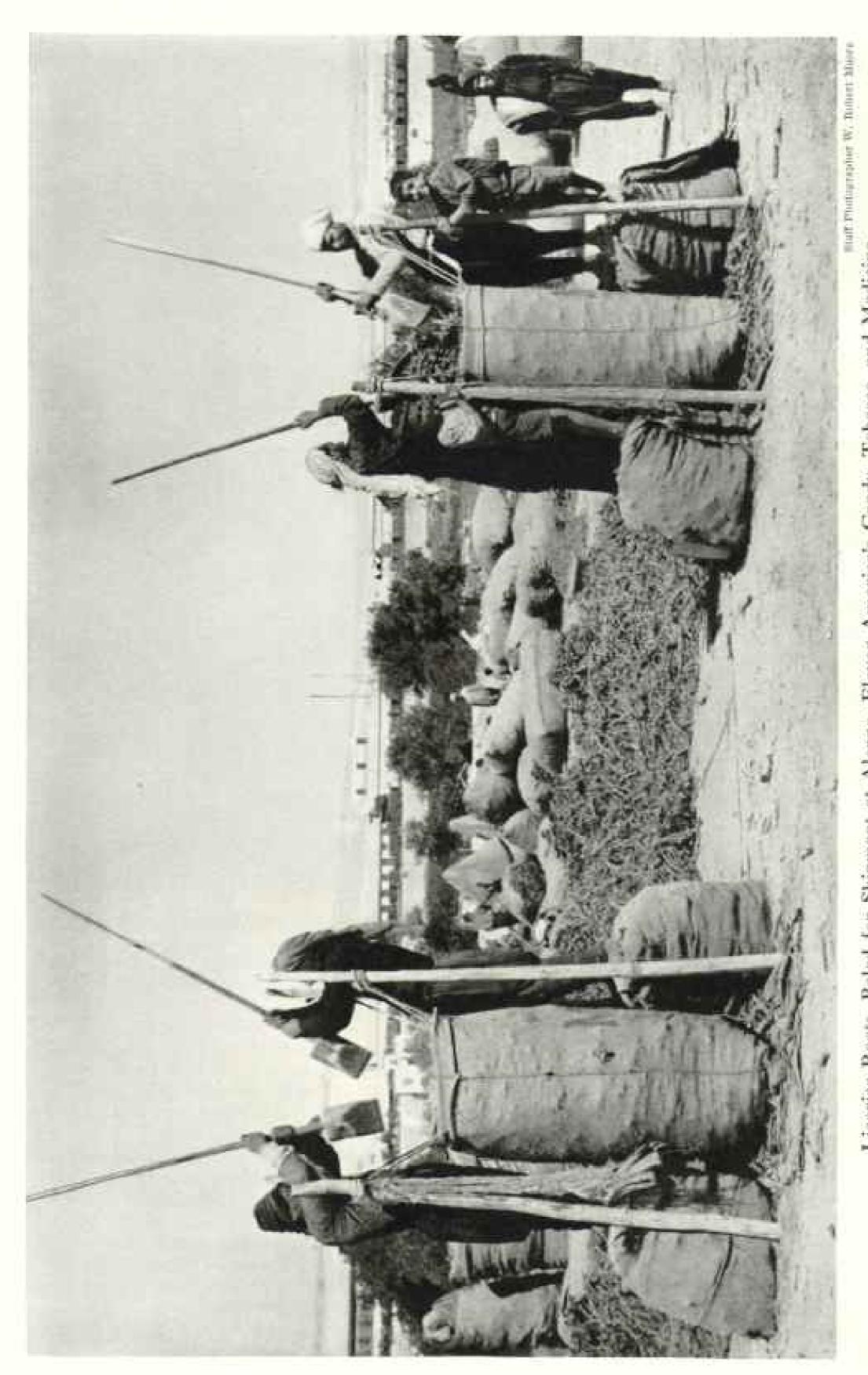
All around the resort towns, sturdy laborers repair their terraces or tend their vineyards as they did before playboys invaded their mountain. Hawk-eyed peasants brave the sun, while their young wear dark glasses with rims like tricycle wheels.

Lebanon seems a woman's paradise. At

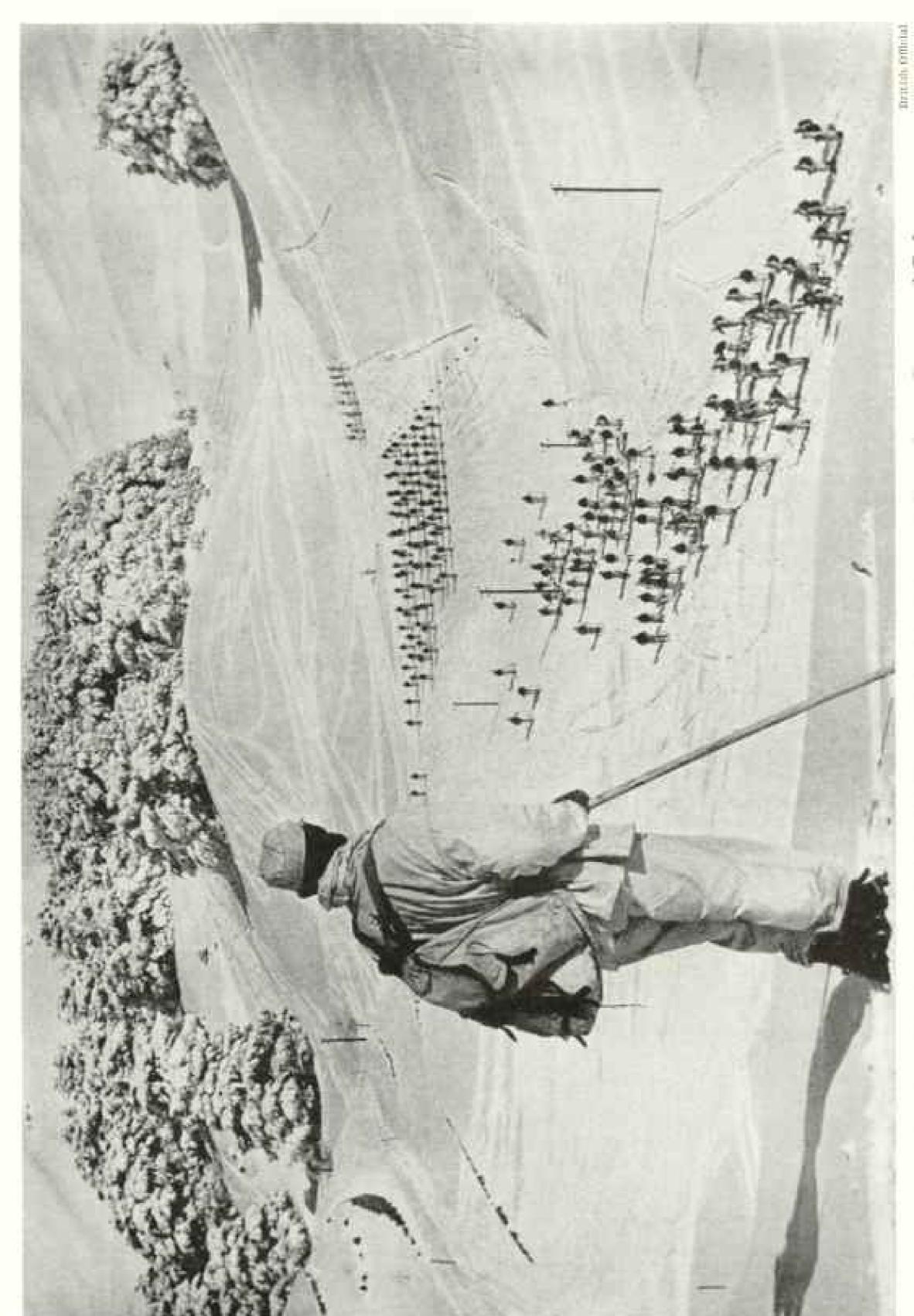
dusk on Sunday, red-cheeked beauty choruses parade the mountain towns, far better dressed than most of the men. Across the majestic countryside sound the feverish, petty rhythms of dance bands, activating scores of shuffling sandals in modern dance.

With musette bag on shoulder and a camera in my hand, I would hire a seat in whatever car was ready to start. Sometimes it scurried up along the history-cluttered coast, where Crusader castles keep silent watch. Sometimes it climbed to some mountain village where the wheat-and-meat dish called kibbeh was freshly haked and the apricots juicy.

When night overtook me I slept, sometimes with a cabaret twinkling its toes on a breeze-



In Syria Boorice grows wild, a pest to the farmer. Often when a bank of the Euphrates crumbles in, the roots are exposed like bristles. Syrians, souking the roots in water and icing the syrup, make a refreshing Boorice drink. Think of the "tar baby" candies these bales would make! Licorice Roots, Baled for Shipment at Aleppo, Flavor America's Candy, Tobacco, and Medicine



For Four Wartime Years British Sld Troops Trained in Lebanon below a Snowy Bouquet of Cedars

swept balcony, sometimes in some lonely valley where young stone pines have added a pleasing

patina to the barren but shapely hills.

There is no describing the loveliness of Lebanon, for each tiny village has its devotees, each viewpoint its habitues who come at dusk to watch soft Tyrian purple clothe the barren limestone slopes.

The fact that many natives fail to appreciate the charm is summed up in a Moslem prayer: "Thanks, God, for this beautiful land, It must be beautiful, or folks wouldn't come

from so far to see it."

I have often had to explain to jealously modern Lebanese and Syrians that New Yorkers would never come from home to see a skyscraper or a well-tailored suit.

Looking Down on Lebanon

On foot I followed sweaty, tollsome paths until a majestic gorge lay far below or late shadows spread mystery after the fierce glare

of the day,

Tramping south of Ba'albek, past vineyards whose long white grapes were unsurpassed, I saw where phylloxera had turned green grape leaves to a dead brown. Our Near East Foundation is fighting the dry-leaf blight with American root stock.

From a plane I could see how olive and banana have turned the highways of armies into one almost continuous garden from Tur-

key to Palestine.

There curve the railway tracks which link the Bosporus with the Suez Canal. Between Tripoli and Haifa, where the two prongs of Iraq's pipe lines reach the Mediterranean, the railway was still under military control.

Looking down on Tyre from the air, one thinks "How are the mighty fallen!" Neither Sidon nor Tyre died in childbirth, but each was eclipsed by its daughter. Before the Homeric age, refugees from Sidon enabled Tyre to surpass its mother city. When, in its turn, Carthage was born, Mother Tyre declined.

In the last few years, gardens have spread along the Syro-Phoenician shore, and Tyre is but a nubbin where it was once the full, fruitful ear.

It is still easy to see where two tiny ports once welcomed the far-ranging Phoenician galleys—the Egyptian harbor, sheltered from the north wind, and the Sidonian harbor, safe from the south.

"Tyre's Ruin like the Foundering of a Ship," reads the headline above the 27th chapter of Ezekiel. Today the air traveler sees the "ship" firmly grounded by the shifting sands. Stern prophets of Israel voiced a curse on the profligacy of Tyre and Sidon. Now the well-dressed Beiruti and the sun hunter of Tel Aviv's crowded bathing beach look upon Tyre and Sidon as musty relics of an almost forgotten past (pages 730 and 747).

About halfway from Beirut to Tripoli is Gebal (Jubeil), whose Greek name links this abandoned scaport with every Christian home. Gebal became Byblos, and Byblos, meaning "papyrus" or "book," became "Bible."

When the Crusaders built their towering castle of gigantic blocks upon a Phoenician fortress site, Byblos was already older than the Pyramids. Jewelry, arms, and sarcophagi, now in Beirut's light, airy museum, show how ancient cultures focused on Byblos. Long before King Solomon's day cedar wood was shipped from here.

Along the rocky coast near Tripoli, tiny windmills pump sea water into shallow cementlined basins for the manufacture of salt.

Tripoli perpetuates in its name the fame of three ancient ports—Tyre, Sidon, and Aradus, now Arwad.

Here oil from the east reaches the oilthirsty Mediterranean area. A small refinery at the end of the desert pipeline is only a pilot

plant for larger ones to come.

Between the city and its port rich gardens produce superlative fruits, but fever spread along the quiet canals. War changed that. Army medical signs tell just where you may camp, when to button your collar and roll down your sleeves, and when to rub on insect-repellent. With malaria on the wane, Tripolitans have less excuse for escaping the hot city for chilly nights in Bsherri, Ehden, or Hasrun. They go anyway.

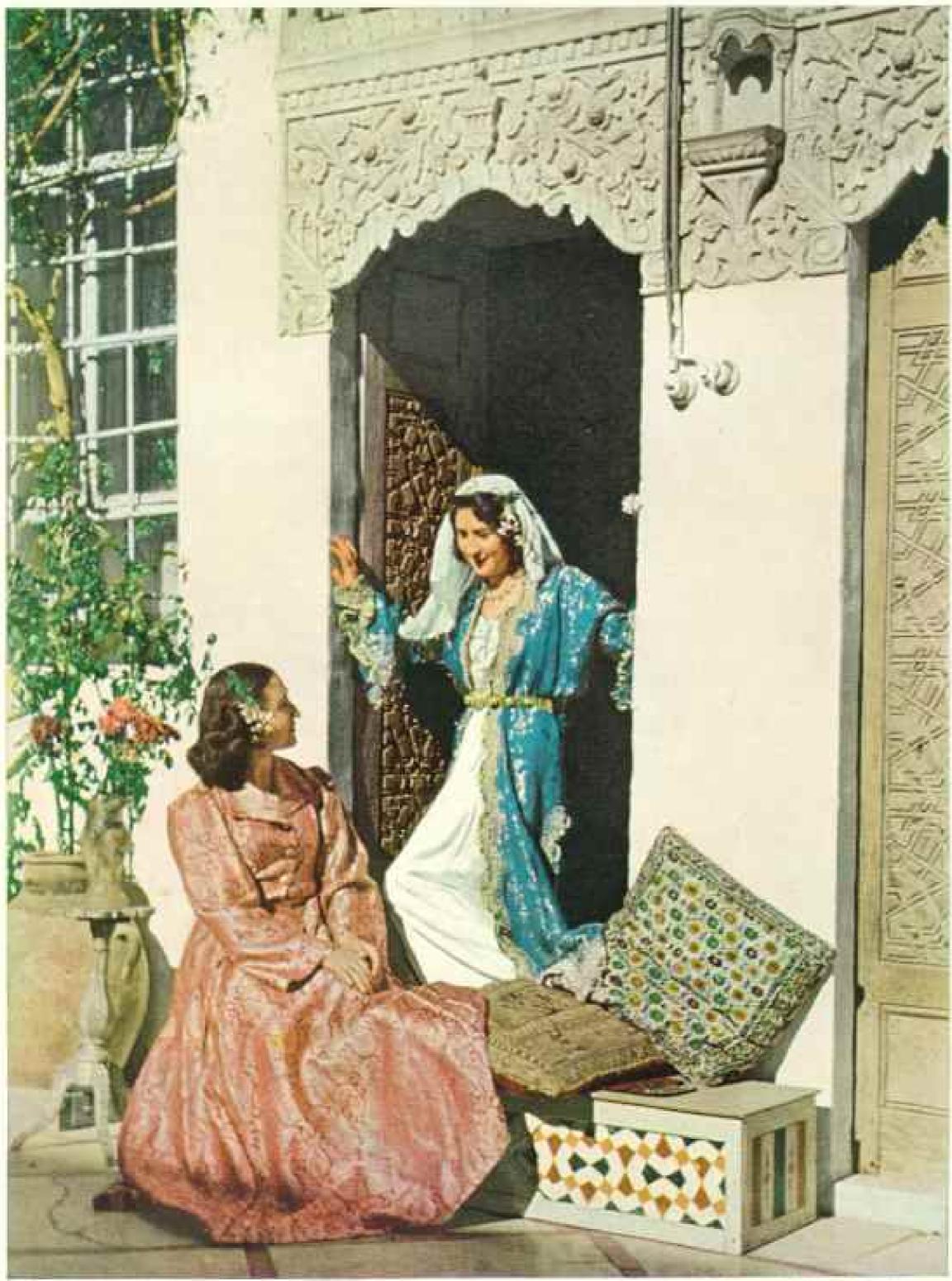
Ski Troops Amid "Cedars of the Lord"

Somewhere on earth there may be lovelier valleys than that of the Kadisha, the Holy Valley of Lebanon. But the villagers, whose golden grain, green mulberry, and heavily laden fruit trees overhang that mysterious gorge, will never admit it. With "prayer, pick, and sword" the Maronites turned a majestic but forbidding countryside into a toil-terraced haven of fruitfulness and peace.

As long as I remember, the hospitality of the Kadisha Valley has been exceptional, but Australian ski troops, training there, added many new English phrases. One I heard was "Come and rest yourself a while." Pretty Maronite girls thus invited me to their neat parlors or high-hung balconies where I could chat with their families or suck a spoon of sweet local jam before drinking tea.

Now that travelers have almost abandoned

Syria and Lebanon Taste Freedom

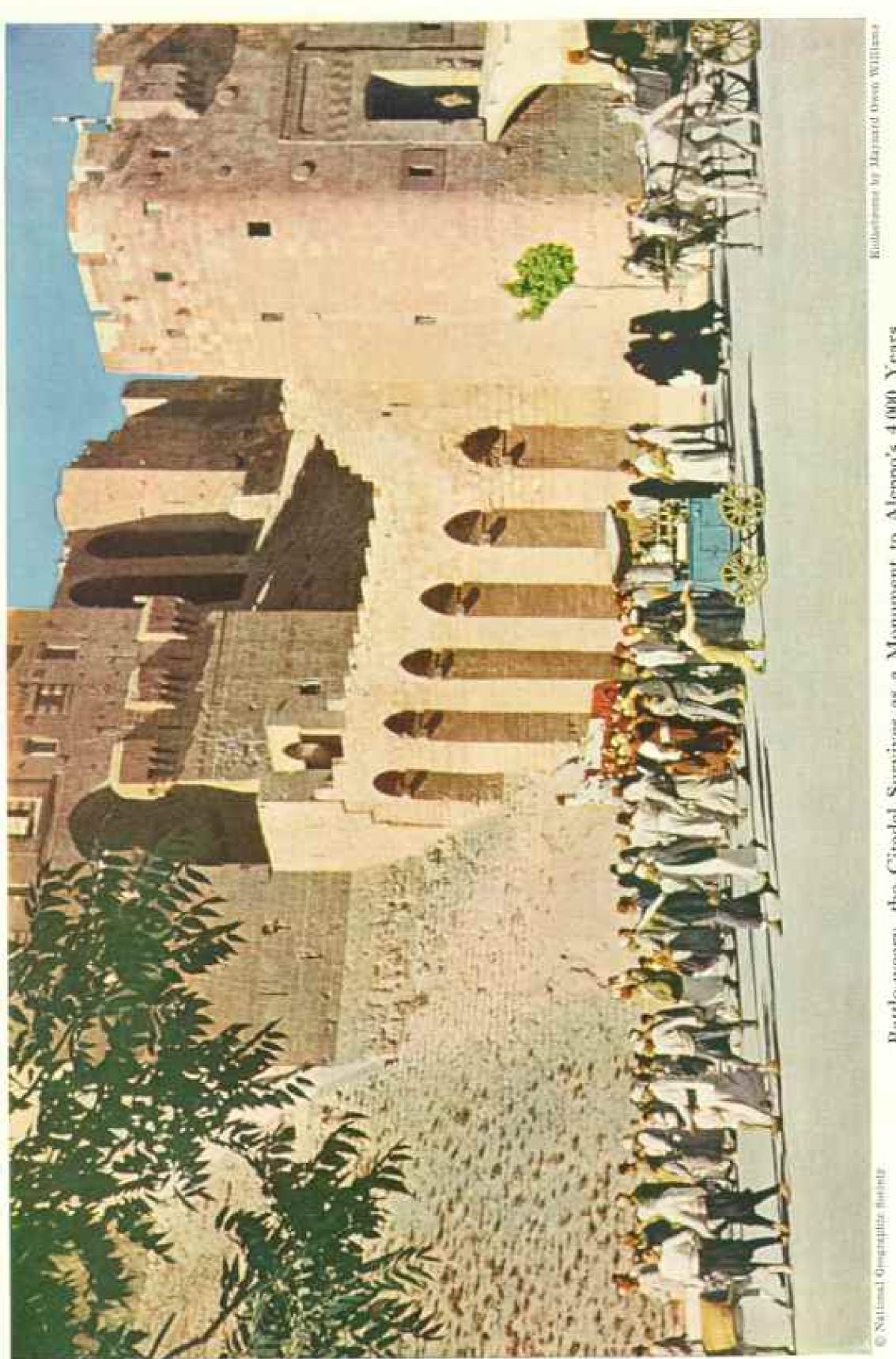


© National Geographic Serietz

Kodathrome by Maymord Owen Williams

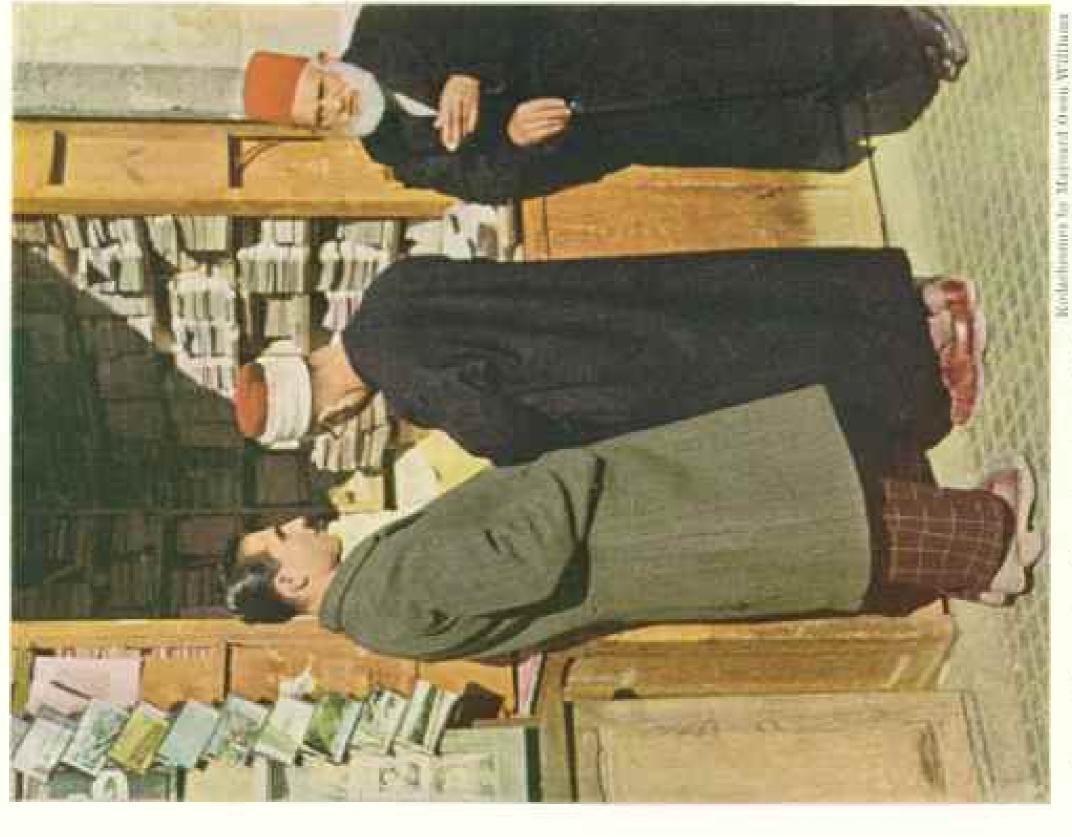
In Damascus, Famed for Its Rich Fabrics, Christian Girls Model the Latest Silks

Damask, the reversible figured fabric, takes its name from this "oldest of inhabited cities," now the capital of the young Syrian Republic. Though Islam dominates in these lands, the Christian Church has survived all the wars and crusades since its establishment in Antioch 19 centuries ago.



Years Buttle-weary, the Citadel Survives as a Monument to Aleppo's 4,000

Like a lonely skyscraper, this billtop dominates the surrounding city. Since Hittite times it has borne a temple or fort. It yielded to Greeks, Moslems, and Mongols, built parts of the present structure. Now it is only a show place.

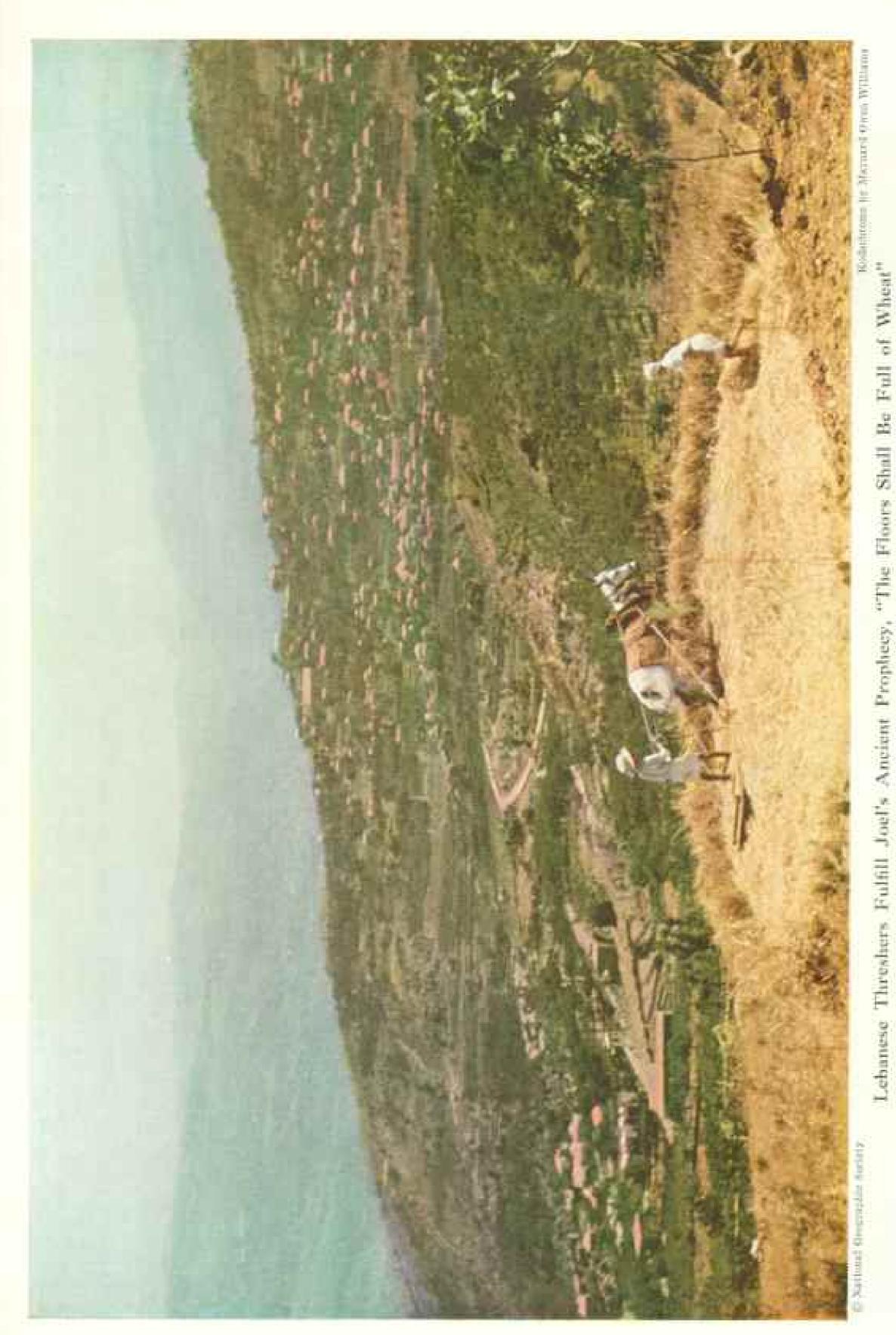


Scant Room for Browsing in a Hole-in-the-Wall Book Shop

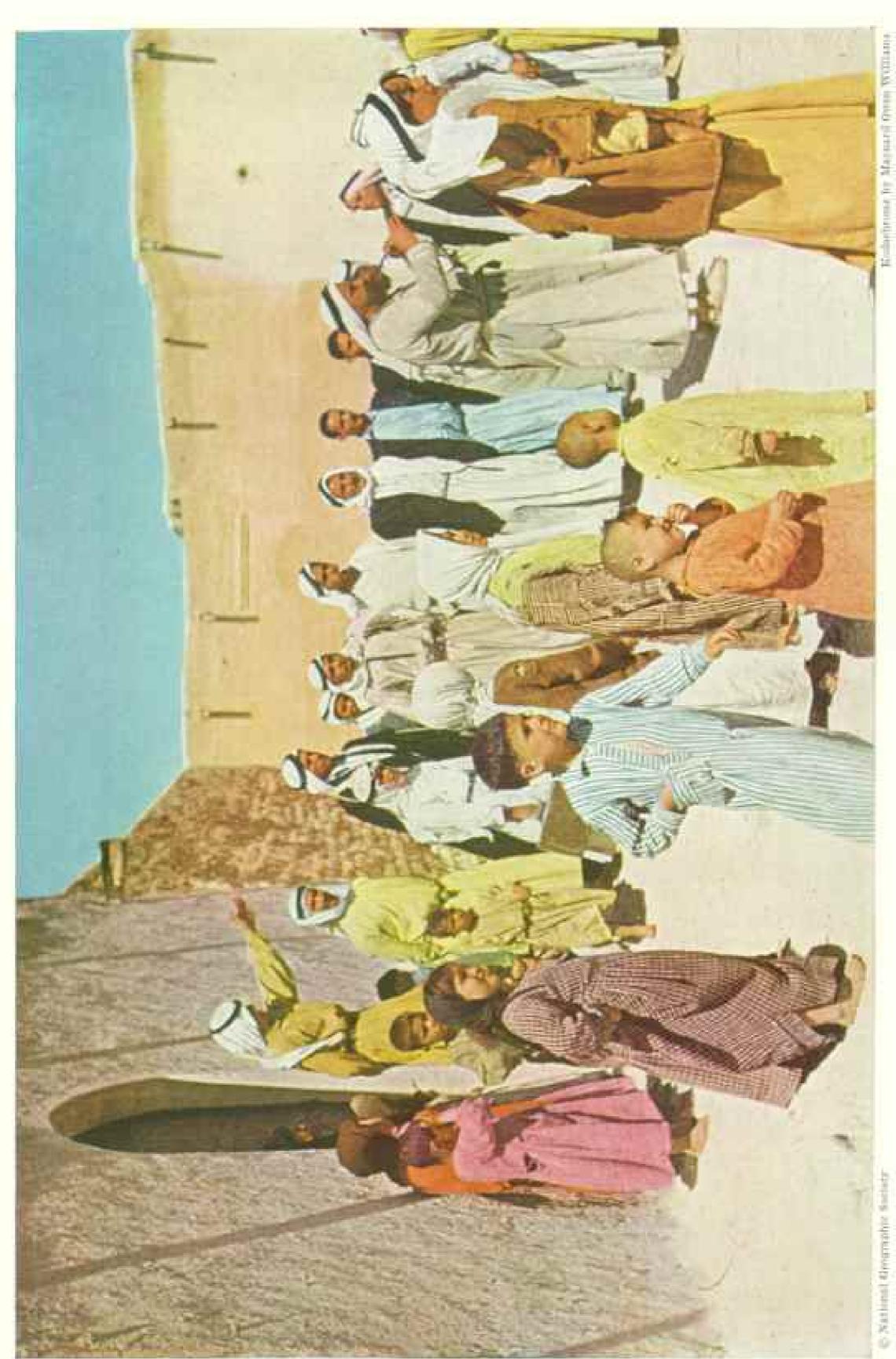
In Damascus, the Arabian Nights and the Koran remain best sellers, though Western books invade the market. Here a Moslem scholar is marked by his white turban. One customer dresses "Western" down to his close.

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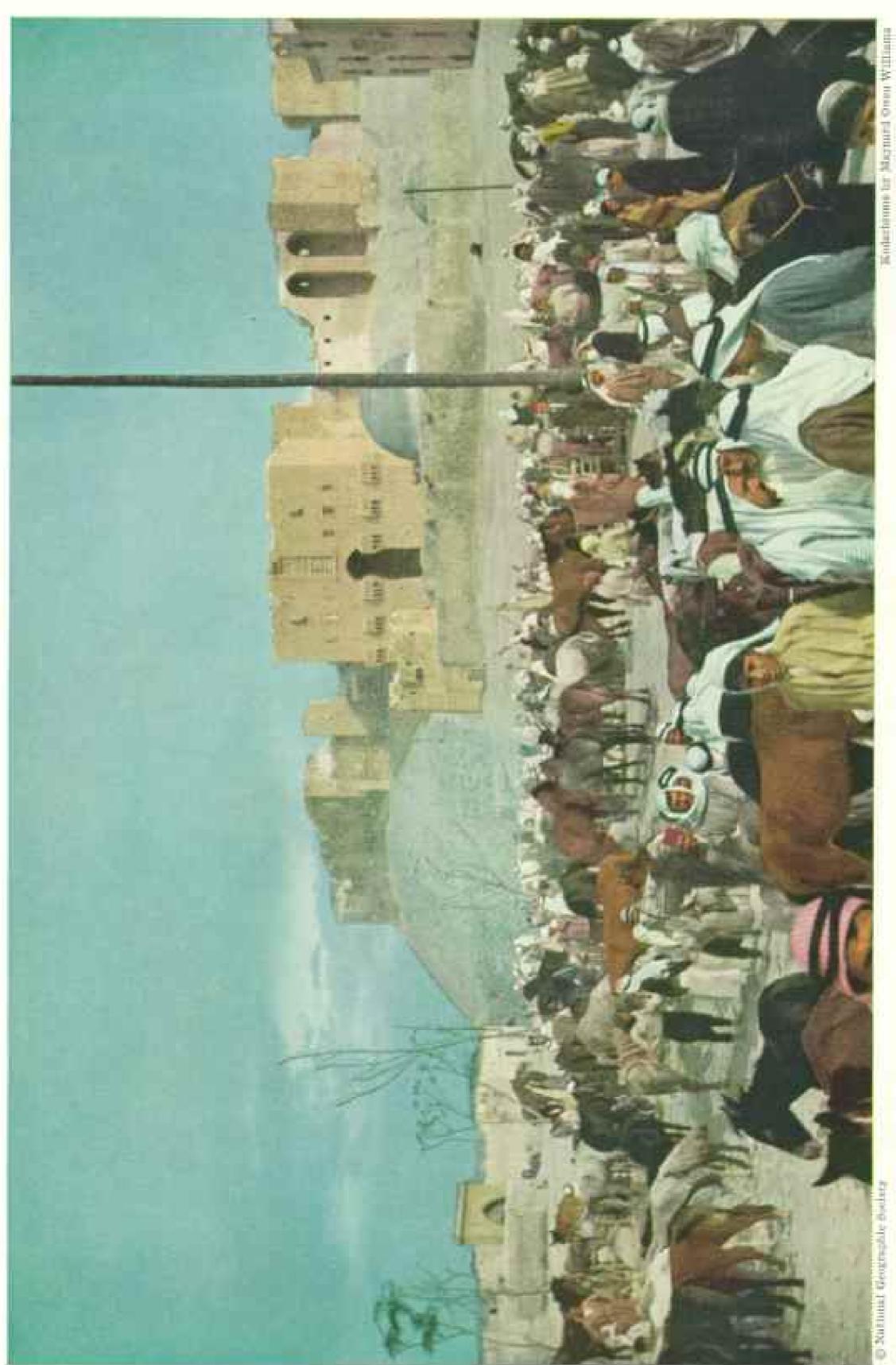
In his master's shop, a cubby-hole in the cobblers' street, new shoes hang from pegs bristling from the walls. Velled women, standing in the street, turn their backs on the crowd as they try, on sizes. leather Cloak A Damaseus Belivery Boy Wears His Burden as a L



In the Lebanon tunge cultivation extends up to 6,000 feet. Terrages, some fringed with multivery trees, clinic the slopes like stairways. Fig trees and vines cling to narrow fedges, gardens grow on seemingly maccomble heights, olive orchards fill ravines, and hundreds of villages perch on alopes of Hammans Valley, near Beirut,



Tadmor, the modern Palmyra, is a small, poor ghost of its ancient self. Ruined temples and lavish tembs attest its vanished wealth. In the third century its rebellious Queen Zenobia saw her capital destroyed by the Romans. She was carried captive to Roma. Nedding Party in Palmyra, a Syrian Desert City That Defied Imperial Rome Men Dance Without Partners at an Arab



Aloppo's David Harums, Trading below the Citadel, Match Wits over the Price of Horseflesh

Each Friday market crowds overflow the covered bazaar into the open air. To it nominds take their livestock and wool, the townsmen their manufactured goods.

To the traveler, Aleppo market is a reviewing stand past which parade all the races and types of the Near East,



He Sprinkles His Vegetables Lest They Wilt

Ume after time Seldom whofly new are the copper vensels of desert falk. Time after time the leaky pot is melted down, reshaped, and sold anew by the coppersmith. More and more these days vessels are made of unsightly gasoline tips.

Aleppo Market Place Is Paved with Copper

O Nathmat Generaphin Bockets

Aleppo gardeners sproad their wares in the streets. The closer to trum lines and crowds the better, say they. Generally they pick a shady spot, arrange their produce attractively, and use a sprinkler frequently.

The National Geographic Magazine



"Take It Right Out into the Light," Says the Persuasive Damascus Cloth Dealer For better or worse this invitation is strictly a gamble, because a loitering pedestrian is likely to influence the customer. "Too much" or "Good bargain," such a one may comment.



O Nathenal Geographic Sectors

Kedachnoses by Marnard Own Williams

Druse Warriors, Feared for Their Bravery, Struck Twice Against France

In 1925-6, when Syria and Lebanon were a French mandate, the Druses fought recklessly but vainly. These troopers of 1945, having refused to obey their European officers, await their pay at Es Suweida.

sun helmets, the Lebanese have gone for them in a big way. As I started the tough climb to the Cedars, a pint-sized lad under a wide helmet asked, "Going to the Cedars, Johnny?"

He shamed me into leaving the rough donkey trail for an even steeper path which wrapped its tendrils to a seemingly vertical cliff. Before the rising sun had lighted the misty gorge, I reached the shelf where stand

the famous trees (page 732).

Like a shadowy bouquet on the bare bosom of the mountain rest the Cedars of Lebanon, cousins of Himalaya's deodars, Biblical sisters of our own giant sequoiss, and joint heirs of the ages. One of them decorates the national flag of Lebanon.

In Lebanon grew the wood for Phoenician ships which coursed the unknown seas. Here grew the boards of cedar with which to line and roof Solomon's rich Temple, so cunningly prefabricated "that there was neither hammer, nor ax, nor any tool of iron, heard in the

house while it was in building."

The Cedars are under the protection of the church, and mine host at the hotel wears the robes of a Maronite monseigneur. Winter ski trails and summer coolness are adding a worldly touch to the "Cedars of the Lord." Young Lebanese sportsmen flock to the Cedars for week ends in that blinding bowl of snow.

Global war has left its monument here:

"During the years 1941 to 1944, units of the Imperial Armies had the privilege of training mountaineer troops in this area" (p. 735).

To the East Lies Syria

A motor road is almost completed across the Pass of the Cedars. From this saddle one can look westward toward the sea or southeast to where six giant pillars of Ba'albek rise above the fruitful "hollow of Syria."

Once I had tramped over from Ba'albek in a single day and slept among the snaky roots of the patriarchal Cedars. But this time I returned to Bsherri and coasted down past giant pipes in which the waters of the Kadisha plunge to generate electricity for Tripoli.

Between Tripoli and Homs, beyond the border in Syria, oil pipeline has followed trail, motor highway, and Diesel train track. Up in the hills which guard this route of international trade is Krak des Chevaliers, one of the stateliest of Syria's many medieval

castles."

It is a tribute to international relations that, in threading the bottleneck toward Homs, some travelers never know when they leave Lebanon and enter Syria.

Cordial conferences have been held between Syrian and Lebanese officials at Shtora, near

Zahle. Shtora, a Niagara Falls or Geneva of the two neighboring Republics, is also the site of an agricultural station where Frank Anthony, of the Near East Foundation, is teaching farmers how to improve their crops.

Near Homs, the Orontes River broadens into an artificial lake so old that Strabo attributes it to the Egyptians, the Talmud to Diocletian, and Abulfeda to Alexander. Between Homs and Hama, irrigation water derived from the ancient reservoir is clothing the countryside with vineyards and melon patches as well as grain (page 748).

Homs and Hama have long been rivals, and an old story of their jealousy fits the atomic

age.

Despite the Moslem prohibition of strong drink, two natives of Homs became inebriated. On a visit to Hama they saw their moon in the alien sky. Returning home, they organized retaliatory measures. But the road was dusty, the day was hot.

"Why can't we defeat our rival without so

much work?"

So they stored explosives in an old mosque, sent an aimer up the minaret to point the direction to Hama, and touched her off.

"By Allah," said the survivors, "if the explosion caused all this damage to Homs, think

what it must have done to Hama!"

Cuddled in the curving valley of the Orontes, at the foot of a commanding citadel, Hama is famous for its great, groaning water wheels, each with its distinctive voice and name. By lifting water to street-straddling aqueducts, they spread green gardens along the Orontes (page 749).

One of Hama's most distinguished citizens was the Arab geographer, Ismail ibn Ali Abulfeda, prince of Hama, descendant of the father of Saladin, and "the king favored by Allah." When he died in 1331, Hama's glory waned. Now its chief hotel, mostly cinema and outdoor cafe, bears the name of the great historical geographer, whose tomb is near by.

U. S. Shoe Polish in an Aleppo Bazaar

In a swift Diesel train I went on to Aleppo. When I first knew the north Syrian metropolis, this old, old desert port seemed like a new frontier town. German engineers called "Fertigis"—the men who said "Ready" in German-were pushing the Baghdad Railway across the muddy Euphrates. Hotels were crowded. Rail followers trafficked in curios and semiprecious stones.

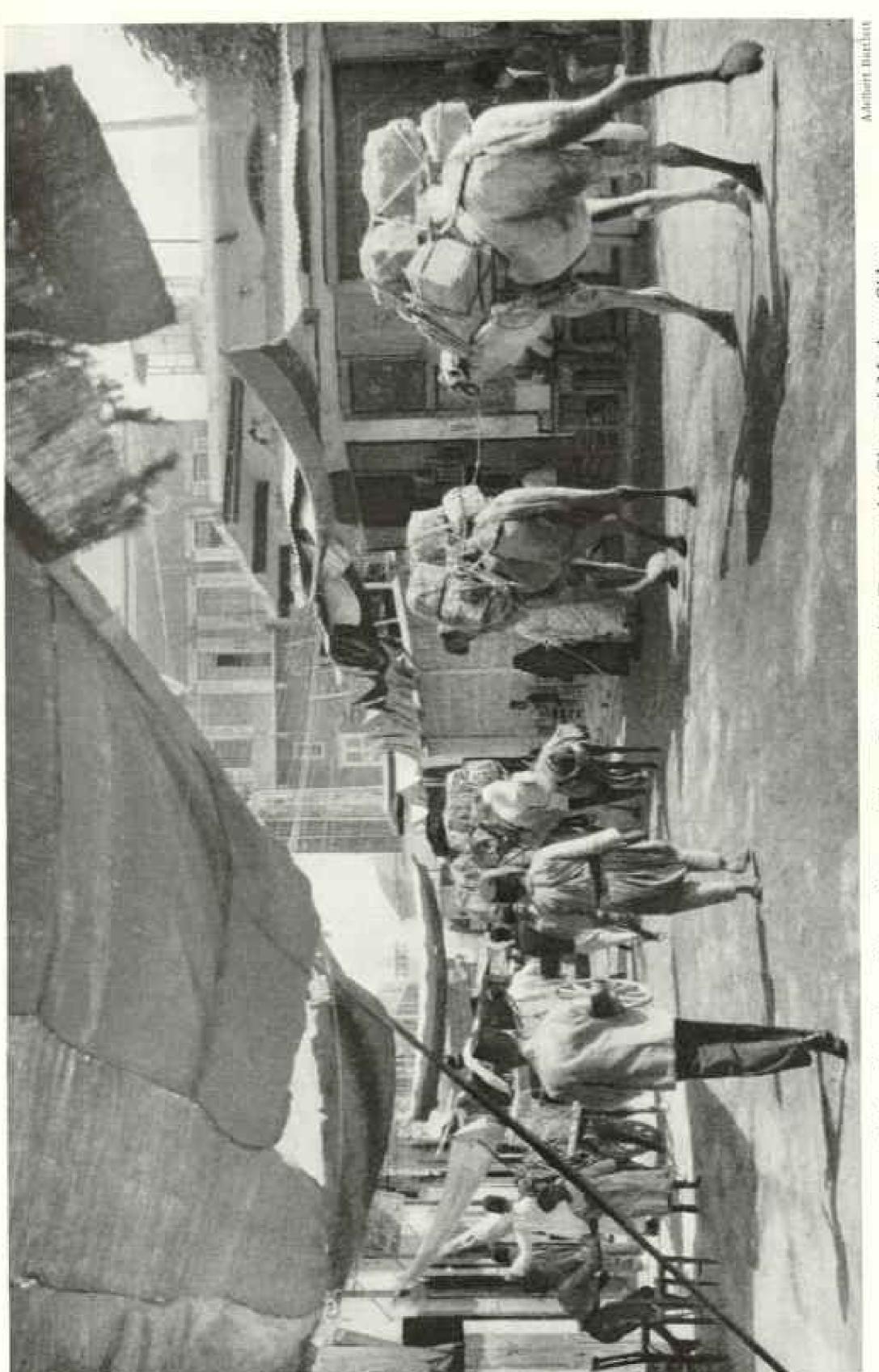
* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Crusader Castles of the Near East," by William H. Hall, March, 1931, and "Road of the Crusaders," by Harold Lamb, December, 1933.



p Girls Armenians at Zahle Repair Shoes amid Pinu

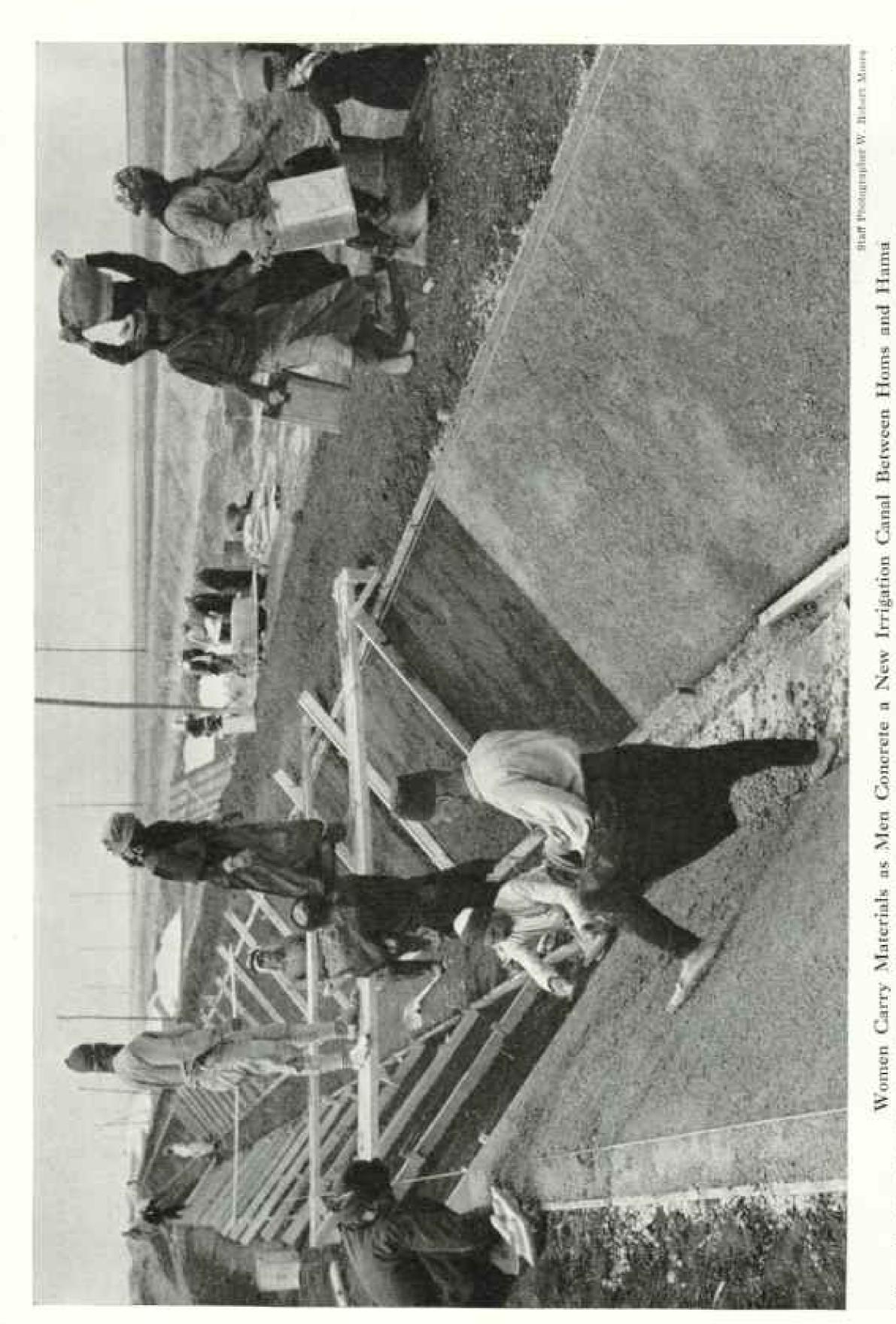
By the consun of 1938 Syria and Lehanon had some 115,000 Armenians, Many, fleeling from Turkey after World War I, arrived in such poverty that they lived in tin huts. Now the colotty contains prosperous businessmen.

French-style bread in popular, Circular loaves are puffed up-like pincushions when they come from the oven. Hole-in-the-center hurdtack, shaped like a neething ring, is munched by bus travelers on their journeys.



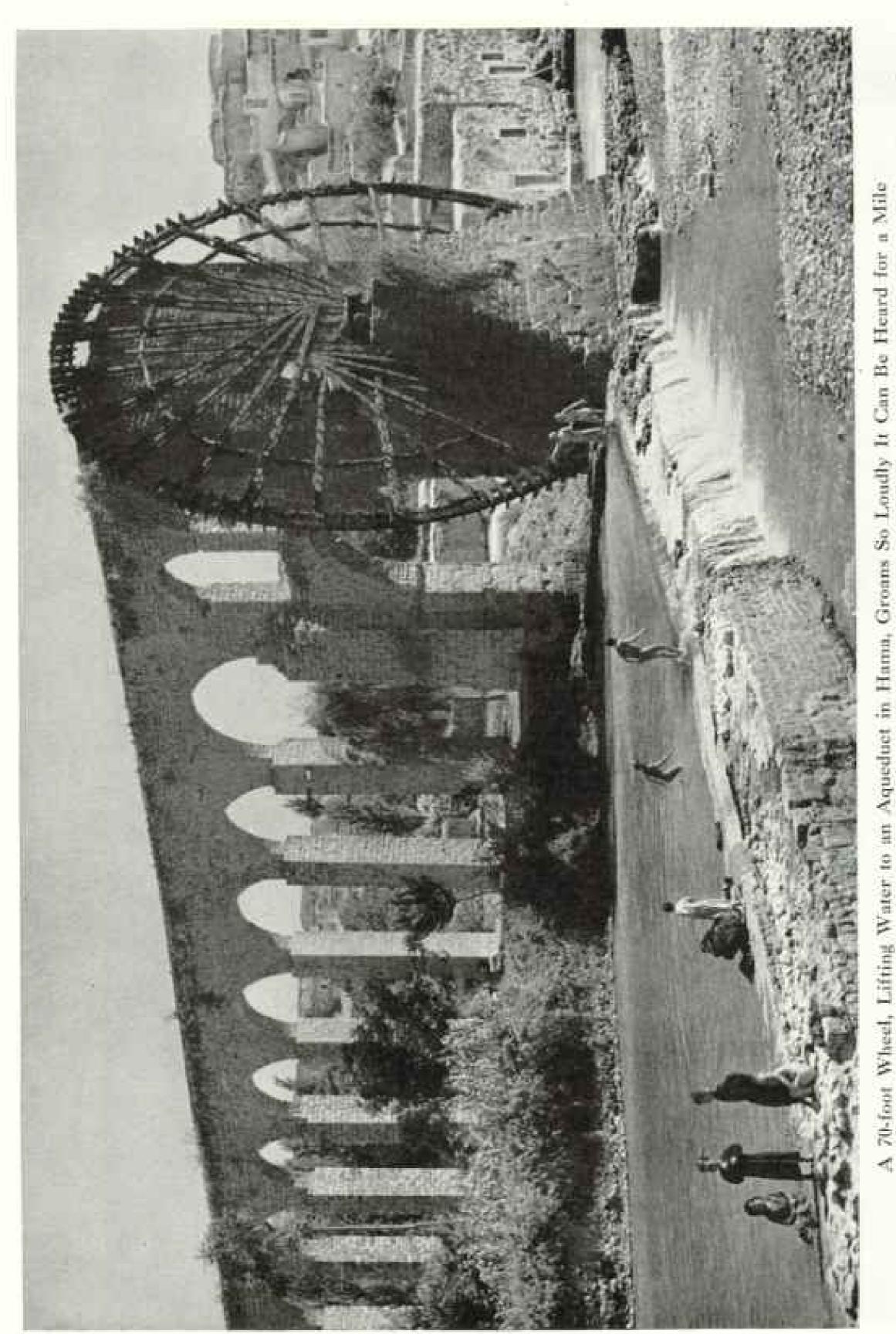
A Few Camels, a Sleepy Bazaar: These Represent the Commercial Glory of Modern Sidon

Here dwelt civilization's pionects. In fragile boats, Phoenician adventurers circumnavigated Africa and may have found tin in Britain. With them they carried a simplified alphabet. They excelled as metallurgists, gers engravers, and weavers. They made dyes of unrivaled beauty. A color picture would above these burlap awnings dyed in purple. Little now remains of ancient Sidon (pages 730 and 736). Its people bave shrunk to 17,700, and they call the town Saida.

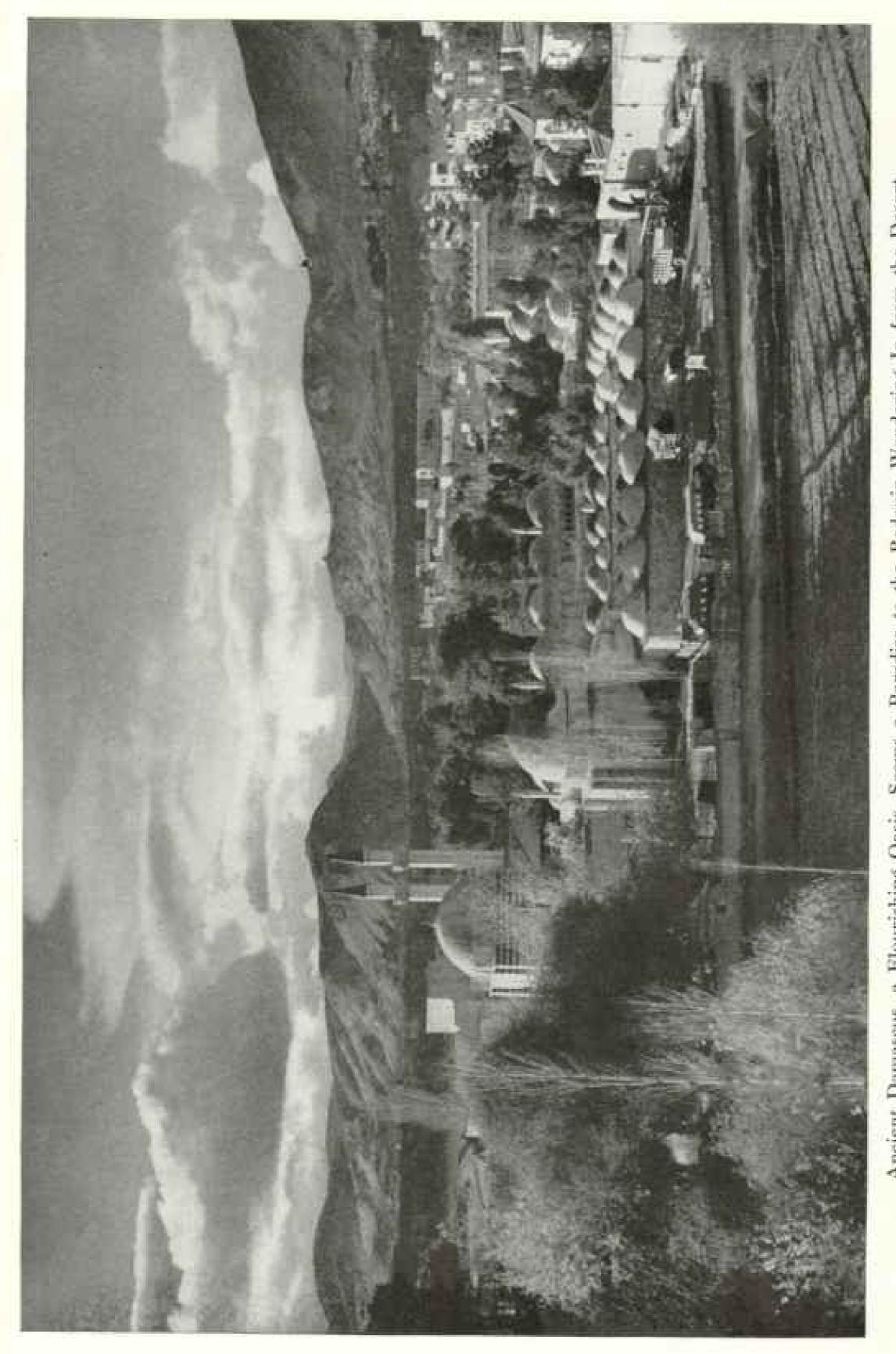


All over the Near East, irrigation brings new life to the deserts. Palestine harnesses Bible rivers. Iraq clears ancient Samerian canals. Syria continues water projects initiated by the French. This channel flows from Bahret Homs, an enlarged artificial reservoir reputed to date from the second millennium s. c. (page 745).

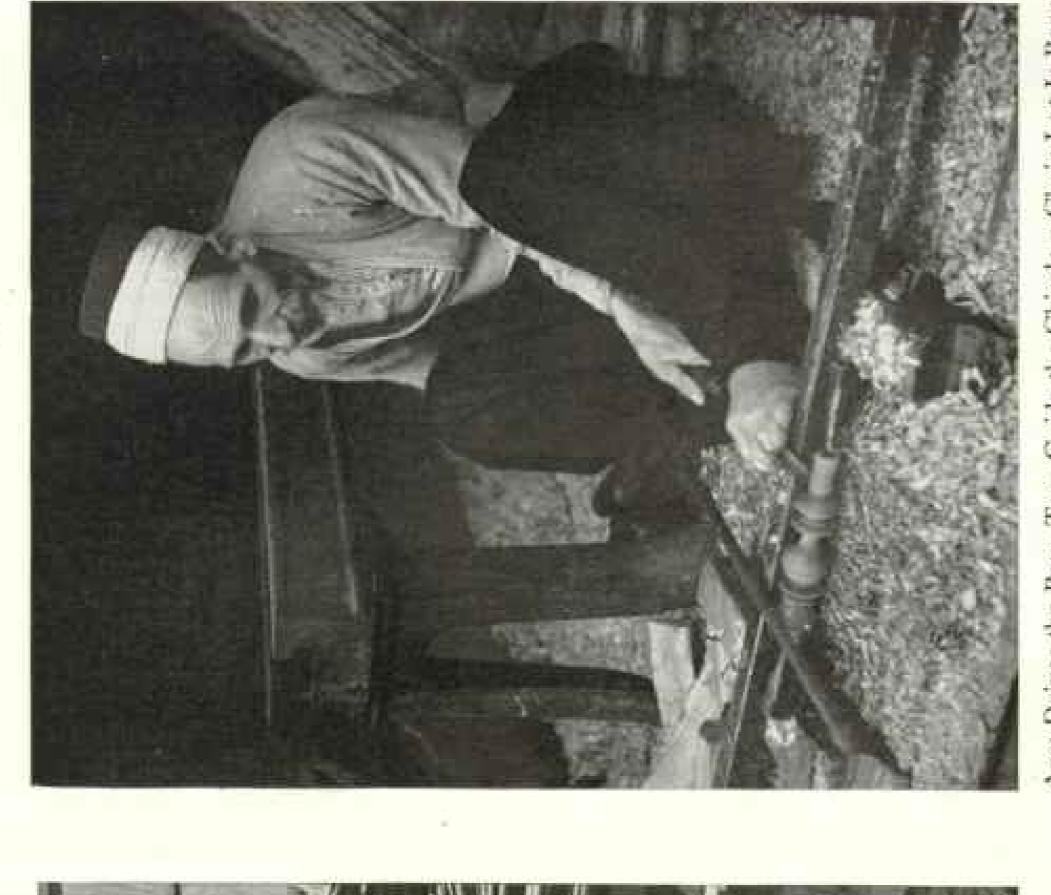
748



Padelles, turned by the Orontes River, elevate buckets, which empty themselves. Homes and gardens are watered by a series of these devices (page 745). This one, largest in Hama, fills the hathing pool of a mosque. Syrian boys, catching a ride, dive from the paddles or swing around as on Ferris wheels. Clins has similar wheels.



New fown climbs the slopes to the right. Old town follows the Barada River, to which it owes its beauty and longevity. Two slender minatets mark Tekkiye Mosque, built in 1516 for pilgrims to Mecca. Its bochive-domed hostelry now shelters Moslem theological students. Beside it, buses await repairs (page 761). Ancient Damascus, a Flourishing Oasis, Seems a Paradise to the Bedouin Wandering In from the Desert



Damaseus Makes Edible Blankets of Apricot Paste

Long before quick-freezing, Syrians preserved apricots so as to withstand heat and shipment. They grind the palp, spread it thinly over cloths, coat with olive oil, and dry in the sun. Soaked and iced, the delicacy is enten like a sherbet.

Arm Drives the Bow, Toes Guide the Chisel; a Chair Leg Is Born Though his lathe li primitive, this Damascus wood turner does a workmanlike job. His baraar lies in a labyrinth of shadowy lames. So narrow are some of the passageways that two persons can scarcely pass.

Dark desert men in long robes gazed at the Hungarian cabaret girls or sucked at serpentine narghile stems while Oriental dancers disturbed somnolent café crowds with quaver-

ing voice and swaying hips.

To this day the bazaars of Aleppo are among the most picturesque in the Near East. On Fridays hair-crowned Bedouins and tarbooshed citizens, carpeting the dusty earth with bright piece goods, secondhand books, or hand-hammered copper vessels, drive spirited bargains at the foot of the honey-colored citadel whose first stones were old when Genesis was new (Plates VI, VII, IX).

I saw an Arab sell virgin wool from his desert flocks to buy a can of American shoe polish. Its dry death rattle indicated that it

had not come from an Army PX.

Near the desert's edge a short-lived river creates an immemorial oasis city, to whose great warehouses, punctuating a trade route old as time, traders brought exotic stuffs. When William Barret opened one of the earliest consulates of the British Empire at Aleppo in 1580, the Venetians were already at home there.

Europeans here sought the silks and spices of the East. But today's rayon comes from Courtaulds in England, the dyes from our own du Pont's.

Mill Owner Practices Golden Rule

For ages Aleppo's weavers have been famous. Even today bright beds of new-dyed yarn blossom on dull dirt roofs. Street after street echoes to the clatter of looms, the shock of shuttles (page 763).

Two of Aleppo's textile factories are among the most modern in all the Levant. At one of them, to which cameleers bring bulky bundles of Jazira cotton, the owners are experi-

menting with profit sharing.

An Aleppo College student who conducted me through his father's mill sensed the responsibility of those who use modern power.

"We turn only a part of our yarn into cloth, for those with hand looms must live."

Such sentiments, once alien, play a part in an Arab awakening which offsets Aleppo's

loss in trade with Turkey.

In 1839 not a single bookshop was reported in Aleppo, although the Levant Company's library had owned 288 volumes in 1688. In 1945 a dealer there asked me the name of an agency which could supply all American magazines. He has requests for highly technical periodicals and feels that cover girls and detective stories cannot fully represent our intellectual life.

"Aleppo has long been a cultural hub," he

observed, "Now America furnishes some of our best contacts with world thought and science."

In Aleppo one is seldom out of sound of stonemasons, who fashion neat modern structures set in handmade lawns. Looking down on the close-packed city are the splendid buildings of Aleppo College, of which Ameri-

can visitors are proud.

So rapidly has Aleppo grown, and so thirsty are its lawns, that there is talk of getting water from the Euphrates. Gravity won't solve that problem without Turkish cooperation, for at the Turkish boundary its muddy waters are considerably lower than Aleppo. A system which would serve Aleppo might spread fertility throughout the whole Al Jazira area, which lies between the Tigris and Euphrates.

South and east of Aleppo neither building stone nor lumber is found, and villages are of beehive huts roofed in without use of heavy beams. Dun cones which are houses alternate with golden cones which are stacks of grain. In the level spots lie the threshing floors on which iron-wheeled drags have almost replaced

heavy flint-toothed sledges.

West of Aleppo the limestone hills crowd in closely, providing splendid building stone, as they did for a hundred ancient towns now dead as St. Simeon Stylites. His open-air perch and pulpit, atop a 60-foot pillar, spread his fame as an ascetic and set an example for frivolous flagpole-sitters 15 centuries later.

Nurses Know Language of Christ

Some twenty years ago my friend Dr. Ellis Herndon Hudson opened a Presbyterian mission hospital beside the Euphrates at Deir ez Zor (page 764). When a British Army dentist and a DDT expert invited me to join them on a trip to Deir ez Zor, I decided to revisit this once lonely outpost.

Within sight of the hospital a skinny suspension bridge crosses the great river to the potentially prosperous land of Arab and Ar-

menian, Assyrian and Kurd,

The Euphrates has never itself been an important highway. Caravans have roughly paralleled its crumbling banks, stabilized by licorice roots (page 734). But since the days of Nineveh there has been some traffic across Al Jazira, and the bridge brought donkey, camel, and car to Deir ez Zor. When beast meets machine on the narrow bridge, either, or both, may balk.

The Assyrians, who "came down like the wolf on the fold," were not Christians or anything like it. But their name is perpetuated through the Assyrian Christians, colonized by the League of Nations in what may again

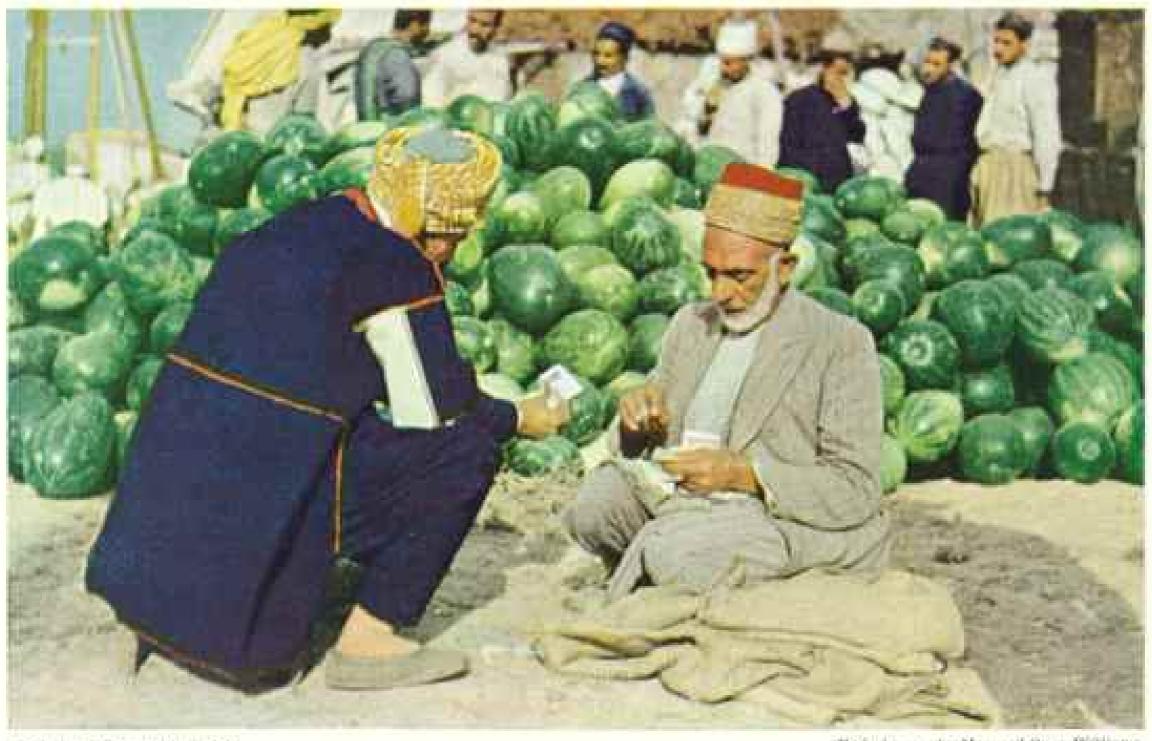
Syria and Lebanon Taste Freedom



Druse Women of Es Suweida, Veiling Their Faces, Leave Noses and Eyes Exposed

Members of this religious sect, an 11th-century outgrowth of Islam, believe their founder was an incurnation of

God. Guarding the secrets of their religion, they dwell apart in the mountains.



C National Geographic Bielety

Kodarhannes by Mernard Oven Williams

Watermelons and Money Exchange Hands at a Solemn Deal in Aleppo

First the prospective buyer thumps and squeezes his selection. As a convincer, the seller plugs the melon, like a surgeon trepanning a skull.



Syria, for centuries the mayn of foreign powers, is free. Fellowing the riots of 1945, the last French troops withdrew in 1946. This crowd bears Syria's three-star flag and Lebanon's order banner (center), "We know book burning is barbaric," said a young Syrian, "but it gives us an emotional outlet," At Deir ez Zor, Beside the Euphrates, Syrians Burn French Books in an Independence Bonfire



His Snowy Turban Indicates the Druse's Rank

Members of his sect are divided into the initiated and uninitiated. Those in the learned class may be recognized by the white strip worn around a red fiz. Some Druses resemble Araba; others look like Europeans.

Silks Worth \$30 a Yard Clothe a Damascus Beauty

C Natherst Gregorythis Surject

No need has she to stand in line for nylons, for Syria and Lebanon have long produced silk. The plains abound in mulberry orchards. Women and children pick the leaves and feed them to the silkworms.



C National Governor Switzer

American University of Beirut Looks Across St. George's Bay to the Lebanon Range

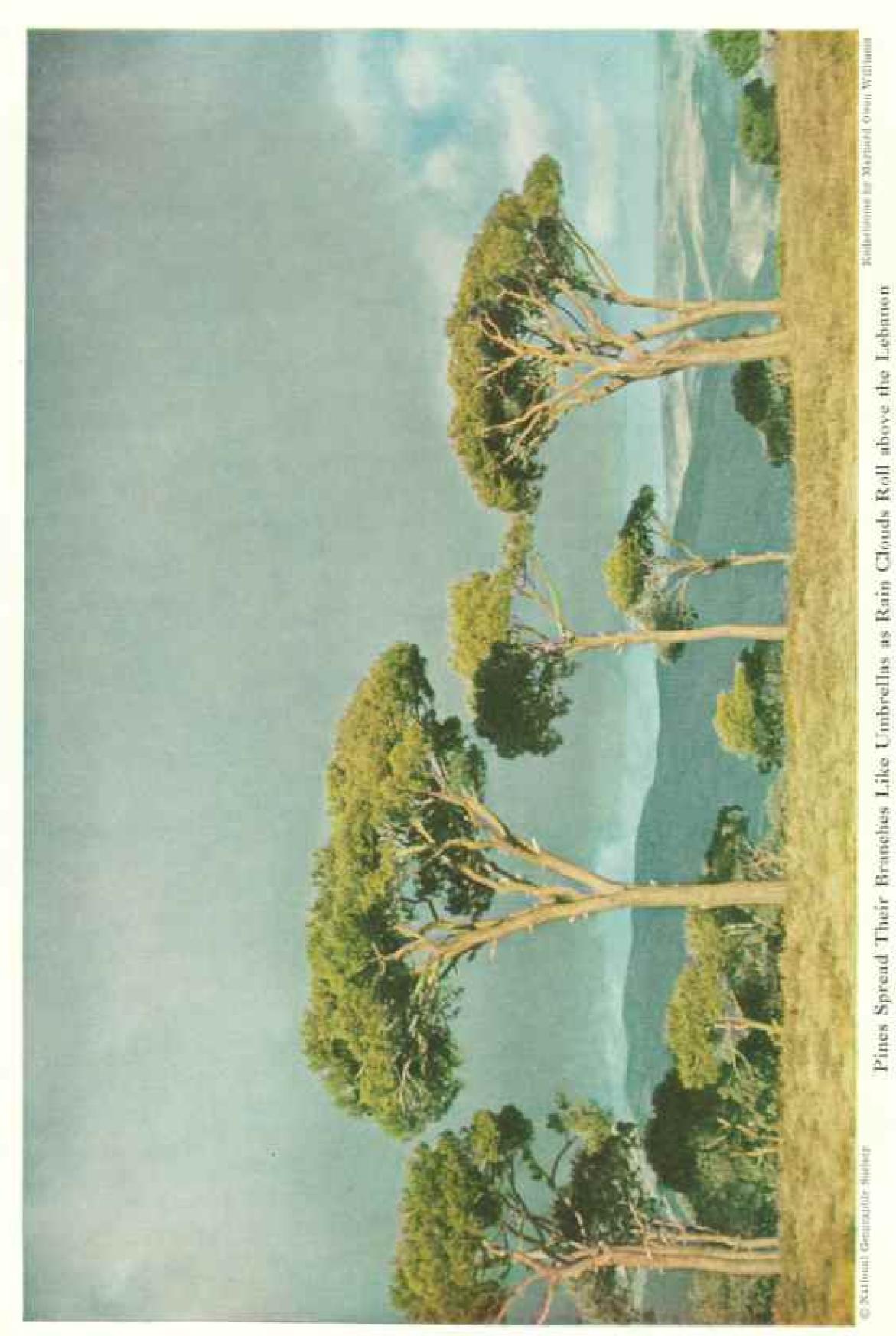
Here some 2,400 students, representing 38 nationalities, dwell in racial and religious tolerance. A.U.B. has been called a "perpetual peace conference in the interests of international good will." Classes are conducted in English and Arabic. Stars and weather are studied at the domed observatory.



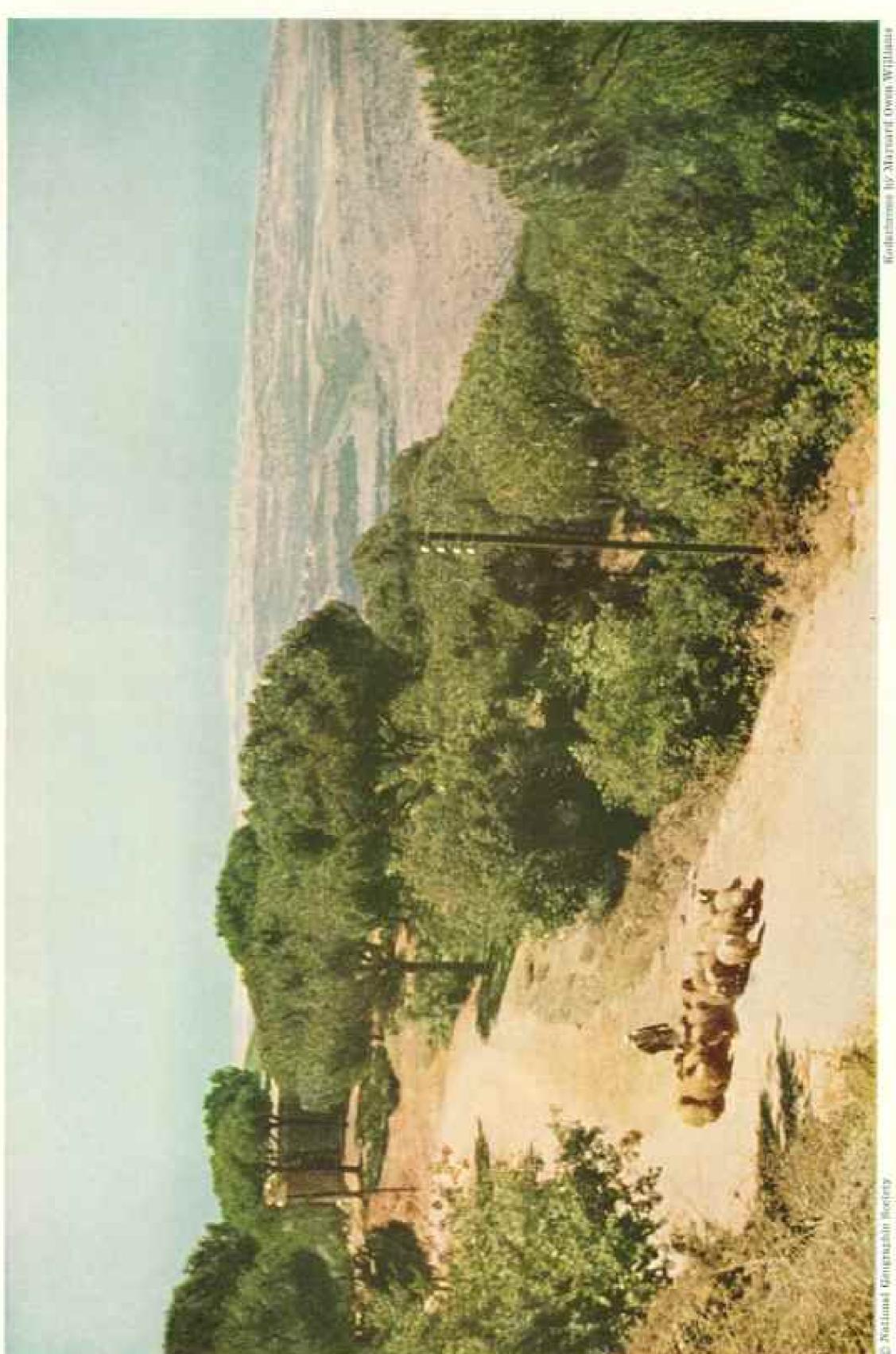
Kolarhums by Majmard Oson Williams

College Hall, Founded in 1871, Is the Oldest Building on A. U. B.'s Shady Campus

Trees conceal the lanes and benches where students stroll and prepare their lessons. Taught in the American way, Beirut graduates go forth into the Near East as leaders in government, business, medicine, and the arts. Distant snow-capped Mount Sannin (8,622 feet) is their inspiration.



Trees, the Bible's "glory of Lebanon." have been logged through the centuries. Now the Government encourages referentian. Lebanese Friends of the Trees parallel our own Save-the-Redwoods League. School children take part in plantings. Stone pines like these are preferred to slow-growing cedars,



Shepherd Drives His Flock along an Antiquated Carriage Road High above Beirut, a Lebanese

Superseding this highway, new motor roads lead from summer's sweltering capital to cool mountain resorts. Many business men make the trip daily, using private cars, taxis, and buses. By day they may swim in the warm Mediterranean, by night sleep under blankers. Beirut is a blur in the distance.

The National Geographic Magazine



Two Weary Farmers, Each with His Biblical Staff, Rest on a Mountain Road
Having sold produce in 'Ain Sofar, a Lebanese resort town near Beirut, they return home with money in their
pockets. To these hills, studded with summer resorts, come visitors from Syria, Egypt, Palestine, and Iraq.



C Nathoul Geographic Society

Modernmen by Migrard Over Williams

A Backload of Yarn, Fresh from the Dye Vats, Halts on Its Way to a Damascus Loom

Hand-loomed silks were prized as souvenies by American servicemen on leave in Damascus. Imported rayons like these provide still competition. Likewise, old-style hedges are giving way to barbed-wire fences.

become a region of fertility and wealth along the Khabur River.

Several of the Christian Assyrian girls whom I met in the hospital parlor had nursed men

wounded during the recent fighting.

Two of them wanted to visit friends in the still-restive city. While escorting them through crowded streets, I came upon a procession on its way to burn some French books (Color Plate X).

One volume refused to burn. I turned it over with my toe. It was a geography.

An intelligent young Syrian tried to explain.
"We know that burning books is barbaric
and does no good. But it gives us an emotional outlet."

How many books the world has known since

Jesus preached in Galilee!

Though it seemed unbelievable, these pretty Assyrian nurses, newly trained in Christian healing, could have understood the Sermon on the Mount as it left Jesus' lips nearly two thousand years ago. In The Four Gospels According to the Eastern Version, George M. Lamsa, an Assyrian, has given us an English translation from Aramaic, the still-living language which Jesus spoke.

In Aramaic, a dot above or below a letter changes its meaning. Under such circumstances, a flyspeck may embarrass a scholar

more than it would a housewife.

Grand Central of Desert Travel

As our RAF plane flew from Deir ez Zor to Palmyra, where men burrowed like moles to secure additional water, I wondered how the great Zenobia here amassed the jewels under whose intolerable weight, as Aurelian's lovely but defiant captive, she all but fainted in the streets of Rome,

At this Grand Central of desert travel, statues were erected to caravan leaders, captains of the only industry Palmyra knew—

desert trade.

So antediluvian does the homely dromedary appear that one might assume that caravans have crossed the Syrian Desert ever since the first thorn-chewers shuffled off the Ark. Actually, the camel has served in the Syrian Desert only 3,000 years.

Two-humped Bactrian camels arrived first, but their heavy camel's hair coats, excellent for a Mongolian winter, were too hot for the Syrian Desert. For centuries Arabian camels

have supplied the Syrian market.

In 1931, when the Citroën-Haardt Trans-Asiatic Expedition's tractors followed a trail first laid down by some nameless camel driver in the long ago, the squalid houses of presentday Palmyrenes were being cleared from the imposing Temple of the Sun.* Now their neatly aligned town has taken roots.

During the brief stay of our plane at the airport, we stretched our legs by following the sound of tom-toms to a native wedding dance, where the headcloths of desert men waved in dust clouds stirred by festive feet (Plate V).

In the Syrian capital city of Damascus, British, Irish, Scottish, French, Greek, and Jewish schools and hospitals have long flour-ished. The eastern end of this great Moslem city is dotted with churches and synagogues. Pagans and Christians once worshiped where Moslems in the Omayyad Mosque touch their foreheads to soft, lustrous prayer rugs as they how toward Mecca (page 733).

Damascus was an outpost for Byzantium, as it later was for Constantinople. In A. D. 635, when the Greeks were napping, the Arabs entered the city. Today's churches stand in the area which surrendered and where, for more than 1,300 years, Christian rights have been respected. Yet twice within twenty years, in 1925 and 1945, Moslem Damascus was bombarded by the overzealous troops of

a Christian power.

On the other hand, no serious student of antiquity can overlook the splendid new museums at Damascus and Beirut. No independent government can ignore the loving care with which their ancient treasures were preserved by the French. Gallic skill in road making, fruit culture, and industrial development are other monuments of the mandate period.

In one of the deservedly famous Damascene courtyards I photographed two Christian girls, whose charm is mildly reflected in Plates I and XI. At a friend's home I met a dozen or so women of the best Moslem families, dressed in Paris fashions, wearing no veils, unmistakably pretty, but safe from the intrusion of my lens.

In Damascus Old Ways Die Hard

Damascus Moslems are traditionally conservative. One who knows the patriarchal city's mosques and cabarets, its aggressive bazaardom, and its retiring private life must sympathize with those who cling to some of the old values (pages 750 and 751).

In an attempt to preserve the good, modernminded Damascenes have turned to their American friends for aid. What may become a Damascene sister of the American University of Beirut (Plates XII and XIII) has already

*See "Citroën Trans-Asiatic Expedition Reaches Kashmir," by Maynard Owen Williams, National Geographic Magazine, October, 1931.



A Lebanese Holiday Crowd Dines Out of Doors in Zahle, a Mountain Resort

These young people are familiar with the English language and American politics. "Give our best wishes to President Truman," said the young lady nearest the camera. "We love America" (page 763). As a lark, two girls pose with narghiles (water pipes).

begun classes at the request of the Syrian President.

As Lt. David Dodge and I rode down through the wheaty Hauran, grasshoppers, clogging the radiator of our jeep, gave our motor a fever. Then we came to Jebel ed Druz, where every blade of grain has to push aside a hunk of lava in order to live.

Jebel ed Druz, "Fortress of God"

What the liberty-loving Druses call the "fortress of God" has been a hide-out for centuries. Even the pipeline builders detoured around this volcanic waste.

Reports tell of paths so steep and narrow that no enemy could invade Jebel ed Druz. But the French overcame the Druse strategy—that the best defense is a lack of roads. Over an excellent highway we rolled into Es Suweida (Plate IX).

By chance our visit coincided with that of a British brigadier. At lunch I sat next to Sultan Pasha Atrash, whose heavy black mustache, imperial nose, and deeply lined forehead failed to make the intrepid leader of the Druse Rebellion of 1925-26 look as fierce as his reputation.

The whole luncheon was an exchange of parables, the best of which was told by the British general.

"Once upon a time a man's house was damaged by his neighbor. All summer long the man complained against the wickedness of the act. Then came the winter rains, which finished the ruin of his house."

The Druse leaders got the point at once, but laughed in admiration of this recognition that, however much assistance Syria receives, it is now on its own. Even in the midst of nationalist talk, the same recurrent phrases creep in—"America (or England) must help us."

As we returned for our jeep, scores of handsome Druse soldiers were gathered in the



An Acre of Threads Is Stretched to Bleach and Dry at an Aleppo Cotton Mill Everything is done by hand. One worker (crouching) unloads hobbins of yarn. These he will place on spindles of a creel (right). Threads, flowing through slots (center), are stretched on upright poles.

square. Having mutinied against their French officers, they were waiting for their pay (Plate VIII).

In this ancient land, so redolent of history, who can say what the future holds for Syria and the Lebanon, or by how many strange strands our destinies are united? But dear is the friendship they bear us.

"Best Wishes to President Truman"

Where Zahle, Lebanon, reaches toward Mount Sannin, outdoor eating places are the rendezvous for Society with a capital "S" and an amazingly proletarian appetite.

There I photographed a dinner party grouped on a shadowy balcony (page 762). Before I knew it I was sharing their food, my garrison cap stood at a jaunty angle on the permanent-waved tresses of a vivacious young Syrian, and I was "looking at the birdie" for a fellow lens addict.

We exchanged flowery Arabic phrases, discussed mutual friends, and—as is customary before parting-wished one another "peace."

Then one dark-eyed beauty had an inspiration.

"Please give our best wishes to President Truman," she said, and added, "We love America too much."

How often, in the old days, my students and I had wrestled with that pesky idiom! My reaction was automatic.

"Very much," I corrected.

But as I tramped back through Zahle, toward the conference town of Shtora, I toyed with the thought.

"I hope 'very much,' not 'too much,' is

right," I mused,

Our swift car, hurdling the Lebanon, swooped toward the sea. Silhouetted against the setting sun was my second home, the American University of Beirut, where it had once been given to me to voice Abe Lincoln's faith "that government of the people, by the people, for the people shall not perish from the earth."

Ali Goes to the Clinic

BY HERNDON AND MARY HUDSON

ALI EL HUSSEIN lives in the village of El Jadeed,* Syria, a single row of straggling mud huts on the east bank of the Euphrates, fifteen miles below Deir ez Zor. Having heard of the new American hospital in the city, he has decided to seek help there, for he has been sick for years.

Ali has no donkey or money to hire one, so be starts out afoot one morning before dawn with others from his village. Some of his fellow travelers are guiding and thumping diminutive donkeys which stagger under loads of wheat or corn; others carry inverted chickens, or a few eggs tied up in a ragful of straw.

Each woman carries a burden in her cloak, the two ends of which are drawn up over the shoulders and knotted across the forehead, forming a sack on her back. The burden usually consists of a baby, who often has to share its nest with a bushel of straw for sale. Some women, in addition, have black pots balanced on their beads; these are destined for the booths of the whiteners.

Everyone is barefoot, the men with loose cotton robes that reach the ankles, the women with dark-blue dresses that modestly cover their feet and trail in the dust.

There is little conversation as the party shuffles along in the heat. Toward midmorning they finally reach the new bridge. It offers free passage over the Euphrates, in happy contrast to the old and expensive ferry, with its cursing boatmen so ready to cuff the awkward Bedouin.

Lost Sheep

Just across the bridge is the hospital to which Ali is bound, and he soon finds his way to the clinic door. There are many people already in the waiting room, but it seems quiet. He salutes the company with a bold "Marhaba" (Hello). But when he settles down against the wall he realizes that everyone is listening to a voice reading.

The story is of one who had many sheep (ah, fortunate man!) and lost one (evil fortune, by Allah!). Of course he searched far for it until he found it in a wadi (gully), and, returning, he bade the rest of the village to rejoice with him (of course, for a sheep is worth a gold pound; more if a female and bearing young).

"And that," says the speaker, "is what God is like; His love seeks us out, though we stray far."

Presently someone beckons, and, gathering

his sheepskin cloak about him, Ali follows along to the examination room, whispering "B'ism'illah" (In the name of Allah) as he enters: "Marhaba," he says again, and the doctor replies, "Marhabtein" (Double hello) as he indicates a stool for him to sit on.

But sitting on anything higher than the floor is a new experience, and Ali is also at a loss to know what to do with the staff he carries. Finally he drops it with a crash on the floor as he gingerly lowers himself onto the stool.

The doctor asks such irrelevant questions as how many children he has, and the state of his wife's health. All replies that he has no children.

"No children? Not even girls?"

"Oh, I have a daughter."

"How old?"

"She is still nursing, and with her mother. Your pardon for mentioning these unworthy females in your presence. May God—His name be blest and exalted—lengthen your years."

"A Pain Here"

The question, "What is your trouble?"
evokes the reply, "That is what I have come
to you to discover." But when pressed for information Ali mutters, "God have mercy upon
your father," bunches his fingers to claim attention, and, emboldened, tells his story.

"May God lengthen your forearm; do not be angered with me if I speak of unworthy things! I have—far be it from you, O son of my brother—a pain here," and he solemnly lays his hand on his stomach.

His story finally ended, Ali obediently removes his headcloth and rope coil, dumps them in a corner with his 25-pound furwah (sheepskin cloak with the wool inside), and steps forth in a cotton "nightgown" once white but now covered by many a telltale spot left by the denizens of his sheepskin. His head—a stranger to soap and comb, with hair unkempt except where braided locks fall from his temples—is uncovered only because he realizes the extraordinary demands of the occasion.

Saying, "May he who looks upon your face see only good," and whispering a sibilant "Name of God," All mounts the examining table by first planting a leathery and dusty foot in the center of the white sheet. He next slips off a belt which carries a curved and sheathed knife and removes one or two

" Literally, new town.

leather-bound amulets hung around his neck. These may contain the cabalistic writing of some religious shelk, or perhaps a hair from the Prophet's beard.

The examination over, the doctor explains to Ali that he needs to take some medicine and be "hit with a needle" every day for ten days. Ali replies immediately, "But my dwelling is far and my time is short," and asks if he cannot cut the time in half by taking two injections a day. It is explained that the injection is a daily dose and that he cannot expect a cure in less than ten days.

"Still," the doctor says, "there is no compulsion here, and the responsibility for treatment is on your own neck. Improvement is not the same as cure. We may strike the tail of the serpent, but unless we smash the head also we have failed."

"Wallahi" (By Allah), the Bedouin replies, sententiously, "the butter " is in the bead."

He is reminded that "Patience is the key to the door of relief," and

he sighs, "Verily, patience is of God."

Then comes the question of medicine—a tablespoonful three times a day after meals.

"What!" exclaims the doctor, "No spoon?"

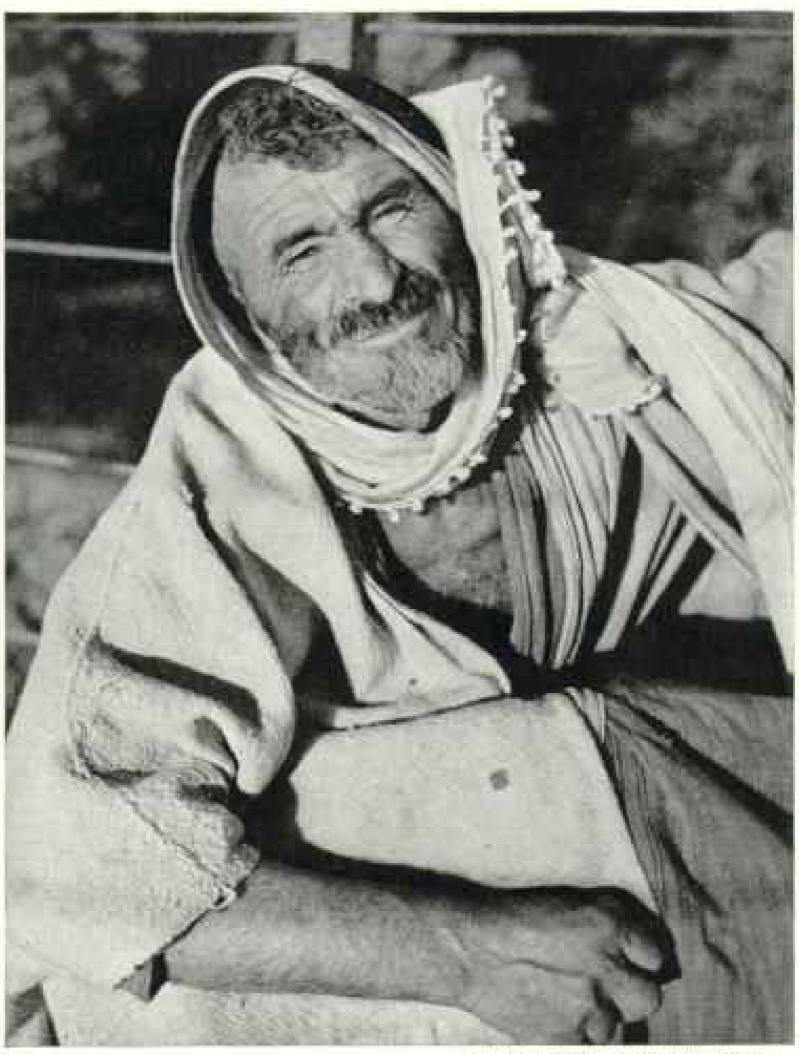
"O long of years, we Arabs are wild beasts.

We eat with our hands; we know not spoons."

So, with a glance at the size of his patient's hands, the doctor agrees that a palmful might do.

"And what shall I eat?" asks Ali, knowing full well that he has absolutely no choice in diet.

To please him the doctor begins, "Eggs, milk, vegetables, fruit." But these are not realities to Ali. He churns his milk for its salable butter; he sells his eggs, and raises



Staff Photographer Mercard Ower Williams

A Bedouin Goes to the American Clinic at Deir ez Zor

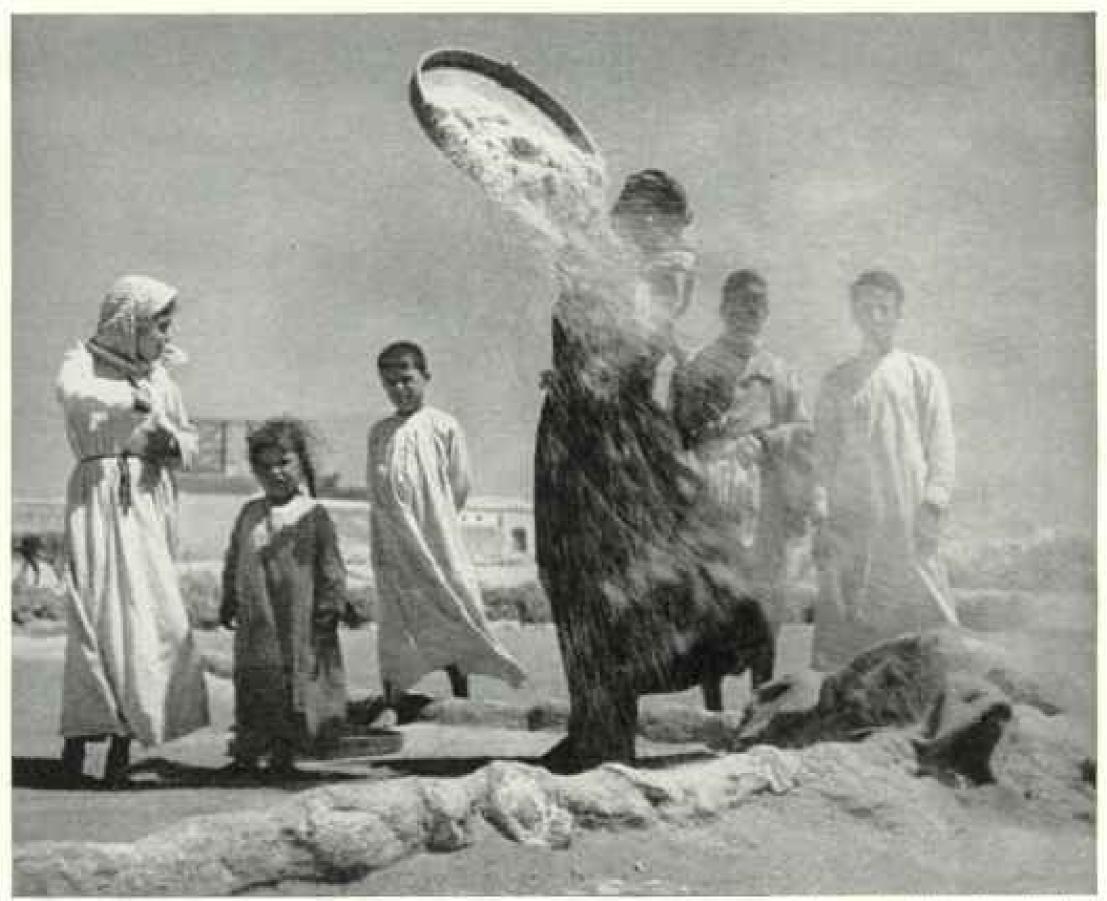
Grown old, he might be Ali el Hussein, the type of Arab for whom Dr. Herndon Hudson founded a hospital some 20 years ago. Since Ali has never gained anything without paying a price, he would despise free medicine as worthless. Therefore he bargains for what the doctor would be willing to give.

"God guard your offspring! We Arabs, we eat corn like our asses. Know you not that the food of the Bedouin is corn, baked in the fire, and that even our sheiks eat only pounded wheat?" So the matter is closed.

Now for the Bargaining

And now for the supreme moment, the allimportant question of cost. Ali knows he must bargain until the sweat runs down his forehead; nothing worth while has ever come his way without a price. To him free medicine means worthless medicine and scorn for

* The richest part, the essence.



find Phongraphic Manusci Own Walliams

Wind from the Desert Blows Chaff off the Wheat in a Field Outside Aleppo

A favorite place for drying grain is the surface of a main highway. Trucks detour around golden patches spread on a hot pavement.

the doctor who believes him such a dupe as to esteem it worth taking. The medicine must have a price, but—equally true—a reduced price.

At this point Ali rises from his stool and leans over in a confidential attitude. With one hand he makes a tentative gesture of supplication at the place where the doctor's beard should be, and in soft tones he says:

"Allah the all-powerful alone knows how poor I am; by your head and by my honor, I speak the truth. I came a long way this day because I heard it said that you in this place did works of healing as a gift to God. Should you heal me, I would praise you night and day; for I depend first upon God and next I put my trust in you! Maybe God will use you to work a work of healing in me. Perhaps God By Allah (and be He exalted), I have not wherewithal to pay you one small flea!"

So finally, not too hastily, and with a proper regard for convention, doctor and patient agree upon terms, and one who exists just above starvation level secures at infinitesimal cost the offices of the best drugs that modern medicine can supply.†

"God will give you healing," says the doctor, rising.

"The praise is to God," Ali replies, as he piously kisses the back of his hand and touches his forehead. "If God wills it," he adds by way of proviso, "and with your help, O protected of Allah."

"With the help of God," replies the doctor. Ali must have the last word.

"God is generous," he whispers.

* Smallest silver coin.

† "About two-thirds of the adult villagers suffer from infestation with hookworms and other parasites, about half have amoebic infection, and most of these seminomads have bejel, a form of syphilis innocently acquired in childhood," explains Dr. Hudson, who spent more than a decade on the Euphrates and established an up-to-date hospital in the remote desert city of Deir ez Zor (p. 752). "A small number of injections is sufficient to relieve bejel patients of their pain and render them noninfectious to others."

Paris Lives Again

By M. O. Williams

N a "Conférence de Paris" postage stamp, the peace dove is pictured with nervous wings. You will know, better than I do now, whether the timid bird has again escaped the outstretched hands of warweary man.

I can only testify that the crowded French capital, playing host to 800 delegates from 21 victorious nations with happiness and goodwill, provided a favorable atmosphere for that

fateful assembly,

This was no carefree thoughtlessness on the part of a city which escaped the horrors of war. It was, rather, the optimism which comes when, having survived the worst, one finds himself not only alive but facing the future with high hope.

Misery still hides in Paris: the misery of those who lived with proud independence and now must conceal their poverty; the misery of thin-legged children who can still smile but have no strength for boisterous play; the misery which becomes despair when money loses value and goods are scarce,

Said my chauffeur, in a talk which continued after the fare was paid and the meter stopped, "If America, the richest and bestgoverned country in the world, still has its

difficulties, how can we be blamed?"

Lovers Stroll and Diplomats Dispute

Behind the cautious debates in the Luxembourg Palace was the sheer delight of a beautiful city whose own citizens fought the oppressor and can again buy food and other necessities of life in reasonable measure.

One had only to leave the somber Hemicycle of the Senate, where the plenary sessions were held, and gaze down on the bright Gardens to see the hopeful dreams of diplomats already realized by the trustful youth of Paris.

Around the central basin little girls wheeled their love-worn dolls. Beside it small boys launched white-sailed boats. Close to the haughty statue of Marie de' Medici, Florentine queen of Henry IV, shouting children helped direct the familiar buffetings of the Punch and Judy show,

Beside a statue to Minerva I saw a softly smiling mother knitting baby clothes. Near a shady pool a loving couple, intent on each other's charms, ignored those of a marble

Galatea on the Medici's fountain.

Here, under the horse-chestnut trees, happiness is a tradition. Here Rousseau strode, declaiming bucolic verses to the trees. Here the children of many an American in Paris have jumped rope or rolled their softly tinkling hoops. This city-set garden of sweet leisure

is an easis of joy.

Under German occupation the Luxembourg Palace was headquarters for the hated Luftwaffe. During the Peace Conference hundreds of correspondents througed its halls, discussed world affairs, juggled transcripts, rattled typewriters, or dashed to specially installed phone booths to spread the unrestricted news.

Wearing a much-coveted blue button bearing a dove and olive branch above the words "Conférence de Paris, 1946," I stood in the Court of Honor as a bullet-proof Nervastella, formerly used by the President of France,

ground to a stop.

From it stepped a figure in gray with smiling but sad-shaped eyes and a jaunty cheerfulness. If any worries obsessed Secretary of State James F. Byrnes, one could not guess it from the snap of his hat brim or the zest of his stride.

Then two powerful Cadillacs and a big Packard rolled up. Not since Republican Guards paraded their white breeches and highcrested helmets beneath the red velvet and massed flags in the Rue de Vaugirard had so much splendor brightened this somber pile.

Accompanied by natty officers of the Red Army was a spectacled statesman who seemed to me so like Teddy Roosevelt that I listened —in vain—for a wide-toothed "Dee-lighted!" In capitalistic comfort, Vyacheslav Mikhailovich Molotov, chief of the Soviet delegation, returned to the fray.

To the right, two impeccable lines of police funneled distinguished delegates and journalists toward the Grand Staircase (pp. 768-9).

In Marie de' Medici's former bedroom, charming secretaries welcomed the visitor, provided information, dealt out cigarettes, planned week ends at Deauville or Cannes, or reserved soft club chairs for the current revue.

Hips, But No Hooray

Farther on, a rich parlor opened on the ostentatious Conference Hall occupied by the Committee on Procedure, pondering the rules under which this fateful game was played. Its ornately gilded walls were covered with Gobe-In tapestries picturing mythological beauties in a simplicity of costume seldom seen in public, but never out of style.

Said one irreverent journalist, "With all those hips, what this Conference needs is a

rousing 'Hooray'!"



Staff Photographer Maynard Owen Williams

Paris Gendarmes Funnel Peacemakers into Luxembourg Palace

Erected in the 17th century for Marie de' Medici in a style reminiscent of her native Florence, the palace is now the seat of the French Senate. Here delegates to the Peace Conference arrive at the Court of Honor,

Facing a helmeted bust of the French Republic, just above a clock to whose "Time flies" warning scant attention was paid, stood the seat of the committee president. On both sides of him stretched wide tables covered with green lawns of blotting paper and doodled scratch pads.

Huge Globe Dwarfed Clustered Heads

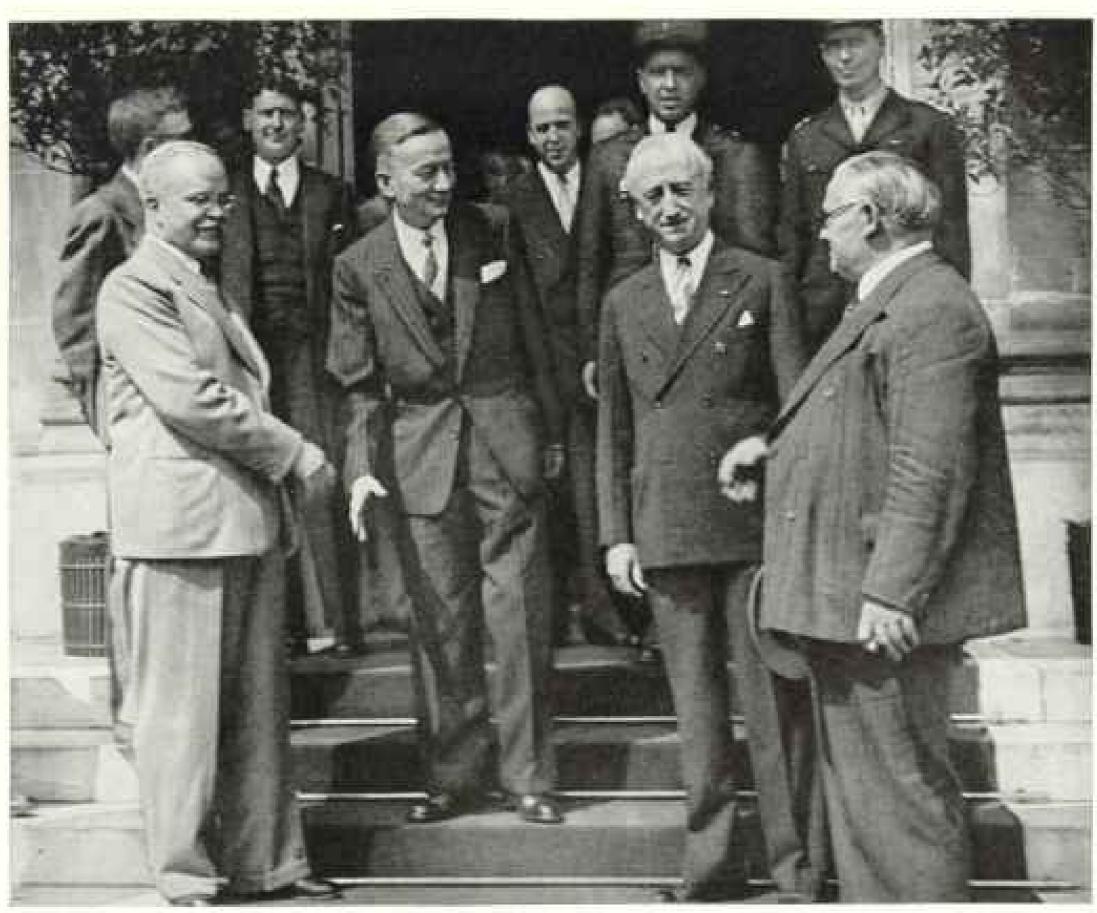
In a niche to the right of the monumental fireplace, a symbolical panel showed the castoff shields and bucklers of war. More significant was the ultramodern gadget before them,
like a David's sling with a world-wide range.
Through this radio center the results of the
Conference, its aspirations and excuses, twice
translated, were shouted to the world, while
men everywhere listened for some inspired
burst of generosity, some sincere step toward
lasting peace.

Near a window overlooking the Court of Honor stood a huge globe, dwarfing the clustered heads. "If diplomats were football players, while discussing the world's fate they would keep their eyes on the ball," joked a photographer.

In the extensive addition made when queen's home became parliamentary palace is the Hemicycle, where the highly international plenary session occupied the 514 seats of French Senators—without much visual difference in most cases (page 775).

From the first, one henna-bearded Moslem patriarch in green mantle and white turban stole the show, not only from the conventionally dressed Indians and Chinese but from his fellow Ethiopians, trained at Beirut, Oxford, and the Sorbonne,

Along with a graceful Parsi lady in a gorgeous sari and the exotic Sir Khizar Hayat Khan Tiwana, Premier of the Punjab, wearing a chanticleer-combed headdress that was more millinery than turban, Ethiopia's red-bearded Sheik Omar al Azhari added a touch of



AP from Press Aur's.

"It's a Date"-Arranged by the Big Four

Smiling as they left the Foreign Ministry in Paris were Soviet Foreign Minister V. M. Molotov, French President and Foreign Minister Georges Bidault, United States Secretary of State James F. Byrnes, and British Foreign Minister Ernest Bevin. They had just agreed upon the opening date of the Peace Conference.

Oriental pageantry to this solemn assembly (page 771).

When President Georges Bidault entered, two floodlights in the gallery highlighted a battery of microphones which made this crowded hall the sounding board of conference action and invited the editorial reaction of world opinion.

Meanwhile, movie cameras recorded the tumbled hair of Australia's Herbert V. Evatt, the politely applauding hands of Molotov, the scholarly dome of Czechoslovakia's Jan G. Masaryk, the quick alertness of Byrnes. Thus could the world's people see and hear their statesmen as they argued their way toward peace.

Sack Suit and Safety Razor

Here were no such silk pants and shapely calves as graced Vienna in 1815; no such bemedaled uniforms as in the days of Bismarck and Disraeli; fewer beards and frock coats than were reflected in the misty mirrors of Versailles.

To the idle eye the Paris Conference marked the triumph of sack suit and safety razor over stuffed shirt and whiskers, the common man over the hero.

To the imagination it represented the triumph of the radio over the intriguing whisper, of the world press over secret covenants, secretly arrived at.

In the library where Senator Victor Hugo studied and Anatole France served as a junior librarian, I read of Marie de' Medici, who built these halls in the days when Pilgrims were seeking a haven for their hungry hearts near Plymouth Rock.

Said the queen's biographer, Thiroux d'Arconville: "If Marie had only had more sweet tolerance . . ." A paraphrase of that wistful sentence still haunted this historic house.

In hotels and restaurants the service was excellent and the familiar button-light blue



Staff Photographer Maynard Owen Williams

Statues and Children Frame the Eiffel Tower and Its Watery Image

When the Germans occupied Paris, they housed a beacon light in the Tower to guide their night planes. The victorious United States Army requisitioned this landmark as a radar transmission point. Last March the Americans gave it back to the French. Completed in 1889 for the Universal Exhibition, the 984-foot structure was the world's tallest until 1929, when New York City erected the Chrysler and Empire State Buildings. Statues stand beside the Museum of French Monuments at the Place du Trocadéro.

for correspondents and dark blue for delegates —won an added welcome from Montmartre to the Racing Club, in the Bois de Boulogne.

Far from the ballets of Leningrad and Moscow, the numerous Russians were the best customers for the Folies.

In the city of Racine and Molière, John Steinbeck's Of Mice and Men was a reigning favorite.

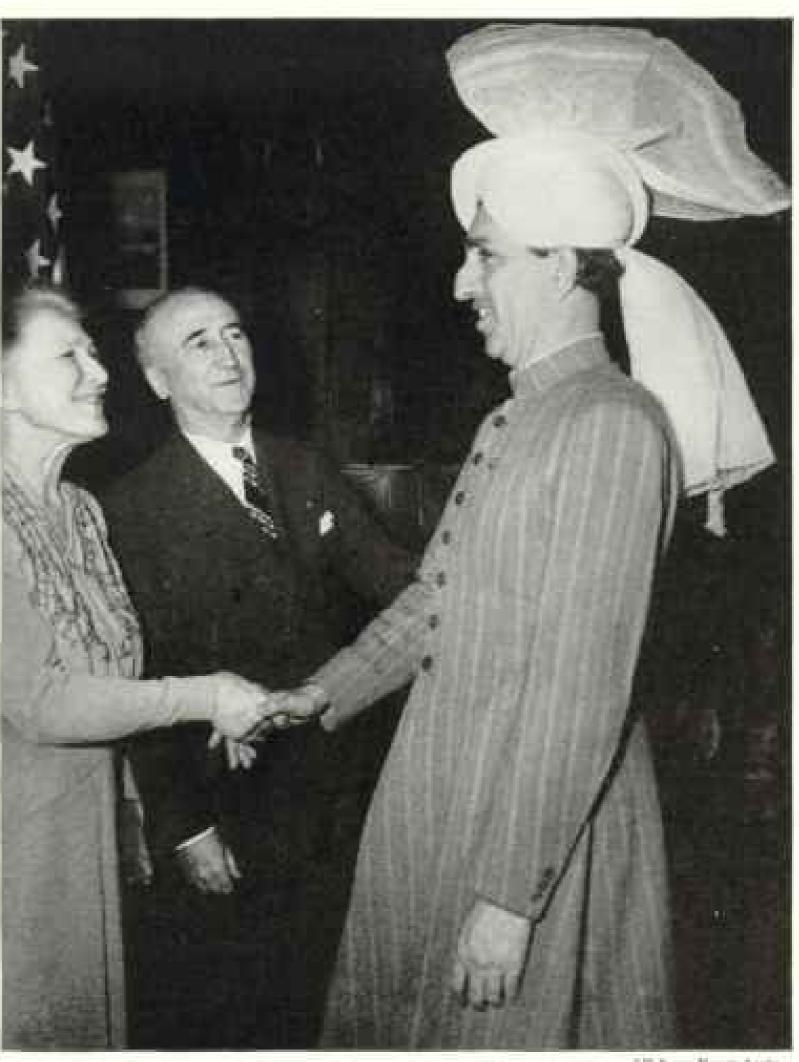
The witty satire of the chansonniers and variety theatres is as sharp as ever. Now that the Commissariat of Tourism is spreading the red carpet of official welcome to visitors from overseas, one sketch showed a Frenchman, traveling with his wife and daughter, who spoke Spanish, Italian, Russian, and English in an attempt to convince his host that he was from Honduras and hence entitled to more of a welcome than a Frenchman would get.

In another skit, Liberty was pictured as a sleeping beauty wooed by three Prince Charmings—the Left, the Center, and the Right.

"When you agree with one another, I'll wake up," she said, going back to sleep—or to read accounts of Peace Conference and Constituent Assembly.

It was a joy to stride the boulevards again, to loaf along the Seine and thumb dog-cared volumes in which some unknown had read of love or far journeys, to study bright prints of Audubon or faded sketches of gallantry or humor in days gone by (page 779).

High on the Hill of Martyrs, Sacré Cœur posed its whiteness against the night (page 772). At the head of the Champs Elysées, beyond Rameses' ancient obelisk in the Place de la Concorde, the Arch blazoned its added triumph.



AP from Proof Ass'p.

America Shakes Hands with the Punjab in Paris

James F. Byrnes, the United States Secretary of State, and Mrs. Byrnes greet Sir Khizar Hayat Khan Tiwana, Prime Minister of the Indian province. The occasion was a reception in the home of the United States Ambassador to France during the Paris Peace Conference.

> In the generous glare of banked projectors, rose windows spread their beauty web, snarling gargoyles crouched above the inky Seine, and the best-dressed audience Paris had seen in years poured forth from the Opéra.

Bountiful Crops Help Relieve Hunger

Among the populace hope and joy mounted as new potatoes crowded the stands, and cherries, wild strawberries, and red raspberries glowed against great mounds of crisp lettuce or succulent string beans from the agricultural districts.

Humble but juicy peaches took their place beside cotton-coddled aristocrats from Fréjus,



Diack Star

Paris Bursts with Patriotism on the Glorious 14th of July

This year marked the 157th anniversary of the destruction of the fortress-prison, the Bastille, initiating the French Revolution. With dancing in the streets, all France celebrated Bastille Day. At night fireworks flashed like star shells over Paris. Here the white basilica of Sacré Cœur reflects the spirit of liberty.

on the Riviera. Small golden melons made hungry folk lick their chops like a Walt Disney wolf.

Like exciting war news from a battle against the four grim Horsemen, "Good Crops of Grain and Wine" was the happy headline at harvest time.

On my way to Paris I had asked myself, "Have lack of food and sadness of heart sapped her amazing vitality?"

Those who met Yvon Petra on the tennis courts of Wimbledon did not find it so. Those whom Jean Sephariades outrowed in the Diamond Sculls on the Thames will not admit French decadence. But in the working quarters of Belleville and those green gardens which bang, like a vast train, from the nudeness of Sacré Cœur, I saw thin-legged little girls sitting still in one place for too long a time. Even in gayhearted Paris, malnutrition, tuberculosis, and the deprivations of war have left their mark.

When I first arrived, surprised that I could fare so well, I ate scanty meals and left a portion of my rationed bread. Then I went on a wide circuit of the Normandy landing beaches, the blasted ports of Calais, Cherbourg, Brest, and Lorient, the ruined clutter of Caen, Falaise, and La Haye du Puits.

In all those ravaged areas I ate far better



GI, in a Barrel of Embarrassment, Waits for a Retread on His Pants

During leave in Paris this American ripped his only pair of trousers. A French volunteer seamstress stitched them at one of the American Red Cross clubs. The barrel, kept for just such emergencies, was used next by the customer at the right,

than I had in Paris. Gradually the amazing production of French fields and herds reassured me, and fat grain shocks made me feel that I could satisfy my hunger without depriving others of food. I even got accustomed to seeing folk with fat purses eat lobster at

\$2 a pound alive,

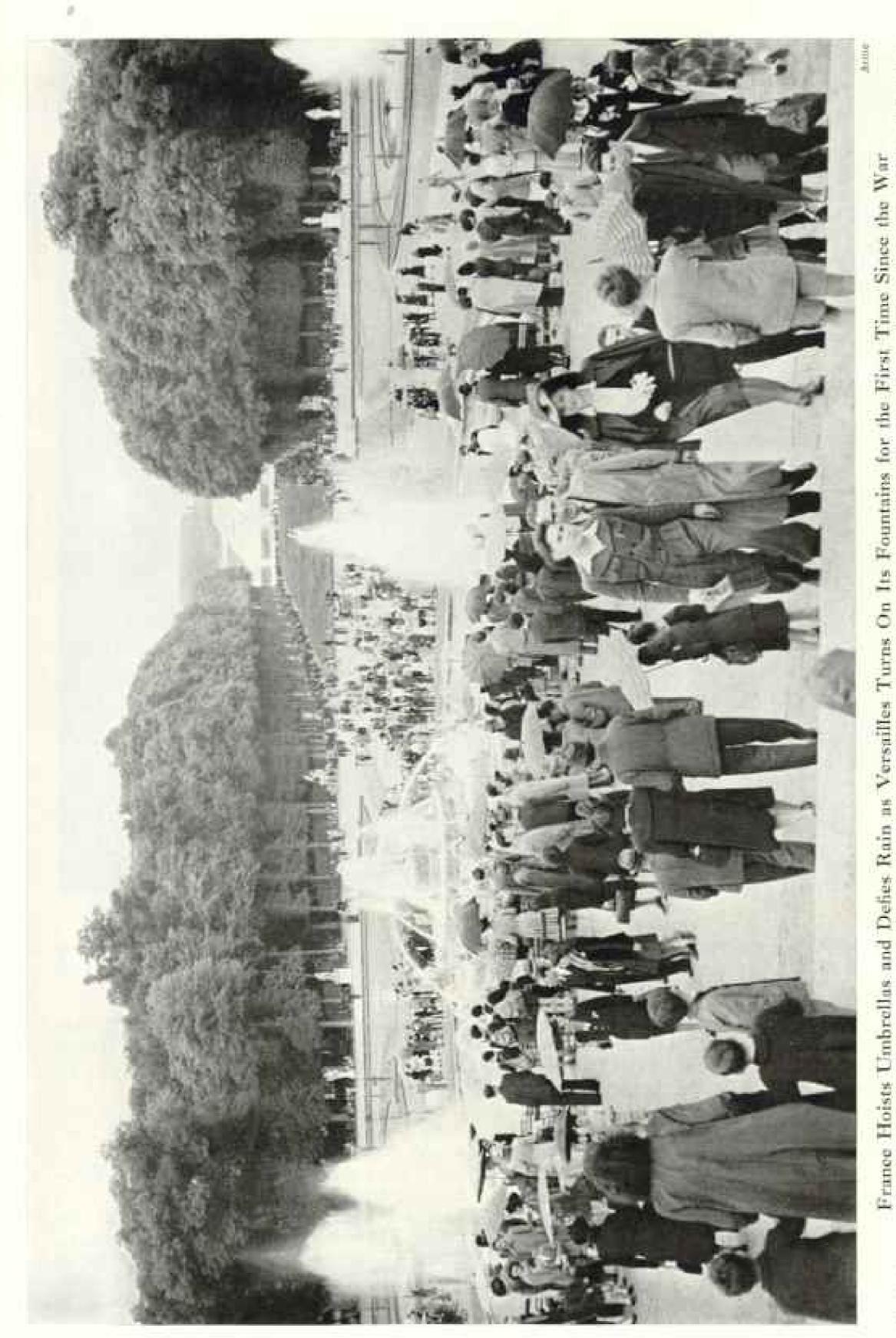
In Rouen, near the spot where Jeanne d'Arc was burned at the stake, the profusion of vegetables, fruits, and flowers was astonishing, The thrifty, faithful peasants of France had set such a table for Paris as it had not known for seven long years.

No one could predict that such cheering conditions would prevail when the summer's

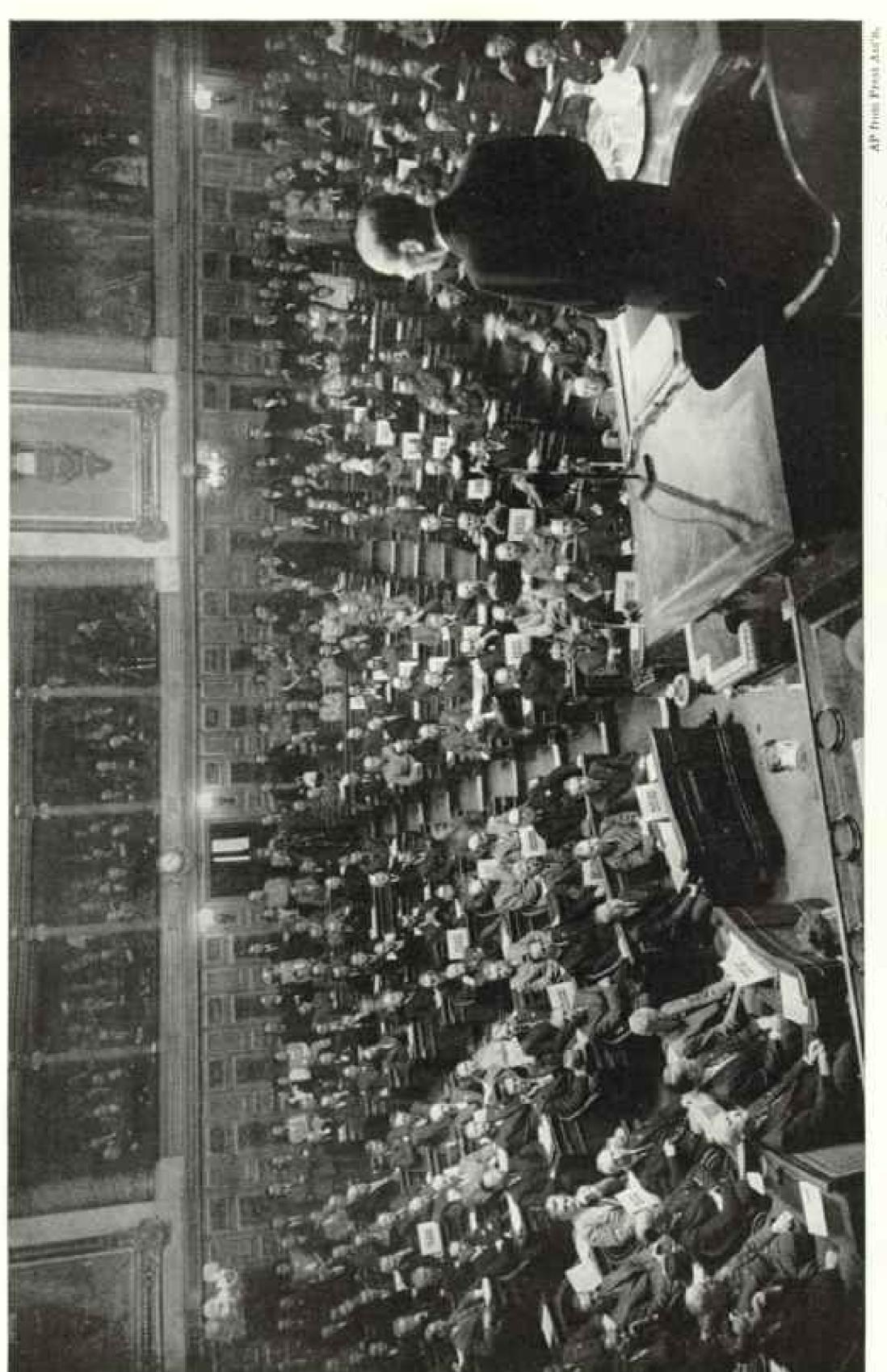
yield was eaten. But meantime, despite postal strikes, fights for wage increases, and rioting against black marketeers, it was good to be alive.

Hundreds of delegates and reporters, well housed and fed, carried on their work surrounded by what the French call joy of living. After three cruel wars in 75 years, Paris has lost neither courage nor zest.

In the gold and white grand salon of the Little Luxembourg, which Marie gave to Richelieu and where Napoleon lived for a while with Josephine, we favored ones fared far better than most Parisians do-hors d'oeuvres, roast veal with mashed peas, ice



Springtime crowds gather for the bour-long show in the gardens of Louis XIV's magnificent Palace of Versailles. Broad walks, lined with clipped trees and marble statues, lead among ponds and essendes to wide steps and symmetrical lawns. These gardens and fountains were ind out in the 17th century.



President of France, Welcomes 800 Peacemakers to the Paris Conference In Luxembourg Palace Georges Bidault,

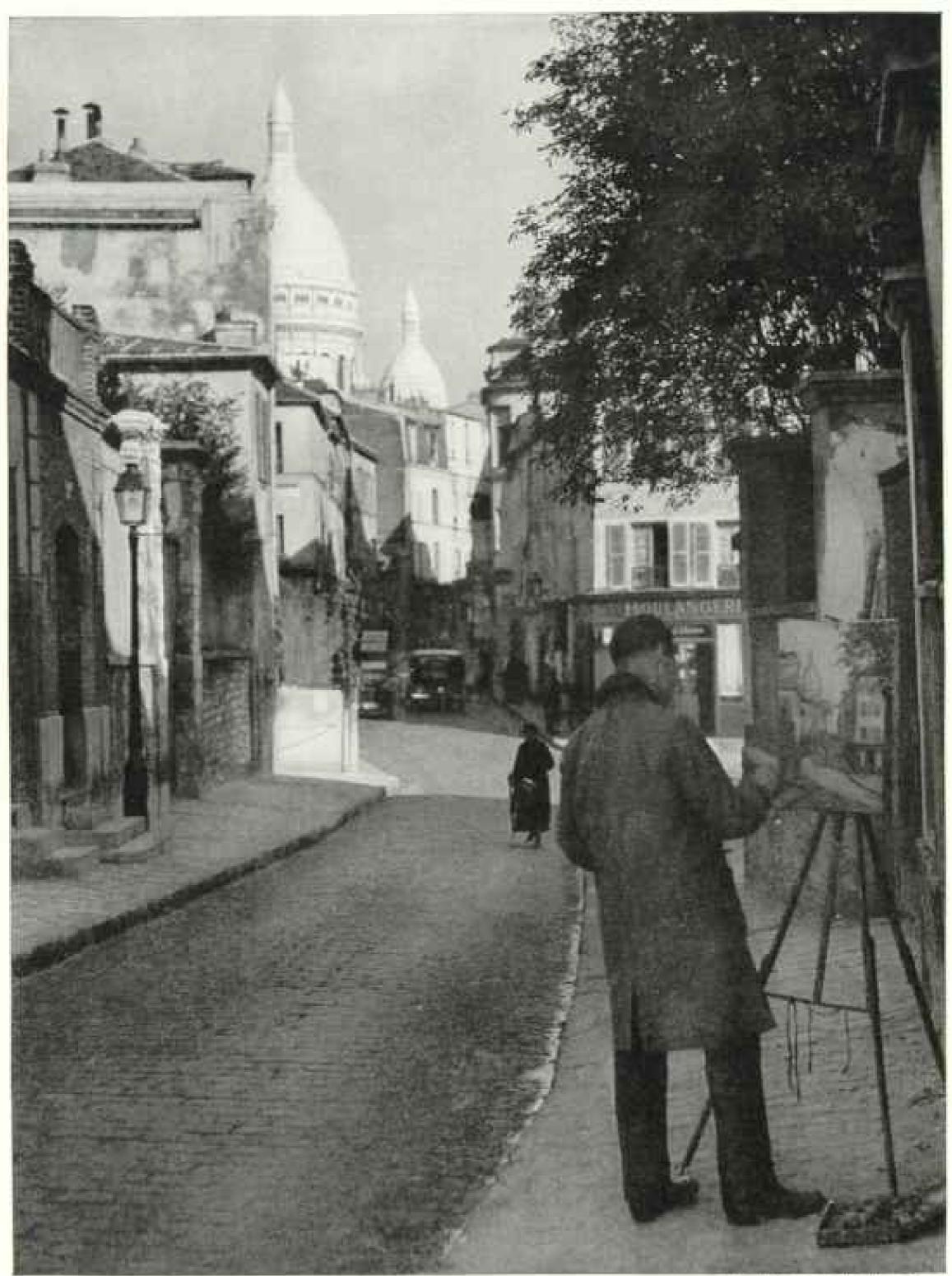
Delegations were scated in alphabetical order, Americans occupying the front row. Left to right are: James F. Byrnes, Secretary of State 1 and head of American Delegation; Jefferson Caffery, Ambassador to France; W. L. Clayton, Undersecretary of State; Benjamin V. Cohen, Counselor; Walter Bedell Smith, Ambassador to Great Britain, now Secretary of Commerce; James C. Dunn, Ambassador to Italy; H. F. Marthews; and Adm. R. L. Conelly, USN.



From Protects Lenis

Montparnasse Laughs Again; Children Play in Its Canyon Streets

These youngsters are amused at an old woman's jest that the Germans will get them if they don't watch out. In many streets and alleys of Paris the author saw spindly-legged children on whom the privations of war had left their mark (page 772). Montparnasse vies with Montmartre as a rendezvous for artists.



Staff Photographer W. Hobert Moore

Lofty Basilica, Humble Bakery, and Winding Street Inspire an Artist in Montmartre

The Hill of Martyrs dominates Paris, rising 331 feet above the Scine. Many night clubs huddle in this section, long famed for its artists. The gleaming basilica of Sacré Cœur, begun several years after the Franco-Prussian War of 1870-71, was completed shortly before World War I as a national votive offering (page 772).



Siad Photographer Mariard Ower Williams

Now Let's See-Just Where Am 12

This man studies one of hundreds of maps at entrances to Paris's Métro system. During the war the subway served as an air-raid shelter; some stations had air filters as protection against poison gas. Métro maps helped thousands of American soldiers find their way around Paris.

cream or fruit, a glass of white or red wine; even coffee, said to be half pure bean. (Oldtimers will take this last with more than a grain of chicory.)

The Conference button also admitted one to special dining rooms at world-famous restaurants: Prunier, Ecu de France, Drouant, Café de la Paix, Carton, Bernard, and the Rôtisserie Périgourdine.

Good Food Comes High

To get a truer picture of how Parisians fare, I went to the workers' quarters and ate scant luncheons of watery soup and bony pigs' feet or lined up for a seat in a popular restaurant where the tripe was tough but the sauce delicious.

Wealthier citizens who are not averse to

patronizing the black market can eat snails from their buttery shells or enjoy a tender steak. With red raspberries smothered in cream, a bottle of wine, black coffee, and with a tip that encourages a second welcome, such a selfish meal may cost 1,000 francs and arouses the resentment of hungry folk who cannot afford it.

How much is a thousand francs?

To an old aristocrat, it may have once meant nearly \$200—enough for a Prince Danilo tour with friends to the Bal Bullier and the scented froufrou of Maxim's in the naughty nineties.

At the moment, 1,000 francs (about \$8.50) represents three or four days' wages for a working man or a week of integrity for a minor government clerk.



Staff Photographer Mayneed Owen Williams

Bookstalls along the Seine Produce a Currier & Ives Effect

A primitive map engages a passer-by. Into his head a toucan appears to be burying its beak. At his elbow hangs a plan of the Paris of centuries ago.

Today, money seeks strange levels.

A distinguished friend of mine, rather than lend his talents to collaboration with the Germans, retired to a farm and learned how to plow with oxen by reading a book.

"They call an ox dumb. It is not so. My oxen knew at once that I was dumber than they and I had to use a heavy goad, rather than intelligence, to make them toil as hard as I."

Coming back to a villa sadly in need of repairs, he asked a humble neighbor to share food and expenses.

For a time he lived very well. Then came the bills.

"Can't you serve us something a bit more simple?" he asked.

"Listen, Monsieur," replied the rustic, "it is very hard to prepare two different menus. If you want me to do your cooking, you and Madame will have to eat the same as I do myself."

Paris Basks in Liberty's Light

Each day, when I went out into this fair city where the Victory of Samothrace and the Venus de Milo have regained their composure after being hoisted about like bellowing cattle, I tried not to take for granted its beauty, gaiety, and charm or ignore the bravery behind it all.

On the first Sunday after my return, such happiness seemed like a sweet dream after a nightmare of dread. Liberty was no longer a tiny speck of sky seen from a dark dungeon. It almost blinded with its glad light.

I sat on one of the little islands in the Bois, glorying in the beauty of the summer day



Joe Papen from Black Star

From a Sidewalk Cafe on the Champs Elysées You May Watch Paris on Parade

Once a residential thoroughfare, the avenue now leads promenaders past shops, banks, newspaper offices, cinemas, and cafes. Beneath the stately Arc de Triomphe an eternal flame burns over the temb of France's Unknown Soldier (p. 782). This cafe, one of many on the Champs Elysées, modestly calls itself "The Select."



Thorita from Pin

Check Your Wheel-and Your Credentials-at a Bicycle Garage

When buses were scarce in Paris, bicycles and motorcycles provided the principal means of transportation. Here a garage attendant notes a cyclist's credentials as a precaution against theft. Many hikes are "taken by mistake." A girl cyclist may have had a part in saving Paris from German destruction (page 789).

After a cool spring and an unpleasantly warm Fourth of July, the weather was perfect. White clouds rode in a sky worthy of Mediterranean lands.

Every rowboat was affoat and every greenframed vista alive with bright figures. Girls pulled at the oars, with sleeves rolled high on their brown arms. Un-nautical citizens splashed and strained.

Bicycles by the hundred glided along to the thrust of bare legs. On an astonishing number, mere infants sat on rumble seats and clung like koala bears to their mothers or rode with their proud papas.

As I watched, a gendarme patiently, almost reluctantly, shooed some scores of quiet folk off the grassy slopes beside the lake. Another, finding hokeypokey wagons in the Bois, sent the peddlers on their way with a friendly slap on their skirts.

Day after day I found myself glorying in happy people rather than in the precious old stones of Mansart, Gabriel, and Goujon. More thrilling than the cloud sweep seen from St. Cloud, the sun dapple on St. Germain's velvet lawns, or mirrored bridges in the Seine is the laughter of children in the parks.

Said a news dealer: "Le Rire [Laughter]

and Le Sourire [Smile] have escaped from the kiosk to join La Vie Parisienne on the boulevards."

Indeed, Paris is Paris again and the Parisiennes seem on the surface as gay as ever.

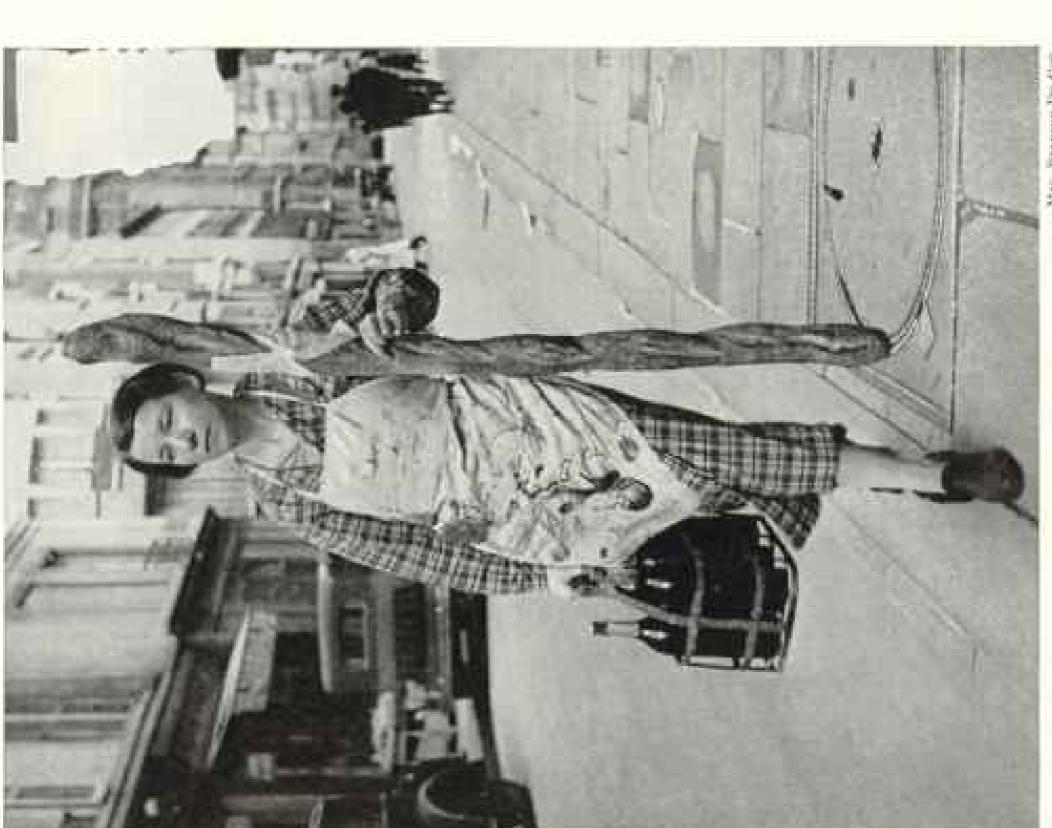
On their thick-soled sandals of wood, cork, or raffia, the girls stand on tiptoe and pile their hair high in an effort to look like queens. In long gowns they would, for they carry themselves well. But in their short skirts, bare legs, and simple blouses they look like vacationing schoolgirls, too unsophisticated to model fashion's robes or use perfume with scandalous names.

Perfumes, indeed! Like motorcars, perfumes are for export and most of the display bottles are full of make-believe.

Fabric and line still respond to the magic French touch. Slick fashion magazines are alluringly illustrated with such sketches as make feminine hearts jump for joy. But I saw few such evening gowns as carry the fame of France to the four corners of the world.

Those once-far corners were never nearer. Between the Seine and the Invalides, a new air terminal has all the freshness of the inviting sky. From the Gare des Invalides prosy little trains used to chug out to Versailles. Now buses whish one off to Orly or

as Snow Whitens Its Roofs. Are do Triomphe Is the Hub of 12 Avenues Smoke Darkens the City of Light Even



Mrs. Prantom Do Con

Jug of Wine, a Loaf of Bread . . .

Far from Omar's wilderness, this Parislenne hustles to the small cafe where she works. Her fingers ignore the dainty wrapper on the giant loaf. Easier to carry than several shorter loaves, French bread for restaurants and large families comes by the yard—or longer.



Wide World from Press Ass'z.

Bal des Arts-a Dizzy, Comic, Nightlong Fronzy

Last June, Paris art students revived their war-suspended annual ball. Many, masquerading as ancient warriors, painted balf-naked bodies thalk white, shoe-polish black, green, or purple. Brandishing spears, they stopped buses. Each pretty girl they tried to capture as a "bostage" for their party.

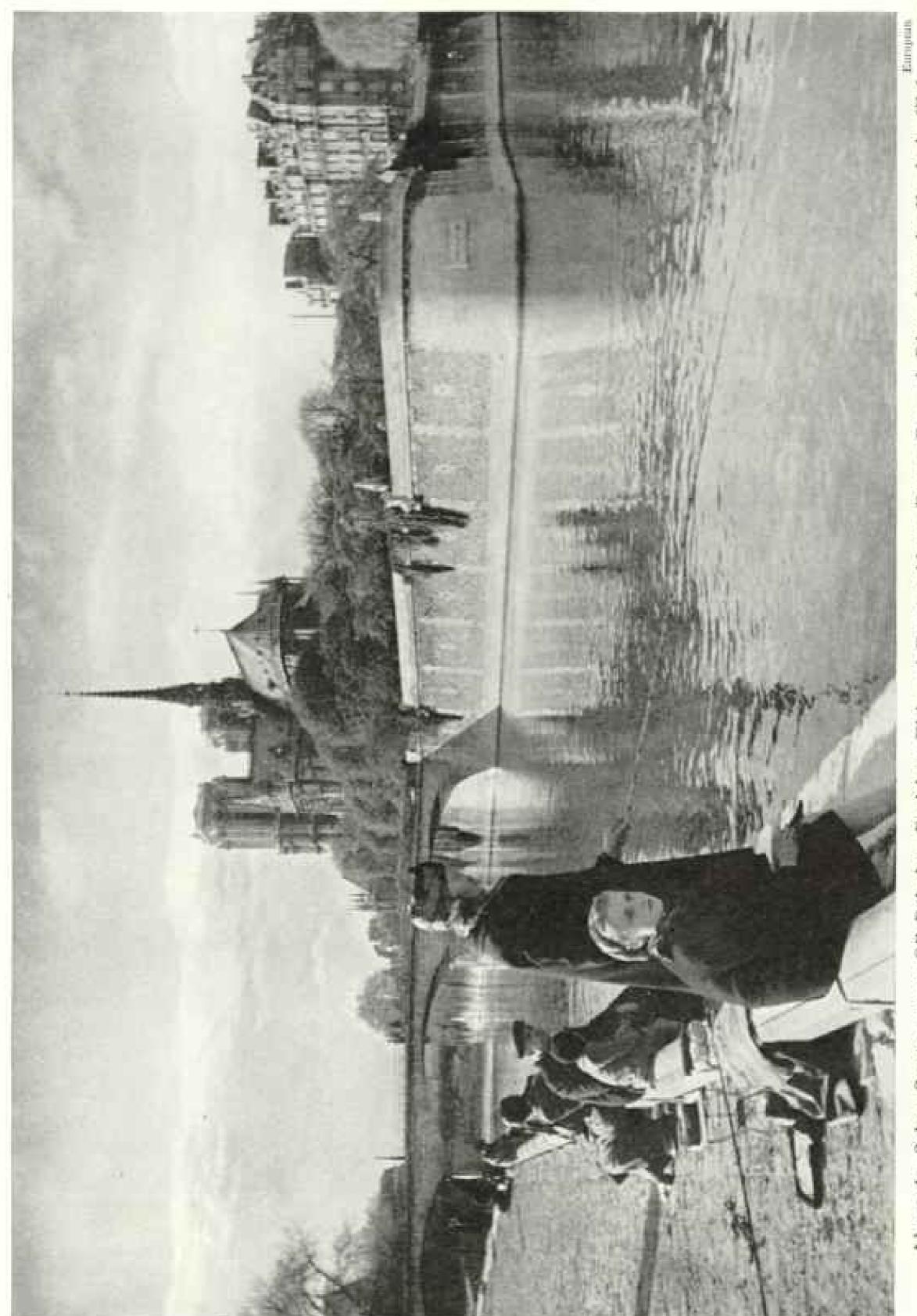


Jos Plane from Bluck flux

Monsieur Jaimes, You're Wanted on the Phone!

A small blackboard, carried among the tables of a sidewalk cafe, notifies the customer, "Ten to one," he says as he lays aside his biere, "it's only the wife."

Baby may admire but not cut this shop-window display. Chocolate is unavailable and eggs are scarce. For Easter, therefore, cardboard copies are made.



Parisians Fish and Forget; Notre Dame, Beyond, Rises from the Ile de la Cité Along the Seine, Serene as an Oil Painting,



Burton Holman from Galloway

Paris, Cradled on a River Island, Grew Up on Both Banks of the Seine

He de la Cité (foreground), once a Gallic stronghold with a natural moat, later the Paris of the Romans and Franks, is the oldest section of the city. Notre Dame Cathedral, begun in 1163, raises its spire 315 feet above the island. Behind the spire lies the Be St. Louis, smaller than the Cité, with which it is connected by a bridge. Barges at the right discharge cargoes hauled over France's vast network of canals and rivers. Numerous bridges link the Left Bank (right) and the Right Bank. In the background spreads industrial Paris.



Staff Photographer Majourd Green Williams

Artists and Kibitzers: an Outdoor Scene for Which Paris Is Renowned

A pigeon-toed lad looks on solemnly; an American naval officer betrays curiosity; a schoolboy gapes with bead thrust forward. They stand in the Tulleries Gardens, a popular promenade on the right bank of the Seine. The Tulleries were laid out in 1664 during the reign of Louis XIV.

Le Bourget for planes to Saigon or New York, Ankara or Rio, Stockholm or Capetown.

What a challenge the plane makes to mediocrity! Let the morning egg seem stale or a waiter indifferent and a dozen other cities promise hospitality before night. But, standing there before the exciting flight schedules and gay frescoes, picturing exotic beauty in Indochina or the Cameroons, I was content to be in Parise

When the City Fought for Freedom

Humble little ceremonies commemorated the days when Paris fought at the barricades. While the Constituent Assembly formulated a new Constitution for the Fourth Republic, President Bidault unveiled a plaque at 41 Rue de Bellechasse, where the appeal for national insurrection was made in the summer of 1944.

Meanwhile, above the Prefecture of Police floated the very flag that first waved defiance at the Nazi foc. One of the welcoming committee at the Paris Conference was Mme, Bruninghausen de Harven, whose daughter was about to leave for study in the United States.

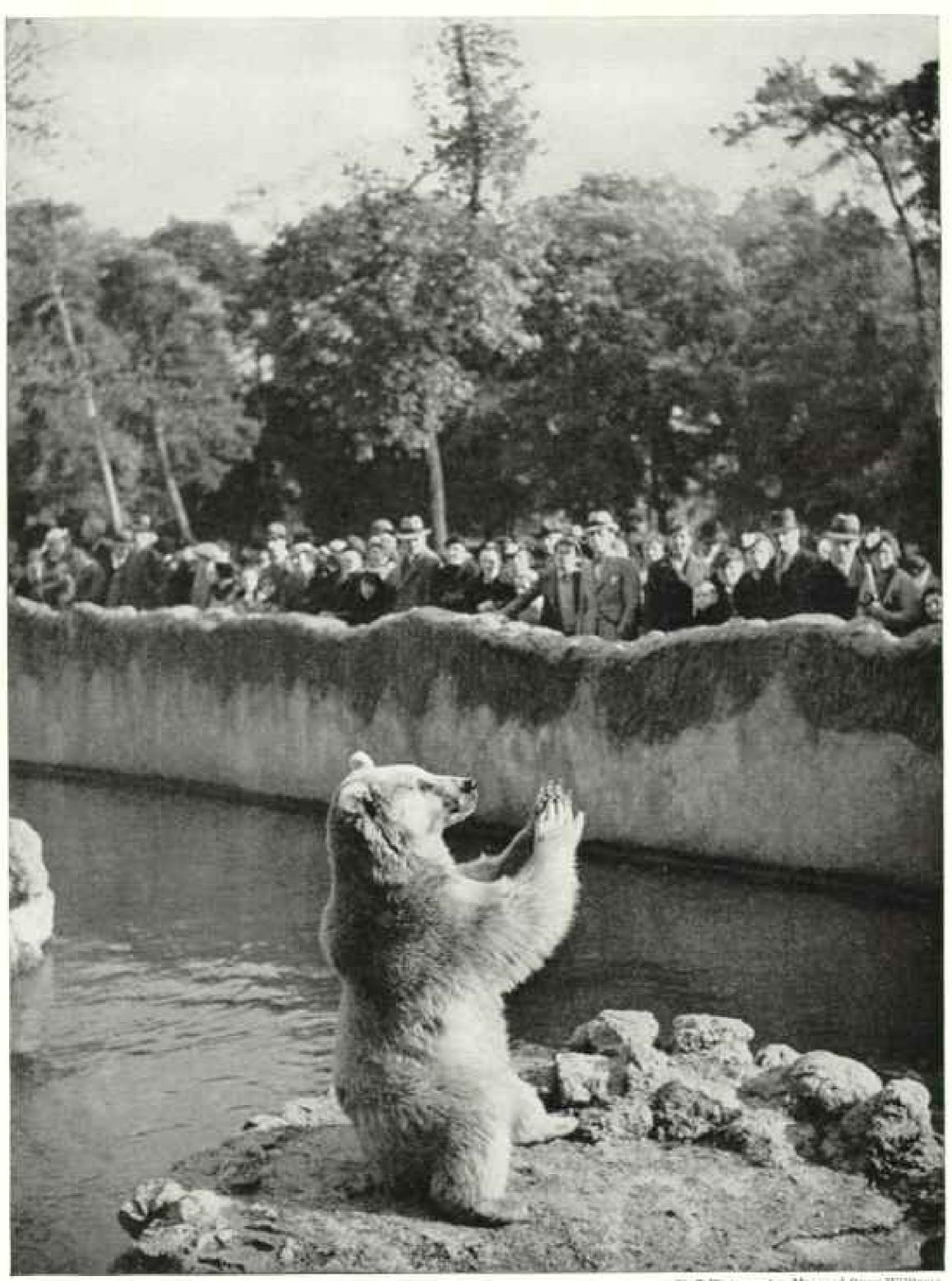
"I love America," she said, "We French will never forget the understanding and generosity of your General Bradley in letting Leclerc enter Paris first."

"Nor will we," I answered, "forget that before our soldiers entered Paris, your patriots had taken over most of the city."

Concerning this psychological basis for present happiness and national pride, I asked, point-blank:

"By the time Parls was free, how many of its people had done their bit?"

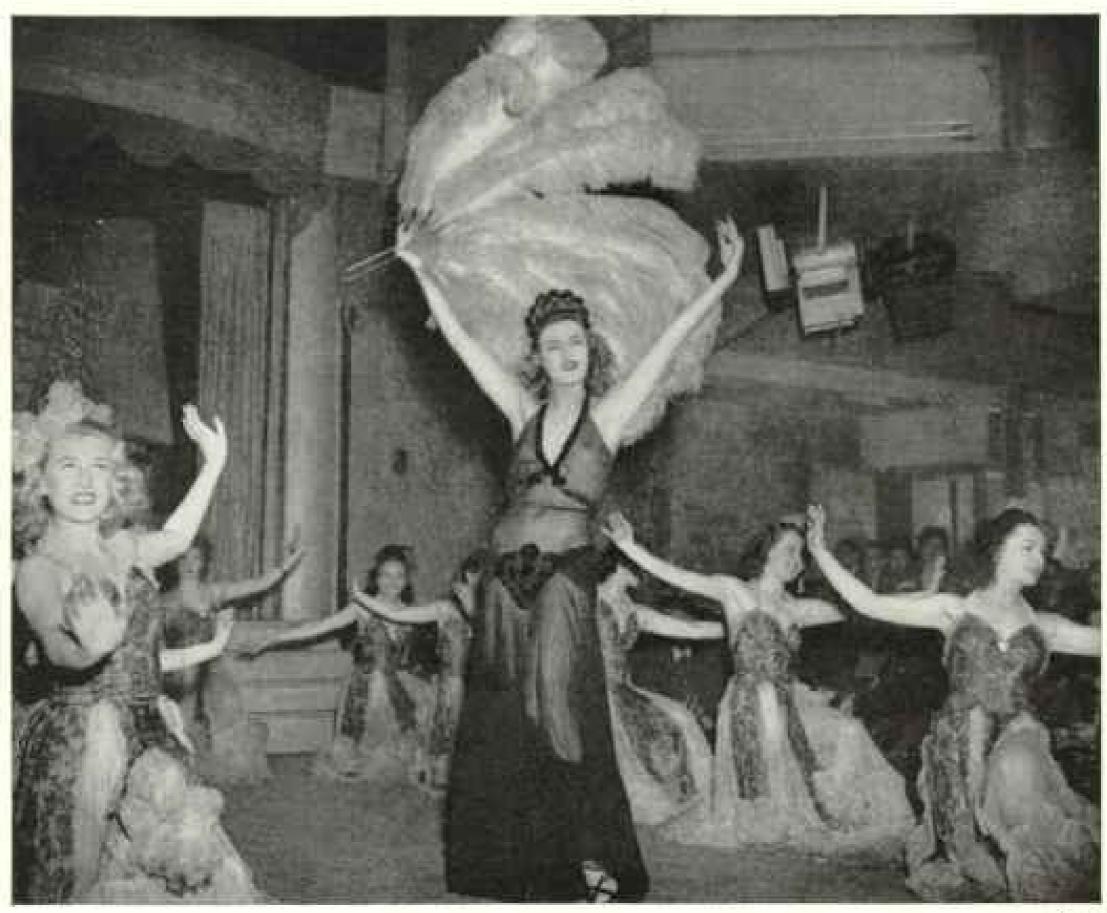
"That is hard to say. Some, of course, missed their chance. I remember when we tore up paving blocks to build a barricade. The first stone came hardest. As the hole spread, more and more stones could be loosened at once. Onlookers suddenly be-



Staff Protographer Maynard Guest Williams

"Peanuts, if You Please," Prays Young Bruin with Suppliant Paws

Paris wouldn't be Paris without its parks and gardens. The Jardin d'Acclimatation in the Bois de Boulogne features a "Zoo for the Little Ones" where children may help feed bears, lambs, goats, rabbits, and guinea pigs. Founded in 1854 to acclimatize foreign plants and animals, the Jardin developed into an amusement park.



Arms

It Looks Like Old Times; Paris Again Is Gay

Feathers, frills, and smiles have banished the depression of wartime blackouts. When night falls, the city comes into its own. Music, champagne, spotlights, and dancing eclipse politics, black markets, and inflation,

came workers. So, despite inertia, the spirit of liberation spread."

On August 24, glad tidings came from Gen. J. P. Leclerc: "Hold on; we're coming!"

The city's churches echoed the great bells of Notre Dame. At 8 p. m., Leclerc swept in past University City, dashed toward the Invalides, and was pushed back to Montparnasse. On August 25 the Germans surrendered and American troops from St. Cloud greeted their French comrades in arms near the Arch of Triumph.

The next day General de Gaulle, spurning his car, walked down the Champs Elysees toward Notre Dame, The Germans still sowed death, but Paris was free!

Why Gen. Dietrich von Choltitz, Nazi commander of Paris, finding the city slipping from his grasp, did not carry out Hitler's frenzied orders to destroy it is still a mystery, a bright spot on the tarnished escutcheon of Germany.

Perhaps a pretty girl cyclist in the Rue de Rivoli played her part. My tent mate of Central Asian days, Georges Le Fèvre (page 790). tells the story in his book about the eight glorious days when Paris found its heart and soul.

R. N. A. Nordling, the Swedish consul to whom Paris owes so much, was in Von Choltitz's room in the Meurice. When machinegun fire broke out, both looked down from the window.

One girl pedaled along the broad, empty street.

"Surely they can't expect me to fire on such people!" said the man whom Hitler had commanded to destroy Paris,

Hitler's orders were feverish: "Make the bloodiest reprisals if German troops are fired on. Evacuate Paris after its destruction if our losses reach 30 percent."

Le Fevre's son scooped older journalists by sneaking through to the American lines. A humble fellow named Gallois rode in a baker's cart to establish contact with Bradley. GIs pounded ahead, leaving martyred and liberated cities in their wake.

On a summer night I watched the reanimation of the eternal flame at the Tomb of the Unknown Soldier. To the simple stone a flaming-sword shield of the Allied Expeditionary Forces has been added, near the spot where the French and American troops met.

One of those men, with a civilian "U. S." patch on his uniform, told me of the greatest

day in his life.

"A Kiss That Tasted of Tears"

"As we came in, we could hardly believe that Paris was safe and its people still alive. Then a girl came along on a bicycle and reached up her arms like a little kid. When the fellows pulled her up, she dragged her silly bike with her. Before I knew it, she was kissing me. It was the only time I ever had a kiss that tasted of tears."

At the meeting place of the Allied armies the great Arch of Triumph has taken on added stature. It was never truly Napoleon's. It

belongs to an unknown now.

With two friendly cycle police I stood under the arch, awaiting the veterans who came at dusk to honor a comrade, his identity secretly cherished in a million hearts.

There was the swish of lowered banners, the roll of drums, a bugle blast, and the martial sweep of the "Marseillaise," splendidly played by the Republican Guard band. Then the colors were furled, the crowd faded away, and under the mighty monument the

silent flame was alone.

The next Sunday Paris celebrated around the fountains of Versailles and the Trocadero Gardens, sloping up from a well-loved avenue with a new name. It was the Avenue de Tokio. It is the Avenue de New York now. Beyond the statue of Washington lies the Avenue du Président Wilson and, still farther, crossing the Champs Elysées, the newly named Avenue Franklin D. Roosevelt.

Thousands of bappy folk again watched the water-play and gasped as a bright brooch of fireworks flashed in the sky above the Invalides, its beauty-perfect dome a golden

glitter in the night.

Here the body of Napoleon is confined, as was the jewel-heavy mummy of Tutankhamen, in a succession of coffins—six. Paul M. Landowski's heroic monument to Marshal Foch stands in a side chapel, and to the left of the entrance is the simple sarcophagus where Napoleon II has joined Jerome, Joseph, and Napoleon I beside the Seine.

Over the door to Napoleon Bonaparte's tomb are carved the always-moving words: "I desire that my ashes rest beside the Seine, amid the French people whom I have loved so much."

The simple words are echoed in my heart, for on the way to this imposing tomb I always pass a strange little car which I knew beside the classic colonnades of Palmyra, in the shadowy bazaars of Herat, and high above the mists of cool Kashmir. Now it is on display at the Invalides and around it gather French lads, stirred by the challenge of the wide, wide world.

It is the "Golden Scarab," which led the Citroën-Haardt Trans-Asiatic Expedition from the Mediterranean to the Yellow Sea. How well I remember the day we left it on that

impassable trail in the Himalayas!

On such far journeys, under the open sky, one comes to know his fellow men. During a solid year, from the Place de l'Opéra across the Gobi to Peking and the mysterious ruins of Angkor Wat, my French companions won my deep regard.

French Keep Their Sense of Humor

Beside the fashionable Boulevard St. Germain, a square old church tower has stood for nearly a thousand years. Somewhere in that vast abbey there was a dovecote from which the Rue du Vieux Colombier takes its name the Street of the Old Dovecote.

One night, in that quiet street, so close to Marie de' Medici's home, I watched the droll antics of Plautus's The Carthaginian to which, after 2,000 years, an amazing young actor named Daniel Sorano adds a truly Gallic touch.

A few blocks away, trained diplomats spoke their careful speeches and then listened for such editorial comment as reflects the feeling of the world. At night, safely away from reporters, they talked on and on. But, having cast out the hated invader, Paris was patient with its invited guests.

While oppressors still sat in their headquarters facing the Opera, the French produced an Antigone which showed with what tragic fidelity one must cling to his faith.

Now, when misery hides in the courtyards, away from the smiling face of Paris, and only the future plays bogeyman, the wholesome laughter of immortal art echoes in the Vieux Colombier. With courage and a Gallic sense of humor, the Old Dovecote of Paris faces the dark-veiled shape of things to come.

*See, by Maynard Owen Williams, "Citroën Trans-Asiatic Expedition Reaches Kashmir," "First Over the Roof of the World by Motor," and "From the Mediterranean to the Yellow Sea by Motor," National Geographic Magazine, October, 1931, March, 1932, and November, 1932, respectively.

Mending Dikes in the Netherlands



Lawrence East from Black Star

Theirs Is a Heritage of Skill in Building and Repairing Holland's Dikes

Dike workers on Walcheren Island, off the southwest coast of the Netherlands, cover metal hoops with rope. These will seal the joints of huge pipes which wash sand into mounds that support the dike (pages 800, 804). Vitally situated on the Schelde estuary in the Province of Zecland, Walcheren guards the approach to the port of Antwerp. On October 3, 1944, the RAF blasted the island's German defenses to facilitate British Commando landings. Water rushing through the bomb-torn sea wall inundated three-fourths of the island's 80 square miles. Some families clung to damp farmhouses; others fled to buildings on high ground. Long accustomed to fighting floods, the islanders stoically lived up to the motto of their Province: "I struggle and I arise."

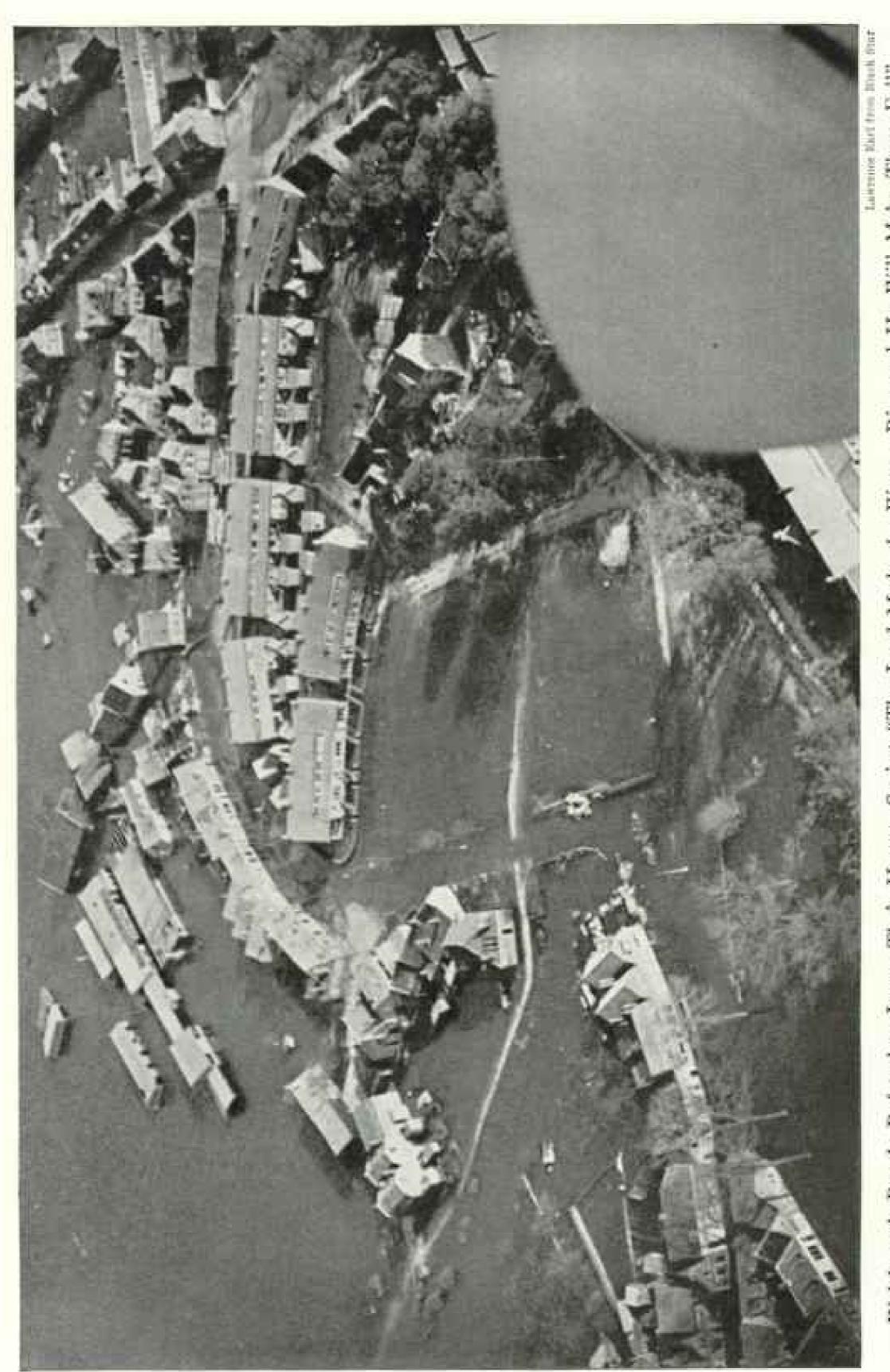
In August, 1945, America sent pumps, Britain lent engineers, and Switzerland shipped supplies. Racing against the onset of winter storms, technicians and laborers could work only at low tide. When waters were at their highest, some parts of Walcheren were more than six feet under the sea. Storms often ruined the new dikes before they were completed. The salt water poisoned the surface of Walcheren's rich soil. When the land is completely drained, it will take at least four years to restore the soil's productivity. The last gap in dikes surrounding the island was closed on January 1, 1946.



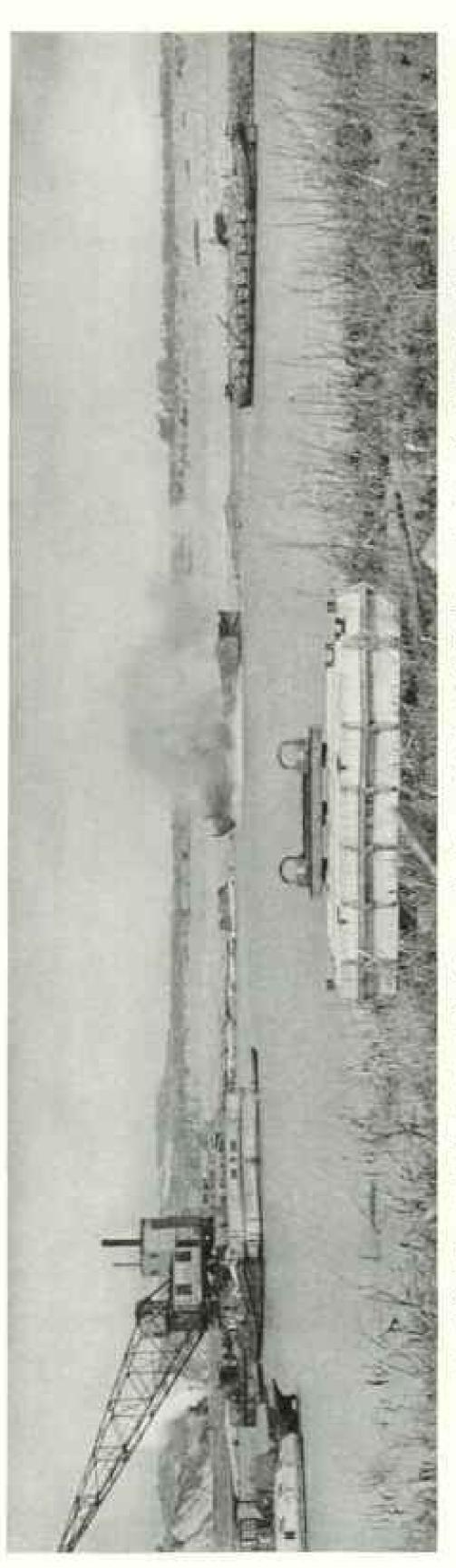
A British Brigadier and Dutch Engineer Discuss the Job's Progress
If the gaps had not been closed, Walcheren might have been washed away, closing the port of Flushing (Vissingen) and interfering with mytgation to Antwerp.

Near Flushing, on the southern tip of Walcheren, some 635,600,000 cubic feet of water flowed over the land daily before the first breach was closed.

A Young Engineer Takes Soundings in a Gap in the Dike



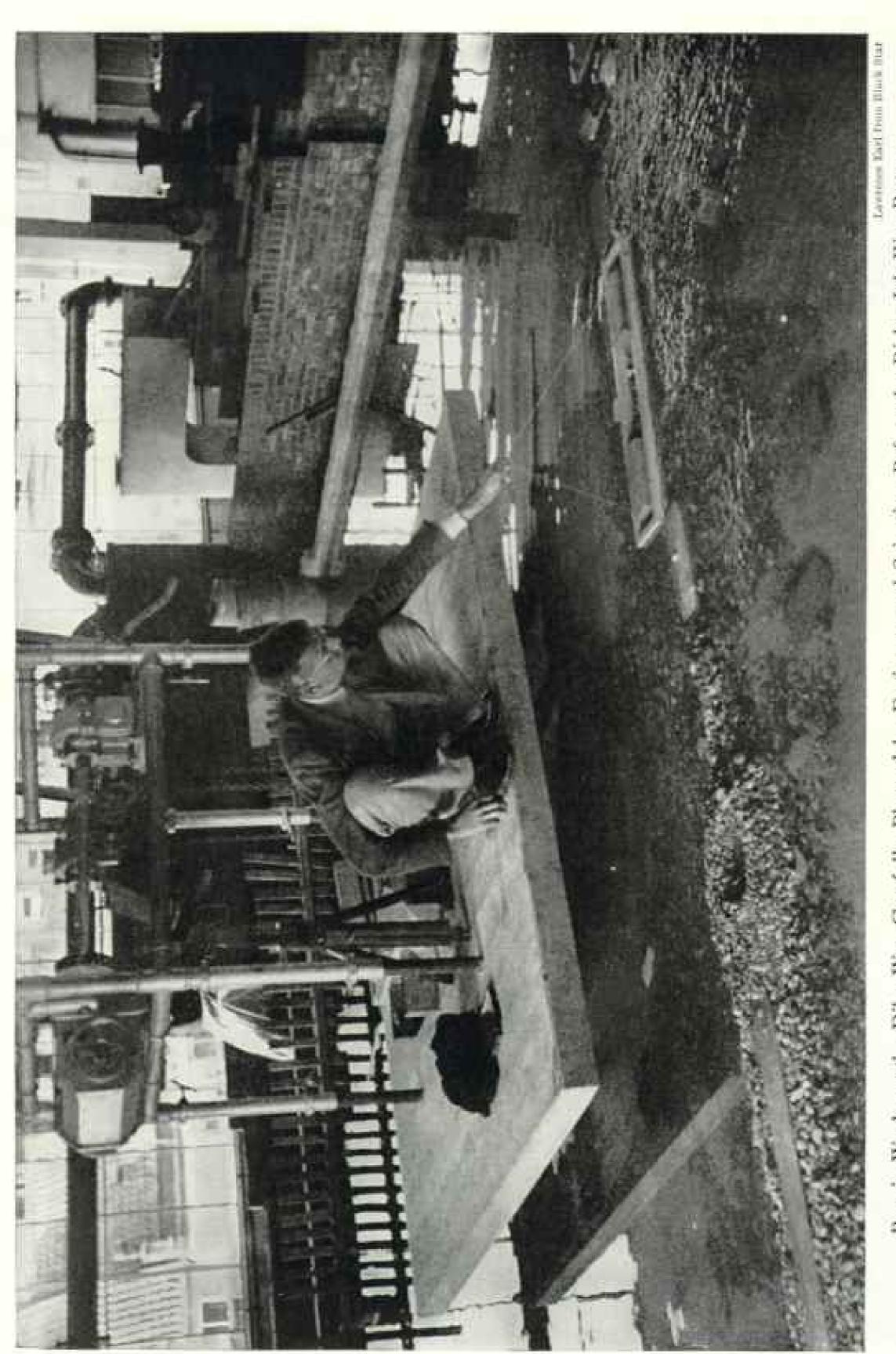
Whole towns were submerged. Wherever salt touched the land, it was ruined. Sodium upsets the normal ratio between it and calcium, forcing the ground to "cake." Calcium can be added in the form of plaster, so tons of gypsum are being imported from Belgium to revitalize the earth. Plants such as mustard, caraway, lucerne (alfalfa), and clover help extract the salt. Long guillies cut by the water will be planted with trees. Walcheren's People Refused to Leave Their Homes, Saying, "The Lord Made the Waters Rise and He Will Make Them Fall"



dynamite, and sunk. These, and "beetles," or concrete pontoons (foreground), had to be placed and he water's flow to a standstill in the gap. Many German prisoners of war were used as laborers. Career by Becoming Part of Walcheren's Stronghold Against the Sea An Allied Landing Barge Ends Its Obsolete British craft were towed into the gaps, loaded with sunk in less than 30 minutes while low tide brought th



Here the tide is out and the gap is nearly closed, but water rushes from inside the new dike through the remaining hole. "Beetles" were brought from British "Mul-berry" harbors, which had been towed across the Channel to help supply Allied soldiers on the Normandy beachhead. Weighted Down by Serap Material and Sand, Old Barges Make a Firm Base for the New Sea Wall



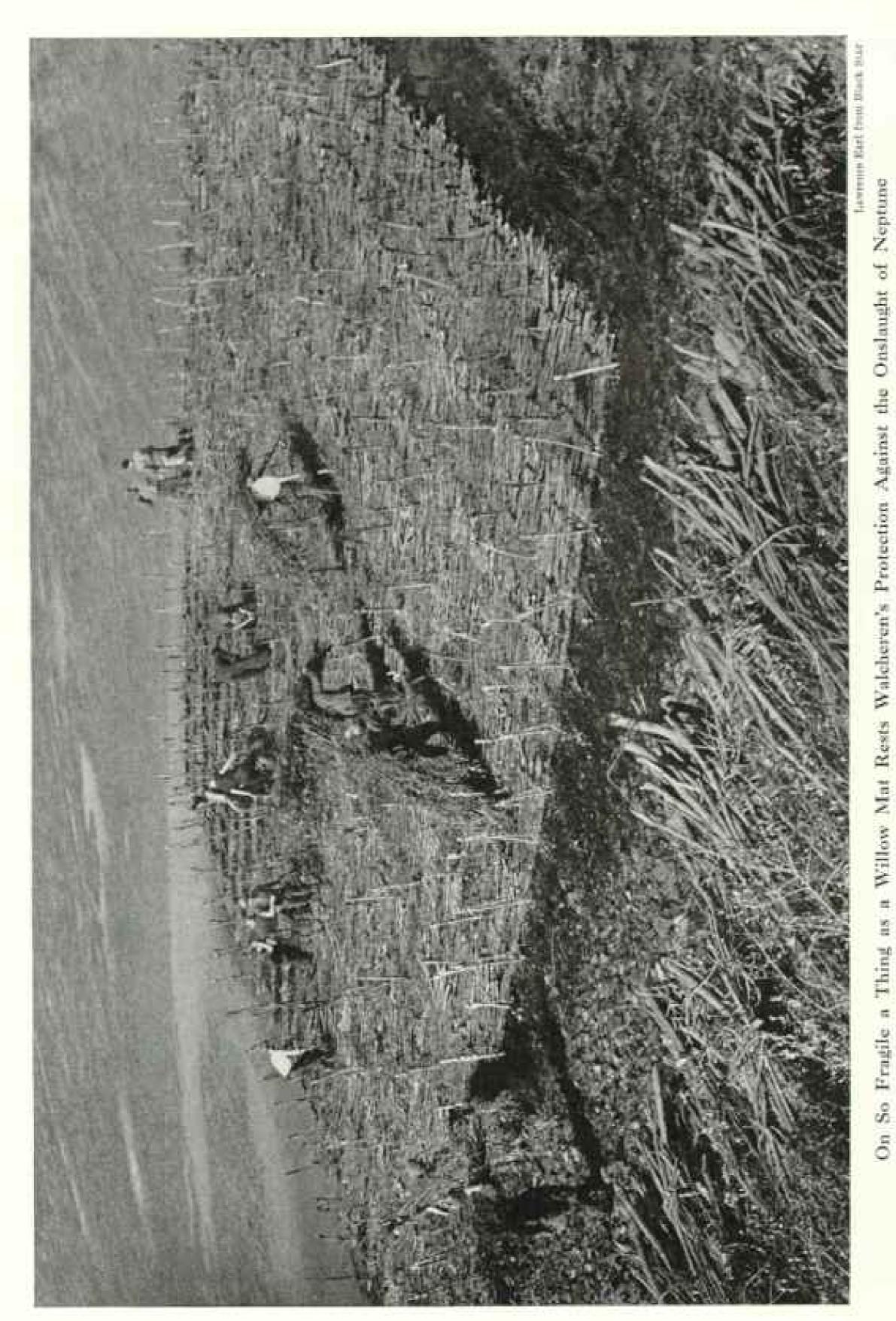
At Delit University, near The Hague, scientists built models of dike breaks. Here they worked out engineers' problems in advance and advised them on their chances of success. Toylike replicas of the barges were swang into place by artificially created tides, calculated to behave exactly like the ocean's tide in a given spot, Repair Work on the Dike Was Carefully Planned by Engineers and Scientists Before the Risky Job Was Begun



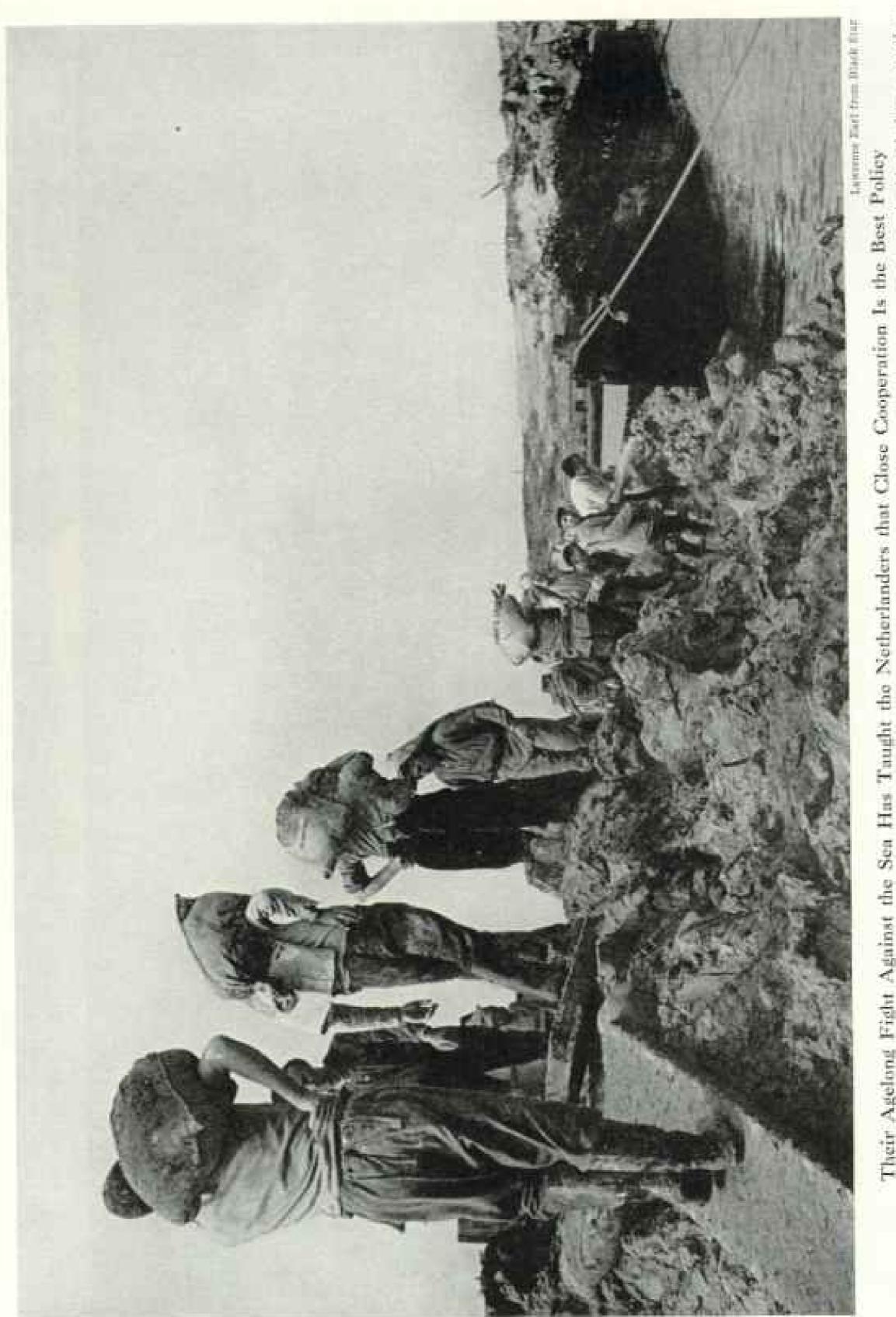


Fastening willow fascines together with withes, workers prepare large mattresses, Bits of Willow Help Keep the Rushing Waters from the Land which, resting on the bottom of the gaps, prevent scouring of the channel.

Here a Netherlander weights a willow mattress with rocks to hold it in place on the bottom. De Waterstaat, a board of engineers, keeps watch over the dikes.

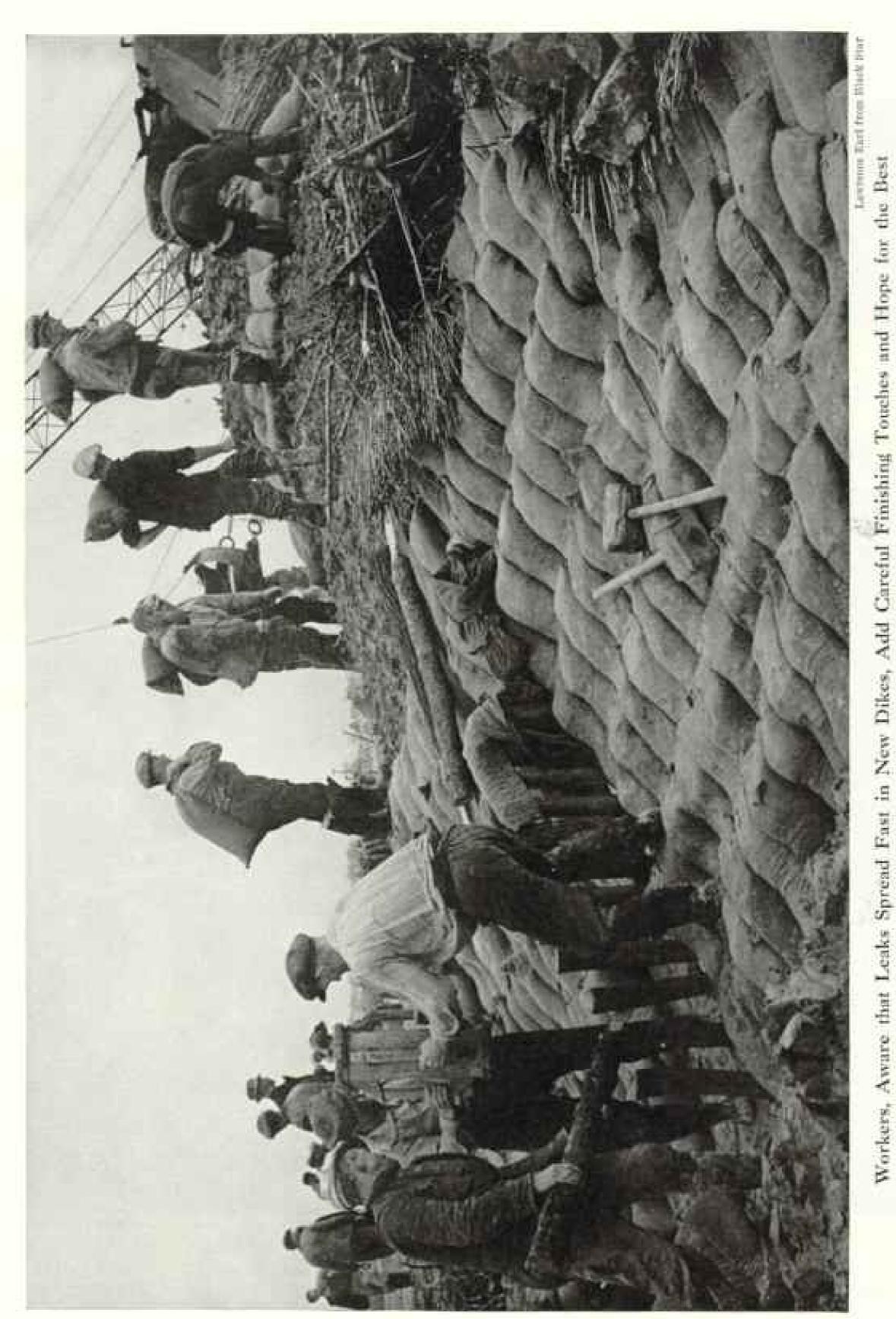


Shortages of rock, lumber, and other building materials long taxed Dutch ingenuity, but generations of experience have solved dike problems. The Willow muts, the those used in levers along the Mississippi River, are filled with sand with stone to sink them. On these mats the barges and "beetles" re-



Each obb tide leaves another A human chain of workers carries and and dumps it into the remaining breach as the last lap is reached near Flushing (page 792).

Into the sand on the willow mats. Dikes are generally about 80 feet broad and 20 feet above sea level. Their Agelong Fight Against the Sea



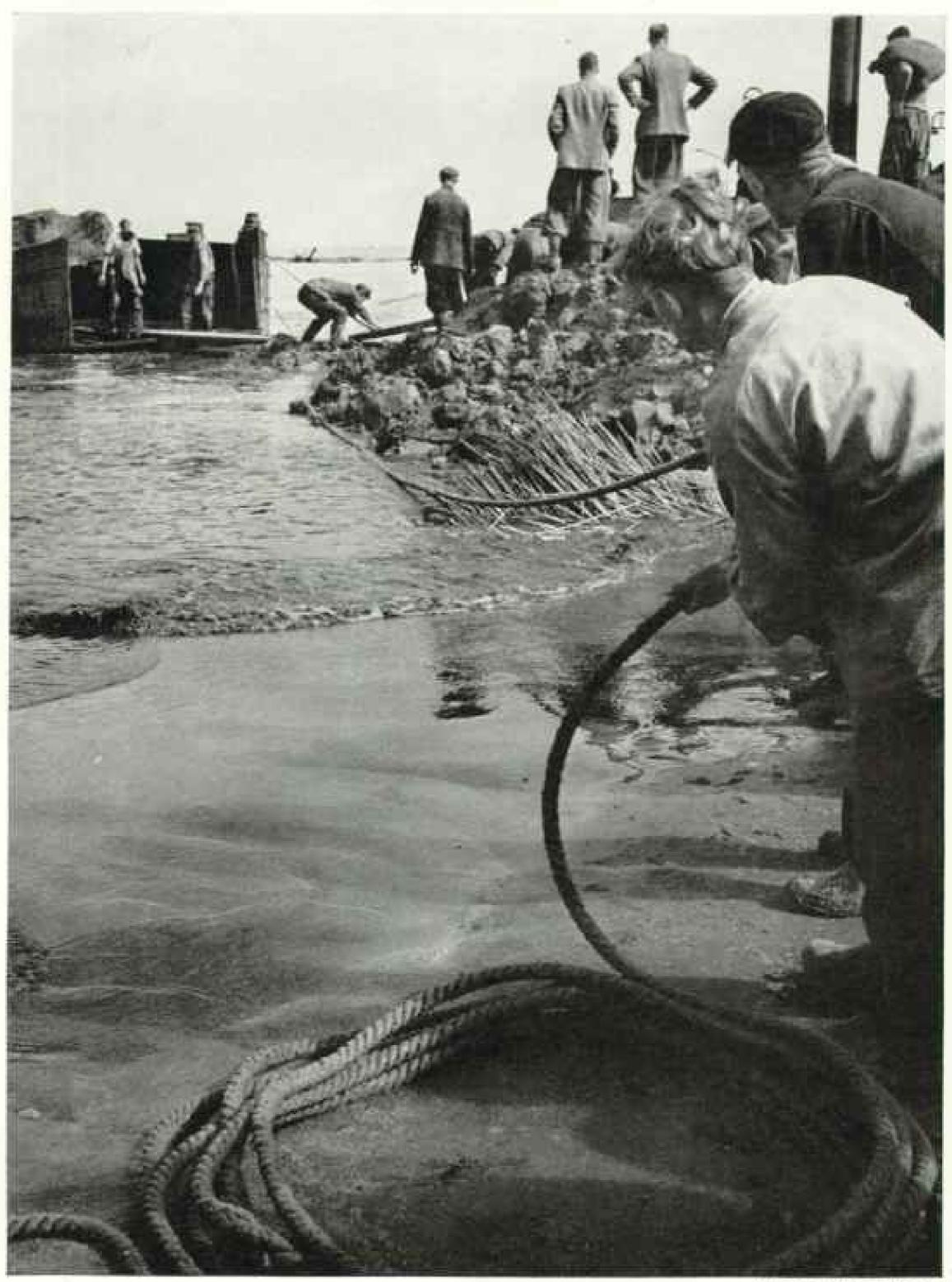
Sand ng seas of the incoming tide. Stakes and sandbags form a first line of defense against the waves, hold the sand in place, serve as additional barriers along the coast. Upon completion, the dike top is well insulated against pounding dune, sown with grass to ho



Lawrence Earl from Black Star

A Geyser of Sand Reinforces the Outer Face of the Dike

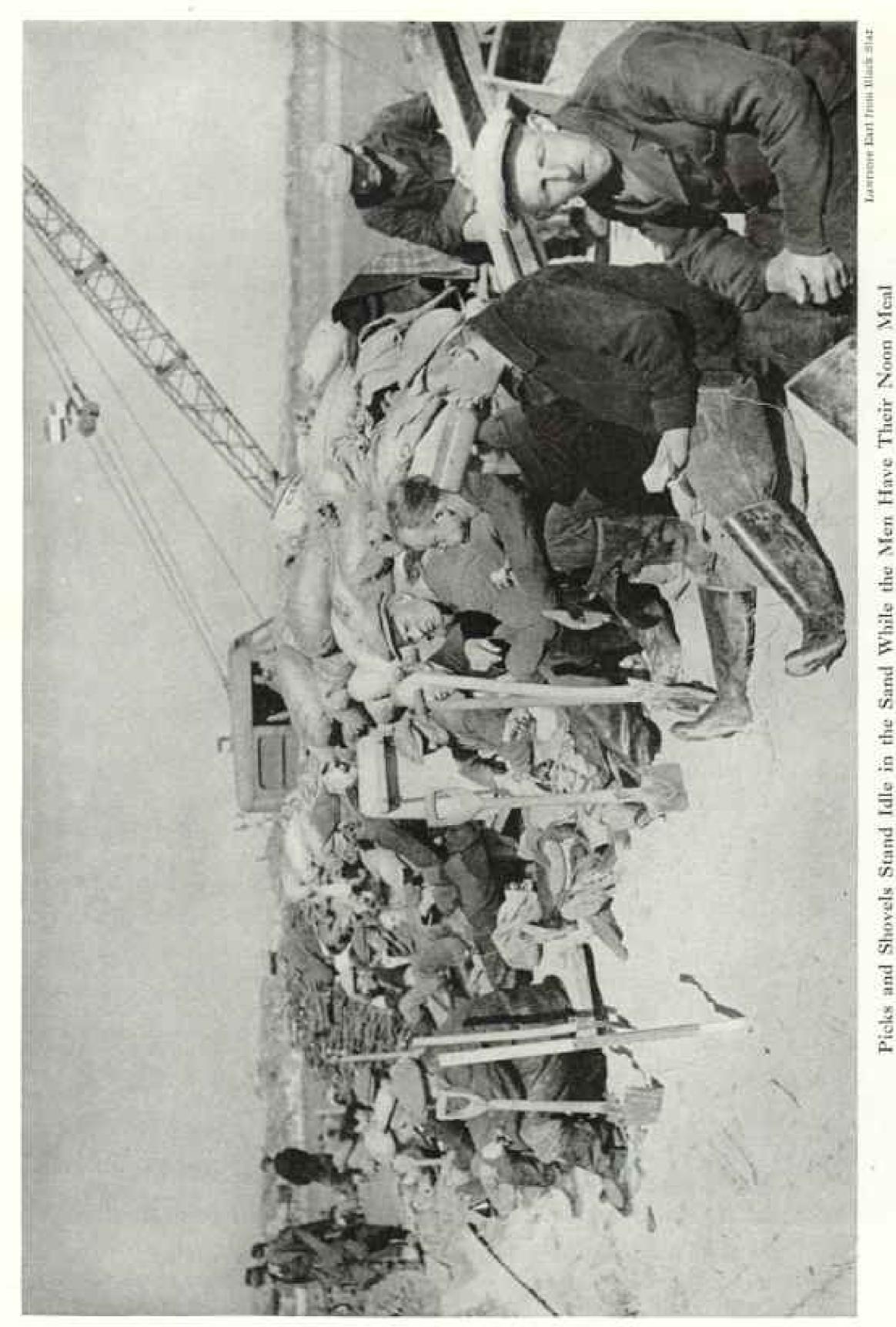
Forty percent sand mixed with 60 percent water is washed through a mile-and-a-half-long pipe to form a ridge running parallel with the dike wall. The spouting pipe pours out more than 1,000 tons an hour. Half the sand sinks, forming the dike's core; half flows away and is wasted (page 804).



Lawrence Bart from Black Star

This Rope Will Anchor a Sunken Barge until It Is Properly Secured

Even after a barge is sunk into place there is grave danger that a storm may wash it away. Clay and rocks are piled on and around the barge. Heavy hawsers hold it in place. Fortunately, salt penetration in Walcheren soil was not very deep, but it will be several years before normal crops are harvested (page 791).



respite for hard-working dike builders comes at lunchtime. When their work is completed, Walcheren's land must be drained. Not only the remainder of the sea water, but seepage and every drop of rain must evaporate or be pumped into the sea, Most of the pumping equipment came from the United States. Brief respite for hard-working dike builders comes at lunchtime.

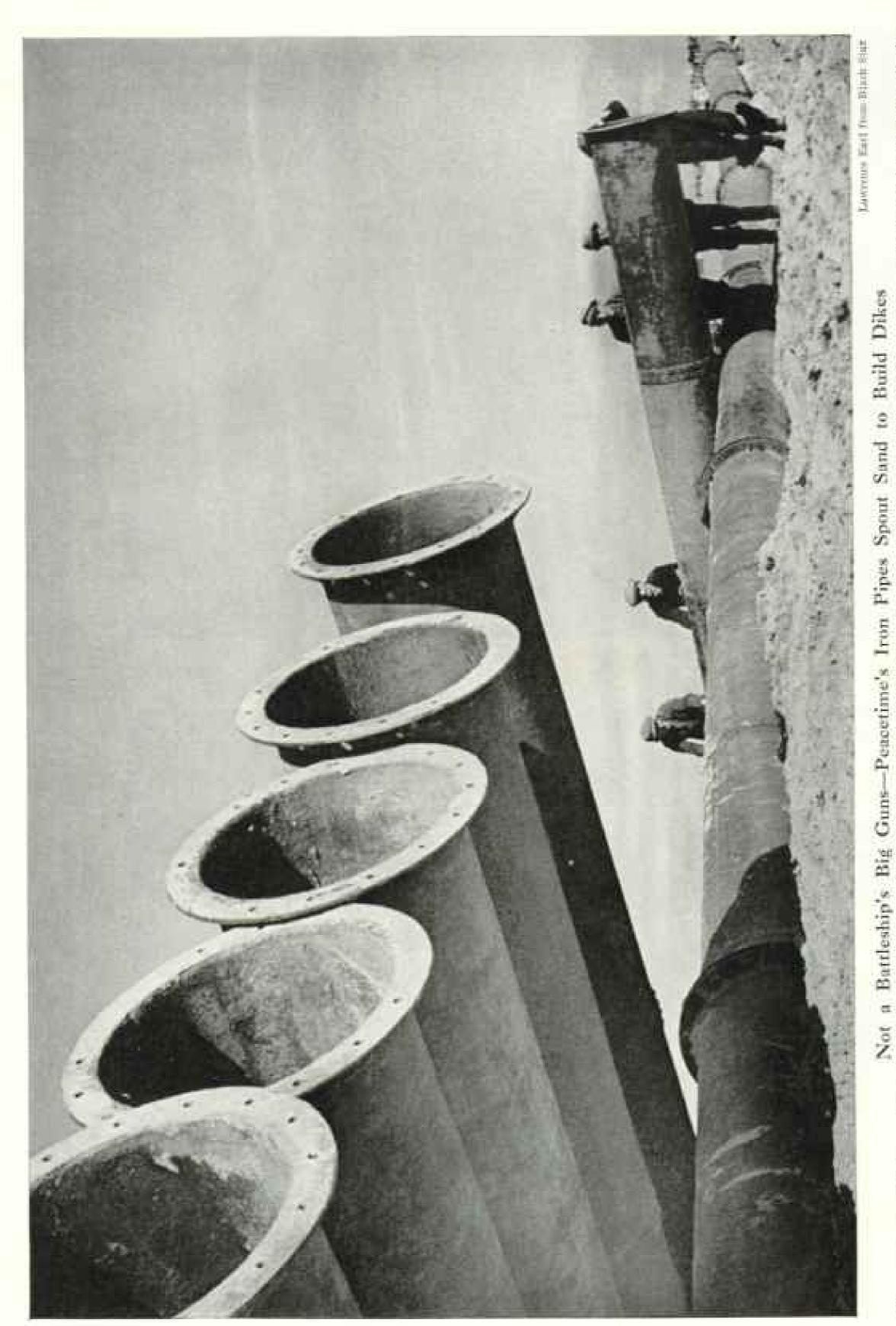




With the gallantry of a Sir Walter Ruleigh, a Netherlander carries a costumed woman on his back to a boat in an inundated area of Walcheren. In many places in the Netherlands, Germans deliberately flooded the land.

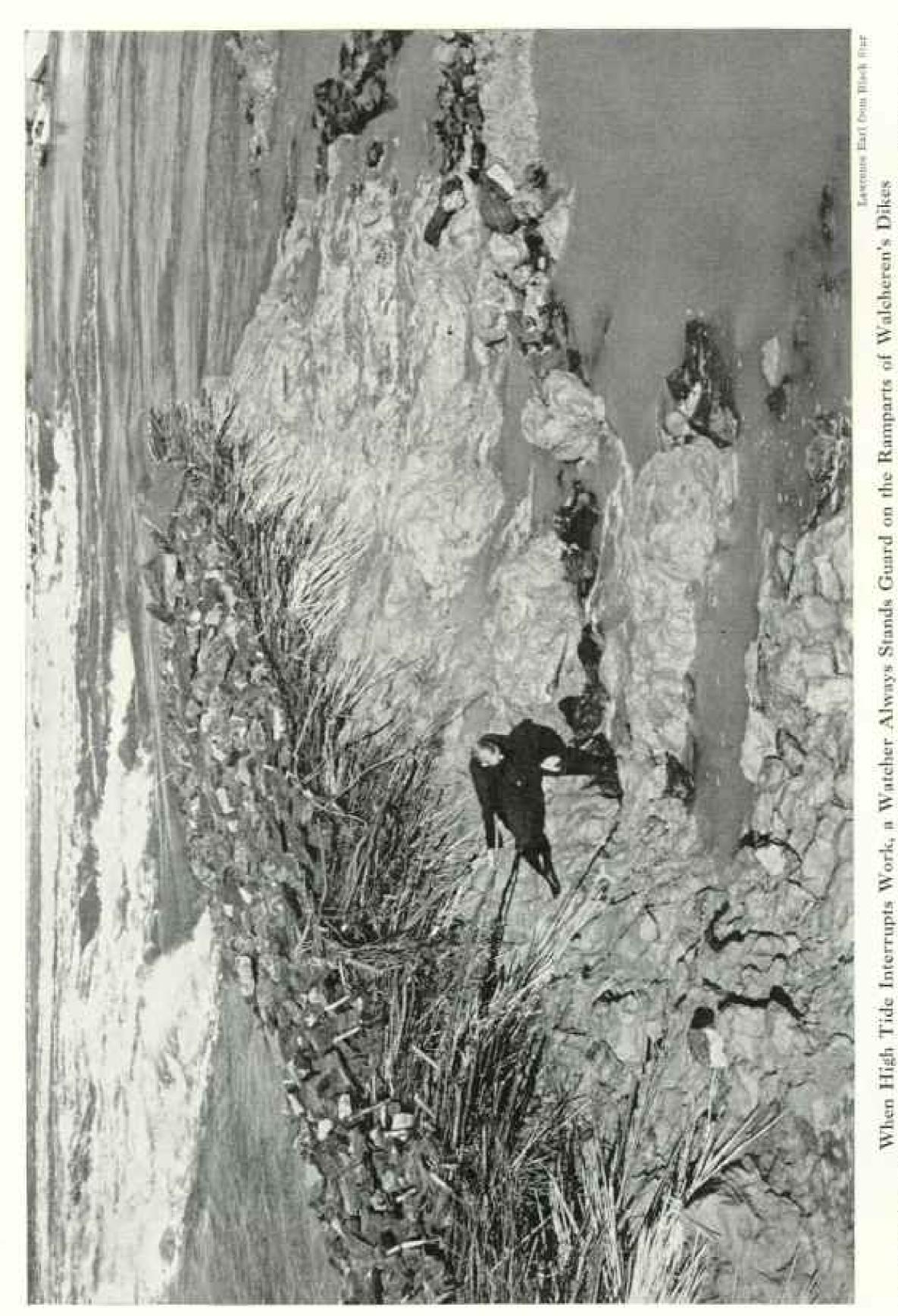
Plotting Against the Common Enemy

Drawing rough "blueprints" on the sand, engineers solve newly arisen problems. At Westkapelle force of the wind made it necessary to work from inside the old dike wall.

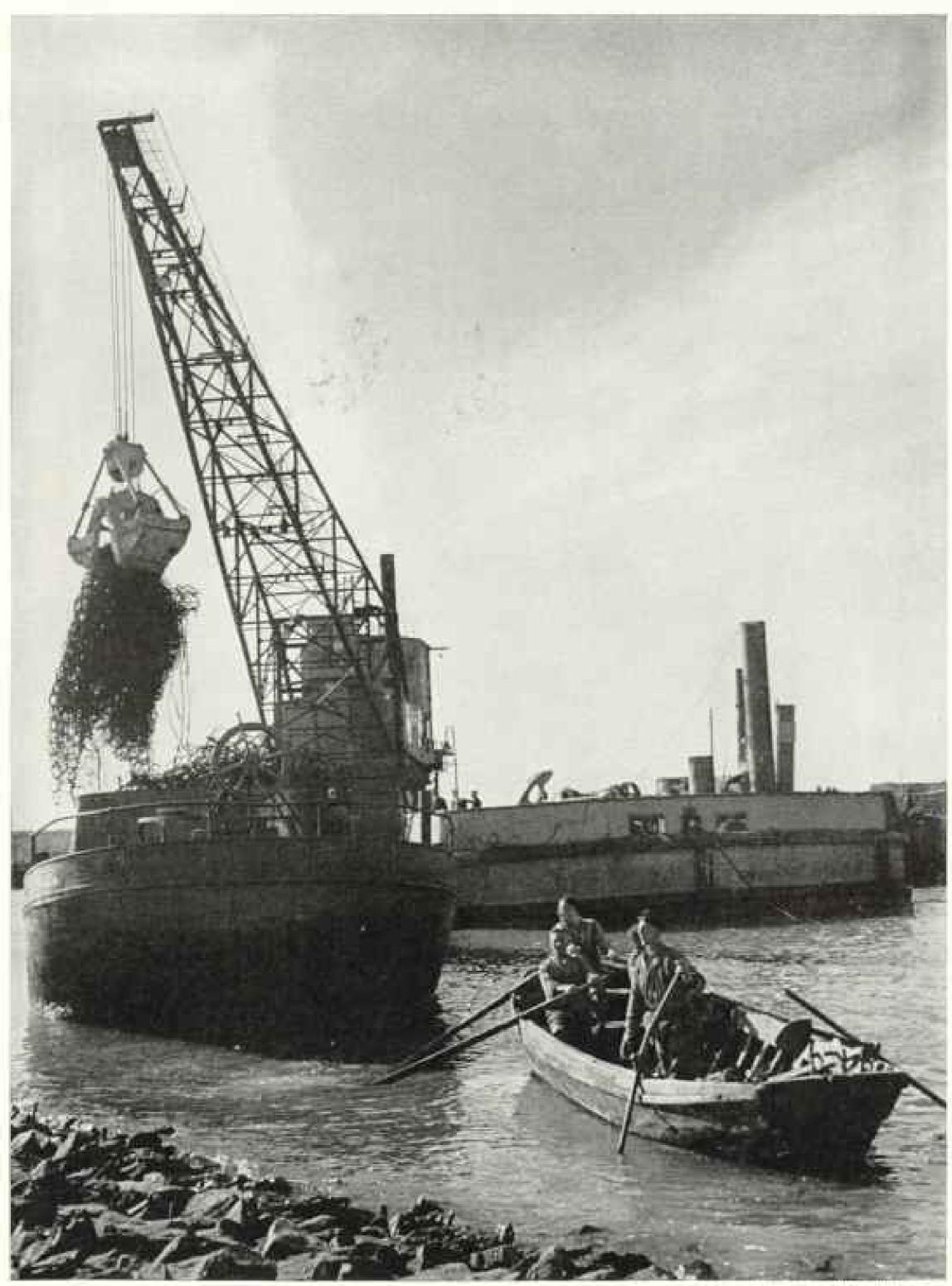


The long and pipeline needs new sections as it grows. These men keep in adequate number of spares on hand so that work can go on at full speed (pages 751, 800).

Even before the war ended, Netherlanders were preparing to restore Walcheren.



plutted at once. Because of the possibility of loss of life and property, anyone caught damaging a dike one time, such an act was punished by death and confiscation of property. A leak in the newly made stretch may become serious if not wall is dealt with severely. At



Lowrence Earl from Black Star

Antisubmarine Netting Comes Up from the Harbor to Sink Again in a Barge

Filled with rusted steel mesh, barges are sunk to fill gaps. Although other countries supplied materials, equipment, and sympathy, it was agreed that dike building was the Dutchmen's job. Their proud record shows that they have never given back land reclaimed from the sea.

Fairy Terns of the Atolls

BY LEWIS WAYNE WALKER

San Diego Natural History Museum

With Illustrations from Photographs by the Author

I ANY of the mid-Pacific atolls rarely visited before World War II have become the homes of American boys

on military duty.

Generally these tiny dots on a map of blue are cordially and unanimously hated. A sign on Kwajalein which reads "Hotel Atoll—No beer atoll—No women atoll—No nothin' atoll," although conceived by a humorist, has an undercurrent which typifies this hatred, and all its coral sand would be traded willingly for a glimpse of a well-tended State-side lawn.

Majestic breakers crashing over barrier reefs don't compare, so the servicemen say, with the home town brook and its "ole swimmin' hole." And so it goes. Belittling comparisons form a lopsided list, with all but one point favoring the continental United States. This one exception is, to my mind, the most beautiful and most ethereal of all birds, the aptly named fairy tern, or love tern (Gygis alba).

Egg Laid on a Bare Branch

When American servicemen first went ashore on the coral islands, they saw birds of many kinds flying over the breakers and heading for distant ocean horizons. Of all this feathered multitude, including gooneys (black-footed albatross), boobies, frigate birds (man-o'-warbirds), and tropic-birds, the fairy terms were the only ones that evinced a welcoming spirit.

As implements of war were being unloaded, the terms circled gracefully overhead and occasionally landed on the stacked crates where they were viewed from a distance of a yard

or less.

Inland from the beaches there are dense patches of native Scacrola shrub and occasional clumps of introduced ironwood. On the branches of these plants the terms carry on their odd housekeeping. The mere fact that they live in trees is in itself unique, since most of the other members of their widespread family deposit eggs in scooped-out hollows on the ground.

The optimistic fairy terns make no pretense at nest building. They lay their single egg on a bare branch, then trust to luck and favorable winds (pages 809 and 810).

One house-hunting pair under observation on Midway spent hours parading up and down a six-inch horizontal bough. Their tiny webbed feet sought for and tested every depression on the bark. But one spot in particular seemed to hold unusual interest and the birds returned to it consistently. Close scrutiny showed a square of bark about the size of a dime chipped out, which left a depression an eighth of an inch in depth.

On each return to the spot the female would crouch in the pose of incubation and set her sights, so to speak. As a friend of mine remarked, "She's setting her Norden, but she's

got to be good to hit that."

The following morning a single egg was accurately balanced in the tiny depression and was completely covered by the incubating bird. At my approach one of the pair, presumably the male, flew just above my head and occasionally brushed my hat with its wingtips. The customary scolding usually heard when colonies of other terms are disturbed was entirely missing. In place of rancous calls, the fairy terms uttered low, questioning, plaintive notes:

Upon reaching the low branch where the bird was incubating, I inserted a finger under the feathers. There was no sign of fight and the expected pecking was not forthcoming. Instead, she shifted her feet, perched upon my hand, and permitted me to lift her off the egg (page 809).

When she resumed her place I noticed a modification of the procedure used by most birds in covering their eggs. Those actually nesting pull the eggs under the breast feathers with their beaks. The fairy terns, however, use their beaks to pull their bodies over the egg, which remains stationary on the bare branch.

Big Guns as Nesting Sites

Another nesting site often chosen by these terns is the V crotch of a branch (page 810) or even the slot between two parallel boughs.

"How does the bird know the egg size before laying?" is a question often asked by servicemen.

The female seems to have a remarkable insight regarding the size of the egg-to-be. I have seen some eggs that were a bare eighth of an inch too large to slip through and crack on the ground below.

When the big guns were installed for coastal defense these terns used them for nesting



Mother Stretches a Guardian Angel's Wing as a Sunshade for Her Child

Hawaiians once considered fairy terms sacred. Their beauty and purity deeply appeal to all races. By their gentle, inquisitive ways and plaintive cries they tug at men's heartstrings.

sites. I know of one gun crew that had a bird incubating an egg lodged in the maze of elevation gears. Just before inspection, the Marines would drive off the parent, hide the egg, and stand at attention. As soon as the inspecting officers passed along the line, the egg would be replaced and the hovering tern would resume incubation.

Before each firing the human protectors removed the egg to save it from the frightful jar of the explosion, but nevertheless it failed to hatch.

The actual hatching of the precariously laid egg probably takes place under the mother's feathers. Therefore, as the young one climbs out of the shell it is more or less braced in place until it can get a firm grip on the supporting branch. However, a prevalent bit of scuttlebutt around the islands credits the young one with hatching feet first and gripping the branch tightly before splitting the shell and emerging!

All terns are very precocious and the young

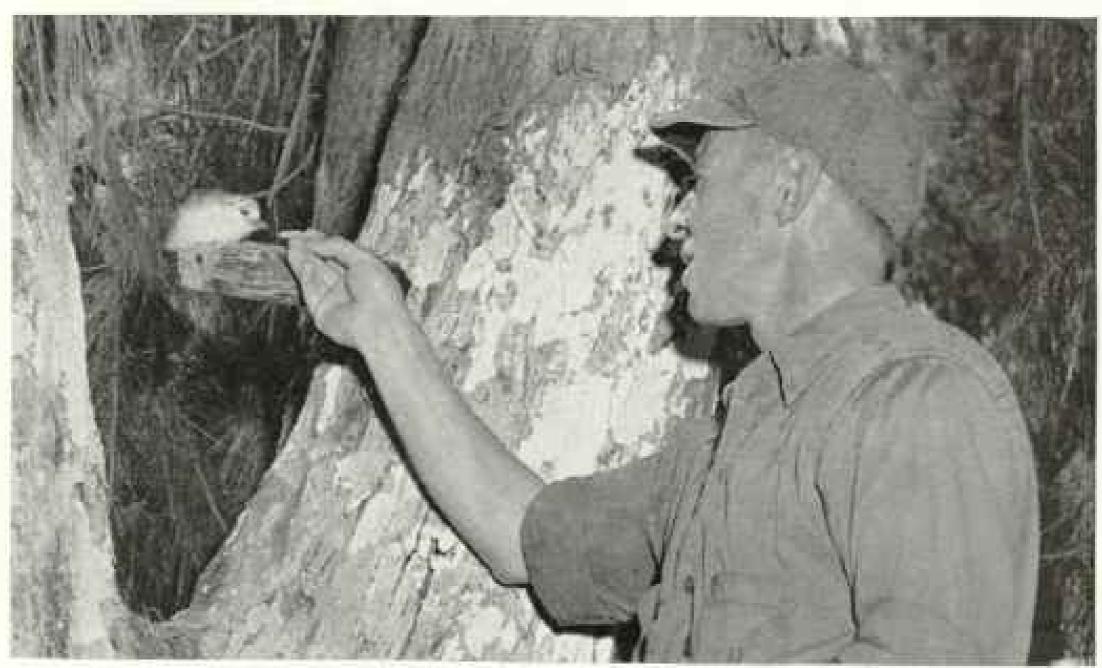
of the ground-nesting varieties are usually able to run within several hours after hatching. Yet they have no fear of height, and if placed on a box or other high object will run to the edge and take off into space.

Young Cling with Deathlike Grip

These fairy tern young, however, react differently. From the moment of hatching until the time for flight they seem to have but two aims in life. One of these is to eat whatever food is offered and the other is to hang on with a deathlike grip.

I tried to remove one fledgling that was on a dead branch of pencil thickness. The branch broke before he would release, and even then it took considerable prying to get him to let go of the loose end so that I could put him on another perch near the original nesting site. This prompted a friend to write:

The wind that rocks the bombers And shakes the mighty ships Has yet to make a fairy tern Release a branch it grips.



U. H. Navy, Officult.

"None of Your Navy Chow, Chum." Junior Thinks One Good Tern Deserves a Minnow On Arthur J. Wagner, a Navy shipfitter, is bestowed a look which seems to say, "Can this be my mother?" It took Wagner three days to accustom the foundling to eat from the hand. Thereafter insistent dinner calls kept him busy collecting fish (page \$11).



A Snowy Mite with Shoe-button Eyes Shows No Fear of Prying Fingers

Marines, who hated the lonely Pacific atoffs, adored the sociable fairy terms. One little mother chose the
elevation gears of a big gun as her nesting site (page 808). Here an egg rests on a bare branch.

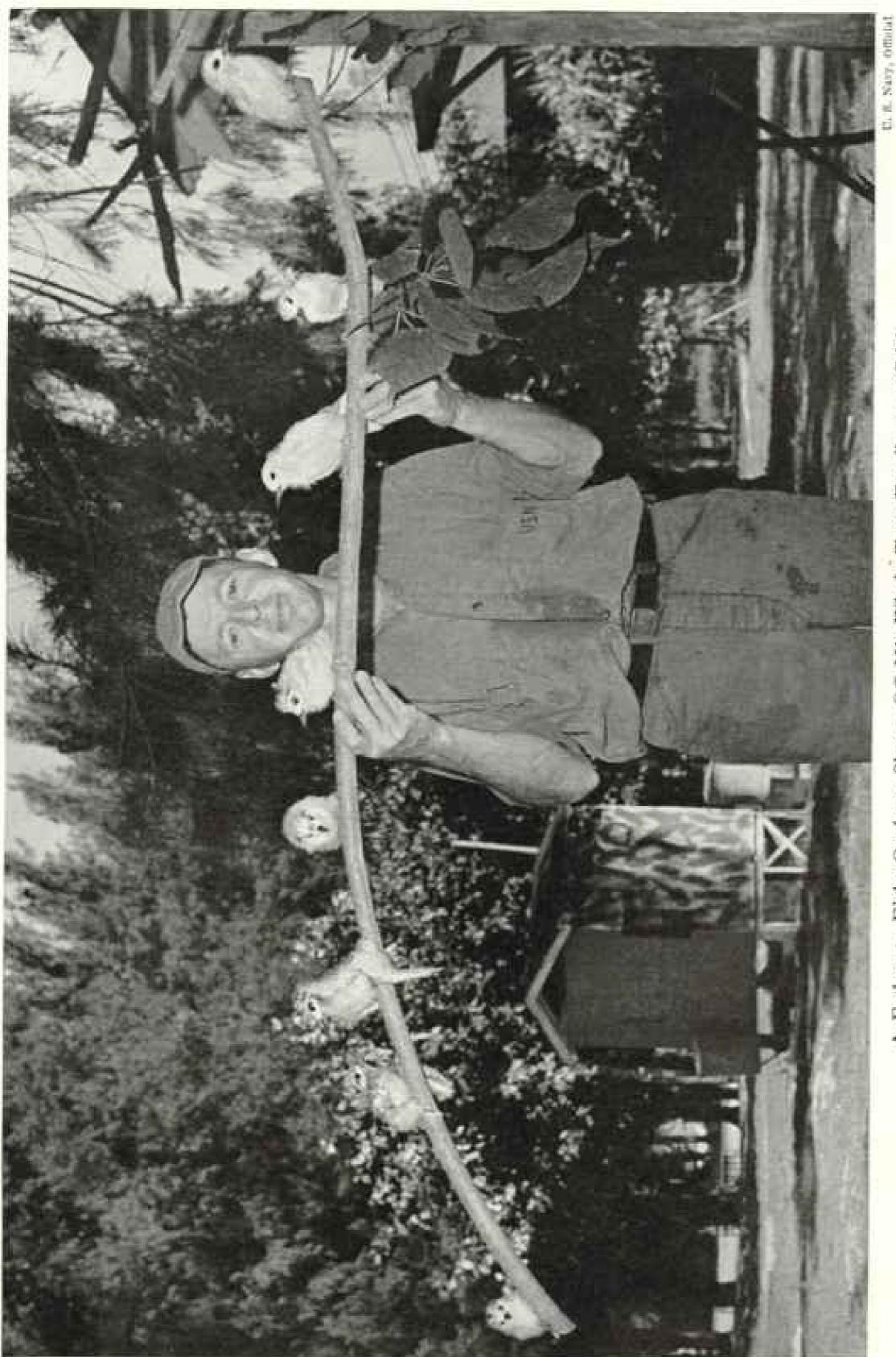


A Balancing Egg Rocks in Its Cradle on the Bough

Fairy terms scorn nesting materials; they use naked branches. Father helps Mother select a dent in the bark; there she accurately deposits her single egg. Despite stiff sea breezes, it holds position like a swaying, lead-weighted toy.

Look in the Tree Fork! That Hazy Spotted Oval Is an Egg

Unlike other birds, Mother does not tuck the egg under her breast, for it might slip off. Using her bill, she draws herself over it. A knothole, a scar on a kimb, or parallel boughs all serve as nests (page 807).



Sailor Wagner ran un asylum for fairy terms lost by their parents on Midway Islands (page 809). To provide perches within easy reach he grafted small low branches on a big tree; with each addition to his family be opened a new branch. All his spare time he devoted to nursing fluffy infants. Servicemen called him "Daddy." A Father to Eight Orphans Shows Off His Whole Tern Family on a Stick



Sunlight Traces an X-ray Pattern on Diaphanous Wings and Tails

Fairy terms nest through tropical sens of much of the world. An individual, however, seldom ventures more than 20 miles from its island. Thus the sight of one tells the shipwrecked sailor or aviator that land is near. Recognition and habits of these birds were taught at survival schools for servicemen (page 814).

When the fairy terns were observed by explorers of the 1800's, mention was made of the parent's return to the nest with fishes stacked crosswise along the full length of the bill.

That is where the observations stopped; and, ever since, the method used in capturing the second, third, and fourth fish without losing the first, second, and third has been a matter of speculation.

During my sojourn on the atoll I also was intrigued by this Nature mystery and unsuccessfully endeavored to watch the white terns at their fishing. It was not until I was ready to leave, however, that I got an inkling of the manner in which it was done (page 813).

A Marine cast adrift on a life raft (experimentally and not by necessity) was drifting along outside the line of breakers, with nothing but time on his hands. Red-footed boobies plunged into the water from a height of fifty feet and emerged in full flight a few moments later as if shot from a gun. Trim sooty terms flew overhead, paused at sight of small fish, dived, and barely penetrated the surface to grab their food.

Fish Stucked in Bill as Caught

Then came the fairy terns, almost singly, so widely apart were they spaced. Their wing tips practically touched the water as they flew. Occasionally one was seen to dart erratically to one side, but there was not even a partial immersion.

Finally one came close to the raft and in its beak were seen several silver-blue fish, stacked crosswise. Ahead of the bird the water broke and a whole school of similar fish skipped



Fairy Tern, Juggler of Fish, Catches a Beakful and Stacks Them Like Tinned Sardines

The question has long been debated. How does the fairy tern, with fish in its bill, capture more without dropping the others? Recently a Marine, floating in a life rait, reported the answer. He saw a fairy tern plunge into a school of small fish leaping out of the sea. With each capture on the wing, the bird threw back its head, crushed the squirming prize, and stacked it crosswise (page 812).

along the surface. Some jumped as high as three or four inches.

In a burst of speed the fairy tern grabbed a fish in its half-open beak. After crushing it to lifelessness, the bird tipped back its head and allowed the quarry to settle against those previously captured.

Two more fishes were caught in like manner within easy view of the watching Marine before the tern flew off toward the island.

In an indirect way my observations of nesting terms tend to give credence to this method of capture. Almost without exception, when fish were brought in neatly stacked, they were all of this silver-blue type, which, simulating flying fish, jump out of the water for escape instead of seeking the depths.

When other types were brought in, such as

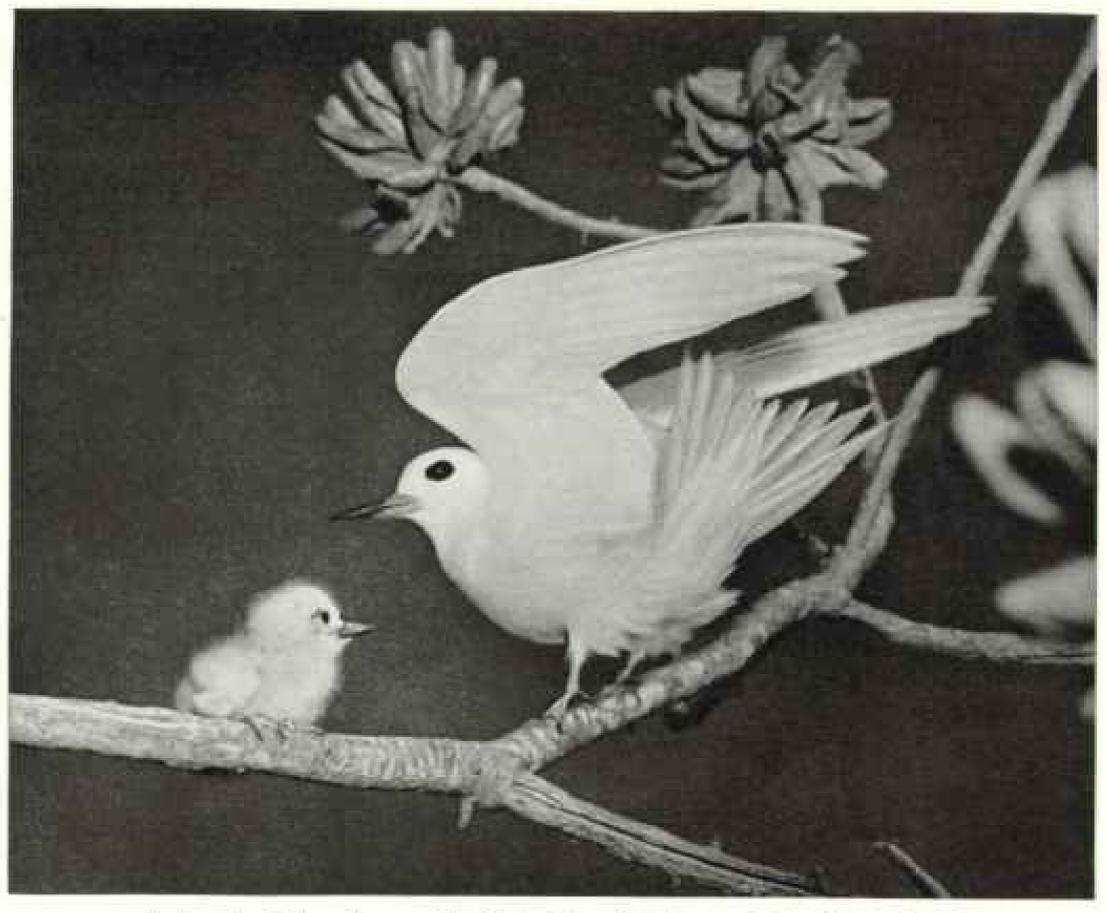
tiny halfbeaks and needlefish or squid, they were usually singles. Their capture probably necessitated a partial immersion.

For the first week or so of a young tern's life, it is fed regurgitated food by both parents, but when it reaches an age of eight or nine days it perks up at a parent's approach and takes small whole fish from the bill.

Sleep Soundly, Balanced on a Branch

The youngster starts with the one toward the tip, and after that is swallowed it takes the rest in succeeding gulps. The feeding adult stands by patiently, and when all the fish have disappeared it looks the offspring over carefully, then flies off to roost twenty or thirty feet away.

After a filling meal the fledgling dozes off



Roly-poly Baby, Born with "Glue Feet," Clings to His Giddy Perch

So tenacious is the hold of the fledgling that servicemen humorously give the fairy tern credit for hatching feet first, taking a deathlike grip, and then shedding the shell. A sleeping bird clings to a branch automatically, with no effort on its part. Tendons in the legs and feet are so arranged that when it relaxes its body the toes "dig in" and clasp the perch more securely. Thus a bird can sleep on through strong winds, rain, and waving branches without danger of falling.

in a peculiar position. Bending its leg joints, it sags on the branch. Its full crop and head droop over one side and its after end droops over the other. In this counterbalanced position it drops into a sound sleep, and other birds can land on the branch with abrupt jars without disturbing the slumbering youngster.

Despite their branch-nesting ways, these birds are adaptable. When man-introduced rabbits destroyed vegetation on Laysan Island, in the Hawaiian group, the fairy terns took to laying their eggs on precipitous pinnacles and shelves of rock, clinging as tenaciously to limestone perches as did their ancestors to nestless horizontal limbs.*

Although fairy terns are found on numerous

islands, spread over a wide area, the range of individuals is limited. In normal weather they rarely venture more than fifteen or twenty miles from their island.

The ranges of various sea birds were tabulated by the military authorities, and classes in recognition were available at Marine survival schools. The pilots learned that the fairy terms stay closer to home than most sea birds. Hence, they are not only one of the few things of beauty to be found on the inhospitable atolls, but also had a distinct military value in the war in the Pacific.

*See "Bird Life Among Lava Rock and Coral Sand," by Alexander Wetmore, NATIONAL GEOGRAPHIC MAGAZINE, July, 1925.

Notice of change of address of your National Geographic Management the National Geographic Society by the first of the month to affect the following month's issue. For instance, if you desire the address changed for your February issue, The Society should be notified of your new address not later than January first. Be sure to include your new postal zone number.

The Society's New Map of Bible Lands

THE timely new Map of Bible Lands and the Cradle of Western Civilization which comes to the 1,500,000 member-families of the National Geographic Society with this issue of their Magazine depicts the world's oldest mapped area.*

Here man has been shaping his destiny since the origin of human culture. Here lies the traditional site of the Garden of Eden; here, on the Tigris or the Euphrates, Noah built the Ark; here archeologists constantly unearth traces of a vanished past, as far back as the sixth millennium before Christ.

Yet no other area on earth appears more frequently in today's newspaper headlines. A dozen international trouble spots remind us that the cradle of Western civilization holds one of the keys to world peace.

The new map, on a generous scale of 63 miles to the inch (1:4,000,000), is printed in ten colors on a sheet 32 inches by 22 inches. It stretches on the north from Istanbul (Constantinople) eastward to the Trans-Caucasian oil center of Baku. On the south it reaches from El 'Alamein, where Rommel's Nazis were hurled back in their final thrust toward Alexandria, to the tiled mosques and golden domes of fabled Isfahan.

Within its borders are Palestine, Trans-Jordan, much of oil-rich Iran and Iraq, northern Saudi Arabia, the oil island of Bahrein, Syria, Lebanon, and Turkey astride the Dardanelles. Problems arising in these areas, where man's earliest recorded struggles for survival took place, today challenge the world's statesmen.

Old and New in the Holy Land

Two insets of the Holy Land, at 16 miles to the inch, graphically portray the contrast of old with new.

One shows the Holy Land of Bible days, from Dan to Beersheba. Historic spots noted include Mount Carmel, where Elijah contested with the prophets of Baal (I Kings 18: 17-40); Dothan, where Joseph's brethren sold him into slavery (Genesis 37: 17-28); Penuel, where Jacob wrestled with the Angel (Genesis 32: 22-31); Megiddo, scene of the prophetic battle (Armageddon) between the forces of good and evil (Revelation 16: 14-16); and Gaza, where Samson destroyed the temple (Judges 16: 21-30).

The other inset shows the Holy Land as it is today, with place names of Jewish cities, towns, and agricultural settlements in red lettering. These include modernistic Tel Aviv, with a Jewish population of 200,000; the diamond center of Natanya; and Gan Shemuel,

model Jewish agricultural community carved out of a desolate area the Arabs dubbed "The Valley of Death." †

Today potash from the Dead Sea fertilizes Palestine. Modern equipment extracts chlorine, sulphuric acid, and caustic soda from briny depths four to six times as salty as the ocean.

An Arab village and a Jewish collective farm stretch side by side along the Sea of Galilee, on whose waters Jesus walked.

Present-day Jericho is an Arab settlement about a mile from Tell es Sultan, the ruins of old Jericho, where "the walls came tumbling down" (Joshua 6: 20).

Three New Independent States

The new map shows Syria, Lebanon, and Trans-Jordan as independent states. As far back as the days of ancient Hittite, Egyptian, and Assyrian empires, these lands were fought over. Syria and Lebanon saw the Persians, Macedonians, Seleucids, Ptolemys, Romans, Moslems, and Ottomans come and go. Now France, their latest ruler, under a World War I mandate, has departed. What does the future hold in store for Damascus, which St. Paul knew so well, and the Biblical ports of Tyre and Sidon, as well as newer cities?

Since David and Solomon established their dominion over Edom and Moab, Trans-Jordan has been ruled by one great empire after another. In 1921 it became an Arab kingdom under British protection as part of the World War I Palestine mandate. Now it, too, is self-governing.

This map also shows the Dodecanese Islands, formerly belonging to Italy, as possessions of Greece. The Paris conference of foreign ministers of the United States, Great Britain, Russia, and France agreed to their return.

By consulting the new map, members can see in detail the strategic situation of the Dardanelles, whose control is of world importance.

Map Bears 248 Historical Notes

On the map in red are 248 historical notes, many in the huge arc which extends from Egypt on the left up through Palestine and

*Members may obtain additional copies of the new map of Bible Lands (and of all standard maps published by The Society) by writing to the National Geographic Society, Washington 6, D. C. Prices, in United States and Possessions, 50¢ each, on paper; \$1 on linen; Index, 25¢. Outside United States and Possessions, 75¢ on paper; \$1.25 on linen; Index, 50¢. All remittances payable in U. S. funds. Postage prepaid.

*See "Palestine Today." by Francis Chase, Jr., National Geographic Magazine, October, 1946. Syria to the Euphrates, then down through Mesopotamia to the Persian Gulf. This arable fringe between the great desert of Arabia and rugged mountains of Asia Minor was called the Fertile Crescent by Dr. James Henry Breasted, late director of the Oriental Institute, University of Chicago.

The Oriental Institute, one of the leaders in archeological research in this area, has cooperated with the cartographic department of the National Geographic Society in reviewing the archeological sites shown on the new map and in bringing the compilation up to date.

From the dawn of recorded history to the Golden Age of Greece, civilization developed here. Stone by stone, its foundations are being discovered. New "earliests" and "firsts"

are coming to light.

Some 4,500 years ago, man made the first map—at least, the earliest one ever found. Engraved on a clay tablet, it showed a tract of land in northern Iraq. It was discovered at Nuzi.

Since then, the art and science of cartography, like all other phases of culture which had their origins in this Fertile Crescent, has advanced until now your Society's cartographers can digest and compile data from current aerial surveys and other late official sources, then print and distribute one and a half million of these large, 10-color map supplements with a single issue of the National Geographic Magazine.

Wheel Known Before 4000 B. C.

Among the earliest permanent man-built dwellings yet discovered are those of old Jericho, which existed before 5000 n. c.

At Hassuna, near Mosul, relics of a community of Neolithic people which flourished some 5,000 years before Christ have been unearthed. These people made pottery, built

houses, and practiced agriculture.

The first intimation of a wheel comes from Tell Halaf, on the Khabur. Here archeologists have found a distinct culture of before 4000 B. C., which they call the Chalcolithic. It is distinguished by its magnificent pottery fired in elaborate kilns. At Tell Halaf was unearthed a painted vase depicting a chariot mounted on two wheels and bearing a man.

At Erech, on the Euphrates above Ur, the earliest attempt at writing has been found cylinder seals which antedate crude picto-

graphic scripts of 3000-4000 B. C.

Oldest religious structure yet discovered is at Tepe Gawra, near Nineveh—an acropolis consisting of three large temples built around a courtyard, and estimated to be some 60 centuries old. From the Chaldeans, who founded astronomy as a science, we inherit the 24-hour day and the 360-degree circle, although the sexagesimal system (counting by 60's) goes back to an even earlier period.

The first iron was used by the Hittites of

Asia Minor.

Recent excavations at Khafaje, near Baghdad, indicate that the horse, originally domesticated by Aryan people northeast of the Caspian, may have reached Babylon by 3000 B. c.

It was the Phoenicians who spread the culture developed in the ancient lands of Egypt and Mesopotamia to distant shores of the Mediterranean and beyond, even circumnavigating Africa.

The three great religious systems, Christianity, Mohammedanism, and Judaism, which now are embraced by 829,000,000 people, all had their origin in this area. Jerusalem is

equally holy to all three religions.

Our arithmetical system comes from the Arabs. During the Dark Ages in Europe, the universities of Baghdad and other Oriental cities kept alive the learning and ideas of both Greek and Oriental philosophy which finally awakened Europe to the Renaissance.

St. Paul's Travels, Crusades, Oil Lines

The map as a whole shows many changes. New wartime features are brought up to date; the controversial oil fields, pipe lines, and refineries are shown; and new railways appear, such as the lines built from Kut to Ba'quba in Iraq and from Khorramshahr to Ahwaz in Iran.

Small insets show in detail Jerusalem, the traditional route of the Exodus, St. Paul's travels, and the Crusades.

Western Iran, shown on the extreme right of the new map, is the scene of the fabulous exploits of America's Persian Gulf Command, formed for one magnificent purpose—to get quantities of war material into Russia as quickly as possible.

Khorramshahr was converted into a modern port where 80-ton cranes picked up Sherman tanks and Diesel locomotives like toys. Andimishk became a small Detroit where two assembly lines turned out 7,500 vehicles each month, with a truck completed every five minutes. Another plant assembled airplanes of all types by the thousands.

In all, the Command delivered four and a balf million long tons of war supplies to Russia. The great Russian offensive which ended in Berlin included 143,000 vehicles of all types delivered by the Persian Gulf Command. All this was accomplished in the stifling heat of one of the world's worst climates.

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ORGANIZED FOR "THE INCREASE AND DIFFUSION OF GEOGRAPHIC KNOWLEDGE"

To carry out the purposes for which it was founded fifty-eight years ago, the National Geographic Society publishes this Magazine monthly. All receipts are invested in The Magazine itself or expended directly to promote geographic knowledge.

Articles and photographs are desired. For unterial The Magazine uses, generous remuneration is made.

In addition to the editorial and photographic surveys constantly being made. The Society has spansored more than too scientific expeditions, some of which required years of field work to achieve their objectives.

The Society's notable expeditions have pushed back the historic horizons of the southwestern United States to a period nearly sight centuries before Columbus crossed the Atlantic. By dating the ruins of the wast communal dwellings in that region, The Society's researches solved secrets that had publied historians for three hundred years,

In Mexico, The Society and the Smithennian Institution, January 85, 1930, discovered the oldest work of man in the American for which we have a date. This slab of state is engraved in Mayan characters with a date which means November 4, 201 a. c. (Spinden Correlation). It america, and reveals a great center of early American sulture, previously unknown. On November 11, 1932, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, Englarer II, ascended to the world altitude second of 72,395 feet. Capt. Albert W. Stevens and Capt. Cavil A: Anderson took about the gondola nearly a total scientific instruments, and obtained results of extraordinary value.

The National Geographic Society-U. S. Navy Rapedition camped on desert Canton Island in mid-Portic and successfully photographed and observed the solar eclipse 67 1937. The Society has taken part in many projects to increase knowledge of the sun.

The Society cooperated with Dr. William Beebe in deep-sea explorations of Bermuda, during which a world recard depth of 3,028 feet was attained.

The Society granted \$15,000, and in addition \$75,000 was given by individual members, to the Government when the compressional appropriation for the purpose was insufficient, and the finest of the giant sequois trees in the Giant Forest of Sequois National Park of California were thereby saved for the American people.

One of the world's largest icefields and glacial systems emaide the polar regions was discovered in Alaska and Yukon by Bradford Washburn while exploring for The Society and the Harvard Institute of Exploration, 1938.



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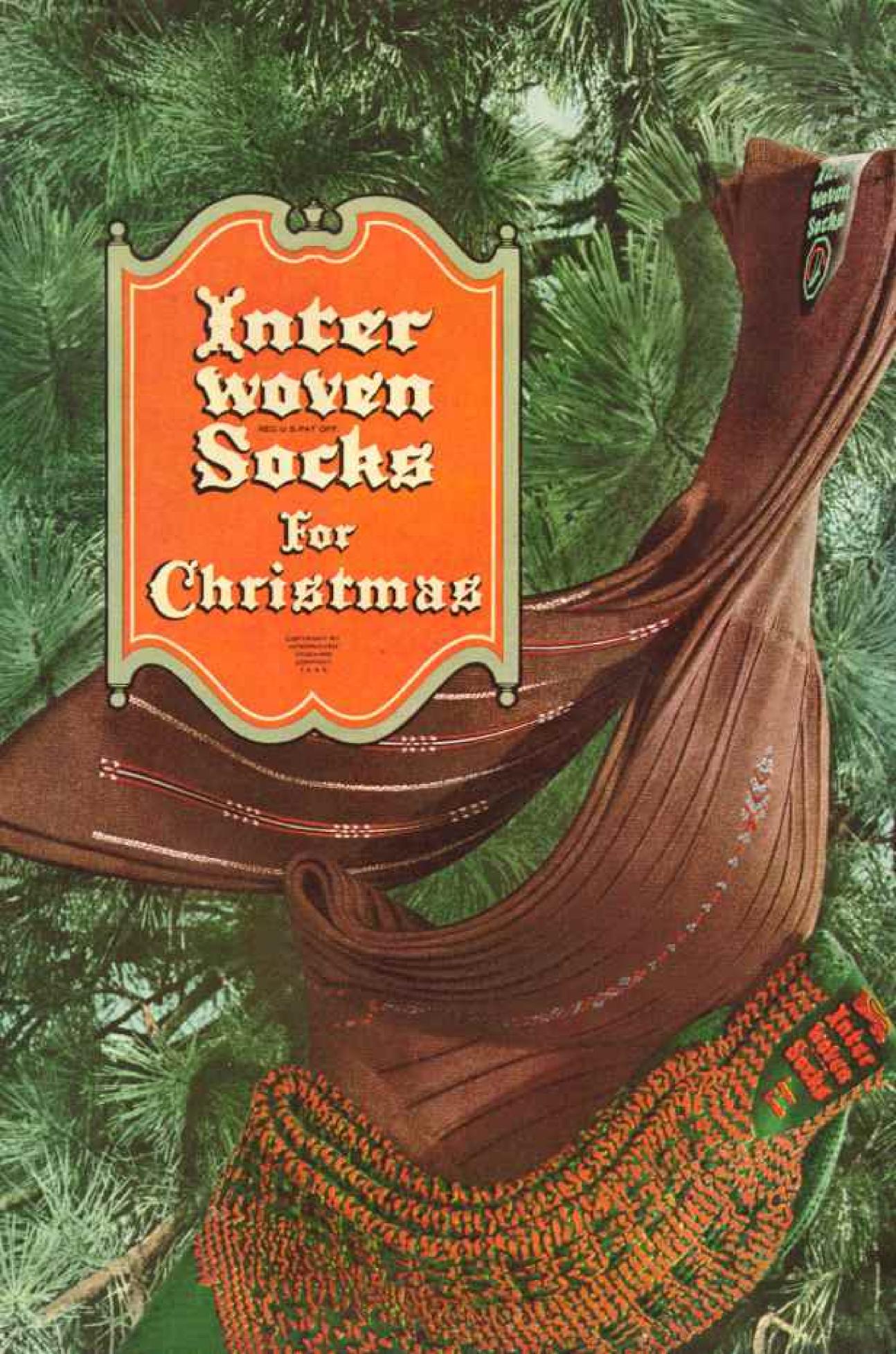


At right—the new "Centennial" Dublin shape \$23.

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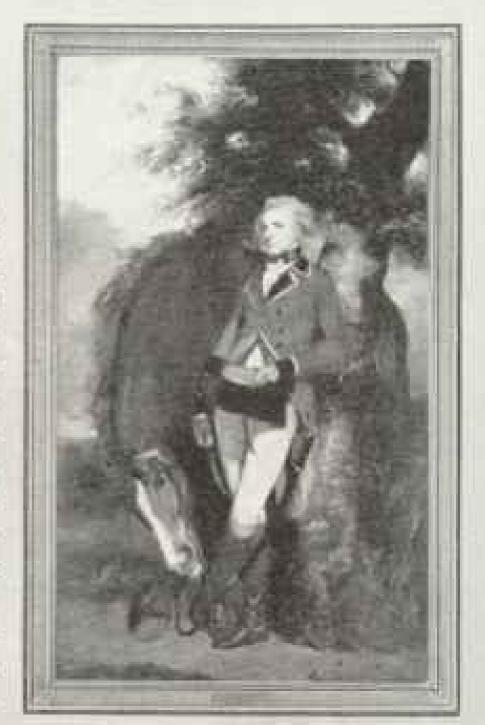
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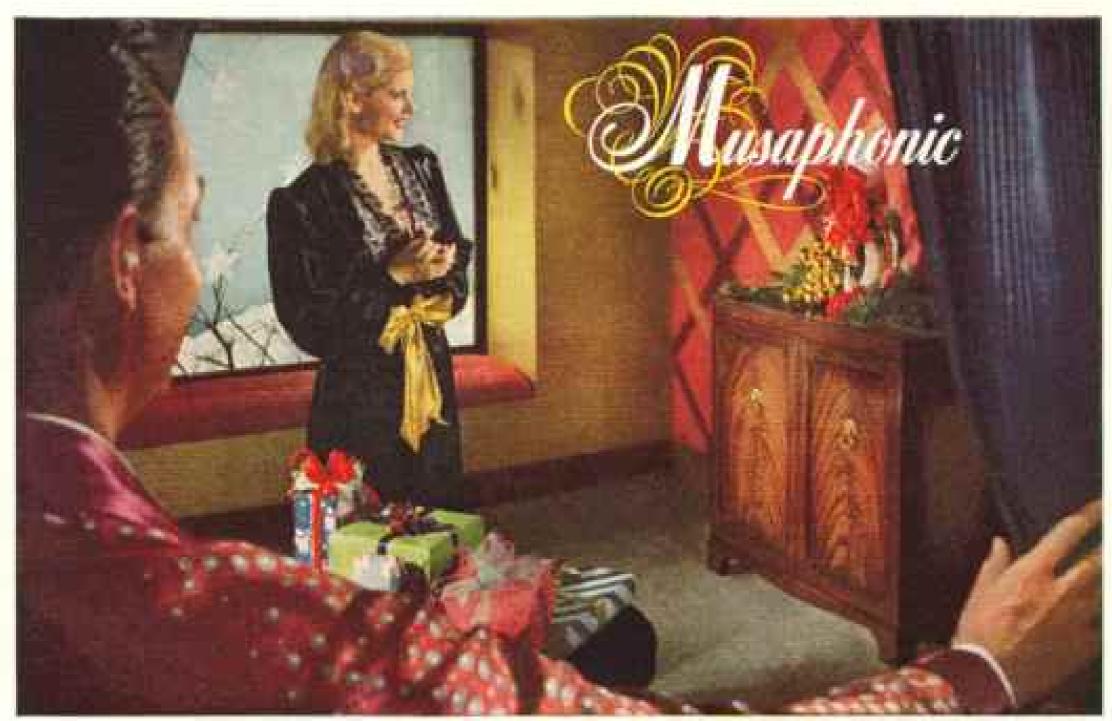
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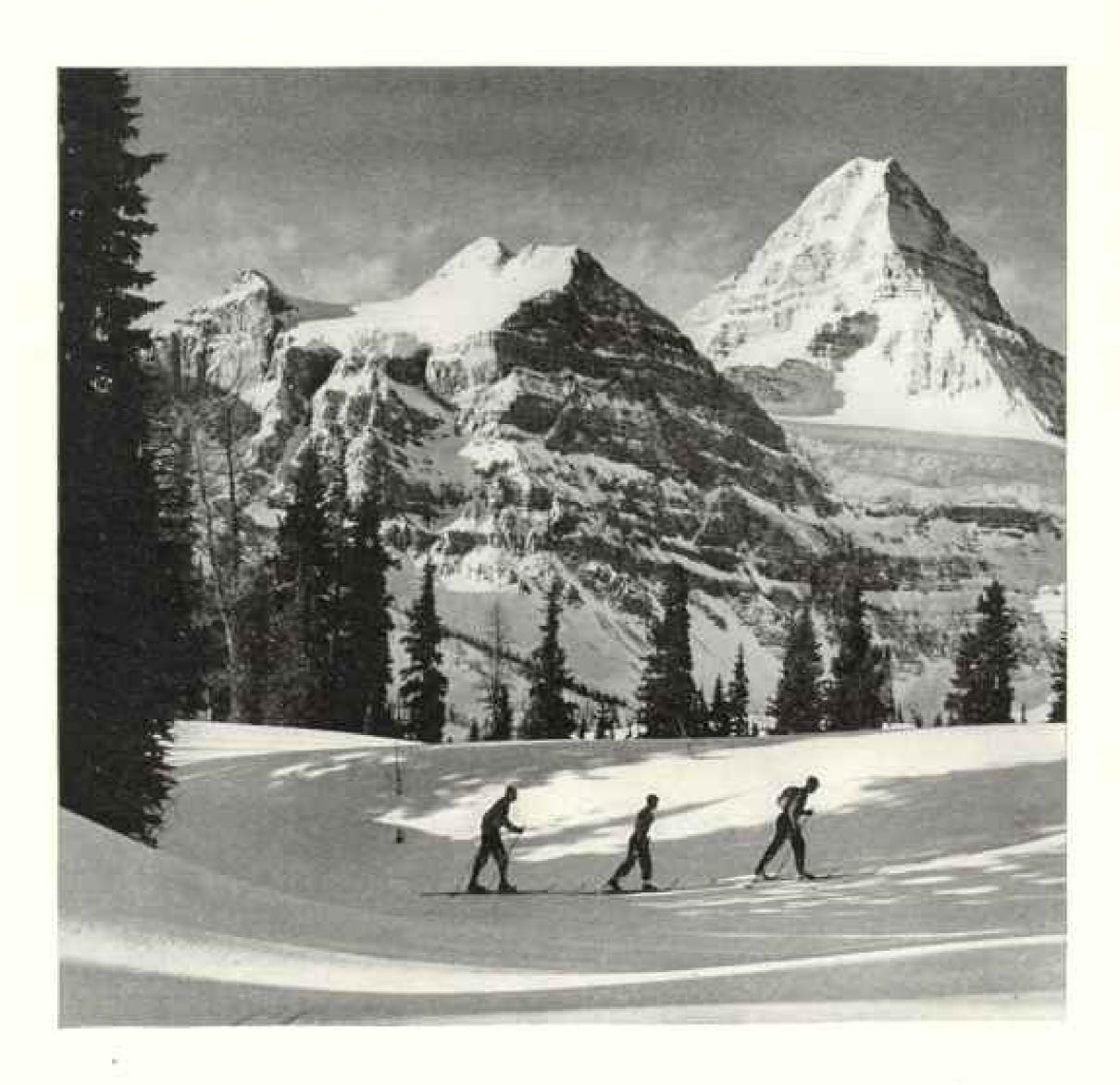
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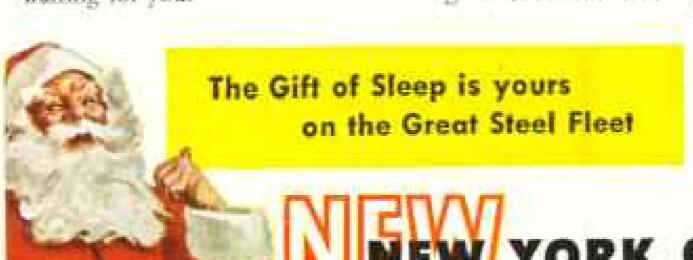
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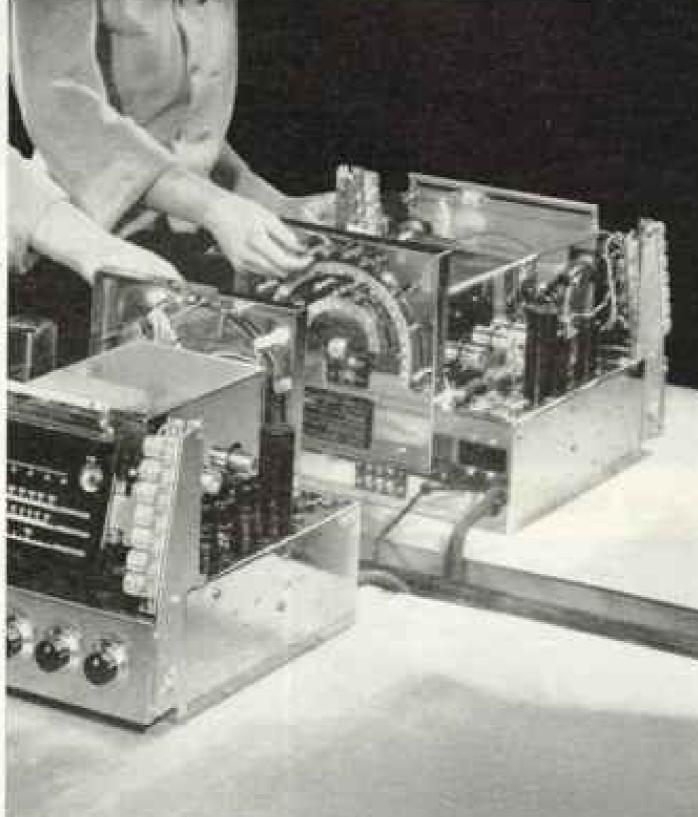
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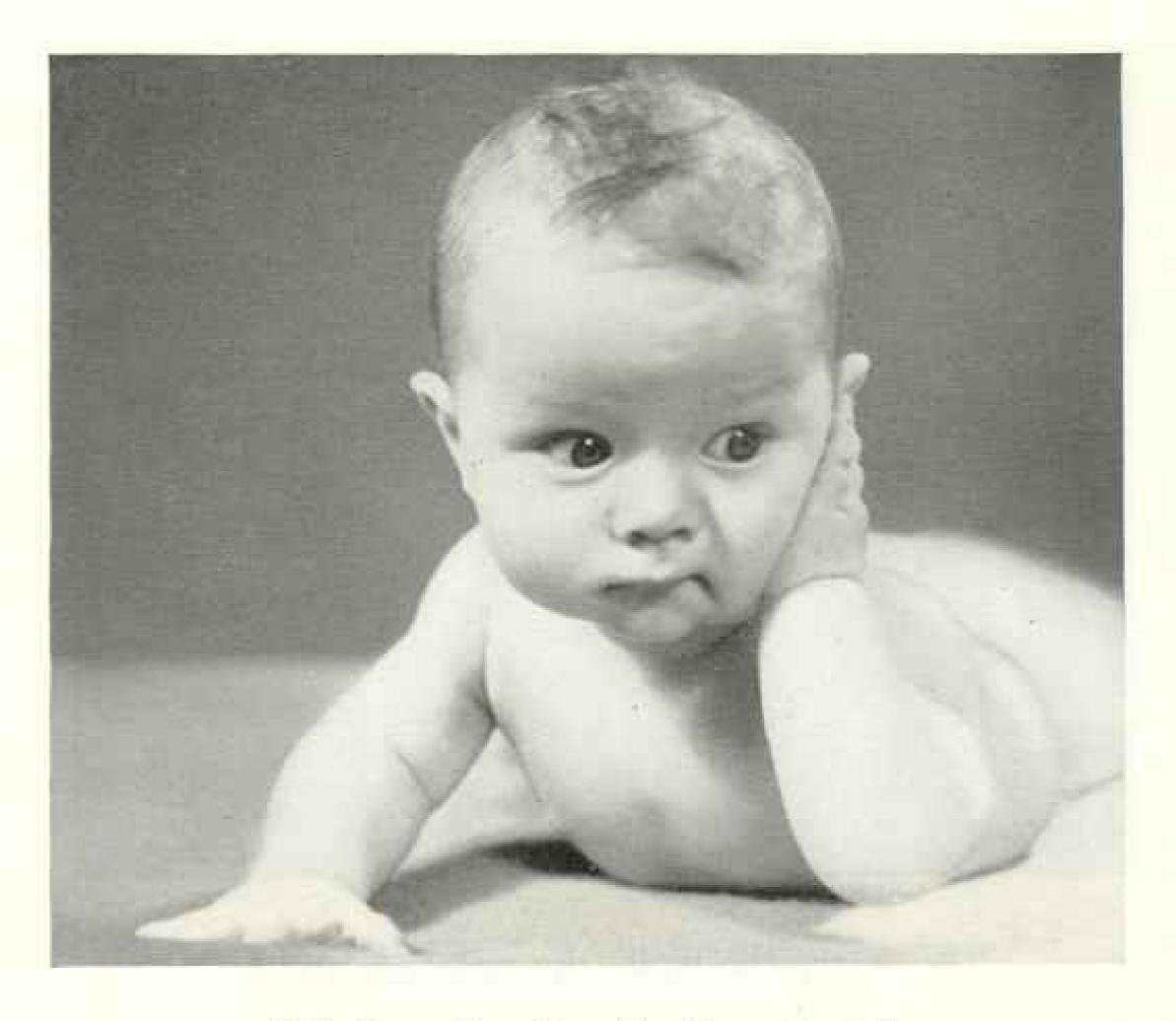




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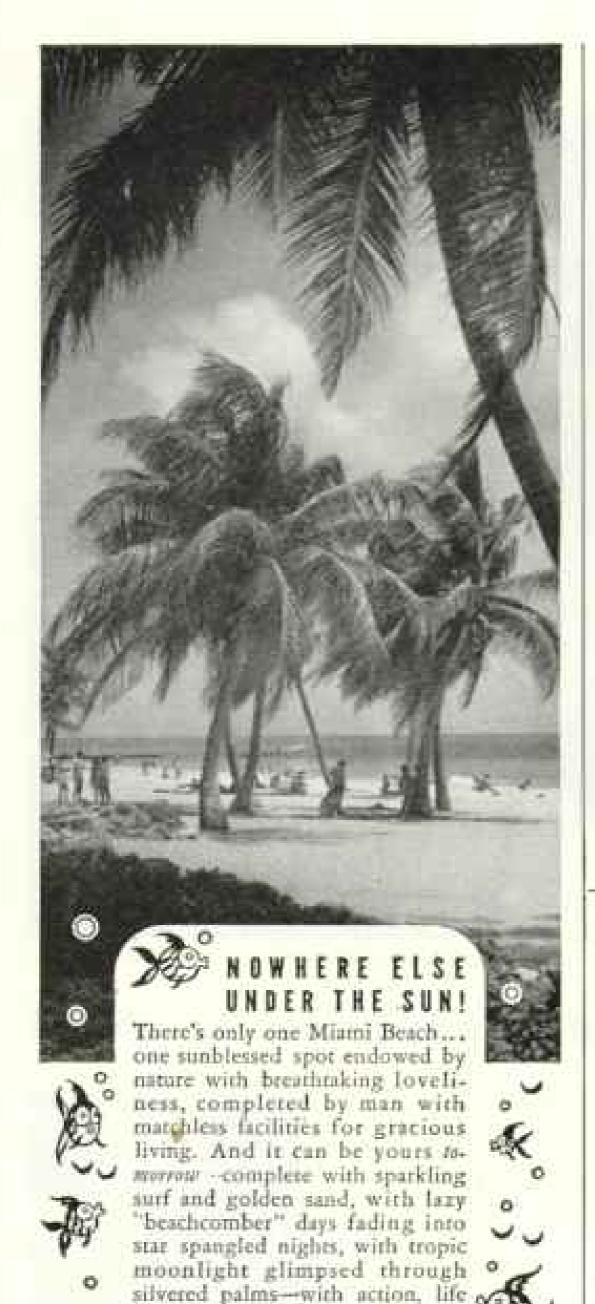
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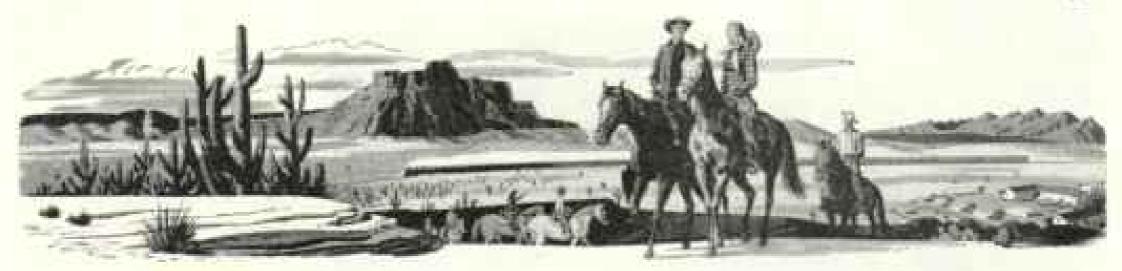


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- 1. The Golden State Limited, with through streamlined Pullmans from Chicago, New York and St. Louis and streamlined chair cars from Chicago. Now on the fastest schedule in its history, the Golden State streaks from Chicago to Tucson in only 36% hours, Phoenix in 39% hours, Los Angeles in 49% hours. No extra fare.
- 2. The swift Imperial, new 53-hour train between Chicago and Los Angeles, gives you an exciting 51-mile trip through Mexico, and shows you California's sunny Imperial Valley. No extra fare.
- 3. The friendly Californian, popular economy train, carries coaches and tourist sleeping cars and a lounge car. Economy meal service, Through cars to San Diego.

On the romantic Sunset Route, through the Old South from New Orleans to Los Angeles, via Houston, San Antonio, El Paso, Southern Arizona and Palm Springs, you may ride:

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- 5. The Argonaut. Carries chair cars and coaches, tourist and standard Pullmans and full lounge car. Through cars to San Diego. Fast, luxurious daily trains from principal eastern cities connect with the Sunset Limited and Argonaut at New Orleans.

Incidentally, we would like to remind you that the peak winter resort season will continue until February. Most resorts, however, will remain open until late spring. To insure getting the train and resort reservations you want, if possible try to take your trip a little later, during the less crowded months. All train and resort reservations should be made well in advance.



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Do you find yourself, now and then, reckoning with memories of pink beaches, winding limestone lanes, the scent of hibiscus and oleanders? In short, is Bermuda on your mind?

The islands are busy reconverting from war. Many of the hotels and guest houses already are open. But it will be some months before there will be ample facilities for every one,

So—before you leave for the islands—be sure to have your THAVEL AGENT arrange round-trip passage and reservations and obtain confirmation of hotel or guest-house accommodations.

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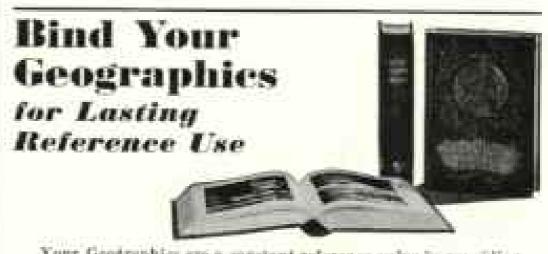
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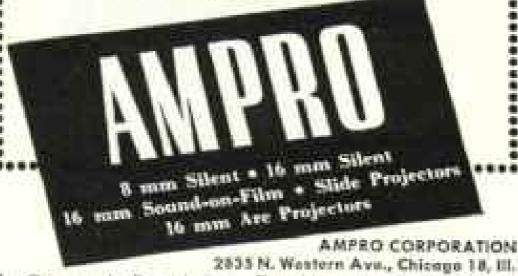


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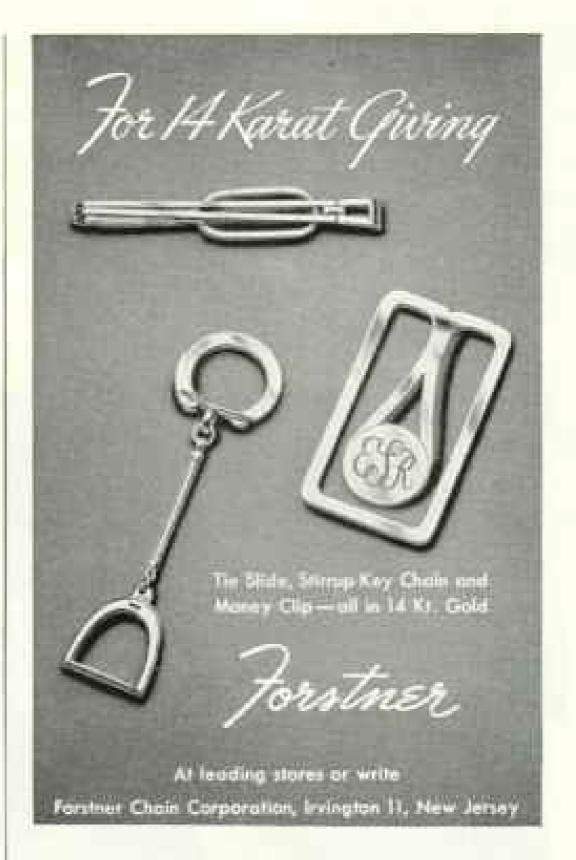
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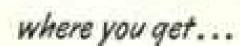


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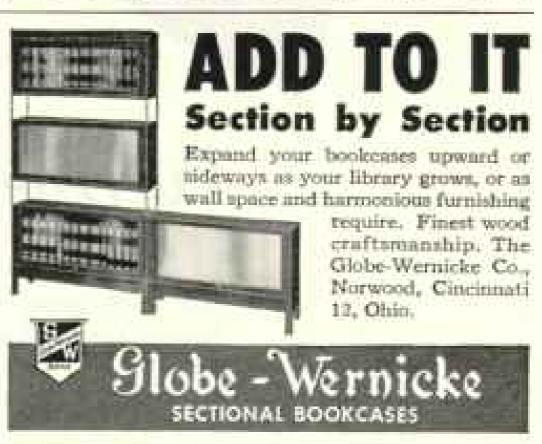




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You would think she had just stepped out of a magazine cover. She's so lovely, so fresh, so tidy. Yet this young lady has just completed a thousand-mile journey by rail.

That she made her trip behind a General Motors Diesel locomotive, in the elegance of a modern de luxe coach, explains her crisp, well-laundered look.

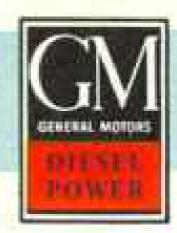
For these smooth-pulling locomotives and the luxury-comforts of the modern coaches they originally inspired — contribute to make a long trip restful, unruffled and clean.

When GM Diesels ushered in the stream-

line era they lifted the level of virtually all travel. They added lure to joyous journeys over singing steel. To the haulage of modern freight loads they brought efficiencies which are truly revolutionary.

Outstanding as GM Diesels are today, they also set the pace for the new tomorrow. For they furnish the most essential and forward-moving element for the coming new day in railroading.

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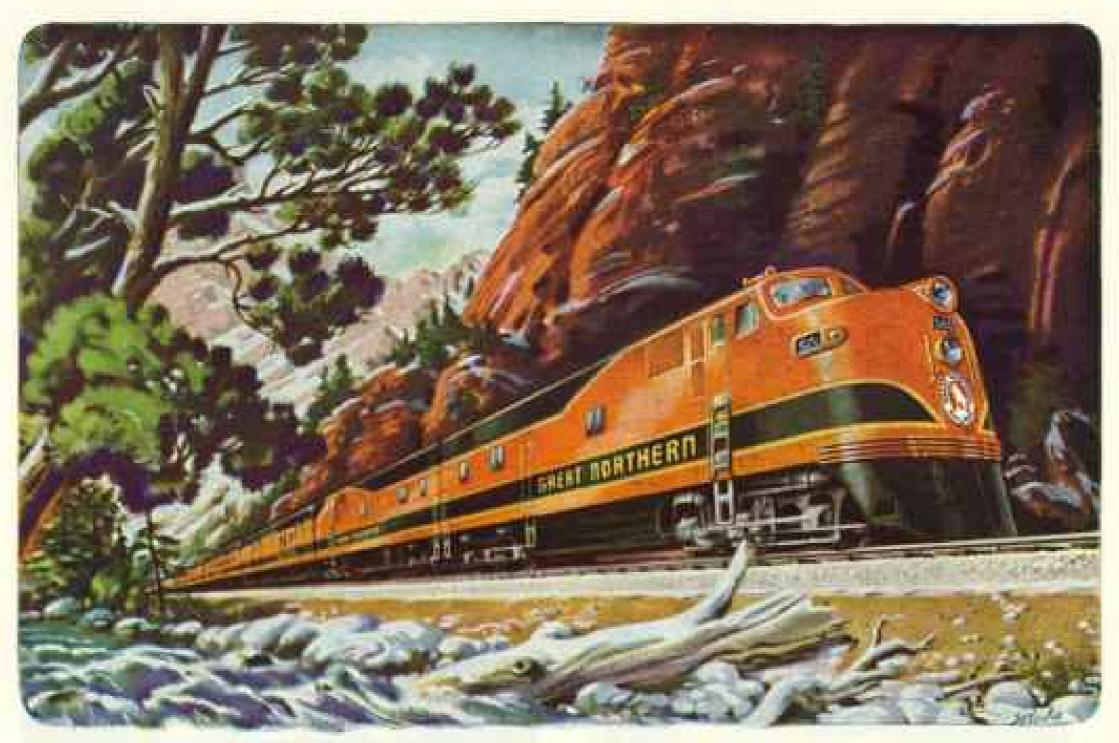


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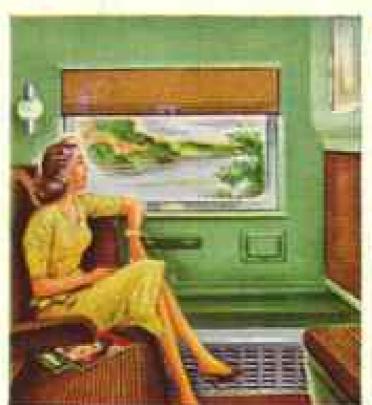




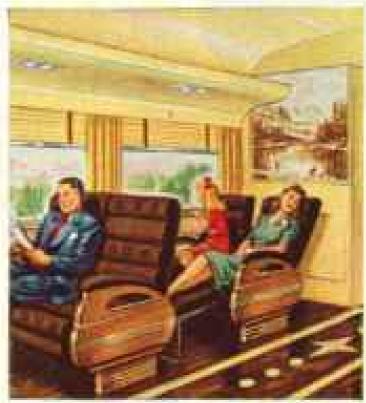


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Can you answer these questions about

DIABETES?



Q. Is diabetes increasing or decreasing?



A. If present trends continue, the number of diabetics in this country will increase by 18% from 1940 to 1950, largely because more people live to reach middle and old age. Fortunately, doctors today can help control the disease; in fact, nearly all diabetics aided by modern medical science can lead full, active lives. Since the discovery of insulin, the average length of life of diabetics has increased greatly.

Q. What new studies hold great hope for the future?

A. Medical science knows more about diabetes than ever before, and constant research on new types and more effective combinations of insulin is being carried on. A chemical compound,
alloxan, which can produce experimental diabetes in animals, has
provided a new means for studying the disease. Further hope for
progress lies in new discoveries about the utilization of sugar
in the body.



Q. Does diabetes have warning symptoms?



A. There are usually no symptoms in early diabetes, but it can be detected by the presence of sugar in the urine. Periodic health examinations, including urinalysis, are the most effective way of discovering the disease early, when it is easiest to control. Once the disease has developed, definite symptoms appear, such as constant hunger, excessive thirst, loss of weight, and continual fatigue.

Q. How can medical science help the average diabetic?

Diet, insulin, and exercise are the major factors in controlling diabetes. Successful treatment depends upon the closest co-operation between doctor and patient in keeping these factors in proper balance.

The physician determines whether the patient needs insulin and how much, as well as the amount and kinds of food that best meet his needs. The patient learns how to live with the disease, and conscientiously follows the doctor's instructions—thus guarding against complications that affect the arteries, heart, kidneys, and eyes.

Even with diabetes, it is usually possible

to enjoy a nearly normal life. For more detailed information about the disease, send for Metropolitan's free booklet 126-N, entitled "Diabetes."





Her secret kept Audubon up all night

In his exploration of Louisiana's Feliciana wilderness in the 1820's, John James Audubon was often led to new bird-life discoveries by observations of the plantation Negroes.

It was from Pomp, one of these native naturalists, that Audubon first learned of the stealthy measures that the chuck-will's-widow took to keep her nest from being robbed by marauders. Touch the eggs of this shy bird, Pomp said, and the chuck-will's-widow would move them to a new nest.

Andubon had only to find a nest to prove that the chuck-will's-widow did move her eggs. But he had to spend a night in the brush beside a nest he had molested to discover how she moved them. Then, as the pine woods came to life with the dawn, he saw a pair of the birds fly from the nest, carrying the eggs in their beaks to another place for safekeeping.

Now a man can't very well depend, as does the chuck-will's-widow, on spur-of-the-moment moves to safeguard his possessions. Nor is it customary for thieves to leave fingerprints before they break into your house.

But fortunately you don't have to rely on sly instinct and quick flight to guard your valuables from thieves. You can invest a small sum in burglary insurance and get continuing, 24hour protection, whether you're at home or away, and this includes the possessions you take with you.

Burglary is on the increase. And more often, too, these days, thieving is accompanied by vandalism.

Burglary insurance protects you against both. If robbers break into your house, this insurance not only helps repay your loss for what they take away—it also helps to pay for damage they do to your house, furniture, or your other valuable belongings that they can't take with them.

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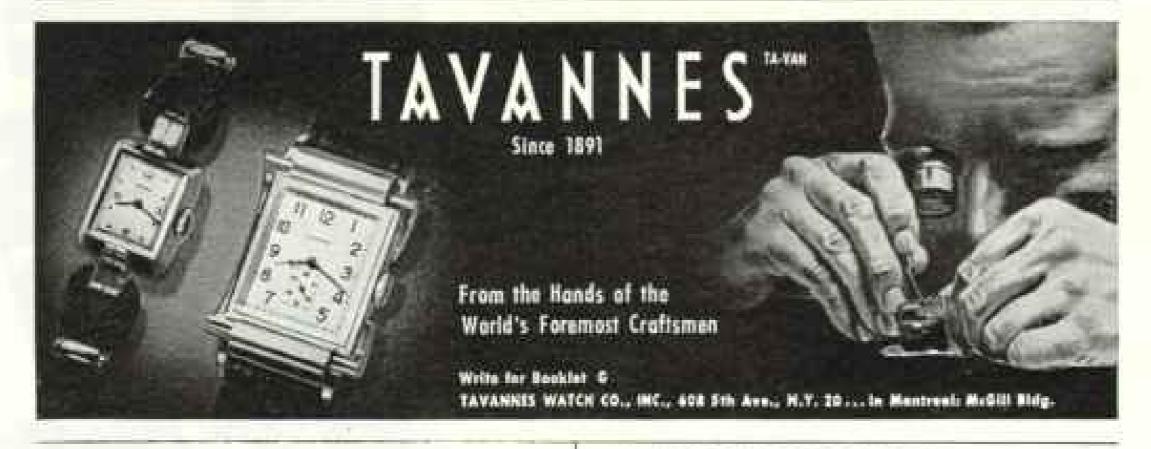
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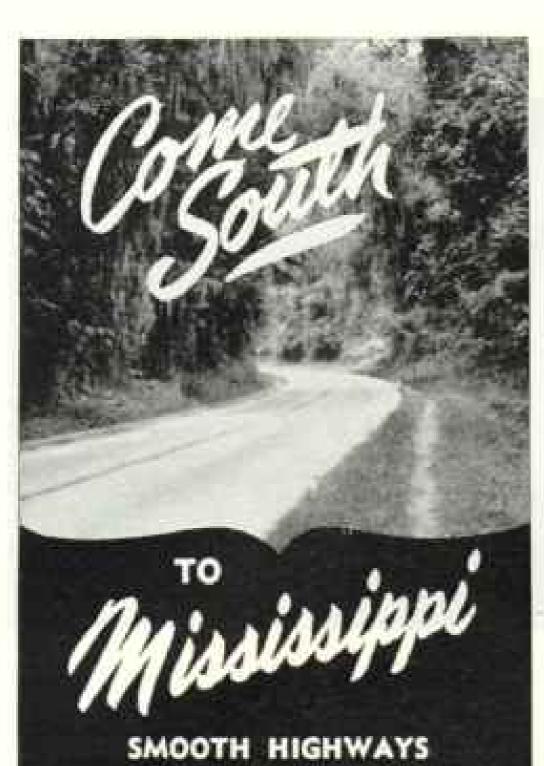
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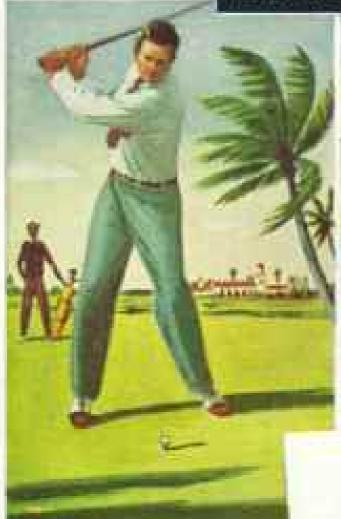
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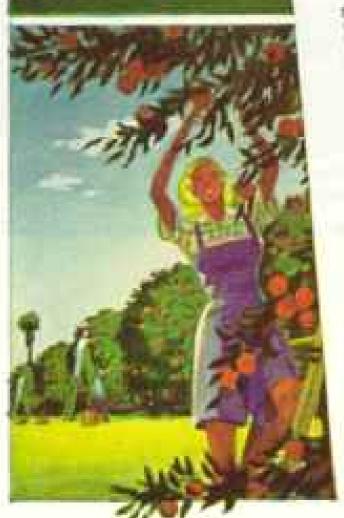


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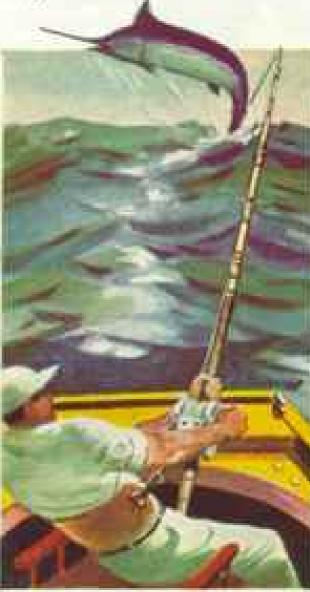




Fun in the sun! Florida's glorious sunshine is waiting to welcome you. Day after day, it will invite you to swim, golf, fish; to enjoy all of the many "summer sports" that are winter pleasures in Florida. It will warm the soft sands of beaches for lazy hours of healthful relaxation, and provide spring-like days for your visits to Florida's many famous attractions and thrilling spectator sports.

This winter, you will find Florida in its gayest, most glamorous mood. Plan to come early, stay longer. There's sunny fun in Florida to fit every vacation budget.

And remember, there's more to Florida than just a happy holiday. Every year more and more visitors discover that Florida offers real opportunities for industry, agriculture and business; that Florida means happier living the that Florida means happier living the year 'round, See all of Florida this winter. You may find that your opportunity is here, too.

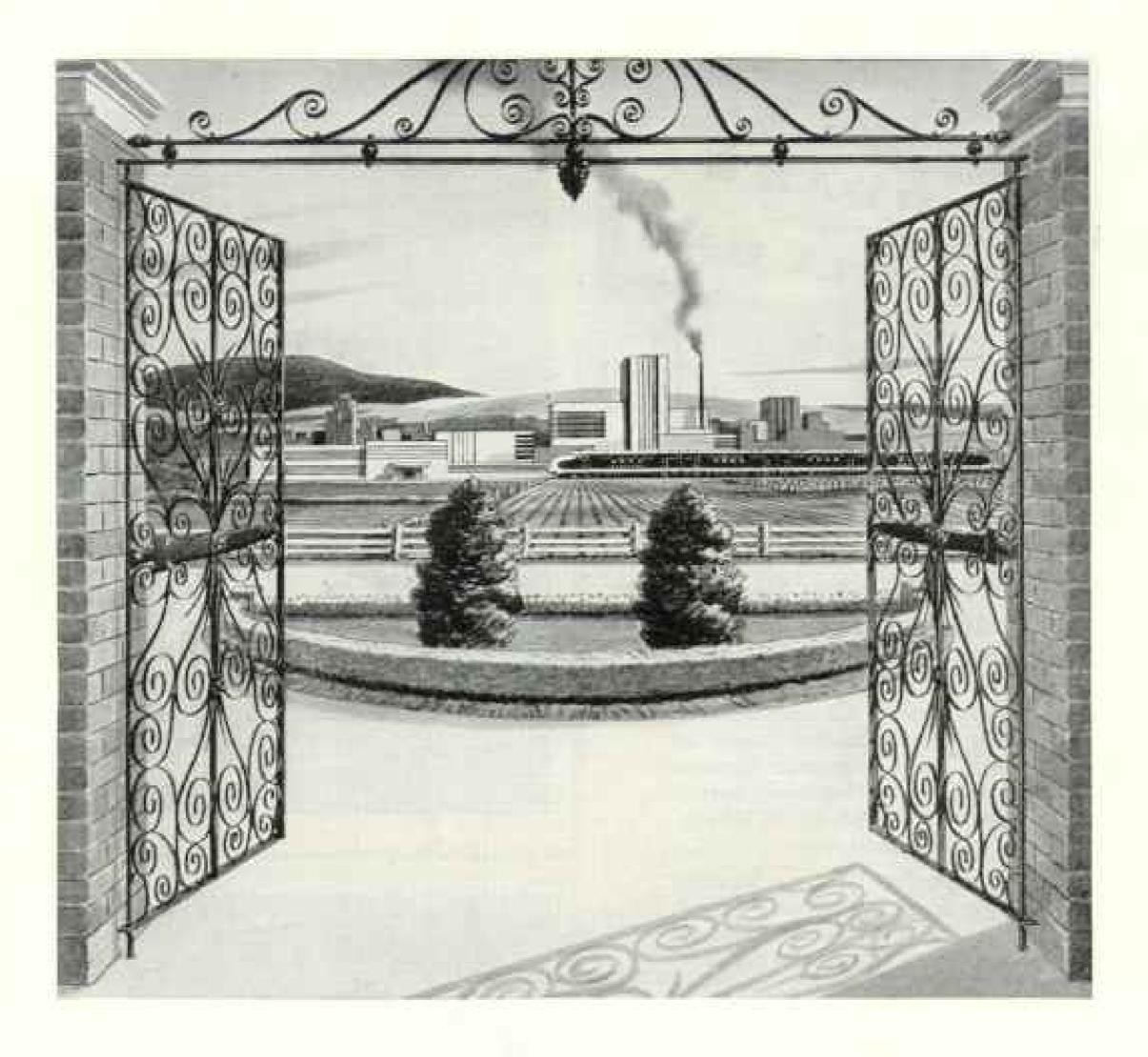




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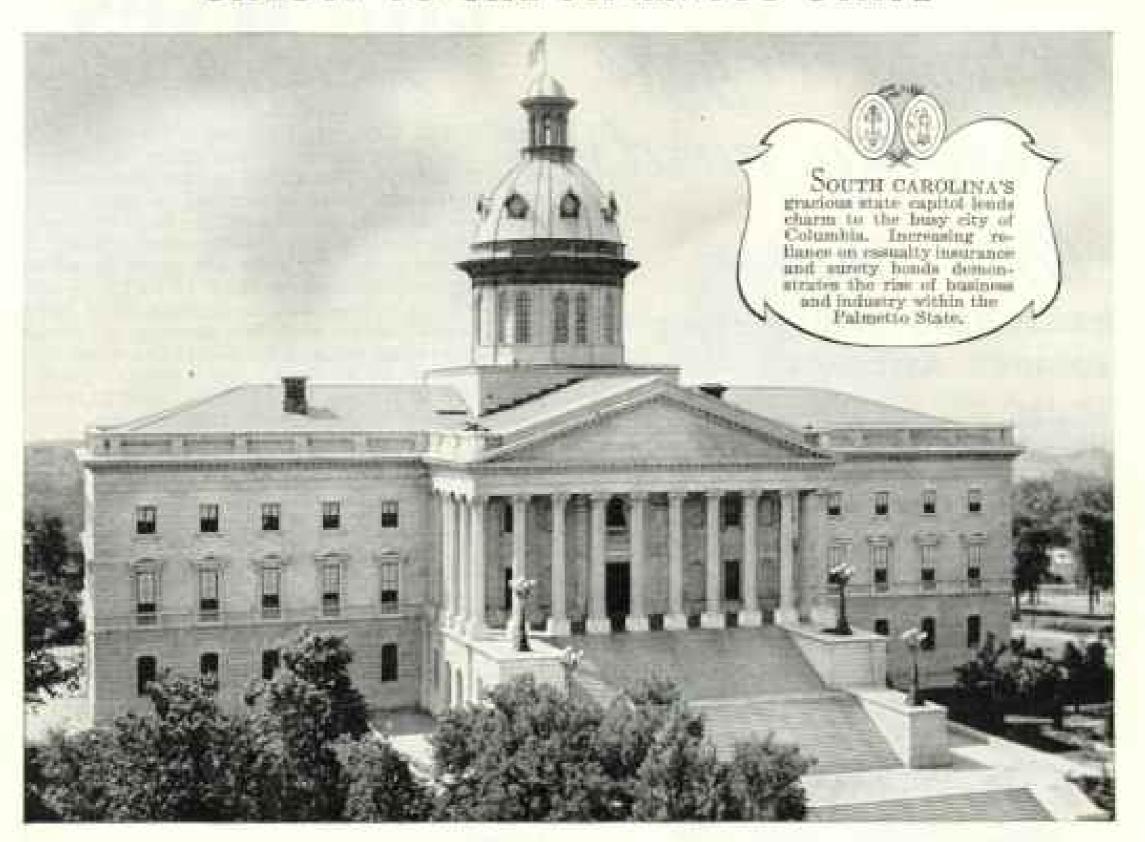
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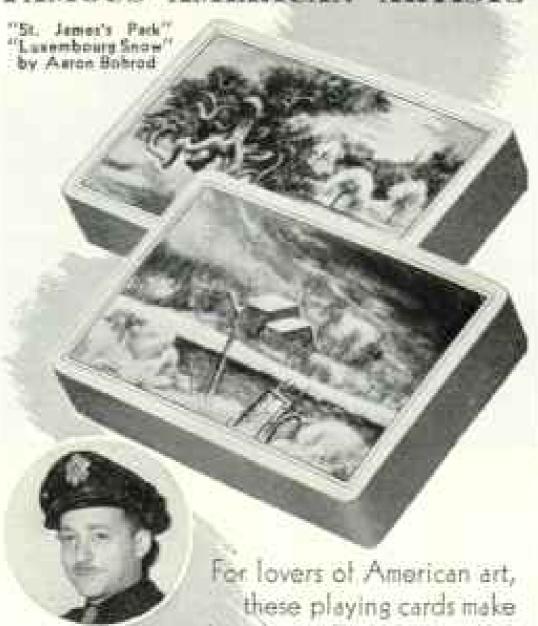
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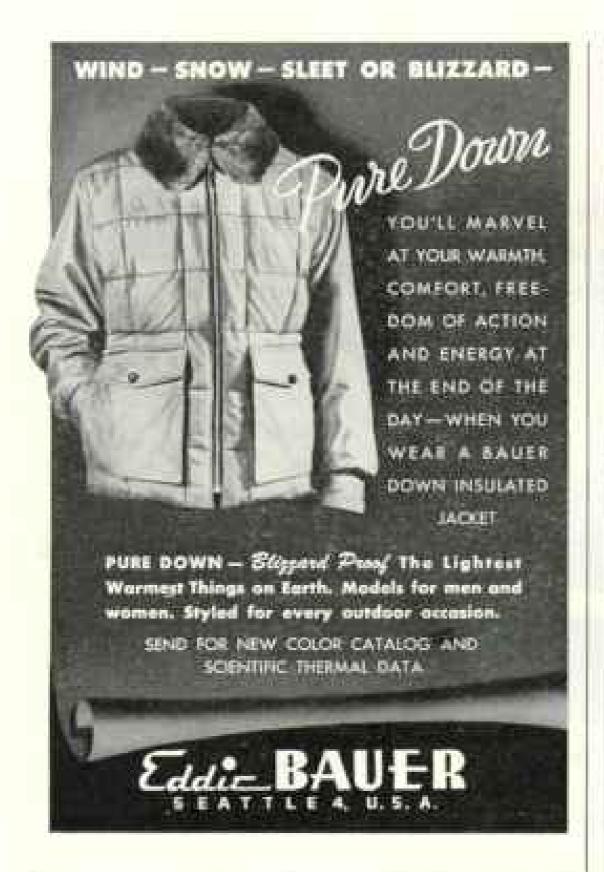
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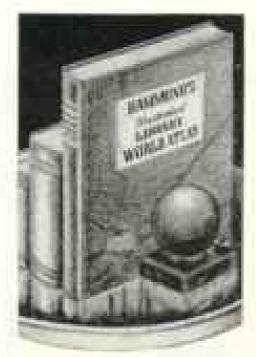
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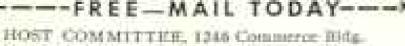


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