VOLUME XCI NUMBER SIX

THE NATIONAL GEOGRAPHIC MAGAZINE

JUNE, 1947

Map of Canada, Alaska, and Greenland

Washington: Home of the Nation's Great
With 18 Illustrations
18 Natural Color Photographs
ALBERT W. ATWOOD
B. ANTHONY STEWART

Washington National Monument Society
With 3 Illustrations
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On the Ridgepole of the Rockies
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With 1 Illustration
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THE NATIONAL GEOGRAPHIC MAGAZINE

Washington: Home of the Nation's Great

By ALBERT W. ATWOOD

WASHINGTON, the Nation's Capital, is, in a very real sense, the second home of every American citizen.

It belongs to each State and to no State. It is neither north nor south; it is the proud possession of each and every one of us.

Back in 1814 when the Capital was only a straggly, unkempt village, an early resident, Mrs. Margaret Bayard Smith, wrote that it "possesses a peculiar interest, and to an active, reflective, and ambitious mind, has more attractions than any other place in America."

Washington has grown since then in civic beauty and monumental splendor far beyond even the noble dreams of its founders, George Washington and Thomas Jefferson.

It is the nerve center of a vast and intricate government machine, pulsating with all the problems of a mighty nation.

Symbols of American Democracy

Yet the feeling of common possession which the average citizen has in the Capital is something more personal and human than government bureaus and their marble palaces.

Naturally, Washington is the city which memorializes the great men of our history and in such physical form that all may see.

But Washington is the second home of every American citizen for a more intimate reason than this. It is not an old settlement as Atlantic seaboard cities go. Yet there is some structure at almost every turn in which this or that famous man lived or worked or visited at the very moment in which he was making history.

The oldest public building in Washington is, of course, the White House, and it has been the home of every President except George Washington. Thirty-one of them have lived there.

The Capitol as well as the White House symbolizes to a supreme degree our American idea of democracy. But of the two, the White House has by far the more personal appeal, because it is the actual home of the First Citizen of the land.

While the President is the First Citizen, he is the people's man, and in the White House the people are vicariously enthroned.

They like it for its charm and simple dignity; they feel far more at home here than they would in the formal magnificence of European and Latin-American palaces.

Newspapers long ago gave the White House the compliment of a living entity, using such terms as "The White House says," or "The White House believes."

The building interests visitors, however, not so much as a symbol of authority, but in its domestic character, as representing the personality of the President.

It is the daily life of the chosen one of the Nation, despite his eminence, that draws people to it as to a lodestone.

Any building which has housed Jefferson, Jackson, Lincoln, Grant, Cleveland, Theodore Roosevelt, Wilson, and F. D. Roosevelt, to mention only a few, has a romantic appeal for Americans that cannot be equaled.

White House Rooms "Lovely but Haunted"

It is a question for biographers and historians whether there has been much happiness in the White House, and whether the second part of the famous prayer of John Adams, its first occupant, namely, that "none but honest and wise men ever rule under this roof," has been answered.

Certainly the average citizen who walks through its rooms has at one and the same time the sense of being in the presence of the

Staff Photographer B. Anthony Stewart

From Decatur House's Classic Entrance Hall a Graceful Staircase Winds to the Salon

On Lafayette Square Commodore Stephen Decatur, hero of the campaign against the Tripolitan pirates, built a mansion for his bride in 1819. Scarcely a year later he died in a duel. Subsequently many national figures occupied his home. Once a tavern keeper penned slaves here. "At night you could hear their howls," said a contemporary. Now thousands each day pass the old slave quarters in the rear (page 713).

immortals and a feeling that those who lived here were normal human beings.

A Government employee who worked for many years in the White House once wrote his aged mother, who had not seen the building, that its rooms are "lovely but haunted."

Theodore Roosevelt, when President, wrote a friend that he never walked through the corridors or up the stairs without thinking of "old Lincoln, with his shambling figure, coming down the steps in the early morning, in his cloth slippers, on his way to the War Department to read the night's dispatches. . . .

"I see him in the different rooms and in the halls. For some reason or other he is to me infinitely the most real of the dead Presidents." *

Even Mrs. Lincoln, according to tradition, told Mrs. Grant: "You better take it if you can get it; it's a pretty good place."

In the southeast room on the second floor the Emancipation Proclamation was signed, and the bed in which Lincoln slept is still there, together with a few other articles of furniture used by him.

Since the White House is, in a sense, a public institution, it has not often been completely closed to the general public, except for necessary repairs and during modern wartime emergencies. It was entirely closed from late 1941 to November 14, 1946, when the historic East Room and a portion of the lower floor were reopened.

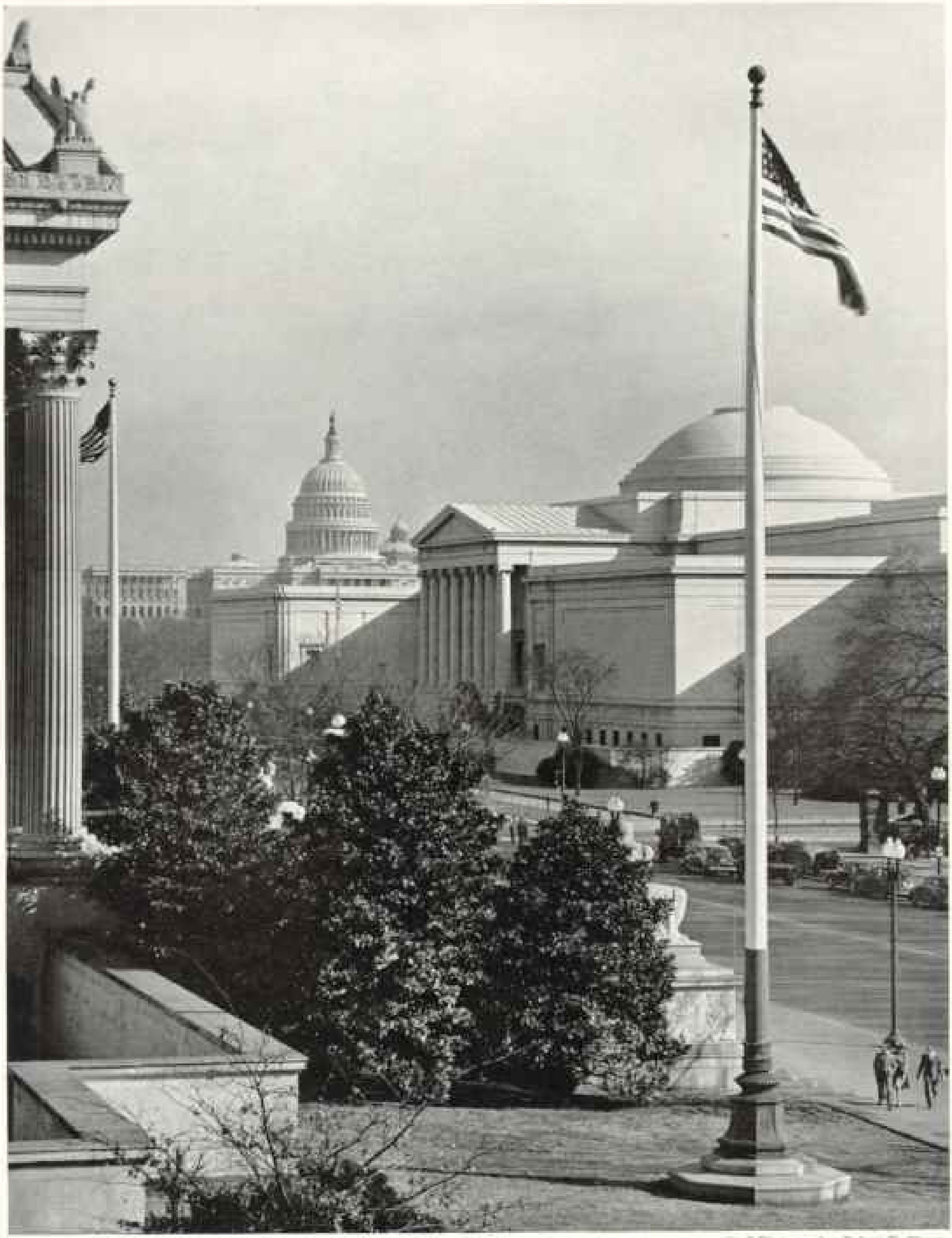
"Rabble Mob" Thronged White House

According to present-day standards, access to the White House and to the person of the President was frightfully abused until very recent times. The general public attended receptions in early days, partaking of alcoholic and other refreshments.

At Andrew Jackson's inauguration the whole building was so inundated by a "rabble mob" of boys, girls, men, and women that they had to be let out through the windows (page 710).

At a later reception George Bancroft described those who attended as "the vilest

* From *Theodore Roosevelt and His Time*, by Joseph Bucklin Bishop. Published in 1920 by Charles Scribner's Sons, New York, N. Y.



Staff Photographer Robert F. Sisson

Classic Domes Crown the Federal Capitols of Art (Right) and Government

Into the National Gallery of Art went 800 carloads of rose-white marble; rain brings out its strawberry glow. Not a window pierces the gallery spaces. Sunbeams fall through the skylight roof. In gloomy weather floodlights gleam in the attic. Both kinds of lighting are diffused by case-hardened glass. If it breaks, it crumbles into octagonal fragments harmless to paintings. Humidity is kept constant to protect canvases from injurious expansion and shrinkage. In the distance, *Freedom's* 19-foot figure surmounts the Capitol (Plate I).

promiscuous medley . . . starvelings and fellows with dirty faces and dirty manners; all the refuse that Washington could turn forth." Men did not even remove their hats.

Even the harassed Lincoln received all and sundry callers several times a week. Not until Theodore Roosevelt's time was the admittance of visitors put on an orderly basis.

More recently, with the growth of population and the heavier burden of the position, it has become necessary to protect the President far more rigidly than formerly, not only from bodily harm but from the wastage of his time and vitality in greeting thousands of schoolgirls and other curiosity seekers.

White House Moving Days Frequent

Despite its charm and beauty, the White House has always constituted a first-class housing problem. The 31 Presidents have lived there on the average of only 4.71 years each. Thus the coming and going of furnishings, equipment, and personal belongings has been enormous.

When Garfield died and Arthur came in, 24 wagonloads of accumulations found in cellar and attic had to be cleared out.

In his *Forty-two Years in the White House*, the late Ike Hoover, for many years chief usher, said that when it comes to housekeeping hardly any two things are done alike from one administration to another. It is very seldom that one administration uses all of the rooms for the same purpose as its predecessor.

Until almost the time of this writing, there has never been any adequate descriptive catalogue of the physical objects in the building. This has made it very difficult for White House officials to furnish accurate information in reply to thousands of requests concerning silver, china, furniture, paintings, and the like.

It must be borne in mind that not only does the Government buy furnishings and equipment for the building but that each President and his wife make many purchases and also receive gifts from all over the country.

Until quite recent times, plumbing, sanitation, cleanliness, and the general condition of building and grounds left much to be desired. At the time of Lincoln's first inauguration a Congressman said that that part of the White House devoted to the Executive looked "bare, worn, and soiled," like the "breaking up of a hard winter about a deserted farmstead."

It is said that more than once Theodore Roosevelt and his sons jumped up from the dinner table to chase rats out of the room.

In Cleveland's day messages to Congress were carried in what was known as the office buggy. A messenger went upstairs one day to the office occupied by the clerks and a telegrapher, announcing that the office buggy was down below.

"And the buggy office is up here," replied the quick-witted telegrapher.

Today the housing problem is a very different one. Until Theodore Roosevelt's time it was possible to handle the office work of the Presidency in rooms on the ground and bedroom floors of the White House itself. In 1902 the Executive Offices were built at its western end.

Today the problem is how to move a substantial portion of the workers in the Executive Offices to other quarters. The mounting numbers of Presidential advisers, secretaries, clerks, stenographers, aides, police, Secret Service operatives, and the like cannot be housed even in the extensions of the White House without eventually encroaching upon and overwhelming the residential character of the historic structure.

Although visitors are rarely admitted to the southern and larger portion of the White House grounds, a beautiful view of the lawns and trees may be had from the surrounding streets.

Trees Planted by Presidents

It was apparently Thomas Jefferson's idea to have the grounds planted extensively with native trees, shrubs, and flowers, and he made out a list in which they were arranged according to form, color, and season. The current list shows all of the many memorial trees planted by former Presidents and their wives.

The oldest living tree, an elm planted by John Quincy Adams, is on the south portion of the grounds, east center, on top of a small knoll. "We fed it twice this year," the gardener told me.

One of the oldest and most beautiful of the trees is a huge magnolia, just off the south porch, which I happened to see at the height of its June bloom. It was planted by Andrew Jackson.

It is a curious fact that the more valuable silverware used in the White House is marked by the building's original and historic name, "President's House." I have seen this mark on the smallest silverware in use, tiny salt spoons, demitasse spoons, and butter knives, as well as on the larger pieces (page 711).

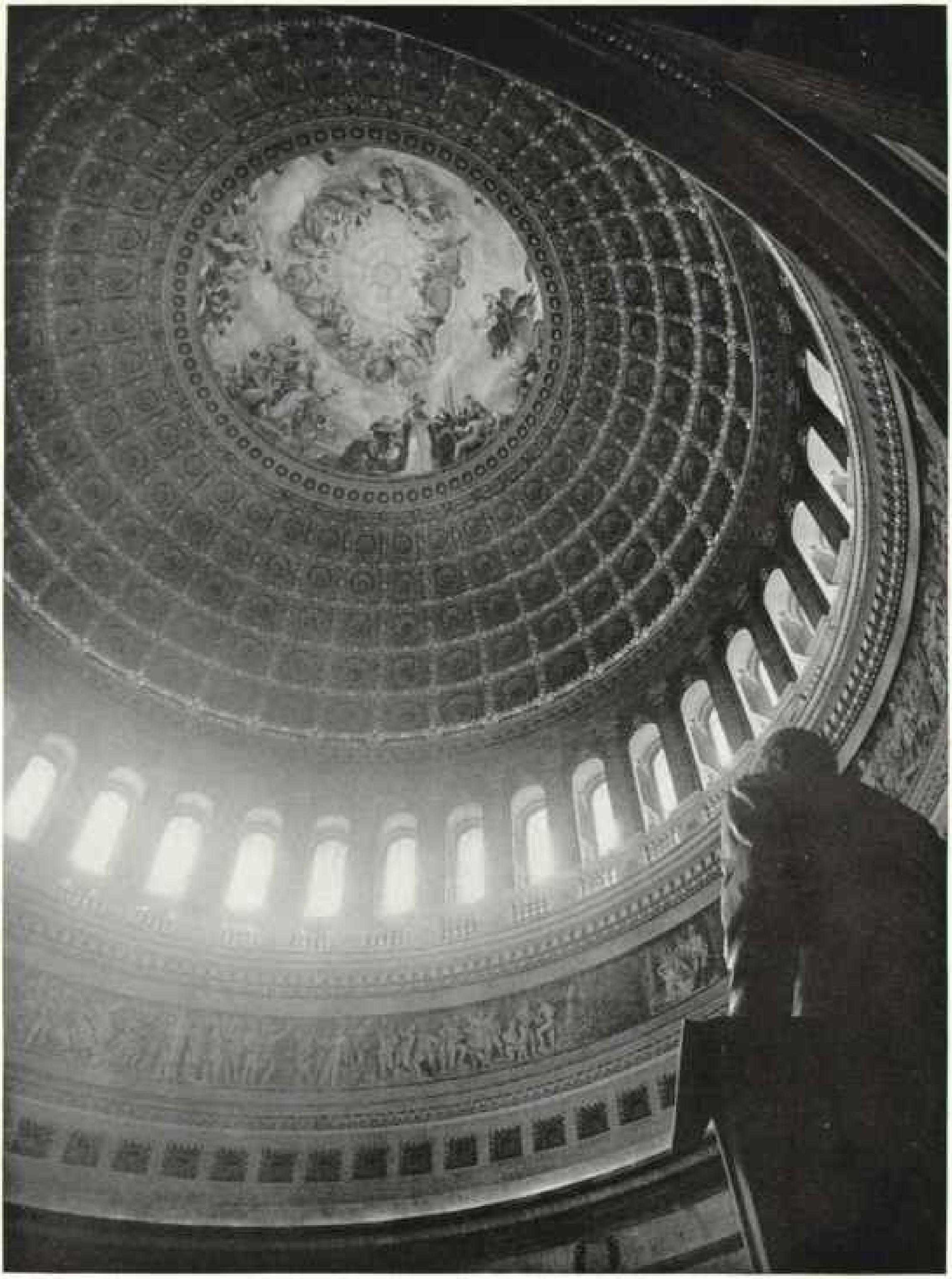
If the words "White House" were put on the silver, it might be like that of numerous hotels or restaurants; presumably, fewer such places are named "President's House."

It is interesting to note that the plated silver is marked "White House."

Staff Photographer R. Anthony Stewart

Seated in His Memorial, Abraham Lincoln Gets White Marble Shoes Shined

Twenty-eight blocks of stone composing the 19-foot figure are joined so truly that all seem as one. Stonecutters required four years to finish the job. Night lamps endow Lincoln's face with impressive lights and shadows. Yearly some 1,200,000 people visit him. Many mistakenly think he is buried in his Memorial (page 730).



Acme

Freedom's Light, Bursting Through Tall Arched Windows, Floods the Capitol Dome

Some 180 feet above the floor of the Rotunda hangs the *Apotheosis of Washington*, a fresco of 4,664 square feet by Brumidi (Plates VIII and XII). He also designed the circular frieze but did not live to complete it. Two shells, expanding and contracting with temperature changes, compose the dome. A stairway winds between them.

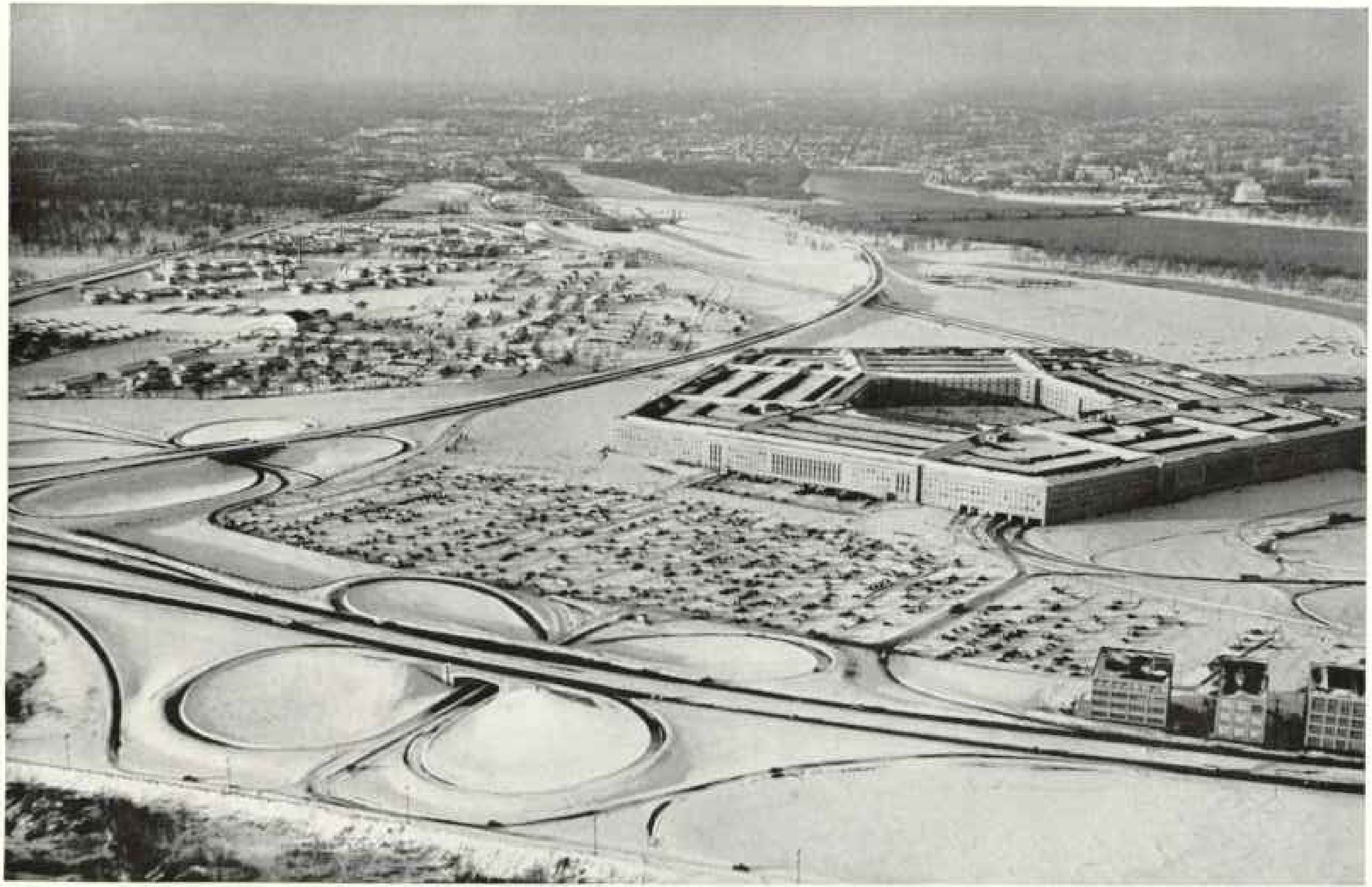
Staff Photographer B. Anthony Stewart

Five Presidents of the Cosmos Club, Birthplace of the National Geographic Society in 1888, Meet in the Main Lounge

Left to right, they are Dr. Gilbert Grosvenor, Editor of the NATIONAL GEOGRAPHIC MAGAZINE; Dr. Alexander Wetmore, Secretary of the Smithsonian Institution and Vice-chairman of the Society's Research Committee (Plate V); Dr. Waldo G. Leland, historian and present Club president; Albert W. Atwood, author of the accompanying article; and Dr. Henry Grattan Doyle, Dean of Columbian College, George Washington University. Cosmos Club, for men of science, literature, and the arts, honors Dolly Madison with a lifesize portrait because she once made her home in one of its buildings (page 714). One of the National Geographic Society's founders, the late Maj. John Wesley Powell, is pictured left of the mantel. A geologist, he was famed for his boat trip through the Grand Canyon.

The first Commissioners of the District of Columbia officially termed the new building the "President's House," although they occasionally followed the custom of the French engineer officer, Major L'Enfant, who drew the detailed plans for the new city and proposed a "President's palace" which would add to "the sumptuousness of a palace the convenience of a house and the agreeableness of a country seat."

Coming up from Mount Vernon, Washington no doubt projected the building as a dignified "President's House." Monroe, coming in in 1817 after the house had been rebuilt, called it the "Executive Mansion," possibly because in those early days a surplus of house



Charles Del Vecchio

Cloverleaf Approaches, Cleared for Traffic, Trace Geometric Patterns Around the Snowbound Pentagon Building

Home of the War Department, the amazing Pentagon held more than 30,000 workers during wartime. Five outer walls cover nearly a mile. Corridors stretch 16½ miles. Parking areas can accommodate 6,400 cars. Arlington Memorial Bridge leads to Lincoln Memorial (right). This 10-inch fall struck February 20, 1947.

A. C. Cline

A Tour of the National Gallery of Art Reveals a Study in Faces Worthy of a Dutch Master

Gladys Hamlin, the lecturer, points to *The Eavesdropper*, a Netherlands loan work by Nicolaes Maes, pupil of Rembrandt. Unabashed visitors frequently ask, "Why is a Rembrandt considered great?" Many grownups are puzzled by distortions in some modern art, but children seem to grasp the idea instinctively. Owners of old picture frames invariably ask, "Is the frame an original?" Lecturers generally have to tell them, "No."

Staff Photographer Robert F. Sisson

In High-ceilinged Grandeur, Clerks Toil Where Dancers Swayed at Presidential Balls

Here Cleveland, Harrison, McKinley, Roosevelt, and Taft were honored. In one architect's opinion, only "an inaugural ball or a thunderstorm could possibly fill the immense void." Formerly the Pension Office, the 100-foot-high interior now houses the General Accounting Office. Pillars, each of 55,700 bricks, resemble marble.

Staff Photographer B. Anthony Stewart

Lincoln in Oils Looks Out into the White House He Knew So Intimately

In the state dining room, which has entertained more than 100 at a time, the small table is set for four. Paneled oak covers the walls. Globes in the silver chandelier shine with a candle effect. Alonzo Fields, who has been with the White House 15 years, polishes silverware. Lincoln's son once owned the portrait (page 727).

Bettmann Archive

Knife-wielding Guests Attack the White House's 1,400-pound Cheese—an Old Print

To get free advertising, a New York dairyman presented the cheese to Andrew Jackson. On February 22, 1837, it was served in the vestibule. "Ragamuffins" climbed in windows, according to a contemporary account. In two hours the cheese was gone, but a "mephitick" odor lingered. What they couldn't eat the citizens bore away. Men did not even remove their hats (page 700).

space and a lack of office space led to dual use. Even to this day "The Executive Mansion and Grounds" is a more nearly official name than "White House," because it is the term used for budgetary purposes; that is, to secure appropriations from Congress.

"White House" Becomes Traditional Name

On the other hand, Theodore Roosevelt had the words "The White House" stamped on documents and stationery, and the stationery used there today simply reads "The White House, Washington." In addition, various Presidential proclamations have used the term "White House."

"We know for whom we work, but we don't know where we work," said an employee of the building who had just helped show me silverware marked "President's House."

A common and persistent error, repeated so often in books and magazine articles, is that the building became known as the White House after it was painted to conceal smoke stains.

There is some evidence that the term "White House" began to come into use even before the building was painted. Such a reference is indicated in one or two early letters.

Existing samples of the original unpainted, unburned, light-buff sandstone from which the building was erected are so light that it would have been natural to use such a term. This was especially so because the air of Washington was even less smoke-laden then than now, and the predominant red-brick or unpainted frame houses of that time would have made the President's House look white by contrast.

Temporary White Houses

More than one dwelling in Washington has been transformed into a temporary White House while repairs were being made at the Executive Mansion or while it was being got ready for a new occupant.

President Madison and his wife Dolly occupied three different near-by houses while the Executive Mansion was being remodeled. Two

are still standing; the third was on the site of the present office building at 1333-5 F Street, N.W., a busy thoroughfare in the heart of the shopping district.

This house was owned by Richard Cutts, a brother-in-law of Mrs. Madison, and an unkind rhymester had this to say of Dolly Madison's famous flight by coach from the White House:

My sister Cutts and Cutts and I,
And Cutts' children three,
Will fill the coach, so you must ride
On horseback after we.

The troopers who guarded the Madisons here at night had no tents and slept on their horses' straw in the middle of what is now F Street.

Another Madison White House, serving for a year and a half, was the solid brick building at the northwest corner of Pennsylvania Avenue and 19th Street, N.W., now used as a chain drugstore. At various times it was the State Department, the British Legation, and the home of two Vice Presidents, Elbridge Gerry and Martin Van Buren.

Staff Photographer B. Anthony Stewart

A Place Setting in the White House Dining Room

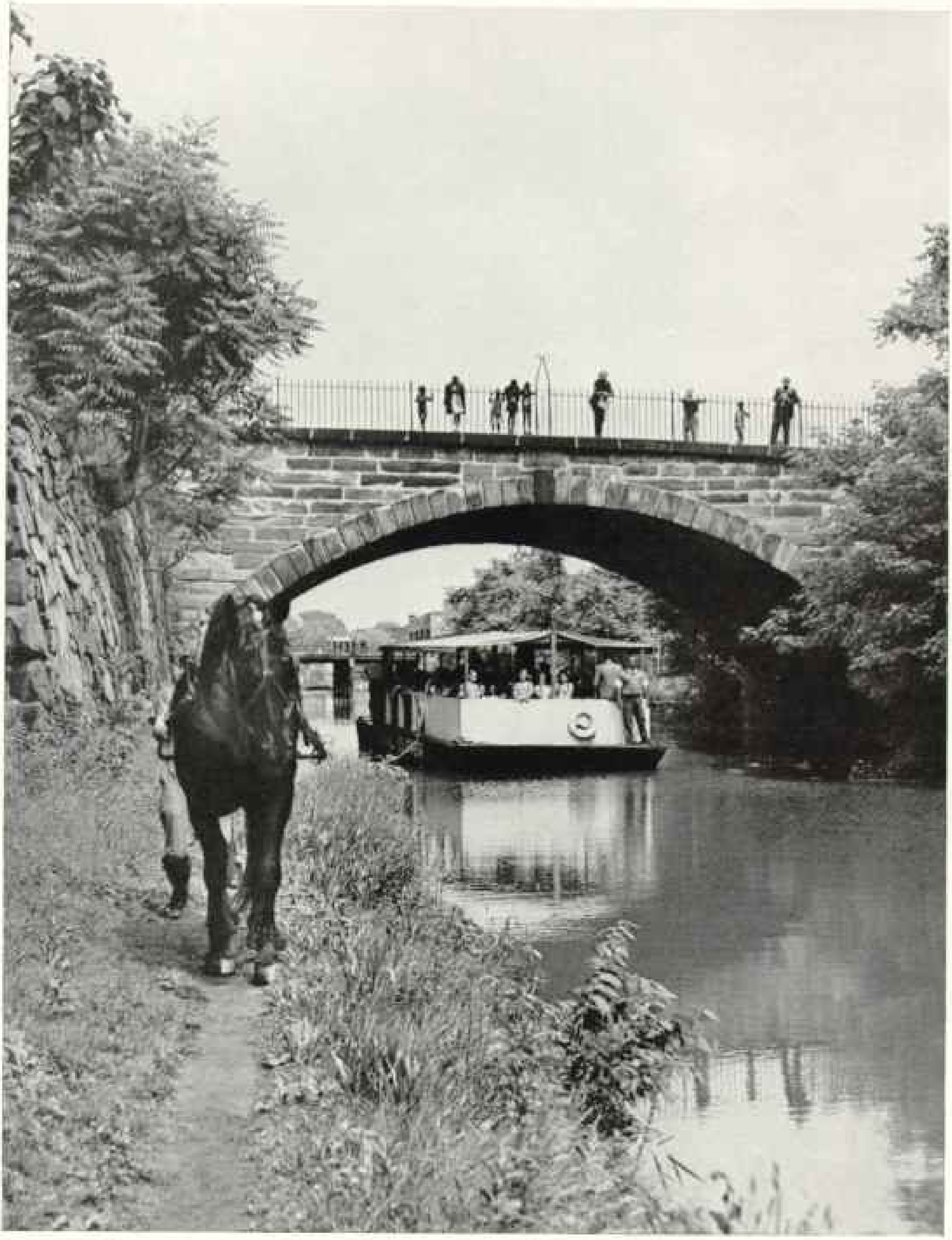
Cutlery dates from the Harrison administration; it was gold-plated beginning with the Taft period. Forks bear the United States coat of arms; the spoon is marked "President's House," historic name of the building (page 702). The American-made plate dates from the Franklin D. Roosevelt era. So do three of the glasses; the second one is brand-new.

A third Madison White House was the Octagon, at New York Avenue and 18th Street, now the national headquarters of the American Institute of Architects and open to the public. Built in 1798-1800 by Dr. William Thornton, first architect of the Capitol, for city entertaining by one of the country's richest men, it is one of the most exquisitely designed buildings in the United States, and so unusual that it is possibly without a duplicate.

The owner, Col. John Tayloe, of Mount Airy, Virginia, with an income of nearly $60,000 a year even at age 20 and boasting 500 slaves, was distinguished for the unrivaled splendor of his household and equipages. He wanted to build a town house in Philadelphia, but George Washington persuaded him to settle in the new Capital.

Distinctive are doors and windows made on the circle to fit the circumference of vestibule and tower. Beautiful mantels in the dining room and drawing room were made in London in 1799 by Coade.

The executive secretary of the Institute uses President Madison's office on the second floor, and in the middle of the room is the table at which Madison ratified the Treaty of Ghent. The table still has a simple, but effective, circular filing system, no doubt used by Madison.



Arthur Ellis

Plodding Nellie Tows a Pleasure Barge Past Wilderness Scenes in Old Georgetown, D. C.

Sunday strollers look down upon the Chesapeake & Ohio Canal from Wisconsin Avenue bridge, only survivor of four old stone spans. Once the 185-mile waterway floated lumber, flour, and coal between Cumberland, Maryland, and tidewater. In 1871 it had 540 boats in service. Flood and railroad ended its commercial career in 1924. Now the National Park Service conducts week-end excursion trips along four miles of restored waterway. Lecturers accompany the tours. "Never lost a passenger from seasickness yet," they boast.

Staff Photographer R. Anthony Stewart

Radiotelephones in Washington Cabs Save Patrons' Time and Drivers' Gasoline

One dispatcher, using short wave, directs about 50 cabs. When patrons call, he notifies a near-by driver, averting an unnecessary return to the cab stand. Cabbies, such as Yellow Cab's Robert Kline, like radio. "No more trips through cold, rain, and snow to answer phone calls," they say.

During the dark years when the Octagon fell into eclipse as a trash-filled tenement, the famous table was sold to a woman in San Francisco, but was rescued from her house in the fire and earthquake of 1906 and bought by the San Francisco Chapter of the Institute.

The no longer so secret doors and stairways of the Octagon have no doubt stimulated oft-repeated tales of ghosts, including those of Tayloe's daughters, who were said to have been involved in tragic romance.

Origin of Lafayette Square

Returning to the White House, we face Lafayette Square, around which have lived so many of the great political, intellectual, and social leaders of the Nation's Capital.

Lafayette Square was apparently named by the people themselves. No official records or legislative acts exist to prove that the space immediately north of the White House was ever officially named "Lafayette Square."

Originally it was planned to be part of the White House grounds, an open space or commons, which extended southward from H Street to the Monument Grounds, with no street cutting through as Pennsylvania Avenue now does.

No one can cross Lafayette Square without glancing at the equestrian statue of Andrew Jackson, which was made from captured cannon (Plate IX).

The first work of any magnitude cast from bronze in this country, at a time when bronze casting was almost unknown here, it was the first equestrian statue in Washington and the second in the United States. The first (of gilded lead) was that of George III at the foot of Broadway in New York City. It was torn down on July 9, 1776, to be melted up into bullets.

Although new buildings are gradually displacing the Square's historic structures, a number of the older ones remain. On the northwest corner stands the Decatur House, one of the earliest private residences built upon the Square. It is famous for its dramatic past and practically unchanged in its somber, solid, massive appearance (page 700).

Decatur's Famous Toast

It was designed by Benjamin H. Latrobe, second architect of the Capitol, for the brilliant young naval officer, Commodore Stephen Decatur, whose exploit in burning the frigate *Philadelphia*, fallen into the hands of pirates, was described by Lord Nelson as "the most bold and daring act of the age." It was also Decatur who gave the toast:

"Our country! In her intercourse with

foreign nations may she always be in the right; but our country, right or wrong!"

He built the house from prize money which he had won, and lived there with his bride, in almost regal splendor, for a year. Then he was killed in Bladensburg, Maryland, in the second most famous duel in the country's history, by a fellow officer, Commodore James Barron, who thought that Decatur had persecuted him.

Three foreign ministers and three Secretaries of State, including Henry Clay and Martin Van Buren, lived in the house. For a time it belonged to the Alexandria innkeeper, John Gadsby, and the tradition is that he ran a slave market there.

The actual slave quarters still exist, in the long yellow-walled extension to the rear, one side of which abuts on the H Street sidewalk.

After the Civil War the house was bought by Gen. Edward F. Beale, sailor, soldier, Indian fighter, trail blazer, and "pioneer in the path of empire," under whose grandfather Decatur had once served.

The house today is crammed full of priceless memorabilia and objects of historic interest. By applying in writing to the owner, Mrs. Truxtun Beale, those who are really interested in Commodore Decatur or in early American architecture may gain admittance.

Cosmos Club Birthplace of National Geographic Society

Directly across the square is the Cosmos Club, that unique organization of men "who have done meritorious original work in science, literature, or the fine arts; or who are recognized as distinguished in a learned profession or in public service" (page 705). It was here that the National Geographic Society was born in 1888.

The more northerly of the group of buildings constituting the Cosmos Club had two famous occupants: Dolly Madison, after the death of her husband, and later Adm. Charles Wilkes, Antarctic explorer.

Dolly Madison, largely because of her tact, memory for people, and perennial and inherent friendliness, held reign over official society both in length and in popular acclaim without parallel in American history. Even in her poverty and old age officials called on her on New Year's Day immediately after calling on the President.

As hostess to the widower Jefferson when her husband was Secretary of State; and later as wife of the President, she dressed in purple and plumed magnificence. One lady said of her, "She really in manners and appearance answers all my ideas of royalty."

It was a common saying that "she entered Washington society on the arm of Jefferson (1801) and left it on the arm of Polk (1849)."

The Cosmos Club also occupies the Tayloe House, built in 1828 by a son of the first owner of the Octagon. Here such men as Chief Justice Marshall, Washington Irving, Webster, Clay, and Calhoun were entertained.

Mark Hanna's "Little White House"

Later, when the national political boss Mark Hanna lived there, it was known as the "Little White House." This writer has many times shown visitors to the Club the safe where Hanna reputedly kept his valuables.

Beyond the garden adjoining the Tayloe House is the Belasco Theater, the official name of which is the Lafayette Square Opera House. On its site stood the house in which Secretary Seward was stabbed the night Lincoln was assassinated and in which James G. Blaine later died.

Adjoining the theater is an annex to the Treasury, whose front entrance is close to the spot where, on February 27, 1859, one of America's most spectacular murders took place.

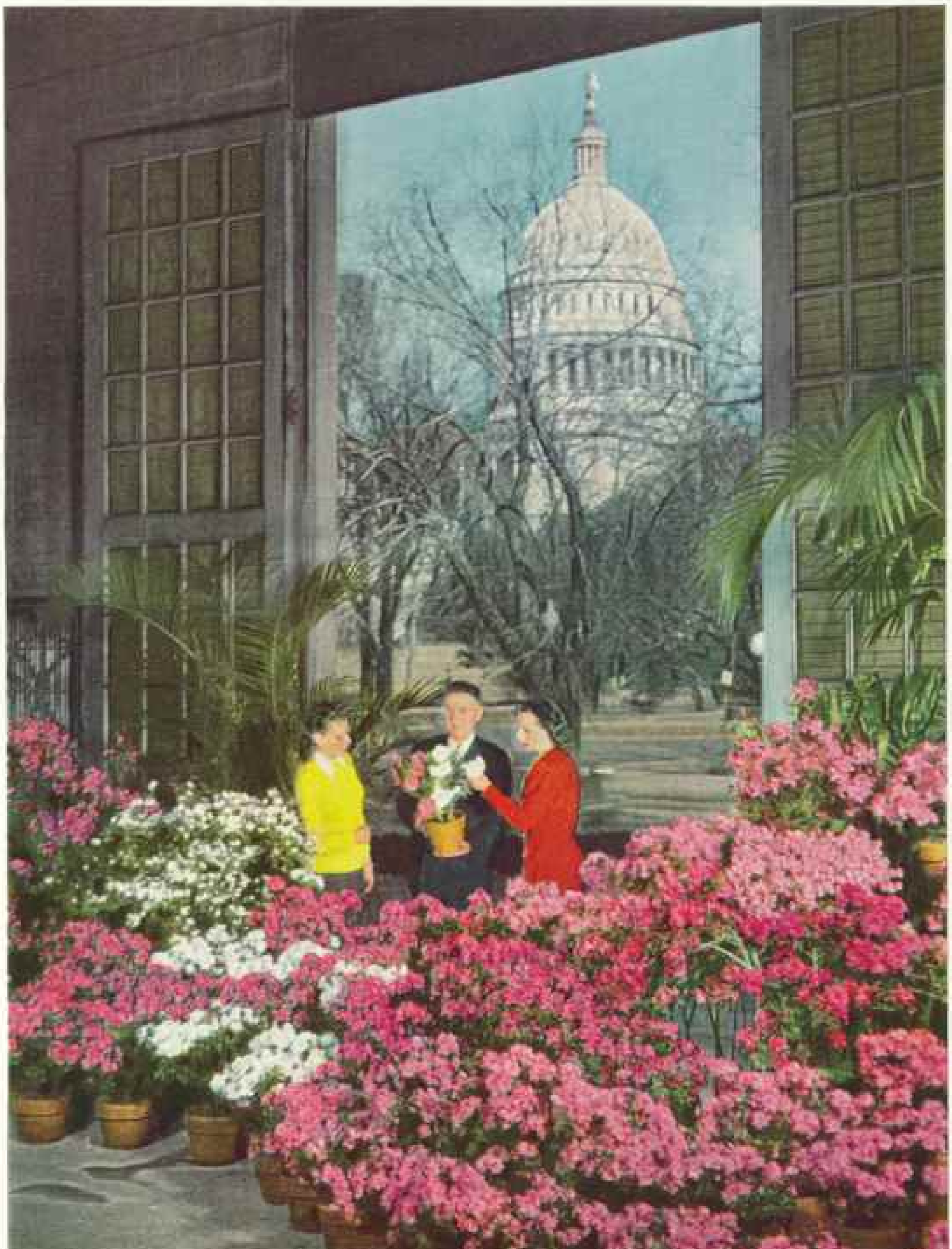
Daniel E. Sickles, ambitious and dashing Congressman from New York, crossed Lafayette Square, with a revolver in each overcoat pocket, when he learned that his pretty young wife had become too intimate with Philip Barton Key, son of the author of "The Star-Spangled Banner." Sickles emptied all barrels into Key, who had only an opera glass with which to defend himself.

Sickles' lawyers not only appealed to the "unwritten law," one such speech being 42,000 words in length, but were among the first ever to plead temporary insanity. Acquitted, Sickles lived to be nearly 90 years old, was a major general in the Battle of Gettysburg, and later had a diplomatic career.

On the north side of the Square, between the modern Veterans' Administration Building and old St. John's Church, is the so-called Ashburton House, a huge brown affair, one of the few remaining historic mansions of downtown Washington.

It was built originally by the then Clerk of the House of Representatives. Daniel Webster arranged that it be rented to Lord Ashburton, British Minister, and it was here that Webster and Ashburton carried on negotiations which established the northeastern border between Maine and Canada and also settled other problems.

It was purchased later by a Pennsylvania family, and a daughter born in the house lived there until her death in October, 1946, at the



 Kodachrome by B. Anthony Stewart

When It's Spring in February, a Conservatory Opens and Reveals the Capitol Dome

Ninety varieties of American azaleas flourish in the U. S. Botanic Garden. These Rutherfordiana hybrids, blooming seven weeks, are shown by William A. Frederick, an official of the garden. During frost months they take shelter in the conservatory. Washington's floral displays are dazzling (Plates II and III).

Kodachrome by B. Anthony Stewart

Cherry Blossoms Produce No Yield, but Lure Hundreds of Thousands of Visitors to the Tidal Basin and Washington Monument

Kodachrome by B. Anthony Stewart

Rawlins Park Says "Welcome, Spring!" Chinese Magnolias Explode Like Pink Star Shells in a Fourth of July Sky

Few cities can match the Capital's trees. Maj. Pierre L'Enfant, George Washington's city planner, visioned a leafy city. For almost a century his dream was incomplete. Then in the 1870's seedlings were set out by the thousands. Now elms arch wide avenues. Truly, Washington is the "City of Trees."

 Ektachrome by B. Anthony Stewart

George Washington University Students Have a Government for Their Laboratory

The Father of his Country visioned this school, where "youth of fortune and talents" might learn "the principles of politics and good government." Now public servants are trained in the limestone Hall of Government, the gift of Mrs. Henry Alvah Strong, a trustee of the University. Federal executives deliver lectures.

Kodachrome by John E. Fletcher

Red Crosses Glow in the Home of Clara Barton, Founder of the American Red Cross

At her Glen Echo, Maryland, house, the Civil War heroine maintained Red Cross headquarters from 1897 to 1904. There she lived until her death in 1912. Stool and chair in this attic room were hers.

Kodachrome by B. Anthony Stewart

Peru's Pre-Columbian Ponchos and Amazon's Tropical Birds Are Akin

Some 1,000 years ago a Pacific coast people stitched feathers, obtained in trans-Andean trade, into the patterns. Secretary Alexander Wetmore displays a macaw and a parakeet at Smithsonian Institution.

Kodachrome by Robert F. Sisson

Thomas Jefferson's Memorial Re-creates the Domed, Cylindrical Vision Which the Architect-President Loved So Well

Circular lines show kinship with Monticello and other designs by Jefferson. His 19-foot statue cuts a cold figure when winter's winds howl through the 54 columns. Near the Monument, so lonely here, a daily traffic jam occurs as homebound Virginians converge on Highway Bridge (Plate XVI).

Kodachrome by B. Anthony Stewart

Dutch Masterpieces Rescued from Nazi Looters Look Down on Executive Officers of the National Gallery of Art

Anna Codde and *Pieter Bicker*, both by Maerten van Heemskerck, were restored by the United States Army. In gratitude, the Netherlands Government sent them and 44 other paintings on an American tour. Left to right: David E. Finley, Harry A. McBride, John Walker, and Macgill James.

 Kodachrome by B. Anthony Stewart

Whenever a President Visits the Capitol, the Sumptuous President's Room Is His

Here the Chief Executive used to sign bills. Lincoln was the first to use the table. The glittering chandelier immediately captures the attention of every visitor. Constantino Brumidi executed the frescoes: *Amerigo Vespucci* (left), *Religion*, and *William Brewster* (Plate XII).

age of nearly 89. I called upon this lady, Mrs. Margaret Coleman Freeman Buckingham, in the same room in which she was born, only a few months before her death.

"I can remember Mr. Lincoln's great long legs as he strode across the Square," she told me, and added that she also recalled the attack upon Mr. Seward, a few hundred yards away, on the night of April 14, 1865 (page 714).

The first building to be erected on what is now the Square, following the building of the White House, was St. John's Church, probably the quaintest of the Capital's old churches. A committee called on President Madison and offered him what is now pew 54. Nearly every President has been to some service at St. John's since its erection in 1815-16.

In fact, there have not been many great Americans who have not at one time or another worshiped there or attended obsequies of leaders quite as celebrated as themselves. By personal association the little church has been related to affairs of state as probably no other church is or could be.

President Franklin Roosevelt went to St. John's an hour before his first inauguration in 1933. He followed the tradition of George Washington, who, after his inauguration in 1789, went to a prayer service at St. Paul's Chapel, New York City. President Roosevelt went to St. John's nearly every year on the anniversary of his first inauguration.

Presidents besides Madison who worshiped there with some regularity were Monroe, John Quincy Adams, Jackson, Van Buren, William Henry Harrison, Tyler, Taylor, Fillmore, Buchanan, and Arthur.

Pew 54 is reserved for each President; if he does not desire to attend, it is rented out. Presidents are not expected to pay for the pew, but several have done so.

Guesthouse for Visiting Notables

On Pennsylvania Avenue, a few feet from Lafayette Square, is the Blair House, guesthouse of the Nation, where the State Department entertains visiting potentates and other distinguished guests, such as the Arabian princes, Prime Minister Mackenzie King of Canada, Viscount Alexander, General De Gaulle, King Peter of Yugoslavia, Foreign Minister Molotov, and King George of Greece, to name a few (page 729).

Bought by the Government in October, 1942, the house represents in its furnishings generations of gracious living; its glassware, silver, and china are especially fine.

President and Mrs. Truman and their daughter Margaret spent the first three weeks of Mr. Truman's term in the Blair House.

"They ate all but one of their meals here," said Mrs. Victoria Geaney, the housekeeper, "and we had a different table setup every time."

The beautiful second-floor library is directly across the hall from the ranking guest's bedroom, and thus more than one international problem has been quietly discussed in the library.

In the summer foreign guests often insist on throwing open every door and window, failing to realize that such a heavily built house is cooler in hot weather if kept closed.

The house was built in 1824-27 by Dr. Joseph Lovell, Surgeon General of the Army, whose requirement that medical officers make weather reports was one of the historic beginnings of the Weather Bureau.

Presidents Visited Blair House

For many years and until a few years ago, the house was owned and largely occupied by the Blairs, for a long period one of the country's most influential families. It has been visited, in some cases many times, by all but four or five of the men who have been President, and by numerous aspirants to that office.

One of the Cabinet members who rented the house was George Bancroft, historian and diplomat. As Secretary of the Navy, he laid the foundations of the Naval Academy while he was there. Also, as Acting Secretary of War, he signed the orders that led to the invasion of Mexico and, as Secretary of the Navy, to the taking over of San Francisco and other California settlements.

Here General Sherman was married and Admiral Farragut given his important Civil War command. Most historic of all, Col. Robert E. Lee, on April 18, 1861, refused command of the Union Armies offered him by Francis Preston Blair on behalf of Lincoln, even though he would have had an opportunity to put into practice all his military theory and would have commanded a larger army than he had ever seen before.

"I declined the offer he made me," wrote General Lee many years later, "stating, as candidly and as courteously as I could, that, though opposed to secession and deprecating war, I could take no part in an invasion of the Southern States."

It is known that, after talking with Mr. Blair, Colonel Lee spent three hours with Gen. Winfield Scott, Commander in Chief of the Army, although what each said to the other was never afterward revealed by either.

General Scott's office was in the building which still stands at the southwest corner of 17th and F Streets, a few blocks below the

Washington Evening Star

Canoe, Best Girl, and Dreamy Music Create Perfect Bliss at a Water Gate Concert

At dusk these couples paddled a mile and a half down the Potomac from a boathouse to the National Symphony Orchestra barge (page 740). Going back in the dark, the lantern-lit canoes bob and gleam like fireflies. Occasionally a moored canoe tips over, but there is little danger—the water is shallow.

Blair House, and is now used by the State Department.

Gen. H. W. Halleck, who was made Chief of Staff in 1864, also occupied this building. To him came that year the famous message from General Grant, "I propose to fight it out on this line if it takes all summer." Grant also made the building his headquarters after the surrender at Appomattox.

It must not be supposed that all of Washington's famous people lived on or near Lafayette Square. Just by way of illustration, in two houses not far apart, at 1219 I Street, N. W., and 604 H Street, N. W., lived two women as different as Mrs. Frances Hodgson Burnett and Mrs. Mary E. Surratt.

Mrs. Burnett wrote *Little Lord Fauntleroy* in the house whose two chief tenants now are a printing and a plumbing concern. Mrs. Surratt ran a rooming and boarding house and was hanged, justly or unjustly, for her alleged part in the conspiracy to assassinate Lincoln, which was hatched there.

Georgetown Antedated Capital City

The Surratt House is in what is now the Chinese quarter, its present tenants being the Sie Que Company and the Gee How Oak Tin Association.

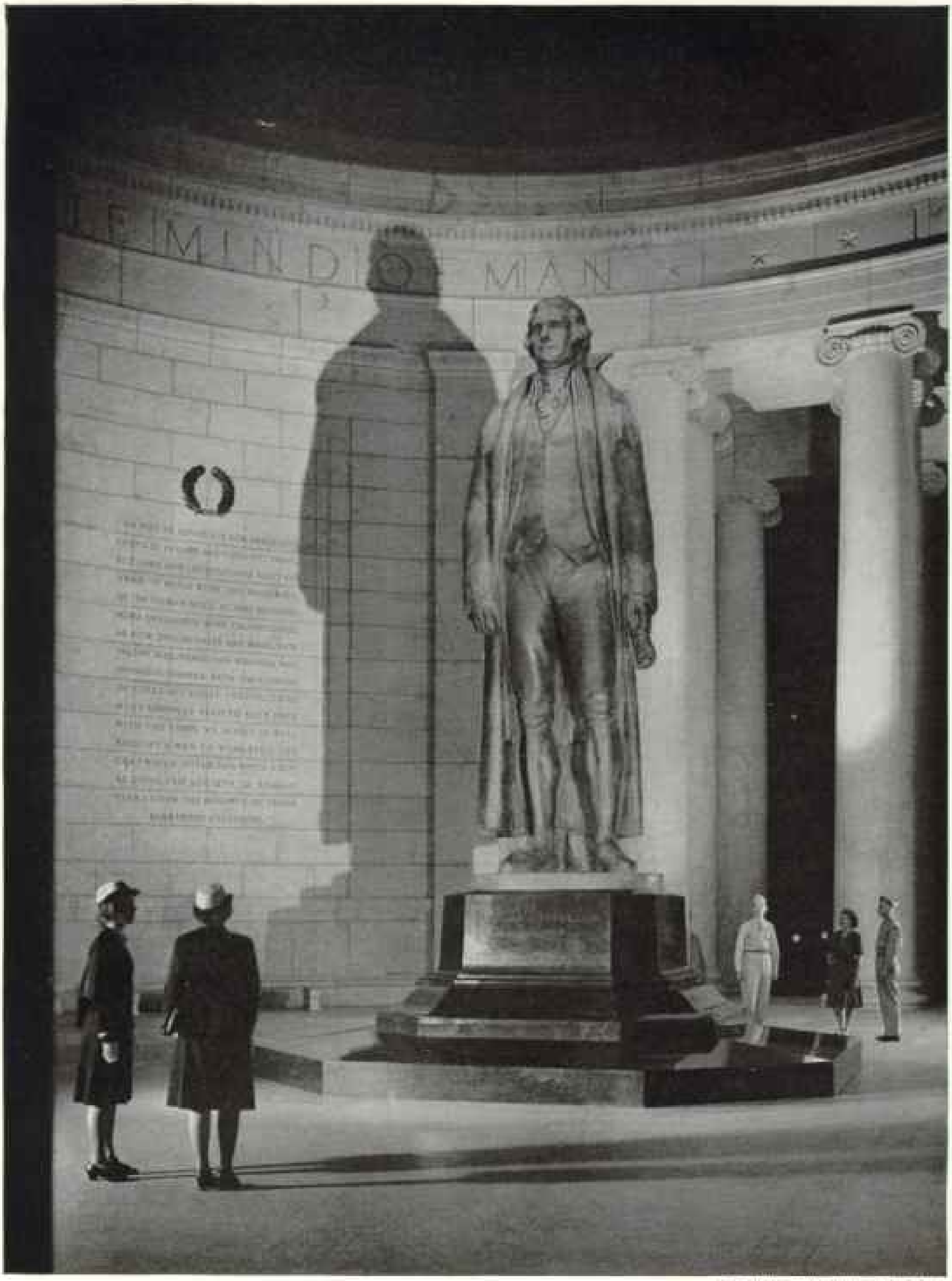
No part of Washington has such pride of tradition or retains such individual entity and quaint romantic charm as Georgetown. Later swallowed up by the Federal City, it was an important shipping center before Washington was even thought of.

Most of the detailed plans for the Federal

Staff Photographer B. Anthony Stewart

Fifteen Feet of Legs and Neck Inspect the People in National Zoological Park

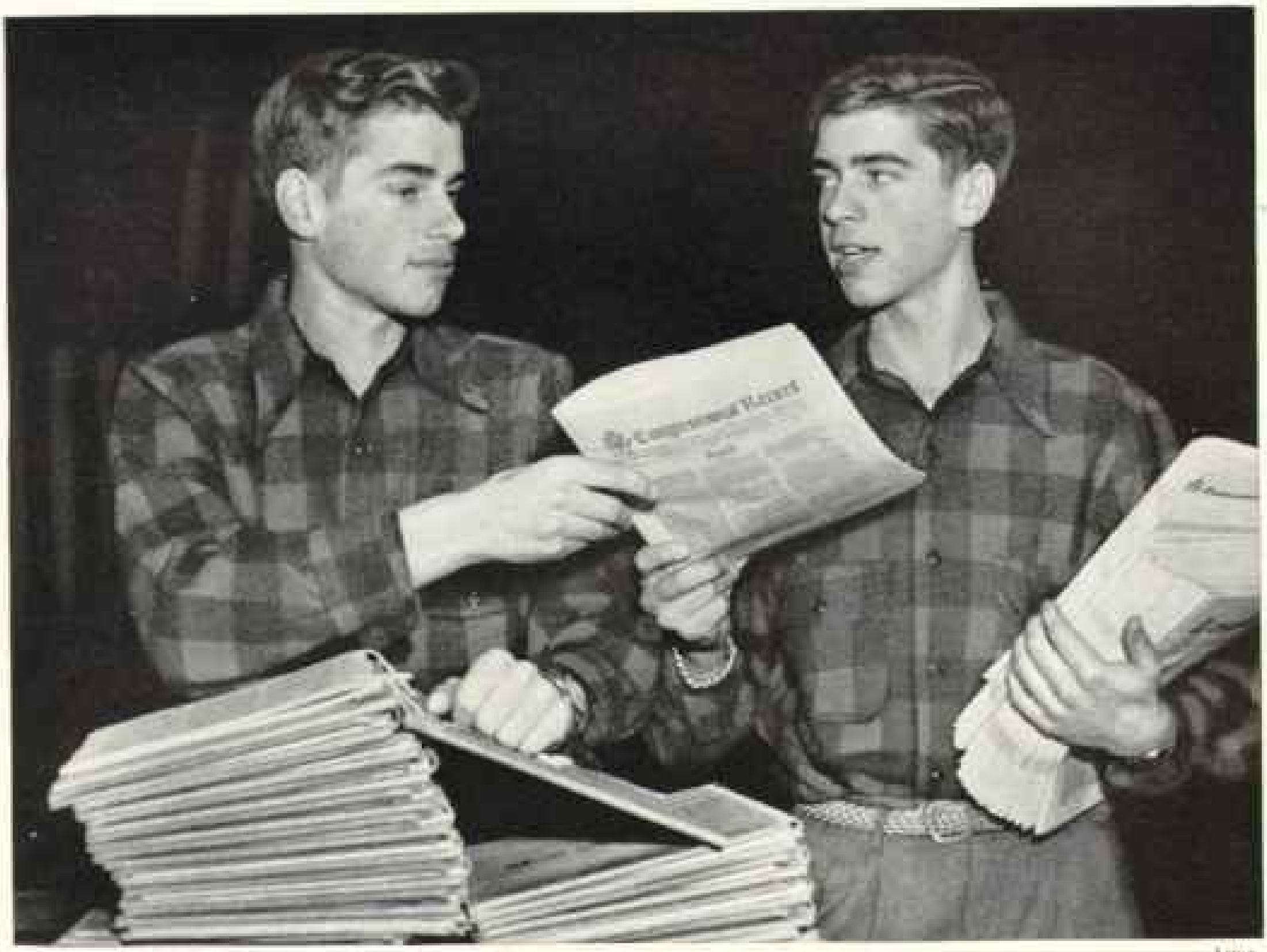
Yearly some 2,500,000 visit the National Zoo's wooded home in Rock Creek valley. There about 2,500 specimens live in comfort. Penguins enjoy refrigerated rooms. In winter this $6,000 giraffe, born wild in the sultry Sudan, gets steam heat. A National Geographic Society-Smithsonian Institution expedition brought him to Washington 10 years ago. Giraffes' fragile bones worry keepers. Mangers are perched at a neck-saving 12 feet. Dr. William M. Mann, director of the Zoo, has never heard a giraffe; others have reported a once-in-a-lifetime "moo" of anguish.



Staff Photographer Willard R. Culver

A 19-foot Thomas Jefferson Stands on a Pedestal in His Marble Memorial

Owing to the metal shortage in 1943, year of dedication, this statue is of plaster, painted bronze. A 10,000-pound bronze now stands in its place. Wall panels quote Jefferson's philosophy. Says the circular frieze: "I have sworn on the altar of God eternal hostility to every form of tyranny over the mind of man" (Plate VI).



Acme

Identical Twins, Pages in the House of Representatives, Keep the Capitol Seeing Double

Clark (left) and Richard Green, 17 years old, stuff *Congressional Records* into folders for House members. Friends often confuse them, especially since they had identifying moles removed. "Being an identical twin has its advantages," says Clark. "Other people's mistakes amuse us. Each of us readily answers to the other's name. As we are together all the time, we never get lonely."

City were made in the inns of Georgetown. George Washington spent much time there.

Unfortunately, the early inns are mostly gone. But at that time Georgetown was described as a city of houses and practically no streets, whereas Washington was described as a city of streets with practically no houses.

At any rate, the little city is now literally packed with beautiful old brick houses, large and small, described by one observer as "variegated and capricious."

There is still at least one street paved with stones, several brick sidewalks, and many ivy-covered brick walls enclosing lovely gardens.

Five old houses at the corner of P and 28th Streets have a century-old picket fence made of more than a hundred musket barrels, possibly surplus Mexican War property. A number of the guns still retain their sights.

On at least two streets, Prospect and N, stand large houses whose grounds formerly sloped terrace-fashion all the way back to the river, and in the rear of at least one there is still the gazebo from which the merchant princes watched their tobacco shipments go down the river.

Curiously enough, the present Secretary of the Navy, James V. Forrestal, lives in an old house at 3508 Prospect Avenue, while the enormous mansion on the next corner was originally occupied by the first Secretary of the Navy, Benjamin Stoddert.

The Laird-Dunlop House is one of the most imposing of the early N Street mansions. The central portion was built by a Scottish-born tobacco merchant. Eventually the house passed to a daughter who was the wife of a onetime law partner of Francis Scott Key, author of "The Star-Spangled Banner." Later it was bought by Robert Todd Lincoln, son of Abraham Lincoln, who lived there until his death in 1926. Still later the house became the property of Mrs. Arthur Woods, a great-great-granddaughter of Alexander Hamilton.

During Mr. Lincoln's occupancy, one of the best portraits of his father, painted by George P. A. Healy, hung in the house. During President Franklin D. Roosevelt's administra-

tion it passed to the Government and now hangs over the mantelpiece of the great state dining room in the White House (page 709).

The Romance of Tudor Place

Because of its association with a member of the Washington family, and because it was designed by Thornton, first architect of the Capitol, Tudor Place is probably the most important building, historically and architecturally, in Georgetown.

Symbol of a bygone age of landed gentry, it stands stately, serene, and aloof on its heights. Interesting is the fact that its superb exterior is offset by a severely plain interior.

Many thousands of people traveling along Q Street daily pass the south front, with its "temple" porch; few ever notice the north or main front, entered at 1644 31st Street.

Unusual in its unbroken chain of family ownership and occupancy, Tudor Place has continued in the Peter family almost since it was erected.

Thomas Peter, son of Georgetown's first Mayor, brought his wife, Martha Parke Custis, granddaughter of Martha Washington, there in 1805. The house is now owned and occupied by Armistead Peter, Jr.

Fame is such a strange and fickle thing that I visited the Oak Hill Cemetery in Georgetown not so much to view the graves of John Howard Payne, author of "Home, Sweet Home," and of those noteworthy Cabinet members, Edwin M. Stanton and James G. Blaine, as to see the obscure, diminutive, and difficult-to-find headstone of Peggy Eaton.

Wife of a member of Andrew Jackson's Cabinet and inspiration for a modern novel, she had Jackson on her side when ladies of high society snubbed her, partly because her father was an innkeeper but chiefly because of her too-charming ways with the men.

Martin Van Buren, Secretary of State and a widower, also sided with Peggy, and this, along with other factors, threw Jackson's favor to Van Buren, who became the next President instead of Calhoun.

On the other side of Washington, near the Anacostia River, is the Washington Burial Ground, commonly known as the Congressional Cemetery. It is one of the most interesting in the country because of the great number of celebrities interred, and also one of the strangest for quite a different reason.

Prior to 1835, all Members of Congress who died in office were buried in this cemetery, and Congress erected for each departed Member an identical and rather ugly tomb. These are uniform in size, shape, material, and inscription, and are spaced at regular intervals.

There are 164 of these curious objects. About half are cenotaphs; that is, they contain no burial, being empty tombs.

Of all the places in Washington associated with the great figures of American history, those connected with Abraham Lincoln provide the strongest sense of drama.

Following in his footsteps, let us first visit Fort Stevens, on the east side of 13th Street, between Quackenbos and Rittenhouse, and stand on the spot where a President of the United States was actually present in a battle and under fire during his term of office.

Washington was defenseless at the beginning of the Civil War. But Major L'Enfant, as a military man, had long before realized that the encircling hills could be defended to wonderful advantage.

Following the first Battle of Bull Run, a program of fortification on a 37-mile circumference proceeded apace.

When Guns Surrounded Washington

By April, 1865, sixty-eight armed forts, with 905 guns and mortars, had been erected. These were interconnected with 20 miles of rifle trenches and 93 unarmed batteries for small mobile guns—one of the world's greatest systems of fortifications up to that time.

Fort Stevens is partially restored, and several other forts are well preserved. In a few years, when all the forts have been connected by a circumferential highway, to be known as the Fort Drive, others will be restored.

In an effort to loosen Grant's approaching strangle hold on Richmond, Lee dispatched Gen. Jubal A. Early in July, 1864, for a raid on Washington. Early actually penetrated to the outposts of Fort Stevens.

At first the defending force consisted of wounded and convalescent soldiers and Government clerks, General Halleck remarking that he had five times as many generals as he needed but was short on privates.

But in the nick of time, Maj. Gen. Horatio G. Wright arrived with the Sixth Army Corps from Grant's main force, and in front of Fort Stevens completely repulsed the poorly supplied Confederates, exhausted from their long forced marches in torrid weather.

While watching the battle, Lincoln was under fire several times, his tall figure offering a shining mark. General Wright, upon visiting the spot many years later, said that he peremptorily ordered the President to get down.

"I am responsible for your personal safety, . . . I order you to come down," General Wright said. "Mr. Lincoln looked at me, smiled, and then, more in consideration of my

Staff Photographer B. Anthony Stewart

Saudi Arabian Princes Visit Blair House as Guests of the State Department

This lovely Pennsylvania Avenue mansion, built in 1824-27, passed to the Government in 1942 (page 723). In this drawing room General William Tecumseh Sherman was married. Its furnishings are mementos of three generations of a distinguished family. Francis Preston Blair, who bought the place in 1836, looks down from his portrait (right). Prince Faisal, Foreign Minister and second son of the Saudi Arabian King, sits between his secretary (left) and bodyguard.

earnestness than from inclination, stepped down. . . . Even then, he would persist in standing up and exposing his tall form."

Lincoln spent many summer nights in the Anderson Cottage on the Soldiers' Home grounds, not far from Fort Stevens. This was the first and now almost forgotten summer White House, for three Presidents besides Lincoln made it their permanent summer home, Arthur being the last.

Lincoln undoubtedly wrote the second draft of the Emancipation Proclamation in the Anderson Cottage, which commands a superb view of downtown Washington and seems little changed from Lincoln's time. It is now one of the dormitories for men who live in the home, and I found a sergeant occupying what was Lincoln's study.

Open to the public, Soldiers' Home grounds are now completely surrounded by the city. The long, winding woodland drives provide welcome relief from urban surroundings.

At the instance of Gen. Winfield Scott and Maj. Robert Anderson, later of Fort Sumter fame, the Government purchased, in 1851, for a "military asylum," the summer home of

George W. Riggs, whose banking firm became the Riggs National Bank.

The purchase was made with a $100,000 draft made out to General Scott, tribute money levied on the City of Mexico, and he endorsed it to the "credit of the army asylum," so that it should not be used for anything else.

For nearly a hundred years Congress has appropriated nothing directly to operate the Soldiers' Home, which is for enlisted men of the Regular Army only.

It is supported out of a very large trust fund made up of court-martial fines, unclaimed estates of deceased soldiers, and contributions from pay, which have ranged from 10 cents a month to a high of 25 cents.

Lincoln's Pew Number 91

No one should fail to visit pew 91 in the New York Avenue Presbyterian Church. The best time is at dusk in the late afternoon. Lincoln occupied this pew from March, 1861, until his death, and paid $50 a year rent. Other Presidents have worshiped in the same church, but it is the Lincoln connection which makes it truly historic.

The pew was and is so narrow that Lincoln had to sit at the end somewhat sidewise, with his long legs partly out in the aisle. Despite this handicap, he permitted strangers to sit with him, and as one would timidly approach he would shoot out a long arm, saying, "Come in here, brother, there's plenty of room."

It is curious how many permanent residents of Washington, as well as visitors, have never been inside Ford's Theater, on 10th Street, where Lincoln was shot, or in the Petersen House across the street, where he died a few hours later.

Yet both buildings are in the heart of the shopping district and are operated by the National Park Service for the public.

The visitor to Ford's Theater must not expect to find it as it was on April 14, 1865. Seized that night by the Army, it was never used as a theater again. The Government bought it, took out stage, boxes, and seats, and made it into a three-story building for War Department offices. It is now a museum of Lincoln relics.

A City of Memorials

Across the street, the exterior of the Petersen House is relatively unchanged. Inside, it has been made to look as similar as possible to the popular rooming house for Union soldiers that it was during the Civil War.

Washington is naturally a city of memorials. In fact, the city was so planned that the Washington Monument, later the Lincoln Memorial, and still later the Jefferson Memorial have fitted harmoniously into the coordinate axes of the central plan (Plates VI and XVI).

The Washington Monument is known to every schoolboy (page 739). The sheer height of its shaft and its ever-changing beauty, under varying atmospheric conditions and from different angles, are a delight to permanent residents and visitors alike.

As for the Lincoln Memorial, no article about places in the Capital associated with the Nation's great can reach a fitting close without reference to it, even though all three memorials are equally symbolic of great men and of the noblest aspirations of the American people.

Many visitors think that Lincoln is buried in the Memorial, but his resting place is in Springfield, Illinois.

The Memorial is more of a temple than anything else; men take off their hats; even noisy children are stilled.

During Robert Todd Lincoln's residence in Georgetown he visited the Memorial several times a week.

Incidentally, the papers of the Great Emancipator, which his son gave to the Library of Congress, will be released to public inspection on July 26 of this year.

The proportions of the Lincoln Memorial are so fine that its great mass, height, length, and breadth are suppressed in its unity.

Lincoln Memorial a Thing Apart

Light shines through the marble panels which constitute the ceiling. To make these panels more translucent, they were soaked in a melted waxy substance before they were put into place.

The Memorial was set apart from all other buildings so that its beauty and sublimity could have undisputed sway over a large area.

As one climbs the long series of steps and approaches the statue of Lincoln, not only do his brooding eyes drive away thoughts of the outer world, but one seems to feel the very essence of his upright character, steeped in tolerance and in the belief that all men should be free.

As the late Marietta Minnigerode Andrews, a well-known artist, once said of the Memorial:

"[It is] so appropriate, as an act of undying reverence, because its beauty is its all, devoid of utilitarian purpose as was the box of precious ointment poured out upon the Saviour's feet." *

* From *My Studio Window*, by Marietta Minnigerode Andrews, published in 1928 by E. P. Dutton & Co., Inc., New York, N. Y.

Illustration by R. Anthony Stewart

Every Washington Honeymoon Couple Wants a Snapshot Taken in Lafayette Square

"Andrew Jackson" represents the Capital's first equestrian statue. Clark Mills, a self-taught artist, devoted nine months to learning how to balance rider and rearing horse. His solution so delighted Congress that it voted him a $20,000 bonus. Cannon captured by Jackson in the War of 1812 were cast into the bronze in 1853.

Kodachrome by Bryant J. Cottrell

John Eriesson Appropriately Sits Near the Memorial to Abraham Lincoln, Who Encouraged Him to Build the *Monitor*

By inventing the screw propeller, this Swedish-American genius revolutionized ship propulsion. Creating the raftlike ironclad, he saved the Union's wooden Navy from the South's *Merrimac*. Allegorical figures are a laborer, representing *Workmanship;* a woman, *Vision*, and (not seen) a Norse seaman, *Adventure*.

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Reproduced by R. Anthony Stewart

Eleven Nations Governing Japan Meet in the Japanese Embassy's Grand Salon—a Typical Washington International Conference

As chairman, Maj. Gen. Frank R. McCoy addresses the Far Eastern Commission, the Embassy's temporary tenant. Secretary of the Commission, Nelson Johnson, at his right elbow, and Lord Halifax at his left. Life-size figures in Japanese armor have been removed from the halls because they frightened cleaning women.

Kodachrome by B. Anthony Stewart

As Many as 8,000 Visitors a Day Tour the Capitol; a Girl Guides This Party

Pompeiian Corridor and *Louisiana Purchase* are by Constantino Brumidi, who previously worked on the Vatican. Liberty-loving, he fled repression in Italy and devoted some 25 years to the Capitol. While executing the Rotunda's frieze, he died in 1880 of injuries from a fall off a scaffold (Plate VIII).

Thomas Hopkins Gallaudet Teaches Deaf Alice Cogswell the Manual Alphabet

"Beautiful as a strain of music," the statue stands on Kendall Green, campus of Gallaudet, only college for the deaf. Today, students from all parts of America are encouraged to read the lips and speak.

© National Geographic Society — Kodachromes by B. Anthony Stewart

Color Reproductions of the Old Masters Are Available to Admirers of the Originals

Romney's *Mrs. Davenport* (left) and Botticelli's *Portrait of a Youth* hang in the National Gallery. These and other masterpieces are gifts to the Nation by Andrew Mellon, Samuel Kress, Chester Dale, and others.

Watercolor by B. Anthony Stewart

Teacher and Children, Visiting Explorers' Hall, National Geographic Society, Examine a Colossal Head from Mexico

Each child taps the head to see if it is solid. It isn't. Carved in lava by a medieval people, the original was too heavy to ship; so a 2,700-pound replica was cast in three sections. Dr. Matthew Stirling, leader of the National Geographic Society-Smithsonian Institution Mexican Expeditions, discovered the head at La Venta in 1940,

Ektachrome by B. Anthony Stewart

The Former Allied Supreme Commander Points to the Germany He Conquered. His Map Saw History Made; Its Travels Were Wide

Especially made for him by the National Geographic Society, the map rack accompanied General of the Army Dwight D. Eisenhower through France and Germany and back to Washington. It contains 22 maps published by The Society. Col. James Stack, senior aide to the General, views it in the Chief of Staff's office.

 Aerial Exploration, U. S. Navy

Trees Part; a Grassy Avenue Opens Between the White House and Jefferson Memorial

Washington Monument stands off center because the intended site was swampy. However, it fits exactly into the intersecting axis between the Capitol and Lincoln Memorial. Four ball fields stud the Ellipse; two circles of elms surround it. Beyond the cherry-ringed Tidal Basin lies the broad Potomac.

The Washington National Monument Society

By Charles Warren

THERE is in the City of Washington an organization formed 114 years ago, in 1833, of whose existence most citizens are unaware, but which is still actively functioning—the Washington National Monument Society.

It has, however, a unique characteristic. By provision of its charter granted by Congress in 1859, it has only 18 members but 53 officers—the latter being a president (the President of the United States ex officio), 48 vice presidents (the Governors of the States ex officio), two active vice presidents, a secretary, and a treasurer.

No national monument to the memory of George Washington was completed in the Capital City until about 85 years after his death on December 14, 1799.

Nine days later, John Marshall of Virginia, in the House of Representatives, supported a joint resolution "that a marble monument be erected by the United States in the Capitol at the City of Washington," and that his body be deposited under it. The resolution was unanimously adopted.

On January 1, 1801, the House passed a bill for a marble mausoleum with a base 100 feet square. In the Senate, the bill was postponed.

In 1816, 1824, and 1830, House bills favoring the erection of a marble monument or mausoleum again failed to pass, many Congressmen taking the view expressed by Erastus Root of New York in 1810—that it was preferable that "Washington's name live in history [rather] than in marble."

John Forsyth of Georgia later said it was unnecessary: "When foreigners inquire of us, 'Where is his monument?' our answer is 'In our hearts, our deep, all-pervading, overwhelming gratitude to the great benefactor of our country.'" George Cary of Georgia said: "We need no monuments. . . . He has a monument in the heart of every American . . . and let it be our peculiar pride to enshrine him."

An Appeal to the Nation

From year to year the project unfortunately became involved in politics until, in 1832, when it was proposed to celebrate the centenary of Washington's birth, the division between the Democrats and the Whigs had become so bitterly partisan that Congress failed to ask President Jackson to attend the exercises at the Capitol, and the municipal celebrations were almost entirely Whig affairs.

Possibly because of this heated political situation and the repeated failure by Congress to provide for a monument, citizens of Washington determined not to wait any longer or to rely on Congressional appropriation, but to appeal to individuals throughout the Nation.

Accordingly, a Society was formed, September 26, 1833, at the City Hall for the purpose of erecting "a great National Monument to the memory of Washington at the seat of the Federal Government," and to obtain contributions for this purpose. It chose Chief Justice Marshall as its first president, and George Watterston (former Librarian of Congress) as its secretary.

Marshall on his death was succeeded as president of the Society in 1835 by former President James Madison, with Judge William Cranch as first vice president. Widespread appeals for funds were circulated. An architect for the Monument was chosen—Robert Mills *—who had designed the first monument of importance raised to George Washington (that in Baltimore in 1815-1829).

Appeals Kept Issue Alive

At first, individual contributions were limited to one dollar, but this limitation was soon abandoned. Though the Society had no great success in raising money (its funds being only $87,000 in 1847), its constant appeals to the Nation and its memorials to Congress, and the indefatigable efforts of its secretary, George Watterston, kept the subject constantly before the people.

The eloquent nature of these appeals "to the American people" may be seen in the following extracts from that which appeared in 1846:

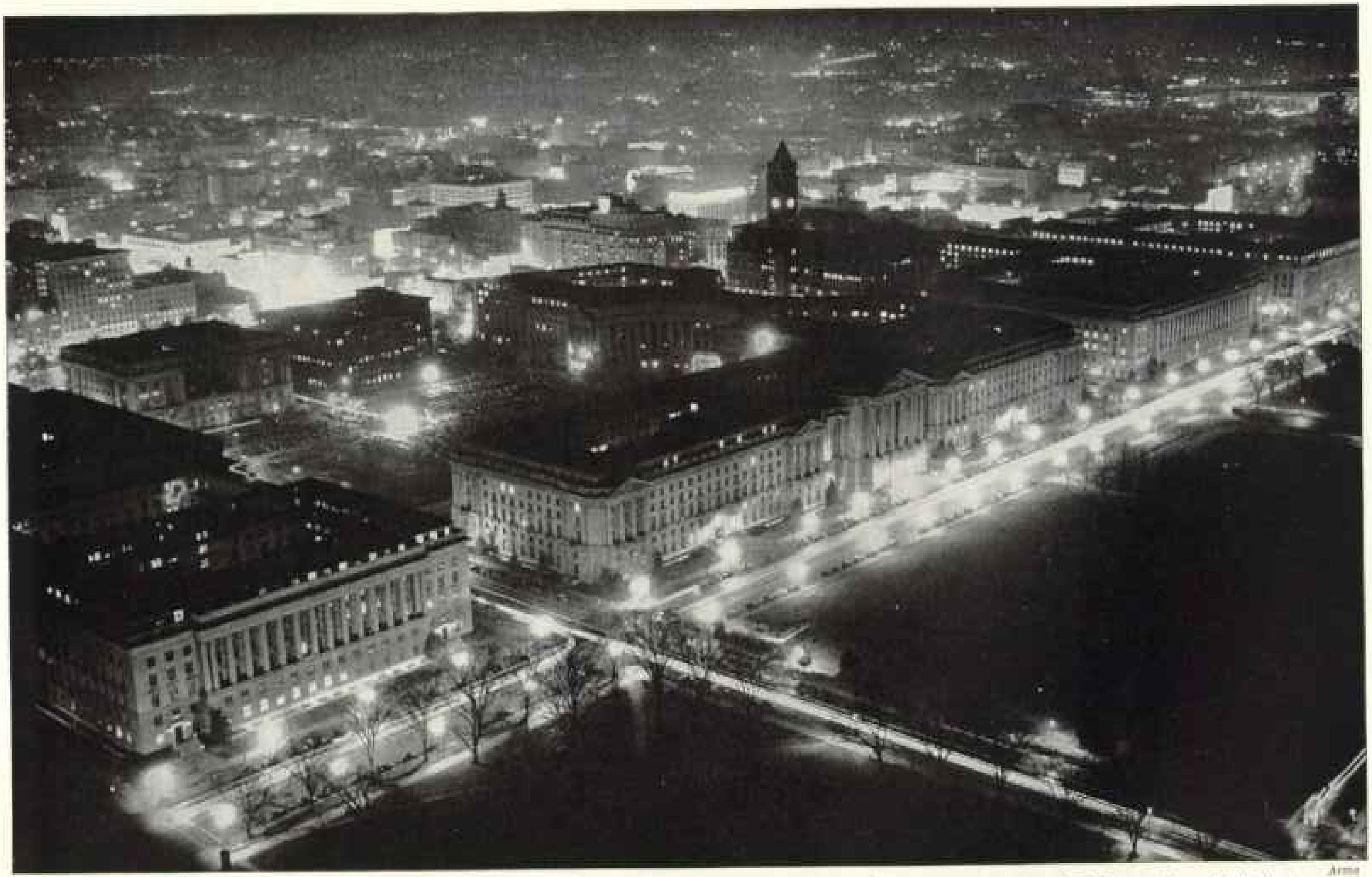
"The object was to erect a monument at the seat of Government which should by its colossal magnitude and imposing grandeur exhibit to the remotest age the gratitude of a nation of free men to the man whose excellent good sense and virtues had so pre-eminently contributed to their happiness. . . . The hope is still indulged that the American people, influenced by the ardent memory of the great founder of their liberties, will not fail to contribute to the erection of a structure that shall be commensurate with their gratitude and

* A monument to Mills was erected in the Congressional Cemetery, May 30, 1936, by the Architects of Washington, bearing this inscription: "Robert Mills, 1781-1855, First Federal Architect, whose influence moulded our Architecture, and whose genius gave us the Washington Monument, the Treasury Building, the Old Patent Office, and the Old Post Office."

Staff Photographer Richard K. Stewart

On Summer Evenings Shirt-sleeved Washingtonians Escape the Heat by Listening to Good Music at Their Water Gate Concerts

Presidents Roosevelt and Truman have attended this democratic open-air music festival. Last season 208,000 persons heard 18 concerts, but only 65,000 paid admissions to the 8,000 seats. Others lounged on park grass, leaned over the approach to Arlington Memorial Bridge (left), or drifted in small boats (page 724). Here the National Symphony Orchestra plays on a barge moored in the Potomac.



Arms

Washington by Night Presents an Incandescent Panorama; Clocks Gleam Like Full Moons in the Old Post Office Building

Constitution Avenue, seen by time exposure from the Washington Monument, faces a dark Mall. Brightest light comes from the theatrical district beyond Pennsylvania Avenue. The wedge between these two avenues forms the Federal Triangle, a $78,000,000 development of 12 massive Government buildings. At the left, where the Triangle ends, stands the Commerce Building. Continuing are Labor, Auditorium, Interstate Commerce Commission, Internal Revenue, and Justice Buildings.

veneration and worthy of him in whose honor it is to be reared. . . . A design has been adopted and lithographed. . . .

"The pilgrim to Mount Vernon . . . is often shocked when he looks upon the humble sepulcher which contains his dust, and laments that no monument has yet reared its lofty head to mark a nation's gratitude. . . . Posthumous honors bestowed by a grateful nation on its distinguished citizens serve the further purpose of stimulating those who survive them to similar acts of greatness and of virtue. . . . The character of Washington is identified with the glory and greatness of his country. It belongs to history, into which it has infused a moral grandeur and beauty. It presents a verdant oasis on the dreary waste of the world, on which the mind loves to repose and the patriot and philosopher delight to dwell.

"Such a being but seldom appears to illustrate and give splendor to the annals of mankind, and the country which gave him birth should take a pride in bestowing posthumous honors on his name. It is not to transmit the name or fame of the illustrious Washington to future ages that a monument should be erected to his memory, but to show that the people of this Republic at least are not ungrateful, and that they desire to manifest their love of eminent public and private virtues by some enduring memorial which, like the Pyramids of Egypt, shall fatigue time by its duration."

President Polk Signed Memorial

This memorial was signed by James K. Polk as president ex officio, William Brent, as first vice president, the Mayor of Washington as third vice president, George Watterston as secretary, and 13 members of the Board of Managers (including Maj. Gen. Winfield Scott).

On January 31, 1848, Congress passed a resolution authorizing the Society "to erect a Monument to the memory of George Washington upon such portion of the public grounds or reservations within the City of Washington, not otherwise occupied, as shall be selected by the President of the United States and the Board of Managers of said Society."

A deed of the present site was executed to the Society on April 12, 1848. The site so granted was the very one selected by Washington himself as the appropriate spot for "A Monument to the American Revolution," which was proposed in 1795. It is also the same site which was marked on Major L'Enfant's map for the equestrian statue of General Washington ordered by the Continental Congress, August 9, 1783.

On July 4, 1848, the cornerstone of the Monument was laid in the presence of President Polk and a large crowd of diplomats and delegations from all parts of the Union.

The orator of the day was Robert C. Winthrop of Massachusetts, then Speaker of the House of Representatives. He said:

"The President of the United States is here and feels, I am persuaded, that the official distinction which he lends to the scene has no higher personal charm, if any higher public dignity, than that which it derives from its association with his earliest and most illustrious predecessor. 'I hold the place which Washington held,' must be a reflection capable of sustaining a Chief Magistrate under any and every weight of responsibility and care, and of elevating him to the pursuit of the purest and loftiest ends."

A striking description which Winthrop gave at the outset of the then world conditions (apposite today) follows: "The mighty movements which have recently taken place on the Continent of Europe where events which would have given character to an age have been crowded within the changes of a moon. . . . The influence of the New World upon the Old is the great moral of the events of the day. . . . New modes of communication, regular and more rapid interchanges of communication and opinion . . . more frequent comparisons of principles, of institutions, and of conditions, have at length brought the political systems of the two continents into conflict, and prostrate thrones and reeling empires this day bear witness to the shock. . . . It is too early as yet for anyone to pronounce upon the precise consequences of the encounter."

After giving an eloquent depiction of Washington's career, he exhorted his listeners to "hold up afresh to the admiration and imitation of mankind the character and example of George Washington."

"See that Every Stone Is Well Squared"

The architect of the Monument, Robert Mills, followed with this injunction: "Look well to the erection of this National Monument. See that every stone is well squared, and that it is placed in its position both level and plumb, that the noble offering of a nation to commemorate greatness, patriotism, and virtue may stand until the end of time."

No one of Washington's Cabinet or generals or other contemporaries of prominence was present. The aged widows of two of his associates, however, attended—Mrs. Alexander Hamilton, aged 91, and Mrs. James ("Dolly") Madison, aged 80. His step-grandson, George Washington Parke Custis, 18 years old at Washington's death, also attended.

Staff Photographer B. Anthony Stewart

Seen from George Washington's Monument, His City Spreads Out Like a Relief Map

The marble obelisk has been called the "most beautiful single object in the world" (Plates II and XVI). Its cornerstone was set in 1848, the aluminum tip 36 years later. The 555-foot shaft remains the zenith of masonry. Its 81,000 tons sway only ⅛ inch in a 30-mile wind. Last year Washington Monument had 840,000 visitors. On clear days they could see the Blue Ridge 60 miles away. To gain the 500-foot observation level, they rode an elevator or walked 898 steps. Climbers saw 188 tribute stones, some carved in Chinese or Arabic, set within the shaft.

In 1854 the Society continued its appeals to Congress, and in 1854-55 a House committee recommended an appropriation of $200,000. Nothing came of this. By an Act of Congress approved on February 26, 1859, the Society was incorporated by Congress on petition of its Board of Managers—Gen. Winfield Scott, Walter Jones, W. W. Corcoran, John Carroll Brent, and others.

President Buchanan presided at the meeting of the new Board, at the City Hall, March 22, 1859.

As the Civil War intervened, and work had ceased on the Monument, a new appeal "to the People and their Representatives" was made on February 22, 1871. It was signed by President Grant, president ex officio; by Henry D. Cooke, Governor of the District of Columbia, as first vice president; by Gen. William T. Sherman as second vice president; by W. W. Corcoran as third vice president; and by John Carroll Brent as secretary; and it contained an interesting history of the Society and of the Monument and its site.

Congress Takes Over Monument

By Act of August 2, 1876, Congress provided for taking title from the Society, provided for a Board of Commissioners (of which the first vice president of the Society should be a member) for the completion of the Monument under the direction and supervision of

the President of the United States, and for appropriating money for such completion.

The Act provided further: "Nothing herein shall be so construed as to prohibit said Society from continuing its organization for the purpose of soliciting and collecting money and material from the States, associations, and the people in aid of the completion of the Monument and acting in an advisory and cooperative capacity with the Commission until the completion and dedication of the same."

By Act of October 2, 1888, it was provided that "the Washington National Monument Society is hereafter continued with the same powers as provided in the Act of August 2, 1876."

"Venerable Citizens" Attend Dedication

After the capstone had been set on December 6, 1884, the Monument, nearly 37 years after the laying of its cornerstone, was dedicated on February 21, 1885, and accepted by President Arthur at its site, in the presence of officials, civil, judicial, military, diplomatic, municipal, and Masonic, and (as the official report quaintly states) "jurists, scientists, journalists, venerable citizens representative of former generations."

There was an address from the aged W. W. Corcoran and by Col. Thomas Lincoln Casey, the engineer who completed the construction. Subsequent exercises at the Capitol consisted of an oration written by Robert C. Winthrop which he had expected to deliver in person, in spite of his nearly 76 years of age, but which, owing to illness, was read by John D. Long of Massachusetts. An oration was also given by John W. Daniel of Virginia.

Winthrop's address was long and eloquent, though not equaling that delivered by him 37 years before. He quoted effectively the opinions of Washington expressed by certain of his contemporaries and by Lord Byron in a well-known poem. He recalled Jefferson's words shortly before his death, when, looking out from Monticello, he said: "Washington's fame will go on increasing until the brightest constellation in yonder heavens is called by his name."

Winthrop concluded by saying that though the Monument itself might become subject to vicissitudes of time, "the character which it commemorates and illustrates is secure. It will remain unchanged and unchangeable in all its . . . splendor and will more and more command the homage of succeeding ages in all regions of the earth. God be praised, that character is ours forever."

In 1926 the American Institute of Architects heard the late James Monroe Hewlett, distinguished architect and mural painter, describe the Monument itself in these notable words of artistic appreciation:

"There is in Washington a construction designed by engineers. The wind piles up masses of sculptural clouds behind it. The rising sun paints it silver and the setting sun paints it gold, and it is, I venture to think, the most beautiful single object in the world today."

Abraham Lincoln's Tribute

A striking supplement to these tributes should be known to all Americans—the speech made by Abraham Lincoln at Springfield, Illinois, more than one hundred years ago, February 22, 1842, on the 110th anniversary of Washington's birth:

"Washington is the mightiest name of earth—long since mightiest in the cause of civil liberty, still mightiest in moral reformation. On that name no eulogy is expected. It cannot be. To add brightness to the sun or glory to the name of Washington is alike impossible. Let none attempt it. In solemn awe pronounce the name, and in its naked deathless splendor leave it shining on." *

* For additional articles in the NATIONAL GEOGRAPHIC MAGAZINE on the National Capital's history, growth, charm, and historic buildings, see, among others: "Washington Through the Years," by Gilbert Grosvenor, November, 1931; "Washington, Home City and Show Place," by Leo A. Borah, June, 1937; "Washington: Its Beginning, Its Growth, and Its Future," by William Howard Taft, March, 1915; "Sources of Washington's Charm," by J. R. Hildebrand, June, 1923; "Wonders of the New Washington," by Frederick G. Vosburgh, April, 1935; "Wartime Washington," by William H. Nicholas, September, 1943; and "Washington—Storehouse of Knowledge," by Albert W. Atwood, March, 1942.

Notice of change of address for your NATIONAL GEOGRAPHIC MAGAZINE *should be received in the offices of 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 August number, The Society should be notified of your new address not later than July first. Be sure to include your new postal-zone number.*

On the Ridgepole of the Rockies

By Walter Meayers Edwards

HAVE you ever dreamed you were hanging on the edge of a precipice, with an unseen force compelling you to fall into the depths below?

My wife and I were both in that predicament last summer—only it wasn't a dream!

Neither of us had ever before climbed anything more hazardous than an apple tree; yet there we were in the Valley of the Ten Peaks, clinging to the perpendicular side of a real Canadian "Rocky" by our fingers and toes.

It was fifty feet to the nearest stop, straight down, and the loose limestone would come away in our hands like ripe berries just when we thought we had a firm hold. The sparkling blue-green beauty of Moraine Lake far below became a matter of indifference in our sudden preoccupation with the geology of the region.

We had been misled into believing we were to have an easy climb and that our complete ignorance of alpine technique would be no handicap. Later we accepted the merited rebuke of old-timers for not having been roped together, and smiled knowingly to each other as we thought of the descent down a rock slide during which a certain part of one pair of dungarees had been worn somewhat thin.

A Car, a Camera, and Time Off

Two out of the millions of Americans who once more were free to roam at will through this land of many wonders, we were especially fortunate in having a new car, a secondhand movie camera, and several weeks of accumulated leave.

Our choice of the Canadian Rockies was influenced by my father, who had given me, as a boy, vivid impressions of a magical mountain fairyland in which lived special kinds of people —Indians, wranglers, Swiss guides, camp cooks, and "Trail Riders."

Very early one morning in July we stole out of our Washington apartment in the dark, climbed into our car, which was stuffed with duffel bags and cameras, and pointed it west. Nine States and five sunrises later, two tired but happy people unhooked the gate of Bill Oliver's Diamond L Ranch, in the foothills of the Rockies 25 miles southwest of Calgary, Alberta.

Bill and his charming wife, "Midge," were ready with a warm western welcome. We were assigned to the tastefully decorated room of their eldest daughter, Joan, who was hostessing at the Columbia Icefield Chalet for the summer. The comfortable ranch-house living room had a large picture window facing west to the mountains, which beckoned to us with blue and white fingers.

The Calgary Stampede

The mountains would have to wait a while, however, for the Calgary Stampede was already in full swing, and only three days remained for movie making.

Wandering around the exhibition grounds early next morning, inspecting the Indian village and absorbing the "atmosphere," we two easterners, in borrowed broad-brimmed hats, were in a different world.

Taking up prepared positions at the eastern end of the arena, we withstood a cavalry charge of fifty yelling cowboys, who suddenly turned about and rode at full gallop into a herd of wild cows. There was a mad melee of men and animals, lassos and dust, in which here and there we could discern a cowboy holding grimly to a roped cow while his partner milked her—into a bottle.

We quickly learned that, contrary to impressions gained from newsreels, most riders manage to stay on their bucking horses and steers for the required ten seconds. There is more of a thrill to seeing a bronco ridden than seeing the rider thrown.

The special event at Calgary is the chuck-wagon race (pages 750-1). On the second evening of our visit I found myself on the roof of the grandstand with a newsreel cameraman while the contestants were taking up their positions in the arena.

The sun is low and long shadows add drama to the scene. Four outfits, each made up of a covered wagon drawn by a four-horse team, driver, and four mounted men, line up.

Suddenly the arena master spurs his pinto pony and dashes up the line of vehicles, waving his arm as a horn signals the start. As one the wagons begin to roll, each weaving a figure eight around two barrels placed to equalize the distance traveled.

The outriders heave a stove into each wagon as it moves along, struggling to secure the load and then leaping into the saddle. There isn't a man in the crowd who isn't on his feet yelling as the outfits careen onto the track.

The first three wagons are scarcely inches apart, and the fourth is hard behind. A collision seems inevitable, but the drivers maneuver the clumsy vehicles with nerve and skill.

As they round the first curve, the advantage of the inside lane becomes apparent, and the

red-shirt outfit gains a few feet. Down the back stretch the dust flies, shirts billow, manes and tails stream out behind, but the positions remain the same.

Outriders are closing the initial distance lost while mounting and follow their wagons around the bend. Here they come down the stretch, sunlight and dust cloaking them in an eerie halo as they strain toward the line. And over they go in a bunch, red shirts still in the lead by inches.

"Whew! I've had enough excitement for one day," said my photographer friend. "We'll probably be counting falling cowboys to lull ourselves to sleep tonight."

A few restful days at the hospitable Diamond L soon slowed us down to normal, and we were ready to start for the mountains.

We Start for the Mountains

We had as companion and guide Canon Tully Montgomery, who hitched a ride with us to our next destination, Banff, where he is rector of the Anglican Church.

From Calgary we ascended gradually through the foothills, following the winding course of the Bow River through lush wheat and pasture lands, passing from plains to mountains through the Gap.

At Canmore we saw a Stoney Indian watering his horse in a stream, unconscious of the beauty of the Three Sisters towering benevolently behind him.

"He, too, is on his way to Banff," said Padre. "He'll take part in the Indian Days celebration, which starts tomorrow."

We drove up the ever-narrowing Bow Valley, the Fairholme Mountains on our right and Mount Rundle on the left, dark against the afternoon sun. Each bend in the road revealed more Indians. They were traveling in jalopies, buckboards, wagons, and on horseback—braves, squaws, and papooses—sober of expression and dress.

A sharp turn in the road brought us to a wide meadow behind a symmetrical fence of trees, and there, close along the base of the huge gray, jagged mass of Cascade Mountain, was a thin sawtooth line of painted tepees, the Indian encampment (page 749).

It was easy to see this place as it had been a mere hundred years before. Not until 1841 did white man's eyes first behold it. In that year, within two months of each other, Methodist missionary Robert T. Rundle, for whom the mountain was named, and Sir George Simpson, Governor of the Hudson's Bay Company, passed this way.

In less than 50 years came the railroad and then the motorcar to Banff, situated like a hub where three valleys join the Bow. As headquarters of the National Park of the same name, Banff is king of a mountain realm.

Throughout our visit the surrounding gray-topped mountains, forest-clad below, kept us breathless, both from admiration and from climbing their steep trails.

In the car we covered every inch of motor road for a quick impression of what other visitors were doing. Some, without leaving their cars, cautiously viewed the buffaloes in the animal paddock northeast of town. Others parboiled themselves in water perfumed with hydrogen sulphide at the Upper Hot Springs on Sulphur Mountain.

Buses brought tourists to watch the bears forage in the town garbage dump. Picnic parties were feasting their eyes as well as their mouths on the shores of Lake Minnewanka (Plate XIV). Those with cars took the dizzy zigzag route up Stoney Squaw Mountain for bird's-eye snapshots of the town and the deep Spray River Valley.

At the northern end of Tunnel Mountain hundreds of tents and trailers stood in neat, closely packed rows in the public campground. Postwar travelers swarmed in hotel lobbies. Groups were reveling in the famous "Million Dollar View" eastward down the Bow toward Mounts Girouard and Inglismaldie. A fortunate few were riding horseback along verdant trails, while others sampled Nature's abundant favors afoot.

Indian Days at Banff

Mingling with the crowd on the Bow River bridge, we were prodded with tripods and jabbed with camera cases as each visitor sought to record the dazzling display of beadwork and feathers provided by Indians of the Stoney tribe, lined up to compete for prizes for the best Indian costumes (Plate XV).

As Norman Luxton, director of Banff's Indian Days, explained to me later: "It gives the Indians a holiday and pleases the visitors. The old people, who never have a chance to go places, receive my first consideration, and only rarely have I had to send a thoughtless son back to the reservation for his aged mother or father."

"How long have they been holding these celebrations?" I asked.

"Fifty-six years," he replied. "I remember when they simply ran horse races up and down the main street. Indians love a contest; so we make competition the keynote, and there are prizes for everything. Afternoons are devoted to races and bronc riding; evenings to song and dance contests. Come and see 'em."

We did!

W. J. L. Gilderoy

Banff Art Students Strive to Capture Mount Rundle's Glory on Canvas

No matter which way they turn, the students face inspiring mountain scenery. They work beside Vermilion Lakes, which are situated conveniently on the Banff-Jasper Highway. Sight-seeing buses stop at the sight of a a moose at water's edge or a herd of Rocky Mountain sheep on the crags. Black bears being fed by motorists sometimes block traffic for an hour (page 755).

Spiral Tunnels Boost This Train Across Kicking Horse Pass

Jagged Mount Stephen looks down on a Canadian Pacific train laboring the 10 miles between Field and Hector, British Columbia. A few minutes ago the locomotive entered Mount Ogden, across the valley, and, in a 2,922-foot loop, climbed 45 feet. Later it plunged into Cathedral Mountain tunnel, shown in the foreground. Having twisted 3,253 feet, it is emerging —another 48 feet higher (page 779).

Dungarees, lumberjacks, sleeping bags, and duffels! These engrossed our minds that night as we slept in urban luxury in the Tunnel Mountain home of Mrs. Byron Harmon, widow of the artist-photographer who "through his photographs has given the Canadian Rockies to the world." *

Sleep in an Indian Tepee

Twenty-four hours later we were each lying in a sleeping bag on spruce-bough mattresses, I in one Indian tepee and my wife in another. As I wriggled to find a softer lump for my hip, my thoughts dwelt on city comfort. We were "having a wonderful time" with the Trail Riders of the Canadian Rockies.

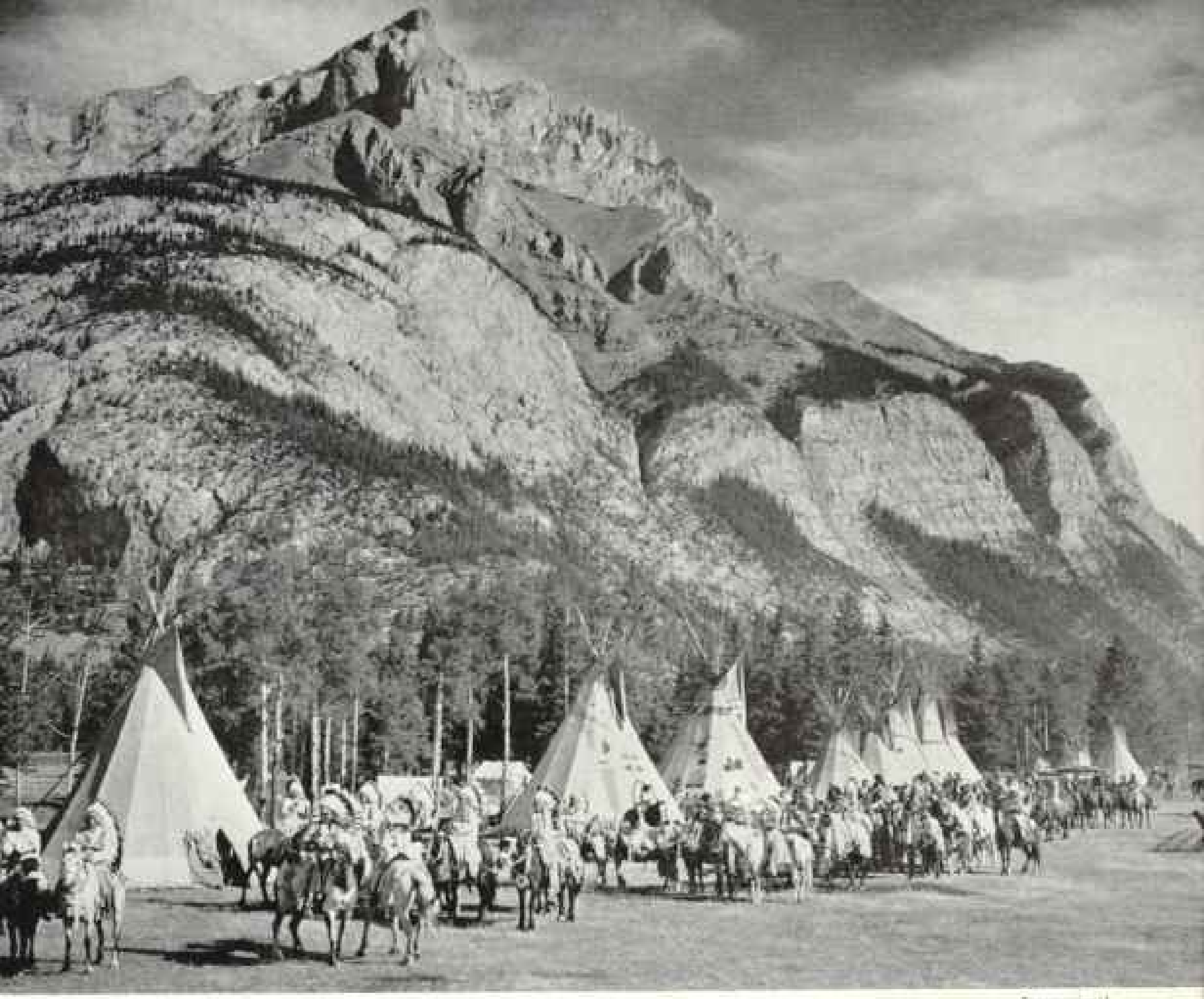
Our base camp of about 20 tepees, sheltering 60 "dudes" and assorted wranglers, was situated in an open grassy valley beside the Panther River, 30 miles north of Banff.

High mountains were all around. Buses had brought us partway up the Cascade River fire road. Then for 17 picturesque miles we had become intimately acquainted with the contours of the Western saddle and the rugged individualist that wears it. What puzzles me is why a dude is called a tender*foot*!

Recollection of that first evening fails beyond a dim impression of hunting for sleeping bags, pulling branches for bedmaking from ready-cut piles of spruce boughs, and creaking into bed. I can't even remember eating.

In what seemed moments I was awakened by one of my three tepee mates stretching a shivering arm out of the covers to light a fire. In 15 minutes the tepee was warm. Soon ravenous dudes were making short work of eating eggs and flapjacks. Long tables had been considerately erected so that saddle-sore Trail Riders could eat standing up!

* See "Peaks and Trails in the Canadian Alps," 13 ills. in duotone from photographs by Byron Harmon, NATIONAL GEOGRAPHIC MAGAZINE, May, 1934.



Stoney Indians Assemble at Their Tepee Camp for a Parade in Banff

For a week each summer the tribesmen move to town from their reservation at Morley, Alberta. Daily they ride through the streets as part of Banff's Indian Days celebration. Most of all, they enjoy competing for prizes in song, dance, and riding contests. Cascade Mountain shelters their tepees (page 746).

We jogged along the mountain trail later on our way to Harrison Lake, led by the head guide on a white mare whose slim brown colt followed her everywhere. All shapes, ages, sizes, and both sexes were represented.

Each had an enthusiasm for outdoor life and the beauty of Nature, which has carried the organization into its third decade.

It was our first Trail Ride, but many old-timers had over 2,500 miles of horseback travel in the Canadian Rockies to their credit.

Thrill of High Trails

The thrill of high trails, the shimmering streams far below, the pine-scented woods, the glistening snow-capped peaks, the surefooted mountain ponies, the comradeship of kindred spirits, the giant appetites and thirsts, and no bath for almost a week!

These were in our minds as we trudged bowlegged, carrying our paraphernalia up the Harmon driveway upon our return to Banff after five days.

We were greeted by a wild Irish yell from "Casey" Oliver, retired sergeant of the Royal Canadian Mounted Police, who had been stationed in Banff some years before. He and his wife were also a temporary part of the Harmon menage.

"Come look in the kitchen! We thought it wuz squihirrols, but thorty squihirrols couldn't have made sich a shambles as ye should've seen fer yersilves," he shouted.

"The bread box wuz open, and all wuz left of two loaves of bread wuz the wrappings, and apples wuz all ohver the place, ivery one with a bhite taken out.

"Know what it wuz? T'wuz a bear! A pussy-footin', thavin' fox of a bhear. Look, there's his footprint as big as yer fist on the cupboard under the window. I told Mrs. Harmon she should have it framed or stuffed or somethin'.

"The idea of a pesky divil of a bhear comin' raight into town and stealin' the bread raight out of yir own kitchen, mind ye!"

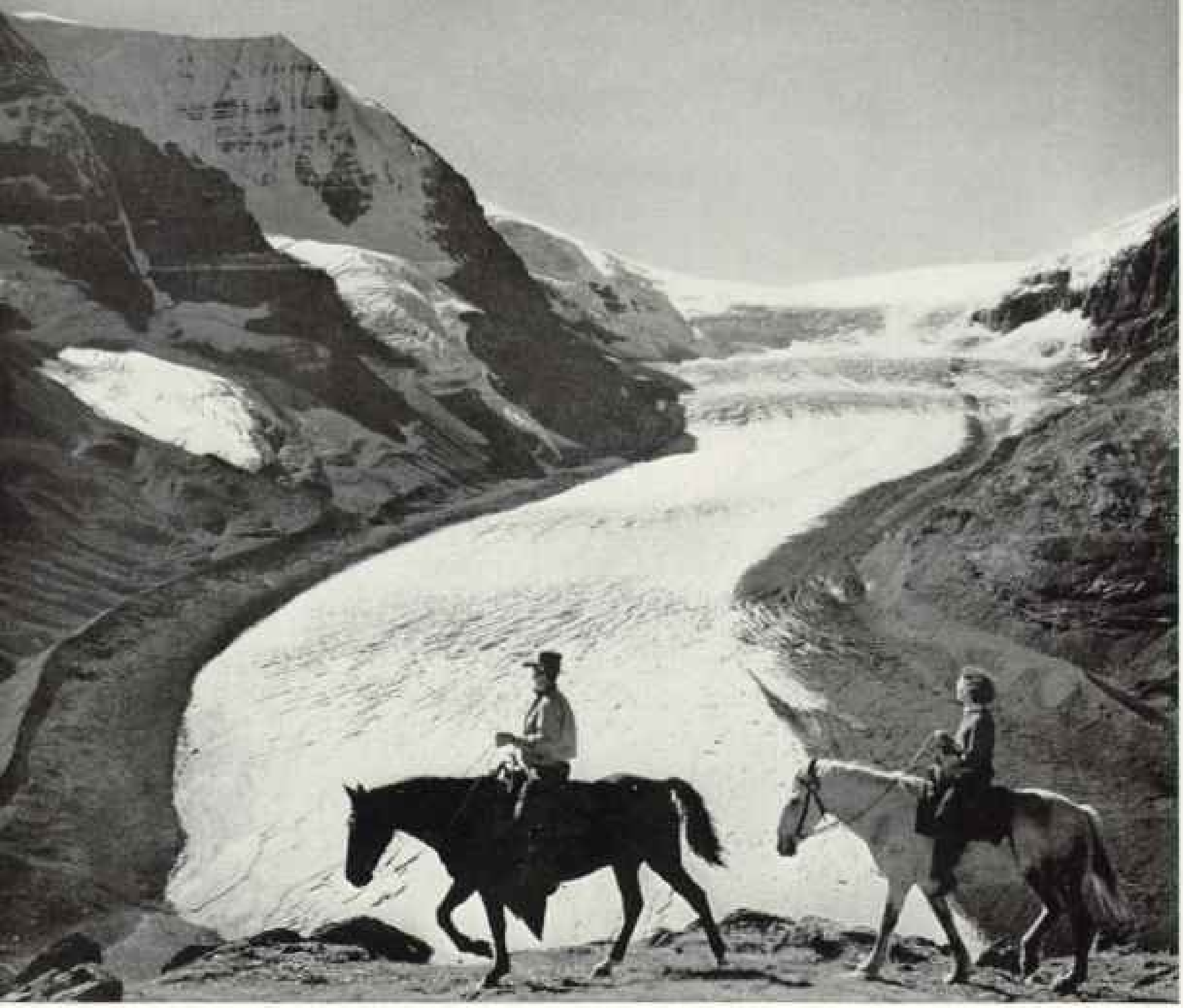
Chuck-wagon Charioteers Race for Gold and Glory at the Calgary Stampede

Each outfit consists of driver, covered wagon, four-horse team, and four cowboy outriders. When the starting horn blows, the outriders frenziedly load camp stoves into wagons. Then they mount ponies and tear off in hot pursuit. Here each driver, weaving a figure eight around two marker barrels, starts the race on his own course.

Alfred Blyth, A.R.P.S.

Careening Teams Test Drivers' Mettle by Rounding Barrels at Top Speed

Barrels are spaced to equalize the distance from starting positions to the track opposite the judges' box (left). That's where most of the spills occur. Other contestants line the arena facing the grandstand and climb the chutes and animal pens to cheer their favorites around the circuit. Sign at left gives time of previous heat.



Harry Rowed

Fair Rider and Watchful Guide Are Silhouetted Against Athabaska Glacier

Their trail is directly above the chalet on the Banff-Jasper Highway. Beyond the horizon lies the main Columbia Icefield. Grim Mount Athabaska rises at the left. Hikers may tread the glacier's ice without danger. Riders take specially shod horses as far as the distant rippled area (page 754).

The excited words poured forth faster than the white water over Bow Falls.

Banff's Animal Streets

Mrs. Harmon, too, had exciting news. A mule deer doe with three fawns had been seen on Squirrel Street (Banff's streets are named for animals, including Buffalo, Grizzly, Cougar, Lynx, and others).

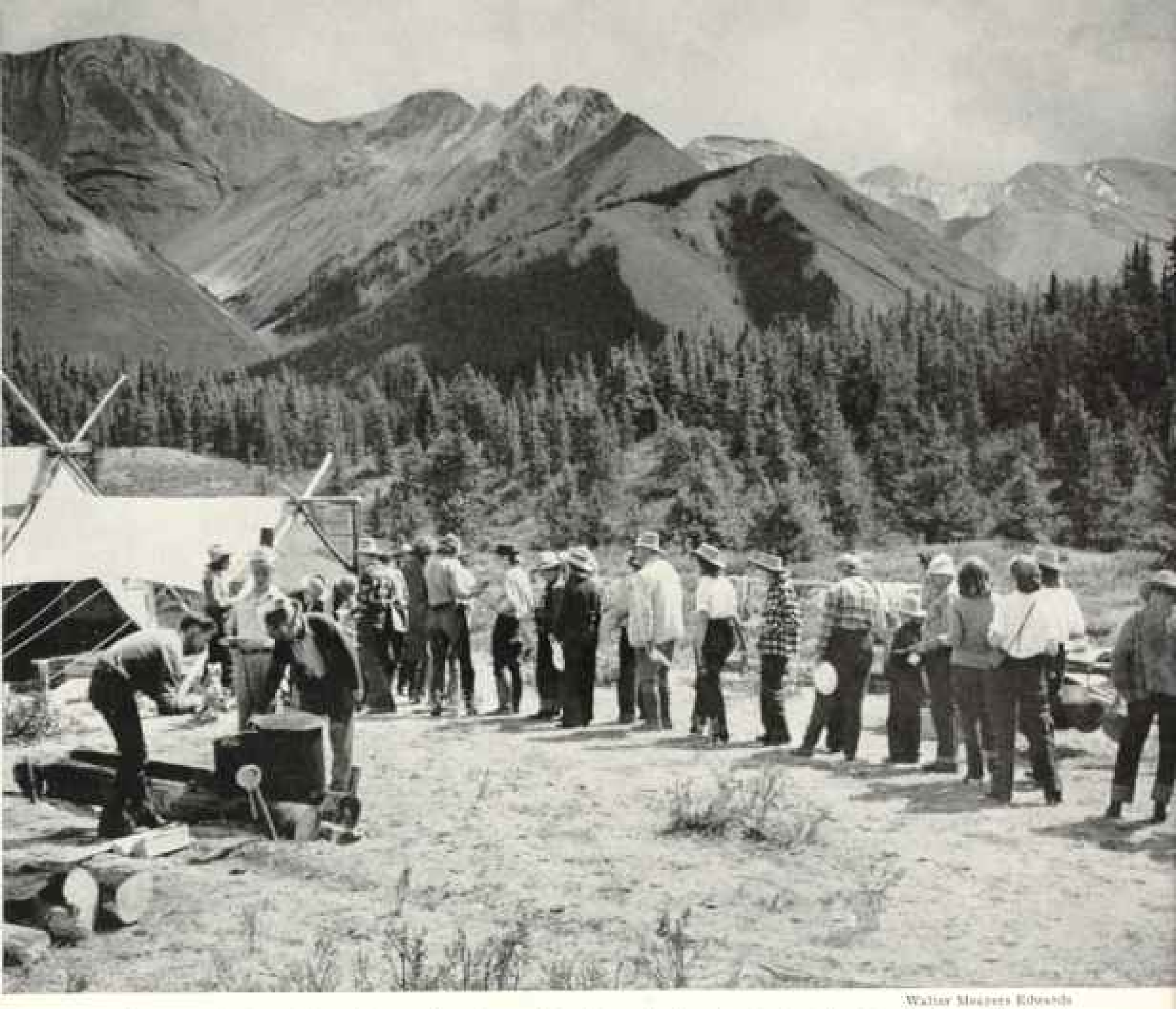
We found the doe in someone's front garden, but for all our effort we could never get her with more than one fawn at a time. She was a little thin, as well she might be with three instead of the usual one or two fawns to nurse; but by systematically nipping off all the poppy blooms in sight, she was working hard to keep up her weight.

Our moose hunt next morning did not add to our camera bag, either, but as an excursion it was well worth while. The early hours found us rowing quietly away from the boathouse, followed by daughter Aileen Harmon in a canoe. Branching away from the light-green waters of the Bow a third of a mile upstream, we entered the smaller Echo River.

Scarcely had I dipped the oars again, after squeezing under the narrow railroad bridge, than my wife whispered, "Moose!" There she was, a large cow standing quietly watching us not 30 feet from the bank, her dark-chestnut coat glistening in the sun.

I wasn't ready! "Hold it, girlie," I thought, as I groped under the seat for the camera, releasing one oar to do so. At the same time the other oar struck the bank. When I picked myself up, gingerly removing a tripod leg from my armpit, there was no moose to be seen.

She couldn't be far away. Aileen went ashore to investigate. A few minutes later I had the camera all but ready and was adjusting a lens preparatory to following her, when Lady Moose suddenly appeared almost under



Walter Meayers Edwards

A Queue of Appetites, Preparing for a Day-long Ride, Besieges the Cook for Flapjacks

Every morning at Windy Camp, 30 miles north of Banff on the Panther River, the Trail Riders go exploring; by evening they are back after seeing moose, mule deer, Rocky Mountain sheep, and mountain scenery. A campfire singing session follows. Then comes sleep on spruce-bough mattresses in Indian tepees.

my nose. Then she retreated hastily into the forest without a sound. She had been lying in the grass perfectly concealed until almost stepped upon.

We continued our winding course into the Vermilion Lakes, but not another moose did we see. We did not mind after seeing Mount Rundle reflected in the placid surface and making a picture to delight the soul of any artist.

That this view is fully appreciated we discovered later when we saw more than 20 art students by the lakeside while we were driving westward on our way to the Columbia Icefield (page 747).

Don't Feed That Bear!

A few miles beyond we passed a group of motorists thoughtlessly feeding a black bear on the highway. These animals are apt to impose upon such hospitality and, losing their fear of man, become dangerous. Park wardens must destroy many each year for that reason.

Traveling down a long straight hill, we could see at the end of an avenue of pines what appeared to be a tremendous castle. Our map indicated that this was indeed Castle Mountain. In January, 1946, it was renamed by the Canadian Government in honor of General Eisenhower (Plate XII).

Outside the warden's lodge at the base of Mount Eisenhower we were greeted by the warden, Ulysses La Casse, who in 1924 was guide and cook on the first expedition to photograph comprehensively the Columbia Icefield.* We were interested in his hobbies—carving ornaments of talc and tables from pine burls (Plate XIII).

Following the Bow River, winding through a deep valley with massive mountains on both sides, the highway continues its northwesterly

* See "Mother of Rivers," by Lewis R. Freeman, National Geographic Magazine, April, 1925.

direction, roughly paralleling the provincial boundary, which is the Continental Divide, until it enters Jasper National Park.

As one approaches Lake Louise station and branches off the Trans-Canada Highway, many of the mountains to the left, unlike those around Banff, are capped with glacial ice. A white signpost by the roadside, with arms pointing upward in all directions, names the peaks—Temple, Hector, Pilot, St. Piran, Fairview, and others (page 779).

I wanted especially to see Mount Temple, because my father at the age of 53 had climbed it in 1923 to qualify for membership in the Alpine Club of Canada. It towered above the other mountains, stately in the afternoon sun, with a great dome of ice upon its summit.

The Banff-Jasper Highway does not pass directly by Lake Louise, and we decided to explore that area on the return journey. At the moment we were intent on traveling to Jasper over the new 146-mile section opened in 1940. We had been told that new scenic wonders would unfold at every mile, and we were not disappointed.

An Array of Natural Wonders

For sheer, wild, solitary beauty this region can have few equals on this continent. There must be enough wilderness loveliness in the 6,785 square miles of Banff and Jasper National Parks to last a lifetime of vacations for all the Nature lovers of North America.

The abundance of natural wonders we saw as we drove slowly northward was lavish. Solitary Mount Hector towered like a great sentinel, a white cloak of a glacier hanging from its shoulder. Crowfoot Glacier clutched a mountainside like a gigantic ghostly claw. Jade-green Bow Lake lay just beyond, glacier-rimmed and tranquil, with carefree horses grazing along the shore (Plate X).

Lofty Mount Chephren stood like a somber pyramid at the end of an avenue of stately pines in the Mistaya River Valley. Through a bare, gray, rocky canyon the milky North Saskatchewan River started on its long journey to Lake Winnipeg. Mount Amery resembled an immense slice of chocolate cake with thick white frosting.

As we wound down into Jasper Park through Sunwapta Pass, we caught our first glimpse of a dark, bleak, irregular rampart holding back a sea of ice threatening to engulf it. We had reached the Columbia Icefield.

Through the big windows of the chalet we gazed at the Athabaska Glacier, a giant tongue of ice in the gap between Mount Athabaska on the left and the Snow Dome and Mount Kitchener on the right (page 752).

"How far do you think it is to the top of the glacier?" asked Joan Oliver, who had been waiting to greet us upon our arrival.

In the clear evening atmosphere, with nothing to compare for scale, it looked about half a mile, but I guessed a mile to be safe.

"You'd find it a long seven miles if you had to walk it," Joan replied. "The Saskatchewan Glacier farther south is even bigger. You can see it if you climb Parker Ridge."

Through the cooperation of the boss, "Jasper" Jack Brewster, Joan and her friend Lorraine Andrew were able to join us at 6 next morning for a scramble up the Parker Ridge of Mount Athabaska (Plate VIII). Driving back the way we had come for about five miles, we left the car just off the narrow road.

With knapsacks, full of grub, and cameras, we struck off across a grassy meadow, through a belt of evergreens, and up the steep slope. Above timberline we clambered over loose rock which shortly gave way to dry brown turf curving above us in undulating stretches.

In shaded depressions we climbed steep banks of hard-packed snow, kicking our toes into it to gain safe footholds. Pausing for pictures delayed us a little, but we reached the top of the ridge in about 90 minutes.

Below us in a deep canyon on the other side of the ridge lay the white ribbon of the Saskatchewan Glacier, stretching off into the distance to merge with the great expanse of the Columbia Icefield (Plate IX).

Beyond the lower ridges of Mount Saskatchewan, from which a smaller glacier flowed into the main frozen river, could be discerned the forbidding mass of Mount Bryce, its summit enveloped in clouds. To the right and closer, the smooth, rounded shape of its ice-covered lower slopes simulated by the fleecy clouds that hid its peak, was Mount Castleguard.

"The Jack Pot"—Rocky Mountain Goats!

We were about to start the return climb when an exclamation from Joan called our attention to a group of small white dots on a green slope far below.

Quickly pulling my field glasses from my knapsack, I could hardly believe what I saw. "One, two, three, four," I counted aloud. "Eighteen, nineteen, twenty . . . twenty-four of them! Rocky Mountain goats! They're upwind and haven't seen us," I whispered, handing the glasses to the others.

What a break! It would have been very fortunate to get close to one or two of these wary creatures, but we'd hit the jack pot.

Asking the girls to keep still, I slithered slowly down, hiding behind projecting rocks.

Reduction by Harry Rowell

With Complete Fly-fishing Equipment and Expert Technique He Nets a Rainbow

Rivers and lakes, with abundant game fish, and mountains such as the Ramparts (above) make Tonquin Valley a favorite of fishermen and campers. Pony trails bring it within easy reach of Jasper, 15 miles northeastward. The stream, in "whose harmonious bubbling noise" this Piscator rejoices, is the Astoria River.

Kodachrome by Leonard H. Lenrow

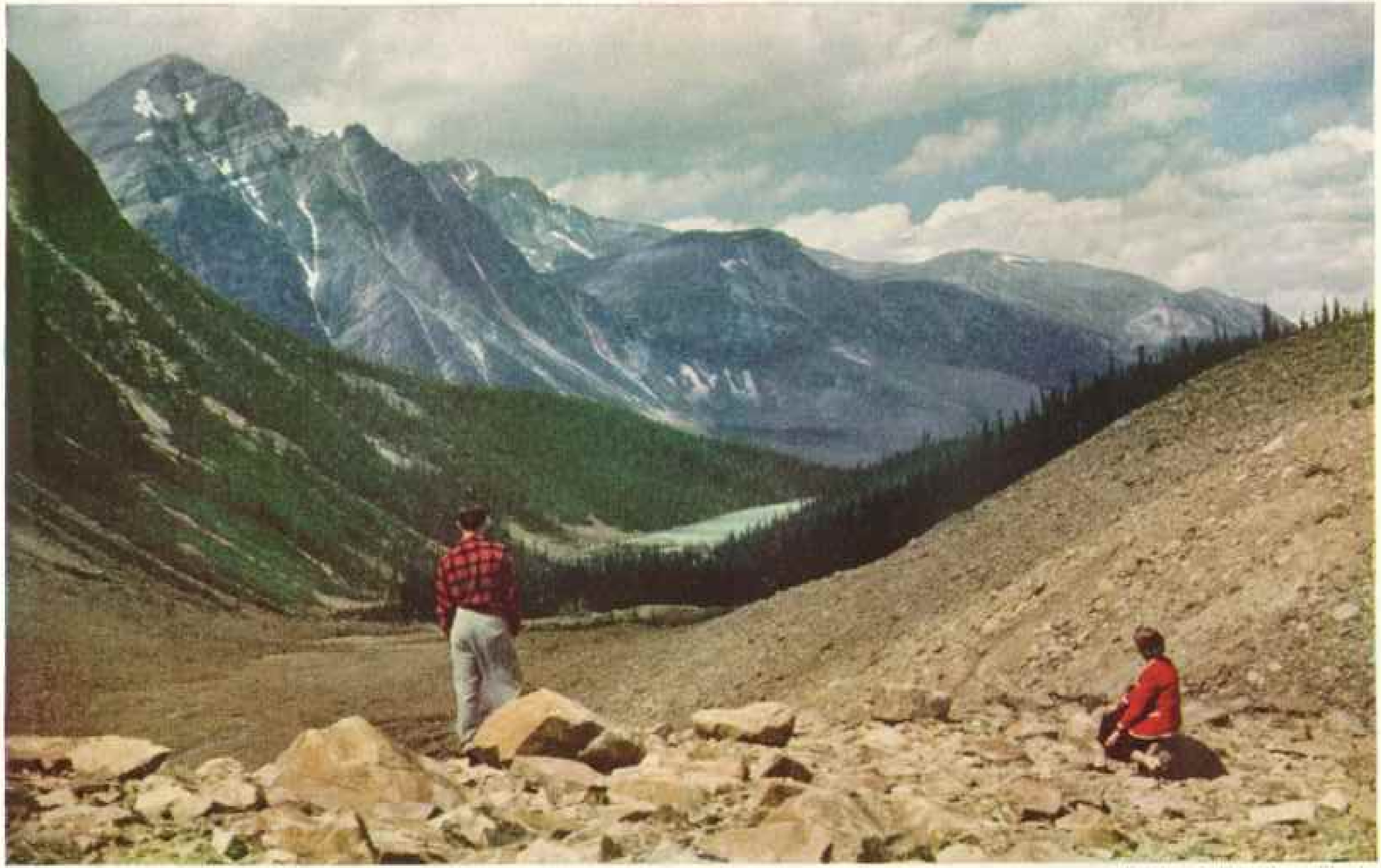
Summit of Majestic Mountain Affords an Eagle's Panorama of the Tonquin Valley

The distant Ramparts, of which the loftiest is Mount Geikie, divide Jasper National Park from Mount Robson Provincial Park in British Columbia, beyond. This delectable valley derives its name from John Jacob Astor's ship of early fur-trade fame. Tiny Moat Lake is dwarfed by Amethyst Lake, whose light-green color belies its name.

Kodachrome by Walter Meayers Edwards

Mount Edith Cavell, Named for the Heroic Nurse of World War I, Hides Her Snow-crowned Summit in a Cloud

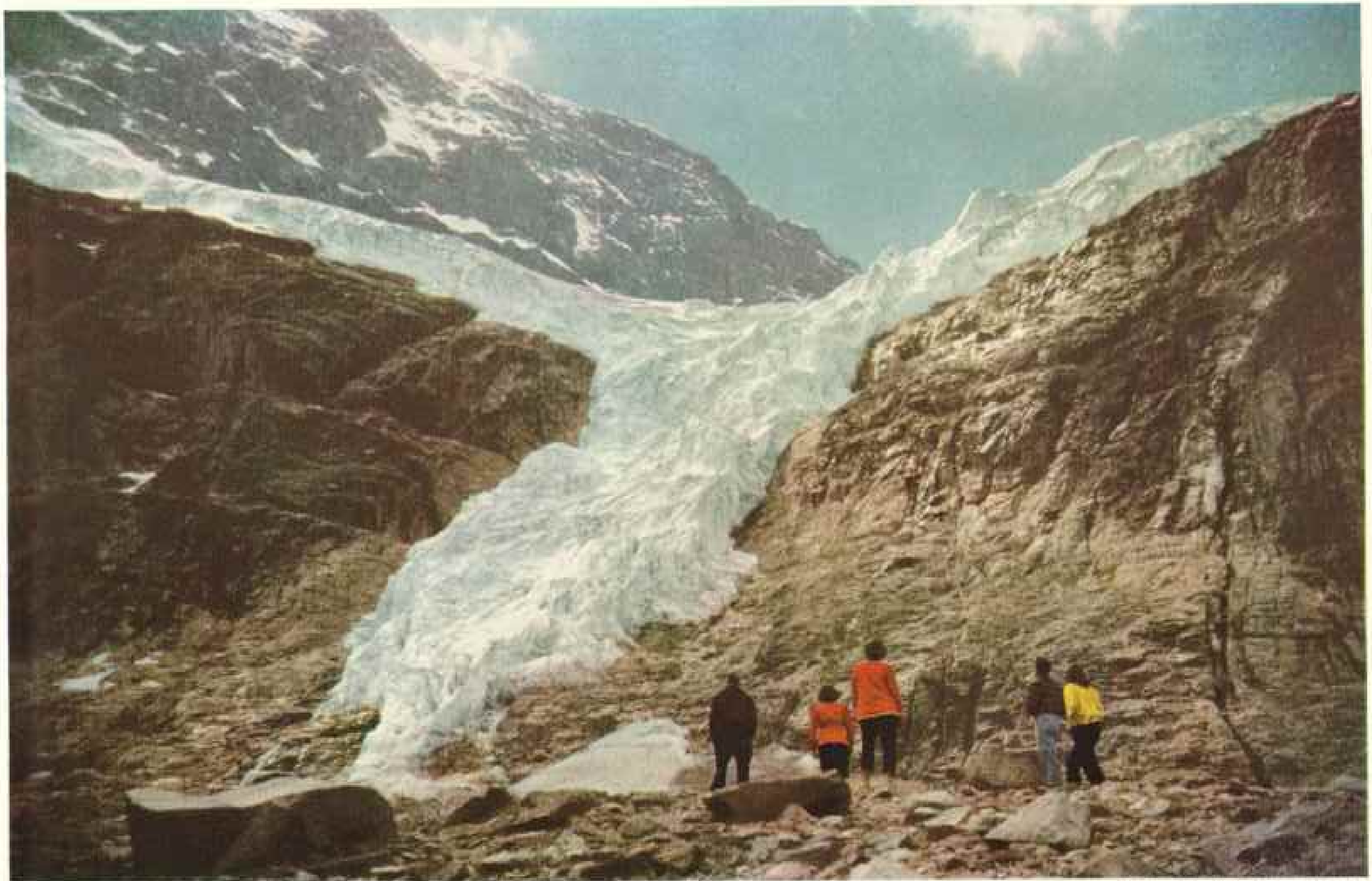
The early-morning sunshine bathes peak and pine, as gentle breezes ripple the surface of Beauvert Lake. The water was so crystal-clear the canoeist could count pebbles 30 feet down, and saw a beaver glide swiftly under the canoe. Near by is Jasper Lodge golf course, where bears amble across fairways and sometimes steal golf balls.



Kodachrome by Walter Meayers Edwards

Cavell Lake Sparkles Like a Jewel on a Green-velvet Cloth Spread below Franchère Peak—Jasper National Park

The mountain is named for a French Canadian, Gabriel Franchère, who sailed in the *Tonquin* from New York in 1810 with the ill-fated Astor expedition to establish a fur-trading post on the Columbia River. His fascinating *Narrative of a Voyage to the Northwest Coast of America* describes the tragedy of the *Tonquin*, the massacre of the captain and crew, and the blowing up of the ship with its Indian captors.



Kodachrome by Walter Meayers Edwards

Angel Glacier Hovers Face Down with Outspread Wings, as if Carved by a Titan Sculptor

Twenty years ago the glistening ice extended a half mile farther to where the people stand, and spread for a mile along the base of Mount Edith Cavell. Even now under their feet there is ice a few inches below the rocky residue of the gradually receding glacier. Experienced climbers scale it without difficulty.

Kodachrome by Walter Meayers Edwards

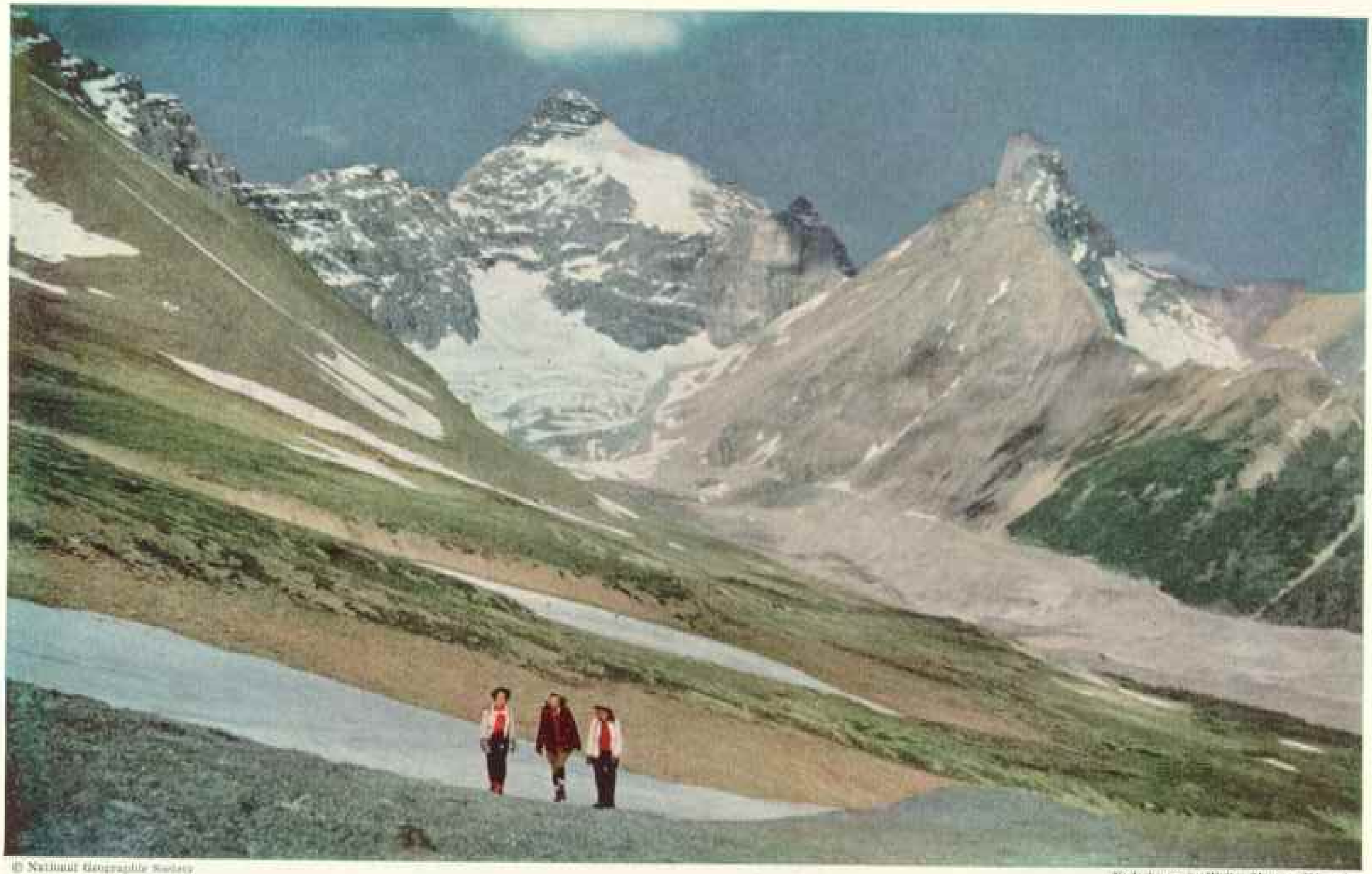
Nature Spreads a Fireweed Carpet on Mount Athabaska's Doorstep

The Sunwapta River is fed by Athabaska Glacier, around bend to right, and is so small it no longer covers its bed. Farther down, swelled by glacial tributaries, it becomes a torrent (opposite). This location, often compared with the Austrian Tyrol, was selected for scenes in a new Bing Crosby picture.

Kodachrome by Walter Meayers Edwards

Stoney Indians Had a Word for These Falls—Sunwapta. It Means "Turbulent River"

Only 30 miles from its source, at the foot of Mount Athabaska, the infant river here makes a roaring cataract. Below these falls the milky Sunwapta joins the Athabaska River, whose waters, by way of the Great Slave Lake and the Mackenzie River, eventually reach the Arctic Ocean.



Kodachrome by Walter Meayers Edwards

In Wild Grandeur, Mount Athabaska's Main Peak Towers Skyward as Climbers Scale Its Parker Ridge

From its summit J. Norman Collie, in 1898, discovered the great Columbia Icefield, "Mother of Rivers." Athabaska is a Cree Indian name, meaning "Where There Are Reeds," referring to the muddy delta of the river at Lake Athabaska, many miles to the north. The massive mountain spread-eagles the boundary of Banff and Jasper National Parks.

Kodachrome by Walter Meayers Edwards

A Glimpse of the Columbia Icefield and a Hearty Breakfast Reward a 2,000-foot Climb

A shoulder of Mount Saskatchewan (left) points to the mile-wide Saskatchewan Glacier, largest issuing from the 150-square-mile icefield. Mount Bryce and Mount Castleguard hide their heads in the clouds. Here the author's party surprised a flock of 24 Rocky Mountain goats. In spite of warm sunshine, cold winds, air-conditioned by the ice, made heavy clothing necessary.

Kodachrome by Walter Meayers Edwards

Horses Find an Equine Paradise on the Shores of Tranquil Bow Lake

From here the blue-green Bow River winds its way through majestic mountains, passing Banff and Calgary, to become the main source of the South Saskatchewan. The three "claws" of Crowfoot Glacier are hidden by the slope at right. Bow Peak (center) and Mount Hector stand alone like sentinels.

"Trail Riders of the Canadian Rockies" Pause for Refreshment in the Snow Creek Valley North of Banff

The 1,200-odd membership of this quarter-century-old organization is roughly half American and half Canadian. The late King Prajadhipok of Siam was an enthusiastic member. Two annual camps, a week apart, are held in late July and early August. Recent camp sites have been within a 30-mile radius of Banff. Here Fred Lear, the author's guide, brings a camera from a tethered pack pony.

Kodachrome by Walter Meayers Edwards

Union Jack Waves a Welcome to American Visitors at the Mount Eisenhower Warden's Lodge

General "Ike" can now boast a "castle" in Canada in addition to Culzean in Scotland. Formerly bearing the aptly descriptive name of Castle Mountain, it was renamed in January, 1946, by the Canadian Government in tribute to the popular wartime Supreme Commander. Shaped like a horseshoe, its turreted façade conceals a small lake cradled high in the center. It is the legendary source of the warm chinook wind that brings cold-season thaws to the western plains.

 Kodachrome by Walter Meayers Edwards

Pine Burls on Twisted Trunks Become Rustic Tables

Ulysses La Casse, Mount Eisenhower warden, fashions the curios in his spare time. The exact cause of burls is unknown, but fungi or bacteria stimulate their growth. If a burl starts when the tree is young, it may grow very large. A lovely grain is disclosed when a burl is cut in half.

Kodachrome by Harry Rowed

Perspective Shrinks the Mighty Athabaska Glacier

To the fair hiker, sun-bathing on the lower slopes of Mount Athabaska, the ¾-mile-wide ice river seems a narrow white ribbon. Towering beyond is the white summit of Mount Kitchener, named for the hero of Khartoum, who lost his life in 1916 when the British cruiser *Hampshire* struck a mine.

Kodachrome by Walter Meayers Edwards

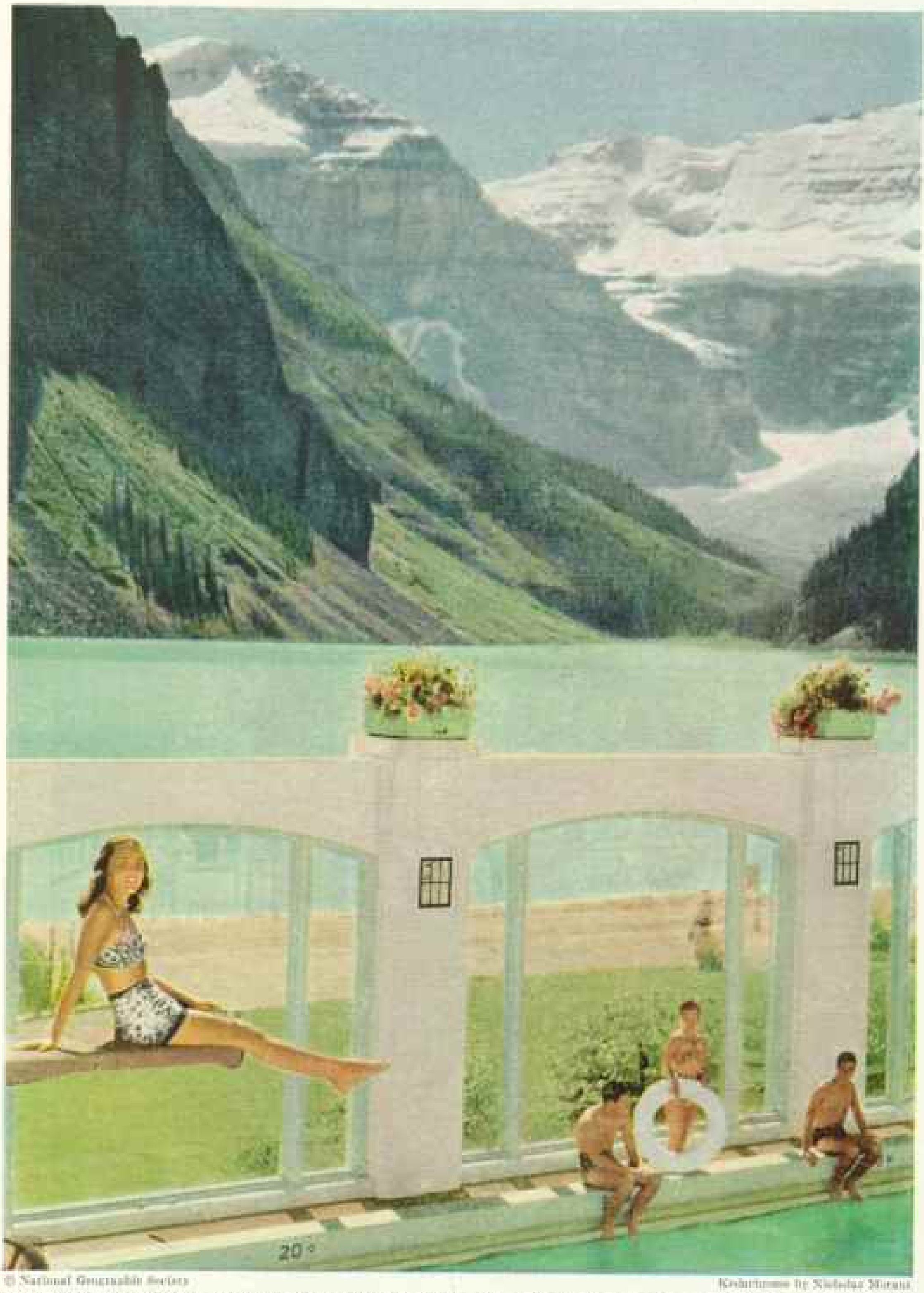
Banff Fishermen Catch Lake Trout Big as 40 Pounds from Lake Minnewanka, Stoney Indian for "Lake of the Water Spirit"

Shaped like an arching caterpillar, the deep lake is ten miles long and a half mile wide. Indian legends always have associated stories of big fish with this lake. The distant rugged peaks form Mount Rundle, which extends nine miles from Banff to the coal-mine town of Canmore.

Kodachrome by Wynne Meacren Edwards

Dan Wildman, Stoney Reservation Farm Instructor, Dons Feathered Finery for Holiday Fun

Now retired and pensioned, this ex-counselor of the Stoney tribe, a branch of the Assiniboins, owns many cattle and horses. The eagle-feather headdress and beaded costume, more flamboyant than in the old days, are worn by Assiniboin and Sioux. The Indian Days celebration at Banff takes place in mid-July.



 Kodachrome by Nicholas Murant

Heated Pool and Glass Screen Give Florida Warmth to Lake Louise Guests Gazing at Icy Peaks

Chateau Lake Louise provides the pool because the glacial waters are too cold for swimming. Ages ago Victoria Glacier, in the distance, filled this deep bowl cupped high in the Bow Range. On sunny days, ice chunks big as office buildings tumble from the upper glaciers with a roar like a battleship's salvo.

The goats were grazing up the slope directly toward me, still unaware of my presence.

Within 15 minutes they were within easy range, and I bagged them all—in movies. Then, while the girls yelled and waved their hats to scare them, I used up my remaining film as the flock made a dignified retreat, an old grandfather in the lead.

Satisfied with the morning's accomplishments, we arrived back at the chalet for lunch, where we were met by Jack Brewster. "There's a party going up on the ice. If you want pictures you'll just have time," he said.

Ten minutes later I was driving down the winding spur road to the foot of the glacier.

A party of visitors, newly arrived, were mounting their horses, tethered to a large rock. I knew I should have to hustle to get up on the glacier before the horses. Without stopping to inquire the best route, I started off at a trot, camera and tripod on shoulder, hopping over rivulets of silted glacial water flowing from Mount Athabaska on my left.

Suddenly I found a wide stream blocking my way. There was no time to lose. A wild leap carried me over, but I landed in loose shale. Down into the icy water went first one foot, then the other. Crash went the tripod, but I saved the camera at the expense of a bloodied hand. My feet were soaked, but I now had a clear way up to the ice.

Panting hard, I managed to get far enough ahead of the line of horses to enable me to obtain the pictures I wanted, and I felt well rewarded for my efforts.

Hydrographic Center of North America

Glancing up at the Snow Dome, another devil's-food kind of mountain, I recalled that it is considered the hydrographic center of the North American Continent (page 773). The 150-square-mile Columbia Icefield, of which its glacier is a part, is huge, considering it is almost 1,000 miles south of the Arctic Circle. With its drainage flowing to the Arctic, Atlantic, and Pacific, it is unique in that nowhere else on this continent is there so great a dispersion of water from a single source.

Surprisingly, the Athabaska Glacier is not the source of the Athabaska River. Instead, it feeds the Sunwapta River. Driving along the road which parallels the latter, we paused on the wide gravelly flats, brilliant with fireweed, a mile from the glacier's tip (Plate VI).

Here we found abandoned movie properties and huts used earlier that year in Bing Crosby's new production, "The Emperor Waltz."

From there the road winds dizzily upward, skirting for a short distance the edge of deep Sunwapta Canyon. The opposite wall, rising almost sheer several hundred feet higher, frowned down menacingly under its blanket of ice, gray clouds adding an awesome coldness to the scene. Far below, the infant Sunwapta was growing apace from the myriad cascades pouring into it.

When, an hour later, we saw the great volume of Sunwapta Falls, it was easy to see why so small a trickle could become a raging torrent within a mere 30 miles (Plate VII).

Augmented by the Sunwapta, the Athabaska Falls are even more impressive (page 776). The road had been closely following the river, which as it curved around Mount Kerkeslin had grown almost 600 feet wide.

We crossed the highway bridge, parked the car, and approached the falls, guided by a rainbow playing hide-and-seek in a cloud of mist that rose up before us and, whipped by gusts of wind, wet our clothing. Through it, as through a filmy curtain, appeared a great cataract, plunging with a roar into the very earth below our line of vision.

A closer view revealed two small cascades flanking the main waterfall as it thundered down into a raging, swirling caldron like some witch's brew, boiling and churning with ceaseless motion. And under the bridge the full volume of the river, already squeezed into narrow compass, was spurting through a dark canyon 80 feet deep and only a few feet wide.

Reluctant to leave so exciting a spectacle, we continued steadily northward through fragrant pinewoods, following the swift-flowing river, and presently in the fading light we entered the little town of Jasper.

We were up at daybreak next morning, canoeing on the crystalline waters of Beauvert Lake in the grounds of Jasper Park Lodge. We were surrounded by glorious mountains, but to the south of us one in particular commanded attention.

In the blue distance, its summit hidden in the clouds, the strata of its rocky form aslant, a hanging glacier clinging to its slopes, was Mount Edith Cavell, a truly worthy monument to bear such a name (Plate III).

It was massive, yet ethereal; lofty, yet not forbidding. A spur road leads directly to the foot of the mountain, and by noon we were standing on the terminal moraine of the Angel Glacier, which clings to its steep slopes, and watching the gray clouds scudding over it (Plate V).

For more than an hour we waited before the sun peeped through for a brief moment to set the ice asparkle. To our right, nestling in a verdant valley, glistened little Cavell Lake (Plate IV).

Resolving to explore Jasper's scenic marvels another time, we headed south once more and reached Lake Louise late that night. The sensation of being in a vast mountain wilderness was more acute in the dark, as we climbed and dropped, wound and turned along the narrow twisting road, stopping occasionally to listen to nocturnal noises—coyotes howling, water splashing over rocks, pine trees rustling, an owl's hoot, a marmot's whistle. These were not the sounds of civilization, and they induced a thrill of uncanny solitude.

Charm of Lake Louise

The magnificent view of Lake Louise, with the icy backdrop of Mount Victoria, is almost as well known as the Washington Monument, but its familiarity in no way detracts from its pristine beauty (Plate XVI).

I saw it for the first time at 5 of a chill morning as the rising sun was tinting the fringes of the mountaintops an exquisite pink. Gradually the light changed as it crept down Victoria's icy face until the whole was ablaze with an orange glow, reflected tremulously in the surface of the lake.

Three hours later we were riding horseback along the high forested trail along the valley's northern border. The lake as we viewed it from above was a light opalescent green, like the Bow River which its waters feed.

The whole area within a radius of seven miles is crammed with eye-filling vistas. A maze of trails leads to every accessible locality, whose fascination is suggested by their names—Paradise Valley, the Lakes in the Clouds, Horseshoe Glacier, Mount Temple, the Beehive, Sentinel Pass, the Tower of Babel.

Now we were on our way to the Plain of the Six Glaciers, close under Mount Victoria. It was like seeing an Alpine painting and then being able to ride up into it. Our way zigzagged upwards 1,200 feet to Lake Agnes, where there is a semitame chipmunk that deserves an "Oscar" for his performance in my movie. Then a long, gradual descent through tall, straight pines brought us to the bare boulder-strewn surface of Victoria Glacier.

From the warmth of the trees we were suddenly in a cold land of forbidding peaks and glaciers. Across the valley Lefroy Glacier led like a white carpet to the Mitre, standing alone at the end of a great corridor formed by Mount Aberdeen and Mount Lefroy.

Directly in front of us loomed the great wall of Mount Victoria. A crown of ice and snow covered it from end to end, and at intervals chunks as big as an office building went plunging down its dark, precipitous face with a noise like a battleship's salvo.

The shoulder of Mount Lefroy jutted in front of it at our left, and between the two giant mountains was a narrow passage which led to Abbot Pass. Through it, at 3 in the morning to avoid falling ice, Swiss guides take their parties on the overnight journey from Lake Louise to Lake O'Hara, crossing the Continental Divide from Alberta into British Columbia, from Banff to Yoho National Park.

Having much heavy camera equipment, we preferred to cross the Great Divide by automobile through Kicking Horse Pass. We packed in from Wapta Lake through the deep forest trail following Cataract Brook.

Picture a small oblong lake less than half a mile in diameter, with water of deepest green, its shores completely clothed with a narrow belt of evergreens, and a great mountain wall close in all around. This was the scene that greeted us as we broke through the trees after an eight-mile ride.

At the far end a cliff rose abruptly, and over it splashed the many-fingered cascade of Seven Sisters Falls. Behind it, like a sheer rampart, Mount Lefroy, its graceful glacier dazzling white in the summer sunshine, completed the picture.

Next morning on the Opabin meadows above the southeast corner of the lake, accompanied by Leon, our 19-year-old guide, we rode our stumbling horses with heads down, wind tearing at slickers and sou'westers, while snow stung our faces and freezing hands. Peals of thunder reverberated among the rocky peaks. So capricious is the weather in the mountains!

The warmer air at the lower level of the lake turned the snow to rain, the high protecting mountains canceled out the wind, and in the gentle drizzle we waited while Leon made fast our belongings to a skittish packhorse with a one-man diamond hitch. Two hours later our dripping four-horse cavalcade klop-klopped slowly along the highway to the stable back of Wapta Lodge.

The Kicking Horse Route

We transferred our things to the car and within a few minutes were descending the winding road through upper Kicking Horse Canyon. The strange name comes from an accident that befell Dr. James Hector in 1858.

Tom Wilson, the guide who discovered Lake Louise, used to relate a story about this region.

He was guiding a party of fifteen men through the area. They ran out of grub and separated to hunt, agreeing to rendezvous near the provincial border at Kicking Horse Pass. In the evening when they took stock of their bag they had only two partridges among

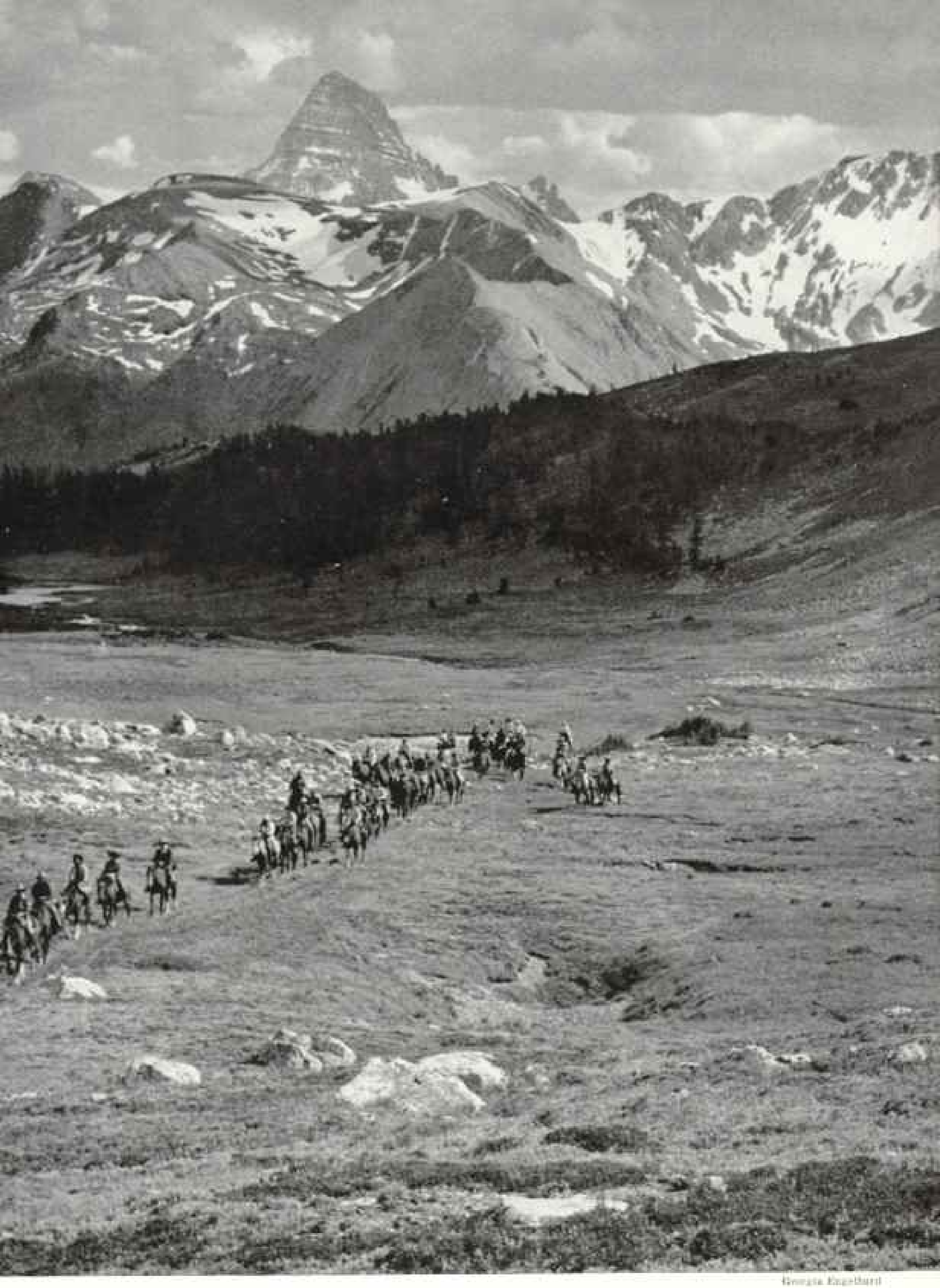
Harry Rowed

Snow Dome's Icy Labyrinth Challenges the Skier; He Tests Every Inch for Crevasses

Water from this icefield flows to Atlantic, Pacific, and Arctic Oceans. Snow Dome (11,340 feet) is one of 13 peaks in the Columbia Icefield rising more than 11,000 feet. Mount Columbia (12,294 feet) is the highest.

Twoscore Trail Riders in Single File Return from a Journey into the High Places

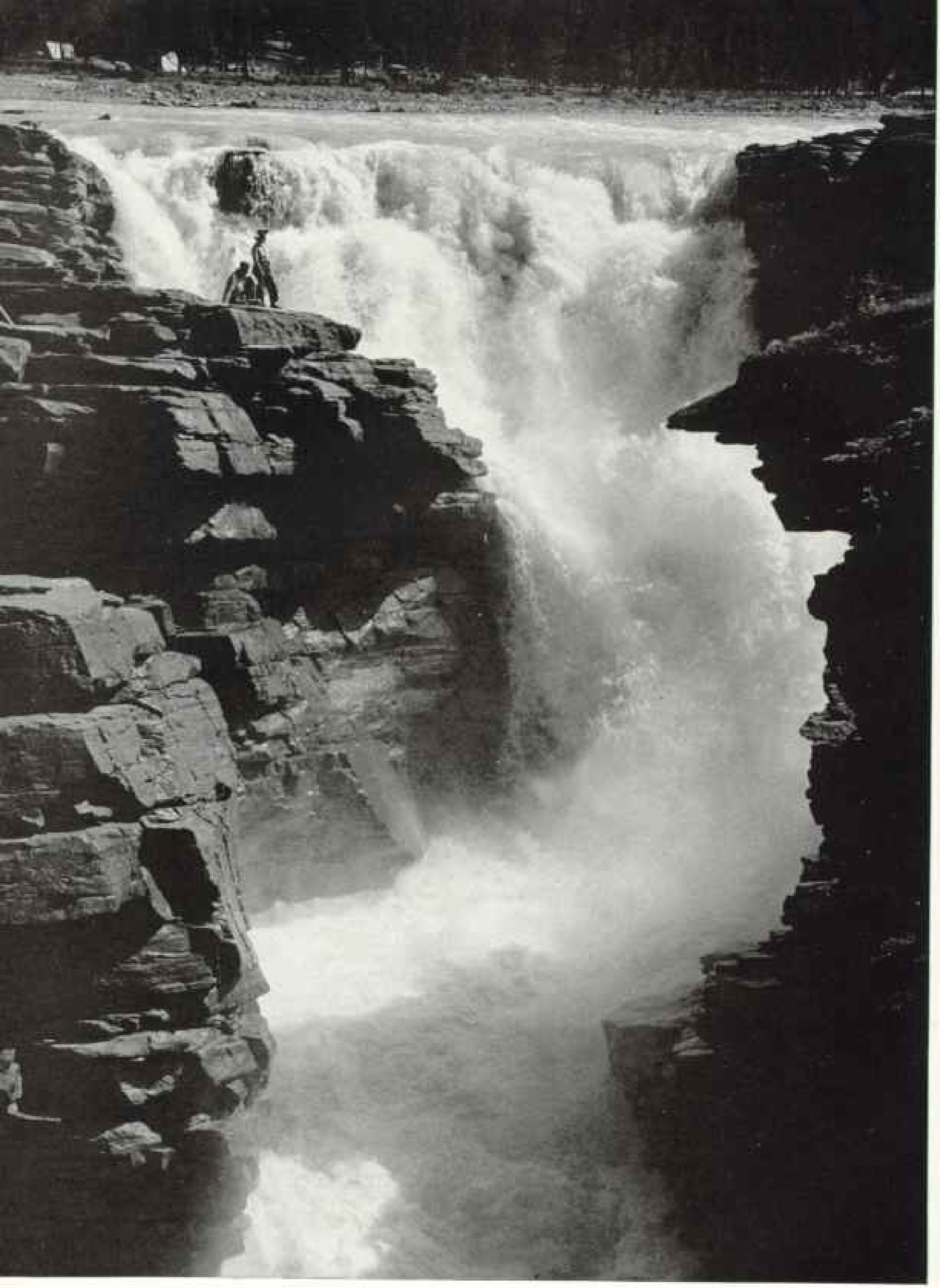
This inspiring panorama was taken from the top of Citadel Pass, 12 miles southwest of Banff. Some of the mountains seen here (left to right) are Wonder Peak, the Royal Group, the Towers, Mount Terrapin, and Mount Magog.



Georgia Engelhard

Pyramid-shaped Assiniboine, Matterhorn of the Rockies, Caps the Skyline

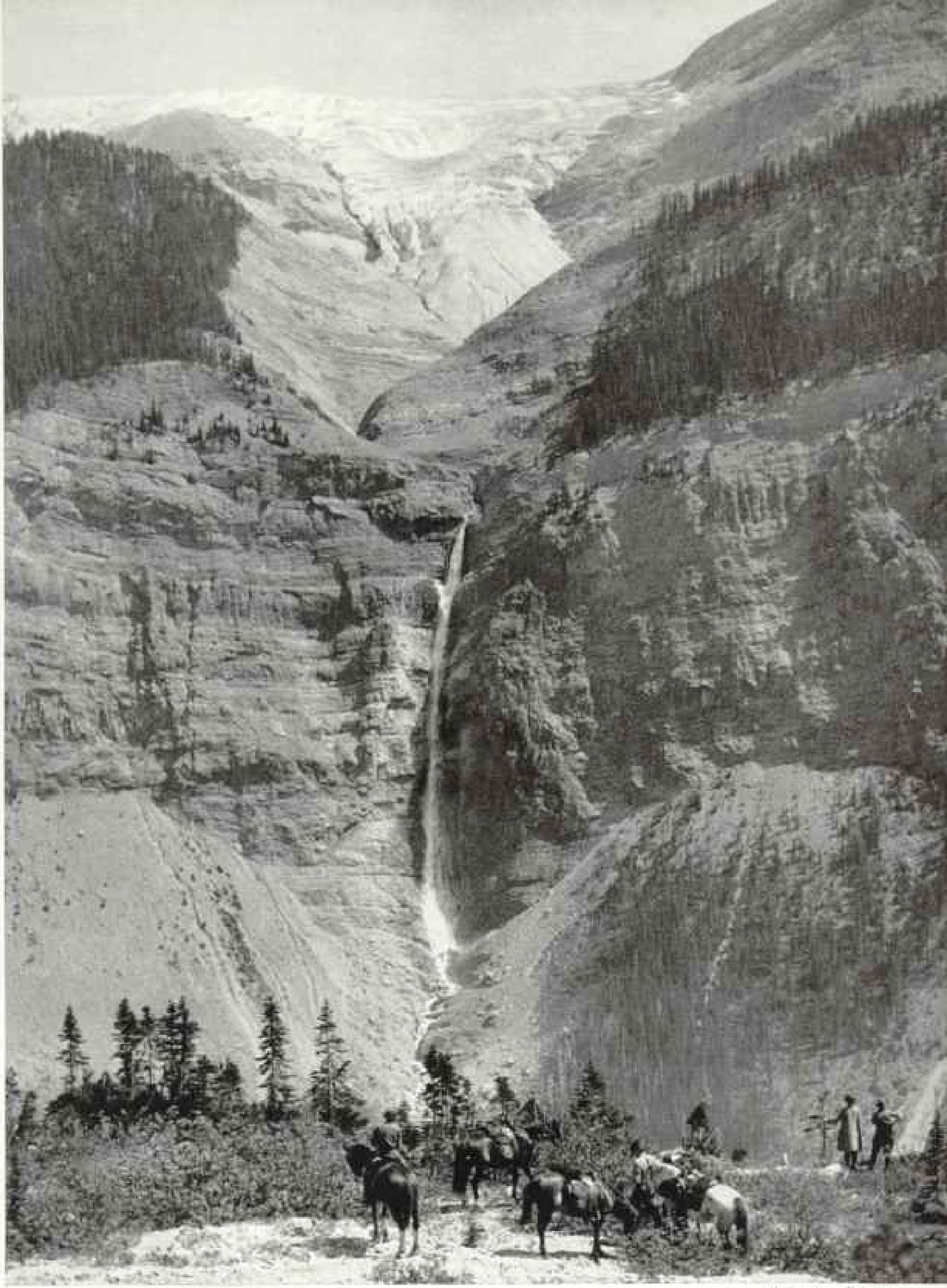
Its 11,870 feet make Assiniboine the highest peak in Banff National Park. It was once thought unscalable; but, though difficult, it has been climbed, the first time in 1901. It straddles the Alberta-British Columbia border.



Canadian National Film Board

Unyielding Rocks Squeeze Athabaska River into a Seething Caldron

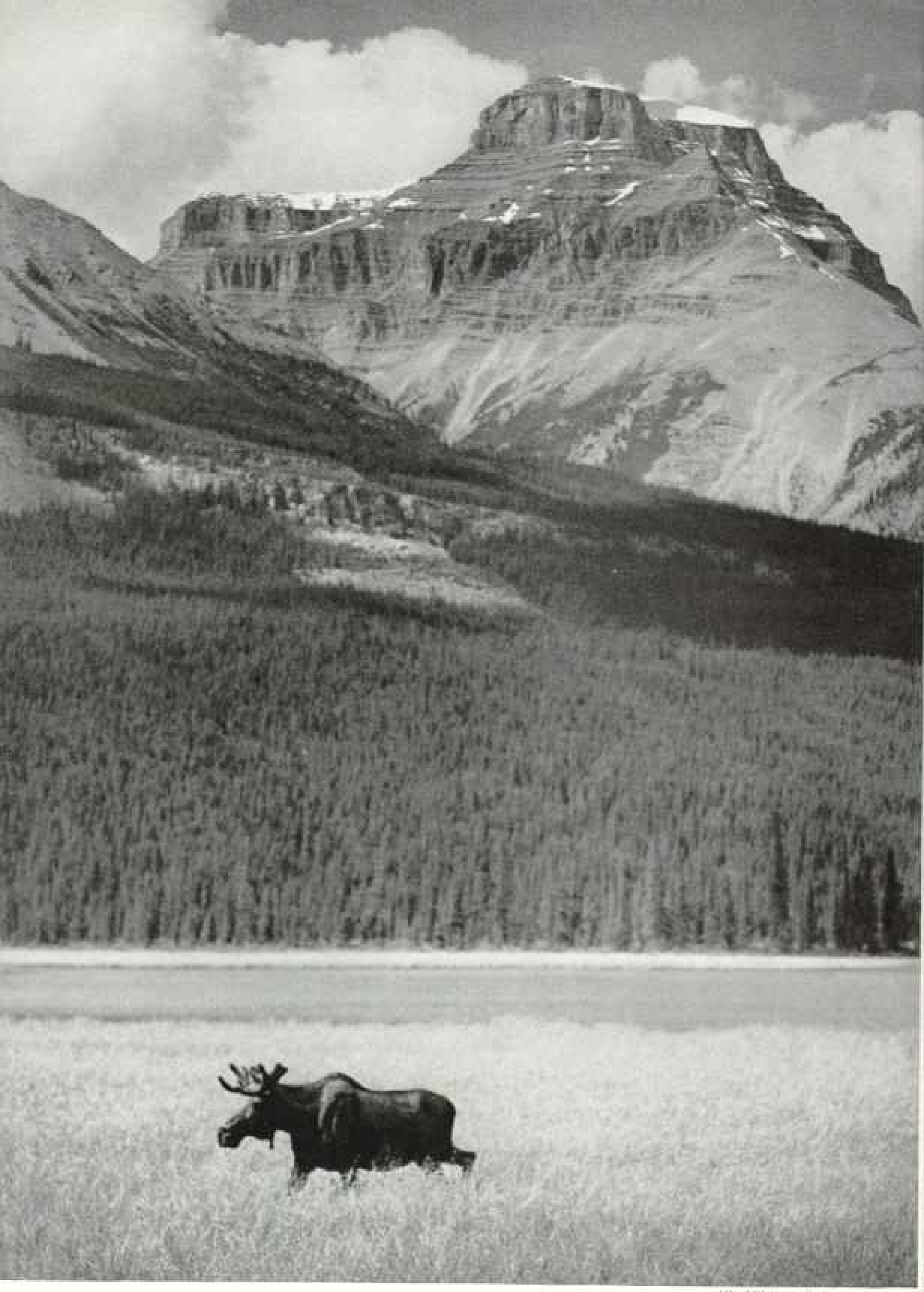
Just above Athabaska Falls the river is nearly 600 feet wide. Below this point it drops into a gorge a few feet wide but 80 feet deep. At this point the stream is 40 miles from its source in the Columbia Icefield (page 771).



H. Armstrong Roberts

Takakkaw Falls, a Lacy Ribbon, Plunges 1,800 Feet, 11 Times the Height of Niagara

If viewed from its base, the slender cataract seems to descend out of the sky. Daly Glacier, a tongue of the Waputik Icefield, is the waterfall's source. It drops into the Yoho River (page 780).



Alfred Blyth, A. R. P. S.

An Auto-wise Bull Moose Saunters Within Camera Shot of the Highway below Mount Chephren

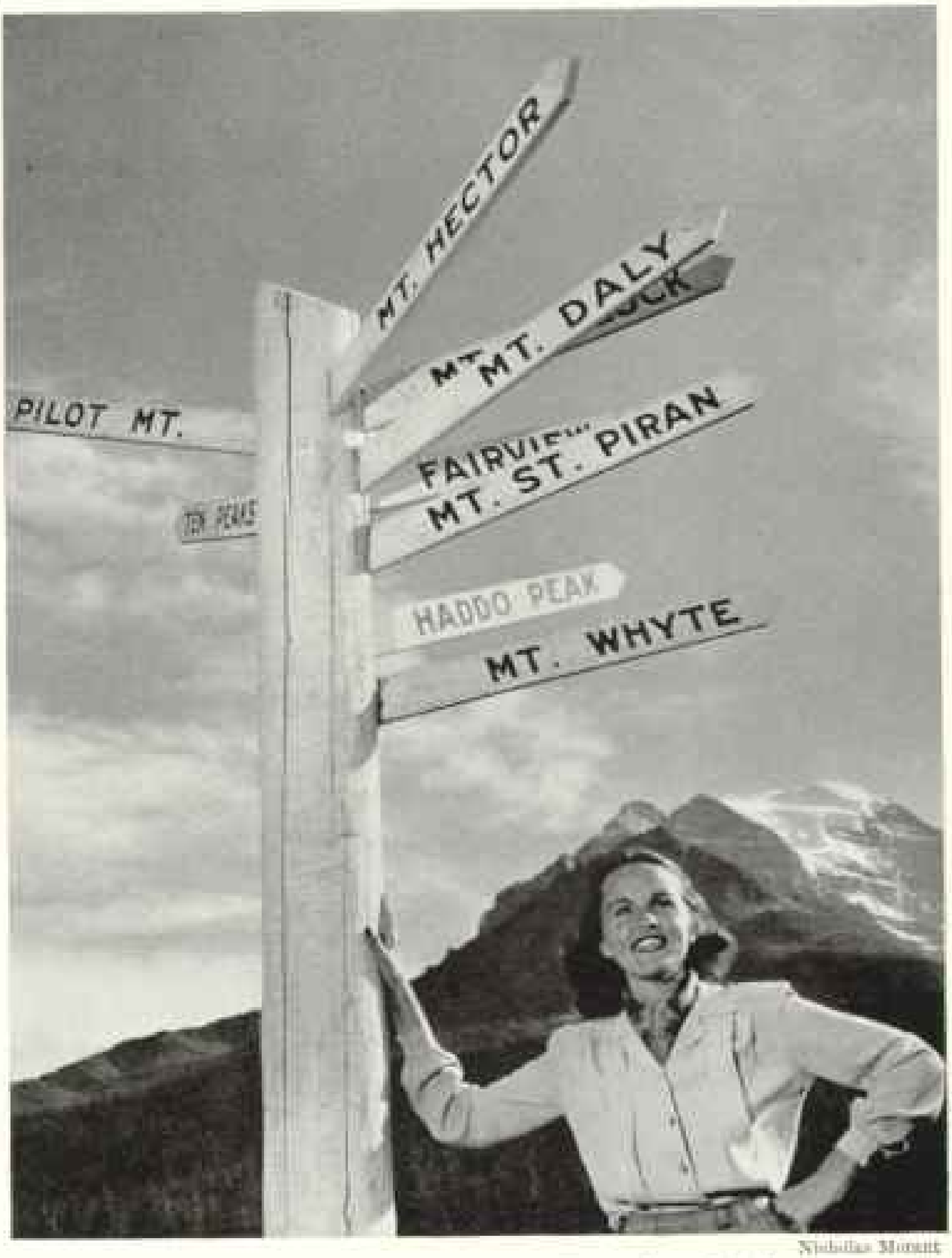
them. "And that," said Tom, "is why they called it the Great Divide."

The Kicking Horse route through the mountains is an important link in the transcontinental line of the Canadian Pacific Railway. The steep grade has been overcome by an ingenious piece of engineering.

From a lookout point we gazed down on the first section of a passenger train, its two locomotives puffing clouds of black smoke as it labored into the side of Mount Ogden across the valley, after a long straight pull up from Field. In a minute or two the train emerged from another portal a little to the left of the other entrance and higher up.

"It makes a loop of 2,922 feet inside the mountain and climbs 45 feet," said a man at my side.

The train rumbled slowly along the mountainside, crossed a bridge above the wild Kicking Horse River far below, and, curving, passed just beneath us, traveling west.



Nicholas Mount

Each Arrow Points to a Towering Peak

Mount Temple's 11,656-foot summit rises in the background. In Banff National Park it is second only to Mount Assiniboine (page 775). The signpost stands beside the Banff-Jasper Highway near Lake Louise railroad station.

"Where to now?" I asked my informant.

"It goes back about a mile, makes a similar loop in Cathedral Mountain—rising 48 feet in 3,255, in case you're interested in figures. Then it heads back again. Look up the mountain behind you" (page 748).

In less than ten minutes we saw the smoke and then the two powerful engines now well over a hundred feet above us, hauling their heavy load eastward to Hector, to await two more locomotives with the next section.

From our Spiral Tunnels viewpoint we could look northwestward up the spectacular Yoho Valley, whose name is an Indian expression of wonder and delight. The probable English equivalent would be the "Ah-ha" Valley. Its 12-mile length parallels the valley of the Bow, on the opposite side of the mountain range that forms the provincial boundary.

Rising in the Yoho Glacier at the far end, the turbulent Yoho River, amplified by innumerable waterfalls tumbling from glacier-capped mountain walls on both sides of the narrow valley, races to join the Kicking Horse.

We had full opportunity to appreciate the extent of the icefields nestled among the surrounding peaks when, after a ride up the forested valley floor to see spectacular Twin Falls, we were returning along the high trail down the west side.

Cradled among the heights directly opposite us was a sea of ice that stretched north to join the great Wapta Icefield, source of Yoho Glacier, at the head of the valley, and of

Gregg Rogerhard

A 5-year-old Horseman Wins the Coveted 100-mile Button

Membership in the Trail Riders of the Canadian Rockies is graded according to mileage ridden in Canada's national parks. At a campfire ceremony Michael Smith receives his silver button from the club's founder, J. Murray Gibbon.

Peyto and Bow Glaciers on the other side of the range. Curving toward us round the base of Mount Niles, looking like a big gray Sphinx, was the Daly Glacier, from the lower border of which white streamers of water cascaded down the bare rock and, merging, disappeared behind the pine forest that carpeted the valley.

As we rode south, we saw issuing from the same glacier a tiny, jagged, feathery line streaked vertically down the cliffside. This was Takakkaw Falls, 1,800 feet, eleven times as high as Niagara (page 777). Viewed from below, they make a glorious filmy ribbon that appears to fall right out of the sky itself.

We had just driven away from the lodge one evening, on our way down to the foot of the falls, when we spied a large, olive-green porcupine 20 feet from us at the road's edge. As I crept stealthily from the car with my movie camera, he turned and made off into the low bushes.

He made too much noise for me to lose him. After maneuvering to get between him and the sun, I got a fine shot of him, big club-like tail beating up and down, galloping down the road—surely the world's fastest porcupine.

He hadn't gone far when a bus, pouring forth tourists, blocked his path. Armed with cameras, the first row charged, and Porky skidded to a stop. As he waddled uncertainly back in my direction, his dilemma was solved by a small pine tree.

Up he went like a spiny tank, not stopping until he reached the top, from which vantage point he surveyed the assemblage of photographers with apparent disdain.

Driving down the Yoho Valley road as the setting sun was making Cathedral Mountain glow with golden beauty, we passed a cow moose. Her calf ran at once to her side for protection. We slowed to watch a gray coyote pup snap at grasshoppers and squat to scratch an ear with a long hind leg, in the approved canine fashion. Then, noticing our presence, he slipped quietly into the shadows.

Until we disturbed them, these animals were at home in their beautiful wilderness. Why shouldn't they be? It really belongs to them.*

* See also, in the National Geographic Magazine, "Canada from the Air," October, 1926, and "Gentlemen Adventurers of the Air," November, 1926, both by J. A. Wilson; "Conquest of Mount Logan," by H. F. Lambert, June, 1926; "On the Trail of a Horse Thief (Columbia River)," by Herbert W. Gleason, April, 1919; "Peaks and Parks of Western Canada," 11 ills., October, 1941; "Tweedsmuir Park; The Diary of a Pilgrimage," by The Lady Tweedsmuir of Elsfield, April, 1938.

Deep in the Heart of "Swissconsin"

By William H. Nicholas

With Illustrations by Staff Photographer J. Baylor Roberts

AT 4:30 o'clock on a cool spring morning, John Pauli's milk truck rumbled through the silent main street of New Glarus, Wisconsin. Passing the edge of the village, it sped on down the State highway for a few hundred yards, then turned abruptly into a graveled side road and chugged up a steep grade.

From my vantage point beside Pauli I looked out upon a soothing panorama of rolling pastureland and shady groves. Here and there an enormous dairy barn and silo, with a house and small outbuildings clustered near by, dotted the landscape.

A few miles from the village, Pauli brought his truck to a halt before a loading platform alongside the road.

"Have to leave a few empty cans here," he said.

The motor stopped. Only the chirping of the birds broke the stillness of the countryside.

And then, as Pauli began to unload his empties, I heard from over the nearest hill the unmistakable sound of yodeling. I looked inquiringly at my companion.

"Just a Switzer warbling for his cows," he said. "They often do it. You can't hear 'em when the motor's running."

America's "Little Switzerland"

That was my introduction to Wisconsin's "Little Switzerland." Here, in and about New Glarus, Swiss colonists and their descendants in the span of a century have turned virgin timber and meadows into one of America's richest dairylands. They have used modern machines and latest scientific methods, but old Swiss customs and traditions survive.

Today the people of New Glarus are 90 percent born in Switzerland or of Swiss descent. Green County, of which New Glarus is a part, is 50 percent Swiss. As one non-Swiss told me, "Here we do everything the Swiss do except talk Swiss."

Green County produces one-fourth of the Swiss cheese made in the United States. Perhaps as an afterthought, it also makes from one-fourth to nearly one-half of the Nation's Limburger. And after cheese requirements are taken care of, there are enough cows left in the New Glarus countryside alone to supply the Pet Milk Company condensery in the village with some 420,000 pounds of milk daily in the flush season.

As Pauli's truck pushed on from one farmyard to another, I kept thinking of the fascinating history of this Swiss colony in America.

New Glarus is named after the Canton and town of Glarus, in Switzerland, from whence came its pioneer settlers.

In 1845 hard times befell old Glarus. Food was scarce, opportunity was limited, the Canton was overcrowded. So the townspeople, in meeting at Schwanden, decided their only hope was to encourage emigration.

They formed an emigration society, appropriated 1,500 gulden to back a colony in the United States, and raised more funds for the purpose by public subscription.

Nicholas Duerst, 48 years old, and Fridolin Streiff, 29, were appointed to find a location for the colony. On March 8, 1845, they sailed for New York. Upon advice of a fellow Swiss, they met here, then wandered about Missouri, Illinois, and Wisconsin trying to locate a site.

After days of fruitless search, they came to the brow of a hill in southern Wisconsin and saw before them a countryside of rolling hills and pleasant valleys. Springs abounded. The site was not far from a road that was frequently traveled then by miners carrying lead ore to Mineral Point, 33 miles away.

Duerst and Streiff liked the region. They purchased 1,200 acres in one tract and 80 acres of woodland two miles distant, and began to build a cabin.

In the meantime, 193 persons of all ages and both sexes enrolled in old Glarus as members of the new colony. So pathetically eager were they to be on their way to the land of promise that they left Switzerland too soon, just a month after Duerst and Streiff had departed.

For 30 days they journeyed by way of the Rhine to Nieuwediep (Den Helder), in the Netherlands, and boarded a ship there bound for Baltimore. They reached the Maryland port after a stormy 49-day voyage.

Over the Mountains by Canal

From Baltimore they "took the cars" to Columbia, Pennsylvania, and from there rode over the Alleghenies on the old Pennsylvania Canal to Pittsburgh.

Next leg of the trip was by barge down the Ohio to Cincinnati, where the emigrants transferred to a steamboat which took them on to St. Louis. There they had been directed to

From Edwin Barlow

When Day Is Done, New Glarus Swiss Relax in a Village Tavern

Here, after keeping up with the news in a Milwaukee German-language newspaper, they turn to their favorite card game, *Yass* (page 796). Ernest Thierstein, the tavern proprietor, is one of the community's most accomplished yodelers (Plate I).

meet Duerst and Streiff. They reached their prescribed rendezvous on July 23, more than three months after leaving home.

But in St. Louis no word was heard from either Duerst or Streiff. The colonists, strangers in a strange land, many virtually penniless, were in dire straits. For two weeks they waited. A few got jobs and deserted. The breakup of their party was threatened. Then they appointed two of their number to search for their missing townsmen.

By Mississippi River boat the pair went to Galena, Illinois, then a thriving river port, where they learned that Duerst and Streiff had gone north. They were advised to try the land office at Mineral Point.

There they discovered that their emissaries had purchased land; so they set out through the bush, accompanied by a friendly fellow Swiss as guide, to find them. A few days later they rounded a bend and, to their great joy, came upon Duerst and Streiff building their cabin.

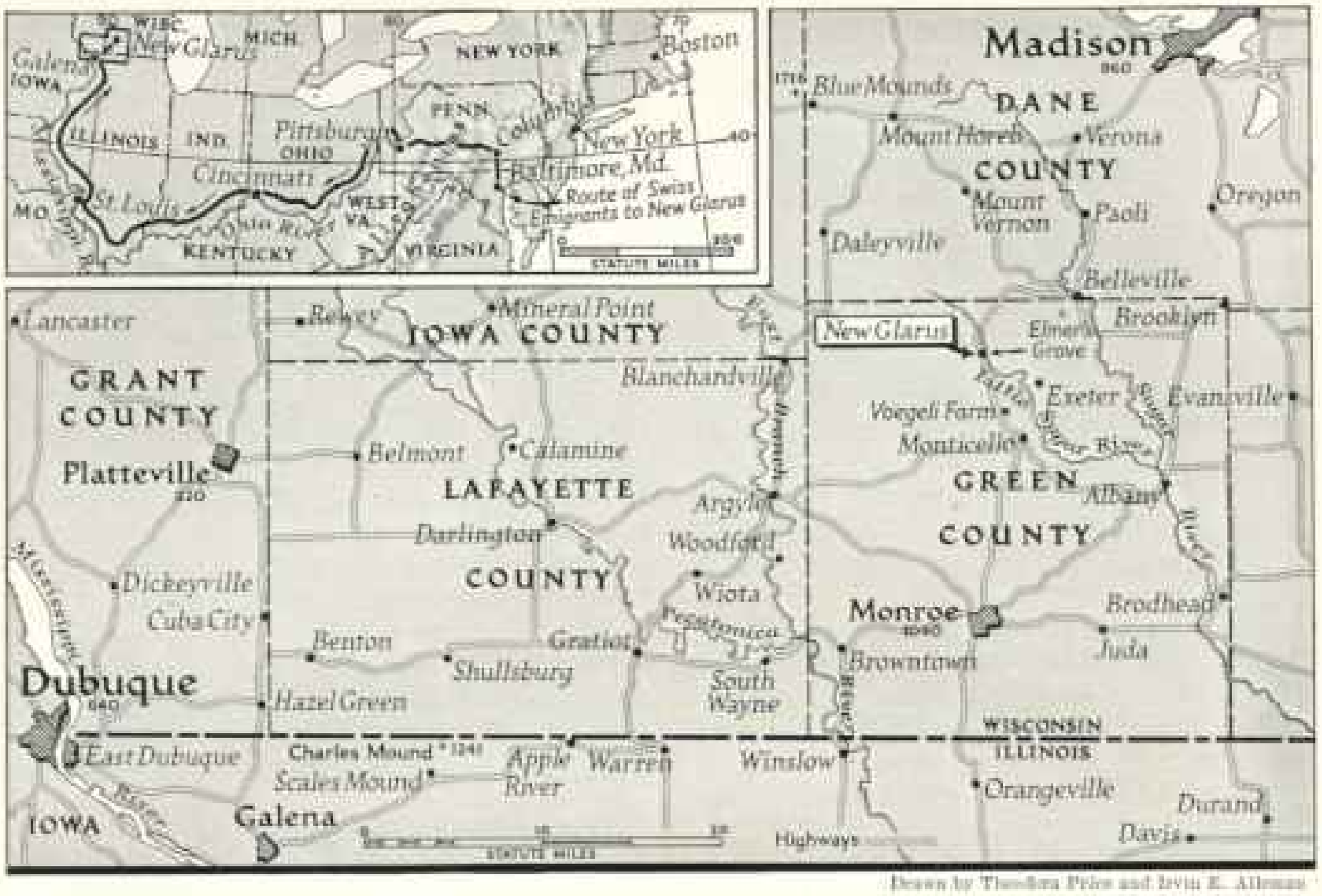
Duerst immediately dropped his tools and started back for St. Louis to meet the rest of the party, which he had not expected for several weeks. He reached Galena at dusk a day later, booked passage south for the next morning, and, weary, went to bed.

Next day, when he had made his way to the dock, Duerst heard by chance that a large band of emigrants had arrived the evening before. He hurriedly looked them up and found they were his fellow townsmen.

On the afternoon of the same day, 18 of the impatient Swiss started for the new settlement on foot, Duerst leading the way. These men traveled all night and all the next day, finally reaching Wiota in Lafayette County, where a farmer let them sleep in his stable.

The next morning they resumed their trek. Everyone they encountered fled at their approach, for, as the son of a pioneer later wrote: "Bearded, unkempt, and ragged as they were, carrying axes and tools of every description, and bags of flour and provisions, they at a distance more resembled a band of robbers than a party of honest emigrants."

Teams were hired at Galena to bring the rest of the party, including the women and children. Within a few days the colonists were reunited, except for those who had fallen by the wayside. By August 15, 108 of the 193 had reached New Glarus safely. Some of the stragglers eventually caught up with the group and rejoined it.



Drawn by Theodora Pike and Irvin E. Altmaier

New Glarus Swiss Help Make Wisconsin America's Swiss Cheese Center

Twenty-five miles southwest of the State capital, Swiss pioneers a century ago carved a new home in southern Wisconsin's wilderness. They named it for the Swiss Canton from which they emigrated. Today 90 percent of the population of New Glarus is Swiss-born or of Swiss parentage.

Then began a struggle for existence. Land was apportioned as in Switzerland—60 lots of 20 acres each, to each head of a family. A dozen pots, pans, and kettles, brought from Switzerland, did duty for all. A big rude shack was hastily built and in it dwelt all the families until individual huts could be erected. The colonists' salt had vanished; so they ate unsalted fish from near-by Little Sugar River. Land was broken by hand, for they had no plows or oxen.

The winter of 1845-46 was a nightmare. Many of the men went to work in the lead mines at Exeter and Mineral Point. Pay was 50 cents a day. Women walked to Monroe, 18 miles away, did housework for three or four days, then took their pay in flour or old clothes, carried home on their backs.

The colony finally was able to buy four yoke of oxen, which were used by the pioneers in turn to help break up the land for planting of wheat.

Cows Come to New Glarus

In the nick of time, friends in old Glarus sent them a check for $1,000. In the spring of 1846 some drovers from Ohio brought a herd of cows to Exeter. The colonists attended the sale. Expert judges of cattle all their lives, they bought the best animals in the herd—one for each family—at $12 each using part of the money sent to them from Switzerland.

From 1846 until 1850, progress was heartbreakingly slow. Then the Crimean War raised the price of wheat, chief crop of New Glarus in its early days, and prosperity arrived. Stories of the colony's success were carried back to Switzerland and additional emigrants arrived, many of them well supplied with capital.

The Swiss colonists turned to making cheese when they bought their first cows, and soon were selling small amounts of their homemade product in Monroe.* The business proved profitable after the close of the Civil War, and with the subsequent decline in the price of wheat and the rise of dairying in Wisconsin, New Glarus began to lay the foundations for its present-day wealth.

In November, 1850, value of taxable property in the township was $8,915. Twenty-six years later it had jumped to $323,996.

*See "An August First in Gruyères," by Melville Bell Grosvenor, NATIONAL GEOGRAPHIC MAGAZINE, August, 1936.

Cash deposits in the Bank of New Glarus now exceed $4,000,000.

The more back roads Pauli's truck traversed the better I was able to understand the soundness of the century-old decision of Duerst and Streiff. I saw at close quarters some of Green County's nearly 53,000 milch cows—nearly all of them Holstein-Friesians—quantity producers averaging well over 7,000 pounds of milk a year (Plate VI and page 795).

In some of the barns womenfolk helped the men. In others, boys back from the armed services had returned to their farm duties. But scarcity of help was still so critical that some dairy farmers had turned their rich pasture land over to Hereford beef cattle, because these animals do not require so much attention as dairy cows.

At one farm a young man with a handcart trundled half a dozen milk cans down to our waiting truck. Pauli introduced me.

"I've brought you a farm hand," he said, jocularly.

"I'll take him," the farmer replied, in like vein.

Back on the road, Pauli turned to me in his forthright Swiss way.

"He would have taken you, too," he said earnestly. "He'd take anyone. He's desperate for help."

Holsteins Work 7-day Week

Pauli has driven his milk route for 17 years, seven days a week, with only a few days off during that entire period. His "patrons," the dairy farmers, also work seven days a week, and the Pet Milk Company condensery in New Glarus, to which he takes his heavy loads of filled cans, opens its doors every morning of the year.

"Holsteins just don't understand about OPA, the Wagner Act, the CIO, the AFL, or Congress," one Swiss farmer told me. "They have to be milked seven days a week, and you can't let the milk stand around, either."

As our laden truck came back to the State highway on our first trip of the morning, en route to the condensery, we encountered lively traffic. Big trucks like ours, small ones, and passenger cars with trailers, all were converging on the condensery with the morning's milk.

We took our turn in line. In a few moments we were at the receiving platform. Pauli rolled his cans one by one onto a conveyor, and they disappeared through an aperture into the building. Before his last can left the truck, the first ones were emerging on another conveyor a few feet distant. They were empty and hot to the touch, after having been washed and steamed in an automatic cleaner which even replaced the tops.

Ray Frederickson, manager of the condensery, invited me inside to watch milk being evaporated.

There is a difference between evaporated and condensed milk. Evaporated milk is natural cow's milk from which about 60 percent of the water has been removed. It contains no sugar and is sterilized in cans.

Condensed milk is of two types—plain and sweetened. The first is perishable, for it is concentrated without the addition of sugar and sold in unsealed cans, mostly to food manufacturers. The sweetened type, the kind housewives buy in grocery stores, is concentrated with the addition of sugar to preserve it; therefore, no sterilization is necessary.

The only way a visitor can see a drop of milk after it disappears into the receiving vats is by looking through small windows in the tanks. The milk never reaches the air again until, in your home, you open a can containing it.

If you boiled two gallons of milk in an open kettle on your stove until but one gallon remained, you would have evaporated milk of about the same composition as you buy in cans. But it probably would be scorched, partly coagulated, and scummy. One secret of making good evaporated milk is to evaporate it quickly at low temperatures. In a vacuum, milk evaporates readily at 125° Fahrenheit.

From the receiving vats I could follow the milk pipe line, first to tanks where it was preheated to 209° partly to retard bacteria growth; then to the vacuum tank where it was evaporated; next to the homogenizer, where the butterfat globules were broken up into microscopic particles.

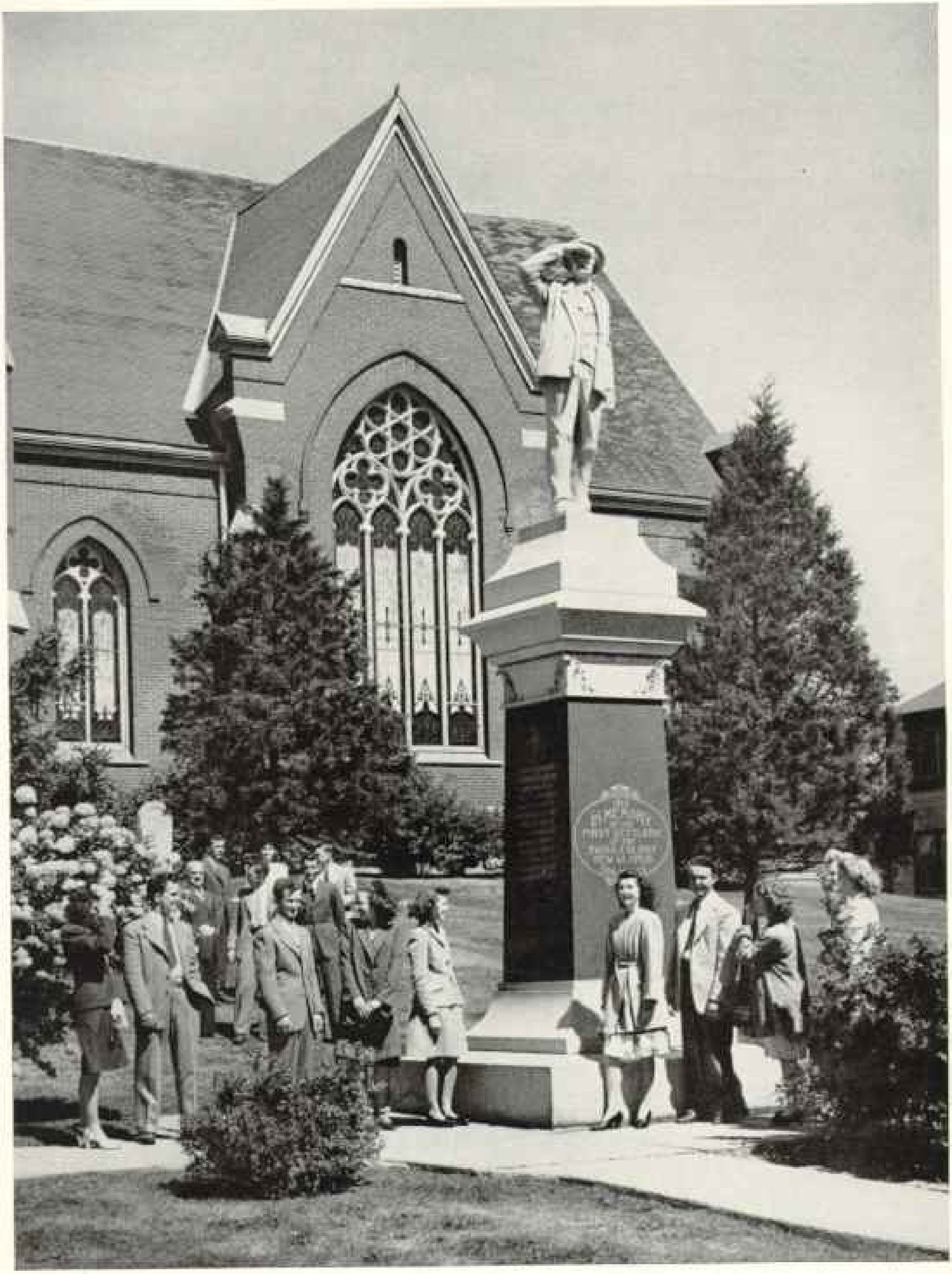
Then the milk flowed to ingenious machines to meet the containers. As each small can rolled into position, the machine forced a precise quantity of milk through a small opening in the top, and then placed a drop of solder over the aperture to seal it.

I watched one of these fast-moving machines fill 160 cans of 14½-ounce size in exactly one minute. Sterilizing, cooling, packing, and shipping completed the job.

At the height of the season, the New Glarus condensery produces enough cans of evaporated milk to fill four freight cars every 24 hours.

Bossy's Milk Reflects Her Habits

Bacteriologists check samples of milk from each farm's daily output, and analyze butterfats and solids. Prices are based on



New Glarus Raised This Monument to the Memory of Its Swiss Founders

One hundred and two years ago, immigrants from Canton Glarus, Switzerland, ended their journey to America on this spot (page 781). Names of the pioneers are inscribed on the pedestal. Today 90 percent of the townspeople are Swiss-born or of Swiss descent. In background is the Swiss Evangelical and Reformed Church.

butterfat content. A standard is set, and farmers whose milk exceeds that standard receive a premium.

Evaporated milk must be of uniform quality; so the whims and habits of the cows supplying the raw material must be watched and allowance made for them.

Type of pasture, transfer from barn feeding to pasture, other changes in bossy's mode of living, all are reflected in her milk.

Many of the milk trucks on the highways around New Glarus are bound for the cooperative cheese factories, large and small. Although the number of individual plants has dwindled through the years, production of cheese has increased by leaps and bounds as operating plants have grown larger and more modern. Green County in 1945 turned out about 17,000,000 pounds of cheese. More than 13,000,000 pounds of this was Swiss cheese.

I visited a modern plant on the outskirts of Belleville, adjacent to New Glarus, to see Swiss cheese in the making. This factory is owned by a group of farmers and operated and managed by George Anderegg, a Swiss-born cheese expert who came to New Glarus on a visit about 20 years ago and liked it so well he stayed.

Anderegg's factory in flush milk season makes 11 wheels of Swiss cheese a day. Each wheel weighs more than 200 pounds. Some reach 235 pounds (Plate VII).

I watched milk direct from the farms go into huge kettles, each holding about 3,300 pounds. Then it was heated to a temperature of 122° Fahrenheit. The cheese makers added rennet extract, obtained from the stomachs of young calves, to coagulate the milk, and also introduced a bacteria culture into the batch, which was then thoroughly stirred and agitated mechanically to separate the curds and whey (Plate VIII).

An Accidental Discovery

Coagulation of milk with rennet extract is an age-old process, probably discovered by accident. Skins and stomachs of animals have been used as containers for centuries. Legend tells that some ancient herdsman noticed that milk coagulated when it was carried in a bag made from a calf's stomach.

When a batch in one kettle was completely separated, the cheese makers gathered the curds in a big cheesecloth and moved it by chains along a conveyor to a pressing table (Plate VIII). There they put the bag of curds into a round wooden form, or wheel, and pressed out the water and whey remaining in the mixture. Cloths were changed repeatedly during this drying process, and within a few hours the wheel had taken form sufficiently to be handled. But missing at this point were both rind and holes.

Next the men carefully slipped the big wheel into a vat of brine so concentrated that the heavy cheese floated upon it. Every day for three days they inspected it there, washing it thoroughly in the brine until the rind formed (page 799).

Anderegg next took me into a big room where two or three dozen wheels which had completed their brine bath had been stored for several days in a temperature of from 65° to 70°. Here the bacteria culture was at work, acting much like yeast in bread dough and forming, by natural fermentation, the holes, or eyes, for which Swiss cheese is famous (page 797). The culture also helps to give Swiss cheese its pleasing hazelnut flavor.

During fermentation the big wheel begins to bulge. It must be removed to a cold storage room at the proper time or it would burst. Cold arrests fermentation. In cold storage the cheese ages for a minimum of 60 days, preferably longer, and then goes to market.

Cream is an important by-product of a cheese factory. After the curds are removed from the kettles, the residue is passed through a separator and the cream thus obtained is sold to near-by creameries.

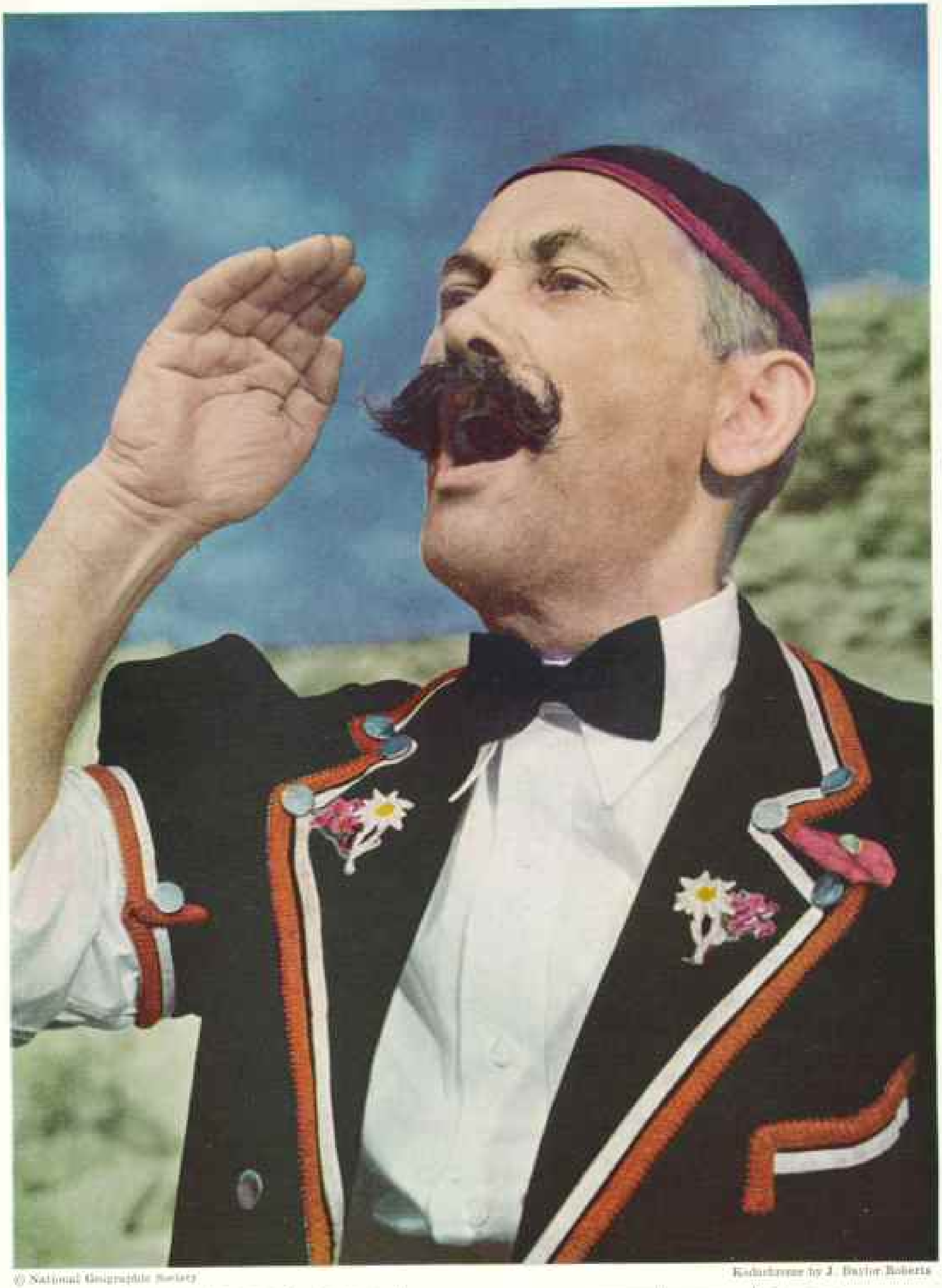
"Now you have seen a modern factory," Anderegg told me. "How would you like to see an old-fashioned one?"

We walked toward his car to be greeted en route by a bounding Doberman pinscher.

"Meet the corporal," Anderegg said, and I greeted the friendly, exuberant dog. "He's just back from the wars. Served with the Marines in Japan, saw action, and was promoted to corporal. I got two letters from men who handled him, both praising him highly. And there's nothing ferocious about him now. He's glad to be home, I guess."

We drove across country to a point between New Glarus and Monroe. There on a hill stood an old building which served as factory in front and home in rear. Less than half a mile away, in front of a farmhouse, stands a bronze tablet marking the site of the log cabin in which the late Senator Robert M. La Follette was born, June 14, 1855.

Presiding over the one-man, one-kettle cheese factory was Fred Muehleman, a rotund and jovial Swiss who came to the United States 35 years ago (page 798). He operates the plant, owned by six farmers who supply milk six months of the year. He makes cheese twice a day. In the wintertime, when milk is scarcer, he rests from his labors of the summer.



Kodachrome by J. Baylor Roberts

Alpine yodels like this come naturally to Ernest Thierstein, of the Swiss community at New Glarus, Wisconsin. He learned the old Swiss warbles in childhood. For a century New Glarus has preserved Swiss traditions.

Kodachrome by J. Baylor Roberts

"*Uf de Baerge Isch Guet Laebe*"—"On the Mountains It Is Good to Live"—Old Swiss Yodel Theme in Dialect

These members of the New Glarus Yodel Club are businessmen, artisans, and dairymen. One of their traditional warbles was composed centuries ago at the foot of the Jungfrau. Casper Yuan, Swiss-born farmer, at extreme right, keeps in practice by yodeling daily just before milking time, while going to the pasture to get the cows.

Carl Marty, Retired Swiss Cheese King, Turns to Art

The canvas, in his home studio in Monroe, Wisconsin, pictures William Tell and his son. As a model, Mr. Marty used the famous bronze statue of Tell at Altdorf, Switzerland, where, tradition tells, the hero shot the apple from the boy's head. In foreground the Swiss flag is portrayed in flowers.

Kodachromes by J. Baylor Roberts

Deep, Vibrant Tones Emerge from a Giant Alpine Horn

Sixteen feet long, it was acquired in Switzerland by Carl Marty (opposite picture) and presented by him to New Glarus. The musician is Swiss-born Rudi Burkhalter. He plays successive notes of a chord, so that resounding echoes will harmonize. His companions wear Swiss folk costumes.

Kodachrome by J. Baylor Roberts

William Tell Pageant Ushers and Dancers Gather at the Entrance to the Chalet of the Golden Fleece

Each Labor Day New Glarus presents Schiller's thrilling portrayal of the Swiss struggle for independence. Costumes are made by women of the community. The authentic Swiss chalet is the home of Edwin Barlow. Original of the German-Swiss inscription over the windows is on a 400-year-old chalet in Bern, Switzerland.

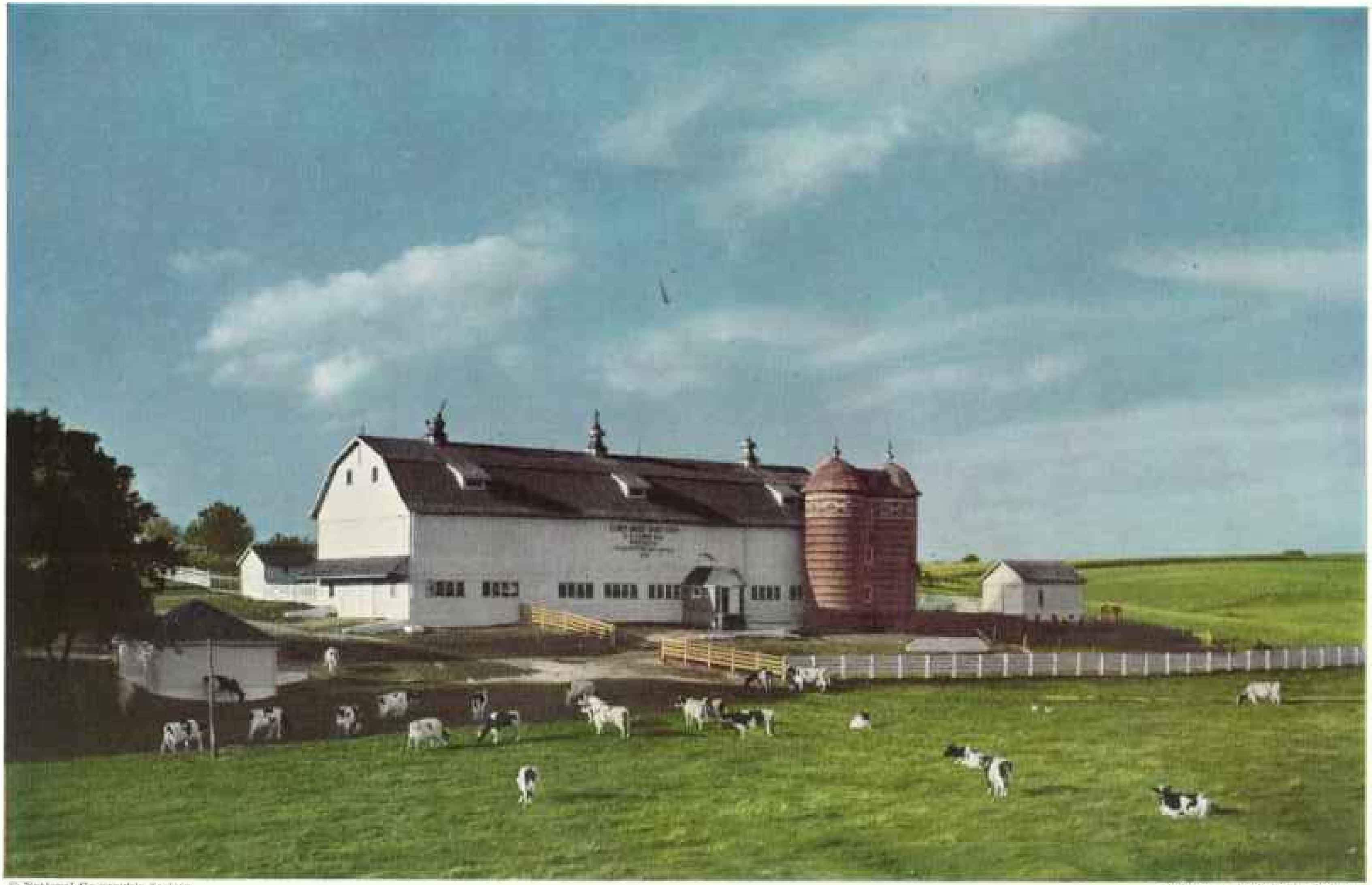
This Copper Fish Yields Water at the Touch of a Finger

The container and the shell-shaped basin are Swiss antiques, part of the exquisite furnishings of the Chalet of the Golden Fleece in New Glarus. The girl, in old Swiss costume, is an usher at the William Tell pageant.

Kodachromes by J. Baylor Roberts

She Holds a 17th-Century Geneva Wine Jug

The girl, a pageant usher and dancer, wears the costume of Canton Fribourg, Switzerland. The window, in the living room of the Chalet of the Golden Fleece, is of old hand-blown bull's-eye glass.



Kodachrome by J. Baylor Roberts

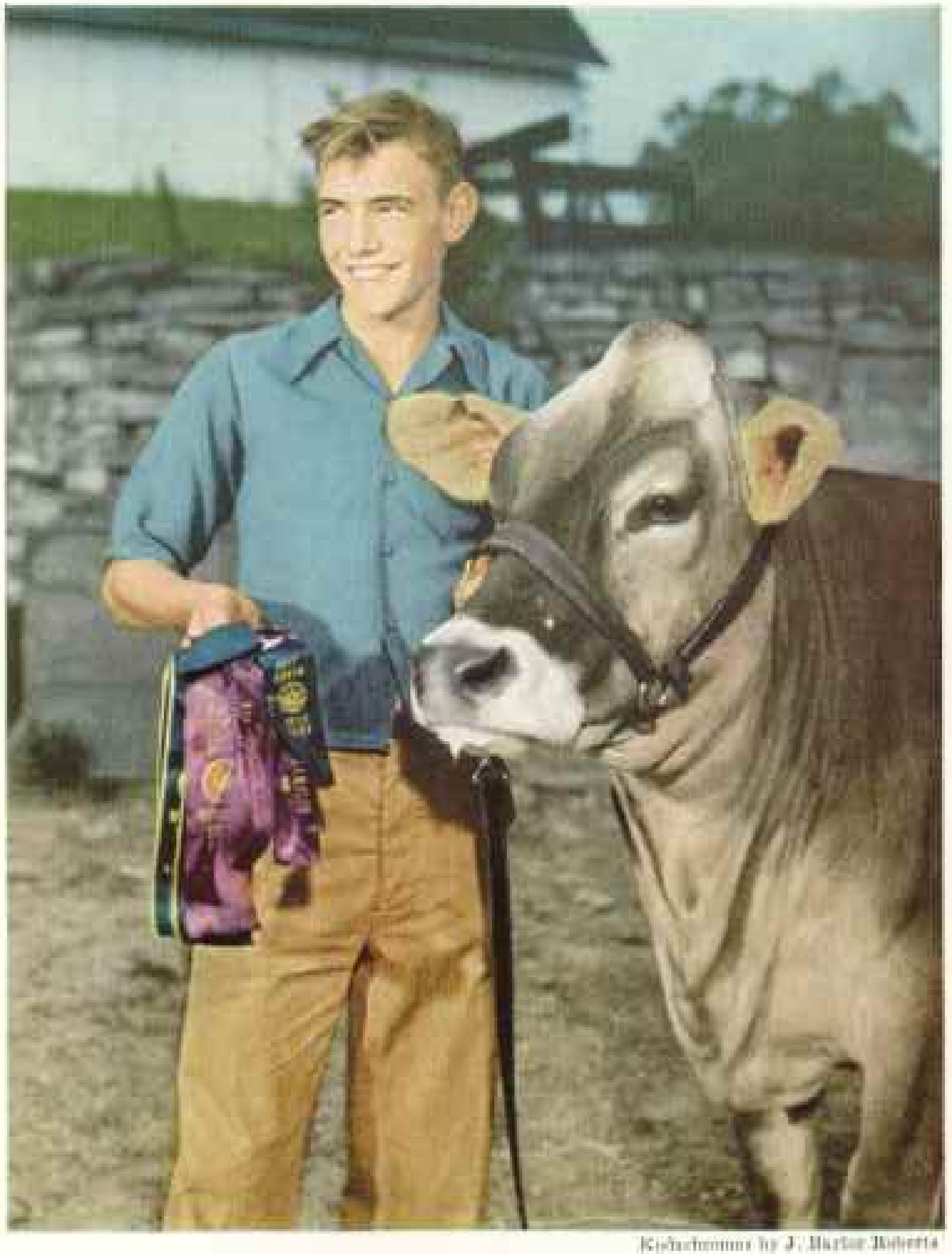
Lush Pastures Keep These Registered Holstein-Friesians Contented in Southern Wisconsin's Rich Dairyland

Modern in every detail is the Elmer Brook Dairy Farm outside New Glarus. About 96 percent of Green County's 53,000 milch cows are Holsteins, famous quantity producers. In 1945 they gave their owners more than 171,500,000 quarts of milk. Virtually all the farmland is devoted to their upkeep.

© National Geographic Society

Basic Material for Thousands of "Swiss on Rye"

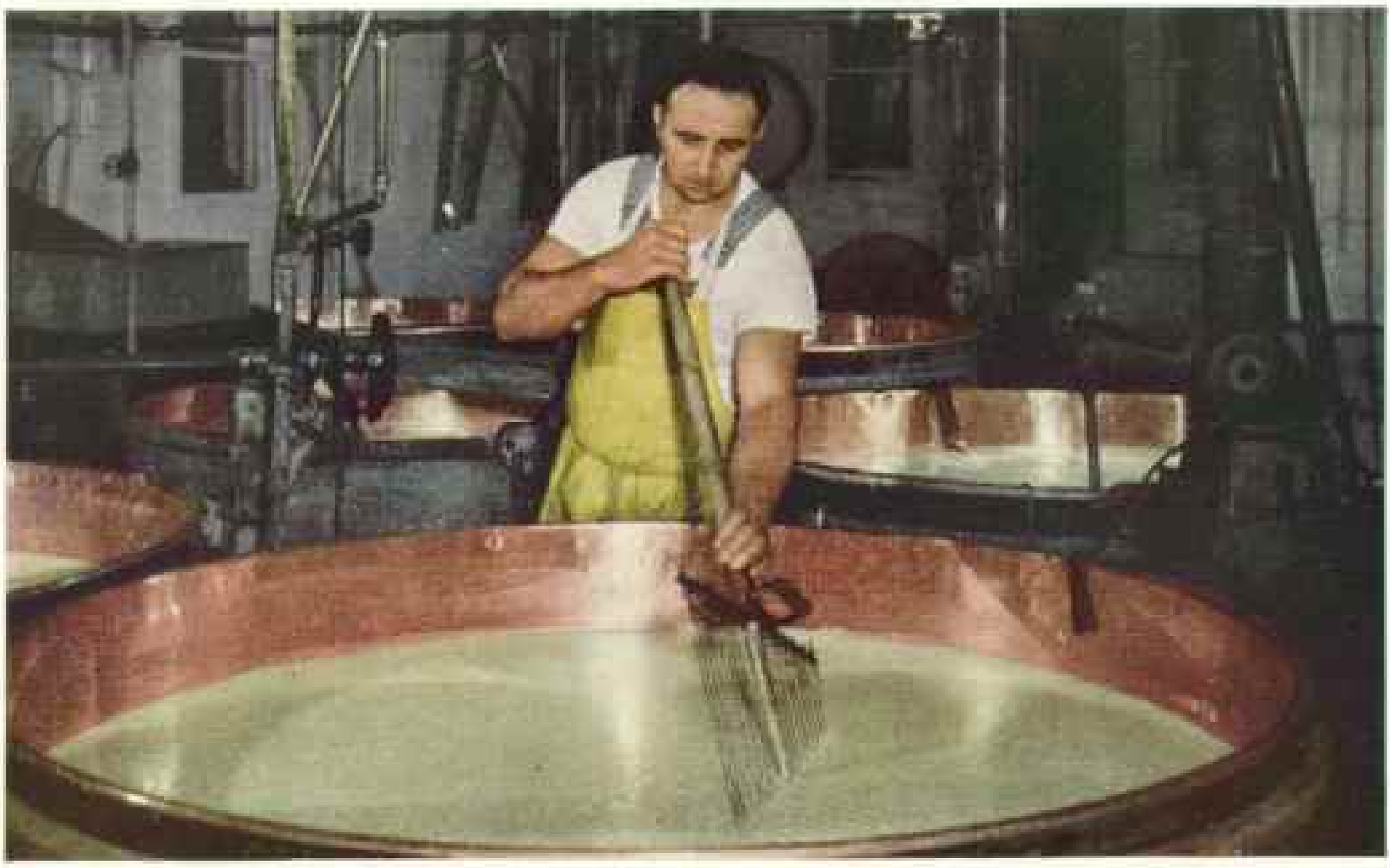
These big wheels of Swiss cheese in a New Glarus warehouse weigh about 200 pounds each. The girl holds a chunk known as a "sandwich cut," sold to delicatessens and small shops which cannot use an entire wheel. Green County is the center of the Nation's Swiss cheese industry (Plate VIII).



Kodachromes by J. Burlor Roberts

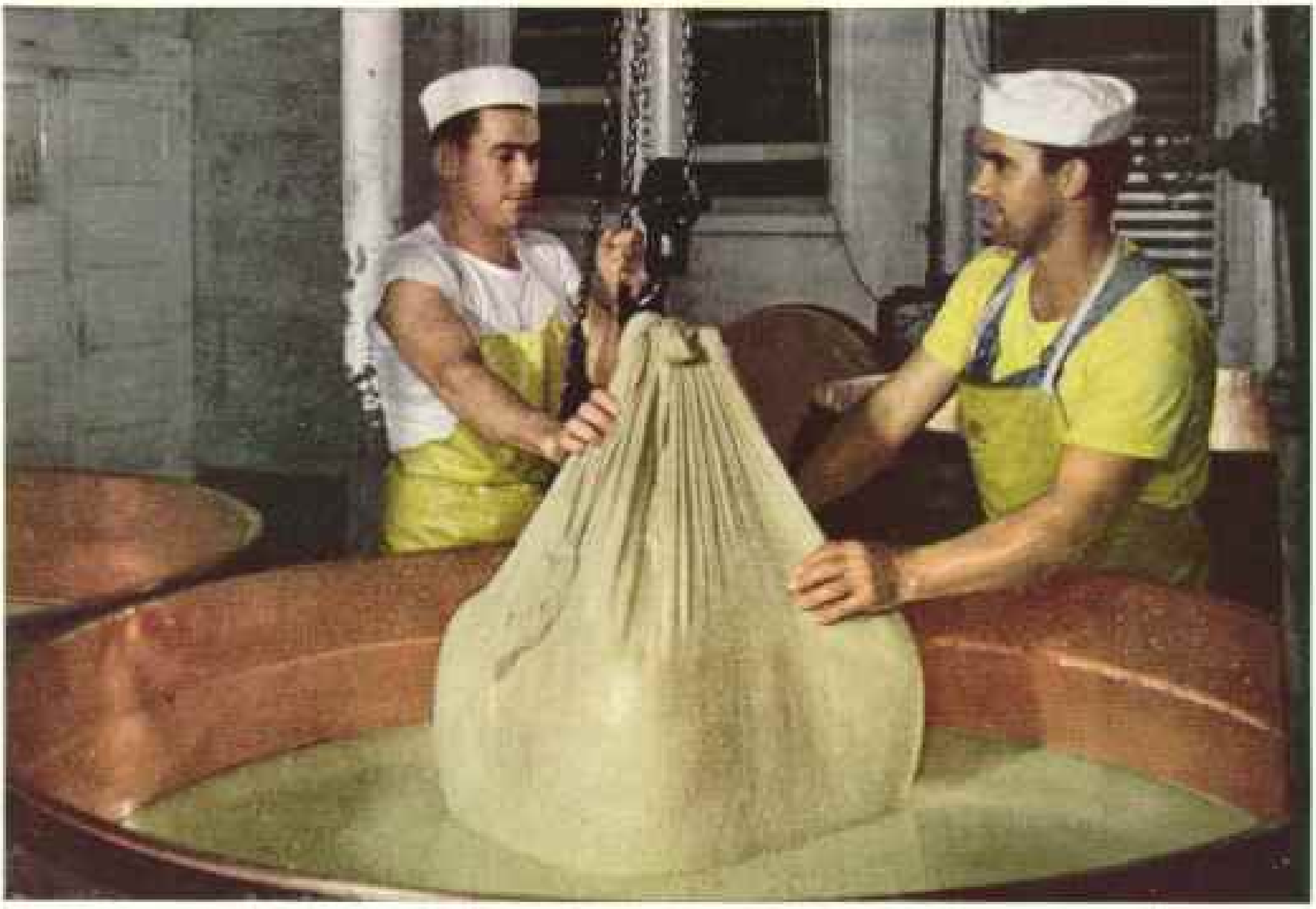
One of America's Brown Swiss Aristocrats

Howard Voegeli, 4-H Club member, is proud of Tex Jane Joyce, winner of Green County and Wisconsin State Fair ribbons. County show place is the Voegeli Dairy Farm near New Glarus, with its magnificent herd of registered Brown Swiss, descendants of cattle from Canton Schwyz in Switzerland.



With a "Swiss Harp" He Cubes Cheese Curds Forming in a Ton of Milk

Rennet, for coagulation, and bacteria culture, which will produce the holes, have been added to the milk in the big copper kettle. This Swiss cheese factory, near New Glarus, is owned by the farmers who supply the milk.



 Kodachrome by J. Baylor Roberts

By Chain Hoist, 300 Pounds of Curds Go from Kettle to Pressing Table

With water pressed out and the curds shaped like a wheel, the solid cheese will be ready for a salt bath, to form the rind. Later, while it is curing, the holes or "eyes" will develop (Plate VII).

Muehleman was making brick cheese, a strictly American variety, when I arrived. Mixing and agitating were accomplished with hand-operated paddles and other implements. He removed the curd from the kettle, placing it in box molds each about a foot long and six inches wide, to be pressed for 24 hours.

When the cheese takes form it is removed from the molds, salted by hand, and put in the curing room to ripen for a minimum of 60 days. In the curing process it develops a vast number of small eyes.

Housewives Protested Limburger

New Glarus's first cheese factory, as distinguished from the cheese-making units installed by the pioneers in their homes, was built in 1870. By 1884 the town was making 800,000 pounds of cheese a year, but three-fourths of it was Limburger. The cheese makers moved their product by wagon to Monroe, then as now the chief distributing point for the county's cheese.

Protests from Monroe housewives arose when the aroma of Limburger penetrated their homes as the Swiss wagons passed down the streets. Schoolchildren held their noses. But Limburger brought money to Monroe as well as odors, and the traffic from New Glarus went unmolested.

Today Swiss cheese reigns, and Monroe heralds itself as the "Swiss cheese capital of the United States." *

Pride of Green County is its nearly 53,000 milch cows and 22,000 bulls and calves. Nearly all the farmland is devoted to their upkeep. In return, the cows gave 368,900,000 pounds (171,600,000 quarts) of milk to their owners in 1945.

About 96 percent of the cattle are Holstein-Friesians, a type which originated in the Netherlands (Plate VI).†

Although outnumbered heavily by Holsteins, Brown Swiss cattle have a place in the hearts of all the Swiss dairymen. That is why even Holstein owners advise visitors to see the county show place, the Voegeli Farm south of New Glarus, with its magnificent herd of Brown Swiss (Plate VII and page 796).

Descendants of cattle from Canton Schwyz in Switzerland, they are striking in appearance and range in color from dark brown and gray to lighter shades. More than 100 head make up the herd, which includes many show animals and ribbon winners.

Not far away is the large farm of Elmer Stauffacher, with its graded herd of some 150 Holsteins. It was here that I first noticed strips of green grass in the pastures which were much darker in color than the ordinary grass in the same field.

"That's where nitrogen fertilizer has been applied," Stauffacher told me.

Nitrogen Popular with Cows

This fertilizer, which is becoming popular in Green County, is an ammonium nitrate, carrying about 33 pounds of nitrogen in 100 pounds of the mixture. When put on pasture land, it makes the grass grazable from a week to 10 days earlier than normally and also makes it more palatable and richer in protein.

"And the cows love it," Stauffacher said. "They walk from one dark-green strip to another, skipping the grass in between. Once I accidentally burst a sack in the field, and a large quantity spilled. I scooped up what I could and spread the rest around with my boot in a little patch. The cows soon found the spot, and they liked the nitrogen so well that where it had fallen they licked up the ground to a depth of about six inches."

The beauty of the rolling countryside around New Glarus is apparent to anyone, but much of the charm of the village itself is not so obvious. Its main street, through which motorists pass en route to Madison or Monroe, is not much different from that of any other Midwest town of a thousand population. But Swiss background and tradition crop out aplenty for anyone willing to explore its quiet streets.

A block from the main highway is the Chalet of the Golden Fleece, a charming authentic Swiss chalet designed by a Swiss architect and built by Edwin Barlow for his home (Plate IV). Two inscriptions in German Swiss grace the façade. The one above the windows of the dining room reads, translated:

"This house is mine and yet not mine. Now will it pass to him who follows me. Would that I knew, my God, who last therein shall dwell."

Over the upper bedroom windows: "Your home is where you are happy to welcome your friends, and disconsolate when they leave."

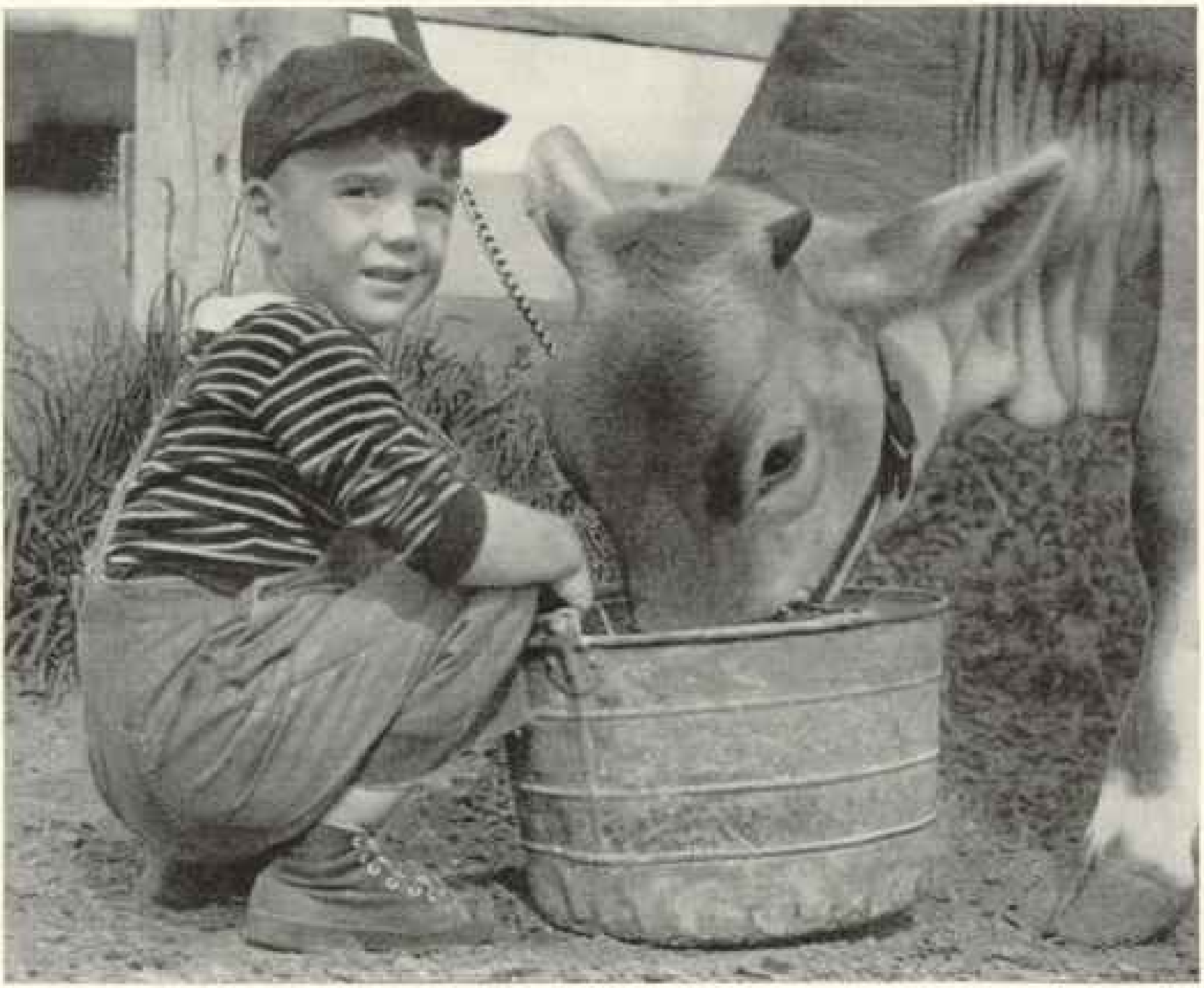
The originals of these inscriptions are on a 400-year-old chalet in Bern, Switzerland.

Within, many of the exquisite furnishings are Swiss, acquired by Mr. Barlow during several years of residence in Lausanne (Plate V). Others are colonial American.

On the main street stands a tavern with a drab exterior but with pleasant surroundings within (page 782). On nearly any afternoon

* See "On Goes Wisconsin," by Glanville Smith, National Geographic Magazine, July, 1937.

† See *Cattle of the World*, by Alvin H. Sanders, published by the National Geographic Society.



Dicky Koller, at Four, Knows How to Feed a Heifer

Virtually everyone in Green County, Wisconsin, is at home with dairy cattle. This animal is part of the herd of registered Brown Swiss on the Voegeli Brothers farm near New Glarus (Plate VII). Brown Swiss give milk richer in butterfat than Holsteins, but do not excel in quantity of milk produced.

or evening you can find the older men of the village here, absorbed in the classic Swiss card game of *Yass*. Tallies are kept on slates, thumbs serving as erasers. Many of these veteran Swiss are retired dairy farmers.

Kilbi—Day of Lamb and Mutton

Big holiday of the year is Kilbi (a corruption of *Kirchweihe*, or "church hallowing"). It falls on the last Sunday in September. Primarily Kilbi is religious. The Swiss Evangelical and Reformed Church is rededicated at morning services (page 785). But after this observance general celebration begins, with dancing and feasting. Eating of lamb and mutton on Kilbi is traditional. The Saturday preceding Kilbi is the only day in the year when New Glarus butcher shops sell either lamb or mutton.

Every Saturday, however, the butchers sell, and restaurants serve, a delicacy known as *Kälberwurst*, or veal sausage.

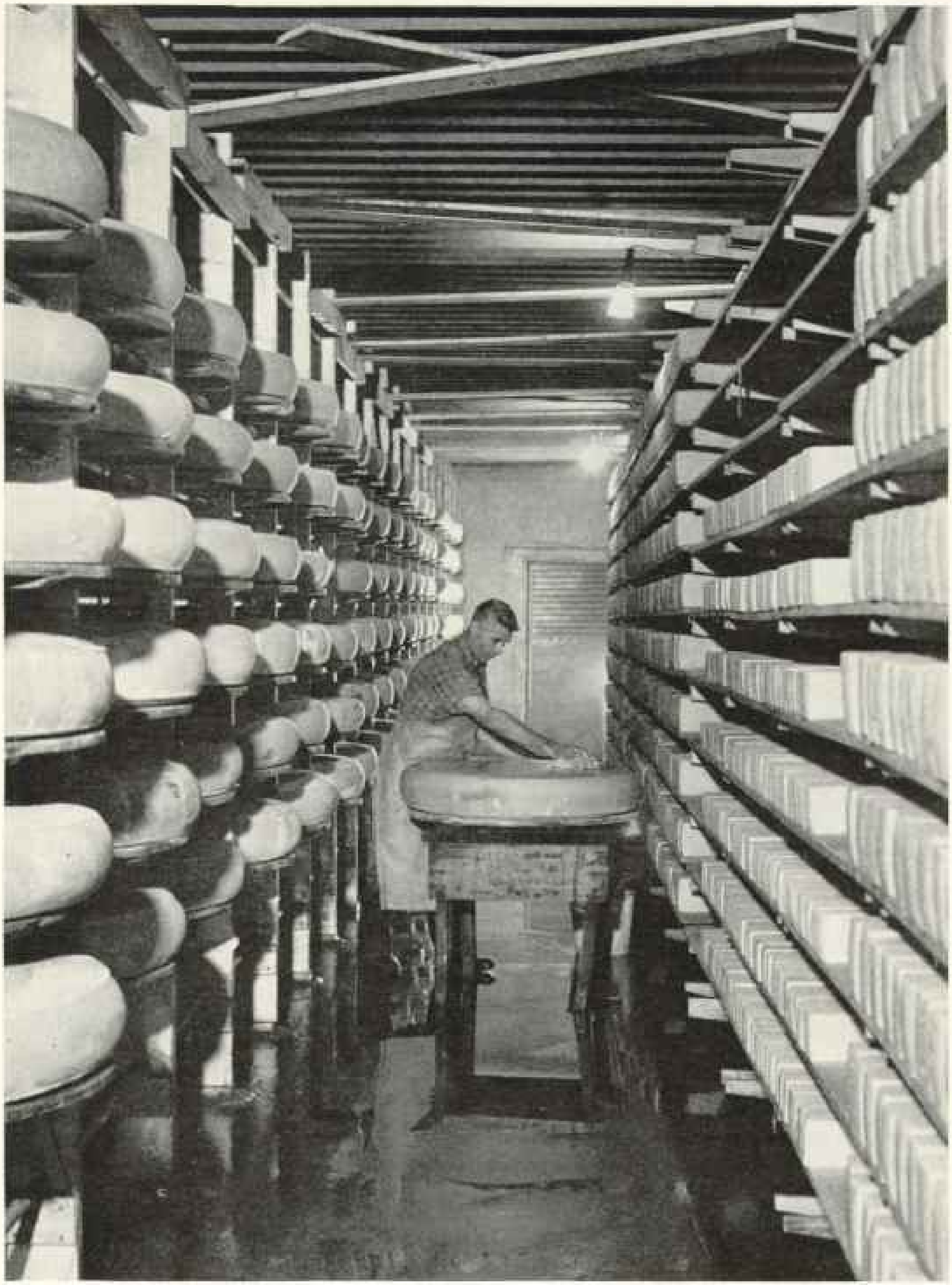
Another New Glarus food specialty is zieger, or ziger, green cheese made of Alpine herbs and whey.

The red-brick church with its high Gothic windows, built in 1900, stands on a knoll in the center of town. Here the first log church was built. It was replaced in 1858 by a stone building which cost $1,950 and 550 days of work by members of the congregation.

In 1900 the tendency in New Glarus was to forget the old; so this historic church was torn down. Dynamite was used to blast apart the six-foot-thick walls, and the striking square tower surmounted by a dome was destroyed. But the bell, cast in Milwaukee in 1859, was preserved.

At the entrance to the churchyard, in which is buried the pioneer, Nicholas Duerst (page 781), stands the Swiss Pioneer Monument, on the sides of whose reddish-brown pedestal are inscribed the names of the original settlers.

Members of the New Glarus church



Here Is Where the Holes Are Made in Swiss Cheese

In the warm curing room of this Monroe factory, bacteria inside the wheels work much like yeast in bread dough, forming eyes, or holes. The bulging wheels must be removed at the proper time or they would burst (page 786). Both Swiss cheese and brick cheese (right) are washed, salted, and turned daily in the curing room.

Fresh Milk Pours into a One-man Cheese Factory

Fred Muehleman, veteran Swiss-born cheese maker, handles the entire operation in this old one-kettle plant near Mount Vernon, Wisconsin. He is employed by six neighboring farmers who own the plant and supply the milk (page 786). In flush season he makes cheese twice a day, after both morning and evening milking on the farms.

preserved a quaint custom of Canton Glarus for many years. At the close of Sunday services, the men rose and remained in their pews until all the women had left the building.

The custom originated more than 550 years ago when the Swiss were at war with their bitter enemies, the Austrians. A company of Austrian soldiers had stealthily approached the town of Näfels, in Glarus, on a Sunday morning. All the townspeople were at church. For some forgotten reason, a woman left the building during services. On her way home she discovered the approach of the enemy.

Racing back to the church, she gave the alarm. Women rushed to battle alongside their menfolk, hurling rocks at the enemy, and helped to score a decisive victory over the Austrians.

From then on, women were granted the privilege of leaving church first in recognition of their deeds on that historic day. The custom was not abandoned in New Glarus until about the time of World War I.

New Glarus Swiss Love to Yodel

Swiss warbling is preserved by the New Glarus Yodel Club. While I was in the village, the club was getting ready to fly to Cleveland to participate in the National Folk Festival there. I was well repaid for attending their final rehearsal.

The yodelers needed no printed music. All but two of the dozen in the group had learned the old warbles, the only tunes used, in their childhood. The other two members, of Swiss parentage, had learned them from their mothers. Every member of the group belongs because he loves to yodel. The harmony obtained by their combined efforts is inspiring. One of these traditional Swiss yodels was composed centuries ago at the foot of the Jungfrau (Plates I and II).

Scholarly-looking John Furrer, one of the two soloists, came to New Glarus a score of years ago. Now he lives in Madison, but he returns to the village regularly to find his outlet for yodeling.

Caspar Yaun, the other soloist, is a veteran New Glarus dairy farmer. Four of his sons served in the Army and Navy during the war. He learned to yodel in Switzerland in his boyhood. Now he keeps in practice daily by yodeling to his cows.

Rudi Burkhalter, the leader, came here from Switzerland in 1938. He specializes in sounding the club's 16-foot Alpine horn. This massive instrument, made in Switzerland, was bought for the yodelers by the venerable Carl Marty, retired "cheese king" and self-taught artist of Monroe (Plate III).

Alpine horns originally were made by shepherds who amused themselves by blowing upon them and hearing the echoes resound through the mountains. Such a horn is hollowed with a pocketknife from the trunk of a small mountain pine which has grown out of a crevice and turned skyward, thus giving to itself a natural curve.

True to tradition, Burkhalter limits his playing to the notes of a chord, because mountain echoes, resounding to the first notes of an alpine horn, must harmonize with succeeding notes as they are played.

The deep, resonant tones of the club's huge horn, coupled with harmonious background tones from the yodelers themselves, create a thrilling effect.

Salt Baths Form the Rind on Swiss Cheese

The wheels go into the brine vat as soon as they are formed from the curds (Plate VIII). Three days later, when the rind is firm, they are ready for the curing room (page 786).

New Glarus also maintains a *Männerchor*, or male chorus, which specializes in old Swiss folk songs.

Crowning achievement in the preservation of Swiss tradition in New Glarus is the community's presentation each year of the William Tell Pageant, Schiller's thrilling portrayal of the Swiss struggle for independence.

Mr. Barlow (page 795) conceived the idea of this community effort and has directed the pageant each Labor Day (in English) and on the preceding Sunday (in German Swiss) since 1938. Two casts of principals are required, one English-speaking and one Swiss-speaking. The pageant takes place in Elmer's Grove, a natural amphitheater east of the village.

Nearly everyone in the community takes part. Rehearsals are held after evening milking hours, so the farm people can attend. The lavish costumes, of authentic design, are the result of months of work by members of the Ladies' Aid Society of the Swiss Evangelical and Reformed Church, aided by other women of the community.

Usherettes Wear Swiss Costumes

Dances were arranged by a New York authority on folklore. Pretty girl ushers are dressed in the native costumes of each of the Cantons of Switzerland (Plates IV, V).

Patrons and patronesses include Mrs. Franklin D. Roosevelt, the Swiss Minister to

New Glarus Townsfolk Portray William Tell and His Family

Scholars may argue over the existence of the legendary Swiss hero. But in Elmer's Grove, on the outskirts of this Wisconsin town, each Labor Day he comes back to life. With him are his wife, Hedwig; son William (right), and son Walter, from whose head the intrepid archer shot the apple (Plate IV). The community pageant, in which the Swiss struggle for independence is described, has been held every year for nine years (page 799).

the United States, Wisconsin's Governor, United States Senators, and other notables.

Under Mr. Barlow's tireless direction, the big cast gives its presentations with professional skill. People from all States in the Midwest come to see the event, now known familiarly to everyone in and around New Glarus as "the Tell."

"Pop Goes the Apple"

Of course one of the first questions asked by a newcomer in connection with the pageant is, "Does William Tell really shoot the apple off his son's head?"

The wily villagers refuse to answer. "Come and see for yourself," they reply. But if you persevere, they will tell you.

Many New Glarus Swiss are competent archers, but, after all, there was only one William Tell. No New Glarus Swiss pretends to be that good; so a little theatrical subterfuge is indulged in at this point in the pageant.

The boy stands with the apple on his head. William Tell releases an empty bow. The boy moves his head almost imperceptibly and the apple falls to the ground. Quickly the boy stoops and picks up—not this apple, but a second one, concealed at his feet. Through it an arrow has been run. He holds the arrow-pierced apple up to the view of the thrilled audience.

This is a most dramatic scene. But once, in an early pageant before all the wrinkles had been smoothed out, it missed fire. William Tell's son was guilty of a blunder.

Tell released the bow, the apple fell to the ground, and the boy stooped quickly.

Almost instantly he rose and proudly held up to view—the wrong apple. The arrow was not there. Poor William Tell had scored a clean miss!

Endeavour Sails the Inside Passage

By Amos Burg

With Illustrations from Photographs by the Author

I HAD not seen my ship since Pearl Harbor. For five years she had ridden to mooring lines at Seattle with no steering pressure of salt water against her staunch oak rudder.

I had come back now to sail her from Olympia, Washington, to Cape Spencer, Alaska—a thousand-mile voyage among the forest-covered mountainous islands that shelter the Inside Passage.

My first act aboard was to throw her hatches open to the winds and the warm June sun. With her teak decks beneath me, I felt once more my Norwegian ancestors' yearning for distant shores.

The ship had braved the breakers in Coast Guard rescue work on the storm-threshed Columbia River bar for 19 years before being condemned in 1929. Purchased then by Capt. O. P. Rankin, a bar pilot with whom I had sailed when I was 14, she had emerged from his loving hands a thing of beauty, with nine hardwood compartments and cabins, a spruce mast, and trim tailored sails.

Captain Rankin and I together had named her *Endeavour* after Capt. James Cook's first ship of exploration. To me had fallen the delightful lot of sailing her over the great waters until World War II interrupted her career.

Shark's Tail a Good-luck Talisman

Now, in June, 1946, after three weeks of overhauling and painting, *Endeavour* was again a fine lady with a shark's tail on the end of her bowsprit for fair winds and good fortune. Crowning her cockpit was the Plexiglas nose of a Flying Fortress for protection from rain and spray (pages 803 and 826).

The stores were moved aboard. My four companions followed—a man, two boys, and a dog.

To start farthest south in the Inside Passage, I backed *Endeavour's* stern up into the Deschutes River in Olympia. Her whirling screw chewed up the tide-flat mud and kicked her northward through Budd Inlet.

Less than an hour after the start, the Washington State Capitol in Olympia was lost to view astern. We zigzagged among islands of all shapes and sizes, the forested tops of mountains partly submerged by the sinking of the continental shelf. Sounds, passages, inlets, and bays extended their salt waters in every direction (maps, pages 806, 807).

With the protractor I laid out the compass courses. Pilots of steamers from Olympia to Cape Spencer use 258 courses. Aboard *Endeavour* we were to steer many more as we explored obscure coves and cut close to the irregular shores for intimate observations.

A Traffic Jam in the Cabin

Our load of five months' supplies and equipment made a traffic bottleneck in the main cabin. John Trout, *Endeavour's* chief mate and chef; the two boys, Robin and Sanford; and King, my family's Belgian shepherd, late of the Army K-9 Corps in France, had to maneuver for sitting and walking room.*

King slept on the floor, his head, tail, and legs jutting out like points on a starfish. Almost impossible to avoid, he was stepped on so often that he finally howled on general principles whenever a foot landed near him. Awake, he maintained an irrepressible courier service about the decks with sticks from the wood box, while mystery and adventure comics flowed artesianlike from the boys' knapsacks to add to the litter.

Coursing through Balch Passage along the southern edge of McNeil Island, we looked at the grim Federal penitentiary and wonderingly recalled stories of spectacular escapes.

The Narrows led us through a fleet of hand trollers off Defiance Point into Tacoma's Commencement Bay. In twilight we steered for the yacht harbor by the tall, smoking stacks of a smelter refining ore for the United States and numerous foreign countries.

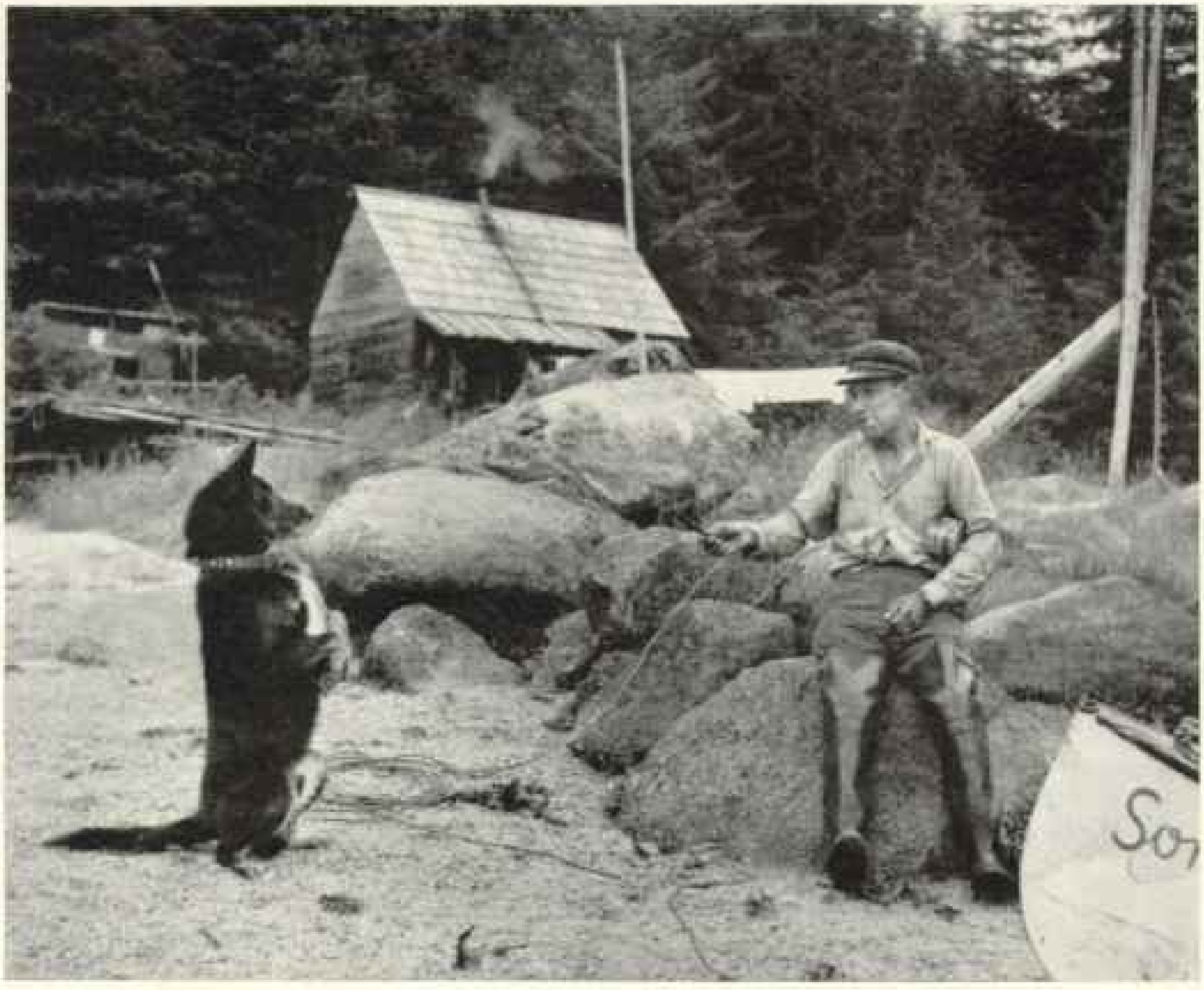
Scudding north from Tacoma next morning and heeling under a fresh westerly, we listened to the Bikini atomic-bomb blast on the cabin radio.† Fresh winds and sunlit waters made me wonder why anyone would bother with atomic bombs on such an exhilarating morning.

As we passed the mouth of Elliott Bay, a panorama of Seattle, "Gateway to Alaska," spread out before us, its 42-story Smith Tower a tall axle in a wheel of populous hills.

This city, largest in the Northwest, acquired its early growth from the Klondike and Alaskan gold rushes, and many evidences of its prosperous link with our northern Territory are visible. Out of protruding piers along

* See "Your Dog Joins Up," by Frederick Simpich, National Geographic Magazine, January, 1943.

† See "Operation Crossroads," 10 illustrations in color, National Geographic Magazine, April, 1947.



King Makes Friends with an Indian at Lowe Inlet

During the war as a K-9 he carried messages, and on the voyage he insisted on stick-toting about the decks and ashore. Most of the Indians along the British Columbian and Alaskan coasts are engaged in salmon fishing during the season, generally as gill netters and seiners. At right is the prow of *Endeavour's* tender, *Song o' the Winds*, the canoe which the author paddled across England (see "Britain Just Before the Storm," by Amos Burg, in the August, 1940, National Geographic Magazine).

Alaskan Way flow annually in normal years more than a hundred million dollars in two-way trade, as well as thousands of camera-toting summer voyagers. Developing airlines are already swelling the quota.

Ghostly Reminders of Vanished Forests

In a few hours we rounded Point No Point and felt our way through a lowering fog across Admiralty Inlet into anchorage at Port Ludlow. The lone, gaunt stack of a former sawmill, relic of one of the first settlements on Puget Sound, looked ghostlike in the misty moonlight.

When the enterprising Yankees, Pope and Talbot, rounded the Horn from Maine and established this mill in the early fifties, they had to chop down 200-foot Douglas firs so dense that settlers and Indians often set fires to make clearings.

Most of the prodigious stands of Puget Sound timber have been felled since then to help house and industrialize a nation, and now many of the old mills have closed or moved away in the wake of fast-disappearing forests that once seemed inexhaustible.

After passing through the Port Townsend ship canal next morning, we voyaged seaward down the storied Strait of Juan de Fuca. In the midst of Olympic National Park, towering Mount Olympus leapt up before our eyes.

Now *Endeavour* lifted upon the swells which prevailing westerlies push up from the Pacific past Cape Flattery. The Cascade Range stood out astern, and the snowy summits of Mount Baker to the northeast and Mount Rainier far to the south gleamed clear above green, singing forests.

Depleted like the forests are the sockeye-salmon fisheries, but they are now being re-

After Five Idle Years *Endeavour* Passes Ballard Locks, Adventure Bound

She had been berthed during the war in Lake Union, Seattle. In June, 1946, thoroughly reconditioned, she emerged from the Lake Washington ship canal into Puget Sound. The author cruised her down to Olympia to start the thousand-mile voyage at the southernmost end of the Inside Passage to Alaska (pages 801, 826).

stored, partly by international regulation. In the small-boat harbor at Port Angeles we watched fishermen readying boats and seines to intercept at least a third of the nearly eleven million sockeyes soon to fill the strait en route to their spawning grounds, 300 miles or more upstream in the Fraser River watershed. A single boat has hit the jack pot by taking, in one haul, 15,000 salmon worth $1 apiece from this treasury of the sea.

After clearing *Endeavour* for Canadian waters, we headed into choppy seas across the Strait of Juan de Fuca. The mountains of Vancouver Island, seen over our plunging bow, appeared wild and beautiful as when sighted by Capt. George Vancouver in 1792.

Victoria Is Old England in Canada

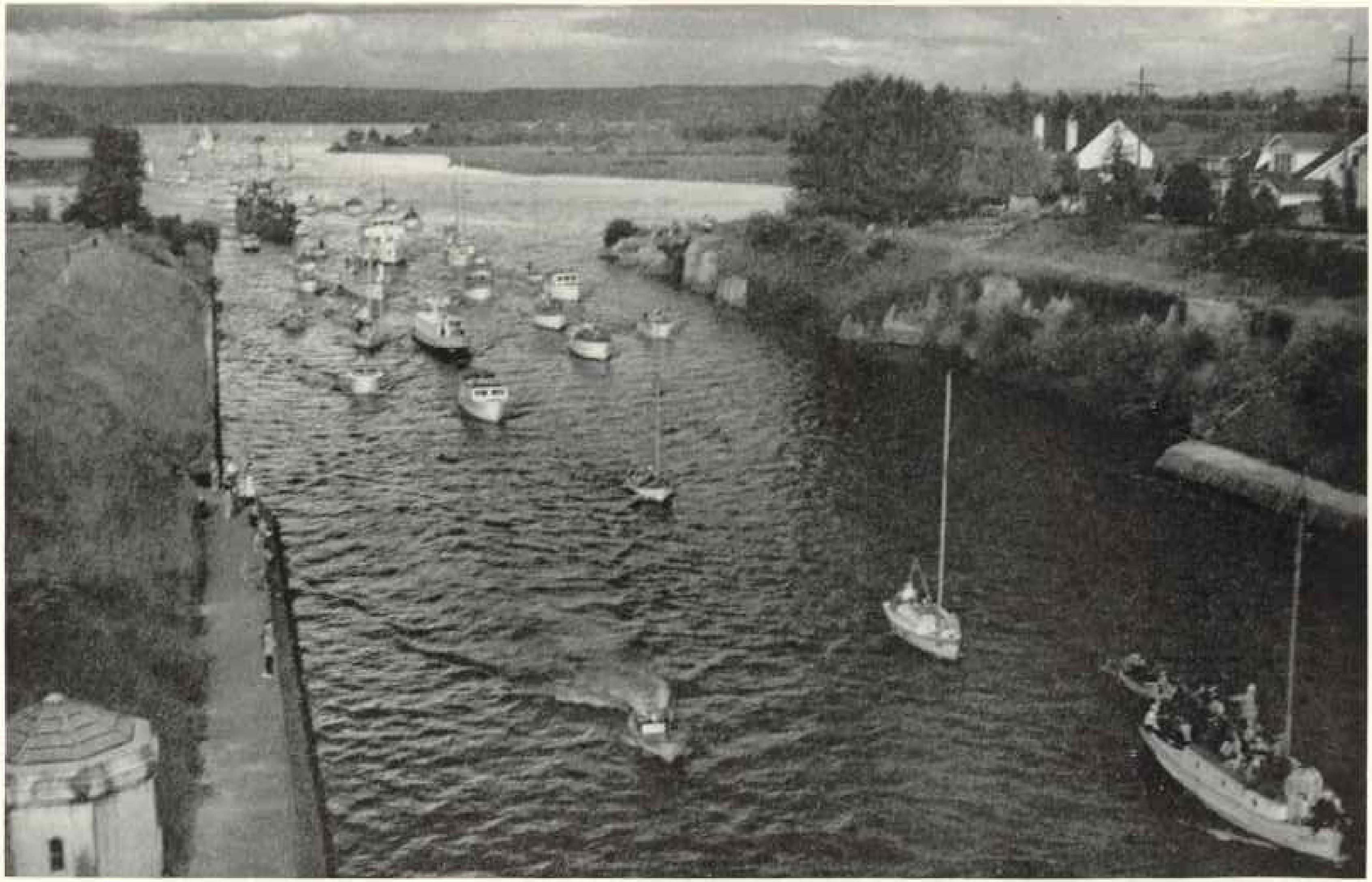
As *Endeavour* climbed the breaking crests and rocked in the waves, King suspended his wood-toting and discreetly joined Robin and Sanford in the main cabin.

Cruising through a narrow-necked entrance, we entered the inner stone-walled harbor of Victoria, the city that prides itself on being a bit of old England in America. There we cast our anchor virtually on the lawn of the Empress Hotel and the British Columbia Parliament Buildings.

Next day we sailed north through sunlit waters along the International Boundary. The many islands of the San Juans, ranging from nameless bits no larger than a blanket to San Juan and Orcas with areas of 60 square miles, sprinkle the sound to starboard opposite Vancouver Island.

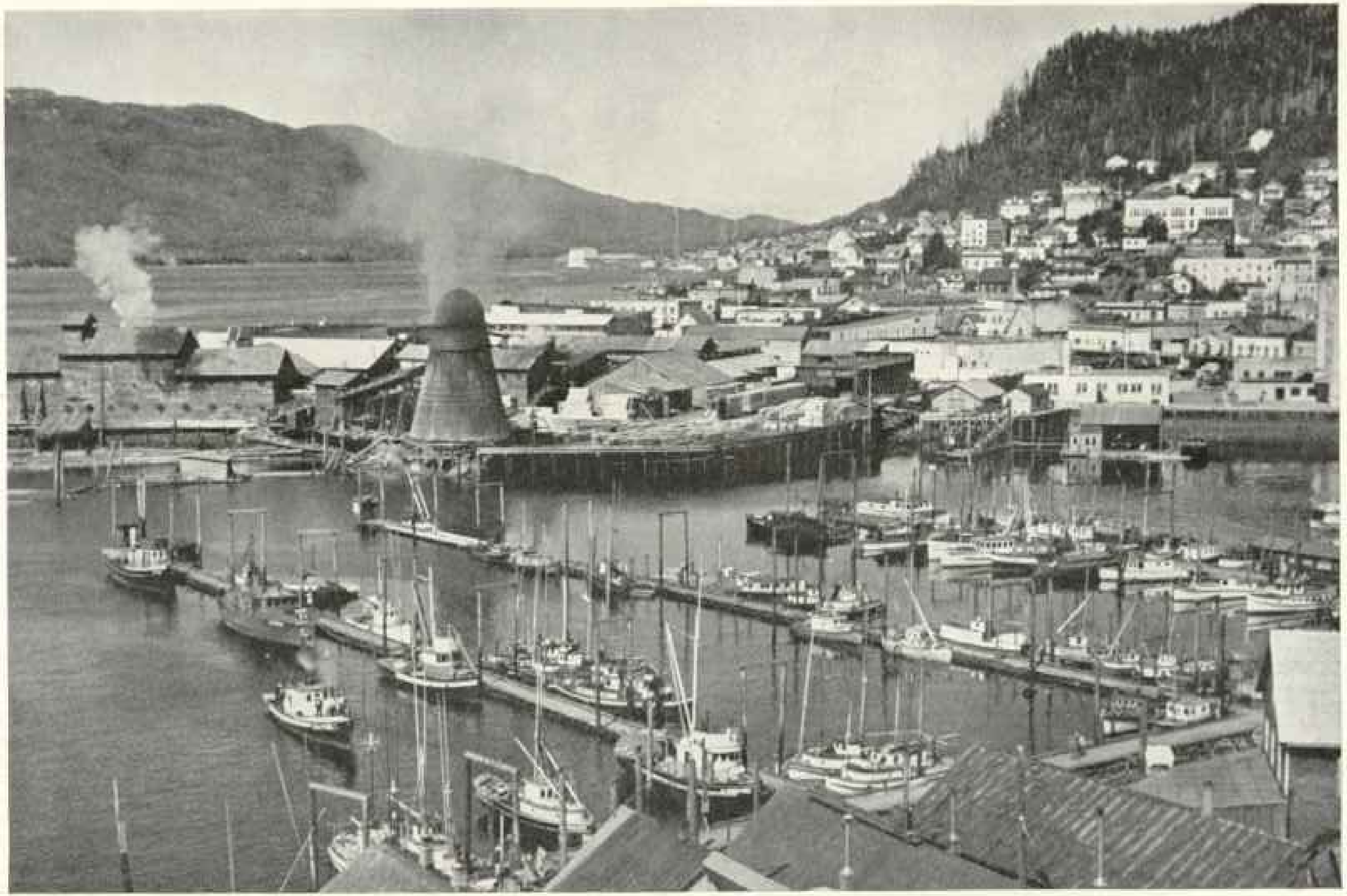
Here, because the rainfall is considerably less than on the mainland, many people have purchased islands for summer homes or for year-round dwelling places. Lovely coves and protected, scythelike beaches tempted us as we glided past. Graceful yachts seemed to challenge us to race on the enchanted waters.

Once ownership of the San Juans was



After Crew Races on Lake Washington, One-way Traffic Pours Through a Bottleneck to Lake Union

Seattle, with two large fresh-water lakes connected by ship canal with Puget Sound, is a yachtsman's paradise. During the annual regattas, when the University of Washington oarsmen, Olympic winners and many times national champions, compete with other sweep-swingers, the three-mile course is lined solidly with pleasure craft.



Ketchikan, Which Leads the World in Salmon Canning, Has More Boats than Automobiles

In the foreground is Thomas Basin, "parking court" for fisherman and voyager. Often 400 craft are tied up here, and 1,100 are registered in the port.

disputed by the United States and Great Britain.* The archipelago was awarded to the United States in 1872 through arbitration by the Emperor of Germany.

To give Robin and Sanford a chance to fish, paddle the canoe, and skip rocks on the water, we dropped anchor late in the afternoon in snug Montague Harbour, Galiano Island.

King, racing ahead as we went ashore, was joyously retrieving sticks on the beach when a lady burst angrily out of a cabin and ordered him back.

"We have chickens here," she flung at us and then flounced back into the house before I could explain that King, being a stick retriever, would never bother a chicken unless it had a wooden leg.

Dawn found us heading out through the tide rips into a smoky haze on the Strait of Georgia. Because the inevitable summer forest fires were already blurring points of land, and I was navigating by eye on this run, we were soon churning through yellow mud in the extensive, shallow tide flats at the mouth of the Fraser River.

This region, which was Indian wilderness in 1808 when Simon Fraser, of the North West Company, descended the stream that bears his name, is now the most populous in western Canada. Vancouver is the third city of Canada and its greatest Pacific seaport.

Down the turbulent, canyoned Fraser through coastal mountains to tidewater, two transcontinental railways bring enormous wheat crops from the Alberta prairies to bulge Vancouver elevators; and sockeye hordes, spawning bound, yield annually, on the average, some 2,000,000 fish to Canadian fishermen operating on the Strait of Georgia.

As we approached the Lions Gate Bridge, we sighted the Vancouver skyline over a turtle-paced raft of logs. Vancouver sits in the center of one of the world's largest coniferous forests.

Just before entering the First Narrows, we saw in English Bay a swarm of white-sailed yachts rounding the buoys in an international yacht race. We docked at the Royal Vancouver Yacht Club. Other yacht clubs and boats were all around us. Near by, Stanley Park, a 1,000-acre gem of the city's extensive park and playground system, was thronged with strollers.

Vancouver Celebrates Its 60th Birthday

Vancouver was in festive mood celebrating its Diamond Jubilee; and nine of the 16 men and women born in the city on the day of its founding 60 years before were having an

* See "Washington, the Evergreen State," by Leo A. Borah, National Geographic Magazine, February, 1933.

anniversary feast in Stanley Park Pavilion.

From the rigging of *Endeavour* we watched the Indian canoe races. The long, narrow dugouts, snaking up the harbor, were jammed with so many paddlers that they frequently swamped and capsized from the spray of their own paddles.

Robin and Sanford returned home from Vancouver. I missed their boyish spirits as *Endeavour* passed under the Lions Gate Bridge and headed north through the sealike expanse of the Strait of Georgia. Now John and I and the dog were on our own.

Far to the west the 5,000-foot range on Vancouver Island etched a blue line on the horizon. Covered with magnificent forests, this largest of all islands on the North American west coast stands buttress to Pacific storms for 285 miles.

Off our starboard we saw the lofty Coast Mountains intersected by deep fiords. Mount Waddington, its face licked by salt water of Knight Inlet, rises to 13,260 feet. Not until the Skeena River cuts through, 450 miles north of the Fraser, is this barrier slotted by a valley large enough to accommodate railroad and highway. Thus all traffic along the British Columbia coast is by water and air.

"Northwest Passages" of Long Ago

We cruised by the intriguing mouths of numerous inlets indenting the Coast Mountains—Jervis, Powell, Desolation, and others—all potential Northwest Passages in the 18th century.

These place names are largely the work of Capt. George Vancouver, whose voyage remains, to my mind, the most extensive nautical survey ever made on one expedition. Examining capes, bays, and channels, the great discoverer left few unsolved problems behind him.

Our prow split the waves of straits and channels known to Spanish expeditions before 1800—Malaspina, Nodales, Goletas.

When we arrived at the head of Yaculta Rapids, the ebb was already beginning to churn strongly through the narrow rock passage. *Endeavour*, gripped by spinning tide rips and whirlpools, was tossed along in the boiling race like a chip.

In trees on an island in the middle of the rapids, a hundred bald eagles perched for salmon fishing, their white heads standing out against the green branches like popcorn balls on a Christmas tree.

As we bucked a strong tide in mid-channel, turbulent following seas swamped our trailing canoe, *Song o' the Winds*. It was a tough job getting the water-filled fragile craft aboard *Endeavour* without breaking it in two. I noticed later that rock-wise Indian trollers

A Sweep of the Paw, a Snap of the Teeth, and Bruin Breakfasts on a 10-pound Salmon

Wading among the silvery horde fighting toward spawning grounds on Admiralty Island, an Alaskan brown bear snatches fish from the water. Black bears do likewise, and the Forest Service has established lookout posts near some streams where visitors can sit to watch them catch their easy prey (page 819). Alaskan brown bears, weighing up to 1,500 pounds or more, are the world's largest carnivorous animals.

hugged the beaches, taking advantage of the back eddies.

Alert Bay, on Cormorant Island, was the first large Indian village we visited. Although the Northwest coast Indian looks romantic pictured beside his totem pole on a tourist folder, in reality few villages still possess such poles.

Forgetful of sea-rover ancestry, these Indians retain few visible remnants of their old culture. Most of them live like the poorest white fisherfolk.

Rain, Fog, and Darkness Hide a Harbor

It was late afternoon in fog-shrouded Goletas Channel when I began to look for the entrance to Bull Harbour, Hope Island. As dusk fell and rain squalls flailed the sea, I wondered why I had not taken my voyage money and gone to southern California instead.

Endeavour began to lift on the ground swells rolling in from the Pacific; still we held the course indicated by compass card lighted by the flickering binnacle lamp. Under my feet I could feel the tremor from the old reliable Gray engine.

My mounting concern turned to quick elation as the Pacific combers, exploding white over black rocks, marked the harbor entrance. Eagerly we entered and dropped our hook among fishing craft in the snuggest harbor imaginable.

Next morning we walked 300 yards over a neck of land to Roller Bay and viewed the vast Pacific beyond pounding surf and gale-twisted trees. A pair of bald eagles flapped by on a scavenger beach patrol, and voices of a congress of crows in the forest rose shrill above the boom of breakers. Far out at sea we could see bobbing specks, the intrepid boats of the trolling fleet.

That evening the troller *Sea Gem* dropped anchor near us. An old fisherman with a kindly, humorous twinkle in his eye yarned with us as he polished his spoons.

"It took me two hours to get across that rough bar tonight," he said. "Four seas were boarding us at once. If my motor'd stopped, I'd never have made it. . . I've caught mighty few fish this season. Good thing my wife has a washing machine, or we'd have a hard winter.

"I get up at 3 o'clock in the morning and eat my cooking in the dark. If I saw it in the light, I wouldn't eat it.

At Meyers Chuck, Dick Taylor Repairs *Song o' the Winds*

"Lonesome Pete," unofficial greeter and mayor of the remote village, reclines on the dock. Here is one of many tiny Alaskan communities where the hundred inhabitants do just as they please. Fishermen work hard during the 30-45 or more days of salmon runs, but they lead independent lives and lay off when they choose (page 818).

"Fishing suits me fine, though; it's a free, healthy life."

A heavy mantle of fog hung over the 35-mile stretch of Queen Charlotte Sound as we laid *Endeavour's* compass course across this longest of the three stretches where the Inside Passage is open to the Pacific. Under our keel we felt the long Pacific roll.

The foghorn on Pine Island bellowed lustily off our starboard, and breakers muttered on the reefs. Significant of hazards in such waters are the names: Storm Islands, Cape Caution, Grief Bay, Safety Cove.

Soon the fog lifted and the magnificent Coast Mountains stood revealed. The roll of the sea gradually subsided as we entered Fitzhugh Sound, and sunset saw us anchored in Long Point Cove.

Lost in a Watery Waste

Rounding Ivory Island lighthouse next day, we headed *Endeavour* northward. My chart showing the sound's exit channels was lost; so were we. Well, we'd just have to do a little exploring.

For two hours, as we sounded the unknown waters of what proved to be a blind bay, *Endeavour* might have been Vancouver's *Discovery* searching these channels for the Northwest Passage.

A second try around the point, and Finlayson Channel opened up. I knew its narrow course would lead us northward.

As we anchored that evening in rainy Swanson Bay, John hailed a fisherman in the dripping gloom. "How many inches of rain fall here in a year?" he asked.

"Inches?" the fisherman snorted. "We don't use inches here to measure rain—we use fathoms!"

Though rain seems annoyingly incessant, no automatic sprinkler system is more efficient for snuffing out forest fires. Not a burnt-over tract scarred the luxuriant forests of spruce, hemlock, and cedar above the northern limit of forest fires on Vancouver Island.

Grenville Channel finally disgorged *Endeavour* among the wooded islands at the mouth of the Skeena. Here the sky brightened, but, looking astern, we could see the dripping canopy of clouds.

Eight hundred gill-net boats were drifting with spreading nets at the mouth of this great natural salmon hatchery. The Skeena Valley is the home of the Tsimshian Indians, one of six coast tribes of fisheaters. Passing close to some of the boats, we saw that all the occupants were Indians.

Beyond the Skeena our course paralleled the Canadian National Railways tracks over which the first train had puffed into Prince Rupert in 1914. Prince Rupert, about 500 miles nearer Yokohama than Vancouver, envisaged itself then as a Northwest Passage port to the Orient; but the Oriental trade did not come, and the first railroad company went into bankruptcy within six years. Three times in the course of a morning walk from the yacht club where we anchored I was shown the plans for the city that did not materialize.

The dreams of Northwest Passage boosters were realized briefly during World War II when the population of Prince Rupert rose from 7,000 to 25,000. For a time the city was a strategic port for American troops and supplies sent to Alaska and the Aleutians, and Russian ships loaded up with wheat here. The population has dropped back now to about 8,500, but enthusiasts have suffered no recession in their vision.

As we neared the International Boundary, ahead rose the great snowy mountains of Alaska, marking the southern margins of 1,100 mountainous islands that compose the Alexander Archipelago. This is the "Panhandle," or southeastern Alaska, 100 miles wide and 500 miles long. In area it is only about one-sixteenth of the Territory; yet it contains half the larger towns, the principal fisheries, and virtually all the commercial forests.

We took a bearing on the modernistic, white, square tower of Tree Point Light, the first of many lighthouses which, together with hundreds of other navigational aids, guide the mariner through the intricate channels for 400 miles to the open Pacific at Cape Spencer.

Grateful for the friendly tower, I remembered that several hundred vessels, small craft not included, are believed to have met their doom in Alaskan waters before the ways were perfectly marked.

Exploring Here Is a Lifetime Job

Southeastern Alaska, with its myriad channels and inlets, has more than half of the 33,900-mile Alaskan shoreline. Scanning the charts, I realized a voyager could pass a lifetime here visiting new places.

As we cruised up Revillagigedo Channel, the chart names became tongue twisters. We had passed from Tsimshian into Tlingit Indian territory.* Besides names of native origin, there were scores contributed by Russians during the years they were in Alaska scrambling for sea-otter and seal pelts. Bering's voyage of 1741 was the first of many

* See "Indians of Our North Pacific Coast," by Matthew W. Stirling, National Geographic Magazine, January, 1945.

expeditions of several nations, each of which put names on Alaskan charts.

En route from Prince Rupert we had joined company with the 34-foot cruiser *Como Reto* of Seattle, manned by Dick Taylor, his wife Madeline, and his 12-year-old son Dickie. Dickie, who had learned that I was searching for cairns that might have been left by the great Vancouver, would slip ashore whenever we anchored and construct authentic-looking stone piles just to watch me ponder over their origin.

Together we voyaged up Tongass Narrows and, 45 miles from British Columbian waters, reached Ketchikan, first Alaskan town of importance in the Inside Passage (805).

Here in Thomas Basin, a sort of marine motor court, 400 trollers, numerous seiners, and an assortment of yachts were tethered to five long floats. A mild feud existed between the yachtsmen and the practical fishermen, who regarded any craft without trolling poles or a seine net as a useless plaything that only took up valuable space in the overcrowded moorage.

Strange Pennants Fly as *Endeavour's* Mate Hangs Out the Wash

Rain falls so often in the Inside Passage that days when clothes would dry were not frequent. Scarcity of water on shipboard for clothes washing was another factor causing laundry to pile up and produce a flapping bumper crop when conditions were favorable.

Although both May and June had been months of glorious sunshine, July set in with heavy rains. It rained every day. When I made some uncomplimentary remarks about the rain in jest, an old resident replied, "After all, we get about 151 inches here a year; it has to rain some time."

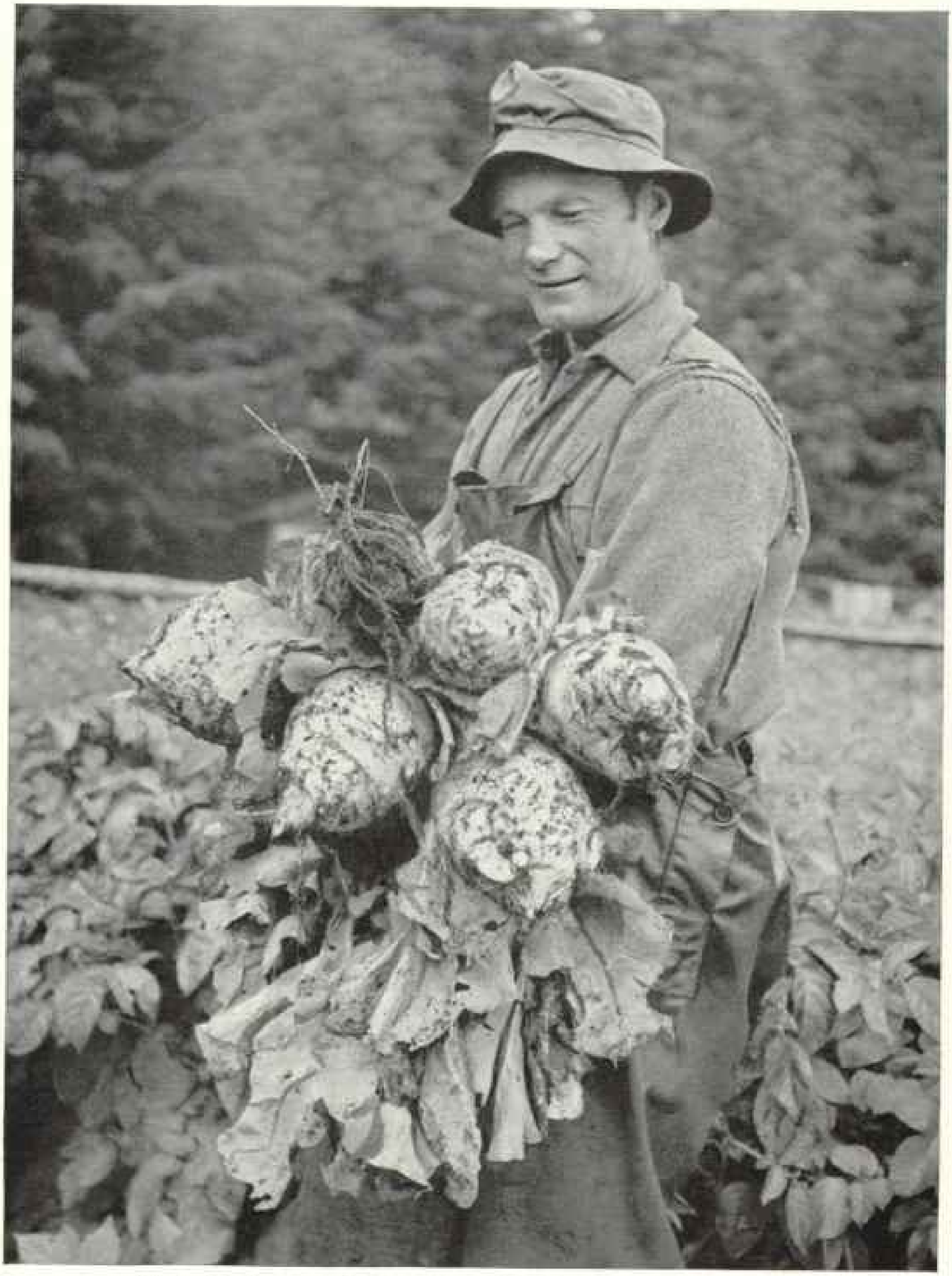
The American Legion monthly rainfall pool was causing annoyance to the Weather Bureau. People eager to win were always calling up, asking how much it had rained that month and how much more it was going to rain.

"Deer Mountain provides Ketchikan with the tallest barometer in the world," Emery F. Tobin, editor of the *Alaska Sportsman*, told me. "When we can see the peak, we know it is going to rain; when we can't see it, we know it's raining!"

Fish Are Like Money in the Bank

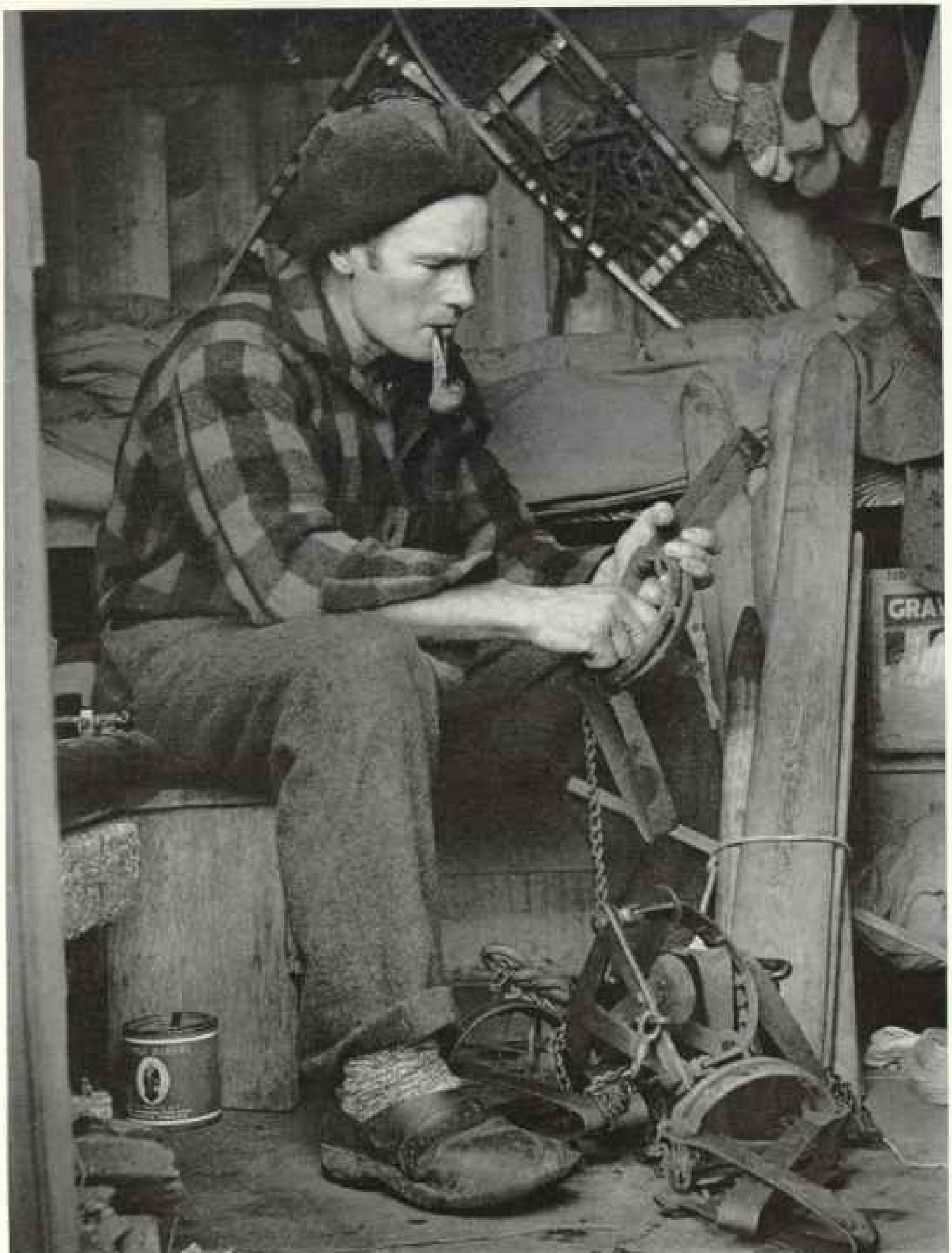
Lying next to us in the moorage was a small troller whose owner, seemingly unaffected by the bustle of fishing season, sat on the afterdeck of his boat and smoked his pipe. I asked him if he was not going out fishing.

"I'm on Territorial pension," he explained. "Sort of retired. But I use the fish like a bank; when I need some extra cash, I go out and catch a few salmon."



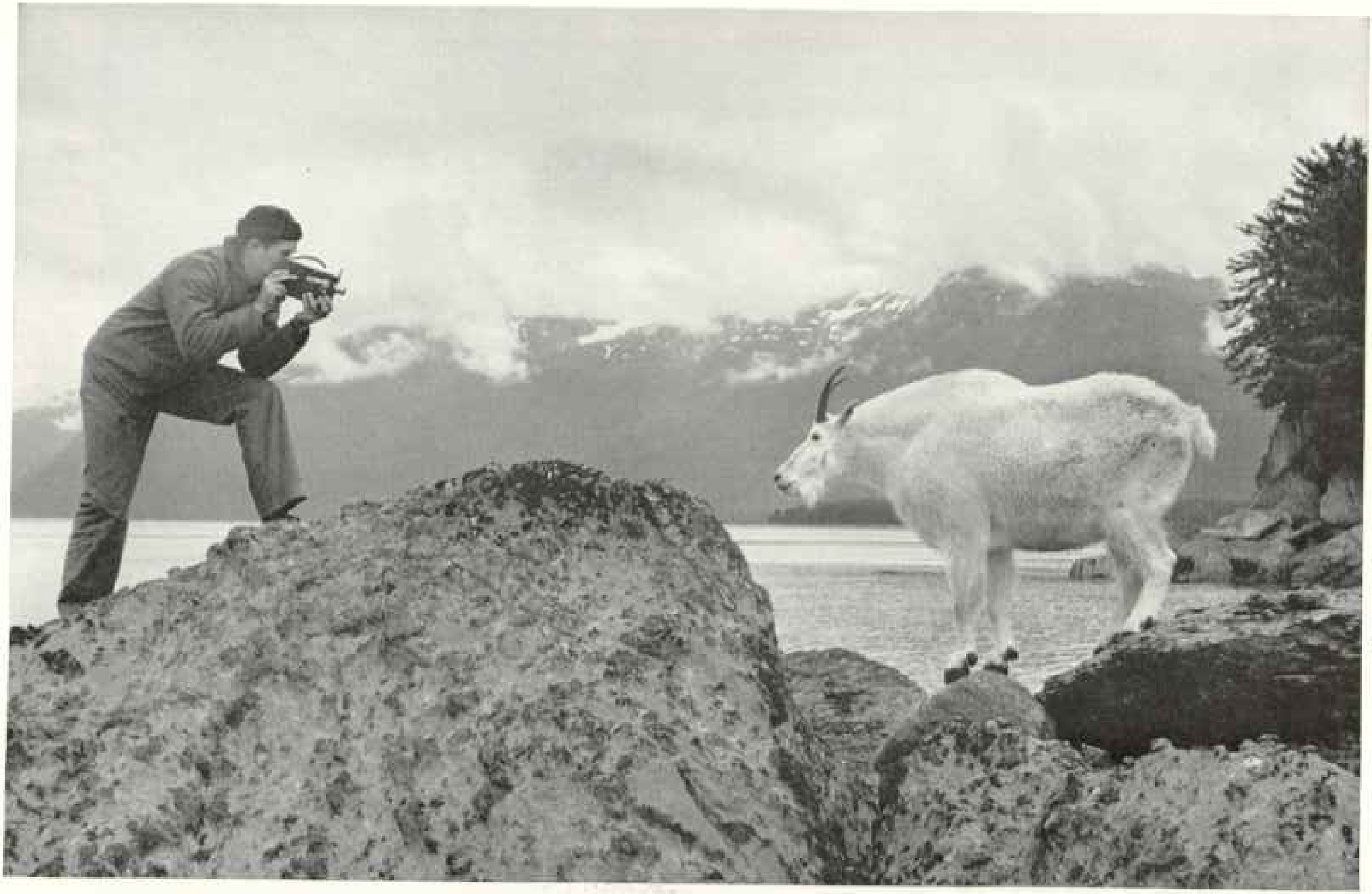
Huge Rutabagas and Other Vegetables Grow at Fanshaw, Alaska

Living in a one-room cabin overlooking a glorious view of Stephens Passage, Axel Pearson is supremely contented. "Too many men come up here to get rich," he says. "I don't worry about money. Two bucks in the fall give me my meat for the winter. Also I have my garden. In summer I troll for salmon; in winter I trap."



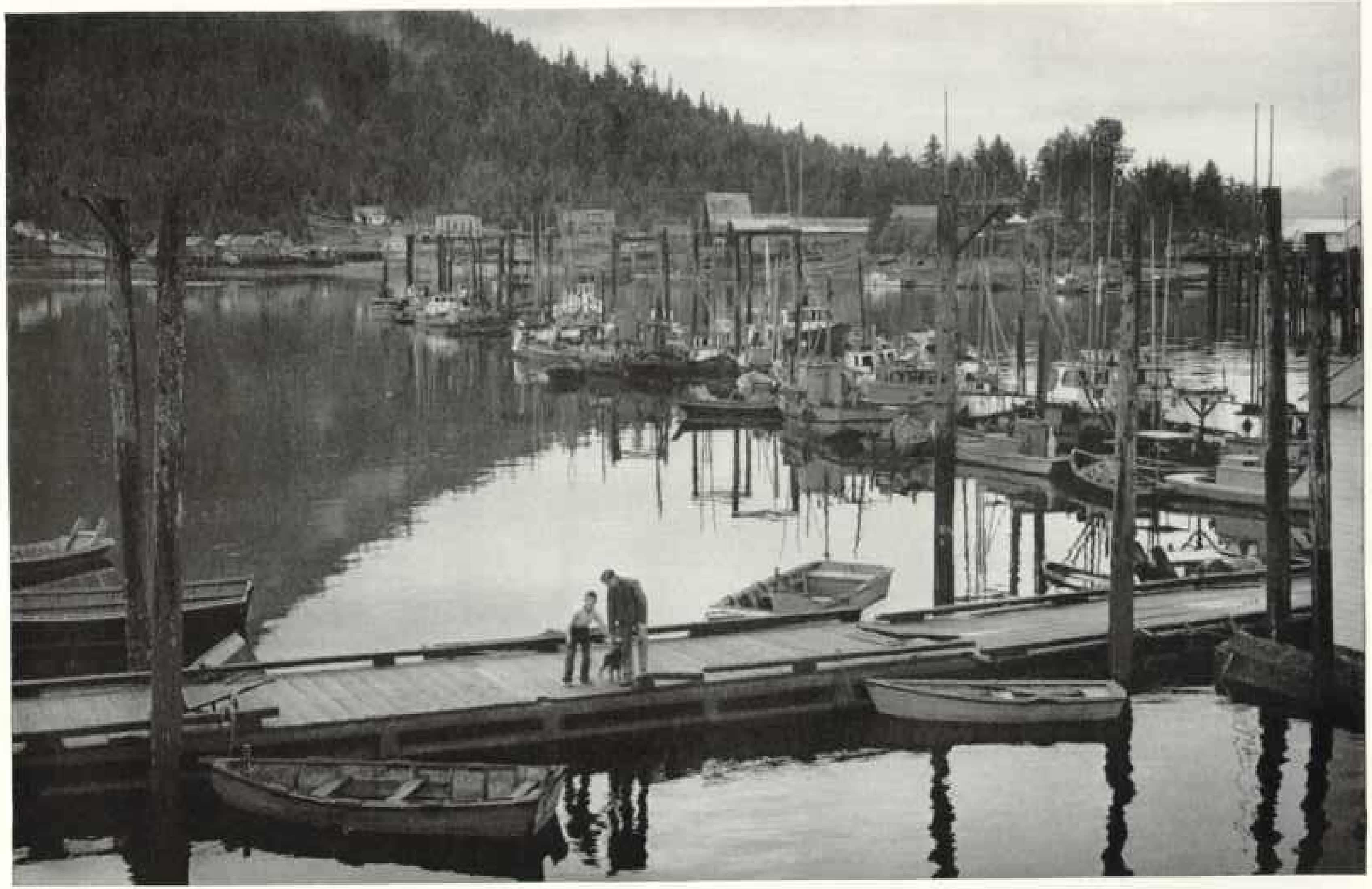
Axel Pearson Makes Sure that His Traps Are Ready for Winter Use

In Alaska there are some 20 varieties of land fur animals of commercial value. Trapping has tided many settlers over bad times, but the Government tries to discourage would-be Daniel Boones who would like to do nothing else. Last winter the mink season was closed, but the winter before, Axel made $30 a skin.



Stamping His Feet and Snorting Displeasure, This Mountain Goat Made a Bad Actor

Precariously perched, Dick Taylor "shoots" the goateed mountain climber, held captive by a fox farmer on an islet near Harbor Island. The region around Sawyer Glacier, near here, was the choice of American Museum of Natural History for its environmental group. Rugged mountains rise above the hammered silver of Tracy Arm.



For a Feast at Wrangell the Voyagers Scraped Fat Dungeness Crabs off the Harbor Piling

Endeavour's crew and the Taylors on the *Como Reto* entertained at dinner with little expense (page 819). Established by the Russians in 1834 to prevent the British from locating a fur post on the Stikine, the town is one of the oldest in Alaska. It was the first community in the Territory to feel a gold rush.

From a Chatham Strait Trap, Salmon Start for the "Iron Chink" Which Cuts Them Up

They are brailed out in flopping masses from the frame-held maze into which they have swum, and taken to near-by canneries. For years Alaska has dominated the salmon industry. Runs in Oregon, Washington, and British Columbia have been depleted, partly because of the advance of civilization. In 1945 the Alaska pack was 4,341,120 cases—nearly two-thirds of North America's output.

When I visited a store for supplies, the proprietor was just closing up. "The salmon are running, and I can make more money fishing," he said. Down off Mountain Point the day before, a fish buyer had paid him $90 for salmon he had caught with sport tackle.

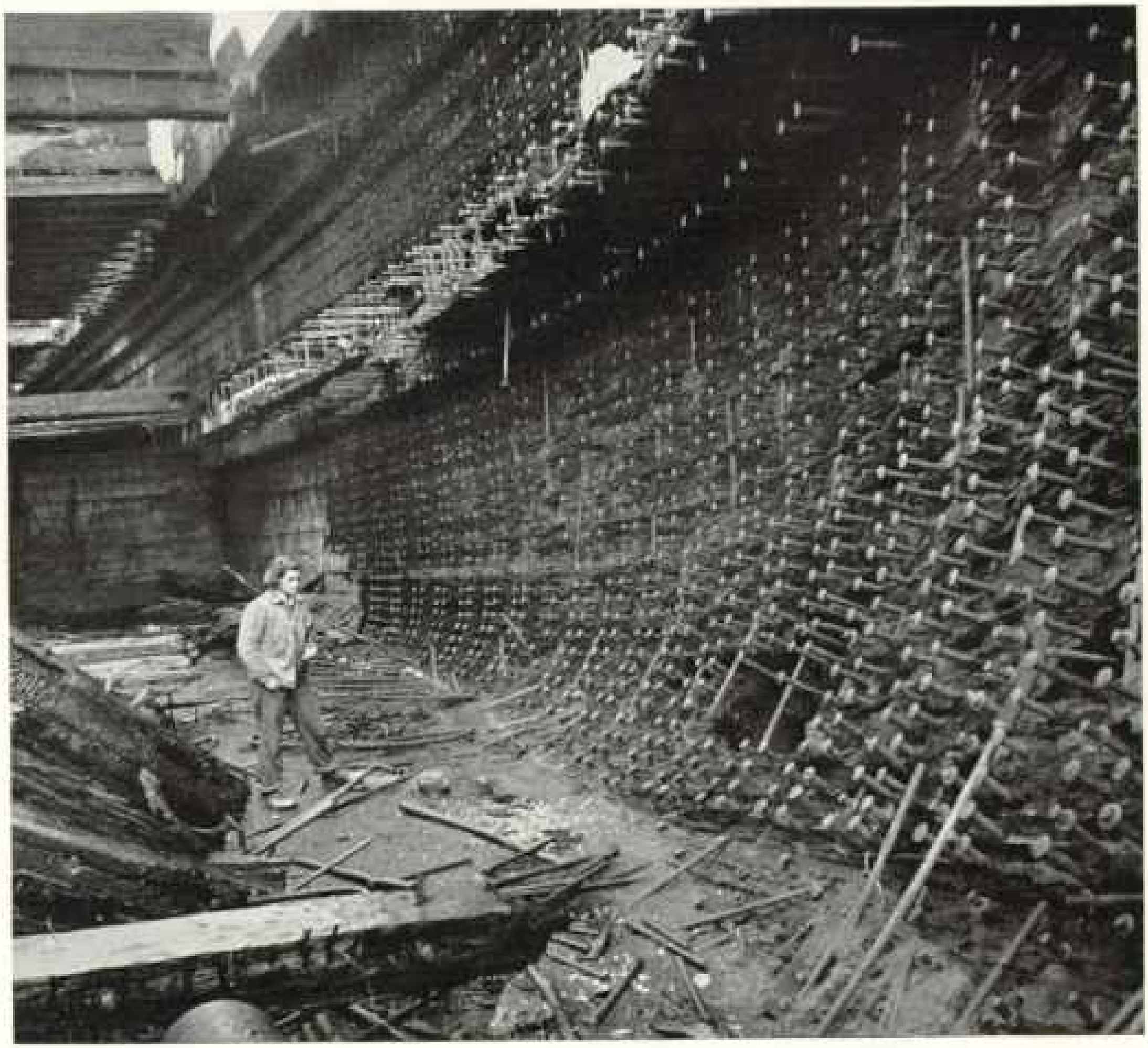
During our northward cruise nothing had impressed us more than the vastness of the Alaskan fisheries. Salmon provide 80 to 90 percent of the total value of the fisheries products and furnish a $45,000,000 pack, but there are a dozen other kinds of marketable fish and shellfish. Ketchikan puts up more salmon than any other city in the world, Chamber of Commerce officials told me.

Northward from Ketchikan extend unbroken rain forests of hemlock, spruce, and cedar so wet that some of the wood we gathered near landings for our galley stove put out the fire. We needed a firewood wringer.

The Tongass National Forest, which covers most of southeastern Alaska, has 78½ billion board feet of commercial timber. According to United States Forest Service estimates, the growing power of this forest could support a permanent population of some 35,000 persons. Eighty-five percent of the wood could be used for paper pulp, and the rest would support a substantial lumber and plywood industry.

On sunny days—and there were a few—I liked to sit at the base of some stately spruce and watch the gliding, soundless movements of the Sitka blacktail deer.*

* See "Deer of the World," by Victor H. Cahalane, National Geographic Magazine, October, 1939.



Rivets Pincushion the Charred Shell of a Salvage Ship in Stephens Passage

The vessel was used to raise the gold-carrying *Islander*, which struck an iceberg on August 14, 1901, and sank in 365 feet of water (page 825). A small fortune was spent during the '30's in raising her, but she yielded little. One passenger who strapped on life preservers and jumped overboard with two suitcases of gold promptly went to the bottom.

These small, dainty creatures live precariously at the northern edge of the North American deer range. Many fall prey to wolves, and every five or six years deep snows drive hundreds of them to the beaches, where they drown in the incoming tide; yet the U. S. Fish and Wildlife Service reports that there are still some 42,000 of them in Alaska.

We sailed up Clover Passage into Moser Bay to see the blacktails at Mr. and Mrs. Art Schwahn's five-acre ranch. As Art and his wife "Pete" greeted us in front of their home-made shake cabin, six wild deer peered at us from behind them. Fortunately I had left King on the boat.

"We had to choose between a dog and these deer; so we chose the deer," Art said. "Deer are lovable animals, always hungry, but too trusting for their own good. Little Susie's favorite sport is riding in a rowboat."

Susie was the tamest of the deer. She nibbled a carrot from my hand.

In the junglelike forest the Schwahns had cleared one acre of ground. "I'll bet those roots go right through to China," Art said. "It sometimes costs $1,500 to clear an acre."

Government agencies advise every prospective homesteader to stay away from Alaska unless he has willingness to work, sufficient cash to tide him over for several months, and preferably his return fare.

"Pete" traps during the winter. Last year she made $1,000 on mink and marten, besides trapping herself a fur coat for which she has been offered $1,200.

Far from City Streets, a Pigeon Pays a Call

Twelve-year-old Dickie Taylor climbs *Endeavour's* rigging in a vain attempt to win a pet. This domestic bird appeared in remote Pavlof Harbor. Learning that the author was interested in cairns left by early explorers, Dickie would slip ashore and erect piles of rock to fool him (p. 811).

As we sailed into the little harbor of Meyers Chuck, we passed cabins hanging on the steep shores like Swiss chalets. Here "Lonesome Pete" (page 809), a tall, organ-voiced Viking from Norway, had built his cabin to command a breath-taking vista of Clarence Strait and its bordering mountains.

Every Man Must Earn His Nickname

Nicknames such as Pete's are common in Alaska. The voyager listens to yarns about "No-fish" Ed, "Blueberry" Johnny, "Two-step" Jake, "Wildcat" Anderson, "Contrary" Gus, "Screaming" Jack, "Four-pole" Johnson, and "Wooden-wheel" Johnson.

Some trait or episode tabs them. Contrary Gus never agreed, Screaming Jack was always mad, Four-pole Johnson was always carelessly breaking his trolling poles. When Wooden-wheel Johnson smashed his propeller, he beached his boat, whittled another one out of driftwood, and continued trolling. Having no personal glamour, I had to be content with "Mr. Endeavour."

When the tide was out, Pete's table was set, yielding him butter clams and king and spider crabs. He canned salmon, blueberries, cranberries, and lagoon berries from the encroaching forests. Venison steaks filled his meat larder. From the chuck (Chinook for "water" or "stream") he fished salmon, halibut, sea bass, black cod (or sablefish), red snapper (red rockfish), flounder, and sole.

On the cultural side Pete had mastered the guitar and piano-accordion. He composed his own music. One summer a visiting artist had left a paintbrush behind; and Pete had mixed his own paints and become an artist.

Pete once caught a blue shark and attempted to by-pass filling stations by lubricating his boat engine with shark oil. When the stuff proved too sticky, Pete simply added coal tar to it and used it to paint his boat.

Pete kept his wood stove unusually well stoked while we were in Meyers Chuck. As we were preparing to shove off, he climbed to his roof, pulled three smoked salmon out of his chimney, and presented them to us.

Leaping porpoises cavorted under *Endeavour's* forefoot as we cruised toward Anan Creek. A score of seine boats hovered near the creek mouth, for this

is one of the world's most prolific humpback salmon spawning streams. Overfishing at one time almost depleted it.

In the days when the fisheries were unregulated, greedy men laid their nets across the creek and got enough salmon to operate a cannery near by. Seiners are now forbidden to enter certain areas, and the humpback are given a chance to reach spawning grounds.

Occasionally a renegade will sneak into a closed stream and make a quick haul, but scouting planes of the Fish and Wildlife Service make poaching difficult. Offenders are usually fined and their fish confiscated.

Even the Bears Are Fishermen

Churning with thousands of leaping salmon, the wild cataracts of Anan Creek were a delicatessen for black bear when we arrived. Dick and I rowed ashore from *Endeavour* and *Como* and walked up the Forest Service trail to film the brutes. With scarcely an intermission, bear after bear lumbered down the steep bank and plunged into the turbulent stream, each to lift out a struggling humpback.

These bears, of which about 75,000 remain, are part of the last great stand of American wildlife. In Alaska their chief protection is the vastness of the spaces they roam. Each Fish and Wildlife agent patrols an area nearly as big as Maine.

While watching the bears we saw a screaming bald eagle hurl himself into the stream. He sank his claws into the back of a husky humpback and tried to lift it with the power of his great wings. But the salmon churned its tail and headed for deep water, carrying the king of birds down until only his head stuck periscopelike out of the water. The eagle let go and, dripping like a soaked sponge, flew off to a tree.

En route to Wrangell, we anchored for the night in Berg Bay. A dilapidated troller rode to its rusted anchor near us, smoke curling from its chimney, though no one was aboard. Dick said the owner probably was a "kelp" fisherman making a bare living in this lonely, loon-haunted wilderness. A kelp fisherman is one who fishes in safe inside waters.

Dickie and I rowed ashore to inspect a deserted log cabin cluttered with rusty traps, guns, scattered parts of a stove, flour, eagle claws, seal scalps, and bits of wolfskin. No doubt the former occupant had been a bounty hunter, living on bounties still paid by the Territory for wolf and hair-seal scalps and, formerly, for claws of the bald eagle.

The next day I talked to an old Indian about this in Wrangell.

"My people were true conservationists," he said. "They believed that if they were wasteful of game they would be punished by starvation. When the white man came, the land and waters teemed with game. There were many eagles, seals, and wolves. When the game began to disappear, the white man blamed the eagles, wolves, and seals and put a bounty on them."

We found little in progressive Wrangell to indicate its long history since its founding by the Russians in 1834. It was the first Alaskan town to feel the impetus of gold when thousands of miners and prospectors, half of them Chinese, outfitted there in the late seventies for the stampede up the Stikine River to the Cassiar gold fields in British Columbia.

Tired of mudholes, present-day citizens had just completed paving the main street of the town. We entertained Mrs. Doris M. Barnes, the woman mayor, at dinner aboard the boats, serving huge Dungeness crabs that John and Dickie had scraped into hand nets off the harbor pilings (page 815).

Wrangell boats were tied up three or four abreast. We never knew when we'd be sunk at our moorings by the large seine boats whose skillful Indian captains delighted in coming into the float at a fast clip, and going full speed astern barely in time to avoid hitting other craft.

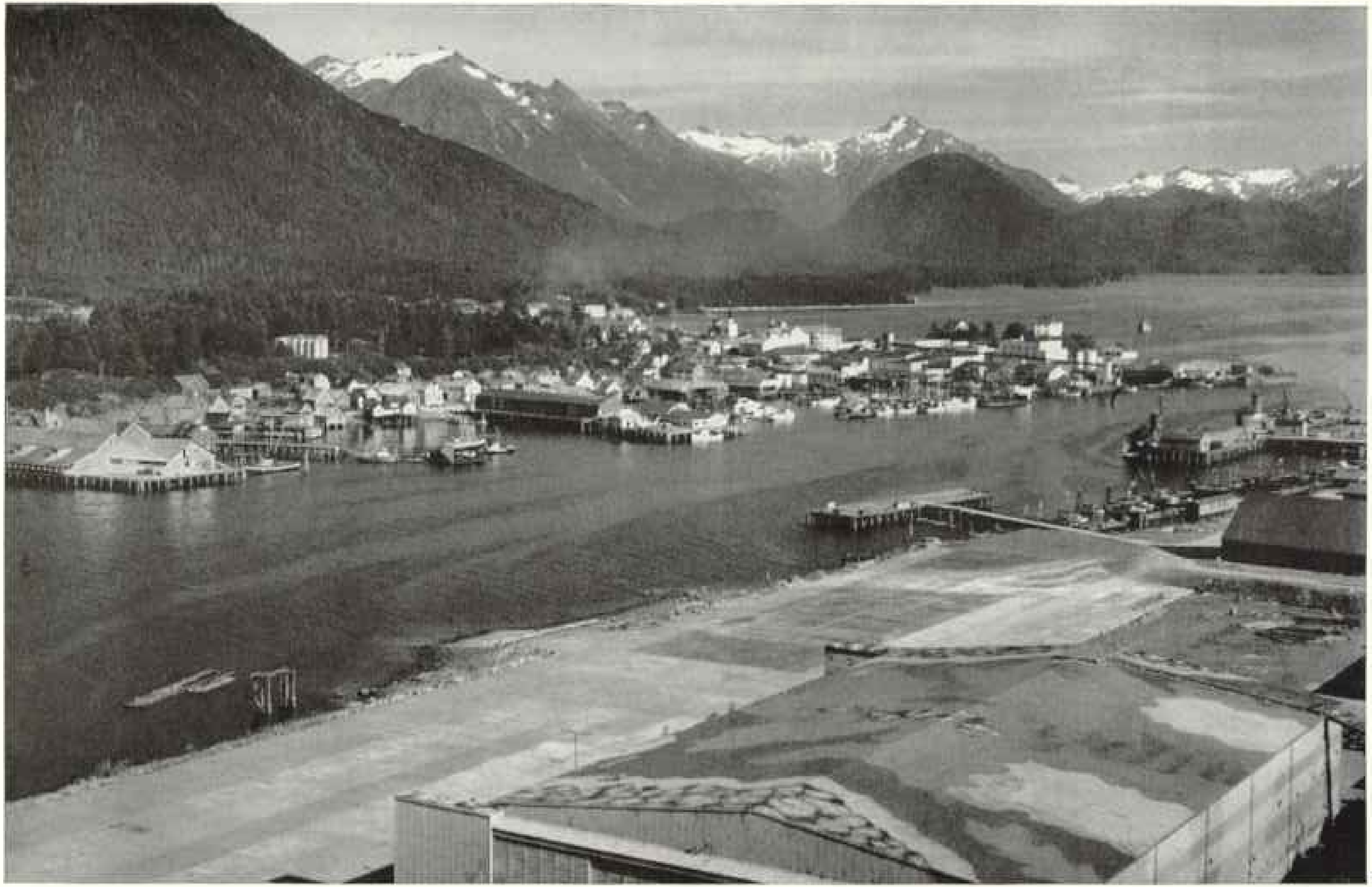
One captain, dashing in to tie up his 20-ton ship, stalled his motor just as he threw it into reverse. Frantically he rushed out of the wheelhouse and stuck his feet over the bow to soften the blow on a moored seiner. The seiner crew popped out of doors and hatches as if struck by an earthquake.

So dependent are southeastern Alaskan towns upon ocean transport that a maritime strike lasting several months left Wrangell almost without food. The meat shortage was acute. The men took down their guns and headed their flat-bottomed, shovel-nosed boats up the Stikine. One party of three men returned with three moose and two mountain goats, a ton of meat.

The powerful Stikines, a branch of the Tlingit Indians, who inhabited this favored spot, once roved the Inside Passage in their great war canoes, sometimes conducting looting and pillaging raids as far south as Puget Sound.

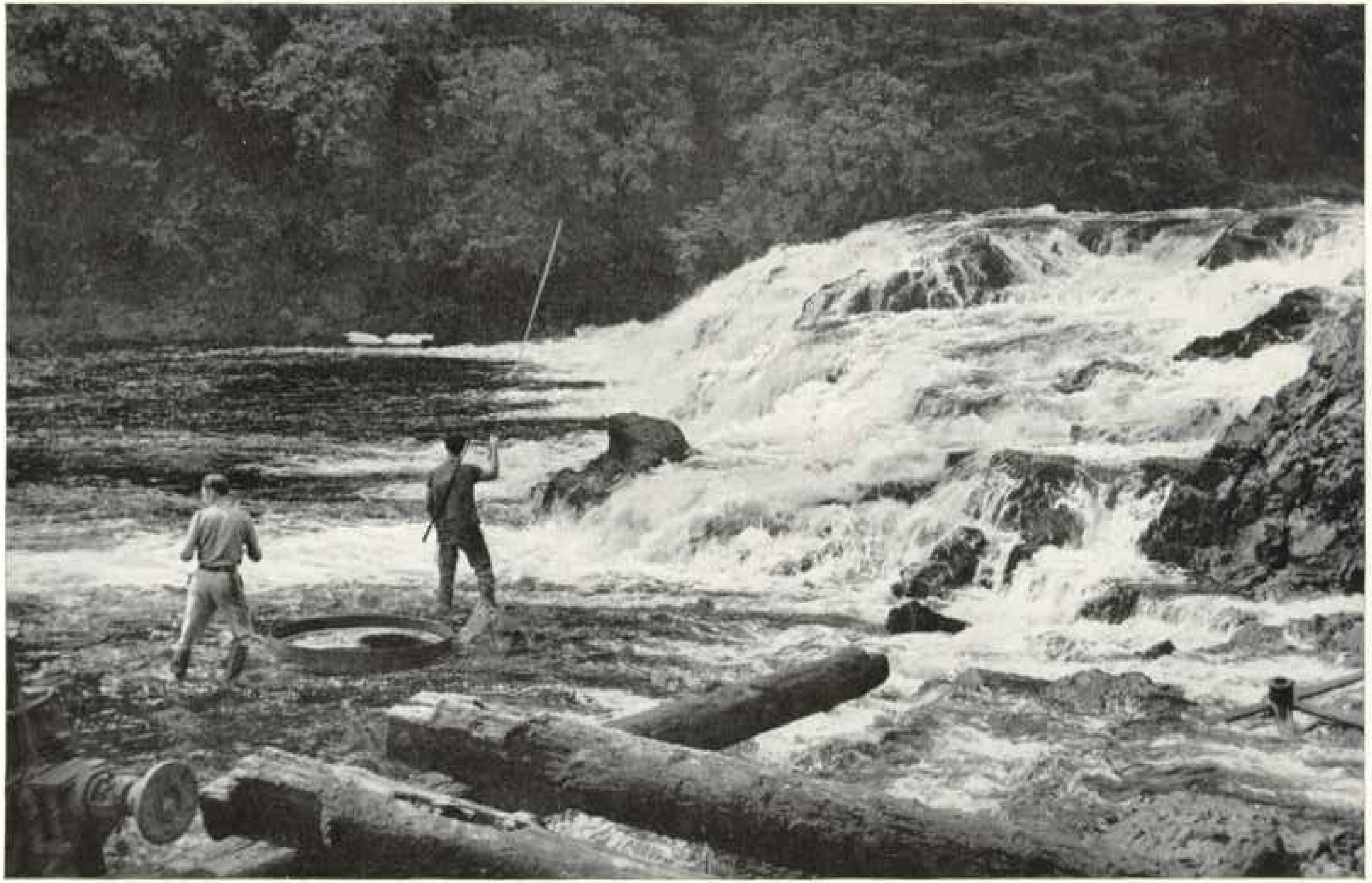
An Alaskan Burbank Has Poor Luck

Six miles below Petersburg we swung into anchorage to visit an old-time sailor, Herman Papke, a voracious reader who had lived here for 45 years. He could not invite us into his cabin because his newspapers and



On Stilts above the Harbor Sit the Water-front Buildings of Sitka, Only Southeastern Alaska Town Directly on the Pacific

The naval air station on Japonski Island (foreground), used during World War II, has been turned over to the Alaska Native Service to serve as hospital and school. Sitka is still filled with reminders of the Russians who settled there in 1799, and for 68 years, despite fights with Indians, held the fur trade for the Czar (p. 825).



At Pavlof Harbor, Chichagof Island, Fresh Water Roars over Rocks to the Sea and the Trout Fishing Is Good

The crews of *Endeavour* and *Como Reto* kept the larder well supplied throughout the voyage. Dick Taylor, owner of the latter boat, had had ten years' experience as a commercial fisherman. Here, using flies and spinners, he and *Endeavour's* mate caught a nine-pound Dolly Varden and several cutthroat trout.

magazines took up all the space not occupied by his bed. For want of storage space he had tucked an anvil and some tools into the bed.

With a vision of benefiting Alaska, Herman had devoted four decades to grafting fruits and berries and waging war on robber squirrels and robins. His annual cherry crop amounted to one forlorn little cherry which he covered with a mason jar.

As we approached Petersburg, we gazed spellbound at magnificent glacier-topped mountains rising behind the town.

Later in the fall, the harbor would be jammed with the halibut fleet whose owners and crews have become prosperous in the hazardous business of fishing 40,000 square miles of halibut banks in the tempest-swept North Pacific.

In 1946 nearly 700 regular halibut boats and some 3,200 men engaged in the halibut fisheries along the northwest coast. Because of previous overfishing, the industry is now regulated by treaty between the U. S. and Canada. For each halibut-fishing area a quota for the catch is set every year; when it is filled, the season closes. In recent years, as the catch has increased because of restoration measures and a bigger and more efficient fleet, the halibut fishing season has been shortened. In 1946 it lasted only 42 days in Area No. 2, south of Cape Spencer. Some of the fleet then goes after black cod (sablefish).

Leaving Petersburg, we headed up Frederick Sound, paralleling glacier-capped mountains along the mainland shore.

Four miles north of Wrangell Narrows, as we passed close to the Sukoi Islets, we saw the unpainted buildings and keep-off signs of a blue-fox island. Formerly there were 250 islands under lease for fox farming on National Forest lands. Foxes ran loose. As disease became rampant and fur prices fell, the number of leased islands dwindled to 50.

More Money in Fishing than in Farming

At the south end of Whitney Island, a man rowed out to us from a group of buildings on shore and introduced himself as Steve De Long, postmaster of Fanshaw. He said he and his wife Kitty, the postmistress, sold vegetables to fishermen and supplemented this income with trapping and fishing. They were virtually self-sufficient.

It seemed to be the general opinion that living expenses are so high in southeastern Alaska that a man could do better by fishing or logging and buying his produce from the outside. An industrious, experienced fisherman can work 45 to 60 days and sometimes make around $5,000.

Axel Pearson, a pleasant-mannered and genial fisherman and trapper, occupied a small cabin next to De Long. Good times and bad he took in his stride (pages 812, 813).

"I like Alaska," he told me. "It offers a free life with many compensations."

Axel told us that he had almost caught a whale without fishing for it. One morning he had seen his fish boat headed up Cleveland Passage behind a whale which had become tangled in the anchor rope. Along with Axel's boat and 25 fathoms of line, the whale was also towing a 65-pound anchor. Axel pursued the whale and, when it slowed down near Five Fingers Light, he cut his boat loose. The whale kept the anchor and line.

In Stephens Passage Old Joe, a famous humpback whale, regaled us by leaping out of the water. Old Joe is known to many of the boatmen and aviators who travel the passage.

Glaciers Make Sailing Hazardous

At Holkham Bay we swung in and entered the deep, canyonlike fiord of Tracy Arm, which penetrates the Coast Mountains for 25 miles. Ice floes up to 200 feet in length all about us were indications of an active glacier at the head.

Nearing the glacier the fiord narrowed and the ice grew thicker. We had to cut through small icefields. Since we had no ironbark along the waterline, this was dangerous, even with *Endeavour's* mahogany hull.

We edged our way through the icefield up to the face of Sawyer Glacier. Suddenly its 200-foot cliff toppled off with the sound of thunder. A tidal wave bearing a huge mass of bobbing, grinding ice rolled toward *Endeavour* and *Como Reto*, tossing our boats into the air like flapjacks.

For three hours we maintained our perilous position. Harbor seals with faces like little old men peered at us from among the floes. The temperature dropped to 40 degrees. It was dusk before we returned to ice-free Stephens Passage.

Off to port next day loomed the forest-covered mountains of Admiralty Island, where once I had stalked with a camera the 1,500-pound Alaskan brown bear, the world's largest carnivorous animal (page 808). A mother bear had charged my two companions and me on an open, treeless flat.

As we approached Juneau, a school of sportive 40-foot humpback whales broke water around *Endeavour*, spouting steam like huge rolling boilers. I recalled that three such whales, coming up under a Juneau halibut boat, had given the bottom a wallop that

necessitated putting back into port for replacement of several planks.

Juneau, Capital of Alaska

Nine hundred miles north of Olympia we entered Gastineau Channel and sighted Juneau. The capital of Alaska lies at the base of dramatic backdrops, Roberts Peak and Juneau Mountain. The boat harbor was crowded with trollers, seiners, and halibut fishermen from the westward.

When the Treadwell mine was operating, Douglas, just across the channel, was the important town. The mine workings extended unsupported a half mile under Gastineau Channel.

"Night and day for 36 years a thousand stamps, each dropping 125 pounds, pounded away crushing ore," B. D. Stewart, Territorial Commissioner of Mines, told me. "The thunder of these stamps could be heard five miles away."

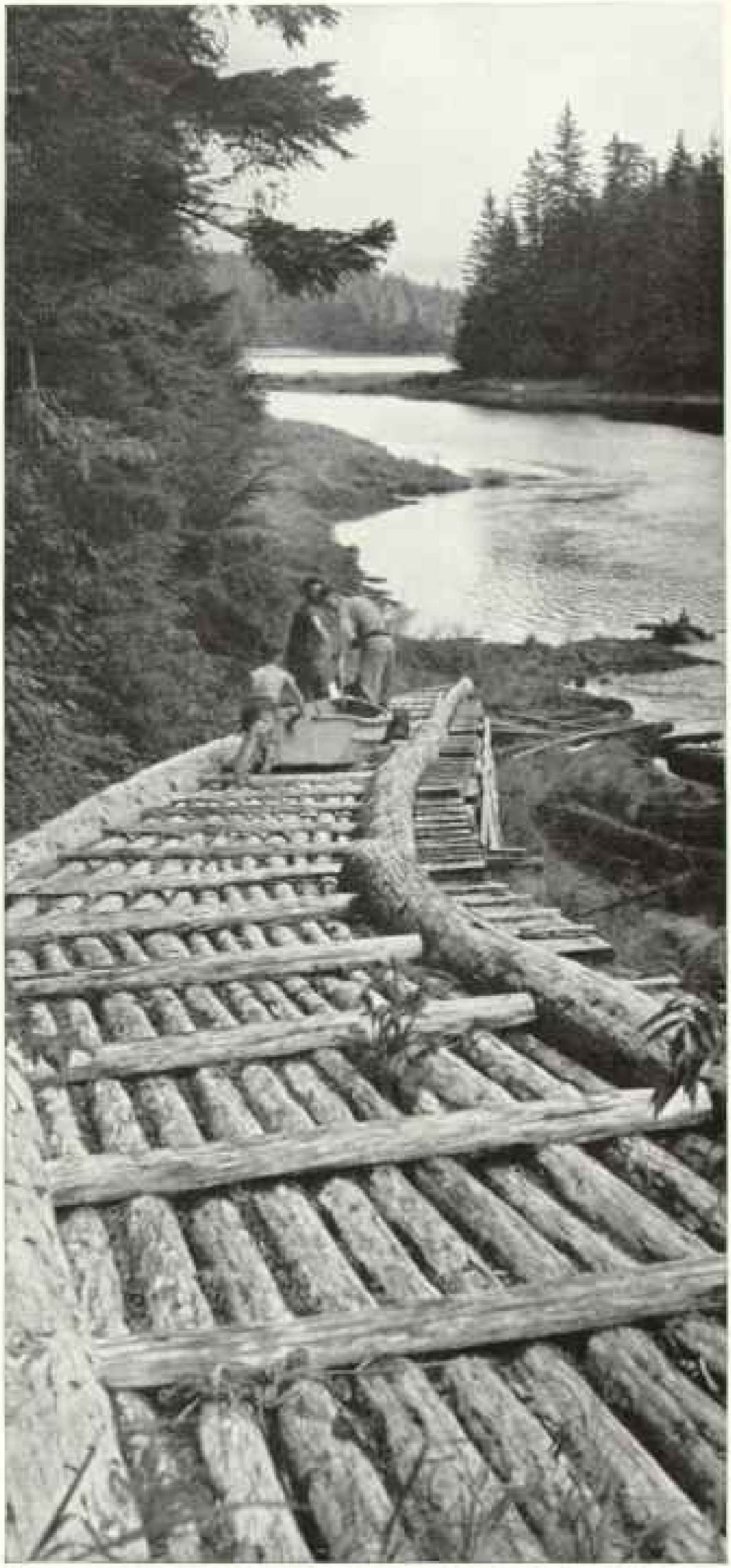
After some $66,000,000 had been extracted in gold, the mine collapsed and flooded on April 22, 1917, and the economic prosperity of Douglas collapsed with it.

Until it closed down in 1944, the Alaska Juneau mine, on the Juneau side, was the world's largest low-grade gold ore mine in point of tons of ore mined. Its workings—shafts, drifts, crosscuts, winzes, etc.—totaled 100 miles at one time.

It is also probably the most conspicuous industrial object in Alaska. The huge stamp mill, climbing the slopes of Roberts Peak at the south end of the city, is sighted by the voyager from far down the channel.

Each ton of ore produced about $1 worth of gold, and from 1893 to the mine's closing the gross value of the gold, silver, and lead recovered was $80,962,388.

A change has come over Juneau since I first visited it in 1928. Its present metropolitan air is unmistakable. People are



A Log Ramp Makes Portage Easy

Taking the boats from *Endeavour* and *Como Reto* around the falls from Pavlof Harbor to a lake at higher elevation for trout fishing, the voyagers were grateful to the United States Forest Service, which has built many conveniences for prospector and vacationist.

Oregon Cowboy Earl Ohmer Is "The Shrimp and Crab King of Alaska"

Although he came north in 1914, he has never shed the western slang and way of dress that he acquired riding ranges. When he saw a fellow eating boiled shrimp on a Petersburg dock, it gave him an idea. Today he has a large shrimp cannery of his own. With his ten-gallon hat, beaded Indian jacket, and riding boots, he is never out of character. Yet he is president of Alaskan Glacier Sea Food Company, chairman of the Alaska Game Commission, and president of the Petersburg Chamber of Commerce.

in Alaska to stay, not to get rich quick and get out, as in the ripsnorting gold-rush days. On my hike from the boat harbor to modern Baranof Hotel I passed, instead of the log cabins of earlier years, attractive, well-painted residences with well-kept lawns. New York styles are on display in the leading department stores, and John Bishop, the stylist, directs an annual fashion show.

For a bird's-eye view of the city and channel I climbed Roberts Peak on the winding Forest Service trail, through forests that end 3,800 feet above the channel in alpine meadows. The noise of my approach scared a flock of small rock ptarmigan. These and other grouse are regarded with affection by old-timers because, when Alaska was being settled, they were often the only meat available to prospectors and explorers.

Mendenhall Glacier a Natural Ice Plant

Mendenhall Glacier, booming some small bergs into a terminal lake a few miles out of Juneau, is easy to reach by the Glacier Highway. Since its bergs broke off directly into Gastineau Channel some 200 years ago, it has made a big retreat inland. It is still falling back an average of 70 feet a year.

While John and I inspected the forest that has sprung up in the wake of the retreating glacier, we saw the town iceman loading glistening glacier ice from Mendenhall to be delivered to Juneau soda fountains and cocktail bars.

This Blockhouse Reminds that Sitka Was Once Capital of Russian America

A replica of the original which protected the Russian garrison and townspeople from the Indians, it memorializes early days when trade and industry for the whole North Pacific region centered here. Warehouses were crammed with sea-otter skins. Foundries cast bells for the California missions. Little original evidence of the Czar's rule remains, for everything was constructed of wood and deteriorated quickly.

Before *Endeavour* cleared Juneau, a rare summer gale swept the harbor. Roaring winds, shoving battalions of black clouds before them, strummed through our boat rigging for two days. This was the "Taku." Its winds have been recorded for five minutes' duration at 50 miles an hour, with individual gusts at 90 miles.

We sailed before the storm abated. Heading down Gastineau Channel, *Endeavour* crossed Stephens Passage in rollicking seas and flying spray and then dropped anchor near the "treasure ship" *Islander* which lay beached in a cove on Admiralty Island—a barnacled, gutted hulk. The *Islander,* carrying Klondike gold from Skagway in 1901, sank in 365 feet of water, but salvagers raised her in the 1930's (page 817).

For a while John and I sat in *Endeavour's* cabin, listening to the sluicing rain pattering across the cabin deck like the sound of bare feet. Then, upping anchor, we sailed north.

Off Funter Bay we caught up with the Taylors on the *Como Reto.* They were fishing for king salmon with a sport tackle. For two days we anchored off the head of Funter among a fleet of trollers.

Because of the failure of the salmon run, many of these fishermen had not even made their gas money. A transient troller, bound westward, said, "These fellows are anchored here waiting for the fish to come in; I'm going out and meet 'em."

Ashore we met Harvey Smith, who had just come here to live after 25 years as a construction engineer in foreign countries.

From the Mast, *Endeavour's* Turtle-back Looks Like Armor

The rounded deck over the stern is duplicated on the bow. Part of the self-righting feature, it served the cutter well when she operated for 19 years as a rescue and patrol craft in the Life Saving Service and the Coast Guard on the Columbia River bar. Crowning the cockpit is the Plexiglas nose off a B-17 that the author picked up in a junkyard for $10. Trailing astern is the veteran canoe *Song o' the Winds* (pages 802, 803, 809).

"I've really begun to live," he said. "Here I have bankers' hours. If the fish want to be caught, they have to meet me at least halfway.

"The only thing that bothers me is my nearest neighbor, a mother brown bear with two cubs. She has an even temper—mad all the time. She has treed the Funter Bay mine watchman twice, and the first time she caught him long enough to knock his teeth out."

From Funter Bay we sailed northwest up Icy Strait with sunbeams dancing and sparkling on blue waters. Mists still floated in the valleys of the mountains. The sea winds were freshening, and the waters seemed like the heaving breast of a sleeping giant soon to be awakened by the fury of autumnal storms.

Ahead rose the Fairweather Range, etching the northern horizon with majestic snow pinnacles. The vista was the most dramatic of the voyage.

We passed many fishing boats, snail-paced for trolling. On some of them we could recognize a woman's presence by the family wash flapping and drying in the rigging.

A Modern Native Town

Shortly after noon, we docked in Port Frederick at the Indian town of Hoonah. The Federal Public Housing Authority had spent more than $600,000 rebuilding it after a fire on June 14, 1944, destroyed 80 shacks and left most of its 700 inhabitants homeless.

Before dusk had settled on the waters, *Endeavour* and *Como Reto* came to anchor in 10 fathoms abeam fox-farm buildings in Willoughby Cove in Lemesurier Island. Joe and Muz Ibach, beloved by many Alaskans for their homely wisdom and hospitality, live here. Once Muz had stayed on the island for nine years without going to Juneau.

She led us through riotous beds of flowers to sign the guest book.

Garden vegetables flourished, and the berry vines were loaded. Muz wanted to fill our arms with vegetables. "The world needs more love, more giving and less taking," she said.

The next morning we voyaged on a tide- and wind-harried sea into Dundas Bay where Joe was serving as watchman on a salmon spawning stream. His white tent sat on an open point where, through the open flap, he watched for seine poachers.

On the extensive tide flats bordering the bay we filled gallon kettles with wild strawberries, which grew within the shadow of one of North America's greatest concentrations of active glaciers, the white giants of Glacier Bay.

Joe piloted us back to Lemesurier in the evening. Both ships plunged through windy seas shrouded in threshing rain and mysterious white fog.

Back in the cove our boats tossed uncomfortably in the exposed anchorage. Since our anchors wouldn't hold without constant attention, we bade Joe and Muz goodbye and ran down to a quiet anchorage in Gull Cove.

To Hospital by Flying Ambulance

But I had not seen the last of our friends. Some weeks later Joe suffered an appendix rupture. He and Muz were alone. All day Muz lighted fires to attract a passing boat. By merest chance a troller put into the cove near sundown and took Joe to Hoonah.

At Hoonah the radio contacted pilot Dean Goodwin in Juneau. He soared over the mountains in the gathering darkness, picked up Joe, and rushed him to the hospital at the capital.

When Dean flew back to tell Muz her husband was safe, he took me along.

"Joe told me to take these to Muz," he said, as he loaded 25 pounds of cantaloupes into his plane. "At 29 cents a pound, too. She'll be eating cantaloupes all winter."

After giving Muz the good news, Dean and I circled over the Fairweather Range and soared above Glacier Bay, following the shore line of the 3,590-square-mile Glacier Bay National Monument.

The best known of the glaciers in the monument is the Muir, discovered by the distinguished naturalist John Muir in 1879. From a height of 2,000 feet we could see its extensive snowfields and tributary ice rivers inching down mountain valleys where, above 3,000 feet, they were formed by snow dropping from the moisture-laden Pacific winds.

The flats were black with geese as we flew over. We sighted no moose, deer, or mountain goats. "Wolves," said Dean. "I bet they've got all the goats."

Wild Strawberries Sold Nation-wide

During *Endeavour's* stop at Gull Cove, we visited the canning department of an enterprise whose specialty is putting up hundreds of gallons of wild strawberries picked on the shores of Icy Strait and Dundas Bay. Its market is Nation-wide. "I started here ten years ago," said the proprietor, "with $1.85."

The next morning, after bidding goodbye regretfully to the Taylors on *Como Reto*, John and I headed *Endeavour* out through South Inian Pass for the Pacific Ocean.

On the north end of Chichagof Island we tied up among the 130 trolling boats of Elfin

Off Chichagof Island *Endeavour* Follows the Troller *Beverly B*, Sitka Bound

The outer coast of the Alexander Archipelago is strewn with numerous islands and rocks against which the surf breaks heavily. The scenes are wild and dramatic where the seas, lunging at the coast before the summer westerlies, crawl up the cliffs and explode into plumes of foam. Generally two fishing craft travel together, especially on the outer coast where a motor breakdown might spell disaster in the breakers. The author's boat carried a main and three head sails.

Cove. Lucky were the boatmen who had their wives aboard to cook meals. One fisherman who had fished hard during a good run of coho salmon had nothing but chewing tobacco and coffee for two days.

We were learning to take tales of large earnings with a sack of salt. A man and his wife passed by with armfuls of groceries. They were pointed out to us as the high-point team, having made $20,000 on 90,000 pounds of fish. I understood that the average for the season was about $5,000.

"Come on, John," I said. "Let's end the voyage and then rig some trolling poles on *Endeavour* and go fishing."

It was midafternoon when we headed westward through Cross Sound and met the surge of the great Pacific. I slowed down to trolling speed. John was on the stern with a fly rod, already laying the foundation of his fortune by hooking a fighting coho.

Tufted puffins, known as "sea parrots" because of their flowing yellow plumes and yellow-and-orange bills, swam around us. Black-headed Arctic terns winged gracefully down the sea wind.

John, King, and I watched as Cape Spencer bore abeam. A few more revolutions of our engine and puffs on our headsails by the aiding winds and we had passed the outermost end of land that stands sentinel to mark the northern approaches to the Inside Passage. Before us at last rolled the blank horizon of the vast Pacific Ocean.

With the U. S. Army in Korea

By Lt. Gen. John R. Hodge

*Commanding United States Army Forces in Korea**

A HUNDRED years before Columbus discovered America, the Koreans led the world in printing. They were the first people to use movable metal type.

Long before that, they had learned writing from the Chinese, and later in their development they vastly improved upon the Chinese system by devising a simple alphabet and introducing to the Far East its first simplified alphabetical script.†

But despite this centuries-old literary background, the Koreans ran into difficulty when they came to translate the portion of the Cairo agreement of December, 1943, which related to their country.

Roosevelt, Churchill, and Chiang Kai-shek, who at that historic conference took up the liberation of peoples enslaved by Japan, agreed that "in due course" Korea was to be free and independent.

Even in our language, "in due course" is indefinite. In the Korean language the phrase is extremely difficult to translate. It may mean "in a few days," "in a few weeks," "in a few years," or "in a few decades."

Therein lies a stumbling block, for the Koreans translated the phrase in favorable ways. Most of them translated it as "in a few days."

Upon one thing Koreans are thoroughly agreed. They all want their independence. More than forty years of Japanese domination, misrule, and oppression have only served to increase their desire for liberty. Every Korean from early childhood has been taught to live for independence. They hope that the time is not too far off when they can have a free, independent, and united country.

38th Parallel Cuts Korea in Two

I arrived in Korea in command of the XXIV U. S. Army Corps in September, 1945, less than a month after V-J Day. My immediate task was to take the Japanese surrender of forces in South Korea, disarm the Japs, and establish orderly government of Korea below the 38th parallel—an area about the size of Indiana, which included the national capital, Seoul (Keijo). (Map, page 833.)

Territory above the 38th parallel—an arbitrary dividing line—was administered by a Soviet Army of Occupation. This somewhat larger area is about the size of Louisiana.

The 38th parallel is not a natural boundary. It cuts across more than 85 rivers and streams. It lies almost exactly between the Yalu River in the north and the Korea Strait in the south.

In the Russian zone are located most of Korea's coal mines and heavy industry—steel and iron, aluminum and magnesium, chemicals and synthetic fertilizer. Most of the country's hydroelectric power is developed there.

In the predominantly agricultural American zone is grown most of the rice and other foods of the Nation. Some coal mines, paper mills, textile factories, and related industries also are located in this southern section.

Today this divided administration of Korea continues, creating a situation intolerable to the Koreans, both politically and economically.

Korea's future is indefinite. As I write these words, I am in Washington for a review of the Korean situation. Incidentally, my return in February, 1947, marked the first time I had seen the United States for almost five years.

Whatever is in store for Korea, and whatever may happen upon my return, I know that in my first 17 months of continuous service there I saw written a chapter in the history of American foreign relations which always will be absorbing and unforgettable to me.

We Inherit Japs from Russians

One of our first objectives was to disarm the Jap forces, to get the Japs out of South Korea, and to bring back to their native land Koreans who had been taken to Japan and other Pacific areas by the Japs. We thought we had completed a good job early in 1946, by which time we had sent almost three-quarters of a million Japanese civilians and soldiers to their homeland.

But soon afterward thousands of Japanese refugees came across the 38th parallel into our hands from the Russian zone in the north. Little or no effort was made in the Russian zone to repatriate the Japanese until late in 1946.

* General Hodge commanded the XXIV Army Corps in the Okinawa campaign. He was sent to Korea by Gen. Douglas MacArthur immediately after the Japanese surrender to command our occupation forces there. General Hodge was Assistant Commander of the 25th Division on Guadalcanal, Commander of the 43d Division on New Georgia, Commander of the Americal Division at Bougainville, and took command of the XXIV Corps in time to lead it at Leyte and Okinawa.

† See "Jap Rule in the Hermit Nation," by Willard Price, National Geographic Magazine, October, 1945.

U. S. Army Signal Corps, Official

American and Soviet Commanders in Korea Confer Through an Interpreter

With Lt. Gen. John R. Hodge in his home in Seoul (Keijo) is Soviet Col. Gen. Terenty Shtikov, head of the Soviet delegation to the Joint Soviet-American Commission intended to arrange the unification of Korea. Conferences, which began in January, 1946, reached a stalemate by May 6 of that year and were adjourned.

These refugees arrived in our territory hungry and weak after long journeys on foot. Most were old men, women, and children. Some able-bodied Japanese men were smuggled into the American zone by sea or shipped into our zone over mountain trails.

Since May, 1946, over a quarter of a million Japs have trickled into South Korea from the north without warning us of their coming. A few still filter in occasionally. All are sent to Japan.

During our occupation we have returned more than one and one-quarter million Koreans to their own country from Japan, China, and remote Pacific islands. In addition, well over one million Koreans have drifted into our zone from North Korea and Manchuria.

Another immediate job was to restore Korea's economy and ensure a living food supply. The country had been sabotaged by the Japs.

There has been a general misconception that Korea has long been a rice bowl of the Orient. This was because the Japanese exported considerable quantities of rice from the country. But they were taking the rice out of the mouths of the Koreans and shipping in for them, as substitutes, equivalent quantities of barley and millet from Manchuria.

Today no rice is exported from our zone, and we are shipping in grains to prevent starvation.

One of the urgent needs in Korea is fertilizer. The land was badly run down. Today we are supplying that fertilizer, so that by the fall of 1948 we hope Korea may be fully self-sustaining.

There is no starvation in Korea today, but without the more than 200,000 tons of grain which we imported in the last year there undoubtedly would have been many cases of malnutrition. Imports are continuing this year.

For many years American missionaries had worked among the Koreans. With the end of the war, churches in the United States again came to the aid of their Korean missions.

At Christmas, 1946, four thousand gift boxes arrived from the Church World Service for Korean children. They contained candy, simple toys, and warm mittens. For many of the recipients—orphans, deaf and blind boys and girls, from three to sixteen—it was the first time they had ever received the simplest gift at holiday time.

This same organization also sent more than a million vitamin pills, necessary to augment the average Korean diet of simple grains, and quantities of blankets, sheets, and bandages.

All this is in addition to vast amounts of medical supplies and urgent necessities for life and health that were supplied by the United States Government.

New Homes on Old Jap Airfield

Under American administration, several low-cost housing projects have been built, giving employment to many thousands of Koreans in addition to housing the homeless. The first of these developments arose on a former Jap airfield near Seoul and was dedicated last November by Maj. Gen. Archer L. Lerch, Military Governor of Korea. Refugee farmers were established in these homes and provided with little tracts of farmland. Other projects have since been completed.

Part of a 200,000,000-yen public works unemployment relief program is the building of a 320-mile all-weather highway between Seoul and the southeast seaport town of Pusan (Fusan). Some of the road is hard-surfaced, but mostly it is a 21-foot-wide first-class gravel road with many wooden and concrete bridges. All the materials, except cement and steel, are produced in Korea.

During the last four months of 1946, foreign trade, principally with China, showed average monthly imports of 30 million yen and exports of 10 million yen.* As production improves under our rehabilitation program, more Korean goods and commodities will be moving to world markets.

In January, 1946, three paper mills out of 14 were operating. By the end of 1946, all were approaching capacity production.

In textiles, nearly 4,000,000 yards of cotton cloth were produced in the last quarter of 1946 in the nationally operated plants.

Although mines had to be retimbered to offset indiscriminate mining practices of the Japanese, monthly coal production in southern Korea stepped up from 5,000 metric tons in January, 1946, to 25,000 in December, 1946. This is a low-grade anthracite, with a limited industrial use except when mixed with imported or domestic bituminous. Korea has no high-grade coking coal.

The Japanese rulers in Korea were interested primarily in educating Japanese children, but today, with the Jap children missing, the total number of pupils attending school is 50 percent greater than before liberation. This percentage will rise even higher as more schools, more textbooks, and more teachers become available, for the Koreans have an unquenchable thirst for education and a profound respect for educated men.

In this connection, it is interesting to note that, although the enemy allowed only Japanese to be taught in schools and used in business, all Koreans speak the same Korean tongue and all literate Koreans read and write Korean as well as Japanese. This is another of many evidences that they never gave in to the prolonged effort to Japanize them.

Koreans Operate Their Own Courts

Today Korea's judiciary system is operated entirely by the Koreans, with the Americans standing by merely as advisers. The system is working efficiently. All laws inimical to democratic processes have been rescinded. Many others have been changed to meet Korean needs and wishes.

The Legislature is half elective and half appointive, but is working on a law for universal suffrage. We are looking forward to the time when the legislative body will be 100 percent elective and when all key Korean officials can be elected or approved by an all-elected Legislature. The sole motive in having it half appointive now is to make sure that it has a broad base and is fully representative of all classes and shades of opinion. The old Korean headman system of indirect elections, going through three stages to elect the final representatives, does not meet democratic requirements (pages 834-5).

Koreans are rugged individualists; they like to think and speak for themselves. Consequently, there is more than usual divergence of opinions and views among them. It must be remembered also that, since we arrived in Korea, they are having their first modern chance to exercise the democratic freedoms.

* Before the war a Korean yen was worth approximately 23¢ in U. S. currency. Until March 11, 1947, the exchange rate had been set by the U. S. Army at 15 yen to $1. On March 11 General MacArthur announced a new 50 yen to $1 exchange rate for American military personnel and American War Department employees in Japan and Korea. Because of inflation, the actual purchasing value of the yen is more than 100 to $1.

Robert Hemmig

"Try This One for Size, Sonny"

A Seoul policeman helps a boy into part of a uniform left behind by a Jap soldier. It's a little big in the shoulders, but as an overcoat it will keep its small wearer warm during the bitter Korean winter. The gate opens into Seoul's botanical gardens.

The objectionable features of the 38th parallel and divided rule in their Nation add to the confusion of thought.

Four of the appointed legislators are women. Never before have Korean women taken any part in politics. Most of them have usually been sequestered in the home (page 836). But a few have attained the Western conceptions of feminine education and independence, and their number is growing. There is no doubt that when the Korean election law passes, it will give the vote to women as well as men.

Several Korean women are already doing fine work in national affairs. Dr. Evelyn Koh, with a Ph. D. from the University of Michigan, and a member of the Korean educational commission which visited the United States in March, 1946, heads the Women's Bureau of the national Department of Public Health and Welfare. Her sister heads the Women's Police Bureau.

An American, Mrs. Helen B. Nixon, of Holyoke, Massachusetts, represents the Military Government as adviser to the Director of the Women's Bureau. She relinquished a Red Cross post to take up this work in a civilian capacity after a record of war service with the Red Cross on three continents.

Another American assistant doing splendid work is Miss Ida Lippmann, an experienced social worker and a member of the Michigan Bar Association. She was busily engaged in helping build up a Korean women's police force to handle delinquent women and juvenile cases. Miss Lippmann, who was a civilian employee of the Quartermaster Corps in France during World War I, gave up her private law practice in Detroit in the summer of 1946 to take the position of Women's Police Adviser with us in Korea.

Korean political difficulties are not all solved, by any means, but the citizenry can forget its strikes, food problems, political turmoil, and other worries upon occasion. In October, for example, 30,000 Koreans jammed the Seoul racecourse to see a 12-race program. Crowds of thousands turn out to see baseball games, track meets, and other athletic events.

Korea a Challenge to the GI

To the American soldier in the occupation forces, Korea is a challenge and a test for his pioneer heritage. It is not a country for a

maladjusted or sympathy-craving youth. The Koreans have no pleasure resorts to offer as leave centers. They have no movies, no corner drugstores where the soldier can buy a malted milk, and no "entertainment" as he knows it.

Our occupation duties require considerable dispersion, and there are many small isolated posts. Improvisation, initiative, and Yankee ingenuity are the order of the day.

In spite of rugged conditions, our soldiers are doing a top job, and almost all of them are facing the facts as they exist.

American soldiers are forbidden to eat in Korean restaurants, for two reasons. One is that Korean foods are cooked in many highly seasoned Oriental styles, some of which cause gastric troubles for those not accustomed to them. The other and primary reason is that they get all the food they need for health and growth at their mess halls, and the Koreans need all the food their restaurants have to offer.

Drawn by Theodora Pfeo

An Arbitrary Boundary, the 38th Parallel, Splits Korea

The United States XXIV Army Corps, under Lt. Gen. John R. Hodge, moved into the area south of that line in September, 1945; a Soviet army occupied the northern zone. Both armies still remain in their respective zones. Koreans await the day when both armies of occupation will depart and their Nation will become reunited and independent. Heijo is the seat of Russian administration.

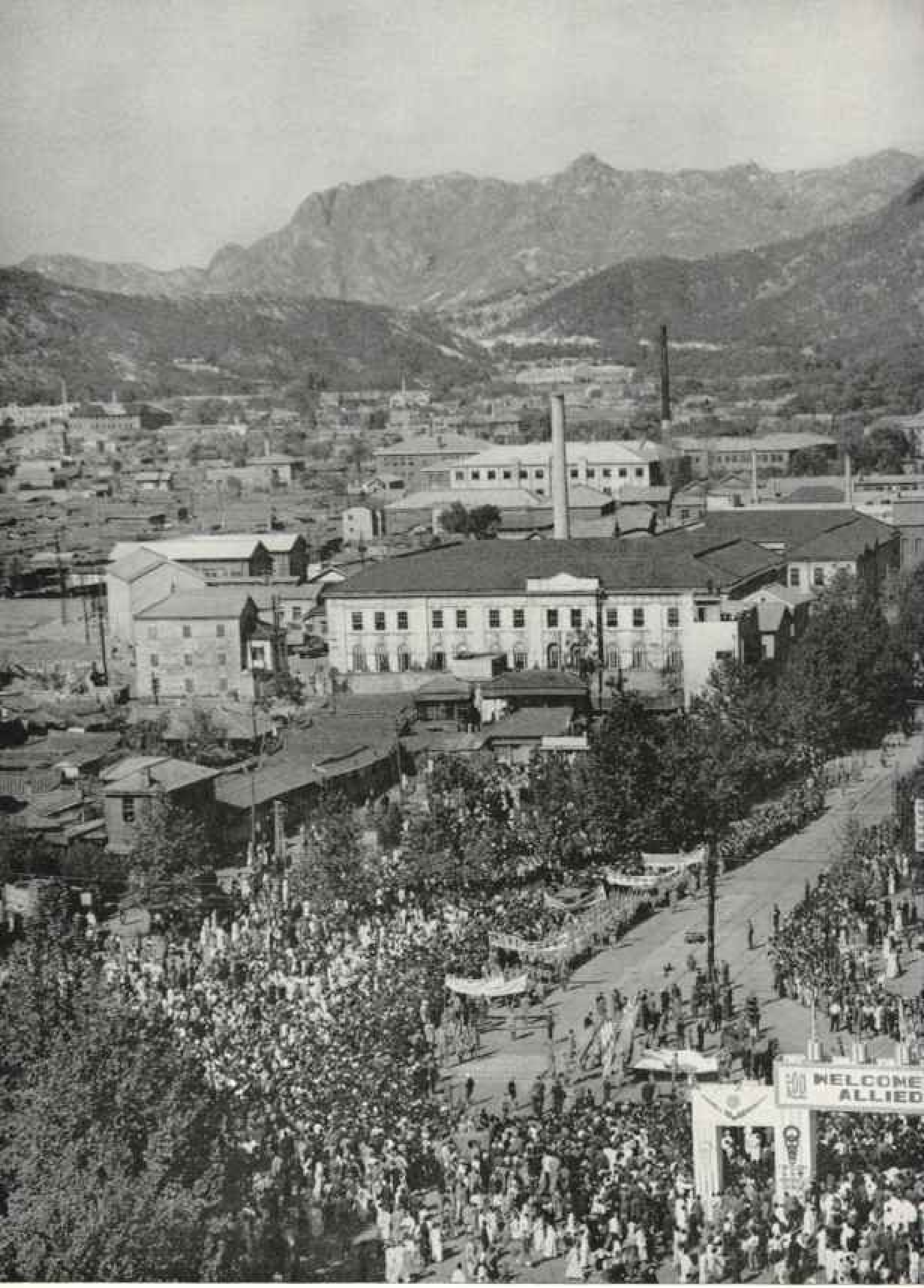
Our ration is substantially more than that of troops in the United States; but, even so, the 18-20-year-old misses Mother's icebox or the corner restaurant for extra rations.

From December 1 to March 1 the climate is very cold, except around the south coast. It is a dry, healthy cold with considerable sun and little snow. In the cities some of our troops are billeted in former office buildings, but even these are not too warm, and it is difficult to get youthful Americans to wear enough warm clothing. They don't like to be bothered. In most areas, however, they are billeted in remodeled Jap barracks or in camps consisting of Quonset huts or prefabricated buildings shipped from the United States.

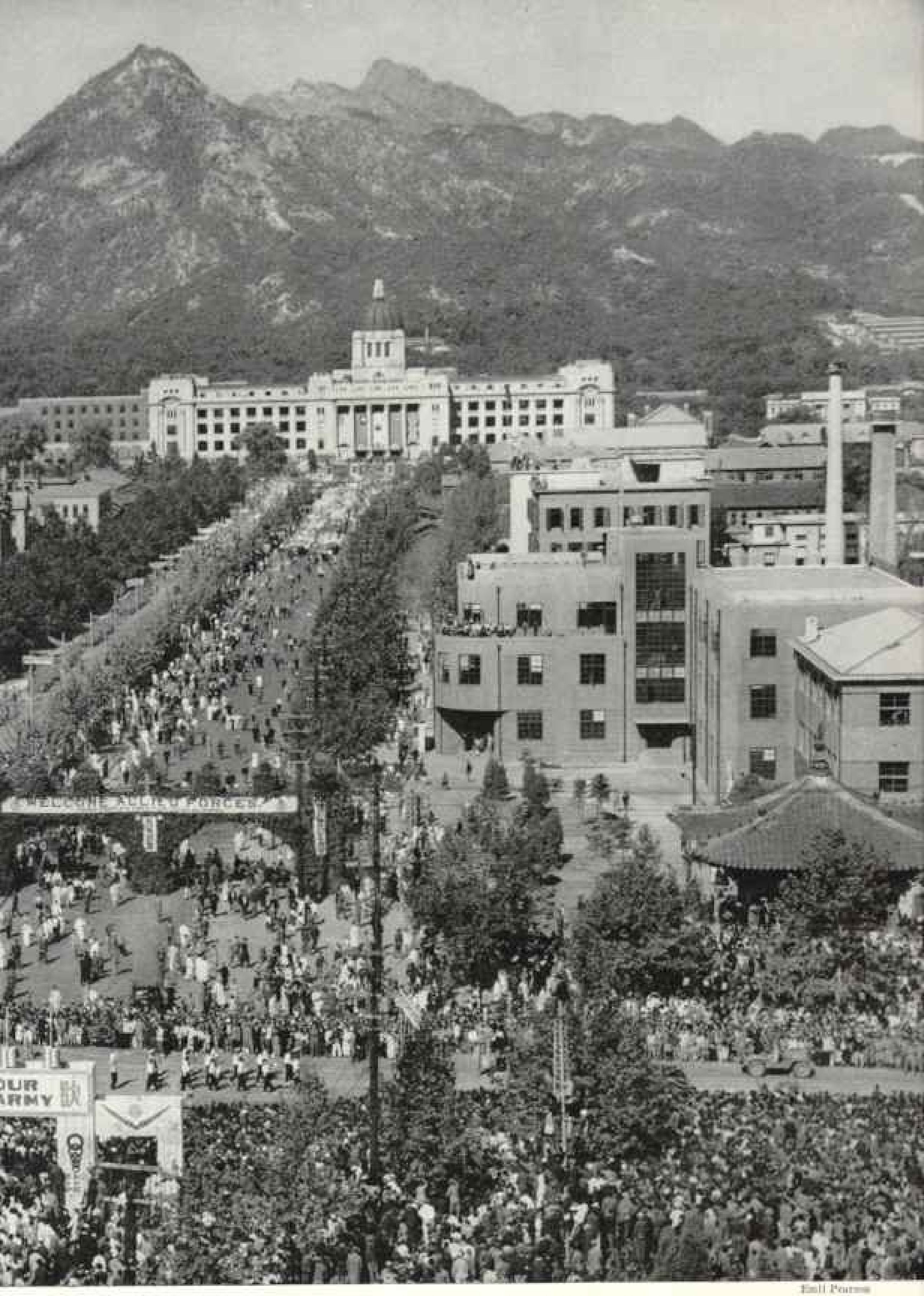
Virtually all the worth-while building in Korea during the 40 years of Jap rule was for the Japs themselves. The Japs (and the Koreans) were satisfied with a heating system in any building which would warm it to about 50° F. It is impossible to step this heat up to a comfortable 70° without blowing out the boilers or burning down the building.

The only water system worthy of the name in Korea is the one the Japs built in Seoul for themselves. It is reasonably satisfactory for such areas as it serves, but its scope is limited.

The native Koreans in cities were served



Seoul Parades to Welcome Its Allied Liberators on October 20, 1945



Emil Pourus

In Seoul's Jap-built Domed Capitol an All-Korean Legislature Now Sits

Robert Hemmig

Strong, Well-placed Hands Make Burdens Light

Wherever mother goes, baby goes, too. This country woman carries a basket of cotton along a rocky path from a field near Pusan (Fusan), Korean port city.

from a few subsurface wells, whose waters were pumped into a concrete pipe with taps at intervals. The only way to step up the pressure in this system would be to rebuild it. The pumps are powerful enough to supply only a trickle, and even if they were stronger the added pressure would burst the pipes. The American wants 25 gallons of water a day to the Jap's one! Hence we have to augment all existing water systems to meet our needs. All drinking water has to be treated for our use to prevent water-borne diseases.

Hot water is scarce. In most hotels in the United States you can turn on the hot-water faucet in any room at any time and instantly get hot water. Not so in Korea. We have to install our own water heaters.

Then, too, we arrive with electric toasters, razors, and numerous other electric gadgets. There isn't sufficient power to supply current for all of them.

These are unpleasant discoveries for the average American soldier. At home he is used to all the heat, water, and power he needs—and more!

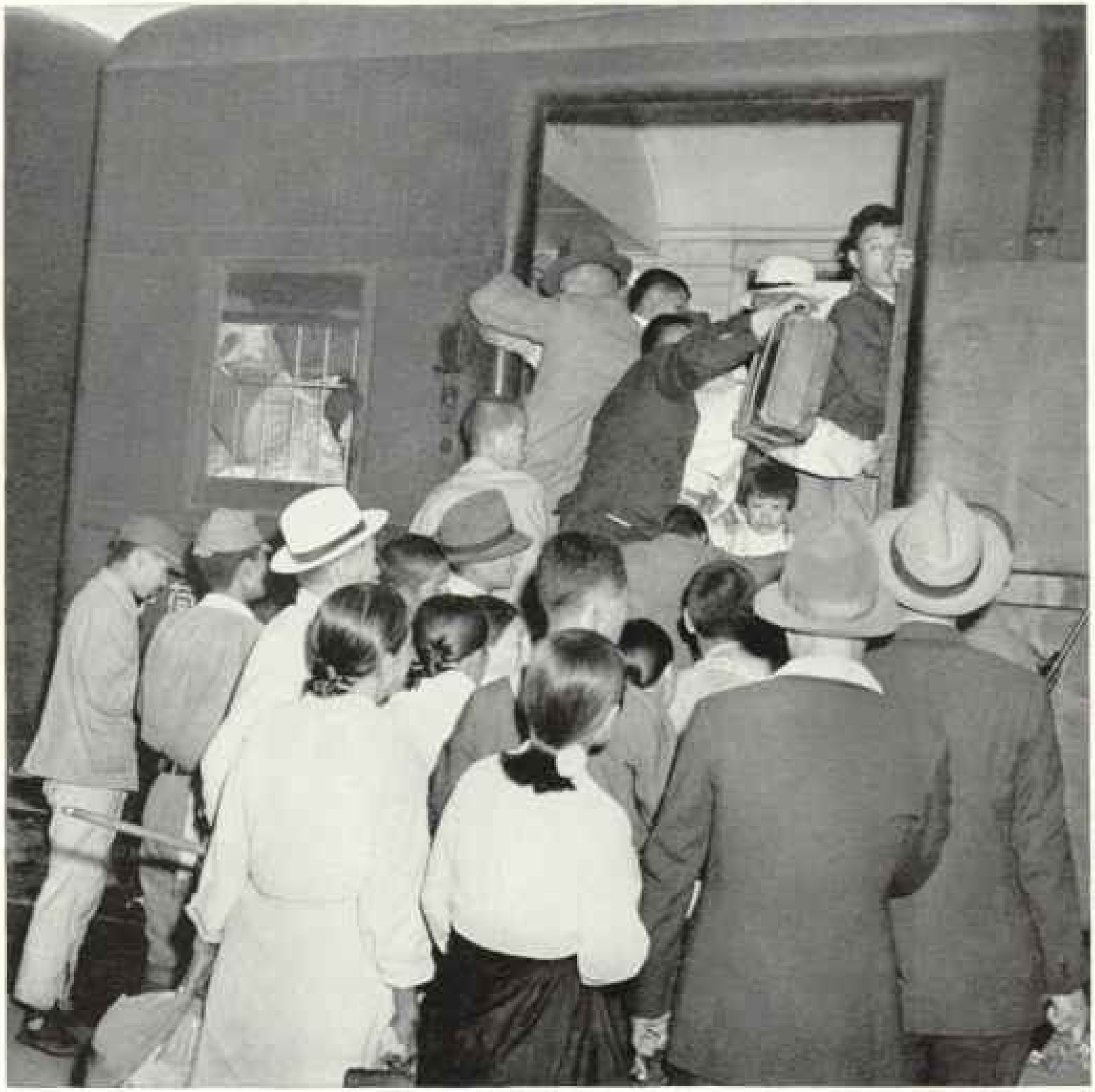
Girls Punished for Dating Americans

Even more puzzling is the youngster's realization that he cannot have dates with any of the cute, demure little Korean maidens he sees on the streets. These girls are exceptionally attractive and extremely modest, conversing with downcast eyes and unassuming demeanor. They are willing to make acquaintances among American boys, for the GIs accord them a welcome respect and esteem, but the ancient Korean code permits no such thing.

Many Korean girls never see their husbands until their wedding day. Before marriage those of the better classes are sequestered and held from contact with the outside world (page 832). After marriage they travel in family groups or with women companions.

When American boys pay attention to them they are flattered and pleased, and the ever-present American candy bar, of course, adds to their interest.

But a Korean girl does not dare to be seen in the company of an American soldier. If she so much as walks a few blocks down the street with one, she probably will be fearfully beaten by members of her family. She is not even permitted to have dates with her own countrymen.



U. S. Army Signal Corps. Official

Catch-as-catch-can Is the Rule on Overcrowded Korean Trains

Long lines of people wait at nearly all stations, and some always are left behind when the trains depart because there is not room for them. Rickshas, almost unseen in Seoul before the war, are back on the capital's streets because taxicabs have worn out. Buses are old and constantly are beset by motor trouble.

The Koreans do not retaliate against American soldiers for having dates. They hold the Korean girl responsible, because she is supposed to know better.

Soldier Turnover High

Turnover in the armed forces in Korea has been extremely high. Ninety-two percent of my command has arrived in Korea since September 1, 1946; 65 percent since November 1, 1946.

This turnover has also added to the difficulties of soldiering through the rapid changes in key personnel where skill and continuity are essential.

But for the American boy who is adaptable and has a sense of humor, Korea is not without its compensations. Despite their soldierly propensity for beefing, most of them have discovered this.

The sickness rate among our troops in Korea has been consistently lower than among troops in the United States, even during the winter of 1945-46 when we had little heat available. The recent heavy arrivals of unseasoned, unhardened men brought a slight rise in juvenile contagions that put our sick rate temporarily above our normal, but still not higher than the average of the Army as a whole.

U. S. Army Signal Corps, Official

"Strike One!" Korean Youngsters Watch a 7th Division Baseball Game in Utchin

Girls entrusted with younger brothers and sisters bring them along pickaback. Americans and American-educated Koreans brought baseball to Korea years ago. American soldiers often play Korean teams.

Each soldier has plenty of food and ample cold-weather and summer clothing. There are more than enough Army blankets in Korea for every soldier in the country. Every unit has athletic equipment in variety—volleyballs, baseball outfits, basketball equipment, etc. Soldiers who like to hunt are in a hunter's paradise.

Ice cream, peanuts, candy—they're plentiful for all.

Until recently, the caliber of motion pictures available for the soldiers was not outstanding. This was because most of the many projection outfits were 16-millimeter, and it is difficult to obtain first-run feature films in that size. But now we have four new 35-millimeter projectors and soon will have eight more in the larger troop areas. We shall still have to use the more than 170 smaller projectors in outlying detachments.

Just before I came to Washington, we were showing in January a class A film which had been released in New York in November. That meant that our soldiers saw it before many towns in the United States. In addition, we always have from five to eight USO shows on the road in Korea.

We are also operating training schools for the new men as rapidly as instructors can be obtained. Schools for mechanics, electricians, cooks, bakers, and refrigerator maintenance men, and signal schools are now being conducted, in addition to the regular educational schools operated as a part of the information and education program.

Of course a tour of duty in Korea presents an unparalleled opportunity for the GI to study an ancient and little-known Oriental country and its people at first hand.

Korean civilization goes back at least 3,000 years, perhaps further.

Korean astronomers studied the stars from an observatory 100 years before Christ.

Much of Japan's stolen Chinese culture passed to that nation through Korea.

Korea is the only nation in the world except the United States that ever defeated Japan. It did so in 1598.

Korea built the first "ironclads," using them to beat the Japs 250 years before the advent of the *Monitor* and the *Merrimac*.

A Hunter Becomes a Pied Piper

The mountainous country abounds in scenic grandeur. It is relatively rich in minerals—gold, iron, silver, copper, and lead, particularly north of 38°. A peninsula of the Asiatic Continent, its southeastern tip sticks out to within 110 miles of the main Japanese islands.

My principal diversion in Korea, when time allows, is hunting—not for the Korean tigers and leopards that are reported to dwell in the mountain fastnesses, but for pheasant and, on occasion, waterfowl.

I often travel 50 to 70 miles from Seoul on shooting expeditions, accompanied by a member of my staff. I use this opportunity to study the life of the Korean farmer and his needs.

I can't roam the countryside long without picking up a following of children. These Korean boys and girls, irresistible to the soldiers, are as attractive and appealing as any children I have ever seen. I thoroughly enjoy their company. They are nearer to American children in their games and spirit of fun than are children of any other Oriental area with which I am acquainted.

I never wear any outward trappings of rank on these jaunts—usually a peaked GI winter cap, GI fatigues, and a hunting coat. My youthful companions do not suspect my identity.

But one afternoon I absent-mindedly took off my cap during a brief rest from hunting.

One keen-eyed little fellow recognized me from a picture he had seen in his schoolroom.

"Hodgey!" he cried, and ran away as fast as his legs would carry him. But he was not frightened, it developed. In a few moments he was back, with all the youngsters from his village at his heels.

"Hodgey!" they yelled excitedly. I had that admiring retinue with me the rest of the afternoon until the crowd grew so large I returned to my jeep and moved to a new area.

Where Yank and Russian Meet

Relations between the commanders of the American and Russian zones in Korea have been newsworthy more than once, and minor friction between the two zones has been described often in news dispatches. But one amusing prank played by the arbitrary 38th parallel has not received much notice.

On the western side of Korea a bay extends northward beyond the dividing line. Accordingly, the line passes across the bay and cuts off some 375 square miles of Ongjin (Oshin) Peninsula, placing the area in the American zone although it is cut off by water.

The only convenient way to move supplies to our troop detachment on this peninsula is by sending a truck convoy by road through part of the Russian zone, circling the north tip of the bay.

Here our soldiers come into direct contact with the Russian soldiers. Man to man, they get along extremely well and are very friendly. However, I was amused to receive a request

U. S. Army Signal Corps Official

"Get Your Christmas Cards Here for the Folks Back Home"

Smiling Korean salesgirls sell the holiday remembrances to a GI. Ten cards are advertised for 15 yen. The picture was made before extreme inflation set in. Today the exchange rate for the yen, as established by Gen. Douglas MacArthur for Japan and Korea, is 50 to $1. Actual purchasing value today is more than 100 yen to $1 (page 831).

last fall from the Russian commander, asking me to order the Americans to stop fraternizing with his men. Americans were destroying the Soviet soldiers' discipline and undermining their morale, he complained.

Moving that truck convoy through the Russian zone is a ceremony. We inform the Russians that, say, about 10 trucks and about 25 men will present themselves at the roadside block near Kaishu at about 10 o'clock on Wednesday morning.

To the Russian that means exactly 10 trucks and exactly 25 men—no more and no less. Russian soldiers meet the convoy at the boundary and escort it through their zone.

Russians Obey Orders Literally

The Russian soldier is allowed no latitude in the interpretation of orders. Orders must be obeyed literally, without the slightest deviation.

Where we encourage the use of imagination and judgment and the development of responsibility in the American soldier, the Russians allow no latitude. Even their officers are surprisingly limited in exercising initiative.

Before returning from the Ongjin Peninsula one day, one of the American truck drivers saw a few boards lying alongside the road. He appropriated them for the purpose of constructing some small gadget for himself and threw them on his truck. But a watchful Russian spotted them and would not allow the boards to be moved through the Russian zone. Our men were accused on the spot of stripping Ongjin Peninsula of essential materials!

Of course, the 38th parallel is a much more serious handicap to Korea's development as an independent nation than the matter of a few boards.

Korea and all its friends await the day of coalition and the emergence of a single, united, independent nation.

When that day comes, we feel we shall have shown the Koreans how they can progress under democratic institutions to their rightful place in the world.

For additional articles on Korea in the National Geographic Magazine, see: "Chosen—Land of Morning Calm," by Mabel Craft Deering, October, 1933; "In the Diamond Mountains," by Marquess Curzon of Kedleston, October, 1924; and "Exploring the Unknown Corners of the 'Hermit Kingdom,'" by Roy Chapman Andrews, July, 1919.

The Society's New Map of Canada, Alaska, and Greenland

By Wellman Chamberlin

National Geographic Society Staff Cartographer

A NEW map area on a new projection is presented to the 1,600,000 members of the National Geographic Society in the 10-color supplement map, "Canada, Alaska, and Greenland," which accompanies this issue of the National Geographic Magazine.

With the advent of giant modern aircraft, it has become important to show the whole vast top of the Western World, where America is closest to Asia and Europe, for a new picture now occupies the minds of statesmen, military strategists, and planners of the commerce of the future—the concept of direct air travel by the relatively short routes which cross the roof of the world.*

The new National Geographic map reflects this modern approach to geography. It portrays Canada in its entirety as the central core of the great Western Hemisphere northland, including its islands stretching toward the North Pole, and shows all of Alaska, Greenland, and Iceland, where the New World joins the Old.

Entirely New Projection Solves Problem

The area covered by this new map presented a unique mapping problem. None of the conventional projections was well suited to show this broad northern expanse as an integrated whole. All involved undue distortion or variation in scale.

After extensive tests on all the currently used methods, we devised this entirely new projection, which The Society has named the Chamberlin Trimetric. It is based on a triangle of three great circles from which all other points are determined.

When tested, the new projection was found to produce excellent results. Maximum scale variation is about half that resulting from other methods. There is very little angular distortion, and over-all distances can be measured with great accuracy. The projection is particularly suited to this important area. In addition, it is easy to compute and draw.

On the new map, which measures 34½ x 26½ inches, major airports as well as highways, railroads, and 5,613 place names are shown. In Alaska appear many new roads, besides the famed Alaska Highway, wartime construction project. In Canada we have included some important winter tractor trails which supply the Far North mining districts.

A new transcontinental highway makes its appearance, for the Canadians have finished the last link between Hearst and Geraldton, in Ontario. One can now drive all the way from Sydney, Nova Scotia, to Vancouver or Prince Rupert, British Columbia, or to Fairbanks, Alaska.

During war years, great strides were made in surveying the Far North. Little-known lands took on vital importance. Your map incorporates that work, and members will note a wealth of new detail, from Greenland to the westernmost Aleutians. Most of this new information results from aerial surveys.

An inset map shows the Aleutian Islands on the same scale as the main map—1 to 8,000,000, or 126.3 miles to the inch. Another depicts the top of the world on a polar projection.†

North Pole Flights Now Are Routine

Until the war-boomed development of long-range, high-altitude planes, a trip beyond the Arctic Circle required months or years for completion. Except for a few whalers, sealers, and the Canadian Mounties, men rarely invaded that forbidding region. An expedition into the Far North was front-page news that commanded world-wide attention.

Today the great planes of the United States Army Air Forces make routine weather reconnaissance flights over the North Pole.

How the airplane has demolished distance in the North was dramatically illustrated in February of this year when 11 United States Army airmen in the B-29 *Kee-Bird*, from Ladd Field, Fairbanks, Alaska, were forced down in Daugaard-Jensens Land, in northwest Greenland, and were rescued by a C-54 from Westover Field, Massachusetts.

As Lt. Bobbie Joe Cavenar gunned his big plane and the aerial giant shattered the Arctic

* One of the pioneers in presenting the new "polar concept" of geography was the National Geographic Society's map of the Northern and Southern Hemispheres, issued as a supplement to the National Geographic Magazine for April, 1943.

† Members may obtain additional copies of the new map of Canada, Alaska, and Greenland (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.

stillness in its rocket-boosted take-off, another B-29 from Ladd Field appeared just to see that everything went according to plan.

After a stop at Thule, where Robert E. Peary long ago recruited Eskimo assistants, Lieutenant Cavenar flew the rescued flyers directly to Westover Field, where they landed less than 24 hours after the take-off from the tiny frozen glacial lake in Daugaard-Jensens Land.

The key points of this thrilling and speedy rescue form a huge triangle which encompasses most of the area on the new map. Ladd Field lies about 1,800 miles (86 degrees of longitude) from Daugaard-Jensens Land. Westover Field, near Springfield, Massachusetts, is about 2,600 miles from the scene of the rescue. A thousand miles across the Arctic are now translated into a few hours of flying time—far different from the weeks of straining labor needed in Peary's day.

Occasionally some great undertaking like the flight of the B-29 *Pacusan Dreamboat* from Hawaii to Cairo dramatizes the possibilities of air travel across the Poles. On this flight of 9,500 miles—which, incidentally, was not a nonstop record—the ship was navigated some 688 miles off course to check on the location of the North Magnetic Pole, which you will find on your map in its newly determined location on Somerset Island, some 250 miles from its old position on Boothia Peninsula.

A flight of this distance, from Washington, D. C., over the North Pole, would cross eastern Siberia and all of China and reach to within 160 miles of Singapore. This distance could reach all points in South America, Europe, and Africa. In Asia only the tip of the Malay Peninsula lies beyond this range. All of New Guinea could be reached, and one could just land at Cookstown, in Australia.

Asia and America Next-door Neighbors

The map emphasizes that here at the top of the world the Western Hemisphere's northland is close to the Old World. During the recent war, enemy invaders entered the lands on both sides of this map. At one corner, Japanese forces came up out of the Far East to occupy Attu and Kiska, from which they were dislodged only by the lengthy Aleutian campaign. On the other side, Greenland was invaded by small parties of Germans who also had to be dislodged by force.

On Little Diomede Island, in Bering Strait, Eskimo children swear allegiance to the Stars and Stripes as citizens of the United States. Only three miles away, their cousins on Big Diomede salute the Hammer and Sickle as citizens of Soviet Russia. These Eskimos—who speak the same language, intermarry, and go across to one another's parties, particularly in winter when ice bridges the gap—live in different hemispheres, separated in time by a whole day. When it is noon Wednesday on Little Diomede, it is 11 a. m. Thursday over on the neighboring island.

During the war an important artery of the air flowed across from one continent to the other not far from the Diomede Islands. Thousands of warplanes left Great Falls, Montana, to fly to Edmonton, Alberta; Snag, in the Yukon; and thence to Ladd Field, at Fairbanks. There they were turned over to Russian flyers who continued westward.

In addition to combat planes, hundreds of stocky Dakotas went through this secret Arctic airway to deliver their high-priority cargoes in the Soviet Union.

Central Alaska, with its clear, dry cold, has become an aerial highway. Elmendorf Field, at Anchorage, a large Army Air Forces base, is fully equipped to serve the largest planes. Ladd Field, at Fairbanks, was chosen as the locale for Operation Frigid, in which the Army made extensive cold-weather tests.

Machines Freeze, but Not Man's Ingenuity

Our forces are finding that the GI is about the only standard component of the military machine which can "take it." Below —40 degrees, guns fail or become erratic, grenades freeze, machinery won't work, tires get brittle; even thermometers have to be specially made. Remarked one Arctic veteran: "If you spilled a quart of heavy oil, you could pick it up in an hour and beat a man to death with it."

In weather like this, Army Engineers developed a new type of bridge. They laid logs across the ice of the Tanana River and then, from a hole in the ice, pumped water on the logs, where it froze instantly. Another layer of logs was laid, transversely, and iced into place. This bridge, which reinforced the river ice, was strong enough to take tanks.

In the Aleutians, Task Force Williwaw, named for the fierce gales which hit those islands, has been making similar tests of equipment in wet, cold conditions.

On the other side of the map area we have the mighty chain of airbases, built during the war, which led combat and cargo planes to the British Isles and the Western European front: Presque Isle, Maine; Goose Bay, Labrador; Stephenville and Gander, in Newfoundland; Greenland's Narsarssuak (Bluie West 1), and Bluie West 8 at Søndre Strømfjord; and the many new fields in Iceland.

The establishment of the Greenland bases was a stupendous undertaking. In weather

U. S. Navy, Official

Thanks to a National Geographic Map, Admiral Nimitz Arrived Safely at Guadalcanal

In a letter to Dr. Gilbert Grosvenor (page 844), the Admiral tells how The Society "lent an unexpected but most welcome helping hand" on a flight to the embattled island in the dark days of September, 1942. Officers, with ranks then held, are, left to right: Comdr. J. P. Compton, USN; Brig. Gen. Dewitt Peck, USMC; Comdr. William M. Callaghan, USN; Lt. H. A. Lamar, USNR; Comdr. J. R. Redman, USN; Air Com. R. V. Goddard, RAF, commanding New Zealand Air Force; Admiral Nimitz; Capt. R. A. Ofstie, USN; Maj. Gen. A. A. Vandegrift, USMC; Maj. Gen. Roy S. Geiger, USMC; Col. O. T. Pfeiffer, USMC.

that went to 60 below and blew piles of lumber around like matchsticks, Army Engineers built larger, more durable, and probably more buildings than Greenland had seen during its entire history under Eskimo and Dane.*

In Operation Frostbite the United States Navy last year sent the carrier *Midway* to Davis Strait and the Labrador coast for Arctic tests of carrier aerial operations.

Europe's North Is Far More Populous

The Western Hemisphere northlands are deplorably empty. Across the Pole in the east longitudes, the Scandinavians, Finns, and Russians have learned to live in these Arctic lands. Russia is reported to have some 2,000,000 people living all year round in her Far North; Murmansk and Archangel are large cities. The new railhead at Khabarovo is a vigorous town, while Novy Port, Igarka, Nordvik, and Tiksi (see placement inset map) are all important to the Russian Arctic ship route.

On our side of the Pole, not one settlement of comparable importance lies on the Arctic littoral. The total population from Alaska to Greenland is only about 1/20th of the Russian 2,000,000. Several factors, however, now are drawing population into the American North. Mining and the exploitation of other natural resources are most important.

At Point Barrow, northernmost tip of Alaska, the Navy has a huge 35,000-square-mile petroleum reserve, where important exploratory drilling is being done. The actual field of operations is at Umiat, on the Colville River, 170 air miles inland. It is supplied by air and by tractor train from Point Barrow. In winter the sled trail goes out over the Arctic Ocean, then up the Colville River.

The major sources of uranium in North America are the Canadian mines at Great Bear and Hottah Lakes, just under the Arctic Circle. At Chalk River, 100 miles west of Ottawa, Canada has built a plant for plutonium manufacture and storage, similar to the United States atomic plants at Oak Ridge, Tennessee, and Richland, Washington.

In this air-atomic age, the North holds keys to the future.

* See "Americans Stand Guard in Greenland," by Andrew H. Brown, NATIONAL GEOGRAPHIC MAGAZINE, October, 1946.

How One of The Society's Maps Saved a Precious Cargo

Many million National Geographic maps went to war between the attack on Pearl Harbor and V-J Day. Extensively used for strategic planning by Army, Navy, and Air Forces, they also played a providential role by affording timely assistance to pilots and navigators, especially in the earlier phases of the war when our military forces had not available the superb detail maps later provided by the U. S. Army Map Service, the Hydrographic Office of the Navy Department, and the U. S. Coast and Geodetic Survey.

Eloquent of such an instance is the following letter from Fleet Admiral Chester W. Nimitz, wartime Commander in Chief of the Pacific Fleet and now Chief of Naval Operations:

Navy Department
Office of the Chief of Naval Operations
Washington 25, D. C.

April 7, 1947

Dr. Gilbert Grosvenor, President
The National Geographic Society
Washington, D. C.

Dear Dr. Grosvenor:

In the early fall of 1942 it was necessary that the Commander in Chief, Pacific Fleet, attend conferences in New Caledonia with the Commander South Pacific Force and representatives of General MacArthur. On the conclusion of these meetings, in late September, CincPac and party proceeded to Guadalcanal to review the situation there with General Vandegrift.

You may recall that our position on Guadalcanal was extremely critical at this time, with little more than the perimeter of an airfield being held by our Marines, and several months of savage fighting to follow before the enemy was dislodged from the central Solomons.

The trip to Guadalcanal was somewhat eventful, and since your Society had an important part in its successful outcome, I felt you would have a personal interest in the details which I record below.

Espíritu Santo, about halfway between Nouméa and Guadalcanal, was then our most advanced base in the South Pacific, with a limited development for aircraft and surface vessels. It was the target of sporadic but small-scale aerial attack by the Japanese. The next and only friendly stop on the Solomons route was Guadalcanal, some 550 miles to the northwest. Guadalcanal Island itself, with the exception of the small Marine foothold, was in control of the Japanese. In these circumstances one had no choice but to make sure of arrival at the correct destination.

My party proceeded to Espíritu via naval seaplane and there transferred to an Army B-17 for the flight to General Vandegrift's headquarters. This procedure was followed because of the superior speed and defensive characteristics of the B-17. It transpired, however, that the flight crew assigned for the last stage of the trip had not previously covered the route and perhaps was not too well prepared for the over-water navigation involved.

In any case, some time after a landfall should have been made on San Cristóbal Island, it was acknowledged by the pilot that his flight track was in error by a sizable margin to the southward, and that he was shaping his course to the north to pick up the island chain.

Additionally, the pilot was equipped with but one small-scale chart of the Solomons area, showing only the larger islands, and positive identification of location would prove a decidedly difficult matter. Further to complicate affairs, we now entered an area of continuous heavy rain with greatly reduced visibility.

At this point it was our good fortune that the Marine officer on my staff followed the practice of always carrying a National Geographic map in his briefcase. The Map of the Pacific Ocean, which was put into use forthwith, included an inset of the Solomons showing the smaller as well as the larger islands.

On subsequently picking up an island of the Solomons group, and after considerable flying about at low altitude to identify the coastline and adjacent small islands, it was possible to establish our position at the northwest end of San Cristóbal. The remainder of the trip to Henderson Field was continued at minimum altitude, hugging the shore line of Guadalcanal Island to avoid losing land contact in the driving rain.

The enclosed group photograph was taken the following afternoon, just prior to departure from Guadalcanal.

It is a pleasure to confirm to you, even at this late date, the details of an episode which had a distinctly personal flavor for all persons in the plane and in which the National Geographic Society lent an unexpected but most welcome helping hand. Needless to say, this was but one of a great number of occasions when your maps proved invaluable to the forces in the Pacific. Your charts were in wide service in planning work, particularly for areas which were not adequately covered by the official maps available.

With my warmest personal regards to you and the other officers of the National Geographic Society, I am

Very sincerely yours,

C. W. Nimitz,
Fleet Admiral, U. S. N.

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To carry out the purposes for which it was founded fifty-nine 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 material The Magazine uses, generous remuneration is made.

In addition to the editorial and photographic surveys constantly being made, The Society has sponsored more than 100 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 eight centuries before Columbus crossed the Atlantic. By dating the ruins of the vast communal dwellings in that region, The Society's researches solved secrets that had puzzled historians for three hundred years.

In Mexico, The Society and the Smithsonian Institution, January 16, 1930, discovered the oldest work of man in the Americas for which we have a date. This slab of stone is engraved in Mayan characters with a date which means November 4, 3321 B. C. (Spinden Correlation). It antedates by 200 years anything heretofore dated in America, and reveals a great center of early American culture, previously unknown.

On November 11, 1935, in a flight sponsored jointly by the National Geographic Society and the U. S. Army Air Corps, the world's largest balloon, *Explorer II*, ascended to the world altitude record of 72,395 feet. Capt. Albert W. Stevens and Capt. Orvil A. Anderson took aloft in the gondola nearly a ton of scientific instruments, and obtained results of extraordinary value.

The National Geographic Society–U. S. Navy Expedition camped on desert Canton Island in mid-Pacific and successfully photographed and observed the solar eclipse of 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 off Bermuda, during which a world record depth of 3,028 feet was attained.

The Society granted $25,000, and in addition $75,000 was given by individual members, to the Government when the congressional appropriation for the purpose was insufficient, and the finest of the giant sequoia trees in the Giant Forest of Sequoia National Park of California were thereby saved for the American people.

One of the world's largest icefields and glacial systems outside 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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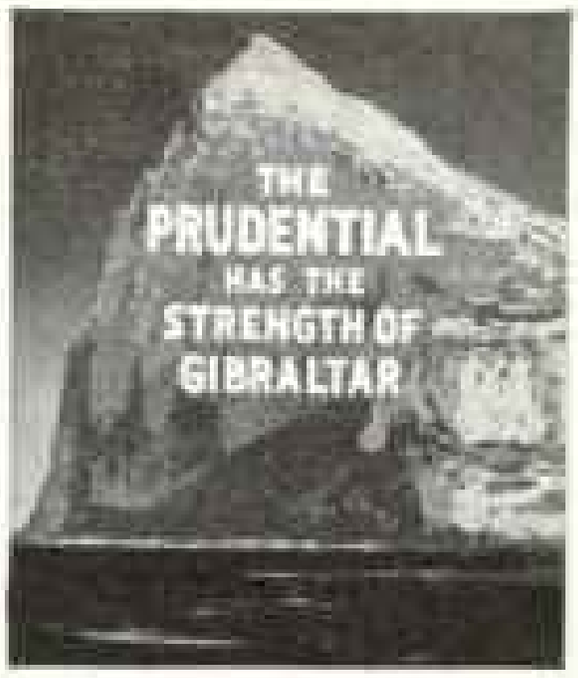

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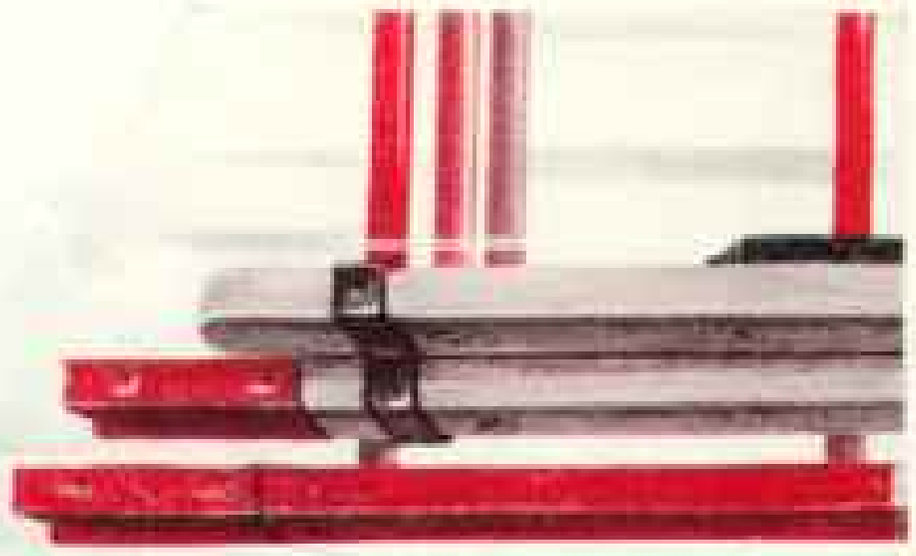

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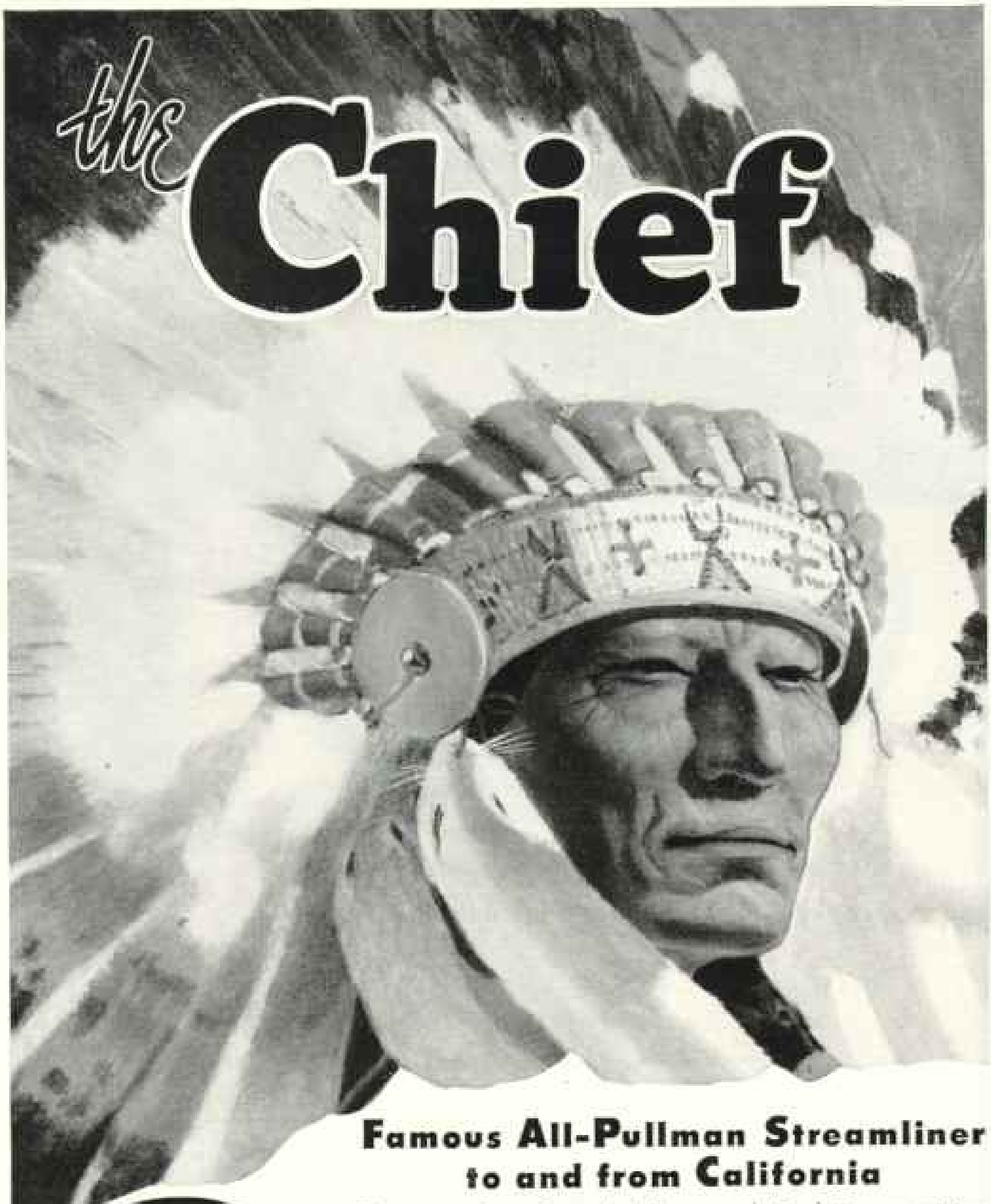

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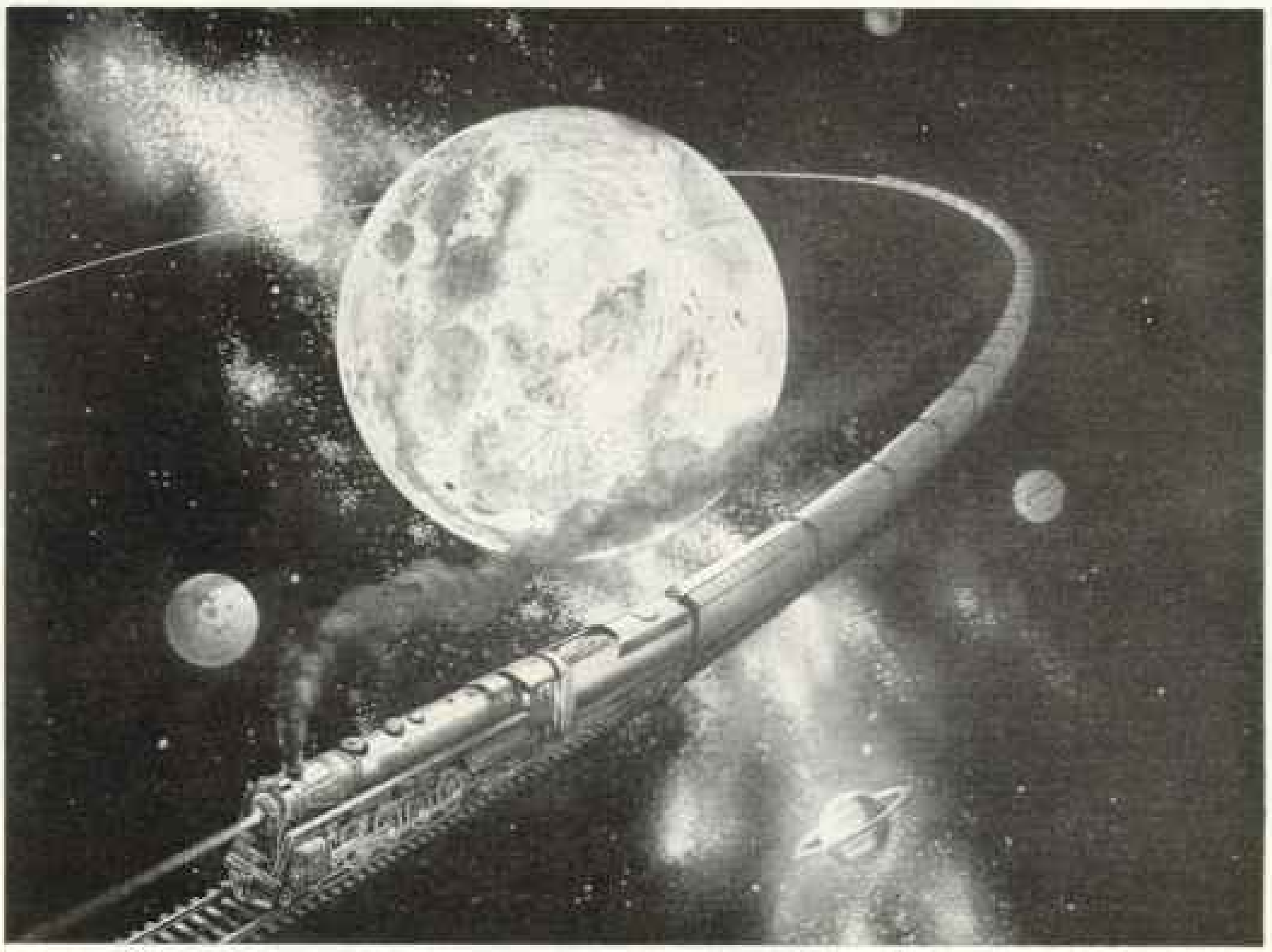

Round Trip to the Moon

● A ton of freight to the moon and back! That's one good way to measure the freight moved by American railroads in 1946 for *each* of the men and women on the railroads' payroll.

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To provide these essential tools, there has been invested nearly $20,000 per worker, furnished almost wholly by private funds. To improve these tools, there must be still more investment —which cannot be expected to continue unless railroads have a chance to earn reasonable profits on these funds.

But during the past twenty-five years—through boom years, depression years and war years—the railroads have averaged a return on their net investment of only 3¼%.

In 1947, even with the increased rates recently authorized by the Interstate Commerce Commission and with freight traffic continuing at its record-breaking peacetime level, railroads will probably earn only about half the 6% return which nine out of ten people think is no more than a fair profit, and which is necessary to attract continued investment in these essential railroads.

ASSOCIATION OF **AMERICAN RAILROADS** WASHINGTON 6, D. C.

IN PARTNERSHIP WITH ALL AMERICA

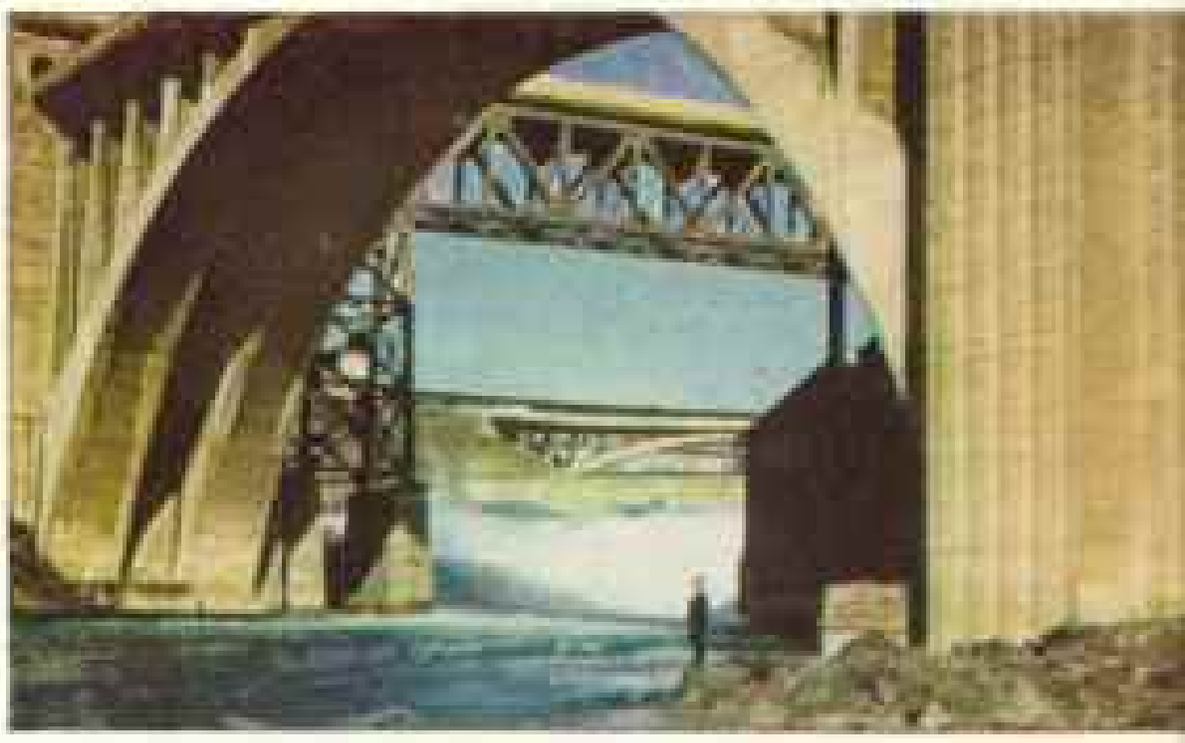
GRANDEUR

Serene and Glorious in

Fascinating

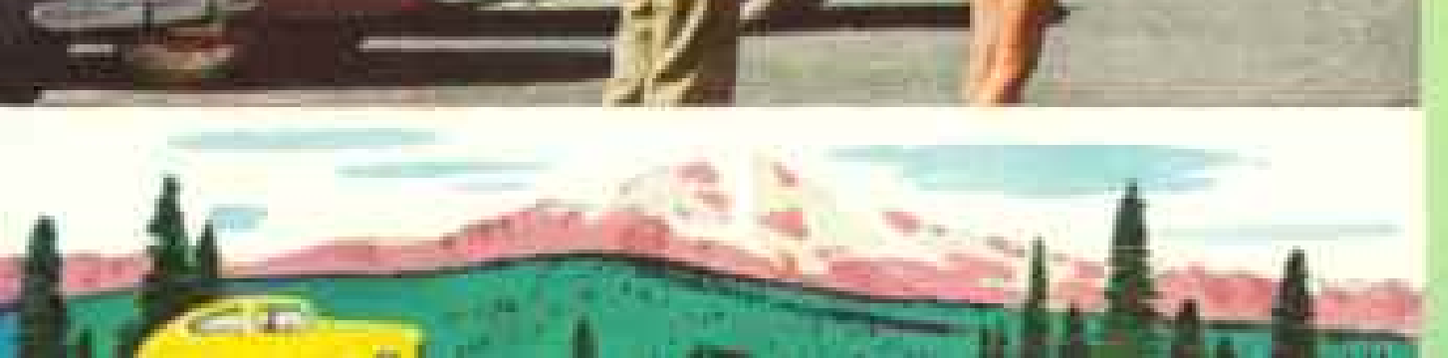
WASHINGTON STATE

Above: Overlooking Columbia River Gorge in Southwestern Washington. Below: Spokane Falls in the heart of the beautiful city of Spokane.



The appeals of Washington State are so many and varied that they cannot be condensed into a few words. One of the most northerly of the forty-eight states, it has nevertheless an amazingly mild climate that makes it an outdoor playground throughout the year. Divided by the majestic Cascade Mountain range, it is really two states in one with high rolling wheatfields, famous apple orchards, painted deserts, and rich grazing lands contrasting with giant virgin forests, inland seas, ocean beaches, and eternally snow-crowned mountains soaring eight, ten, fourteen thousand feet into the blue. Its varied attractions are easily reached by broad, smooth highways and comfortable, modern accommodations are everywhere. There's a life-time of exploration in fascinating Washington State — let us send literature.

Below: Scene in Mt. Rainier National Park, a year 'round playground reached by five fine highways. Mt. Rainier elevation 14,408 ft.



WASHINGTON STATE Department of Conservation & Development, Room 740 Transportation Bldg.—State Capitol
Olympia, Washington

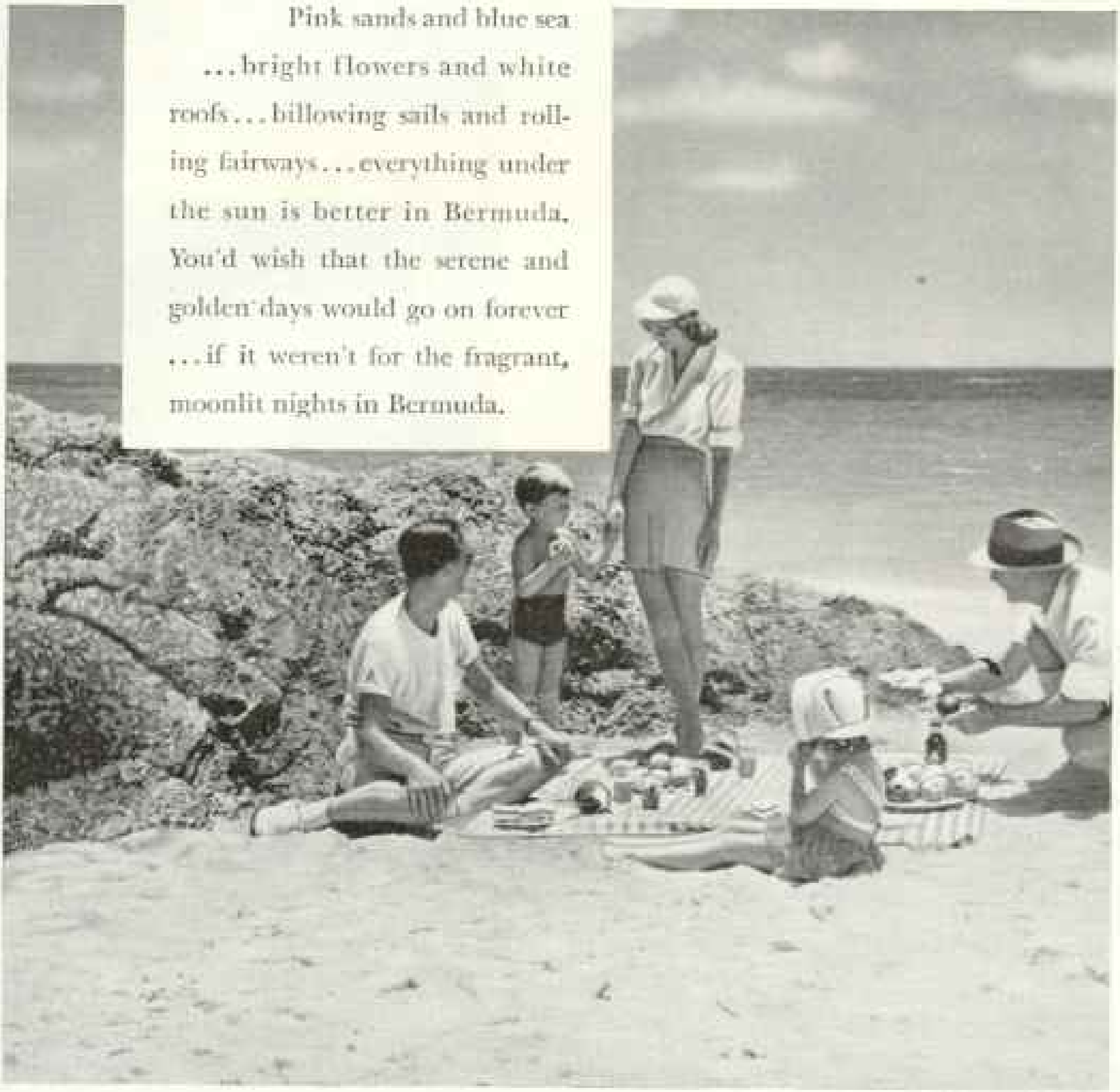
Gentlemen: Kindly send me your free literature on Washington State

Name .....

Address .....

Everything under the Sun!

Pink sands and blue sea ... bright flowers and white roofs ... billowing sails and rolling fairways ... everything under the sun is better in Bermuda. You'd wish that the serene and golden days would go on forever ... if it weren't for the fragrant, moonlit nights in Bermuda.



HORSESHOE BEACH

EVERYTHING IS BETTER IN—

Bermuda

Coat of Arms

FOR NEW ILLUSTRATED BOOKLET, *write The Bermuda Trade Development Board, Hamilton, Bermuda or 620 Fifth Avenue, New York 20, N. Y. In planning your trip to Bermuda, your Travel Agent will give you experienced help and complete service—at no cost to you.*

Vacation all the way—

on New York Central's new luxury coaches

SPACE TO SPARE at a low coach fare . . . with 12,000 more luxury seats now available daily in New York Central's three miles of gleaming new streamlined, air-conditioned, post-war coaches.

LAZE AND GAZE at the scenic Water Level Route from the streamlined *coach* observation cars of such famous trains as *The Pacemaker*, *The James Whitcomb Riley* and *Empire State Express*.

STEP ABOARD the world's largest fleet of post-war coaches, and you step straight into a glorious vacation. Shut the door on summer heat, and relax in air-cooled comfort. Enjoy Central's lean-back seats, wide windows, and modern luxuries that make your 1947 holiday a vacation *all the way!*

FREE 1947 Vacation Guide

Colorful booklet describes Holiday territories in "Central" land. Write to Room 1204E, New York Central System, 466 Lexington Ave., New York 17, N.Y.

Name_____

Address_____

City_____ State_____

EXPLORE New York Central's 11,000 scenic miles at LOW COACH FARES

NEW YORK CENTRAL

The Scenic Water Level Route

Lesson in Latitude

No, we don't mean geographical latitude...

We mean the latitude of the Ansco Film on which this picture was taken.

Used in this sense, "latitude" means the amount of underexposure or overexposure which a film will allow—*and still give satisfactory pictures.*

Ansco Film is famous for its wide latitude which helps even improperly exposed films to give satisfactory negatives...and well exposed negatives to give magnificent pictures, like the one above. Ansco, Binghamton, New York.

ASK FOR

FILM & CAMERAS

Wherever you go, discovering something worthwhile to buy depends upon recognizing the distinctive marks of quality. More new car purchasers Change-Over to *Action-Traction* General Squeegees than to all other makes combined because their Top Quality is so easily demonstrated, so long remembered. Extra mileage, quick-stopping ability, blowout protection and quiet running make their slightly higher price trivial by comparison. The least of the difference is the difference in price.

Action-Traction

RUNS LIKE THIS — STOPS LIKE THIS

The **GENERAL** SQUEEGEE **TIRE**

"There's something really good about this morning!"

She feels as rested and relaxed this morning as she would had she slept in her own bed at home.

There are two reasons:

Modern trains follow modern locomotives. Since General Motors Diesel locomotives were introduced thirteen years ago, modernization of passenger equipment has made dramatic strides.

But the locomotive itself deserves part of the credit. The flow of power in a GM Diesel locomotive is so smooth that you ride through the night without jerks at starting and stopping. You glide to a stop — start so smoothly that you would need to watch the landscape to know when your train starts to roll.

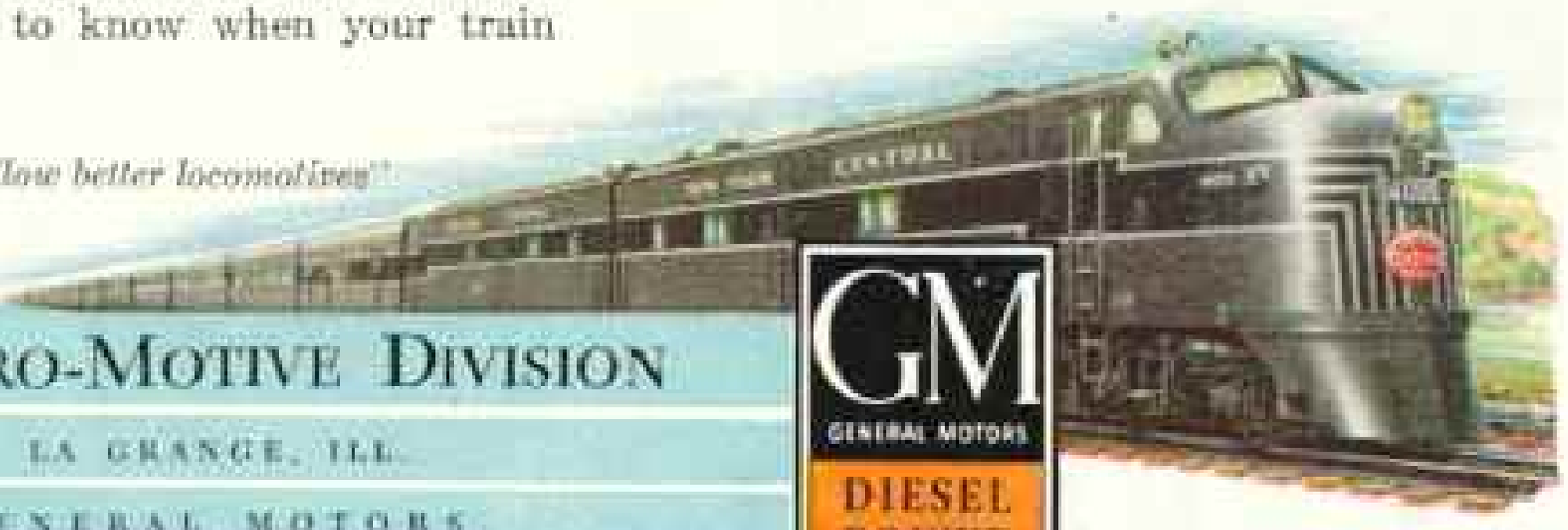
That is one of the many reasons why experienced travelers choose the trains with GM power up ahead.

And you can ride through the night — on a transcontinental journey — without a single change of locomotives.

And the savings in operating costs have enabled the railroads to provide extra comforts for passengers.

Fact is, the entire economy of the nation benefits as the railroads approach closer and closer to complete dieselization — the traveling public, shippers, investors and the railroads themselves.

"Better trains follow better locomotives"



ELECTRO-MOTIVE DIVISION

LA GRANGE, ILL.

GENERAL MOTORS

GM
GENERAL MOTORS
DIESEL POWER

Smartly styled – beautifully toned

. . . The Magnavox Duette. Combining truly fine radio-phonograph performance and unsurpassed Magnavox tone quality with beautifully styled modern furniture, the Duette at $187* sets a new standard of value. See and hear this splendid instrument. Compare it with much higher priced radio-phonographs. You won't be satisfied until you own one. The Duette is sold only in America's fine stores. Look for the name of your nearest Magnavox dealer in the classified telephone directory.

The Magnavox Company, Fort Wayne 4, Indiana.

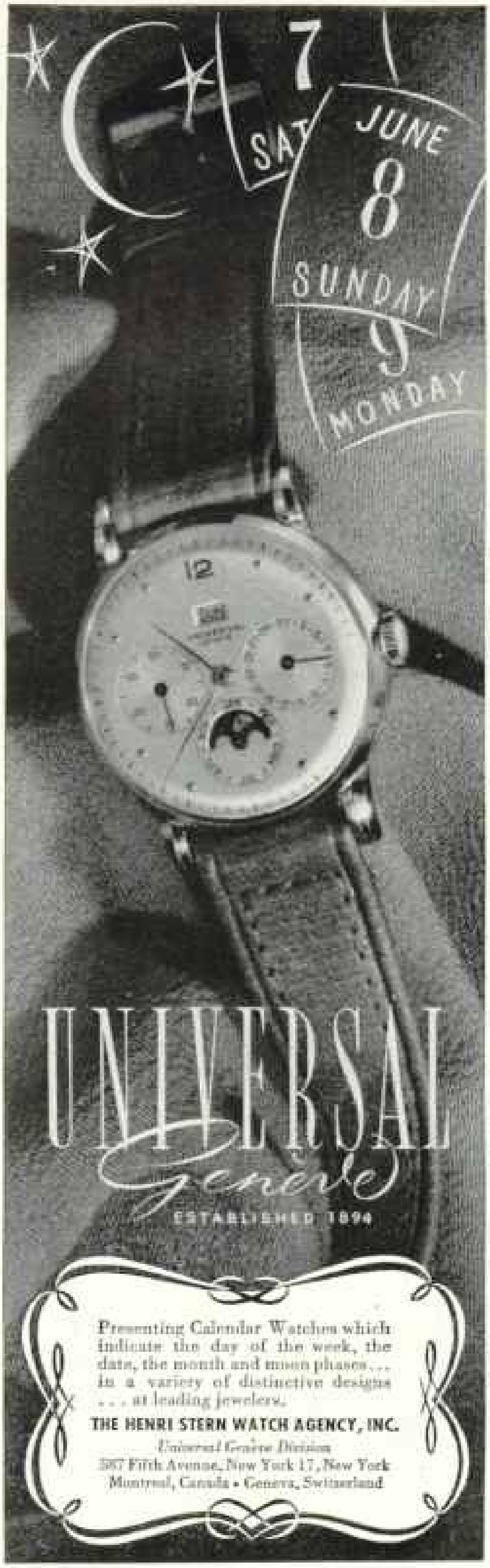
The Duette. Youthfully styled, graciously modern furniture finished in light or dark synthetic leather with white or dark walnut panels. Equipped with powerful 6-tube radio (plus rectifier) and automatic record changer $187*
With FM (14 tubes and 2 rectifiers), $252*.

the magnificent

Magnavox

radio-phonograph

*Prices slightly higher west of Rockies.



Wide choice of all-expense or independent trips on luxurious liners . . . colorful scenery . . . fascinating "foreign" cities . . . vacation fun.

NIAGARA to the SAGUENAY—Enjoy all or any part of this world-famous route between Buffalo and the Saguenay River, including Thousand Islands, the "Rapids," Murray Bay, etc.

GREAT LAKES CRUISES—Lakes Huron and Superior on largest, finest lake steamer. See the "Soo," Port Arthur, Ft. William. Sports, Entertainment.

CANADA STEAMSHIP LINES

Offices in Principal Cities, or Your Travel Agent

FOR A VACATION THAT IS DIFFERENT

Come to Québec

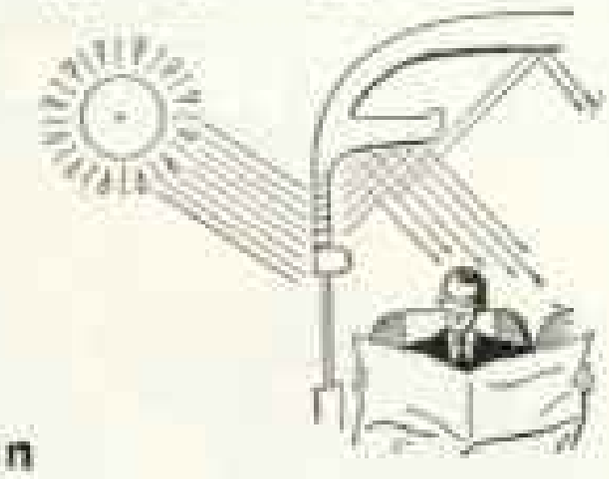
• Picturesque fishing villages nestling against the mighty St. Lawrence, century-old farm houses and shrines, metropolitan Montreal, Québec—the only walled city in America . . . You and your family will be delighted by the old-fashion hospitality of Québec's modern inns and hotels. For maps and booklets write PROVINCE OF QUÉBEC TOURIST BUREAU, Québec City, Canada.

LA PROVINCE DE
Québec

ANOTHER "FIRST" FOR AMERICAN CAR AND FOUNDRY . . . ANOTHER "FIRST" FOR THE CENTRAL OF GEORGIA RAILWAY

The Secret of the "Sunliner"

Read how a wonderful new window, with a "Venetian blind" built into the glass, works miracles on the "Sunliner"—revolutionary American Car and Foundry coach built for the Central of Georgia Railway.



This sketch explains the principle of deflected light. Outside light strikes deflector vanes placed within the window glass itself, is thrown upward. Striking the baggage rack and ceiling, the light is again deflected and diffused through the car.

No sun glare . . . you get even, balanced *indirect* light at all hours of the day—no matter on which side of the coach you sit.

The head-high fluorescent lighting—*also* with deflecting system built into it—gives the same balance of light as in daytime.

LATE-HOUR TRAVELERS can doze without pin-point lights to disturb them. Even the night-lighting of the "Sunliner" is indirect and restful!

NO EYE-SHOCK from rapidly-alternating light and shadow. Draw your drape—and you *still* get full, shadowless light!

AND ESPECIALLY FOR THE LADIES . . . Wash basins are cleverly combined with vanity dressers in spacious lounges. ACF design does this *even while providing more passenger seats in standard cars!*

Look for this hallmark of superior equipment that means the latest in railroad service and the most in travel values.

American Car and Foundry Co.

"Quality and Vision in Railroad Transportation"

AMERICAN CAR AND FOUNDRY COMPANY • NEW YORK • CHICAGO • ST. LOUIS • CLEVELAND • WASHINGTON
PHILADELPHIA • PITTSBURGH • SAN FRANCISCO

Television gives you a choice seat at the game.

Television—a Season Pass to Baseball!

Every home game—day or night—played by the New York Giants, Yankees and Brooklyn Dodgers will be seen over television this season!

Owning a television receiver in the New York area will be like having a season pass *for all three ball clubs*. And in other cities, preparations for the future telecasting of baseball are being made.

When more than one home game is on the air, baseball fans can switch from one to the other—see the most exciting moments of each!

Those who own RCA Victor television receivers will enjoy *brighter, clearer, steadier* pictures through the exclusive RCA Victor Eye-Witness picture synchronizer that "locks" the receiver in tune with the sending station. For television at its finest, you'll want the receiver that bears the most famous name in television today—RCA Victor.

When you buy an RCA Victor television receiver or radio, or Victrola radio-phonograph, or an RCA Victor phonograph record or a radio tube, you know you are getting one of the finest products of its kind science has yet achieved.

Radio Corporation of America, RCA Building, Radio City, New York 20. Listen to the RCA Victor Show, Sundays, 2:00 P.M., Daylight Saving Time, NBC Network. "Victrola" T. M. Reg. U. S. Pat. Off.

Several television cameras bring you a close-up of the action wherever it occurs. Here are two RCA Image Orthicon television cameras used by NBC's New York station WNBT in televising home games of the New York Giants.

RCA

RADIO CORPORATION of AMERICA

give you a new thrill from 16mm. Sound-on-film

For the showing of 16mm. talking pictures in the home, school, church or club—this new improved Ampro "Premier-20" brings brilliant, enjoyable projection . . . rich, natural sound reproduction. Compact, portable, easy to thread, simple to operate. *New Dynamic Speaker* has wide range and adequate power. *Streamlined Carrying Cases*, richly finished in simulated leather, are scratch resistant . . . offer complete protection for equipment. *Many other* special Ampro features of this "Premier-20" bring added thrills, and enjoyment to all 16mm. sound projection.

Write today for complete details and prices on the new Ampro "Premier-20"

AMPRO CORPORATION
2835 N. Western • Chicago 18, Illinois

AMPRO
8 mm Silent • 16 mm Silent
16 mm Sound-on-Film • Slide Projectors
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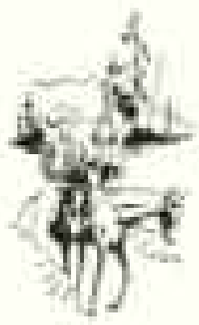
A General Precision Equipment Subsidiary

AWAITS YOU IN

Natural North Idaho

Where majestic mountains, fish-filled lakes and streams, unspoiled primitive areas are tied together with modern highways . . . dotted with friendly cities and intriguing ghost towns. You can enjoy water sports on Lake Pend Oreille, Coeur d'Alene, Priest and other lakes. Rough it in the Selway-Bitter Root primitive area or the Seven Devils Range. See Hell's Canyon, North America's deepest gorge.



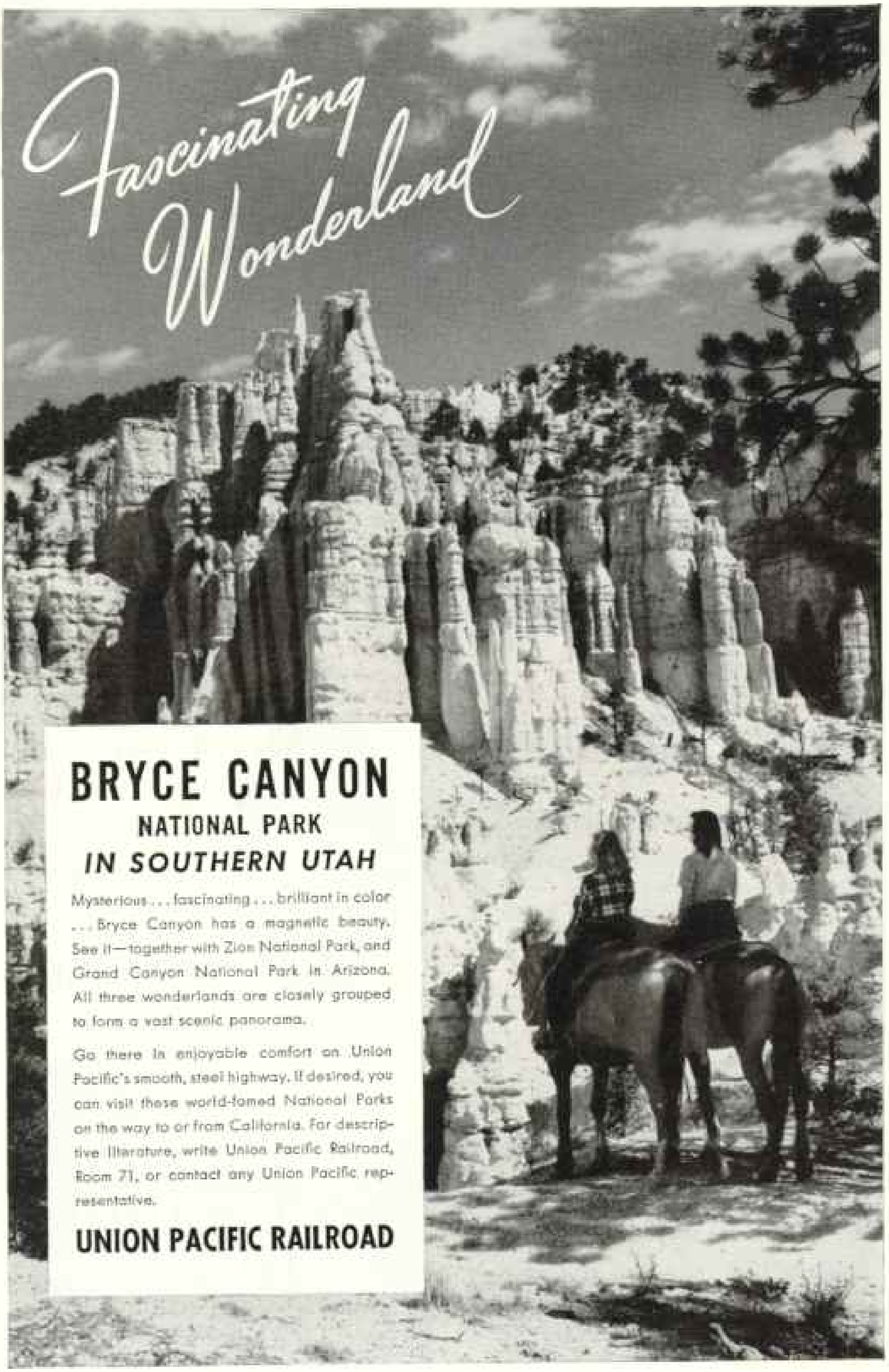
North Idaho Scenic-Land Assn.

Room No. 1, Chamber of Commerce, Lewiston, Idaho

Please send free information on Natural North Idaho.

Name _____

Address _____



BRYCE CANYON
NATIONAL PARK
IN SOUTHERN UTAH

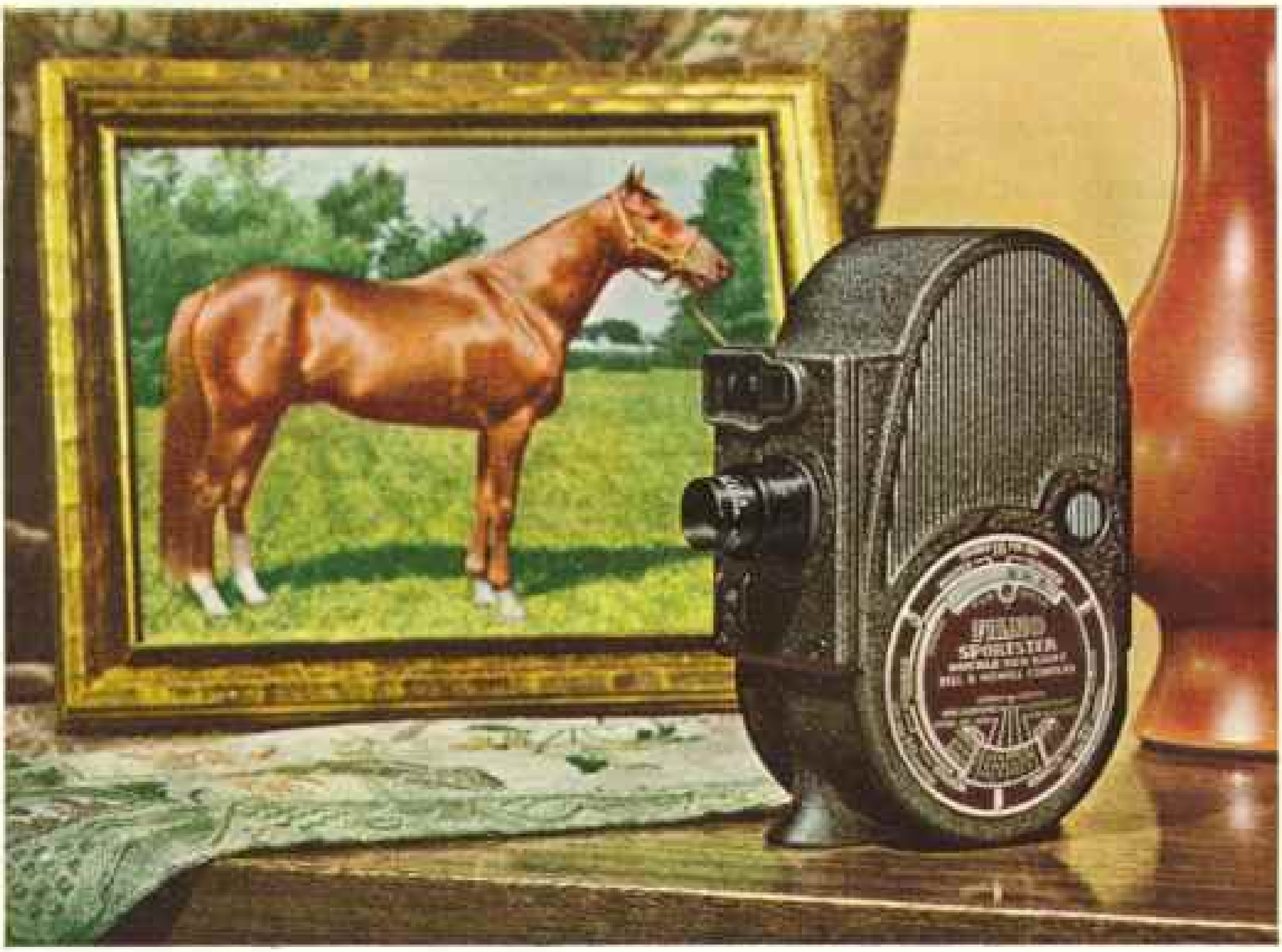
Mysterious . . . fascinating . . . brilliant in color . . . Bryce Canyon has a magnetic beauty. See it—together with Zion National Park, and Grand Canyon National Park in Arizona. All three wonderlands are closely grouped to form a vast scenic panorama.

Go there in enjoyable comfort on Union Pacific's smooth, steel highway. If desired, you can visit these world-famed National Parks on the way to or from California. For descriptive literature, write Union Pacific Railroad, Room 71, or contact any Union Pacific representative.

UNION PACIFIC RAILROAD

FOR *Superb* PERSONAL MOVIES

Filmo cameras prove their superiority on home movie screens, just as decisively as Whirlaway proved *his* on the race tracks. For Filmos have a proud heritage. Born of Hollywood's professional preference for Bell & Howell equipment, they give the discriminating beginner theater-quality results with amateur ease...and offer the advanced enthusiast the versatility he demands. Filmo "bluebloods" include 8mm and 16mm cameras and projectors, and Filmosound 16mm sound film projectors. Bell & Howell Company, 7104 McCormick Road, Chicago 45.



BOTH ARE BLUEBLOODS:

Whirlaway, winner of the Kentucky Derby in 1941. Owned by Calumet Farms, Lexington, Kentucky.

Filmo Sportster, winner in making truly fine movies, in beautiful full color or brilliant black-and-white, on low-cost 8mm film. It's small, light, easy to carry, easy to use.

FILMO SPORTSTER

by

Bell & Howell

IS THE HORSE HERE TO STAY?

Ask any dude at a western ranch. He'll tell you the horse is a great invention! He takes you where cars can't go—down an old buffalo trail . . . to an unfished stream . . . to try your luck at panning gold. Best way to get to the horse: The North Coast Limited. Serving *more* dude ranches than any other railroad, Northern Pacific can take you to one that fits *your* ideas of fun . . . and price. And speaking of horses . . .

Here's 30,000 horsepower! These five new Northern Pacific freight diesels are 200-footers—with ample muscle to hustle mile-long loads at express speeds, or scale mile-high mountains. Working with them on the Main Street of the Northwest are sleek new N. P. passenger diesels, pulling the North Coast Limited. Main Street keeps making news—*big* news to people of the 7 states we serve, to others who visit or do business with the West.

For vacation information, write E. E. Nelson
110 Northern Pacific Bldg., St. Paul 1, Minn.

NORTHERN PACIFIC — MAIN STREET OF THE NORTHWEST

RWAY FURNITURE

for Gracious Living

NORTHERN FURNITURE COMPANY
MAKERS OF BEDROOM AND DINING ROOM FURNITURE
You are welcome to visit our showrooms
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Free!
FOR LIMITED TIME ONLY!

KALART TELLS YOU HOW TO "BEAT THE SUN"

Wonderful outdoor shots need not depend on the position or brilliance of the sun. KALART's "How-To-Do-It" booklet explains in simple terms how to make clear, sparkling outdoor pictures of people, flowers, scenes and animals under true natural conditions, whether the sun is bright or dull, in or out of shade, even in the rain! No expensive, complicated equipment required. This coupon brings you your free copy without obligation.

JUST MAIL COUPON TODAY!

KALART, Dept. NG-6, Stamford, Conn.
Without obligation on my part, please send free booklet, "Synchro-Sunlight."

Name .....
Address .....
Name of my Camera .....
My Camera Store .....

KALART

Copr. 1947, The Kalart Company, Inc., Stamford, Conn.

THIS FALL *join the fun in Southern California!*

In Fall, our "second Summer," celebrations, rodeos and all kinds of festivities seem to start by spontaneous combustion throughout Southern California. It's a time when you can enjoy everything you've heard about here—a vacation time when gay, exciting things are going on.

So plan to join the fun in Los Angeles County and all Southern California *this Fall*. Coupon will bring you full information.

1 FOREIGN QUARTERS ARE FUN . . . the Mexican market place with its Spanish dancers, pottery makers, glass blowers . . . and Chinatowns with their stone dragons, miniature gardens, restaurants, curio stores, and quaint shopkeepers.

2 BEACH PARTIES ARE IN ORDER . . . to the music of Pacific combers on beaches especially designed for sunlazing. In Fall, days are warm and sun-flooded—the water inviting.

3 SWIM IN THE DESERT . . . It's no mirage, that water; just one of many luxurious pools at desert resorts. Get a sun tan while you play your favorite sport or ride the desert trails.

4 NIGHT LIFE IN FULL SWING . . . Screen and radio stars swarm to smart night clubs where you, too, can dine, dance, watch a glittering floor show, hear famous name bands.

5 GALA AND SPECTACULAR SPORTS EVENTS . . . Join the summery crowds at big, exciting football games . . . golf tournaments . . . tennis matches . . . rodeos . . . speedboat contests.

6 "WARNING—DEER ON HIGHWAY" . . . A common mountain scene. Thrill to challenging peaks, jeweled lakes, fragrant forests, alpine blossoms . . . all from superb highways.

WHEN YOU ARRIVE IN LOS ANGELES, VISIT OUR ALL-YEAR CLUB VISITORS' BUREAU, 517 WEST 6TH ST., FOR FREE, FRIENDLY VACATION SERVICE AND COMPLETE INFORMATION.

ALL-YEAR CLUB OF SOUTHERN CALIFORNIA, LTD.

This advertisement sponsored by the Los Angeles County Board of Supervisors for the citizens of Beverly Hills, Glendale, Hollywood, Long Beach, Los Angeles, Pasadena, Pomona, Santa Monica and 182 other communities. Copyright, 1947, by All-Year Club of Southern California, Ltd. —a non-profit community organization serving vacationists.

FREE FOLDER—MAIL COUPON TODAY

All-Year Club of So. Calif., Dept. C-6
629 S. Hill St., Los Angeles 14, Calif.

Please send me your free vacation folder "WHAT TO DO AND SEE IN SOUTHERN CALIFORNIA."

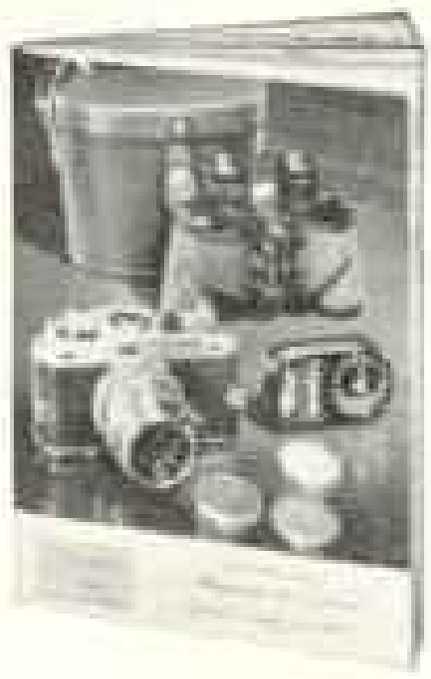
*Name*_____

*Street*_____

*City*_____ *Zone*____

*State*_____

(PLEASE PRINT NAME AND ADDRESS)



FREE

Photographic and Optical Goods Catalog

America's finest moving picture and still cameras and equipment are on parade in this great catalog. 124 big pages (12 in full color) to guide you in selecting cameras, photo equipment, binoculars and other optical goods. Book also contains much material on home movie making — Lighting, Editing and Titling, and on still camera Flash and Color Photography, Developing, Printing, Enlarging. All equipment featured in catalog is available on Wards Monthly Payment Plan.

MONTGOMERY WARD

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Kansas City · Oakland · Portland, Ore. · St. Paul

MONTGOMERY WARD NG647
Please send me Wards 70th Anniversary Photographic and Optical Goods Catalog.

Name _____

Address _____

Post Office _____ State _____

Rich returns will be yours for every hour you spend in Pennsylvania. Our land and our people welcome you to a vacation you will remember lifelong. It will be a glad, gay, go-everywhere time for you.

Everywhere you go in Pennsylvania are things to do and see. Sights and scenes and activities that kindle new zest in living. Places and pleasures that will call you—and your memory—back.

This is the time to visit our 15,000,000 acres of forests. To retrace the footprints of American history in the treasury of countless and famous historic shrines. To see our blossom festivals. To relax in the comfort and conviviality of our famous resort areas. Fish . . . swim . . . golf . . . ride . . . canoe . . . play tennis . . . hike . . . or just rest in hearty content.

Every form of transportation will bring you here. For your motoring pleasure—there are 55,000 miles of improved highways that tie this State into a vacation package for you.

You will prefer Pennsylvania for your vacation. The reasons are many. Write for literature that will make these reasons plain.

IF YOU DRIVE
—DRIVE SAFELY

PENNSYLVANIA

DEPARTMENT OF COMMERCE • HARRISBURG, PENNA.

JAMES H. DUFF, Governor — ORUS J. MATTHEWS, Secretary of Commerce

Penna. Dept. of Commerce, Harrisburg, Penna.
Please send me, free, maps and literature about Pennsylvania's vacation highlights. Dept. N-2.

*Name*_____

*Address*_____

*City*_____ *State*_____

THE O. A. SUTTON CORPORATION
WICHITA, KANSAS

Beginning of a Cool Summer

Happy family—about to enjoy a life-time of even greater joy. For anyone who owns a Vornadofan is in for many hours of cool, fresh billows of air, moving in gentle, swirling currents—but powerfully driven by a new principle of air circulation. No more sitting before an old-style "egg-beater" type of "fan" with its blasts of air, its drafts, and its fuss and bother.

There's a thrill of pride in ownership of a Vornadofan, as any dealer will tell you, not only because of its unrivaled performance but also because it's a thing of beauty.

In snowy mountains or dripping jungle . . .

"my G-E meter *never* failed me"

Writes one camera fan:
"Despite jolting journeys . . . bitter cold . . . sudden snows . . . dust and heat of the Desert . . . and Burma's dripping heat . . . during 3 years' battle service, my G-E meter never failed me!"
Let this user's experience help you make sure of better pictures! General Electric, Schenectady 5, N. Y.

Ask your photo dealer for the

GE Exposure Meter

. . . it's 3 meters in One!

GENERAL ELECTRIC

Eclipse

THE WORLD'S BEST LAWN MOWER

FOR MORE LEISURE TIME THIS SUMMER

This high speed Eclipse mower literally trims hours from your lawn mowing time. It provides the ultimate in quality, craftsmanship and dependability. Enjoy a new realization of effortless motorized mowing perfection. The Eclipse Lawn Mower Co., Prophetstown, Illinois.

• HAND AND POWER MODELS •

The conquest of CANCER is progressing

Last year medical science saved the lives of thousands of cancer patients, and many more might have been saved if cancer had been discovered early.

Chances of cure are best when cancer is treated in the early stages. To detect early cases, there are 3 things everyone should know!

1 What are the "Danger Signals" that may mean Cancer?

1. Any unusual lump or thickening, especially in the breast. 2. Any unexplained bleeding. 3. A sore that does not heal, particularly about the mouth, tongue, or lips. 4. Any changes in the color or size of a mole or wart. 5. Loss of appetite or continued unexplained indigestion. 6. Any persistent changes in elimination.

2 What should you do when warnings appear?

Get medical advice at once! The "danger signals" show that something is wrong, *but they are not sure signs of cancer.* At one leading clinic nearly 9 out of every 10 women who came for examination because they recognized the warnings *did not have the disease!*

3 Why are annual physical checkups important?

Cancer often starts without any warning signals that the patient can detect. Only examination by a skilled physician may discover these "silent" cancers in their early stages. That is why annual medical examinations are so important, especially for older people.

There is progress in cancer research, too!

Today, more and more people are living to older ages when cancer is most prevalent. Cancer still ranks second among the causes of death, but medical science is continually increasing its knowledge of the disease.

While specialists say that the best means known for treating cancer is complete removal by surgery, or complete destruction by X-rays or radium rays, experiments with other methods are constantly going forward. Atomic research has provided valuable new materials for laboratory study of cancer cells. Clinical research and intensive studies in chemistry, biology, and physics also give real hope for the future.

To learn more about this disease, send for Metropolitan's free booklet, 67-N, "There Is Something YOU Can Do About Cancer."

He blew smoke into a dead bear's mouth

THE JOURNALS of John Bartram, botanist, contain much more than descriptions of plant life in colonial America.

Bartram was also a keen student of Indian customs. In writing about his trip from Philadelphia to the Oswego River in 1743, for instance, the botanist set down this interesting story of the way Indian hunters tried to assure themselves of good bear hunting.

As soon as he had killed a bear, the Indian proceeded to make peace with the animal's departed spirit. Placing the stem of his lighted pipe in the dead bear's mouth, the hunter then blew into the pipe bowl.

As smoke from the pipe filled the bear's mouth and throat, the hunter begged the bear's departed spirit not to resent the injury done its body and not to thwart the Indian's good hunting of the future.

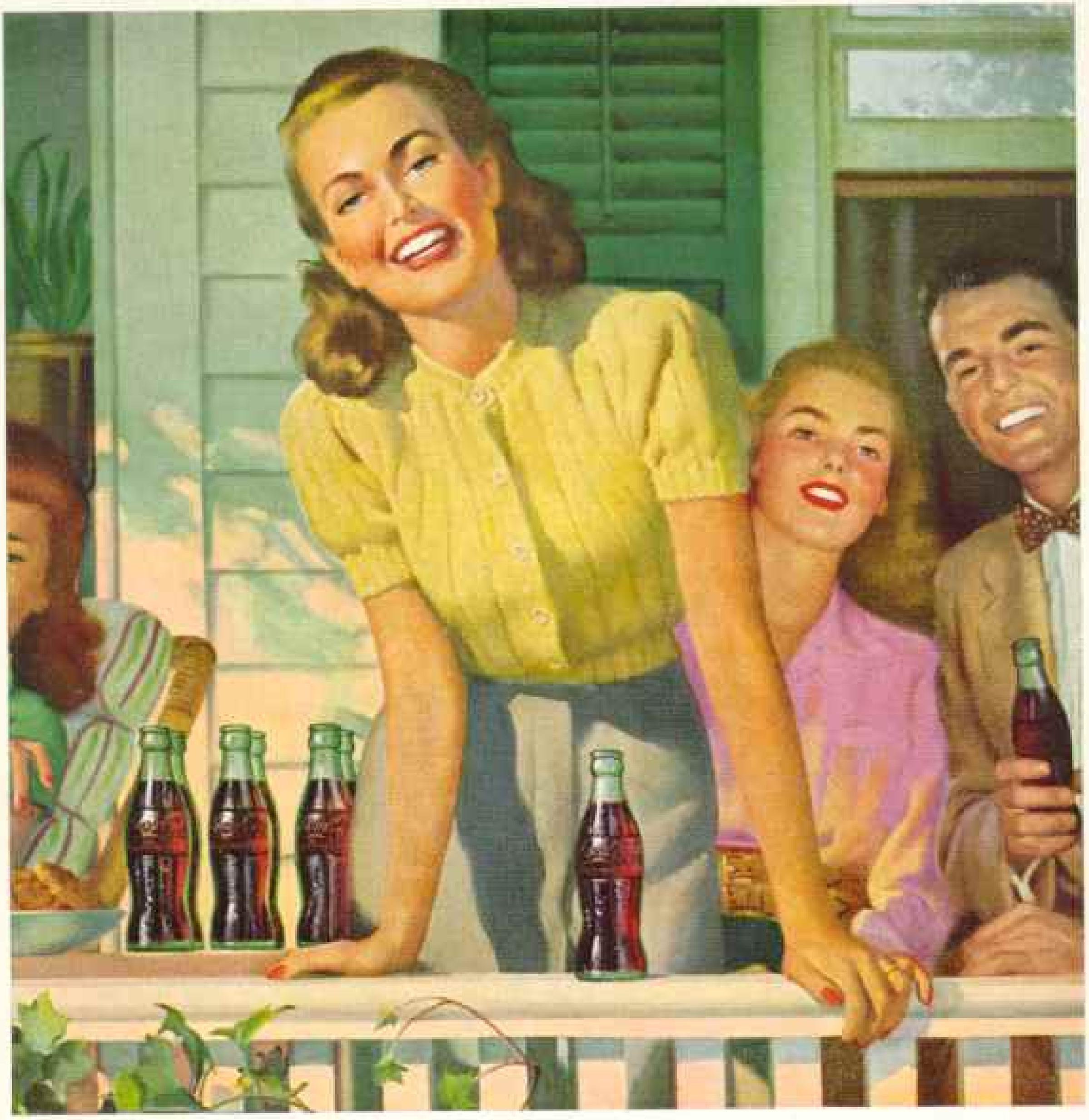
John Bartram's bear story is a good example of man's long-standing desire to shape the future to his own ends. It reminds us, too, that only in fairly recent times has this yearning been satisfactorily fulfilled.

That fulfillment came with the development of *modern insurance*.

Today the financial uncertainties of an unforeseeable future cause little worry to the man whose family is protected by enough insurance of the right kind.

Who's the best person to advise you about how much fire, life, accident, automobile, or other kind of insurance you and your family need?

We firmly believe that person is your Travelers agent or broker. You'll find that he's an expert at helping you plan a future to fit *your* needs.



Come on over...Have a Coke

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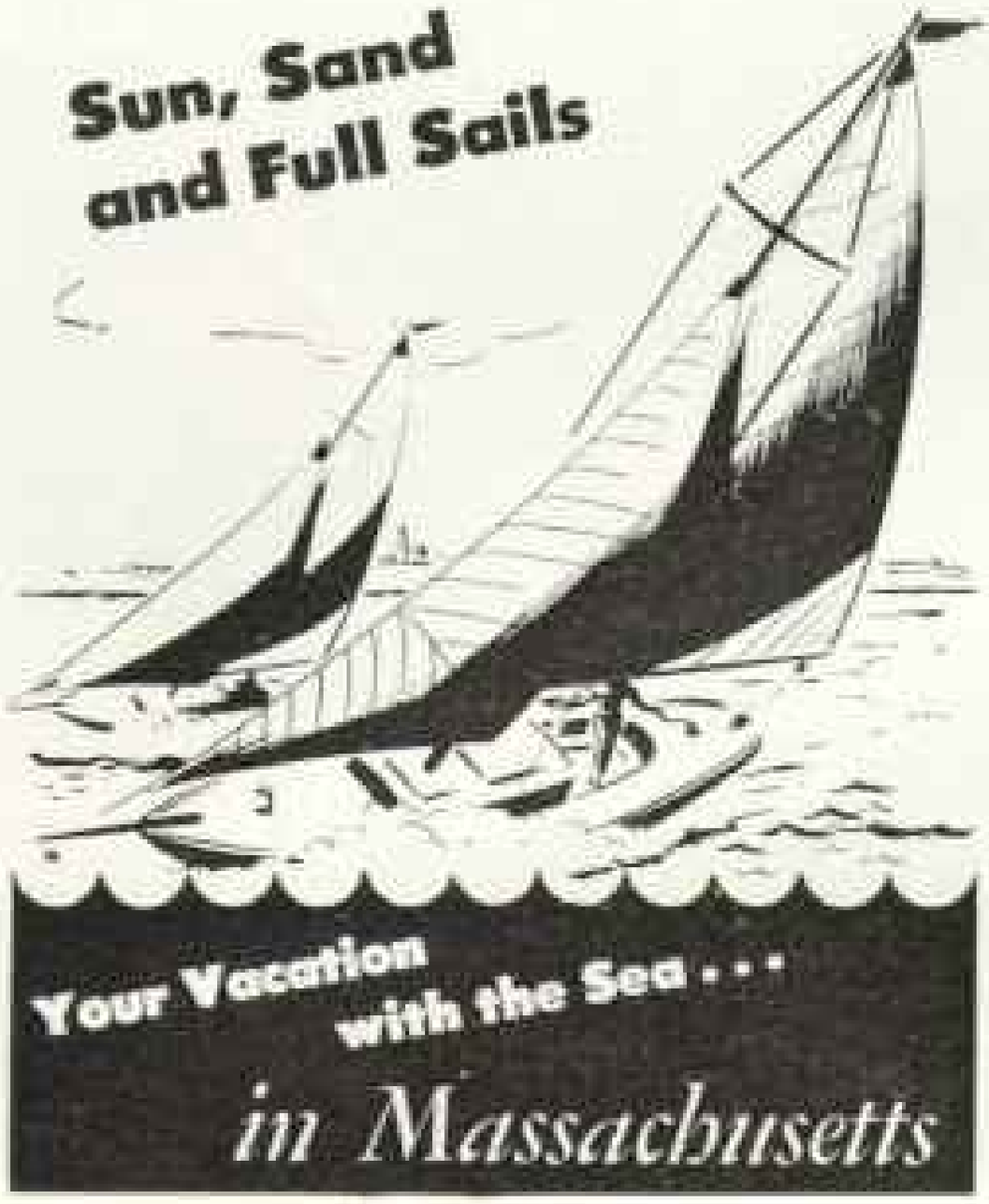

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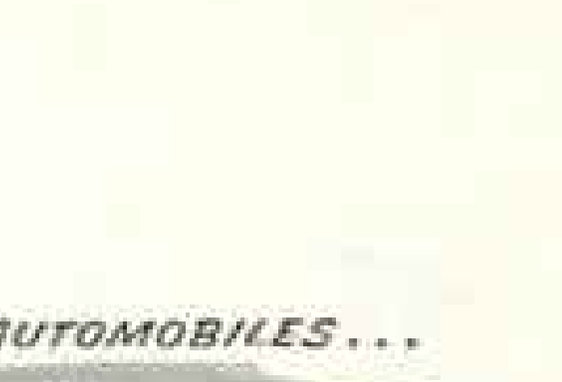

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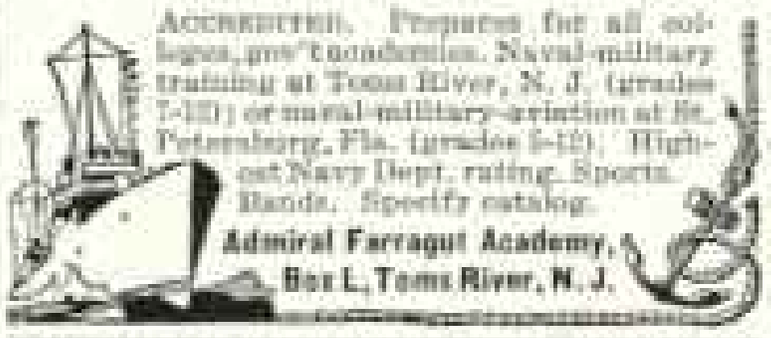

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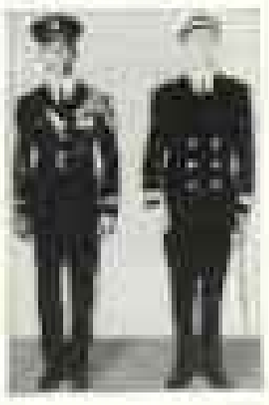

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