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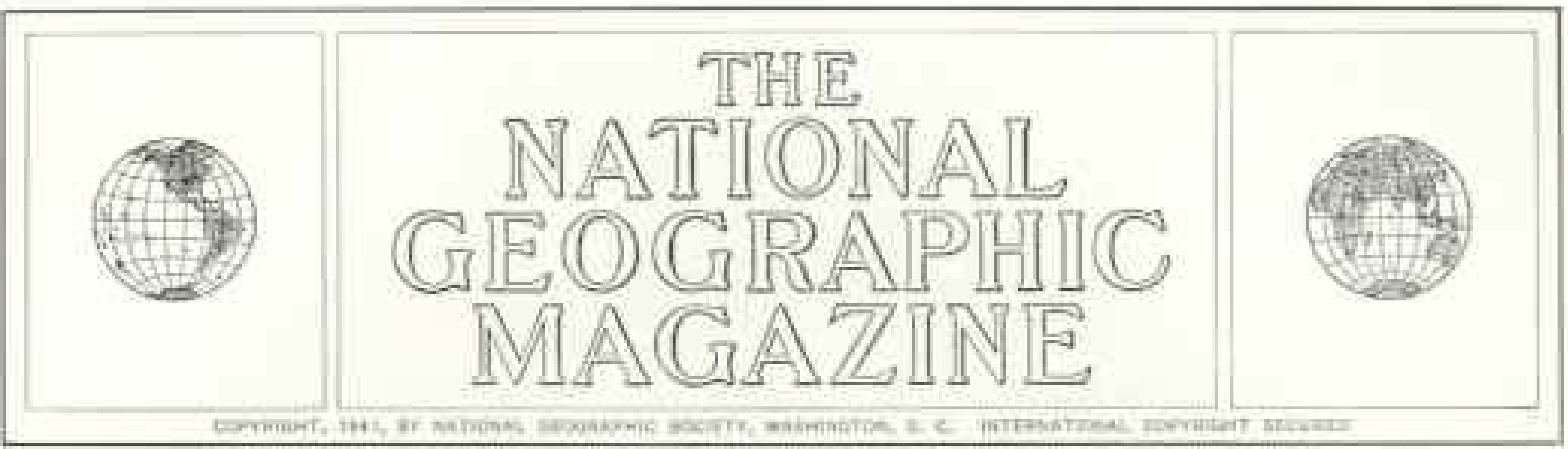


Around the Clock with Your Soldier Boy

By Frederick Simpich

IF YOUR boy was slightly pot-bellied when he joined the Army, he's probably flat as a shad by now, and likes it!

"Six weeks of this drill," said the old sergeant, "will push any man's breast back up to where it slipped down from. . . . And I've seen living skeletons put on 25 pounds so fast you could hear 'em grow, like them elephant's-ear plants in Manila. On Army cooking they sure fatten quick."

The Army itself wants mothers and dads back home to know exactly how it's treating their boy. It repeats that.

From coast to coast, generals in a dozen training camps urged this reporter, saying: "Please write just what you see. We've got nothing to hide. We want home folks to know exactly how Willie, Jimmie, or Clarence is being fed, clothed, entertained, even doctored when he's overeaten.

"Tell 'em, too, what all their boys are learning here besides the business of soldiering; tell 'em what useful arts and trades they acquire, which will make them better citizens, more able to earn a good living when they get home again."

Army Now Training 1,400,000 Men

So, around the clock I went, trying to keep up with your boy. Not so easy, when you figure there are 1,400,000 in training; that each one walks about 10 miles—or say 14,000,000 miles of total walking—from reveille to taps!

Yet there's never a dull moment for Willie—and in a few days it will be "Bill" or he will fight! He took us for a ride in his tank—and he drives it like a Roman chariot. He tumbled us over steep banks, splashed us through creeks, and even pushed down forest trees for us.

He took us up in his balloon, flew his plane upside down for us, let us ride his pack-train mule, fed us at his mess, rustled us a barracks bunk.

Even the Mules Have Gas Masks

We sniffed his mustard gas, and noted how petulant the Army mule becomes when clad in a gas mask. We went with the "jump master" to watch how parachutists quit their planes, and our hearts stopped when one chute didn't open on instant schedule. In sham battle, tanks rushed at us, shooting blanks as they came; antitank guns knocked them over; then "enemy" bombers dived on us, unexpectedly from out the clouds, and blasted us with their practice eggs.

With colonels and many rookies we talked; with cooks, too, with mule skinners, gunners, upside-down flyers—even with a few sweet, much-in-demand but professionally wary Army nurses. "There's only 40 of us," said one with smiling Irish eyes, "and 40,000 men in this camp. . . . And you're telling *me* to watch my step! We *know* 'em!"

To see how boys take it, we got in line with naked men at rookie reception centers. Unless your spare parts such as teeth, eyes, ears, hearts, lungs, playful kidneys, and rusty joints can pass the doctors, you get a ticket home.

Don't ask what ratings we made, but we even took the alpha test and the Army I.Q., all of whose 150 questions, they say, no one man has ever answered correctly! Then we sat down before privates working as Army clerks—some of whom yesterday were actors, architects, and diamond cutters—and got "classified." That means getting put on the big yellow record card that shows every soldier's race, color, previous condition of servitude, education, and training.

Staff Photographer J. Baylor Roberts

On the March, in Camp, or in Battle, Singing Is Part of a Soldier's Life

For centuries military leaders have encouraged national anthems, military marches, regimental songs, and popular ballads, from "Dixie" to "Over There." To its soldiers our War Department has just issued 1,500,000 songbooks. Here a hostess at Camp Shelby, Mississippi, helps the boys in a little barber shop harmony.

They told us to which class of Army work we would have been assigned, had this test been in earnest. I was struck by its fair, painstaking thoroughness.

Each examiner has a book, with a set of questions applicable to different trades. You can't fool them. If you say you're a paper hanger, a tightrope walker, or a lion tamer, after eight or ten questions the Army can tell whether you really are a lion tamer—or a faker.

What does your boy do—the one who enlisted, or was drafted?

What is the Army doing, *for him?*

Seeking answers, this old reporter spent weeks afield. With him went ex-marine J. Baylor Roberts, yclept "Little Joe," staff cameraman—smiling and nonchalant even in the tiny, freezing open basket of a wind-tossed balloon.

"Yes, General," I said, "I do remember when we shot Arizona quail together, when you were a mandolin-playing cavalry lieutenant on the Mexican border during the Carranza revolution. But I want now to talk to the rookie; I want this story from the buck private's viewpoint. So scare up some Harvard Ph.D. who volunteered in your outfit, or a hard-boiled sergeant with five service stripes."

Old Soldiers Say New Army Is Good

"Naw, that's horse feathers!" agreed the old sergeant. "No million men can 'jump to arms before sundown.' Even if they did, they couldn't hit a barn.

"In the other war I saw guys sent up front who'd never even fired a gun. We gave 'em five or six cartridges to shoot at tin cans, till they at least learned how to load and pull the trigger.

"But General Marshall's starting this Army right. Now a rookie barely stumbles off the train that brings him to camp before we shove a rifle into his hands and tell him to commence shooting. . . . Yet, I must say, it's the first army I was ever in where rookies line up to swear to income tax returns!"

The Army has many branches. They range from infantry and artillery to air corps and chemical warfare service. Your boy belongs

Staff Photographer J. Baylor Roberts

Time Out from Field Maneuvers for Lunch in Their Armored Dining Car

No more hardtack and corned beef. Today's field ration consists of canned meat and beans, canned meat and mixed vegetables, cans of soluble coffee, and biscuits. All may be eaten either hot or cold.

to one. Suppose he's a "doughboy," with the infantry (page 18).

Doughboys have made American history. They held Bunker Hill. At New Orleans, in 1815, it was infantry, shooting from behind bales of cotton, that aided Andy Jackson to victory.

Dusty foot soldiers followed Zachary Taylor into Mexico; fifty years later they charged up San Juan Hill. First Yankee force coming to grips with Germans in 1917 was infantry. Doughboys are still the backbone of our Army.

In review recently at Fort Sam Houston the gallant old 9th marched by. I hadn't seen it since the end of the Boxer War, when it was Legation Guard at Peking; it had been among the first to enter the Forbidden City. As its colors were carried by, I lifted my hat with a feeling of nostalgia—or was it genuine sentiment and reverence?

Today the doughboy still marches and fights on foot, but motor trucks ease his bunions. More rookies end up here than in any other branch of the service, because infantry forms such a large part of the Army.

Infantry is, in fact, the Army's main fighting force; it can defend itself on any kind of ground. It's the doughboy, in most cases, who moves into the enemy, gains ground, holds it, and whips the foe.

$85 Worth of Clothes, But No Pajamas

If your boy is a foot soldier, here's what he carries, in combat: field uniform of steel helmet, shirt, trousers, leggings, shoes, underwear, and, depending on weather, raincoat or coat and overcoat—some $85 worth of clothes but no pajamas; a haversack, for his mess kit; cup and canteen; first-aid kit; pack holding blanket, shelter tents, poles, pins, toilet articles; gas mask; intrenching tool; reserve ration; weapon and ammunition.

With a rifle the doughboy carries a bayonet, 136 rounds of ammunition, and a hand grenade. If he carries an automatic rifle or machine gun, he has 180 rounds.

Such packs weigh up to 74 pounds.

At Fort Benning, Georgia, we watched 20,000 rookies, lying prone on their well-filled bellies, firing at targets. Small forest trees behind the targets had been mowed down by the hail of bullets. Some boys, their ears

Staff Photographer J. Baylor Roberts

Proudly He Follows in Dad's Footsteps

Veteran Master Sgt. Henry H. Beck, with 25 years' service, welcomes his son Ray who has just volunteered at Fort Knox, Kentucky. Draft boards report ever-increasing numbers of volunteer enlistments.

stuffed with cotton, worked with machine guns.

"Show me one," I said, "who had never pointed a gun before."

They did. He was from Brooklyn. "He says he's never fired even a .22 in a Coney Island shooting gallery," said his colonel. "But here, look at his score. You wouldn't expect much more from a veteran. . . . No, we can't make soldiers as easily as you cut out paper dolls. But with this intensive training—and no more long, aimless hours marking time on parade grounds—we feel we're going to town."

Some drill sergeants, of course, still bark. Older ones say you've got to be hard and snappy to get discipline and efficiency.

I watched one giving bayonet instruction to a rookie squad. He had a voice hoarse as a sea lion's.

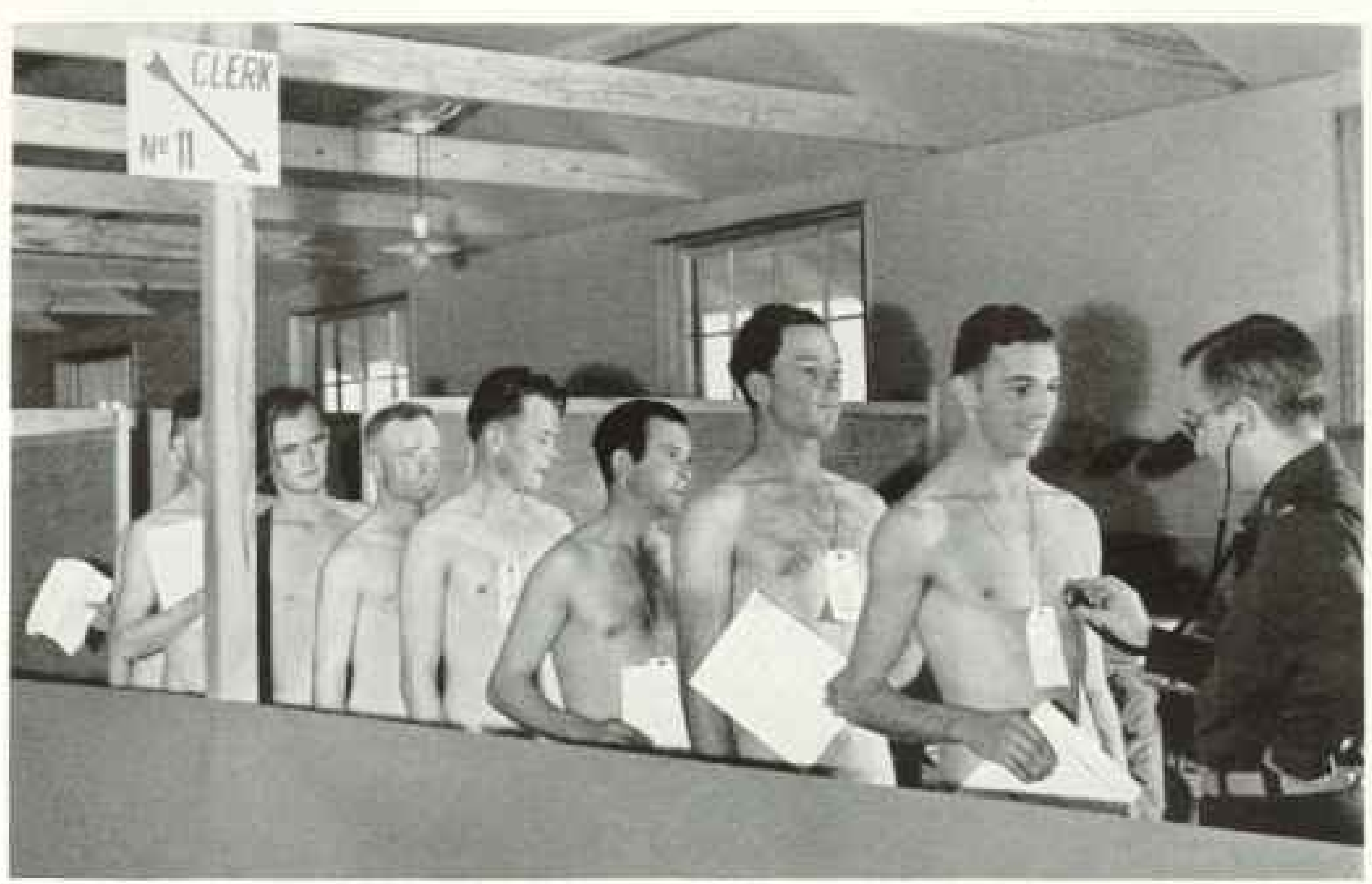
"Ready now—left foot forward—bayonets up a bit. Lunge! . . . Good! That got 'im. . . . Now take a short hold on your weapon — pull your bayonet out, and step back."

One rookie, slow on the pickup, wasn't getting it. At him the sergeant didn't even crook a finger, much less call him by name. But everybody knew at whom the old noncom's withering invective was aimed. I watched the rookie, helpless, red-faced, having to take such a panning before his buddies with no chance for back talk. He got madder and madder. Just when he couldn't have endured it another second, the sergeant let up; he knew just *when* to let up! He broke into a broad grin. "That's better," he comforted. "Tomorrow it'll come easy. Fall out!"

Bulldozing? Yes. Heartless? No. I know that type of old noncom. He respects his officers and himself; he wants to make good soldiers out of these rookies; he knows that means obedience, instant reaction to orders.

Iron Bulls, Steel Turtles, Hell Buggies

Sure, the sergeant has a seal's voice and a line of razzing that infuriates his victim! Yet if that same laggard victim got caught in a burning bunkhouse, this old sour-puss with that same seal voice would be yelling "Stand back!" to everybody else, and he'd be going in himself, alone, to save that rookie. That's the way it is with trained soldiers. That's the kind of man the rookie will make, if his sergeant doesn't fall dead first of apoplexy!



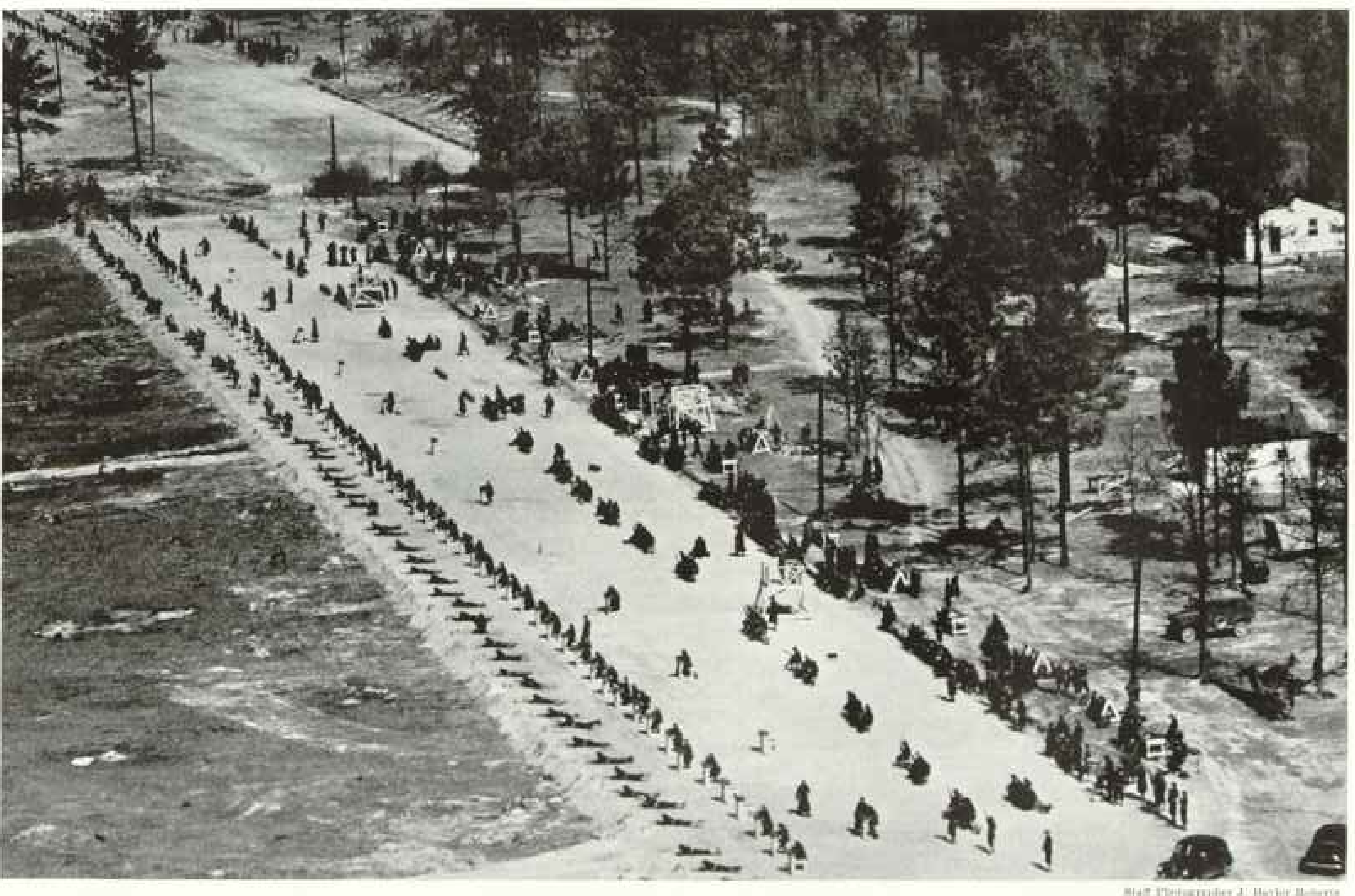
"All the Ills That Flesh Is Heir to" Are Exposed When Army Doctors Examine Recruits

"Only once in a long, long time do we find a boy who's glad his defects keep him out of the Army," said a physician. "Most of those rejected are depressed and disappointed." Wearing name tags and carrying their own physical examination charts, boys face the doctors at Camp Blanding, Florida.

Staff Photographer J. Baylor Roberts

"Rest Your Weight on It So I Can See How Much Your Big Dog Spreads Out"

"And no cracks about my tattoo! You ought to see the guy with a cockfight on his chest, and a pack of hounds chasing a fox down his back." Fitting soldier shoes at Camp Blanding.



Staff Photographer J. Baylor Roberts

"We Stick a Rifle in a Rookie's Hand the Week He Hits Camp and Say, 'Commence Shooting'"

Result: Some young soldiers, after a few weeks' intensive practice, shoot as well as veterans. Here infantrymen of the 9th Division at Fort Bragg, North Carolina, lie prone and fire at targets. Men sitting behind coach them and keep score (page 2).

International News

Welders at Work Recall That Fiery Scene in *Faust* When Goblins Revel on the Brocken While Lightning Plays

These students of aviation mechanics, each with his acetylene and oxygen tanks, are busy in a welding class in the Academy of Aeronautics at LaGuardia Field, New York. Both civilians and enlisted men are taught here. All over the United States, at army posts and in scores of privately owned factories, vast numbers of men are being trained as mechanics, electricians, die makers, etc.

AP from Press Ass'n., Inc.

Antiaircraft Gunners "Get the Feel" of a Bomber Attack

Simulating an enemy, a big army bomber dives low over 3-inch guns set on the beach near Camp Hulen, Texas. One function of these guns, effective up to 15,000 feet and more, is to hold enemy ships so high that they cannot aim their bombs accurately. Wind socks, towed by planes, form practice targets.

Let no skeptic say all Uncle Sam has for a "Panzer Division" is wooden "movie cannon" and blueprints of tanks!

Hardest-hitting, fastest-moving animal in his whole Army now is the Armored Force. Maybe your boy is in "Hell on Wheels," as soldiers call this thundering juggernaut of tanks and guns that smokes up the Kentucky hills around Fort Knox (page 15).

Eighty-four thousand men, or eight divisions, each with 384 tanks, 19,000 weapons, and 2,500 vehicles, will be formed from the nucleus trained here and at Fort Benning.

This force trains men not only to fight *with* tanks, but against them. I got here late one rainy evening. Out on the wind-swept artillery range dummy target tanks drawn by cables raced about the hills. They looked like wild rhinos loping through Ethiopian dusk.

Racing unexpectedly from behind one hill, they would dart for cover behind another. Furiously, the men behind the field guns banged at them.

Groups of mud-spattered artillery officers, their slickers dripping, barked orders as thunder from the skies vied with thunder from the guns.

"Bull's-eye!" somebody yelled, as a shell burst fairly on top a moving target.

"Yes, and that gunner's a brand-new man—and it's hard shooting now, what with darkness, and rain on his sights.

"But we train 'em fast. 'You're in the artillery now,' we tell a draftee. 'That thing there with two wheels and a long nose is a cannon. To shoot it, you pull that cord, called a lanyard. . . . Go on and pull it! Get the feel of it, and hear how the gun barks. Then we'll teach you to load it, point it—and hit your target. By and by you'll learn how to aim at a target you can't even see.' "

Tanks prove the day of trench war is past. They charge, indifferent to bullets and bayonets. Whipping out behind, their waving aerial masts look like the lashing tails of

International News

Mother Earth Quakes When This Giant Speaks

It costs $3,000 to fire one of these 16-inch coast-defense guns. They can throw 2,100-pound shells 25 miles. From this hidden pit, gunners never see the enemy ship. From distant observation posts the target's location is telephoned to a plotting room, whence instructions for aim are telephoned to the gun crew.

"She Said She'd Write—and She Did! That's My Letter Postmarked Kokomo!"

Handling mail in a camp of 60,000 men is harder than in a city because personnel is constantly shifted.

Staff Photographer J. Baylor Roberts

Gun, Blimp, and Truck All Work in Close Harmony

Battery C of the 36th Field Artillery fires this new 8-inch howitzer. Hovering above is the 2d Balloon Squadron's blimp, used to spot artillery fire. Landing beside its mother truck, the blimp changes its motor for an open observation basket; then it is let up into the air on a cable run off a drum in the truck.

U. S. Army Signal Corps, Official

Two More Attractive Features of Life in the Army

Left to right, Second Lieut. Irene V. Offenburger of Columbus, Ohio, and Second Lieut. Frances L. Bryant, from Louisville, Kentucky, both of the Army Nurse Corps. They are on duty at the Army hospital in Fort Knox, Kentucky (page 26).

angry lions. Only cannon can stop them (page 18).

"This Armored Force strikes with a power no mere flesh, blood, and courage can resist," said an officer.

"Our combat strategy involves a spearhead of 10,000 men, firing 19,000 separate weapons, all hurled irresistibly forward by 2,500 armored vehicles tied together by a nervous system of some 600 radio sending and receiving sets."

Napoleon, like our great Civil War leaders, struck hard with heavy cavalry.

Heavy cavalry on wheels is what this force is, plus cannon, airplanes—many things. Spraying hot lead, these tanks rush at you at 35 miles an hour. Their threat to run smack over you is terrifying enough, besides the fact that in two hours each can shoot its own weight in balls and bullets.

"Boys must like tanks to make good drivers," said a sergeant. "Farm boys, used to tractors, learn quickly. Their fathers before them monkeyed with reapers, binders, and model T's, so these kids hang around our shops even on Sundays, asking more questions about the tanks. . . . They make up nicknames, too; that tank with twin turrets they call Mae West."

I felt as if I were lifting the hood of my own automobile and trying to crawl in with the engine when I first let my clumsy self down through a tank turret: machinery all around—radio sets, a cannon, machine guns, steering gear; slots to peer through; and four cramped men, heads padded in crash helmets.

Yell as you will inside a moving tank; nobody hears you. Too loud a roar comes from its radial airplane motor.

Some tankers say they can't even hear the bullets that hit them when, in sham battle, they close shutters and let the "enemy" shoot. Others say they *have* heard—that it sounds like woodpeckers!

Peering from his turret, the commander guides the driver with kicks. Not mule kicks—just smart taps. One on the left shoulder means turn left; right, turn right. On the head, stop. In the middle of the back, go forward. This is because, when a steel shutter is lowered to keep out bullets, but little vision is left to the driver. I quickly saw the value of these shutters because, when we crashed the trees, my shutter was still open and pieces of broken limbs punched in and jabbed at my face.

Staff Photographer J. Baylor Roberts

Veteran Jump Master "Tug" Wilson Can Send 12 Parachutists Overboard in 10 Seconds

Wilson, at left in rear, starts each jumper, whose ripcord is snapped to the line overhead (pp. 13, 14, 15). Jumps are made from 750, 1,000, and 1,500 feet. Before jumping, men throw out "Oscar," a dummy; its chute, opening, shows wind speed and direction. Nobody jumps, for practice, if wind is over 12 miles an hour. These men of the 501st Parachute Battalion wear snag-proof suits. To lessen the jar of landing, their boots have insoles of sponge rubber.

"Tanks are built to kill, not for comfort," said an officer.

Officers flock to this school, especially after they saw what Hitler's tanks did to France's proud army. Their instruction is much broader than that of enlisted men.

Picked soldiers, of more than average intelligence—men who can pass the Air Corps' basic aptitude tests—are also trained.

Fort Knox Armored School Graduates 100 Weekly

Gunnery, tactics, tanks, communications, field engineering, and clerical work—they're all in the curriculum. In each of these the soldier is trained for a particular specialty, such as radio operator, tank mechanic, welder, sheet-metal worker, storage-battery electrician, cryptographer, etc.

Many college professors, on leave, are commissioned as reserve officers and on duty as instructors. Also, among such reserve officers, you meet a Chevrolet plant engineer, a Diesel engine maintenance expert from a noted railway, radio technicians from both Philco and R.C.A., a scientist well known in carburetor work, and many others.

Headphones clamped on, a hundred Fort Knox student rookies listened to dots and dashes, and wrote down the letter groups on practice pads. Beginners receive only four letters a minute. Those more advanced can take 8, 10, 12, and up to 20 letters.

From a central talking machine the messages come by radio. It is controlled, with various speeds for different student groups. In primary work you may hear it say in American Morse code: "Here's the letter A—dot and dash. Y sounds this way—two dots, space, two dots."

U. S. Army Signal Corps, Official

"Jump"—"Jump"—"Jump," Says the Jump Master, and Out They Pour!

At lower right swings a man whose parachute is just opening. Below the plane another man's chute cover is being ripped by the tight line that runs to the plane. From the open door leans another, ready to leap. Should a chute fail to open, the jumper has an emergency one, which is pulled by hand. At Fort Benning, Georgia, the writer saw a parachutist save his life by that means. Behind the plane flies a cargo ship, which drops supplies and equipment.

Boys learn both to send and receive. Some also learn to encipher and decipher, with the aid of Army secret code books and an odd cipher machine.

Such code and radio training, freely given here, will be of enormous value to these boys in later life, in or out of the Army.

Besides this Armored Force, the Infantry, Cavalry, Air Corps, and the Field and Coast Artilleries all have their own systems of communication. They, too, have radio and code schools, in which thousands of recruits are being trained.

The Signal Corps Breeds and Trains Carrier Pigeons

All other Army communications work is done by the Signal Corps. It has built telephone lines and radio stations from Alaska to Panama. It, too, draws its share of volunteers and draftees, many of whom are now coming from our great radio, telephone, and telegraph companies.

That wireless network which ties the War Department at Washington with all corps areas in continental United States, and with Army headquarters in Manila, Honolulu, Panama, etc., is run by the Signal Corps. Every post has a "message center."

To intercept and decode enemy messages is one of the Signal Corps' chief jobs.

With this work the writer was once joined in an international "incident" wherein nocturnal wire-tapping played its part. Some odd messages were caught. In reply to a question from headquarters as to his plans, should America attack, a certain foreign naval officer replied: "On account of the accursed condition of my boilers, I shall sink my ship—and let him save himself who can."

U. S. War Dept., Official

Parachutes, "Life Rafts of the Air," Hung Up for Ventilation at Randolph Field

About 1,000 chutes are in daily use at this Texas flying school. Once every 60 days they must be aired against mold, inspected, and repacked. Specially trained "riggers" care for them. Nobody can ride in an army plane without a parachute. Today parachutes are made of silk, rayon, or Nylon.

U. S. Army Signal Corps, Official

This Tank Crew Shows from What Varied Walks of Life Soldiers Are Drawn

Here, truly, is democracy. Left to right: Harry Ruggiero, Baltimore, stevedore; George W. Edick, recently graduated from a Cleveland engineering school; Sgt. W. R. Brabham, drugstore clerk, Gainesville, Florida; Lieut. T. R. Bruskin, Washington, D. C., newspaper reporter; Roland E. Bundock, Wallingford, Connecticut, bass viol player with a famous dance orchestra. Fort Knox, Kentucky (page 9).

Our Signal Corps also trains homing pigeons (page 16). In World War I a certain outfit, through a long day of battle, waited anxiously to hear from one of its lost battalions.

"They're somewhere out there," said the general, "maybe all shot to pieces. If only they'd send in their pigeons, we'd know where they are, and maybe we could help."

Just then in flew a pigeon. In haste eager men caught the tired bird, unrolled its flimsy message, and read:

"We're busy fighting and tired of carrying this darned bird around."

Realizing the pigeon fancier's age-old dream, the Army is now developing a "two-way" bird, by which questions can be sent and answers received.

At the movie shows you may see fascinating shorts that show soldiers surfboating with hula dancers of Waikiki, hunting sloths in Panama jungles, or flirting with the slant-eyed, split-skirted sirens of Shanghai. The Signal Corps made the movies. That's good enlistment propaganda, the sagacious old corps well knows.

Parachute Rookies Get Most Spectacular Training

You think of Ringling Circus, or the Daring Young Man on the Flying Trapeze, when you watch mass parachute jumpers. A brass band —on the ground—playing the "Blue Danube" is all you need to complete the illusion.

What a full-blooded robustious gang! Said an old warrant officer, "If you ain't too big and fat to jump through a plane's open door, and have enough intelligence and muscular co-ordination, you might join us." That sounds simple; actually, it's a large order—look your fat friends over!

All turning somersaults, 50 or 60 men tumbled across an open field at Fort Benning,

Staff Photographer J. Baylor Roberts

Pigeons Are Trained by the Army to Carry Messages Under Fire

This mobile pigeon loft at Fort Monmouth, New Jersey, houses 60 birds. Mounted on a truck, it is easily moved to maneuvers. Several pigeon fanciers gave their birds to the Signal Corps; drafted later, they happily found themselves assigned to pigeon work at Fort Monmouth, thus reunited with their own birds (page 15). At left is a Wisconsin draftee who indicated on his yellow classification card that he wanted to be a pigeoneer, because since boyhood he had raised and raced pigeons. So here he is!

Over and over they bounced, forwards, backwards, and sideways.

Student parachute jumpers they were, learning how to fall without getting hurt. Later, in actual practice, I saw some jumpers hit the ground so hard you could hear them grunt as they landed a hundred yards away. One got tangled in the shrouds of his chute, was dragged by the wind, and nearly choked. Red marks showed on his neck.

"There's lots to learn about this business," one chutist told me. "Often you'll hit easier if you're swinging back and forth as you land; you can get a better tumble that way."

With "Tug" Wilson, pioneer jumper who has trained scores, we went with the 12 boys into the plane from which they jump (pages 12 and 13).

Commanding here is a "jump master." He sends them out, one after the other, saying, "Jump!"—"Jump!"—"Jump!"

As each man's chute opens, he yells "Geronimo!" In fact, we heard them all yelling and whistling as they went down. It's surprising how far the human voice carries from the upper air.

One jumper's main chute failed to open by the automatic device. He went down, down, and our hearts stopped. All too near the earth—so it seemed even to old parachutists—he pulled the ripcord on his emergency chute, worn in front. It opened barely a hundred feet from the ground.

"That jerked his breakfast upside down, but saved his hide," another jumper said.

We heard later of a chute that caught on the plane's tail and swung the man through mid-air at a dizzy speed for five minutes. Then it came loose and he reached the ground unhurt.

To rate "expert parachutist" a boy must have made six jumps, from heights of 750 to 1,500 feet.

Before anybody jumps, the plane throws out "Oscar," a dummy. His chute shows wind speed and direction. In practice, they don't jump if the wind is over 12 miles.

In war the wind wouldn't stop them. Lieut.

Staff Photographer B. Anthony Stewart

Even Cavalry Horses Wear Gas Masks Now!

Because he breathes only through his nose, the horse needs a mask of special design. Mules, when masked, have been seen to rear up on their hind legs and strike at the mask with their forefeet.

Col. Albert W. Stevens, who has made a jump of over 24,000 feet, told me he once got caught in a high wind and traveled nearly thirty miles before landing.

Best parachutist's fable is that of a jumper who, about ready to pull his cord, suddenly saw in the air before his face a pair of goggles. "Some idiot lost 'em," he reflected. Then he recognized them.

"By golly, they're mine! I must have knocked 'em off when I bailed out!"

So, before pulling his cord, he reached out and retrieved the goggles, which were falling at his own rate. He put them back on and then pulled his cord.

Even after a would-be chutist joins and goes up for his first jump, nobody makes him take his first dive. He can back out once and get only a gentle lecture. But if he balks a second time and still won't jump, they don't even let him sleep in the jumpers' barracks that night. In a few hours he's sent to some other outfit. But nobody ever tells on him.

Many of this month's draftees (July, 1941) will probably volunteer for service in parachute troop units, now being expanded.

Besides jumpers, air infantry is planned. Foot soldiers will climb out after their planes land to support jumpers in action behind enemy lines. To dynamite bridges, warehouses, and power plants, burn military installations, and wreak other demolition will be part of air infantry's job.

Gas Drills and Gas Masks

"We've even got masks for horses and mules," said a chemical warfare expert as he finished trotting his pig-faced masked men on a trial heat through a gas chamber. "They're specially built, since mules and horses breathe only through their noses.

"Some mules, when you first mask them, rear up on their hind legs and strike at the mask with their front feet, as if playing a jew's-harp.

"In our drill we yell 'Gas!' or sound a rattle or siren to warn men that gas is in the air. In ten seconds a man can get his mask on."

Chemical warfare is old. In the Peloponnesian War, Spartans used burning pitch and sulphur bombs. Other ancients used smoke

Bayonets Fixed, Infantry Charges Through Protective Smoke Screens at Fort Benning, Georgia

U. S. War Dept. Infantry School, Official

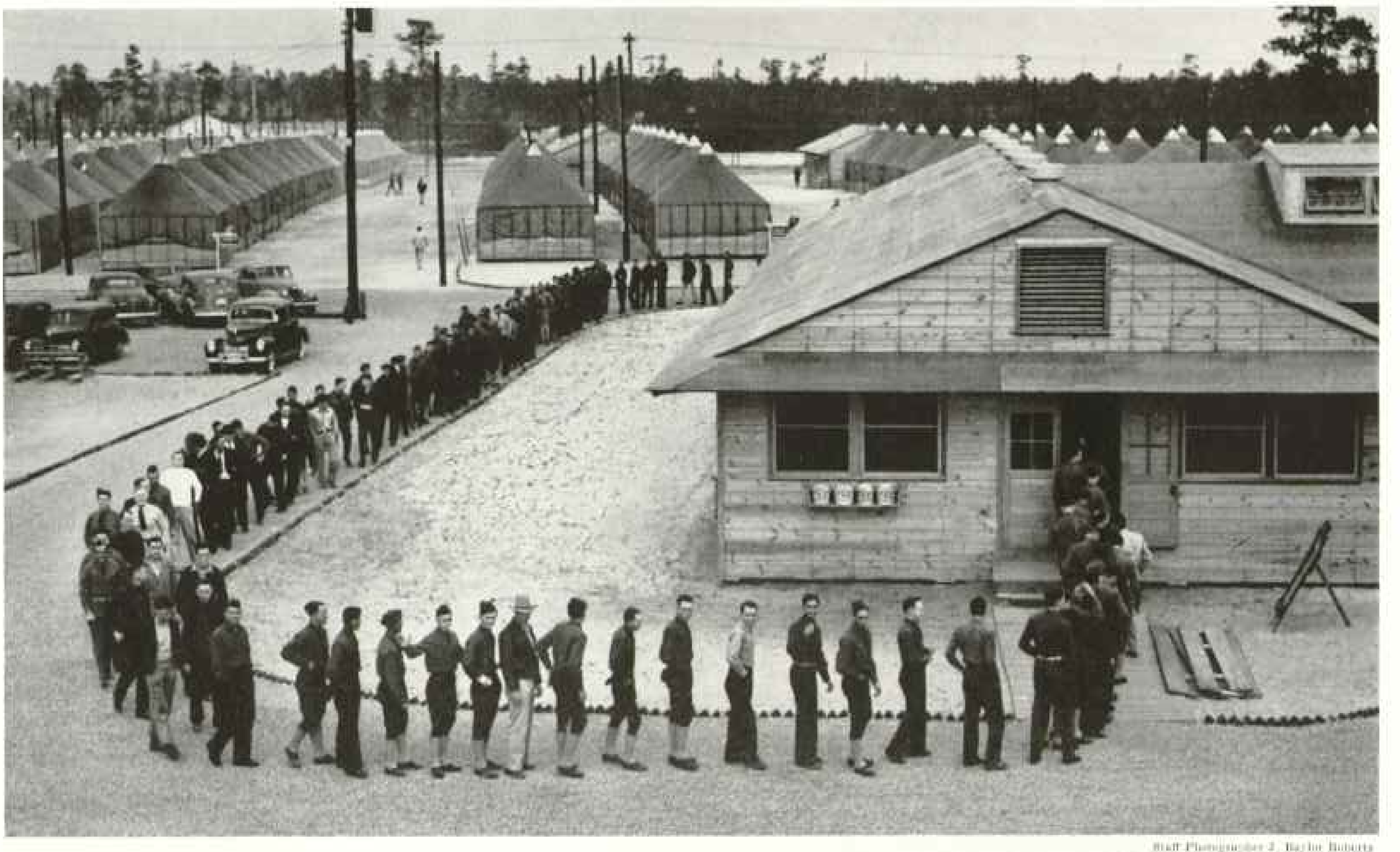
Spectators and Enemies Hunt "a Better 'Ole" When Such an Outfit Charges, Even if Only in Practice!

Second Armored Division roars past General Alvan C. Gillem at Fort Benning, Georgia, while bombers drop bags of flour on rival gun crews seeking to stop the tanks.

J. J. Given

Desert Dust, Smelly Leather, Snorting, Sweaty Horses—How Artist Remington Loved Such Army Action!

From Fort Bliss, set high on barren, dusty hills in the extreme western corner of Texas, troopers of the 1st Cavalry Division go on maneuvers. With machine guns on pack horses and each man with field equipment, they plunge down the rugged terrain. Look how high horses lift their feet out of sand and loose gravel (page 22).



Staff Photographer J. Baylor Roberts

Ready for Their First Lunch with Uncle Sam, Many of These Rookies Are Still in Civilian Clothes—"Cits" to the Old Army

In the mess hall at Camp Blanding, Florida, 750 men are fed, cafeteria style, in 52 minutes. Here the 31st Division, from southern States, occupies half the camp. Across a street is quartered the 43d Division, from New England. Men nicknamed this dividing lane the "Mason-Dixon Line." Vast Camp Blanding is a good example of the new cantonments. With its own waterworks, light plant, and sewage-disposal system; its own branch railroad, paved streets, 3,000-bed hospital, theaters, chapels, and stores; its tailor shops, post office, and camp newspaper with full editorial staff; its own recreation halls and playgrounds, and even its own private Lake Kinsley for 60,000 men to swim in, this camp is indeed a city in itself.

Army

At Fort Oglethorpe, Georgia, the 6th Cavalry Loads Its Mounts into Horse-carrying Trucks, or Portees

Time was when all cannon, escort wagons, caissons, etc., were drawn by horses or mules. Now the army horse rides in comfort, along with the troopers, and arrives rested and fresh. Primary purpose of the portee is to transport cavalry speedily, over good roads, to rough country which trucks cannot negotiate, but where cavalry may reconnoiter. Sometimes green horses balk, throwing themselves wildly about the gangplank. Once aboard, however, they soon quiet down (page 23).

Staff Photographer J. Baylor Roberts

In Kentucky Even Roosters Volunteer for Service with the Fighting Forces

This red bantam stands watch before 1st Armored Division headquarters at Fort Knox, Kentucky. He roosts in a bush beside the door and is fed by the men; here Pvt. Avery Withers tickles the rooster's rosy wattles.

screens made by burning leaves, hay, or grass.

No chemical is more effective than mustard gas, which was discovered about the end of our Civil War.

Our experts refer to their gas weapons as "agents," which they classify in three groups: those which injure human beings; smoke screens; those which start fires.

"We teach recruits to protect themselves against gas in three ways," officers say. "First, by use of masks. Then, by taking refuge in gas-proof shelters; third, by quick flight from any area being shelled by gas bombs."

I saw rookies in line, learning to identify different gases by smelling of bottled samples. Some made them sneeze and weep.

Mustard, however, smelling like garlic or horse-radish, produces no immediate physiological effect on the inhaler.

Lewisite gas smells like geraniums, and makes you sneeze.

Phosgene smells like freshly cut green corn, or silage fodder. It is visible as a thin white cloud. It burns your eyes, tightens up your chest, and makes you cough.

In war phosgene is meant to kill and mustard gas to burn; lewisite does both.

Uncle Sam's Army Still Rides 15,000 Horses

"The horse is obsolete," insists a tanker.

"Oh, no," argues an old cavalryman. "The Germans still use 800,000. The Poles sent cavalry against the Germans in 1939, armed only with lances."

"Sure," agrees the tanker, "and look what happened!"

"Well, maybe—on that level European plain. . . . But what good would your cast-iron turtles be on narrow mountain trails, or in swamps? And America's got 11,000,000 horses to draw on."

"Tanks can go anywhere cavalry can."

So into the night goes the argument.

Staff Photographer J. Baylor Roberts

"Looky, Fellers! They Gave Me a Suit Made for World War No. 1 . . ."

"My collar's full of holes made by moths that died before I was born," said the man in the middle. "I'll write a letter to Mrs. Roosevelt—and my Congressman!" His shirt tail at "half-mast," another struggles into his new uniform. And look at the blushing rookie in his long-handled underwear pulling on his first army trousers! To outfit each man from tie to toothbrush takes 72 different items. For 1,400,000 men, that means over 100,000,000 different things. No wonder the Q.M. has a headache! (Page 27.)

Meantime, Uncle Sam still maintains two divisions of cavalry, with headquarters at Fort Riley, Kansas, and Fort Bliss, Texas (p. 19).

"This is the worst dust storm in Texas history," said a cowpuncher, as we watched a review. Wind howled and swept blinding dust and gravel across the barren parade ground. All orders, bugle calls—even army band music—were drowned by roaring wind.

Troopers' hats blew off and rolled away. Some horses, blinded by dust, turned rump to wind, kicked out of their traces, and fell in tangled harness.

Yet on and on past the reviewing stand galloped the regiments of mounted men, and after them, on and on, rolled the trucks, the cannon, the antiaircraft, engineer, hospital, and quartermaster crews.

From Genghis Khan or the charge of the Light Brigade down to our Civil War feats of Stuart, Morgan, Sheridan, and Fitzhugh Lee, deeds of great cavalry leaders have filled our histories with tales of romantic adventure.

But barbed wire and machine guns have stopped all that. Today's cavalryman is really a mounted rifleman. Spectacular as it was, at Fort Myer or Madison Square Garden Horse Shows, the saber charge is obsolete.

Even the two divisions of regular cavalry use wheels. Their horses ride in trucks called "portees," eight animals to each truck. Today's mounted rookies may haul their horses to some point 300 miles or more from the post; then, when roads get too rough for the truck, they unload their animals, saddle up, and go on. For reconnaissance missions these mechanized horse units are ideal (page 21).

Sorry indeed are results of Army's checkup on American youth. Draft board doctors dismiss up to 45 percent as unfit. Bad teeth are

International News

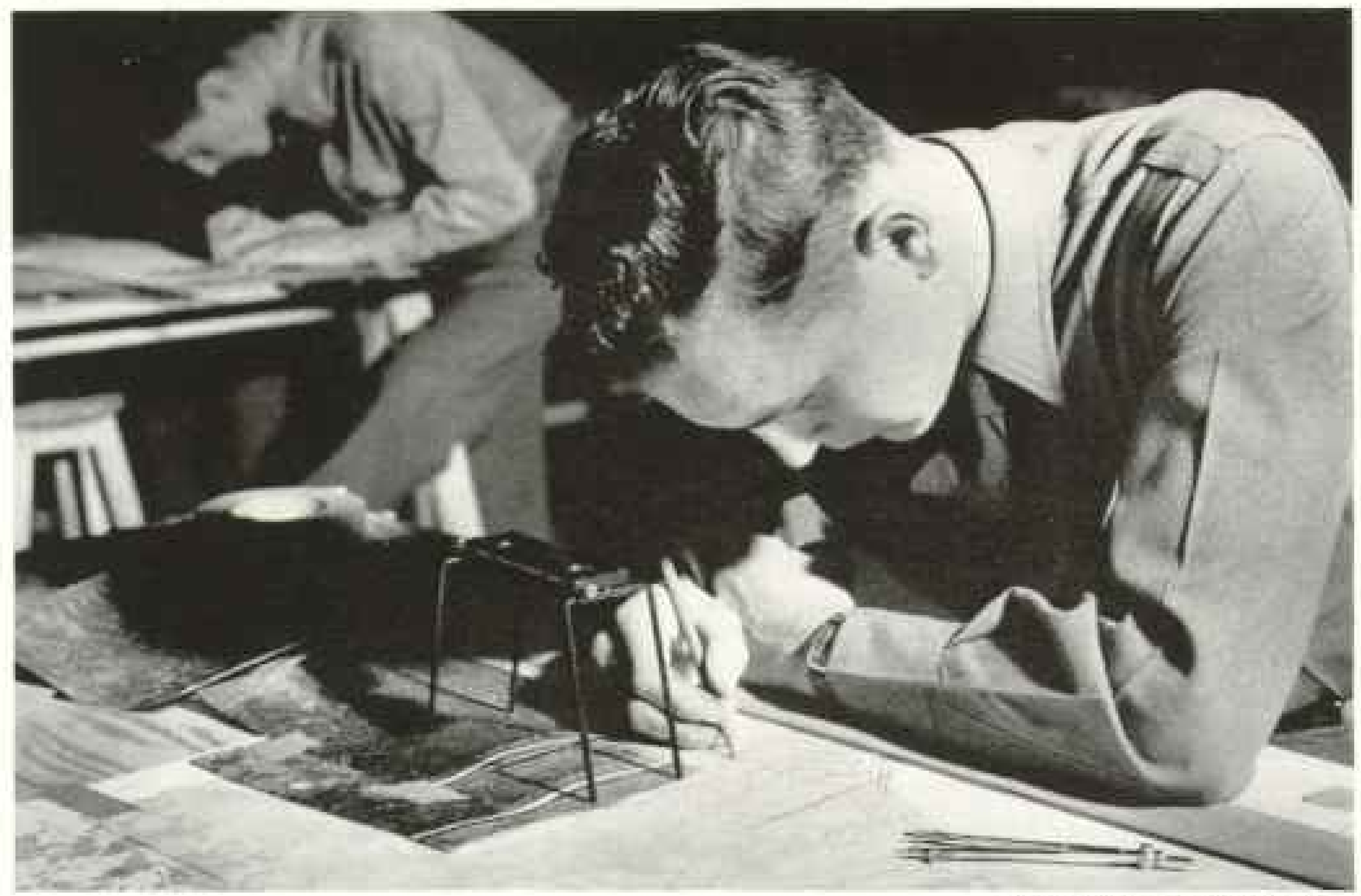
Not a Transport of 1918—But April, 1941

From the Army base in south Brooklyn, 3,000 men have just boarded the transport *Washington*, former Atlantic liner, for service in Panama, Hawaii, and the Philippines. Besides military posts in Alaska and Puerto Rico, the Army now also sends garrisons to its newly acquired bases in Newfoundland, Bermuda, and the British West Indies. Badly needed are more ships for the Army Transport Service.

Wide World

Soldiers Hold on for Dear Life as Their "Jeep" Car Hurdles a Rough Spot

Towing a 37-millimeter 900-pound antitank gun, this midget car—a "Jeep" in army slang—rushes into field maneuvers. A coupling invented at Fort Oglethorpe hooks the gun to the car.



Staff Photographer J. Baylor Roberts

Map Drawing Is Among the Many Arts an Army Rookie May Be Taught

This young soldier belongs to the 4th Division Motorized Infantry at Fort Benning, Georgia. He is correcting a topographical map, aided by air photographs viewed through a stereopticon.

Staff Photographer J. Baylor Roberts

"Sure It's a Fine Gun, and a Nice Goat, But What We Need Is Practice Shells"

From Biloxi, Mississippi, to Camp Blanding, Florida, came Battery F of the 114th Field Artillery. Perched saucily on the muzzle of a "155" howitzer is Billy, the mascot.

the chief defect. Then, at reception centers, Army doctors reject another 15 to 18 percent of those certified for selective service by the local boards. So, in the end, only about half the men of draft age are accepted by the Army.

"If war comes," I asked a general, "what will we have to do with that 50 percent that went home?"

"Cure some of them and make them fit to fight, or work as clerks, or put them in labor battalions. We'll have to if we need that man power."

"Too many young Americans sit in grandstands and *watch* baseball, football, tennis, or boxing," declared an Army doctor. "More of us should get out in the fields and *play*—as the English do."

Some Camps Have Hospitals with 2,000 to 3,000 Beds

Once a boy is sworn in, however, the Army's first big aim is to keep him well. Clear across America, great training camps contain fine, well-equipped hospitals, with anywhere from 1,000 to 3,000 beds each.

First thing a soldier learns is to keep his quarters neat and clean. Sanitation, first aid, personal hygiene, go hand in hand with military courtesy, discipline, drill, and gunnery.

At Fort Bliss I complimented a veteran mule skinner on the spotless condition of his company lavatory and showers.

"Flies just naturally accumulate wherever you have horses and mules," he said. "So in self-defense we use screens, and keep everything extra clean. If a guy is sent to this outfit who won't do his part, we take him to the cleaners, *muy pronto*. . . . I've noticed for twenty years that no matter how sloppy a rookie is, or how he scatters his stuff around the floor, the men soon work him over. In a few weeks he'll be neat and tidy as an old maid."

Medical, dental, and nurse corps are all part of these big Army hospitals. In snappy uniforms these nurses, who may rank from second lieutenant up to major, add a fine touch of feminine color (page 11).

Selectees by the hundreds now learn pharmacy and the skilled duties of hospital attendants, working with the Army Medical Corps.

Staff Photographer J. Baylor Roberts

To Insure Pure Water for Camp Is Among the Army Engineer's Many Responsibilities

Here the engineer school at Fort Belvoir, Virginia, has set up a portable water-purification unit and a canvas storage tank. Capacity of this purifier is 15 gallons a minute.

So parents needn't worry about their soldier son's health. He gets more careful, constant medical attention than he would at home. Even dietitians figure out his meals for him!

Into vast camps go 75 to 100 carloads of food a day. The Army even has its own schools for cooks and bakers.

Fresh fruit and vegetables, milk and butter, are bought locally wherever possible. In this work expert buyers from the Department of Agriculture are detailed to help the Army quartermasters. This plan insures fresher, greener food and distributes more cash among farmers near camps.

A soldier's daily food is called his "ration." It now costs about 46 cents a day and is going up.

Walk through storerooms at any big camp; see the shelves of canned goods, cube sugar, spices, coffee, tea, and cereals; the bins of vegetables, and the iceboxes full of good beef, mutton, and poultry; smell the hot bread in the kitchens, and cakes and pies turned out by the cooks! One Louisiana outfit had a noted French cook with it. His reputation spread so fast that hordes of men from other outfits surged over to sponge off his company and enjoy his French cooking.

All food is bought by the Army Quartermaster, or Q.M.

What a Stupendous Task the "Q.M." Has!

Biggest merchant in America now is the Q.M.

Army camp population almost equals that of Nevada, Arizona, Delaware, Wyoming, and Vermont combined.

Camps have miles of buildings; also, each has its own paved streets, waterworks, sewage and light plants, theaters, cafes, and stores.

Of beds, pillows, sheets, dishes, pots, pans, towels, telephones, etc., the Q.M. has bought enough to equip 1,400 hotels accommodating 1,000 guests each.

Handed your boy, when he got to camp, was a kit of 72 different articles, from tie to toothbrush. What astronomical heaps of soldiers' things the Q.M. will have issued by 1945, when it's figured 4,000,000 to 5,000,000 boys will have passed through training camps!

Compare today's well-fed, well-dressed, and warmly housed American soldier with Wash-

Staff Photographer J. Baylor Roberts

Like Plebes at West Point, Newly Arrived Randolph Field Cadets Must Take a Hazing

Here in the messroom you see newcomers perched on the outer four inches of their chairs. After official designation as flying students, these boys get primary flight training in Government-approved civilian schools. Then Army schools take them—a three-year course in all. Graduates are commissioned in the Reserve.

ington's freezing, famishing men at Valley Forge!

Today's rookies ride to camp in Pullman cars. Their beds have sheets and pillowcases. For breakfast they get oranges, cereal, hot cakes, bacon and eggs, and coffee. Contrast them with Winfield Scott's men, who landed at Veracruz and disappeared into Mexican wilds to live on beans and jerky.

Compare a year's training for today's youth with what our ancestors suffered to found and defend this country!

We can raise that $17,000,000,000 this training is to cost. What a lot of money, for *any* country! They say if a printing press had started making dollar bills at one per second the day Columbus discovered America, and had kept running ever since, it would still be about three billions short of the sum named.

Army Eats a Cow Every 54 Seconds!

Even now, with only 1,400,000 men, it takes a potato field of nearly 70 square miles to feed this Army during its year's training.

It's eating 580,000 head of beef cattle a year, which is a whole cow every 54 seconds, day and night.

Cans of vegetables it eats, stacked one on another, would make a pile 8,962 miles high!

Already, for your boys, the Q.M. has bought 23 square miles of khaki cloth; 8,000,000 pairs of shoes; 53,500,000 pairs of socks; 15,684,828 pairs of pants; more than 20,000,000 shirts, besides 113,000 motor trucks and 25,000 trailers.

Always the Q.M. has to plan far ahead; he has to foresee every eventuality, and make his plans flexible to meet it.

To get enough trained men to do this big job, the Q.M. has to maintain his own schools. Today he has 10,000 selectees training at Camp Lee, Virginia, and 6,000 students at Fort Warren, in Wyoming. In all, with specially trained reserve officers as teachers, instruction is being given to 38,000 soldiers for work in the Q.M. Department.

Biggest real estate dealer on earth is the Q.M. Land used now for camps, hospitals, Army shops and warehouses, and Air Corps

Staff Photographer J. Baylor Roberts

Coffee Tasters Curl Their Lips Over Sample Drinks in a Q.M. Depot

Growls, long and loud, come from officers and men if camp coffee is weak and pale. To get good beans, well roasted, is the Quartermaster's job; to keep it strong is the company cook's duty. In this San Antonio army coffee laboratory samples are made from different berries. Tasters couldn't possibly swallow one cup after another; hence the colossal cuspidors close at hand!

projects amounts to nearly 4,000,000 acres, or an area bigger than the total land and water extent of Rhode Island and Connecticut.

Think what a headache Army lawyers on the Judge Advocate General's staff must get, seeking options, purchase contracts, and sound titles for so many different tracts of land! This Judge Advocate General, incidentally, has an interesting job, and a small army of lawyers works for him. He told me that about fifty years ago fully half of all officers and men in the Army were being court-martialed every year; now such trials are rare.

Enlisted men are no longer prosecuted for filching a chocolate bar from the post exchange, swiping a buddy's tobacco, or punching his nose. Now company commanders settle most such family quarrels.

Minus Ordnance, We Couldn't Even Start to Fight

No fancy pants or flashy parades for the boy who lands in the Ordnance Department. Yet he's the man behind the man behind the gun. His job is to supply guns and ammunition. He handles the bullet for your .22 rifle, or a one-ton shell for a monster coast-defense gun.

To do its work, the ordnance branch needs the help of armorers, instrument repairmen, welders, electricians, machinists, chemists, toolmakers, munitions workers, gunsmiths, and artillery experts.

Soldiers may be trained at ordnance training centers, or in the ordnance schools at Aberdeen Proving Ground, Maryland, and Raritan Arsenal, Raritan, New Jersey.

Imagine all a rookie must learn! "Ordnance" handles every tool of war, from pistol to siege gun—some 2,500 separate items of more than 250,000 different parts!

Besides guns and ammunition, this branch also deals in tanks, armored and scout cars, bombs, range finders, fire-control devices, and pyrotechnics for signaling.

Kipling's *Barrack Room Ballads* hold the same salt and spice you find in American Army camp life.

The rookie tackles any theme from poetry to prophylaxis.

Soldier Doings and Dialogues

"Our vet works on sick horses just like on people. He pulls their teeth, and gives 'em blood transfusions. He's got a big operating table. I've seen him slam a sick horse on that, get out his knife and fork, and, boy, does he go to town! I've seen him scatter horses' insides all over the shop, then put that critter together again just like working a puzzle."

* * *

It was in Chemical Warfare's stockroom. The company wag didn't know it, but the mild-mannered clerk was, in civil life, a college professor.

"I just bought a Mexican burro," said the wag, as his buddies edged up to hear the fun. "What kind of a gas mask you got that'll fit him?"

"Variations in the asinine skull are unpredictable," said the clerk softly. "Is your animal prognathous or brachycephalous?"

"Says what?" muttered the wag as his buddies roared, and that was that!

* * *

"Where's that wagonload of old shoes going?" I asked.

"To town—to a contractor who repairs 'em all for the post."

"How do you get your own back again?"

"We don't! We jump on the pile and work down till we find two that look alike."

* * *

Old sergeant, to rookie: "No! No! I said phone the school for cooks and bakers—not crooks and beggars!"

* * *

It was the night of payday. Twenty thousand rookies swarmed in from camp to see the town.

Men half deaf from long hours of rifle firing crowded into a shooting gallery, to pay to shoot still more—at clay pipes, moving ducks, and white rabbits. Others swigged every drink from pop to goat's milk spiked with vanilla extract.

"How much do the soldiers spend on pay nights?"

"Well, say $5 to $10 each."

"You mean the 20,000 in town tonight may spend $200,000?"

"Sure. In my dump here I've taken in $2,600 since noon. In one day I sold 360 harmonicas."

"What else do they buy on paydays?"

"Cheap jewelry, and pillow covers with sentimental texts, to send home. Postcards, musical instruments, cameras, anything. That money burns 'em."

* * *

Strolling, alert, his club swinging, came an M.P.

"Do you pinch many?"

"Naw—unless they get hard. . . . Us older men look out for 'em. When I see one the worse for wear, I usually dig up his fare and put him on the camp bus. Less trouble than dragging him to the hoosegow."

* * *

From a boy, sprawling on his bunk: "This paper says, '60,000,000 rolls of flypaper sent to Camp Jackson. . . .' Who's down there drawing all them flies?"

* * *

"Is that a free-for-all, out there?"

"No, jujitsu—Japanese snake-dance stuff. Officers teaching infantry hand-to-hand fighting, same as police self-defense. They show you how to dodge a knife or club and disarm a prisoner. All kinds of kicks, trips, and strangle holds. Boy, does that leave you black and blue!"

* * *

"Here's a good one," resumes the bunk reader, still sprawling. "It says an Albany draftee named Columbus drew number 1492!"

"No stuff!" grumbled another. "Who thinks up all them gags?"

"Yeah? Well, here's another says if 1,400,000 soldiers get turkey on Thanksgiving, that'll equal one turkey weighing 700 tons!"

"Sure, one high as the Methodist church! Our big howitzer couldn't even knock his tail feathers out!"

* * *

"Did you hear about the guy just joined us that used to make fancy patterns for wall paper? They got him drawing maps."

Nut letters to the general include one which says: Why not recruit dogs from city pounds? Tie on each one's neck a bomb, to resemble the brandy keg carried by life-saving St. Bernards. Let each dog be radio-controlled; send them into enemy territory, and explode these bombs by radio!

Schools to Train 30,000 Pilots a Year

Flying across America, near every airport you see the sky full of small, yellow practice ships. Youth has found its wings.

Army planes startle the countryside. "Family life of my turkeys is all shot," muttered one farmer. "When planes fly over, they set up an awful cackle and take to the air themselves. One flew to the top of a haystack and wouldn't come down till dark. They think

U. S. Army Signal Corps, Official

Earth-bound Men Speak to Sky Riders by Portable Field Radio

Miracle of modern communications is the Army's radio, by which tanks, trucks, gun crews, planes, balloons, all may report to headquarters. One man turns a generator crank to make "juice." Smaller outfits carried by one soldier are known in Army slang as "walkee-talkees." Maneuvers near Biloxi, Mississippi.

Staff Photographer J. Baylor Roberts

Not Even a Stygian Stream Can Stop the Army Engineers

At Fort Belvoir, Virginia, Engineer troops practice with assault boats. Used for combat, and to establish bridgehead positions in hostile territory, the tubby craft are nested like plates and moved up by truck. Each squad carries its boat to the water's edge.

Staff Photographer J. Baylor Roberts

Who Says a Soldier's Life Is Dull, Lonely—That He Never Meets Any Nice Girls!

Leave it to the doughboy! Be he jitterbug, rug cutter, or just a "good egg with a line," he'll make out. Besides, near every big camp, local lodges, schools, and churches throw open their doors to soldiers. Here at Camp Shelby the 37th Division plays host to a girls' club from Hattiesburg, Mississippi.

U. S. War Dept., Official

Flying Cadets, Perfect Physical Types, Model the Latest in Flying Togs

It gets bitterly cold high up in the air—even over Randolph Field in sunny Texas; hence the fur-lined flying suits, huge moccasins, and warm gauntlets. Left to right, these smiling, dauntless lads are: John A. Hensler, Ocean Park, California; Norman L. Hirst, Los Angeles; William S. Watrous, Chicago; Cary A. Griffin, Glendale, California; and John D. Johnson, Stillwater, Oklahoma.

Staff Photographer J. Baylor Roberts

Ropes Weave Fancy Figures Against a Texas Sky

Temperamental army mules are blindfolded while their packs are being lashed. Here the men are throwing the Nagle hitch. This stout and wily beast belongs to a Fort Bliss, Texas, pack train. Led by a bell horse, usually white, these mules carry ammunition, supplies, and sometimes small mountain guns.

the planes are hawks, and go wild with fright."

I've seen cattle herds run almost out of a county, stampeded by planes. I've been in planes myself that zoomed them, just to see them run. Now such horseplay is forbidden. Thinking pilots don't do it.

From March Field, California, bombers go away over to empty Mojave Desert, where their exploding eggs can worry only the Gila monsters and other lizards.

From Barksdale Field, Louisiana, they fly down to the Gulf of Mexico to shoot. Even there fishermen complain. They say a bomb kills fish 500 yards from where it splashes.

"We're improving," said a bombardier. "But don't believe that stuff about us being able to drop a bomb in a barrel from 15,000 feet up! Though they do say we've unnerved Texas hens to the point now where they fly over their nests and try to *drop* eggs into them!"

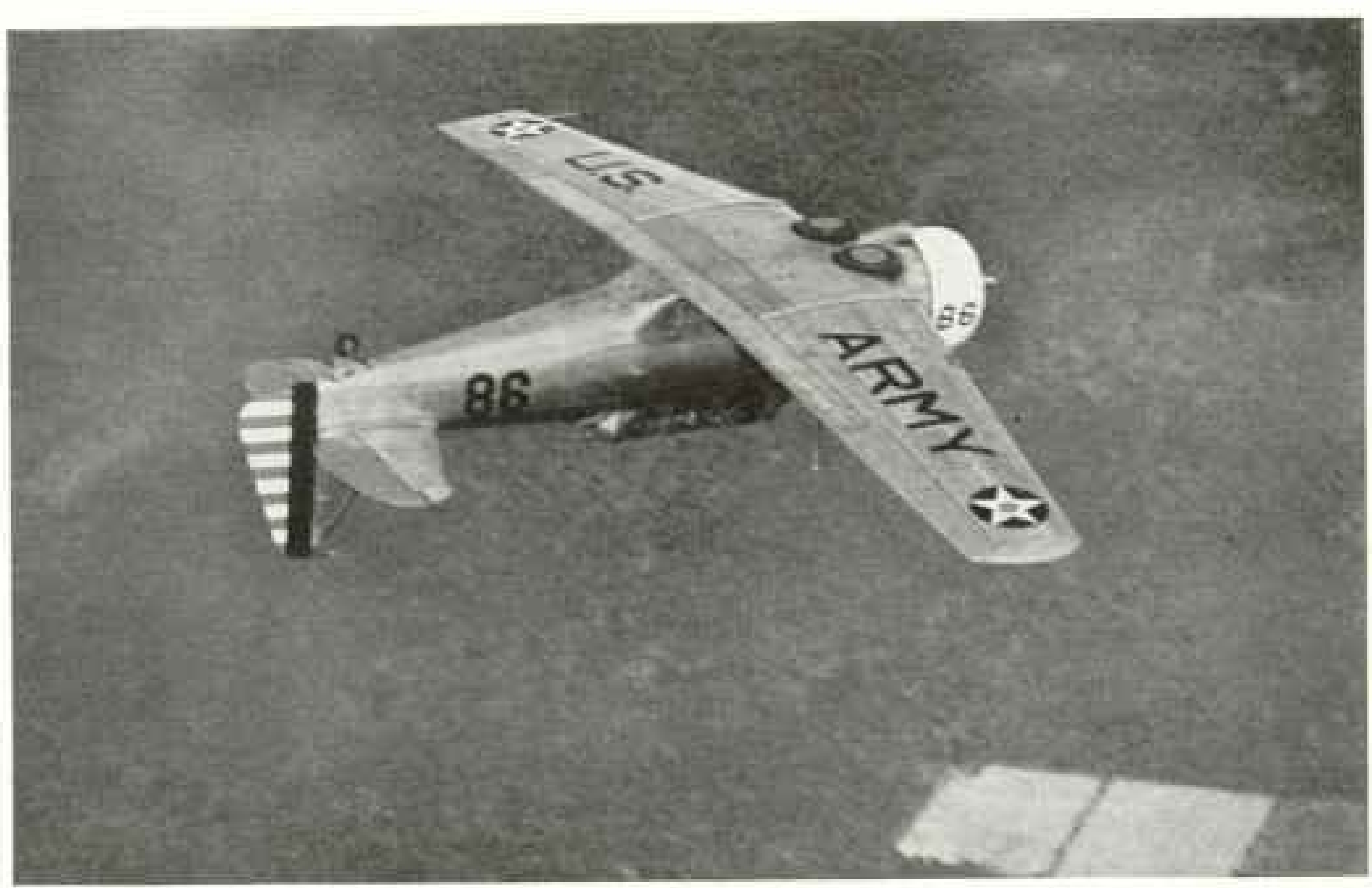
At San Antonio I asked a pilot to fly past us, upside down, so Little Joe could picture him that way. He obliged, and told this story: "X, famous stunt pilot, one day in the clouds overtook another plane. Sneaking up, X flipped over as a prank, flying upside down, and passed the other machine—still in thick clouds (where anybody can get the vertigo). In consternation, thinking now that *he* was upside down and didn't know it, because X must be right side up, the other man flipped over, too—and so X left him literally up in the air!"

To fly, your boy must take primary training in civilian schools. Two years of college, or its equivalent, is required of candidates. Those who "pass" from civil schools go to Randolph and Kelly Fields, at San Antonio, Texas; graduating here, they're commissioned in the Air Corps Reserve (pages 28 and 33).

More schools, enough to train 30,000 pilots a year and 100,000 mechanics, are being set up. The country hopes ultimately to produce 50,000 or more planes a year.

Favorite air school joke is to send new men on a goose chase for a bucket of "prop wash," this being the air fanned to the rear of a plane by its propeller. Greenhorns mistake prop wash for a cleaning solution for use on propellers.

These cadets take no thought of the morrow. They don't worry about how or whether our industrial system can absorb them when



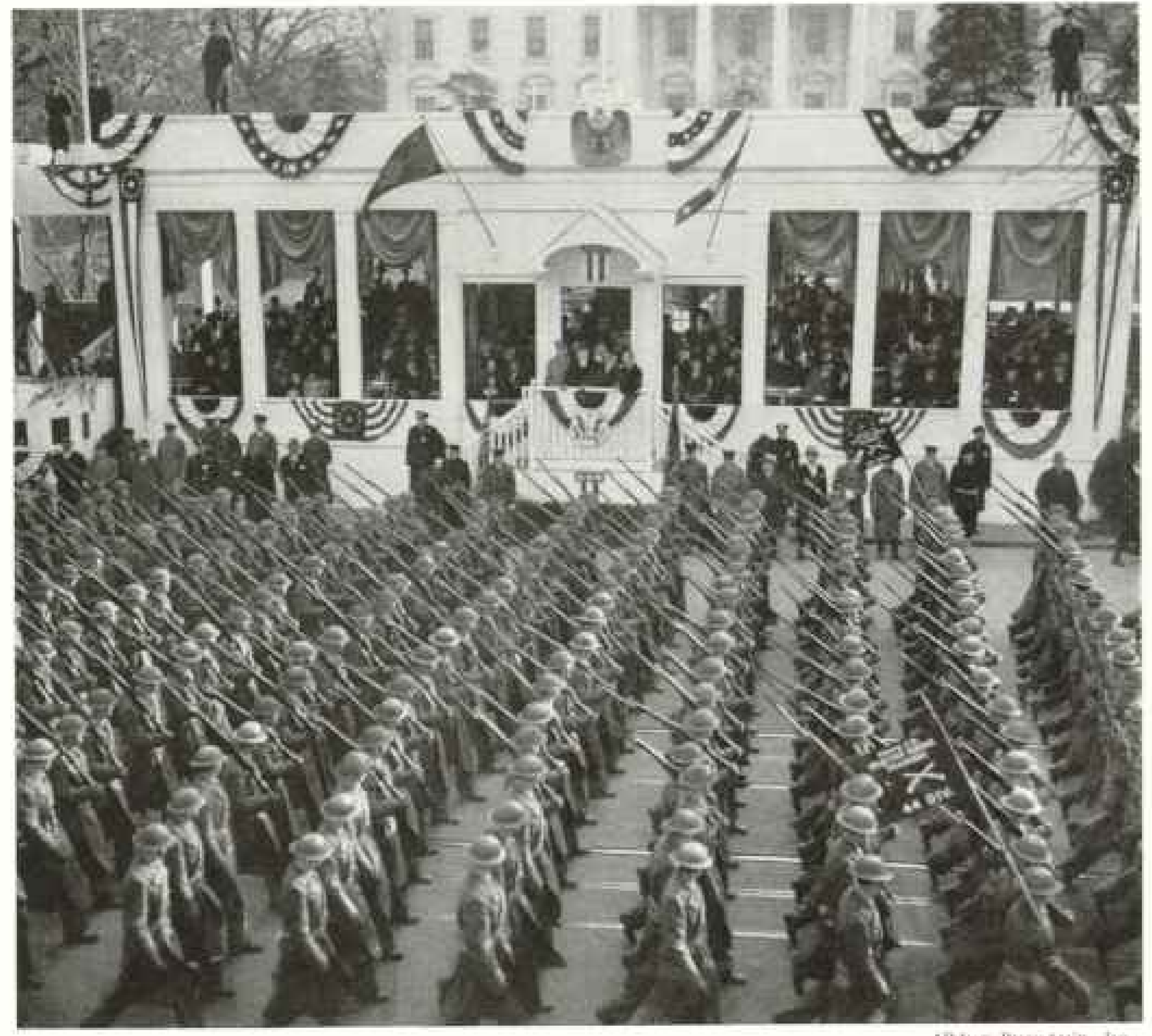
"Can You Fly Upside Down?" We Asked. "Sure," He Said, and Flipped Over

Here he is, his wheels folded up like a duck's feet. Major William L. Kennedy at Kelly Field polishes up flying cadets who have already finished the freshman course at near-by Randolph Field. Below, yet over his head, he looks up at Texas!

Staff Photographer J. Baylor Roberts

After a Hard Day on the Target Range, at Night They Pay to Shoot Some More!

It costs a nickel, with this electrical device, to fire imaginary bullets at an imaginary airplane. But how they like it! Marksmen of the 47th Infantry try their skill at a Fort Bragg, North Carolina, post exchange.



AP from Press Ass'n., Inc.

Newly Drafted Soldiers Parade Before President Roosevelt at His Third Inaugural

These trainees of the 12th Infantry, in tin hats with bayonets fixed and combat packs, get in step just a few yards from the White House reviewing stand. Their guidon reads: "Prov. Co. Selective Service Trainees, 44 Div."

this emergency is over. They live for today. "When they get too crazy to fly with any other living human in the plane with 'em," I was told, "we make pursuit pilots out of 'em." A "dodo" is a flying cadet who has not yet soloed.

This itch to fly affects oddly assorted men. Look at the enrollment at Randolph Field: actors, chemists, radio skit writers, a glib-talking tobacco auctioneer, a Walt Disney studio artist, a swing band drummer, a swimmer from Billy Rose's Aquacade, a forest ranger, and even a statistician!

Some get washed out; a few want to quit, but can't—they're "in the Army now." Some want to stay in as a career. But the majority want, eventually, to work into commercial airlines, if not as pilots then as executives.

"I could have stayed in Chicago and courted the other fellow's girl," said Lieut. Johnson Beyer of Randolph Field. "My high number wouldn't have been called for months.

"But I'd finished college, and like flying. So I joined up. At home I paid $15 an hour for flying lessons. Here I get paid for learning. To own a plane like I fly here would cost me $40,000.

"Here we're taught flying, navigation, meteorology, radio, etc. Privately, that course might cost $2,000.

"If and when this emergency ends, I'll have something to sell when I seek a job in commercial aviation. Yet some mistaken folks back home think we're wasting our time in the Army! . . In lots of ways, this 1941 army is the world's biggest college."

In the Pennsylvania Dutch Country

By Elmer C. Stauffer

TRUCKS, buses, and pleasure cars flash over the Lincoln Highway between Philadelphia and Lancaster. The bustling county town slows their progress, but they soon whiz on, west-bound toward York.

In two or three hours this swift stream of traffic streaks a route that six-horse Conestoga wagons used to labor along for days. It goes through a garden spot of America—rich farmlands tilled for generations by folk here born and bred and everywhere respected as master farmers.

Lincoln Highway (U. S. Route 30) is the base of a triangle in southeastern Pennsylvania formed by Philadelphia, York, and Bethlehem. Within this region roughly lies the Pennsylvania "Dutch" country, the subject of my story.

Slow-moving creeks wind through broad, fertile limestone valleys and lose themselves in clumps of wood or disappear under covered bridges. Tremendous red barns tell of fat farms; geometrical designs are painted on many. Often red, too, are the dozen-roomed brick farmhouses mothering their broods of low-built springhouses, smokehouses, chickenhouses, and pigpens.

Sturdy split-rail fences bound fields of tobacco, wheat and corn, potatoes, and pasturage.

"People from Another World"

Not a few motorists, however, fail to keep the speedy pace on entering this land of plenty. They slow down as boxlike, horse-drawn wagons pass. In the so-called "cheese boxes" bearded men in black broadbrims and their bonneted wives with long, full skirts prompt the comment: "Why, they look like people from another world!"

So they are; and another world all our Pennsylvania German Land seems. Approach it from any direction, and you are conscious that here the earth is rich, towns and villages neat, farmers industrious and orderly, brick churches red and frequent, taverns old and crowded with dormer windows.

Over the door of his cottage Francis Daniel Pastorius, leader of the first band of Germans to come to Pennsylvania, wrote an inscription in Latin which I have translated rather freely:

> Sweet and pleasant breathe the breezes
> Round my bothy in the glen;
> But they wait no words of welcome
> To the godless and profane.

Such always has been the spirit of that people who for more than two and a half centuries have given color to the hills and vales of southeastern Pennsylvania—the Pennsylvania "Dutch," to use the popular term.

On the sixth day of October, 1683, six weeks after Pastorius had landed, the "good ship *Concord*" arrived at Philadelphia, bearing "thirteen heads of families" and their wives. There is no trustworthy record of the number of children. Weavers they were, and other artisans, Mennonites and Quakers by faith, many of Dutch ancestry, attracted to Pennsylvania by the earnest preaching of William Penn. They chose for their home a spot then in the remote wilderness, now the twenty-second ward of the city of Philadelphia, but still called Germantown.

The colony grew so rapidly that six years later it was compelled to incorporate. But, alas, men willing to hold the offices could not be found; Pastorius, who became its first mayor and chief citizen, had to impose a fine upon any elected officer refusing to serve. We are still like that! Most Pennsylvania Dutchmen consider public office a burden.

Eleven years later arrived a band of mystics led by Johann Kelpius. A platform of celibacy collapsed when the charm of Germantown's daughters undermined the ascetics' lonely life in caves. Only Kelpius continued his hermit ways, praying alone in his rock-bound chapel.

European wars, with privations and sufferings, and political and religious persecutions sent more Germans to the New World in 1709. The next year ten ships loaded with 3,000 refugees cast anchor in New York Harbor.

Most of the immigrants settled in the valley of the Mohawk, especially along the Schoharie. But reports from happy compatriots in Germantown led 300 families to abandon farms and homes, float down the Susquehanna to the Swatara, cross the divide, and settle in the Tulpehocken region of Pennsylvania.

The Amish and Mennonites

Soon came others fated to grow in numbers and influence among us—a trickle of Amish and still more Mennonites, from Germany and Switzerland. Having landed, they decided to go so far into the wilderness that "the world" would never follow. They chose the Pequea Valley, about 60 miles inland, and established their homes. Here the eighth generation still lives, often on the very farm the original member of the family cleared. And such farms as they are! (Pages 42, 46, 58, 62.)

The German Baptist Brethren, known as

Staff Photographer Harrison Howell Walker

From the Steeple, Trombones Sound Over Bethlehem

Ninety years ago a trombone choir first played at an Easter sunrise service of the Central Moravian Church in this Pennsylvania city. The custom has continued ever since. Immigrants from Saxony founded the congregation in 1741. The present church was built in 1803 (opposite page).

Dunkards or Dunkers, landed in 1719. They, too, flocked to the fertile valleys in Lancaster County. Many spread westward and southward until today hardly a farming section of our country is without these master farmers.

Among the Brethren appeared, in time, Johann Conrad Beissel. He founded a group that considered Saturday the true Sabbath and observed it as a holy day. Settling at Ephrata, they established a thriving monastic group.

The colony has virtually disintegrated now, but the "cloisters" of the enterprise still stand, a spot of interest to visitors (page 70).

Coming to Pennsylvania in 1734, the Schwenkfelders settled in what is now Montgomery County, but particularly in the valley of the Perkiomen. Since then, they have lived here to add their bit to the color and character of our region.

Among the last of the "sects" to arrive, though far from small in numbers, were the Moravians. In 1735 a group migrated to the new American colony of Georgia, but moved north to Pennsylvania later. They purchased an immense tract of land on which the town of Nazareth now stands.

Here the Moravians established their industries, a dozen in number, and began their extensive and influential missionary work among the Indians.

The "redemptioners," too, formed a large body. They came as the result of the operations of shipowners and land speculators. These gentlemen found it profitable to lade the holds of their ships with bulky goods and the decks with passengers. To accomplish the latter, they advertised the glories of Pennsylvania. A circular shows a lad sitting on the bank of a stream, herding geese; the longer one looks at the woodcut illustration, the more geese he sees.

Staff Photographer J. Baylor Roberts

After Church—Homeward Bound for a Pennsylvania Dutch Sunday Dinner

"Seven sweets and seven sours" may round out a bountiful meal for these members of the New Mennonite Church at Bareville, near Lancaster. Sweet pickles balance sour pickles; pickled eggs and red beets offset ginger tomatoes. Other items besides the heavy main course may include rhubarb or strawberry jam, apple butter, chowchow, spiced peaches or pickled red cabbage (page 65).

Staff Photographer Harrison Howell Walker

Ushers Serve Sugar-coated Buns and Coffee at a Moravian Church "Love Feast"

"Many men in Pennsylvania own five hundred geese," avers the subscribed legend. "Bison peer from the forest; giant deer stalk the woodland lanes; two hunters stagger beneath the weight of a wild turkey; rye-heads of prodigious size vie with beets and cabbages of tremendous proportions; and fish struggle to impale themselves on the hook."

The Promised Land of William Penn

Ships groaned with those seeking plenty in the woodlands of William Penn. Many passengers, however, lacked the necessary fare. Such the shipowners brought as redemptioners. These men and women agreed to work for any persons to whom the shipowner should sell them, until they had earned their passage money.

Many were unskilled workmen or farm laborers—but not all. Witness this placard once displayed in Philadelphia:

> There still remain on board the ship *Aurora* 18 passengers amongst whom are servant girls, sugar bakers, bread bakers, 1 shoemaker, 1 silversmith, 1 leather dresser, etc. . . . also for sale are 80 water casks, 1 chest of fowling pieces, and 13,000 bricks.

The migration made a tremendous drain upon the young male population of the cities in the Rhineland. The burgomaster of Berne feared a feminist uprising. To prevent it, that worthy hired a schoolmaster to present arguments against going to Pennsylvania.

"What is the gain," declared his booklet, "of large heads of rye in a land lacking smiths to make sickles, or the grain itself in a land without millwrights to build mills, or bison if no gunsmiths can be found to keep the guns in repair?"

As a result, numerous young Swiss mechanics arrived.

Their Barns Are Red; Their Dress Drab

Of the sects to settle the Pennsylvania Dutch country, Mennonites, Amish, and Dunkards stand out prominently today for their determination to cling to a simple way of life. Because of their plain clothes and rigid adherence to customs of two centuries ago, they are known collectively as the "Plain People." By their magnificent farms and drab dress you will know them. They keep their barns, homes, and other buildings brilliantly painted, often in red, yet wear black or gray clothes.

The Mennonite sect takes its name from Menno Simons, a Dutch priest, though the views of these people originated in Switzerland. The principal tenets of the Church include nonresistance, nonswearing of oaths, nonparticipation in civil government, nonbelief in infant baptism, and seclusion from the world. The Church still holds foot-washing rituals and baptizes by pouring or sprinkling.

About 1693 a Swiss Mennonite, Jacob Amen, felt that the Church was slipping away from the rigid doctrines laid down by Menno Simons. With sympathizers Amen formed a group known as the "Amish." They virtually bent backwards to return to the original articles of faith.

Buttons gave way to less "worldly" hooks and eyes. Hair grew long about the men's shoulders. Their upper lips were clean-shaven, for a mustache was then the mark of a soldier. Married men only were allowed to grow chin whiskers.

The Amish costumes of both men and women remain much the same today as those of two and a half centuries ago.

Even among these hard-working, hard-living, hard-praying folk differences led to divisions of the Amish sect. Broadly, there are two principal branches: House Amish (Old Order), and Church Amish (New Order). The former hold religious services in homes and barns; the latter have church buildings.

Beards and Bonnets of "Plain People"

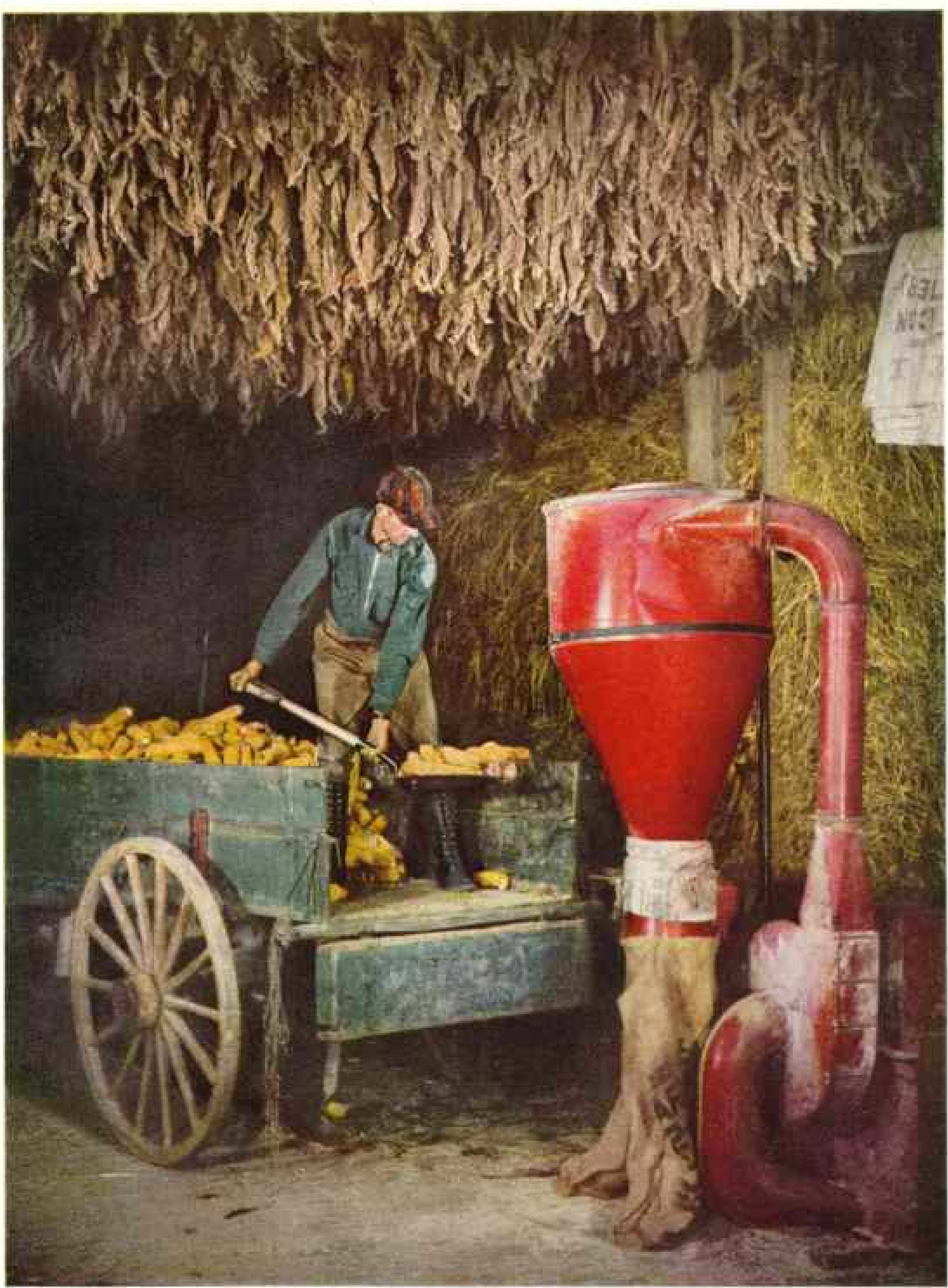
House Amish use only horse-drawn vehicles (page 74). They scorn such modern conveniences as electricity and telephone. Church Amish drive automobiles, may have their homes wired for light and telephone, and wear less drab clothes than the Old Order.

The Dunkards, or Dunkers, literally dipped into religion and their names through baptismal procedure. They practice trine immersion; that is, baptism by submerging three times in a stream or river—once for the Father, once for the Son, and once for the Holy Ghost. They refuse to bear arms or engage in quarrels, take an oath, or conform to many worldly ways.

Now, if you meet Plain People on a country road or city street, how can you tell Amish from Mennonites or from Dunkards?

Easiest to distinguish are the Amish. Amishmen's hats have the flattest crowns and broadest brims; theirs are the bushiest and longest beards. Amish women's bulky bonnets cloak their heads almost like hoods; skirts, full and wide, fall to the ankles. Amish children are sartorial replicas of their parents (pages 57, 60, and 61).

Between Mennonites and Dunkards you will have more trouble. After months in the Dutch country, many persons are still unable to tell a Mennonite woman from a Dunkard. Both have small, black bonnets on the backs of



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Kodachrome by Harrison Howell Walker

Gobbling Up Corn, Cob and All, a Hammer Mill Grinds Out Livestock Feed

Grain grown on this Pennsylvania Dutch farm near Mount Joy nourishes steers which produce the best fertilizer for tobacco. Some leaves are hung up in the barn to dry for several months, but most of the tobacco fills a large shed near by. Mows well stuffed with straw supply cattle stables below.

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Kodachrome by Harrison Howell Walker

Mellow as a Medieval Flemish Canvas Is This Pennsylvania Landscape in Autumn

Everywhere in the Pennsylvania Dutch country the soil is wisely and well tilled; barns, farmhouses, and other buildings all gleam as if painted only yesterday. Here in the vicinity of Wernersville orchards begin to displace the tobacco fields so prevalent in the broad limestone valleys farther south.

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Strawberries Are Heavy, but This Mennonite Heart Is Light

Kodachromes by Harrison Howell Walker

Sturdy as the Fence They Climb—Mennonite Girls Near York

© National Geographic Society

Turn Right for Lancaster, but Stop for Pretzels

Kodachromes by Harrison Howell Walker

If the Sign Doesn't Tell, Your Nose Will—Lancaster

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Kodachrome by Harrison Howell Walker

Every Piece of Knotted Dough That Goes into This Oven Is Tied by Hand by One Woman

In the Lititz bakery begun by the older man's father, a small staff makes fine pretzels. Dipped in boiling potash for gloss, the dough is salted and baked from five to eight minutes. Pretzels originally were made to represent children with hands devoutly crossed. They were given to little ones who said their prayers.

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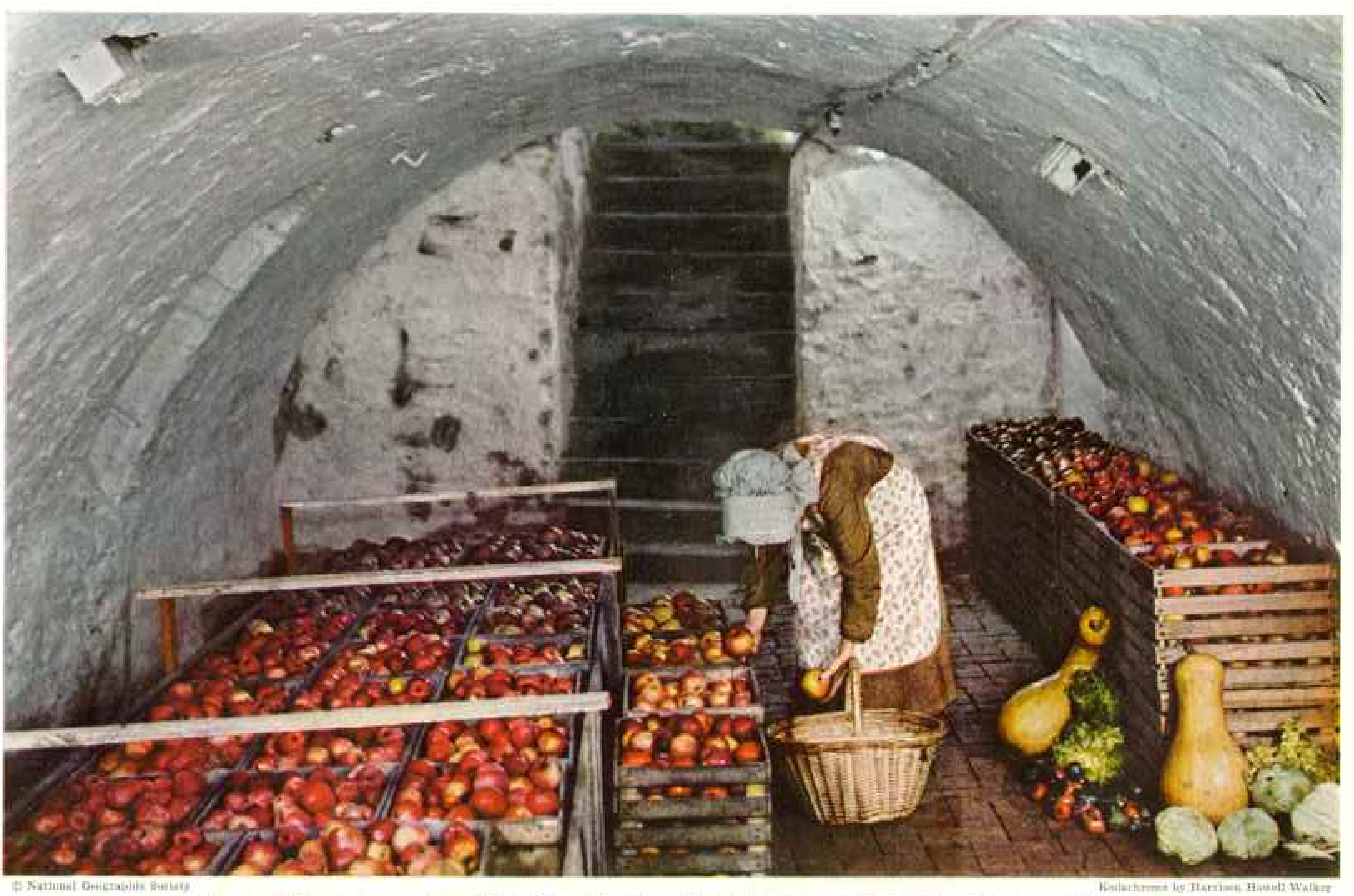
Kodachrome by Harrison Howell Walker

Straight Rows of Blossoming Potatoes and Young Tobacco Plants Lead to Well-kept Buildings on an Amish Farm

Such fine farmsteads have earned for rich Lancaster County the title "Garden Spot of America." A leading county in crops and livestock, Lancaster raises about 95 per cent of Pennsylvania's tobacco, and produces much wheat, corn, and milk.



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During Winter's Blasts the Old-fashioned Cellar Affords Fruits and Vegetables Frost-proof Shelter

Here, too, in summer, perishable foodstuffs are kept fresh and cool by water from a spring over which the house was built. This Mennonite woman living near Millersville gathers apples for a pie, a popular dessert on Pennsylvania Dutch tables.

Trimmed with Paint Kept White as Snow, the Red-brick Amish Farmhouse Plashes Warmth on a Wintry Landscape

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Straight to Market Strides a Mennonite Woman

She doesn't stop to window-shop, but goes directly to business. "Plain People" make their own clothes except shoes.

their heads; skirts are neither long nor short.

Men of both sects may or may not be bearded, wear dark clothes, and black hats not so conspicuously broad-brimmed as those of Amishmen. The children, until taken into the Church, dress like any others outside the plain sects.

Churches of the Plain People are severely lacking in ornament. Simple, too, are the services—singing without accompaniment, prayer by members of the congregation, and sermons usually beginning with the phrase, "It just occurred to me on the way here . . ."

Members of these churches will not go to court nor will they defend themselves against wrong. Were a thief to drive off a Mennonite's best cow, the farmer would do nothing except protest. He might, however, appeal to one of his "worldly" neighbors, who would crack the marauder over the head with a club and restore the stolen property.

Were an unscrupulous creditor to hale an Amishman into court, I can hear the judge declare as he surveys the defendant's long hair, lavish beard, and buttonless coat: "But the defendant is an Amishman. You had better settle out of court."

Not only the plain sects of the Pennsylvania Dutch country cling to centuries-old customs. At Manheim the Lutheran church still honors a tradition born in 1772. The deed to the plot of ground upon which the church stands stipulates that the rent shall be "one red rose annually in the month of June forever, if the same shall be lawfully demanded by the heirs, executors or assigns."

Owner of the property and author of the clause, "Baron" Henry William Stiegel was founder of the town, maker of Stiegel glass, and philanthropist whose generosity brought on poverty and death in obscurity.

Collecting the Rent—a Rose

Only twice did the Baron personally receive the rose. By the third year he had been cast into a debtor's prison; payments ceased and were forgotten until the mislaid deed was found 118 years later. In 1892 the tradition came to life again. A descendant of Stiegel living in Virginia journeyed to Manheim to receive the payment of one red rose.

Every year since then the Festival of the Red Rose has taken place on the second Sunday in June with a descendant of the Stiegel family on hand to accept the floral rent (page 53).

In founding the glassworks near Manheim, Stiegel contributed a precious part to the Pennsylvania Dutch country's treasure chest of arts and crafts. Today rare Stiegel glass is widely sought by collectors and museums. One woman of Lancaster, Pennsylvania, has spent more than thirty years and a small fortune assembling a collection she displays on a few short shelves in her home (page 52).

"Dutch" furniture, chinaware, pottery, counterpanes, rugs, artistic ironwork — all made by hand—are other art objects treasured in homes for generations.

Of much interest, too, are *fractur* paintings. These are vivid, carefully executed designs on certificates of birth, baptism, and marriage; title pages, wall texts, bookmarks, etc.—a hold-over of the ancient art of illumination in our modern age.

Hair Combs from Cow Horns

In out-of-the-way villages, in large towns, or on farms various small-scale trades have been handed down from father to son.

George Crouse lives on a farm a couple of miles from Reinholds. In a near-by stone house built by his grandfather in 1824, Crouse turns cow horns into hair combs (page 68).

Here an elderly workman with pincers takes a horn, previously slit by saw, from a big, black caldron containing a boiling oil solution. He runs it through rollers that look like an oversized clothes wringer, and the horn comes out flat as a flounder. A hand-worked press flattens it further; a plunge into cold water gives it bonelike hardness.

Upstairs, Crouse's son saws the slab into sections measuring 9 by 2 inches. Crouse himself planes and polishes the pieces, then pushes them through a teeth-cutting machine. After more polishing, what was once a bovine bone of contention becomes an appeaser for unruly locks or a smoother for silky strands.

During the Revolution, Crouse's great-grandfather made combs from cow horns for soldiers. Ever since his grandfather settled here permanently, the family has followed the same trade in the original factory. As long as cows grow horns and the Crouses bear sons, the plant will flourish, the comb maker believes.

"Horn combs can stand sterilization," he explained, "so we ship a lot to hospitals."

"Where do you distribute?" I asked.

"All over the United States and even to the Philippines."

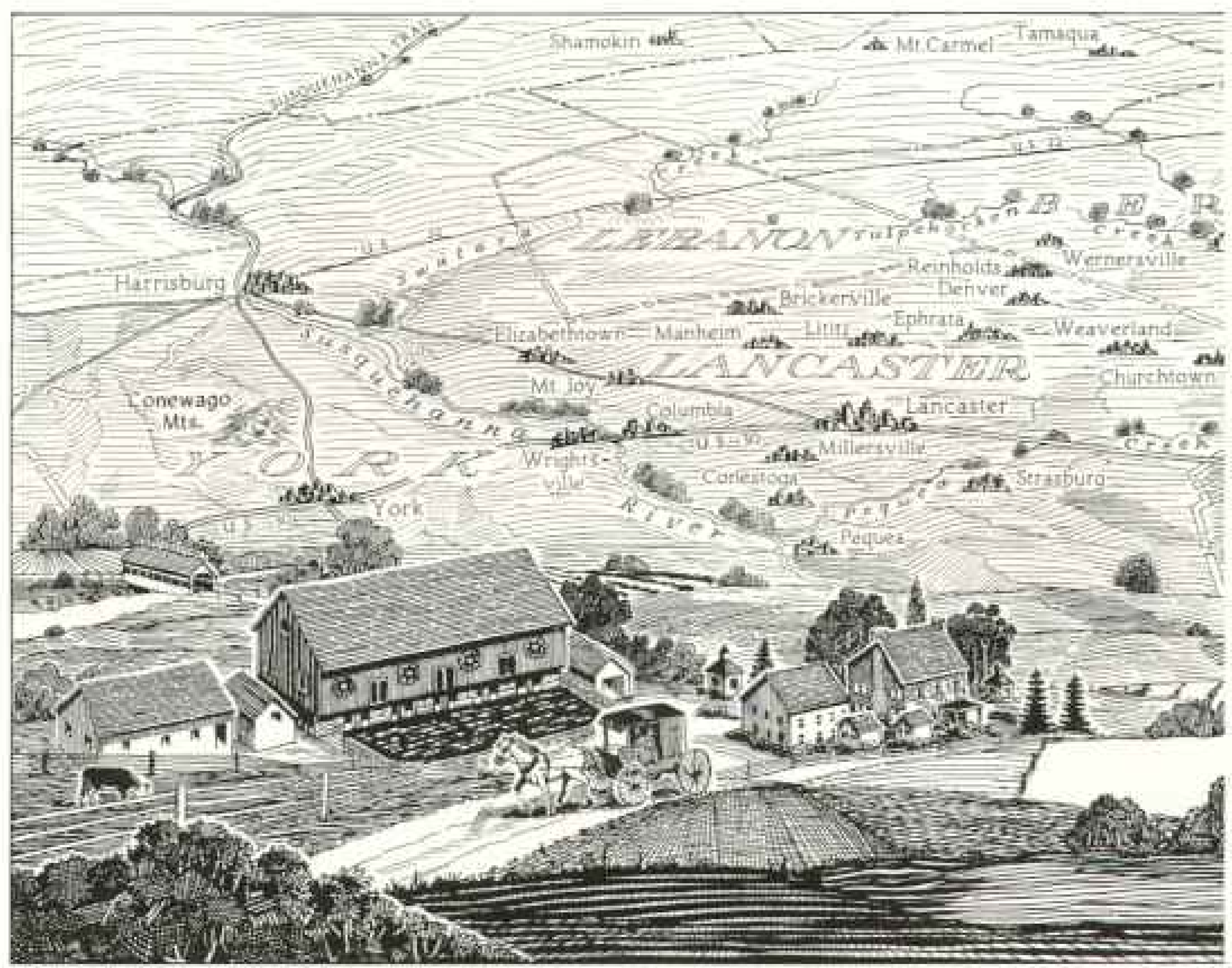
"To Europe, too, in peacetime?"

"No. France and Germany still have horn-comb factories."

"Where do you get the horns?"

"Most of the smaller ones come from cows right around here. The larger ones are from Texas. We also get some from Panama."

A white-haired gentleman of Lititz in-



herited a business begun in 1861 by his father. With a small staff of helpers he makes some of the finest pretzels in the region. The bakery is housed in a Dutch-styled stone building constructed in 1784 (page 45).

Tying the Knot in a Pretzel

Pretzel dough of flour, yeast, and water goes into a machine that ejects it in pencil-like strips. An endless apron belt conveys them to a woman who snatches them up, one by one, deftly tying the conventional pretzel knot. When 90 have been knotted and placed on a wooden tray, they are taken to racks in the baking room.

The woman loads 115 such trays in a day. That means she individually knots with her tireless fingers 10,350 pretzels—the bakery's daily output.

After knotted dough remains on racks to "rise" or "set," it boils for less than a minute in a light solution of potash. This gives pretzels their gloss.

During the boiling, the one baker sprinkles coarse salt on a "peel"—a flat wooden shovel. In orderly arrangement the pieces of dough are placed on the peel, showered with more salt, then shoved into the oven. Here they bake from five to eight minutes.

Allowed to dry out and crisp for half an hour, the finished pretzels, all golden brown, sparkling, and smelling better than roasting chestnuts on a cold day, are packed in big round tins.

The pretzel patriarch, who sells only locally in Lancaster County, maintains that the quicker they bake, the better; the quicker they dry, the better; and, of course, the quicker they are eaten, the better.

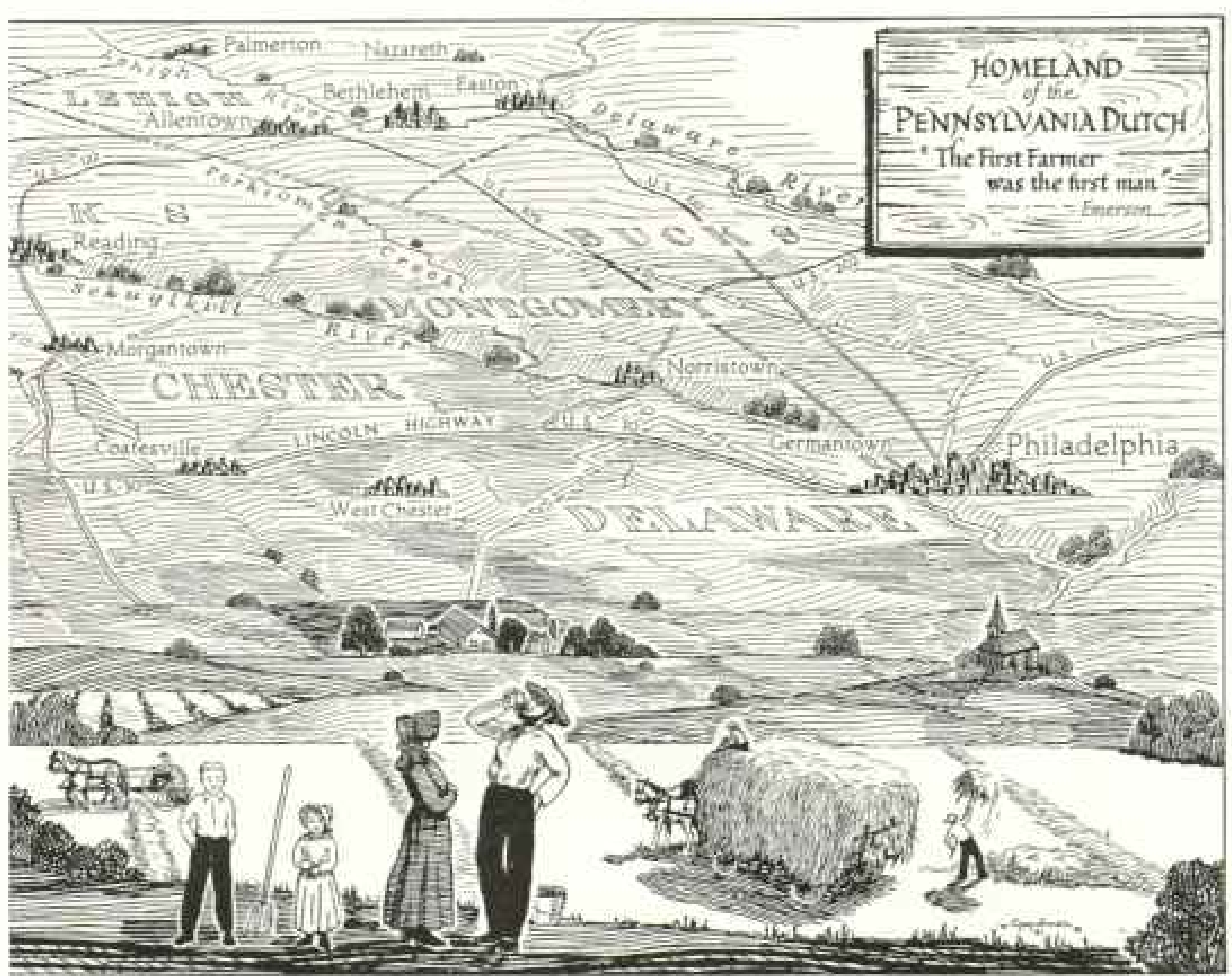
Carpenter and Gun Collector

Phaeris Brenner of Millersville is a carpenter by trade, gun collector by preference. He also repairs neighbors' clocks and watches. But his guns get most attention (page 71).

For 35 years he has been collecting and swapping muskets, rifles, shotguns, and pistols.

In a workshop at the rear of his little house several watches and their parts were spread over a table under the window. Many kinds of guns stood in corners or hung from racks against the walls.

Picking up a light short rifle, he said, "This is one like Buffalo Bill used." He reached for



another. "Here's the last type flintlock that was made. See the date—1844?"

After showing a pistol similar to that used by Booth to shoot Lincoln, he led the way upstairs to another room. Almost enough guns to outfit a platoon striped the walls. Arranged in racks, the exhibition told the story of the evolution of American rifles from the Revolution to the first World War. And still, no two of his 200 were alike.

"Kentucky" Rifles—from Lancaster

On one wall hang a dozen so-called "Kentucky" rifles. The model, originally manufactured near Lancaster, went west with pioneers and early settlers. It was so popular in Kentucky that it took the name of that State. Two distinguishing features are its barrel, upwards of four feet long, and its elaborately hand-carved stock, often embellished with brass.

Old Order Amish make virtually everything they wear except their boots. A few professional hatters, however, manufacture the black felt broadbrims. Women in many families weave the straws that Amishmen and boys wear in warmer months.

When an aged Amishwoman we know is not engaged in the long, slow process of braiding or hooking rugs, she turns to the equally tedious task of plaiting rye straw for hats.

The stuff looked as clean and yellow-white as soda-fountain straws.

"It was reaped while green and spread on the lawn to dry," she explained. "After this, we cut it in equal lengths and tied it in bundles big as a man's arm. We hung it up in a near-by shed for a spell and burned sulphur there. That's what really bleached it more than anything else."

Seven Straws for a Preacher's Hat

She took five straws from a drawer. Her knotted fingers began to braid, moving nimbly and deftly as Chinese fingers with chopsticks.

"Of course, I usually wet the straw in hot water to make it more pliable," she said.

"Do you always plait five straws?"

"For an ordinary hat, yes; for a preacher's hat I use seven."

Some straws were much coarser than others. Hats made of the cruder strips cost half as much as those made of the finer. It took longer to braid the fine straw.

Staff Photographer Harrison Howell Walker

Mrs. Hostetter Taps Out "Home, Sweet Home" on Eight Stiegel Wineglasses

The rare glassware, which forms a perfect musical octave, was made in the 18th century by Stiegel in his glassworks (page 49). Also highly prized by collectors are the old luster pitchers on the top shelf. The Hostetter home in Lancaster is furnished almost entirely with Pennsylvania Dutch antiques.

"I keep on plaiting," said the Amishwoman, "till I have a strip about 25 yards long—enough for one hat. Then I begin where the center of the crown will be, and sew around and around till I have something that looks like a hat."

Our forefathers occupied all the fertile limestone valleys in southeastern Pennsylvania, and then spread out into similar lands in Maryland and Virginia.

After the Revolution they migrated to Ohio, Indiana, and farther west. Many later settled in Ontario, Canada. In most of these places they rapidly lost their identity, recognizable only by their names, the dishes that lade their tables, and the architecture of their "Holstein" barns.

In Pennsylvania, and to a degree in Canada, they—that is, we—remained "Dutch." Dutch the English Quakers called us; Dutch most of us still call ourselves.

Red Barns, Cows, Apples

The early settlers established fine farms. We keep them that way. They went in for scientific farming. They did not know that their laborious conservation of manure and their centuries-old method of rotating crops were scientific. Even now we do not know it until schools of agriculture come and tell us.

A Church Pays Its Annual Ground Rent—One Red Rose

When "Baron" Henry William Stiegel, the famous glassmaker, gave Manheim a plot on which to build Zion Lutheran Church, he demanded as rental: "One red rose annually in the month of June forever." Here Richard M. Martin presents the rose to Mrs. Bessie Boyer Nagel, Stiegel descendant (page 49).

Staff Photographer Harrison Howell Walker

No Fancywork Is Too Complex for This Mennonite Woman's Nimble Fingers

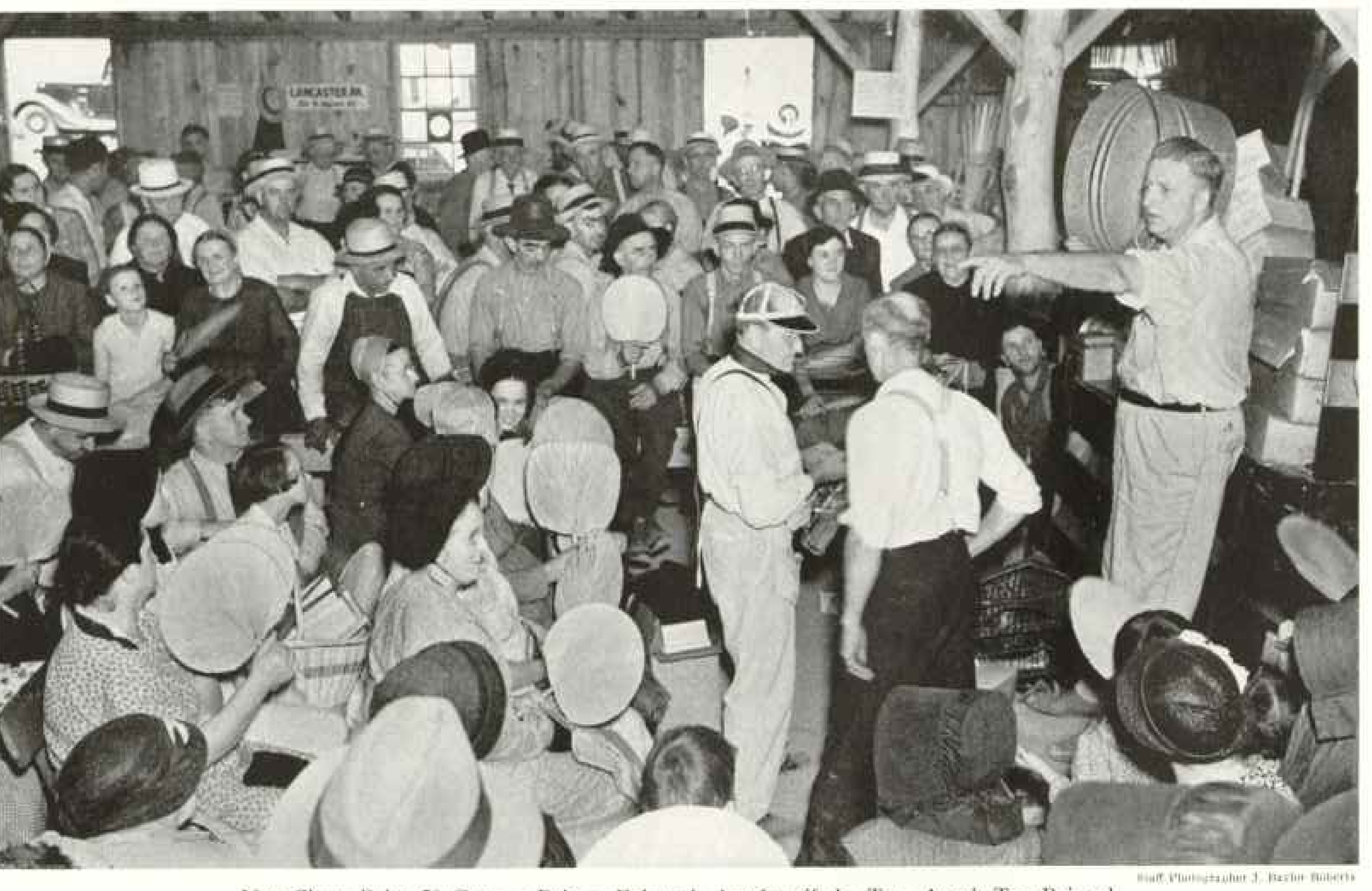
Miss Alice Petersheim of Morgantown learned needlework as a little girl. Here she is braiding.

Staff Photographer Harrison Howell Walker

Pastoral Paradise—Broad Acres and Immense Barns of the S. Forry Laucks Farm, Near Wrightsville on the Susquehanna

Staff Photographer J. Baylor Roberts

Mennonites, Leaving Their Church Near Lancaster, Keep Horse-and-Buggy Days Alive as They Drive Home to Ultramodern Farms



Staff Photographer J. Baylor Roberts

New Shoes Bring 50 Cents a Pair at Ephrata's Auction, if the Toes Aren't Too Pointed

They are high, laced models, culled from warehouses. Stockings sell for five cents a pair; boys' knickers for 50 cents. Dogs, cats, guinea pigs, and white rats are side lines. Amish, Dunkards, Mennonites, and other "Plain People" patronize these public sales, held on Tuesday and Friday mornings. Palm-leaf fans keep the customers cool. Excitement and fun are free.

To us, these things seem merely common sense.

How may the visitor to the Pennsylvania Dutch country know that he is with us? He must look for the red. Red barns adorn the countryside. We are fond of red cows; red apples are our apples. Redtop thrives in our meadows; we cultivate it. We built—we still build—red brick houses (page 48).

Our women love red dahlias, red geraniums, and red roses. We cultivate black cherries, but we like the red ones best. Into our carpets we weave red stripes; we put red patches in our crazy quilts. Our farm machinery, our lawn furniture, the spangles on our farm harness are red.

Big Farmhouses and Bigger Barns

Outsiders tell us that we make shrines of the red barns. We admit it. But that we neglect our houses, we do not admit. I have threaded the highways and byways of our Pennsylvania Dutch country, yet have never found those small houses sometimes said to be typical of us. All the old farmhouses I know have from nine to nineteen rooms. Ten is the prevailing size. A few newer ones are of eight rooms. But we do pay a lot of attention to our barns.

The farm life centers around the barn. In or about it every member of the family has work to do. Women work hard about the house, garden, and chicken yard; nevertheless, one or more will be on hand for milking. The men spend many daylight hours at the barn. Here horses and cows are stabled, wagons and other farm implements stored. The granaries are in the barn.

Around the two main buildings, house and barn, the springhouse, smokehouse, chickenhouse, corncrib, and pigpens are small and of less importance.

On Sunday afternoons the farmer's children and many of the boys and girls of the community gather in one barn—their playground. They slide down straw piles, romp on haymows, play hide-and-seek in feeding entries, gambol on threshing floors, or clamber monkeylike along the purlines and rafters.

Take an evening in November. The corn has been husked; oats, rye, and wheat have been threshed. The hay is in. The mows are filled. Corn fodder is in a stack near the barn. Snow is forecast. Snow, too, says the wind sweeping over the Conewago Mountains. Gone is the sun, but the western sky still bathes the landscape in a rich saffron radiance.

The farmer has finished his chores. On the threshold of the barn he stands and gazes thoughtfully at the yellow light streaming from the window across the way. He knows that in the kitchen shoals of tender pork chops are swimming in an ocean of golden gravy, and corncakes are turning a luscious brown. And of course there will be baked yams, lima beans, and stewed dried corn, and slaw dressed with sweetened vinegar and spiced with sweet peppers.

In a minute he will be there for supper—"dinner" as the name for the evening meal has not yet invaded our region.

But before he goes, he will cast one reassuring glance at the barn. Through his mind will flash a picture of the cattle, comfortable in their stone-walled quarters. Among them is a yearling steer, apparently the darling of the flock, so carefully is he tended. He must be fat by the Monday after Thanksgiving, for then he will be slaughtered with six or seven fat hogs.

All will find their way into hams, flitches, sausages, bologna, or chipped beef, not to mention lard, "panhaas," and "lewerwarscht."

And the farmer thinks of the cellar under the barn bank. It is redolent with homegrown apples—Smokehouse, Rambos, Winesaps, Ben Davis, pippins, Tulpehockens (Fallawaters). Here, too, are mangels, beets, cabbages, turnips, not to forget a "schtenner" of sauerkraut, the barrel of vinegar, another of hard cider, and many jugs of home-made wine.

On shelves stand numerous jars of homecanned fruits and vegetables, crocks of jellies, pickles, and preserves.

We still use "receipts" for cookery. We clothe our babies in "hippens." For us the newer and awkward words, "recipe" and "diaper" are affectations. We eat our eggs with *flitch*, as do our friends in England. We *redd off* the tables, *redd up* the rooms, and *outen* the lights.

No farmers, however, more quickly adopt newer ways of caring for eggs and milk, or new breeds of cattle and pigs, when proved. We avail ourselves of new methods of planting corn, threshing wheat, or curing tobacco. We have erected a monument to the man who developed the York Imperial apple (page 71). But we are old-fashioned in our family loyalties, family prides, in our attitude toward our parents, toward the church, and the Sabbath.

A Land of Tobacco and Cattle

Tobacco and cattle are the agricultural essence of Lancaster County. Some 95 per cent of the tobacco produced in Pennsylvania grows here, fertilized principally by manure from cattle. The crop amounts to about 40,000,000 pounds annually. On the outskirts of Lancaster City huge tobacco warehouses tower near one of the State's largest stockyards.

They Might Have Lived in the Days of Tom Sawyer

Except for shorter-length trousers and skirts, Amish children of 1941 dress like the grownups.

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Monday's Apples Make Tuesday's Cider for Wednesday's Apple Butter

In their own orchard near Millersville three unmarried Mennonite sisters prepare the fruit for a near-by mill.

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Bursting Hollyhocks and Fertile Farms Enrich the Pennsylvania Dutch Country in June

Beyond the field of ripening corn big barns tell of a land of plenty. As early as colonial times York County was known as the "bread basket of America." Neighboring Lancaster County grows most of the State's tobacco (page 41), but York manufactures one-eighth of all cigars made in the United States.

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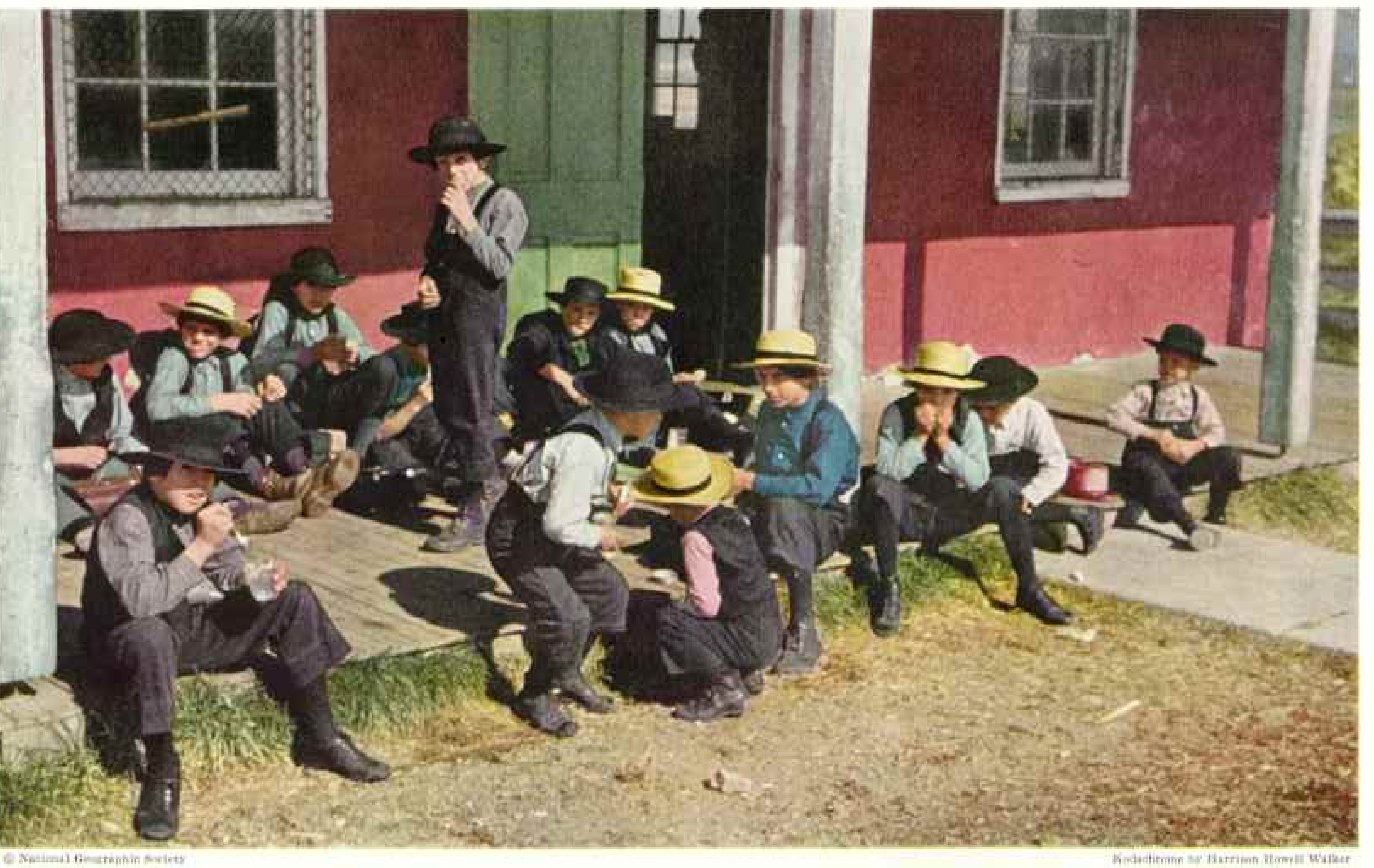
A Youthful Adam Tempts Eve

This is the land of cherry pies which thrifty housewives make possible all year round by preserving much of the fruit. These children near Elizabethtown steal a march on the pies.

Kodachromes by Harrison Howell Walker

Misses of Nazareth Model as Early Moravian Settlers

In the 1940 bicentennial pageant, they portray traditional gowns of the sect. Red ribbons indicated girls under 12 years of age; pink, unmarried women; blue, wives; and white, widows.



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No "Store" Food for Them—Amish Schoolboys Eat Lunches Direct from Their Mothers' Ample Larders

Recess comes at 11:30. In pleasant weather the boys grab flat, broad-brimmed hats, dash out the door, and settle down on the porch to sandwiches and sweets. Girls eat inside at desks. Later, all play games in the yard, boys on one side of the building, girls on the other. Amish children rarely continue school after their fourteenth year. Then they begin work in earnest on their families' farms.

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Kodachrome by Harrison Howell Walker

"Camera!" Cry These Amish Girls and Dash for Shelter in the Little Red Schoolhouse

Inside the one-room building near Churchtown girls sit on one side of the aisle, boys on the other. Except for different colors, the girls all dress alike and knot their hair behind. All the boys have "Dutch-cut" hair. Here a couple of lads, thinking they are out of the picture, laugh at the flight of skirts. Some schools are attended entirely by Amish.

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Kodachrome by Harrison Howell Walker

Motors and Mules, Men, Women, and Children Make Hay Today in Pennsylvania Dutch Land

Modern methods are finding their way to these farms. Although mules pull the rake and haul the hay to the great barn, a tractor has the heaviest job on this Mennonite farm near Mount Joy. Nowadays more and more machines reap, shuck, and grind corn. Motor combines harvest grain and gather and bale the straw. Engines pump water formerly dipped by bucket from spring or well, run cream separators, and churn butter.

© National Geographic Society

Kodachrome by Harrison Howell Walker

Marching Youth and the Colors Bring New Life to Old Nazareth on Its 200th Birthday

"And After I Eat My Lettuce, May I Have Some Cherry Pie?"
Mother gathered from her garden near Elizabethtown almost everything served in this Mennonite kitchen.

© National Geographic Society Kodachromes by Harrison Howell Walker

This Mennonite Girl of Lancaster Streamlines Her Traditional Bonnet with Thin Mesh
Customers come even from Philadelphia and Baltimore for spotless vegetables and fruits, farm and dairy products.

Cut in late August and early September, tobacco hangs up to dry until December. For the first few days, it is left on outdoor racks; then it goes to sheds which are as common in this county as barns. Some farms have two or three such buildings, often nearly 100 feet long and a third as wide (page 72).

During winter months farming families gather in the sheds to strip and prepare the dried leaves for warehouses. Standing at a long wooden bench, one worker will sort the plants; another tears the leaves from the stalks; others size the leaves (page 73).

Sizing is important. The quality of the leaf varies with its size. To standardize the process, a wooden frame divided into seven compartments of graduated lengths is used by all tobacco farmers.

Leaves of the same length are tied together in sheaves or bundles that a man's hand can reach around at the butt. When these bundles fill a uniform baling box, they are all bound together and wrapped as a single bale in heavy paper. In this shape the tobacco goes to the warehouse for sweating and other processes before shipment to factories that turn it into cigars.

Day in and day out through long winter months the farmer and as many of his family as possible work at the tedious task of stripping and sizing tobacco. But they try to pass the time pleasantly. A wood-burning stove ensures warmth when cold winds howl around the shed and under the crack in the door.

If the farmer has a radio, he sets it up in the stripping room. If not, the workers amuse themselves with stories, riddles, jokes, and songs. Pictures decorate the walls; a box of candy remains open on the window sill; a gallon jug of cider or water stays in the middle of the bench.

Hard work in the outdoors requires that we eat plenty of food. We plan every detail of the farm to supply the table. Lone trees in our fields bear fruits, shellbarks, or walnuts. Shade trees on lawns are pear, plum, or apple.

Every farm has an orchard yielding apples from July to November, with a dozen barrels for the root cellar and winter fireside. No farmer feels respectable unless his farmstead has four or five grape arbors—over the well, over the spring, over the walk to the barn, or trained along the porch banisters.

Seven Sweets and Seven Sours

Pennsylvania Dutch tables virtually sag with food. A regular dinner calls for seven sweets and seven sours. At the instant I cannot tell which is which. Meat, potatoes, beans, and peas are sweets. Pickles, and pickled beets with hard-boiled eggs in the beet brine, are sours. Pie may be either (page 59).

To refuse a second helping is impolite; not to finish your plate is just as bad. It reflects upon the hostess; it suggests you do not consider the food good. Roast beef, fried ham, bologna, and pork sausage often appear at the same meal. Two kinds of cake with cookies, as well as pie and a pudding, are the dessert.

When menfolk gather for a winter evening, it's the "eats" that keep us together—eats and conversation. Fried oysters served on a big platter in the center of the table start things off. And, of course, these are followed by several kinds of prepared sausages, cheeses, pies, jellies and preserves, white and rye bread, apple butter, "smierkase" ("smearcase," or cottage cheese, to some Americans), pickles, pickled cabbage, pickled green tomatoes intermixed with nasturtium seeds.

We empty the dishes, go to bed, sleep, and look for breakfast in the morning!

Hard-working and Devout

Pennsylvania Dutch folk, especially the women, work hard. Take any Monday. Up at four, they light fires under big iron kettles to heat water for washing. They get breakfast and wash the dishes. Then they do the family washing. By ten o'clock the clothes are on the line. After dinner and the usual kitchen clean-up, they "redd up" the rooms and make the beds. The dried clothes are sprinkled and ironed. Supper with after-mealtime routine follows.

Now the chicks must be fed and the milk tended. This done, they rest by such light labor as weeding in the garden. The men rest from shocking rye and plowing by building a bit of stone fence or digging post holes.

We also like our fun, especially in the outdoors. But it must be a pastime calling for activity and a gathering of men. We hunt and fish, but find little game and catch few fish. We rather use these as excuses for visiting our neighbors and enjoying whatever prodigal Nature has spread before us: a patch of luxuriant tobacco, a group of scarlet maples, a Vandyke-brown oak tree, a stand of tall corn, a vine laden with deep-maroon, musky fox grapes—these, one and all, delay the hunt and receive the sportsmen's admiration.

We are a religious people. The country church, not a structure of boards and shingles but one of brick and stone, is just as much a part of the landscape as the red of the barns, the crimson of the hilltops, or vermilion of the maples. Our Plain People are preëminent in the degree to which they carry the teachings of their churches into daily practice.

Staff Photographer Harrison Howell Walker

Nature's Own Refrigerator—a Pennsylvania Dutch Springhouse

The small building, erected over bubbling springs near Millersville, is a rarity today. No native can forget his boyhood invasions of the springhouse, to pull out a chilled juicy apple on a hot day. Butter, cheese, milk, and cream in the spotless crocks standing on a submerged platform are always cool.

Along little lanes winding through the Amish country east of Lancaster you will pass every now and then a one-room schoolhouse. On one side of a central aisle sit the girls; on the other, the boys. Ranging from 6 to 14 years, they make up the eight grammar grades, which is all the schooling most Amish ever get (pages 60 and 61).

Except for different colors in material, every girl is dressed alike. From tiniest in the front row to largest at the rear, each girl knots her braided hair behind. The boys, too, wear the same sort of clothes, differing only in the color of their shirts. Their hair, of course, is "Dutch-cut."

In a corner of the room stands a big cylindrical iron stove, its shiny black exterior embossed with fancy decorations. The woman teacher—not necessarily Amish—shovels the coal.

When an arithmetic test is over, one of the grades has a spelling session. Reading for another class follows. The five boys and girls of this particular group line up abreast with backs to blackboard and take turns reading.

Smallest of the five is a dark-haired boy with bright-blue shirt. Beside him stands a girl in a deep-red dress. Then comes a black-haired lass with very pink cheeks, tallest and handsomest of all. Next to her, a boy with flaxen bangs and wearing a faded red shirt seems dwarfed and slightly bleached. A girl in a white cap and gray dress ends the line-up.

At 11:30 comes lunch recess. Bobbed-haired boys grab flat, black hats, dash through the one door, and gather on the porch to eat sandwiches brought with them. The girls remain inside to eat at their desks.

Swapping sandwiches, the boys talk loudly, laugh happily, glad to be free and out in the sun—for a while at least.

Lunch over, the boys collect on one side of the schoolhouse for a game of ball; girls

Staff Photographer J. Baylor Roberts

Encircled Stars and a Running Horse Brighten a Barn in Lancaster County

According to legend, the Pennsylvania Dutch once painted symbols on their barns to frighten away witches. Today the pictures, common sight over the countryside, are purely decoration. Most popular are star, lily, and tulip designs.

play together on the other side of the building. A bell calls them back to several more hours of work.

Usually, after 14 years of age, an Amish child's schooling ends. From then on a boy helps his father on the farm; a girl works with her mother about the house. Amish maintain that if a boy waits much after his fourteenth year to learn farming, he will not be efficient in the work that is the true life of the Amish.

"Fair Week" Climax of Year

Fairs, picnics, and markets we love. Everything dates from "fair week." Corn must be cut before fair week. Seeding done after fair week is not properly husbandlike. Apples must be gathered the first moonless period after fair week.

At these fairs we exhibit and admire everything from cottage cheese, crazy quilts, and white mice to purebred bulls and stallions.

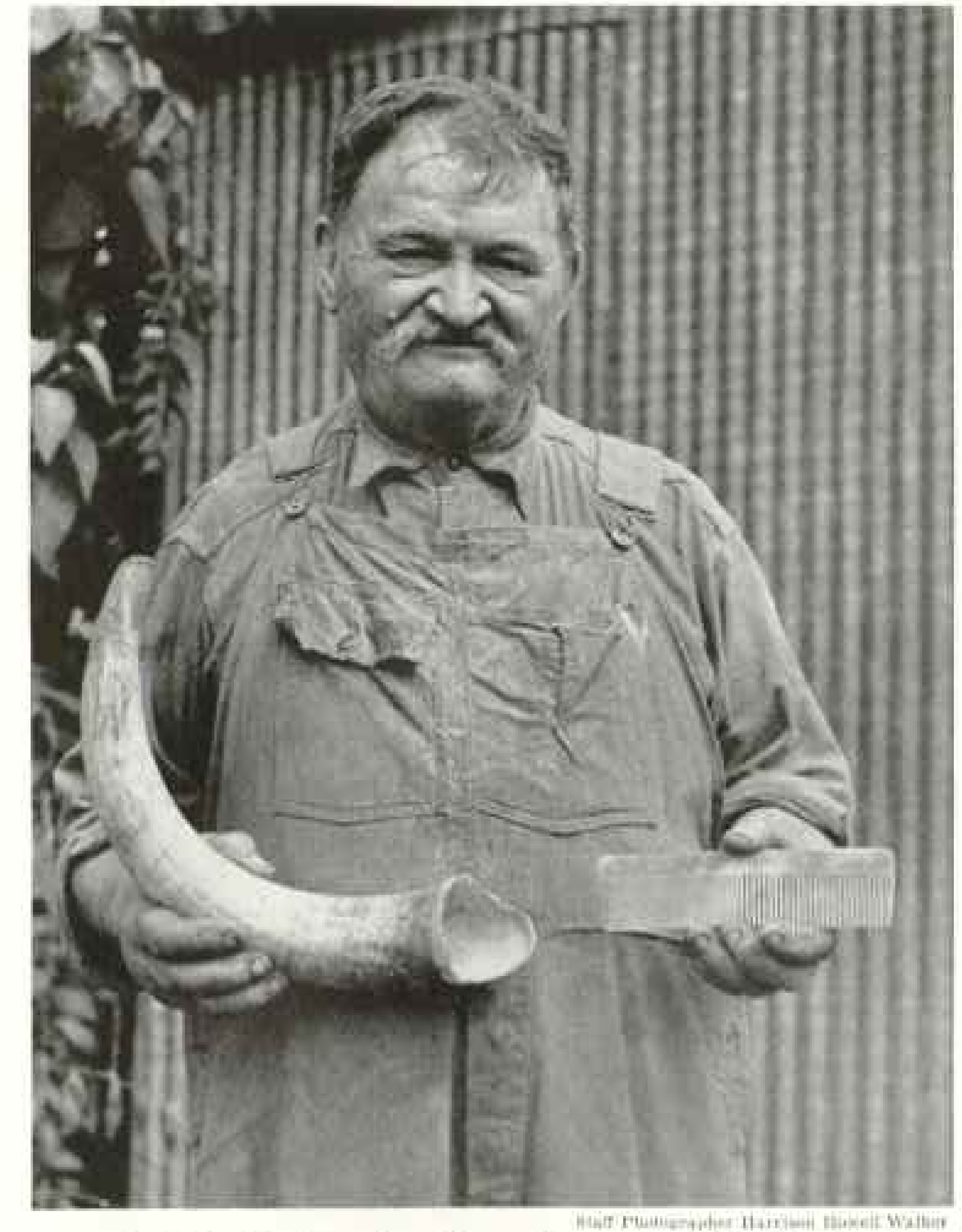
Our picnics are tremendous affairs, really "old home" gatherings. The annual picnic which I attend, as has my family for generations, has been held in the same grove on the first Saturday in September from time immemorial. It is known as the Wolf's Church picnic. Rarely fewer than five thousand persons attend. Here old friends greet each other, coming from Boston or Birmingham; no matter where, they plan to be on hand.

The markets are an institution. Farmers bring what they have to sell, city folk go to buy, and all go to visit. The social leader discusses the merits of yellow-skinned and white-skinned dressed chickens with the wife of her own gardener; the markets are democratic affairs. Only the improvident buy potatoes, lettuce, eggs, etc., in the grocery store. Many markets are now under roof in buildings designed for that purpose (pages 64, 68).

Stand on a corner any Saturday in Lancaster's Penn Square and watch the market parade. Wicker baskets swing on pedestrians'

"They're Just as Big on the Bottom of the Box"

A Mennonite couple spread out their luscious strawberries and fresh eggs on a stand in the York market. Twice a week, from all over the countryside, Pennsylvania Dutch bring their farm produce to the large covered halls in the heart of the city.



Staff Photographer Harrison Howell Walker

In His Hands a Cow Horn Becomes a Hair Comb

George Crouse continues a business which was started near Reinholds by his great-grandfather during the Revolution. He boils the horn in oil, then rolls it out flat as a flounder. After it is hardened in cold water, he saws it into slabs, which are pushed through a teeth-cutting machine (page 49).

Staff Photographer J. Baylor Roberts

There's Nothing Like a Community Barn-raising to Whet a Pennsylvania Dutchman's Appetite

When this Lancaster County farm needed a new barn, neighbors rallied round and raised the framework in a few hours. Now they turn their attention to the feast spread over bales of hay: 9 gallons of lemonade, 120 buns, 10 pounds of frankfurters, 13 pounds of cheese, 4 pounds of Lebanon bologna, 4 pounds of pretzels, 5 gallons of ice cream, 75 slices of cake, and a box of cigars. Carpenters finished the roof and sidings.

Staff Photographer Harrison Howell Walker

Ephrata Cloisters, Now Stark and Weather-beaten, Once Housed the Curious "Society of the Solitary"

Here Johann Conrad Beissel, religious refugee from Germany, founded the strange monastic community in 1732, along Cocalico Creek (page 38). He called it Ephrata, an old designation for Bethlehem. Soon he had 300 followers. At the Cloisters many famous works, including Bunyan's *Pilgrim's Progress*, were printed in German. Pictured here is the Women's Building.

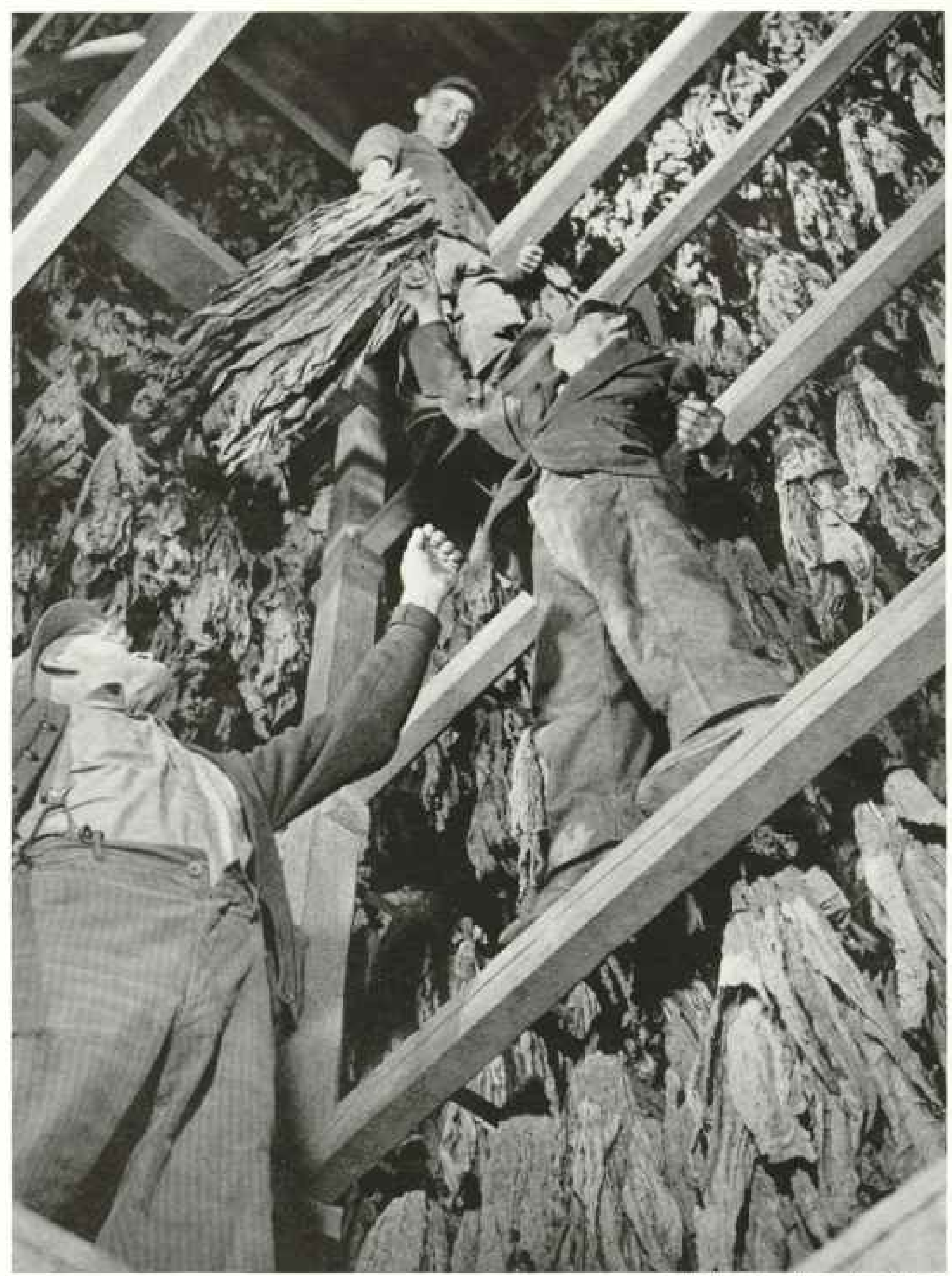
Several Kentucky Rifles Come Home to Lancaster County

The famous long-barreled firearms were first made by early southern Pennsylvania German and Swiss gunsmiths. Taken into the wilderness by frontiersmen, they became so popular they acquired the name of the new territory. Phaeris Brenner, Millersville collector, examines a prize rack of guns (page 50).

Staff Photographer Harrison Howell Walker

A Bronze Plaque Records the Fame of the York Imperial

Pickers pause before the shaft, in a field on Springwood Farms, two miles south of York. Here Jonathan Jessop first propagated the celebrated apple more than a century ago. Today York Imperials are a standard variety in southern Pennsylvania, Maryland, Virginia, and sections of the Middle West.



Staff Photographer Harrison Howell Walker

On Rafters and Poles in a Ventilated Barn, Lancaster County Tobacco Is Hung to Dry

Moisture in the air after late winter and early spring rains makes the leaf soft and pliable. Then it goes to market. Most barns and sheds have hinged sidings to allow free passage of air. The county's annual tobacco crop runs to about 40,000,000 pounds (page 56).

Staff Photographer Harrison Howell Walker

Stripping and Sizing Tobacco Is a Family Job During Winter Months

Here on a farm near Millersville all hands prepare the leaf for market. Pennsylvania tobacco, the bulk of which is grown in Lancaster County, is mild and well suited for cigar fillers and wrappers. York County is one of the Nation's leading cigar-manufacturing centers.

arms as commonly as gas-mask containers from Londoners' shoulders (page 48). Here comes an elderly Amish couple with their basket between them. There goes a young Mennonite woman weighed down with provisions for a whole family.

It's hard to tell, but that looks like a Dunkard burdened with apples and celery, disappearing around the bank building. And see the Amish mother in her black bonnet, apron, and ankle-length skirt. She holds the tiny hand of her daughter, miniature of herself.

But it's not exclusively a Plain People parade. Any man or woman in the street can, and does, march in it. That's a schoolteacher struggling toward her car with bags and bundles, vegetables and flowers. She'll let you help her, but reluctantly. Lancastrians don't like to have anyone think they can't manage their own marketing.

The man on the curb waiting for traffic lights to switch looks like a distinguished diplomat who has swapped his portfolio for a willow basket. And isn't that girl crossing the street toward the Central Market the waitress who served us supper last night?

Careful—you'll bump into him—he can't see where he's going with those eggplants piled all about him. Why, it's the desk clerk of the hotel! The lady getting into the limousine was our hostess at tea the other day. Oops!—she dropped the squash.

Let's enter one of three large market halls to marvel at the quality and cleanliness of fruits and vegetables, and the friendliness, really joviality, of everyone. The people look as if they were enjoying a fair that comes but once a year; yet many attend markets held nearly every weekday.

Look at those apples shining as though individually and painstakingly polished; crisp, cool lettuce having a handled-with-white-gloves freshness about it; big tomatoes, red and firm, glistening like clever wax copies;

Staff Photographer Harrison Howell Walker

On Saturday This Amish Couple Deliver Farm Produce to Strasburg Customers

They are members of a stern sect, offshoot of the Mennonites, and consider automobiles and decorative dress as "worldly." Amishmen wear broad-brimmed black hats and their wives cling to plain black bonnets. Hooks and eyes replace buttons on men's suits and on women's long, full dresses (page 40).

gourds and pumpkins, fresh and full, glowing like plump children just out of the tub.

Zinnias, dahlias, gladioli, and chrysanthemums put winter out of mind on this late autumn day. Cookies, cakes, and flaky pastry bring it back with luscious thoughts of Christmas feasting. And over by the butchers' counters, dressed chickens, red steaks, and bulging bologna are samples of the market's meat department.

No one is in a hurry here. It is an all-day affair for most. Groups pause in the aisles between the stands to greet each other and chat: "Did Daniel get through his operation all right? A good tobacco crop this year. Was much of your corn destroyed by the beetle? I'm glad to see you out today, Sarah."

A Literature and a Dialect

We have developed a literature. Writers have sung of our land and of us in the language our forefathers brought with them from the Palatinate or from the mountain glens of Switzerland. The sounds, still understood by Rhineland people, are German with Rhenish softening of gutturals and the gentle movement from the throat toward the lips—the result of the French influence among us.

The literary movement is still alive among us. In Allentown, for instance, Dr. Preston A. Barba's "Pennsylvania Dutch Eck," a compilation of writings in the dialect, appears in the Morning Call every Saturday and is read in many parts of the United States. In addition, "Pumpernickle Bill" (William S. Troxell), and Lloyd Moll write daily columns of chatter in the dialect for the Call-Chronicle papers.

But we are a passing people. "Dutch" in name we shall remain for a long time; "Dutch" in fact we shall be only for the span of life of the present generation.

Some years ago I visited the market in York. Not one conversation in the dialect did I hear. At last I started one, and then passers-by stopped to stare at me. It will be better when all of us speak by preference the language spoken by the majority.

But when no one any longer says "go the hill up," or when no one confuses his v's and w's, even then I fondly hope that we may read over our gateways:

> Sweet and pleasant breathe the breezes
> Round my bothy in the glen;
> But they wait no words of welcome
> To the godless and profane.

AP from Press Ass'n, Inc.

To Soldiers Far from Home a Gift of "Smokes" Is Always Welcome

A Canadian brigadier in Iceland receives a consignment of tobacco from the school children of Great Britain.

Dorwell from Pictorial

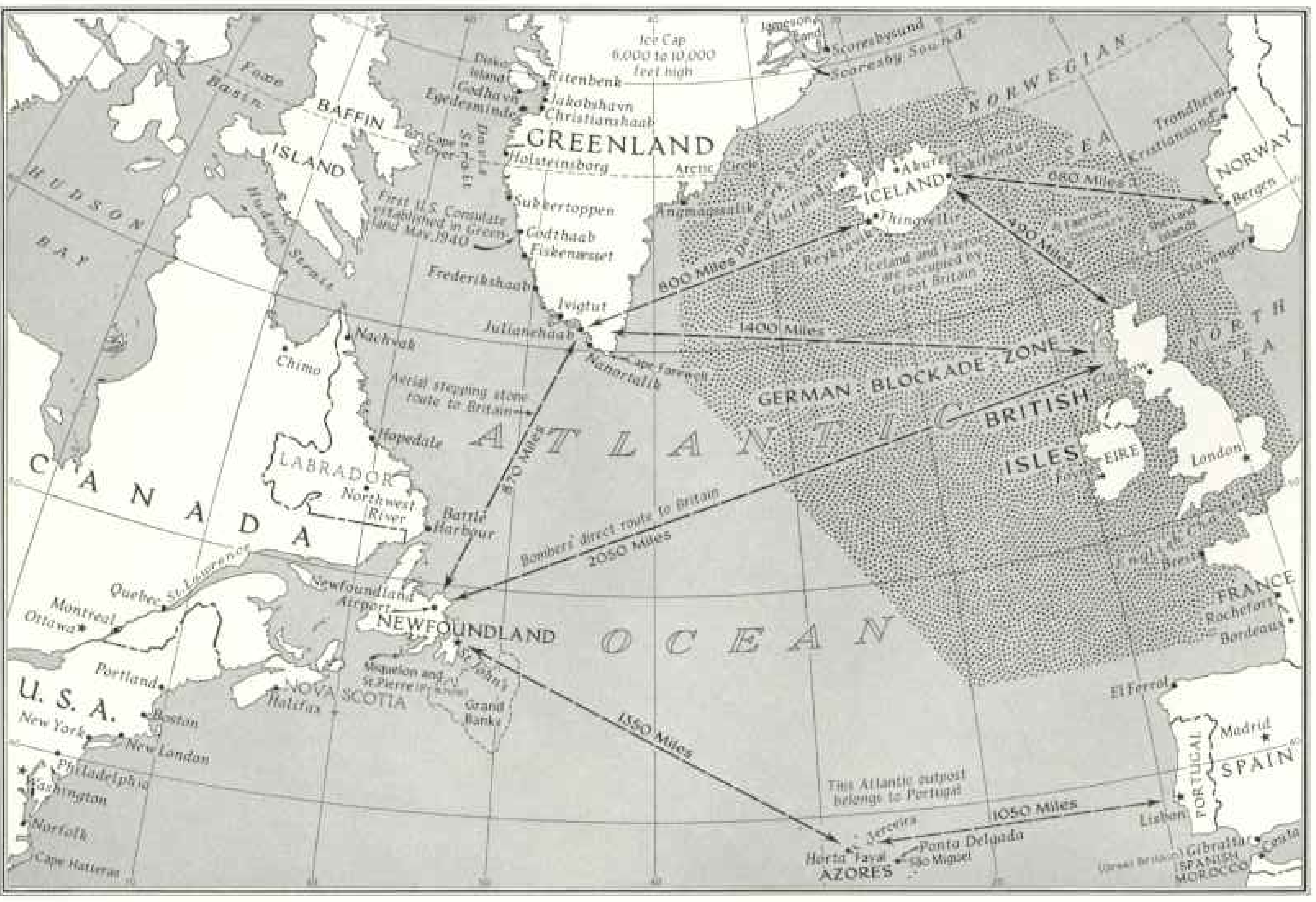
A British Sergeant Makes Friends with Reykjavik Youngsters

The peaceful occupation was strategically necessary because Iceland, only 500 miles from Britain, would make a dangerous haven for enemy bombers and submarines. The warm Gulf Stream and subterranean hot springs temper the climate, so that Iceland's lakes are open the year round, affording excellent landing surfaces for aircraft.

AP from Press Ass'n, Inc.

Defying Submarines, Reykjavik Continues Maritime Trade with England and the United States

The large vessels alongside the wharf at the right are two of a fleet of three owned by the Icelandic Steamship Company. One plies between here and English ports; its sister ships make regular trips to and from New York. The *Vard* is Norwegian and the *Súðin* a coastal freighter. To make this safe harbor for its capital city, the Iceland Government has constructed a $3,000,000 breakwater.



Iceland, Between Two Worlds, Holds a Strategic Place in the Battle of Britain and the Battle of the Atlantic

AP from Press Ass'n, Inc.

Amid Scenes Familiar to the Vikings in 874, Canadians Man Bren Carriers

This motorized unit is stationed near Nodur Reykir, about 10 miles east of Reykjavik. To the left of the tents and houses in the background, what appears to be a cloud of dust rising from the highway is steam issuing from boiling springs. The entire capital city is kept warm by natural steam heat.

British Official from Wide World

Canadians Bivouac Beside the Main Highway of Iceland

Connecting Reykjavik and the farming country is a fairly good motor road. The principal field crop here is hay for horses and cattle, but numerous boiling springs jetting steam are used for heating greenhouses, where excellent fruits and vegetables are grown.

British Official from Wide World

Antiaircraft Guns Are in Readiness to Repel Raiding Bombers

Upon occupying the country, British and Canadian troops set up strong batteries for defense. A few German planes have ventured over the island, but no bombings had occurred up to late spring, 1941. Although Iceland formally protested against military occupation, the people prefer a peaceful protectorate to invasion.

British Official from Wide World

With a Lewis Gun Canadian Soldiers Cover a Road

There are not many highways in Iceland, and a landing force would have difficulty moving swiftly across the country.

Lionel Green

Little Miss Iceland Need Not Fear Mud

She wears sturdy rubber boots. Otherwise her clothing is as modern as the garb of an American child in the primary grades.

Durwell from Pictorial

Motorized Patrol Units Maintain a Lookout for German Landing Attempts

Well equipped for rapid movements, the British and Canadian troops guard all key points in Iceland.

AP from Press Ass'n, Inc.

Iceland Has Some Aircraft of Its Own

These hydroplanes are at rest on Lake Thingvalla, large enough to serve as a landing field for a considerable force of bombers. Thermal springs keep it open virtually the year round.

British Official

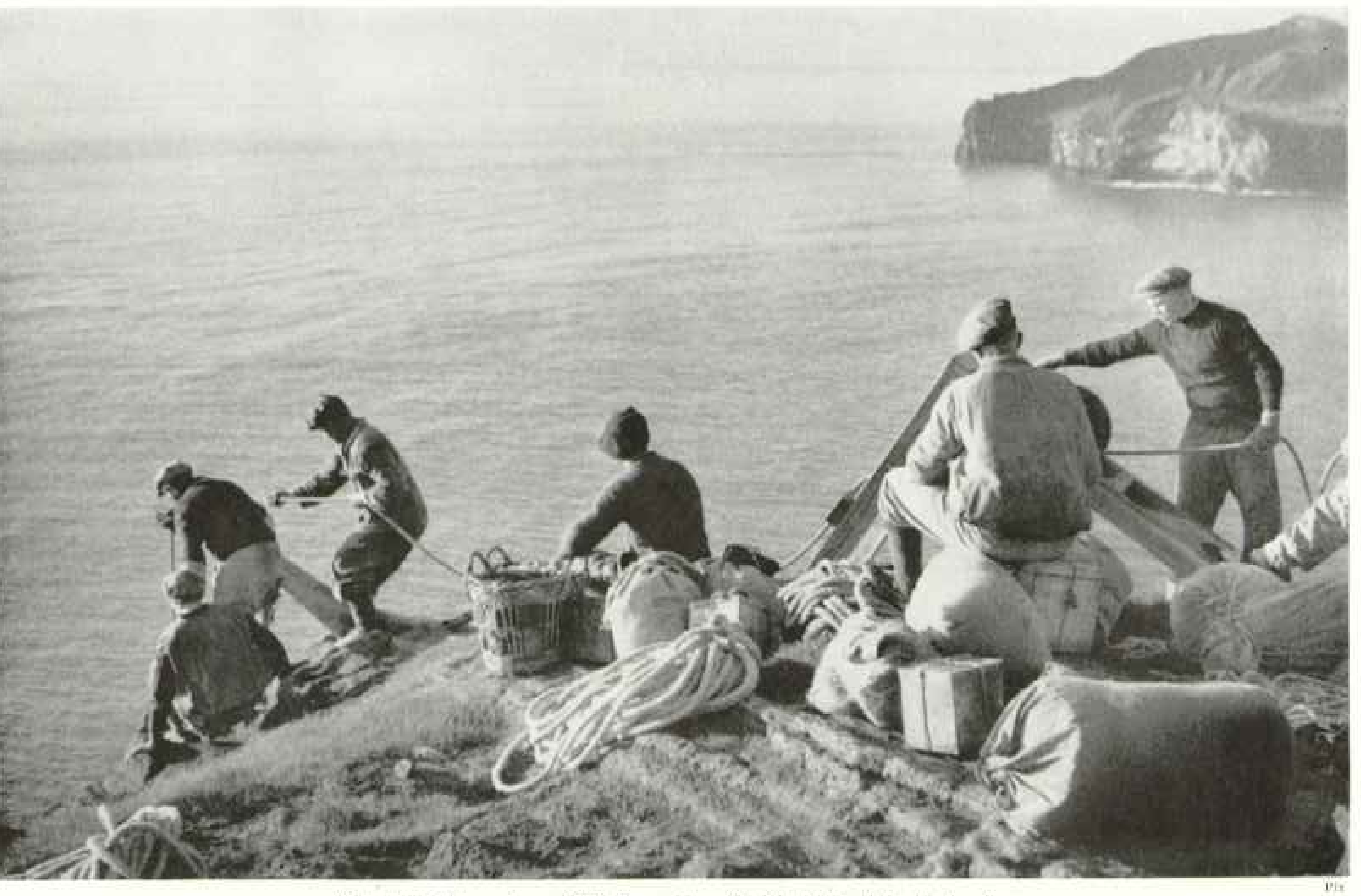
A Tiny Icelander Brings His Wheelbarrow to Help the British Soldiers

For the first time since the days of the Vikings, Iceland finds itself in a war zone.

Wide World

Streets of Reykjavik Ring to Martial Tread

Iceland has enjoyed independence since 1918, but remained under the Danish King. After the Nazi invasion of Denmark, the Iceland Cabinet took over the royal power and set up a separate foreign service.



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Bird Eggs Taken from Cliff Faces Provide Much Food for Icelanders

Murres, auklets, and other species make their nests in crevices and on tiny ledges of the sheer precipices that rise from the sea. Men skilled in climbing are lowered in rope slings from the dizzy heights to gather thousands of eggs. These are carried to the summit and placed in large baskets.

Norcross-Bartlett Expedition

Reykjavik Young Folk Parade to Celebrate Their Country's Millennium

In 1930 Iceland observed with joyful ceremonies the 1000th anniversary of its Parliament. Boy and girl members of sports groups marched in processions, and the capital was decked in gala array. To honor their northern friends the Norcross-Bartlett Expedition in the schooner *Morrissey* visited Iceland that year.

Lionel Green

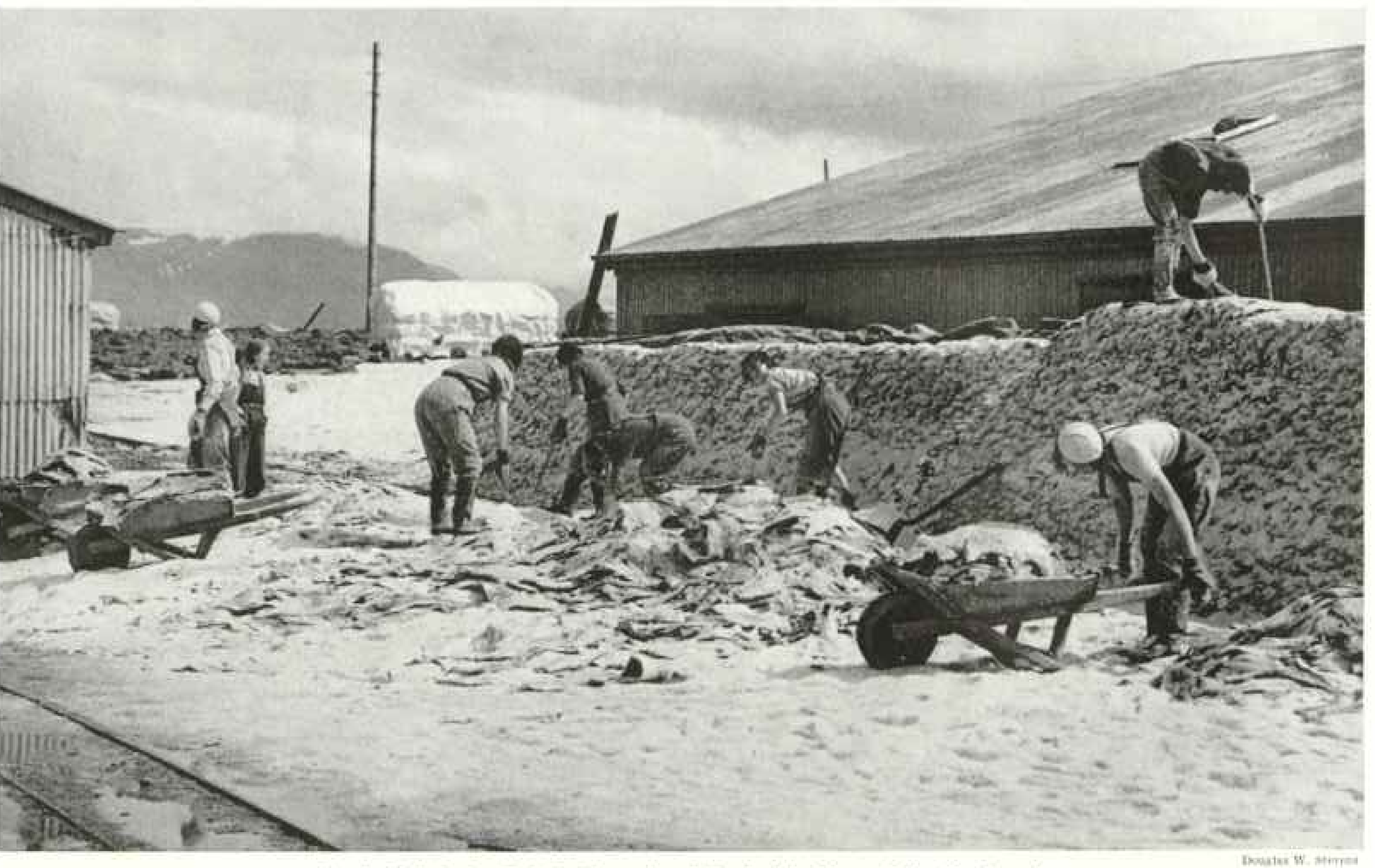
Most of the Workers Who Handle the Drying Cod Are Women

When the fish are landed, they are spread on the stones along the shore and turned over from time to time.

Norcross-Bartlett Expedition

Codfish from the Trawlers Cover the Shore Near Reykjavik

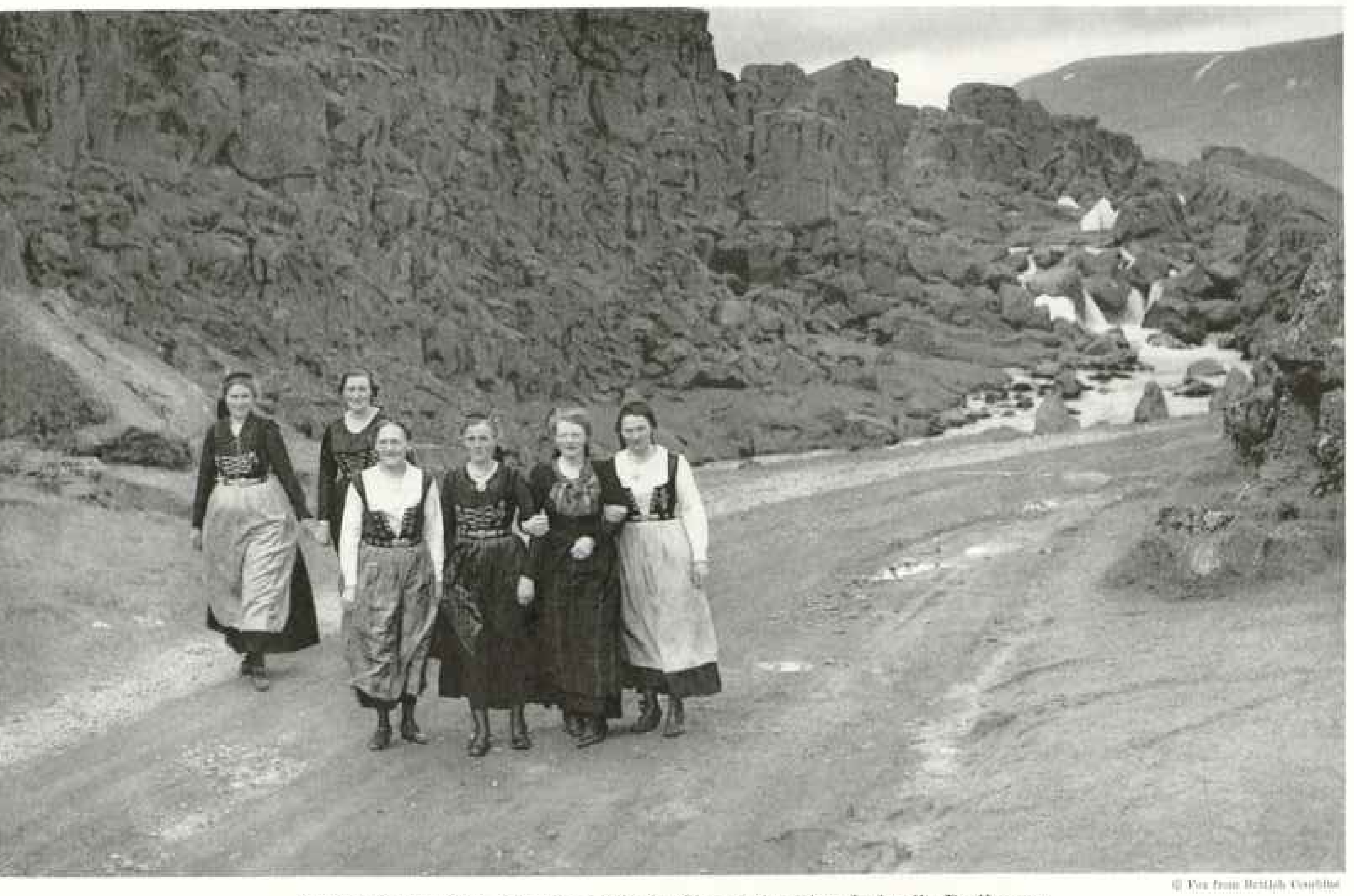
In Iceland miles of broken volcanic stones edge the coast, providing an uneven surface on which fish are spread to dry in wind and sun.



Douglas W. Stevens

Partly Dried, the Cod Is Cleaned and Stacked in Heaps Like Cordwood

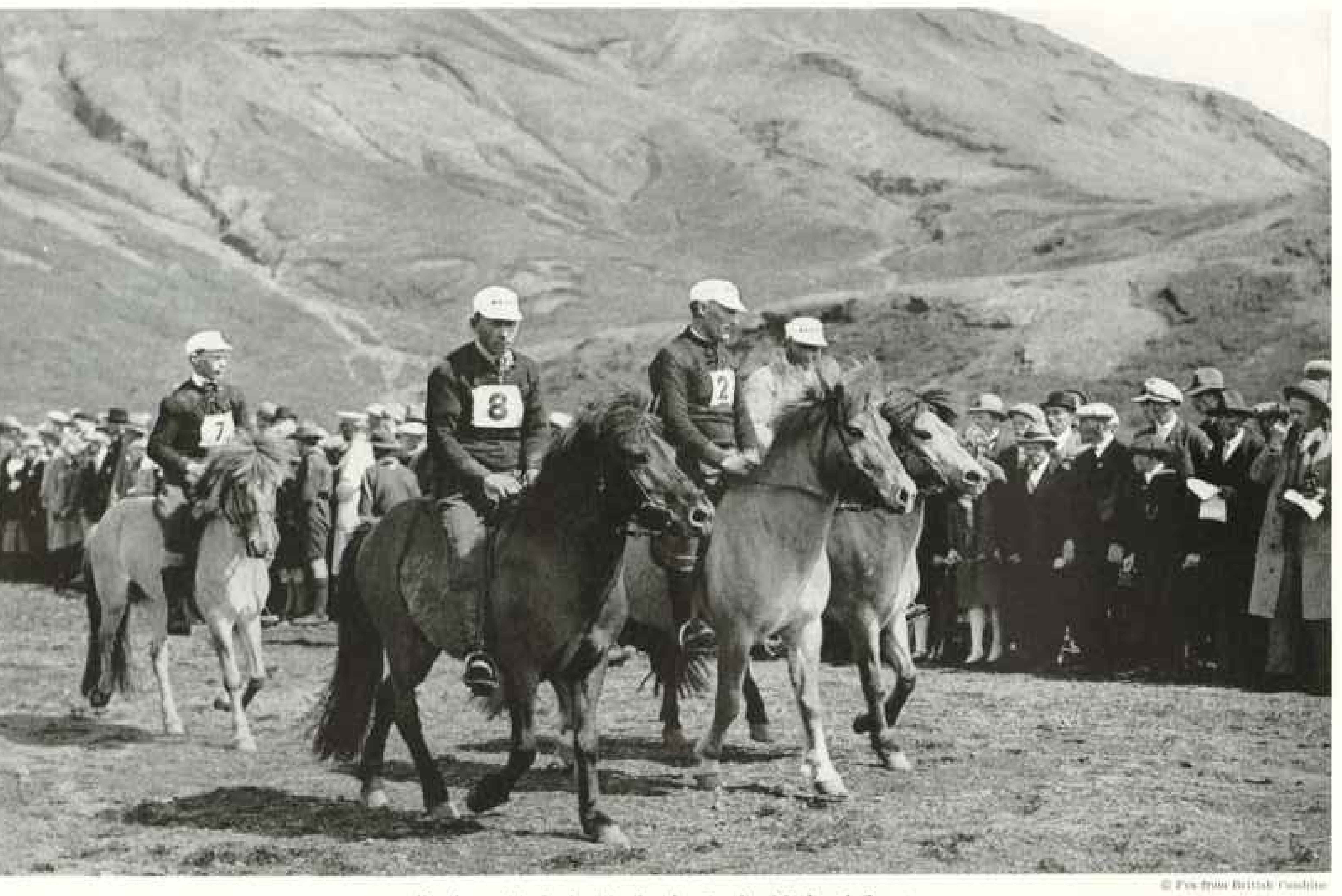
Here its own weight forces out the brine. With the North Sea mined and fish life decimated there, Iceland codfish banks become a veritable gold mine. The fishermen have been reaping a rich harvest since the beginning of the war and the coming of the British troops, for they sell their catches to England at high prices.



© Fox from British Combine

Women in National Costume Visit the Site of the First Icelandic Parliament

The earliest Althing convened here at Thingvellir in 930 to set up a government and found the "grandmother of republics." Feminine styles in vogue then are still in favor. The Government has constructed a passable motor road from the present capital, Reykjavik, to the historic camping ground of the founders of the nation.



© Fox from British Combine

Racing with Icelandic Ponies Is the National Sport

On a course near Reykjavik competitors are about to start a 300-meter run. These little horses are descendants of animals imported by the Norse, who came to Iceland in 874, bringing with them some domestic stock, including also cattle and sheep.

AP from Press Ass'n, Inc.

Iceland Women in National Garb Chat with a Canadian Officer

The smiling ladies are explaining the traditional caps with streamers and the bright-colored silk aprons.

Darwell from Pictorial

Tons of Supplies for the Soldiers Are Unloaded Daily at Iceland Ports

Although Germans have included Iceland in the area of total blockade, ships move freely between the island and both the British Isles and the United States. Through April, 1941, only one Icelandic freighter had been sunk.

Chile's Land of Fire and Water

Smoking Volcanoes and Ice-hooded Peaks Stand Sentinel Over Limpid Lakes in the Far Southern Andes

By W. Robert Moore

"YOU'RE late. You'll be lucky to get even a few days of good weather," friends said when I left Santiago to go south to the Lake District of Chile. The sun was shining.

"You're late; the summer season has ended," I heard at almost every place I visited. "The rains will start any day now."

Still the sun shone. Day after day sunshine glistened on the snow-capped mountain peaks and shattered itself into rainbows in the spray of roaring waterfalls.

The "unseasonable" weather of March was very pleasant indeed.

Sunshine in the Chilean lake region deserves emphasis, fair weather is so rare. Only in the summer months of January and February are sunny days a fair certainty. Throughout much of the remaining ten months of the year clouds and rain linger over the landscape.

In this locality Darwin, on his voyage of the *Beagle*, found that "every inch of land, every tree, every thicket was a sponge saturated with water."

Moss grows on rooftops and walls, on trees, turf, rocks, and rail fences.

"Even we acquire a bit of moss ourselves!" commented one of the local residents. "The rain and dull weather get into our systems."

Among those with whom I talked, however, there were quick wit and ready smiles. Somberness, if there is any, apparently vanishes with the appearance of sunshine.

2,600 Miles of Varied Climate

The length of Chile, compressed between the lofty Andes and the Pacific coast, is out of all proportion to its width. Though averaging only about a hundred miles wide, it stretches north and south for some 2,600 miles.

Contrasts are marked. The country embraces parched, sunburned deserts filled with copper and nitrates in the north, possesses fertile agricultural lands in its central valley, has vast virgin forests extending toward the south, and finally terminates in the bleak, windy, soggy islands at Cape Horn.

Nearly two-thirds of the way southward, where farming areas give way to timberlands, is the Lake District. Here the rugged Andean backbone becomes a little less bulky and more disjointed.

"Chilean Switzerland," some have called these lake lands that lie between the towns of Temuco and Puerto Montt. To the Alpine Republic there is a similarity—and a difference.

Much German is spoken, for colonists from Germany began migrating to these parts in the middle of the last century. But Spanish is the principal tongue. Here forests are barriers to grazing and plowing. They are being felled and fired, rather than encouraged to grow (page 99). Pioneering still is in progress.

Here, too, are mountain peaks perpetually covered with glaciers and snow, but, unlike the Alps, some of them smoke from volcanic fires that smolder deep in their bosoms.

In a little more than 200 airline miles there are a dozen large lakes and several small ones. Eight white-hooded volcanoes stand sentinel within this same compass. It is a land of much scenic charm.

To thousands of Chileans and Argentineans this is vacationland. And as for trout fishing, those who have whipped its rivers will proclaim there is no better spot in the world.

Warlike Tribe Long Ruled the Region

From Santiago to Temuco we sped by express train through ripening vineyards and harvested fields. Passing at nighttime through the region of Chillán and Concepción, scene of the severe earthquake of January, 1939, we saw only peaceful autumn countryside. Farmers prodded oxen at plows or yoked to lumbering two-wheeled carts full of grain.

Temuco is a small country town grown large in catering to expanding needs of Cautín Province, of which it is the capital. Trade in wheat, barley, oats, timber, and apples furnishes revenue for its 38,000 inhabitants.

Only 60 years ago the town was a fort in the forest, surrounded by hostile Araucanian Indians.

For centuries this warlike tribe had dominated the region. Even the Spanish Conquistadores had their troubles with these fierce Indians. In 1541 Don Pedro de Valdivia, one of Pizarro's captains, founded Santiago and, in the next 13 years, pushed south to establish forts at Concepción, Villarrica, Imperial (now Carahue), Valdivia, and other points (map, page 94).

Valdivia had great aspirations for Imperial. It was to be the "city that should be head of

Helene Fischer

Unconquered Araucanian Horsemen Carry the Flag of Chile at an Annual Fiesta

Never subdued by the Spaniards, about 30,000 of these hardy Indians now live peacefully on vast grants of land in Cautin Province. Today they are farmers and weavers.

the Realm." But Santiago instead became the capital, and Imperial, like many other settlements, succumbed to the Araucanians in the long conflict that followed.

Men "Stiff in Battle"

The region hereabouts was the stronghold of these hardy Araucanian natives. Mapuche—"people of the land"—they called themselves. Like the forests, they were deeply rooted to their ancestral soil. And, like the volcanoes in whose shadows they lived, they could become a fiery inferno.

"I pledge my word," said Valdivia in a letter to his emperor, "warring with many nations, never saw I men so stiff in battle."

Valdivia knew. He had to bring many reinforcements from Cuzco, Peru.

Later, at a battle near the fort of Tucapel, his forces were surrounded by the Indian army of Lautaro, who had formerly been his horseboy. Valdivia was knocked from his horse with lances and war clubs, stripped, bound, and dragged away to the chieftains, before whom he was dispatched with a blow on the back of the neck with a club.

Lautaro, the heroic Caupolicán, and many another Araucanian chief led the warriors to halt the Spanish advance, but theirs was a losing battle against superior arms. For three centuries these native Indian peoples were not completely conquered. After many attempts at appeasement by the Chilean Government, they were finally pacified in the eighties of the last century.

Remnants of that once-powerful race still live around Temuco, quietly settled now to peaceful enterprise.

We saw men tilling parcels of the chocolate-brown earth that still remain theirs from ancestral domains. The womenfolk were weaving *choapinos* (small rugs) on primitive looms or working about their thatched huts.

Like North American Indians, the Araucanians have a rich gift of poetic fancy. They have populated the forests and lakes with

Fritz Henle from Three Lions

Gaudy Posters of German and Italian Resorts Lure Travelers at Ensenada

The town, on the edge of Lake Llanquihue, consists only of a hotel, restaurant, depot, and a few cottages. It is a way station on the combination water-and-land route through the Chilean lake region to Argentina.

fantastic creatures, and ascribed romantic names to their surroundings.

A conspicuous landmark east of Temuco is Llaima Volcano. From among the forests it rears its snow-mantled cone more than 10,000 feet.

At our first glimpse, clouds of smoke trailed in a long banner for miles across the countryside. Early writers say the volcano "exploded" in 1640. Since then there have been several violent outbursts, a spectacular one occurring in 1933.

Hunting Grounds Now Skiing Runs

On Llaima's western slopes, where the Araucanians once hunted, hundreds of skiing enthusiasts now whiz down its snow fields.

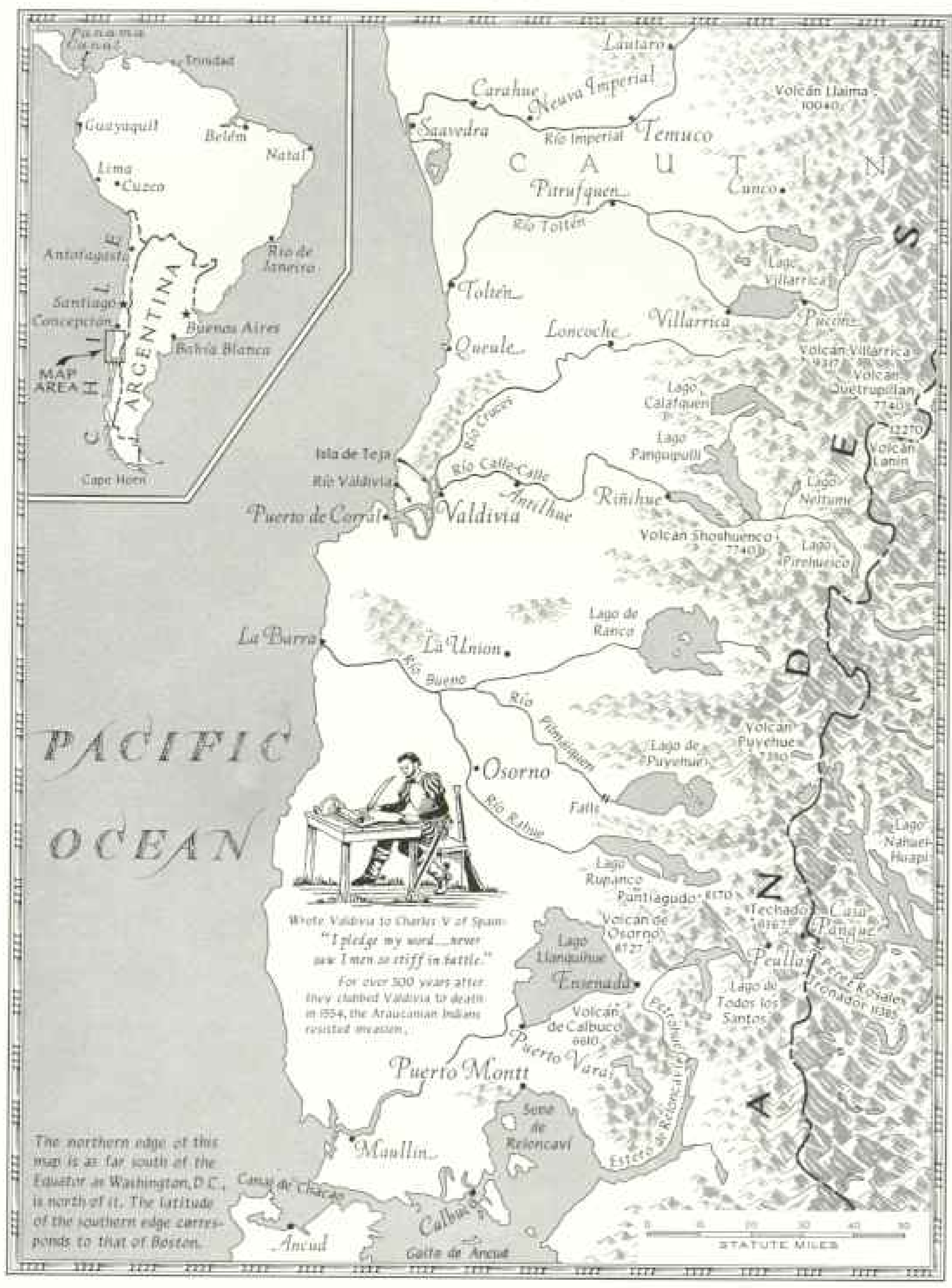
From around Temuco three other lofty volcanoes—Villarrica (still active), Quetrupillan, and Lanin (these two extinct)—are also visible toward the southeast on fair days.

By train I journeyed to the town of Villarrica, then motored to Pucón, a holiday center in the Lake District. From here, Volcano Villarrica seems a next-door neighbor. On clear, crisp mornings you feel that you can almost reach out of your window and scrape a handful of snow off its slopes.

"God of Fire," the natives of the region call this monarch. From Pucón it resembles Mount Fuji somewhat flattened out; above its forested base the slopes of lava, ashes, and ice tilt up gently to its 9,317-foot smoking crest (pages 98 and 110).

Like Llaima, this volcano erupted violently in 1640, and legend says it heated the water of a near-by stream so that the fish in it were all parboiled! Though it has given vent to accumulated internal wrath several times since, the fishing is good hereabouts! Salmon and trout abound—and the "big ones" do not always get away.

Prize rainbow trout up to 25 pounds have been successfully landed; six- to eight-pound ones are a common occurrence. Even smaller ones have plenty of fight. The main haunts



By Boat and Bus the Author Crossed Chile's Lake District to the Argentine Border

Near the coast, around Valdivia and Osorno, he found fertile valleys turned into a national breadbasket by German refugees (page 96). He traveled inland to the Andes, with their snowclad peaks, volcanoes, and scores of lakes. Resorts dot the area, for Chile has made of it a playground for winter and summer vacationists.

Fenno Jacobs from Three Lions

The *Huaso* Sticks to the Dusty Road, Leaving Hard Surfaces to Motorists

Parallel to this old trail, a modern gravel-faced highway runs into Osorno. Cowboys prefer the dirt, which is easier on the horses' hoofs (page 96).

of the salmon are in the quiet water around the mouth of the lake and far down the Toltén River, near the sea.

Hereabouts, if you don't fish you sit silent in clubroom conversations.

"I get the feathers for tying my flies either from England or the United States; the hackles I pick from birds imported from Wales," says one devotee.

"I get mine from Bolivia, from various places in Peru, Argentina, and from the central jungles during our flights," reports another, a member of the airway lines.

"What about those you picked up in mother's chickenyard last time you were home?" adds an American wife.

Pucón has other attractions. One can swim in the cool water off a black volcanic sand beach, sail, hike over forest trails, or play golf on a peninsular hill that commands a magnificent view of the mountains.

By motor launch across the east end of the lake one can reach La Rinconada, a lagoonlike stream alive with waterfowl.

Lumbering goes on in the dense forests. But here, too, large forest areas have been fired to open up the land for pastures and farms. On countless acres stand blackened or weather-bleached tree trunks. Several times on the trip smoke from crackling forest fires blotted out the landscape.

Chile's National Flower

Continuing southwestward from Villarrica, I came to Valdivia. At the railway junction children were selling fern-fringed bouquets of *copihues*, Chile's national flower. Its blood-red, bell-shaped blossoms hanging from twin-

ing vines lend bright splashes of color to roadside bushes and the gray-green forests.

"Droplets of Indian blood," and "bright blossoms of pain," local poets have called the waxlike blooms of this Chilean bellflower. Botanists named it *Lapageria rosea* in honor of Josephine Beauharnais de La Pagerie, first wife of Napoleon. She had taken it to Europe from her native Martinique, where it also grows wild. There is a white copihue, too, less common than the red.

Some days after I had shuttled off to Valdivia, I visited Lakes Panguipulli and Calafquen.

These lakes were as lovely in the bright autumn sunshine as their names are poetic. Panguipulli fills a long slender trough between verdant hills, the notch serving as a sort of rifle sight aimed at Shoshuenco Volcano. Calafquen, a half moon of blue water, lies around a ridge only a few miles away and spreads out below the southwest slope of glistening Villarrica. Every stream hereabouts holds lure for the angler.

Valdivia I found to be one of the most industrious and prosperous towns in southern Chile. Don Pedro de Valdivia (page 91) allotted 70 men to his fort, built here in 1552. Two years later he secured for the settlement the privilege of a coat of arms.

"Let there be on the shield a river, and a city of silver that is situate on that river—" thus began the royal grant. The river it had, for Valdivia is located where two streams pool their waters to become the Río Valdivia. It was a long time, however, before the prophetic city of silver had any meaning.

Insurrections in which even the magistrate, Don Pedro Fernández de Córdoba, had fetters riveted on him; a long succession of invasions by the Araucanians; earthquakes, fires—all these the town has passed through.

Many German Refugees in Valdivia

Growth of Valdivia into a modern busy town, now of nearly 40,000 inhabitants, dates from the beginning of German colonization. Leaving Germany to escape the iron hand of Metternich, scientists, doctors, poets, and just plain hard-working men began arriving here in 1850.

Tanneries, textile and furniture factories, a sugar refinery, shipbuilding yards for lighters and other small craft, and a big brewery line the waterfront and cover Teja Island.

Many buildings are of concrete, built since an earthquake and fire destroyed much of the town in 1909.

Engaging a motor launch, we rode the 11-mile river route to the sea at Puerto de Corral. The river, coursing through smiling fields and low wooded hills, is navigable only for shallow-draft vessels now. Scouring walls are being built to deepen the channel so that ships may come to dock in Valdivia.

A triangle of old Spanish forts once guarded the mouth of the river. Some of the walls and old rusting cannon remain. Friends showed me the historic ovens in which the Spanish colonists heated cannon balls to fire at ships.

Osorno, 90 winding miles southward from Valdivia, likewise reflects German colonization. Local industries and the town's present modernistic flair in architecture are largely of their building (pages 106 and 107).

Unlike Valdivia, which still has an old Spanish tower to remind it of bygone days, Osorno has lost its link with the Conquistadores. Founded in 1553 by a lieutenant of the energetic Valdivia, it was abandoned, refounded in 1558, destroyed by Indians, and again abandoned for nearly two centuries. Its original name was Santa Marina de Gaete, in honor of Valdivia's wife.

Home of the *Huasos*

The country roundabout alternates between forests and fields. Numerous livestock are raised on the green pasture lands. Visiting the lakes, we met many of the Chilean *huasos* with small flocks of sheep and herds of cattle (page 99).

At home in a thick-felted saddle, wearing a wide-brimmed hat, a poncho over his shoulders, leather chaps, and savagely sharp spurs, the huaso is a picturesque figure. The Chilean equivalent of an Argentine gaucho, he may be a cowman, a ranch manager, or a farmer (pages 95 and 109).

Horses in the south are to ride; big sleek oxen pull the carts and plows (page 103).

A trio of large lakes—Ranco, Puyehue, and Rupanco—lies at elevations from 230 feet to nearly 700 feet in the hills eastward from Osorno.

Lake Puyehue is the most popular, because it is easily accessible and has a thermal spa at its upper end. It is near the "Salto," or Waterfalls, of the Pilmaiquen.

Shortly after issuing from the lake, the water makes a noisy, spectacular plunge into a twisted gorge. In sunshine, rainbows hang suspended in thick clouds of spray that plume up to bathe masses of ferns and thickets. Three snow-crowned peaks form a wide backdrop to the falls and folded hills.

A Government-fostered colonization project extends along the south shore of Lake Puyehue. On these farms we talked with Chilean and

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Kodachrome by John Swope

With Classic Grace, This Chilean Señorita Carries Her Basket of Grapes

Ruby Saxton lives on her father's ranch south of Santiago on the way to the famed Chilean Lake District. She is of Chilean and English descent. Numerous vineyards, producing luscious grapes for the table and for wine making, flourish in the Aconcagua Valley, near Valparaiso, and in this region south of the capital.

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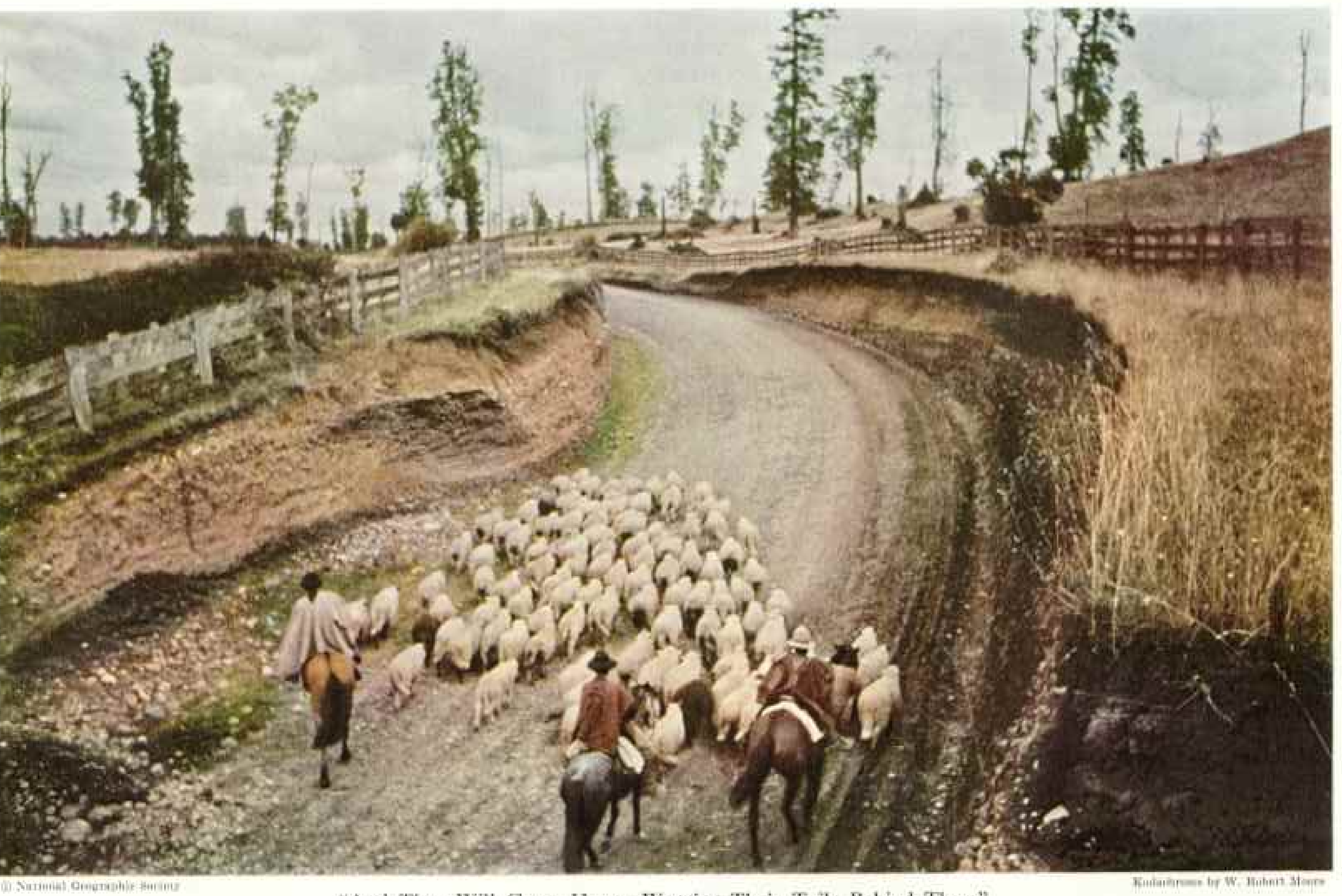
Kodachrome by W. Robert Moore

Lake Villarrica Echoes to the Throb of Outboard Motors Made in U. S. A.

This lake, and the rivers flowing in and out of it, form a fisherman's paradise. Numerous large trout and salmon are caught. Between Temuco and Puerto Montt there are a dozen such lovely lakes nestling beside eight snow-capped volcanoes. A plume of smoke often rises from the white crest of Villarrica Volcano (background).



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"And They Will Come Home, Wagging Their Tails Behind Them"

Unlike Bopeep's, these fat-tailed sheep are neither lost nor alone, for Chilean ranchmen near Lake Ranco are taking them to the corral. Large forest areas around the lakes have been burned over to provide pastures. Rail and rough-hewn wooden fences enclose many of the farms.

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Kodachrome by W. Robert Moore

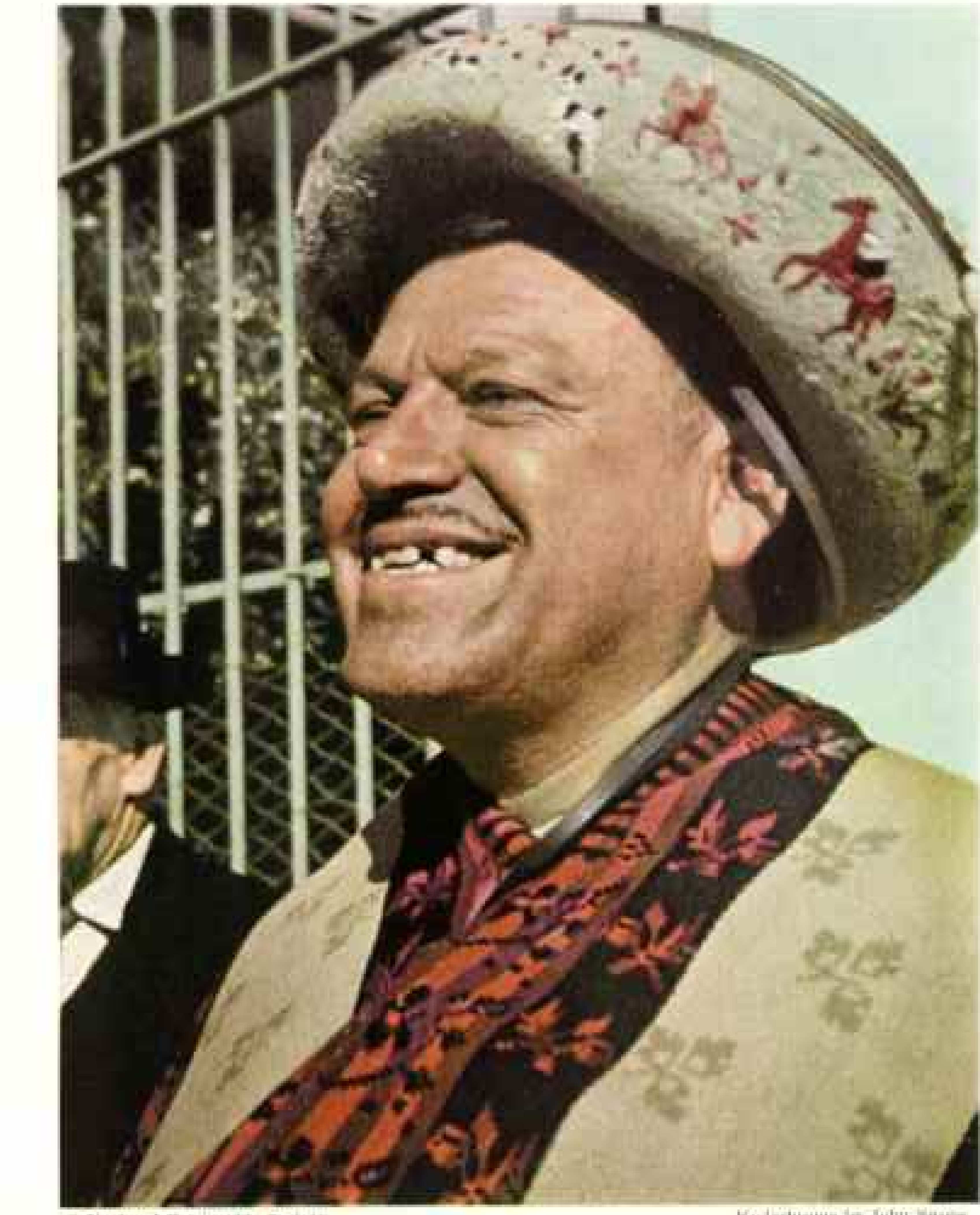
Beside Lake Llanquihue, Nature and Man Have Lifted Lofty Spires Toward Heaven

Across the lake towers Osorno Volcano, inactive in recent years, but ribbed at its base with old lava flows (page 102). Calbuco, near by, had a short eruption in 1929 and was also active in 1933. From the vacation town of Puerto Varas, foreground, visitors begin their boat and bus route to Argentina.

© National Geographic Society Kodachrome by W. Robert Moore

Araucanian Indians Call Themselves "People of the Land"

To preserve their lands and forests they fought bitterly against the encroachment of the Spaniards. While extending his control in this Temuco region, where Araucanians still live, Pedro de Valdivia, founder of Santiago, was killed.



© National Geographic Society Kodachrome by John Stone

For Smile and Costume, Wallace Beery Could Do No Better

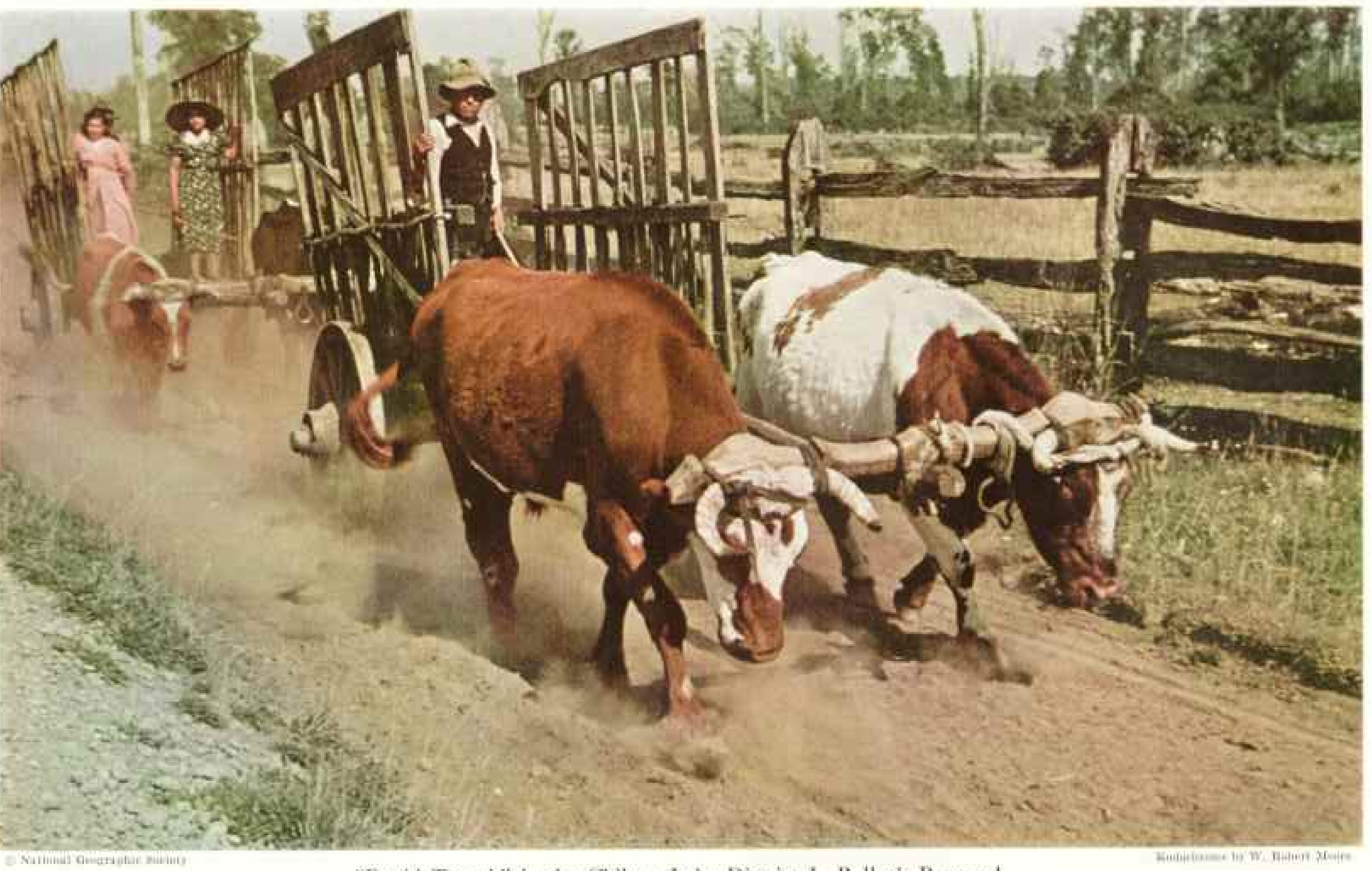
The broad, figured hat worn by this ranchman is the handiwork of a Colchagua hatter. Over his shoulders he wears a *manta*, a capelike garment slit in the center, through which he thrusts his head.

© National Geographic Society

Kodachrome by W. Robert Moore

Snow-crowned Osorno Appears in Early Morning Like a Misty Print of Mount Fuji

Though only two-thirds the height of the famed Japanese landmark, the 8,727-foot volcano keeps its snow cap the year round. Here, at the end of summer in March, the white mantle is at its smallest. This winding lake, Todos los Santos (All Saints), and Lake Llanquihue form a popular water-land route from Chile to Argentina.



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Kodachrome by W. Robert Moore

"Rapid Transit" in the Chilean Lake District Is Bullock Powered

The plodding beasts are also used for most of the plowing and cultivation on the farms. Horses are broken to the saddle for ranch riding after cattle and sheep. Many carts have solid wooden wheels in this region where roads are more often muddy than dusty. Rain falls much of the year.

© National Geographic Society Kodachrome by John Swope

Parking in Rural Chile Is Still a Problem of Hitching Posts

Horsemen wear spurs with wicked-looking rowels. Stirrups are made of thick carved wood.

© National Geographic Society Kodachrome by W. Robert Moore

Huge *Pangue* Plants, Growing About the Lakes and Rivers, Dwarf a 16-year-old Boy

Countryfolk use its leaves for roofing, chew the stalk, and dye cloth with tannin from its roots.

foreign colonists who were industriously clearing out stumps, hauling logs, and tilling the rich brown fields. For many of these modern pioneers it was the first parcel of good earth they had owned, for Chile is still a country of large holdings.

Part of the lake road passes through thick woodlands. In the dense undergrowth hung hundreds of copihue blossoms and scarlet clusters of parasitic *quintral*, similar to mistletoe. Wild fuchsias dripped red beside white flowering myrtles.

Though most of the forests are mixed, the majority of the trees in this locality were an evergreen hardwood, *laurel (Laurelia aromática)*. Its wood is odorless and is used extensively in making butter boxes.

Land of the "Honey Trees"

Scattered widely through the forests also were *ulmo*, or *muermo* trees *(Eucryphia cordifolia)*, large handsome evergreens. In full flower, their branches appeared like wispy white clouds against the green of the foliage. I promptly dubbed them "honey trees," for from their blossoms comes the finest honey I have ever tasted.

One gets tree and plant conscious at luncheons and dinners in the south.

"Café ó agüita?" asks the waiter at the end of each meal.

"What is agüita?" I asked when I heard it first.

"Hot water with a leaf in it!"

You can be served *boldo, matico, menta* (mint), and *paico*, to name but a few. All are supposed to have some medicinal value.

Blackberry bushes fill the countryside. They grow in the woods, along fence rows, in the fields, and crowd into roadways and paths. They have become a pest in Chile. In some places a man can hardly grub and burn them out fast enough to be rid of them on his farm.

The bushes hung heavy with huge ripening berries, yet during my whole trip I had them just once, except for those I stopped to pick myself.

Lakes Llanquihue and Todos los Santos (All Saints), with their snow-crested guideposts—Volcanoes Osorno and Calbuco—are the most familiar portion of the region.

Besides attracting numerous holiday visitors, they also provide a lake-bus-lake link for those who wish to pass between Chile and Argentina.

Largest of the Chilean lakes, Llanquihue spreads over a wide triangle of more than 300 square miles. When we arrived at Puerto Varas, at its southern corner, rain had been falling. Leaden skies hovered low over the landscape and lifted only late in the afternoon to give us tantalizing glimpses of Osorno and Calbuco.

The Mount Fuji of Chile

That night it turned cold and the stars shone.

"It will be fair tomorrow," said an acquaintance. "When the east wind from the Cordillera blows, we have good weather for two days, perhaps three."

Next morning I stepped out into bright sunshine and for a moment thought I was in Japan. Looming on the horizon across the lake was Osorno, like a misty Old Master of Mount Fuji (pages 100, 102). Though not so lofty as Fujisan (it is 8,727 feet high as compared to the 12,395 of the Japanese volcano), its contour is strikingly similar. Its ice cap, however, remains heavy throughout the whole year.

Osorno has been inactive for many years. Perhaps its destructive days belong to the past, along with the activities of a strange feline monster which, according to ancient Araucanian legend, was armed with a fierce claw on its tail and came up out of the waters of the lakes to slay men and beasts. Charles Darwin recorded one of Osorno's eruptions in 1835. Few lava flows are now to be seen on the surface.

We boarded the *Santa Rosa* and sailed to Ensenada.

No Snow Except on Mountains

"It's cold," said a fellow passenger, his face and hands red from the sharp Cordillera wind.

I agreed and crawled into my overcoat. "Does it ever snow here?" I asked.

"Only on the mountains. It reaches down on the slopes of Osorno so that we can go skiing. Around the lake it only rains."

In a 10-mile bus trip one climbs up some 436 feet to Todos los Santos. The route is across old lava flows and most of the way parallels the River Petrohué, which brawls among volcanic rocks, polishing them to the smoothness of glass.

The water in the river, like that in Lake Todos los Santos, is bright green. Because of this coloration the lake is also called Esmeralda (Emerald).

As strangely shaped as some mythical Araucanian monster, Todos los Santos winds among high mountains and is, to me, the loveliest of all the Chilean lakes. As you sail away from the base of Osorno, the Japanese perspective persists, the illusion aided by twisted trees that cover some of the islands.

Fenno Jacobs from Three Lions

Osorno's Tree-shaded Walks Suggest Old Spain, but Many Citizens Speak German

Refugees from Germany colonized Chile's lake region 90 years ago. They fled from the censorship, espionage, and power of statesmen like Metternich, master of Austria and chief arbiter of Europe at the height of his career.

On deck I met two young Canadians who had scaled Osorno the week before. It was an easy climb, so they said.

With less success they had fashioned a raft on which to sail the length of the lake to Peulla. For days they had cut dry hard logs from one of the hillsides.

A Raft That Wouldn't Float

When they launched the first log, preparatory to assembling the raft in the water, it plunged straight to the bottom. The second also sank like lead. Thus ended before it began their raft voyage on Todos los Santos.

They had picked out a large evergreen beech, *coigüe*, a wood that, because of its durability, is used for railway ties and for piers or other under-water construction.

Midway along the north side of the lake rears 8,170-foot-high Mount Puntiagudo, long extinct. Puntiagudo means "sharp pointed," and it certainly is. After tilting up steeply for some height, it suddenly thrusts up into a sharp pinnacle. Nature seems to have gouged its slopes and point as a lead pencil is crudely sharpened with a dull knife.

Crumbling rocks on Puntiagudo's almost vertical peak have thus far thwarted every attempt of mountain climbers to scale it, I was told.

Farther along on the journey, Mount Tronador lifts its hoary head for a short time above a notch in the high hills and then settles out of sight as the steamer swings into the last reach of the lake toward Peulla.

With few houses and a hotel, Peulla is

Fenno Jacobs from Three Lions

Modernistic Inside and Out Is the German Public School in Osorno

Bizarre designs are the creations of German-Chilean architects, inspired by new building motifs in Germany. Descendants of mid-19th century immigrants, now usually speaking both Spanish and German, till broad, fertile farms in southern Chile.

mainly an overnight stop for most people with Chile-Argentina itineraries; it deserves more. Located on the shore of the lake at the bottom of an amphitheater of towering mountain walls, it faces toward the perpetual snows that lie on top of Mount Techado.

Dense jungles clothe most of the hillsides. In the valley, as elsewhere in humid spots of the Lake District, big rhubarblike *pangue* plants grow (page 104).

A single leaf from such a plant would make a good umbrella, for some of them measure nearly five feet in diameter! The blossoms appear on a green spike twice the size of a huge ear of corn, and are reddish-yellow, horny nodules. The plant's sour stalks are thirst-quenching; its tannin-filled roots are used for black dyeing.

From Peulla, passengers go by motorbus through a winding valley to Casa Pangue and over the Pass of Pérez Rosales into Argentina, where, after two other brief lake voyages and a short linking bus trip, they arrive at the railhead for Buenos Aires.

At the Foot of "The Thunderer"

I stopped at Casa Pangue, at the foot of mighty Tronador, the Thunderer. Avalanches and ice breaking away from the glaciers that blanket its 11,385-foot walls have given this majestic mountain its name.

Legends say that the Thunderer's rumblings occur to give warning whenever an enemy passes this way. Apparently I was a friend, for Tronador uttered not a sound.

Instead, the mountain appeared more like

Photo Jacobs from Three Lions

To Puerto Montt Come Flocks of Sheep, for Shipment by Coastwise Boat to Valparaiso

The distance by water to the Chilean metropolis is about 800 miles. Colonists, mostly German, settling here on the shore of Lake Llanquihue, have built up a rich farming area. Originally foreigners were induced to come to Chile at the Government's expense, but that practice ended in 1870.

Fennó Jacobs from Three Lions

Homespun Poncho and Knitted Socks Keep Him Warm

The blanket coverall takes the place of jackets and coats for Chilean boys. Cowboys wear a similar cloak, called a *manta*, which usually is more colorful.

Staff Photographer W. Robert Moore

On Fiesta Day the *Huaso* Wears Silver Spurs

Bands of silver encircle the Chilean cowboy's hand-carved wooden stirrups (pages 96, 104). Comfortable saddles consist of six or seven layers of felt.

Victor León

Twin Chilean Volcanoes Spout Columns of Smoke and Flame At the Same Time

Villarrica and a neighboring volcano erupted in February, 1940, but caused no serious damage. The sight was a treat for summer visitors to the near-by resort of Pucón, on Lake Villarrica (pages 93, 98). Chile's disastrous earthquake of January, 1939, took place much farther north.

some kindly old man with snowy head, nodding in a quiet snooze under the warming sunshine. Much of the time Tronador is hidden behind heavy clouds.

The strong Cordillera wind dropped the morning I left on the return trip. Not a leaf stirred on the hillsides. We steered into a wonderland of reflections and smoky-blue haze. Back toward the sunrise the lake spread like a sea of quicksilver.

Rounding a headland we saw the snow cap of Osorno hanging detached in the sky like a wisp of white cloud. It seemed so tenuous that a breeze, had there been any, might have blown it away. We cruised toward it for miles before it finally became anchored to earth. If the photographs that I took that morning caught the "atmosphere" of Osorno, I did not work in vain.

Above the fishing and shipping town of Puerto Montt rain clouds billowed into the sky.

"Our sunshine has ended," said an acquaintance.

Perhaps so. But I had seen the Chilean lakes in friendly mood.

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Newfoundland, North Atlantic Rampart

From the "First Base of American Defense" Planes Fly to Britain's Aid over Stout Fishing Schooners of the Grand Banks

By George Whiteley, Jr.

ONE-THIRD of the way to Ireland on the great circle route from New York the rugged shores of Newfoundland, America's northeastern rampart, jut out of the North Atlantic. The big island commands the approaches to the St. Lawrence River and the most highly industrialized regions of Canada and the United States.

Today this rampart is being watched with the aid of warships, planes, and men from the new United States base at St. John's—"first base," American military men call it. Of the eight defense sites leased from Great Britain, this was the first to be garrisoned by United States troops, early in 1941.

From the long, sheltered harbors of Newfoundland and from the gigantic British airport at Cobb's Camp, aircraft now patrol the island and its waters far out to sea. Taking off with as little ceremony as if on routine flights, American-built warplanes in ever-increasing numbers are flying over like birds of passage for transatlantic delivery to Britain (maps, pages 77 and 115).

Contrast in Britain's Oldest Colony

A place of strange contradictions is Newfoundland, chosen by geography for a major role in both the Age of Discovery and the Age of Wings.

Discovered by John Cabot in 1497, Newfoundland is the oldest colony in the British Commonwealth of Nations. Yet through the centuries the tides of immigration and industry have passed it by, and its resources of minerals, timber, and water power have been incompletely developed.

Far bigger than Ireland or Cuba, Newfoundland has only about 295,000 inhabitants—fewer than seven to the square mile. Yet its climate, except in the extreme north, is moderate. Lack of arable land is the Old Colony's greatest handicap.

Although it is near Canada and is often shown in the same color on maps, Newfoundland is entirely separate from the Dominion. It held independent status in the British Commonwealth of Nations until 1933, when its legislature agreed to a commission form of government under a British governor pending recovery from financial difficulties.

In Newfoundland the oldest and newest industries carried on by white men in the New World may be seen side by side—cod fishing and transatlantic flying.

The first began soon after the coming of Cabot, for the waters around the island swarmed with cod and other fish.

Well do I remember the beginning of the second. On a cold May day in 1919 I stood with my family looking down on long, narrow Trepassey Harbour, at the southeastern tip of Newfoundland, where the first airplanes I had ever seen were roaring over the water and into the air. Three flying boats of the United States Navy were attempting to fly across the Atlantic to Plymouth, England, via the Azores.

Up went the planes and eastward over the sea. Their motors drowned the cheers of the townspeople and the sirens of the United States destroyers that had served as their base. Only the *NC-4* reached Plymouth. But that was the beginning of transatlantic air transport, in whose future Newfoundland was to play so important a part.

In normal times the Atlantic Clippers, carrying passengers and mail, take off from Botwood, Newfoundland, on their summer route to Britain. Contrast of old and new is often provided by the sight of a latest-type plane starting for Europe, while down on the sea a stout little schooner heads for the fishing banks.

Only King Cod Is Called a Fish

To this day, after hundreds of years of intensive fishing, the ocean around Newfoundland yields a rich harvest. And cod is still king in the Old Colony. Here "fish" means cod; everything else is salmon, halibut, haddock, as the case may be. Throughout this article "cod" and "fish" mean the same thing.

The catching, curing, handling, and selling of cod still employ more of the population than any other activity, despite the development of manufacturing, mining, and lumbering in recent years.

More and more of the islanders are being employed, however, in connection with defense activities. Others work in the big mills at Corner Brook and Grand Falls, which turn the island's pulpwood into paper (page 128); in the lead and zinc smelter at Buchans; or in the mines such as the huge deposits of iron on Bell Island in Conception Bay.

Newfoundland's people live almost entirely within sight of the sea, along a coastline that

St. John's Evening Telegram

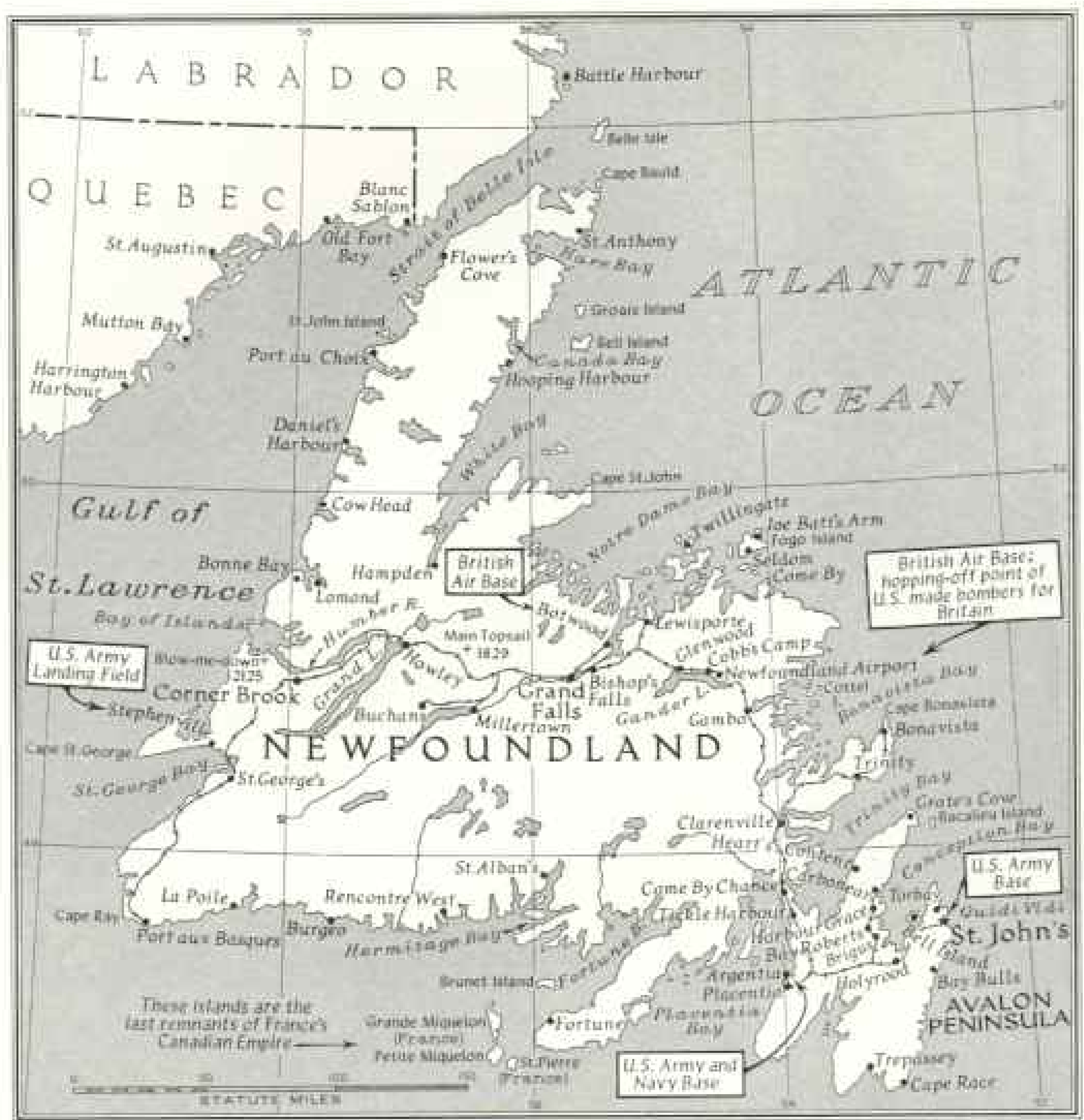
Newfoundland's Governor Inspects Canadian Forces Stationed on the Island

Vice-Admiral Sir Humphrey Thomas Walwyn reviews troops on the grounds of Newfoundland Memorial University College at St. John's. The governor is appointed by the Government of Great Britain and is chairman of a commission of six members, three from Newfoundland and three from the United Kingdom.

Montreal Standard

One Touch of Swingtime Makes the Whole World Kin!

When a dance orchestra starts blaring, American and Canadian soldiers and Newfoundland girls find they all have something in common. This dance is at the Caribou Hut, a group of rooms set aside for troops at the Y. M. C. A. in St. John's. Sir Wilfred Grenfell raised funds for the building.



Innumerable Bays Indent Newfoundland, Britain's Oldest Colony

Larger than Ireland, this rocky, glacier-scoured, sea-buffeted island lies at the entrance of the Gulf of St. Lawrence. Almost all its towns hug the coast, though a railroad runs across the island to the capital, St. John's, on the Avalon Peninsula (right). Harbour Grace west of St. John's, Botwood near the north-central coast, and Newfoundland Airport at Cobb's Camp are famous as take-off points for transatlantic flights. Southeast of Newfoundland the Grand Banks form a vast shallow sea, one of the great cod-fishing grounds of the world (see also map, page 77).

winds around and back, in and out, for over 5,000 miles, more than two-and-a-half times the distance between Newfoundland and England. Much of it is towering, mountainlike cliff, rising abruptly from blue-green waters.

Here Blow-me-down Is a Place Name

Everywhere are capes, bays, isthmuses, sounds, fiords, peninsulas, islands—thousands of islands, clustering in groups alongshore and at the head of bays, forming narrow channels and "inside runs" that delight the heart of the adventurous yachtsman.

To the island's fisheries in early days came colorful cosmopolitan crews—English, French and Spanish Basques, Bretons, Normans, Portuguese. The result is a varied and curious collection of place names: Heart's Content, Tickle Harbour, Seldom Come By, Joe Batt's Arm, Hooping Harbour, Port aux Basques, Argentia, Cape Bonavista, Main Topsail, and Blow-me-down (or sometimes Blomidon).

Army

Warmly Clad American Soldiers Leave for Newfoundland

This contingent undergoing last-minute inspection at Boston was equipped with fur caps and other warm clothing because it went north in January. The climate of the island is not unduly severe.

My wife and I lived at Bay Bulls, half a mile from Bread-and-Cheese.

A landmark gallantly named by the Portuguese after their intrepid navigator Gaspar Cortereal is now Cottel Island, while Bacalieu Island is obviously the Spanish *bacallao* or Portuguese *bacalhao*, meaning cod.

Although Newfoundland was the earliest-known portion of the Atlantic seaboard, settlement was slow. The West-of-England fishermen, who were evidently acknowledged masters of the new seas by the continental seamen, assumed a prior right to the land also. They bitterly opposed any attempt to colonize the new country.

Even as late as 1830, when the 60,000 people then living in Newfoundland were demanding a constitution and a judiciary system, the English fishing interests fought the measure. To them, the idea of Newfoundland's having a legislature was outrageous. One indignant burgher declared: "They are making roads in Newfoundland; next thing they will be having carriages and driving about!"

One of the early governors sent from England was Captain John Mason, who, with Sir Ferdinando Gorges, subsequently founded the State of New Hampshire. Mason explored the island, made the first accurate map, and wrote a tract encouraging settlement.

Publicity, 1617 Model

After a six years' stay Mason returned to England, probably influenced by his pretty wife, Mistress Anne Mason, who evidently preferred the gaiety of London to the excitements of frontier life. Robert Hayman, the poet-governor who succeeded Mason, wrote in 1617:

"To all those worthy women who have any desire to live in Newfoundlande—

> Sweet creatures did you truely understand
> The pleasant life you'd live in Newfoundlande,
> You would with teares desire to be brought thither!
> I wish you, when you goe, faire wind, faire weather.

Giles from Black Star

In Newfoundland, Where Gasoline Is Costly, the Horse and Buggy Survive

Quaint vehicles somewhat resembling the Irish jaunting car are used by the citizens of Torbay, north of St. John's, attending church on a foggy Sunday morning. Most people in this region are of Irish descent.

Good publicity copy for 1617!

In spite of much early lawlessness, hard-working and resourceful Englishmen began to settle and take root in the island as the years went by. These hardy folk carried on a rude kind of agriculture, raised vegetables, reared cattle and swine. Fish and game were easily obtained, as were wild berries.

Settlements were scattered, just as they are today, and the pioneers, skillful in woodcraft, went about the country visiting each other; "cruising," it was called. Even now in some parts of the country to pay a visit to a distant friend is "to go for a cruise."

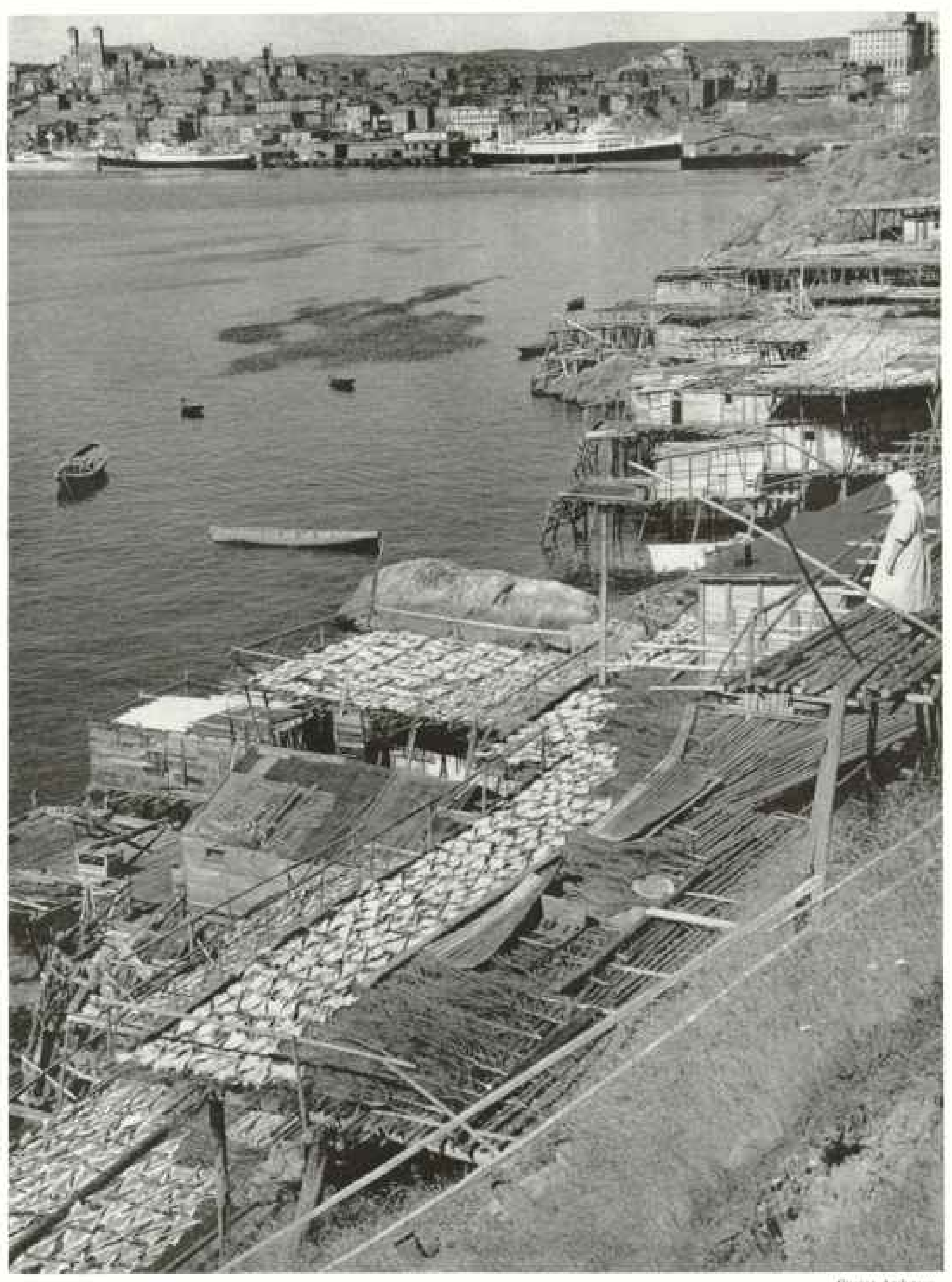
Some Villages Little Touched by Time

Visitors ask why the people have separated among hundreds of tiny isolated villages instead of living in several larger ones where modern conveniences could be arranged. The answer is that a fishing population is generally a scattered one. Besides, there is comparatively little arable soil along the coast, and since the desire to own a house and bit of land is strong among the people, they have to get off by themselves (page 121).

Life has changed little in 200 years in the "outports," the scattered coast villages. My neighbors engage in much the same tasks that made up the daily round of their forefathers.

Cows, sheep, goats, and hens wander at will down the rough, rocky roads, over the often unfenced land. The houses are small white-washed dwellings perched on the side of a hill, on a pile of rocks, in the lee of a clump of firs. Some have a flower garden and a lilac bush (which blooms in late July), and in their tiny front windows are rows of begonias planted in painted tomato cans.

A weathered barn, a vegetable patch, and a summer supply of firewood—fir logs stacked together like an Indian wigwam—these are the general features of the near-by houses. Some are cosy and comfortable; others bare and unpainted, revealing a losing fight against poverty.



Gustav Anderson

Codfish Are Everywhere in St. John's, the Newfoundland Capital

Fish, first split and salted, are drying in the sun on "flakes" of brushwood on the steep slopes of the Battery, where cannon were mounted in former times. Below are landing stages for fishermen's boats. The passenger ships in background operate normally between St. John's and Liverpool, Halifax, and Boston (pages 120, 123).

Along the near-by water front nearly every house has its own fishing stage and store, and a boat or two at anchor. Most of the stages are perched precariously on stilts to keep them level amid the jagged rocks. They seem to be striding up the cliffs.

None of the houses boasts shutters, for sunshine is always welcome, but nearly all carry ladders on their roofs, because there is no fire department in the isolated villages. Oranges and apples are seen only on special occasions, if at all, and a balanced diet has yet to be achieved.

Red Cliffs, Blue Sea, Challenge Artists

No artist could be in a village five minutes without wanting to set up his easel or unstrap his camera and get to work. He might see a lighthouse shining whitely against rugged red cliffs, with a little tan-sailed schooner coasting along and the deep blue sea beyond. What a fascinating color is the Newfoundland sea! Or he might happen on a group of big-booted, canvas-jacketed fishermen "barking" nets—boiling them with spruce bark in a large black caldron to preserve them.

He might see granny, a colored handkerchief over her head, fetching in a back-load of firewood, or a little lass "spillin' a turn o' crunnocks"—an armful of kindling to help mother bake bread.

Older children, rosy-cheeked, tousle-headed, with kettles and pails, are off to pick the luscious blueberries and partridgeberries that cover the hills in the fall. Fields of wild flowers brighten the landscape—roses, scabiosa, bog myrtle, rhodora. Inquisitive billy-goats wander about, wearing triangular yokes painted red to identify them as so-and-so's property.

These features are common to the fishing villages of the coast, but there is really no typical outport. Circumnavigate the island, and the human scene as well as the landscape continually changes. Each bay is different from the one preceding.

Here in Bay Bulls on the southeast coast nearly all the villagers have Irish names. About 1814 thousands of Irish emigrants flocked to Newfoundland and all settled in this southeastern area. They probably were so exhausted after the arduous ocean crossing that they seized upon the first available acres of free land.

Every family in this village has enough land to grow sufficient potatoes, carrots, cabbage, and beets for its own use and perhaps enough hay for the cattle's winter feed. The fields are rocky and uneven. Compared with most of the terrain, northern Vermont is a fertile garden, yet local vegetables have as sweet a savor as the best that grow.

Some villages are not so well off for land as is ours. The next hamlet down the coast, for instance, has no land suitable for gardens. The people's livelihood has to come entirely from the sea. They sell or barter their catch of dried cod for food and other necessaries. A small catch of fish coincident with low price is disastrous for families thus situated.

During summer the short, wiry ponies that have worked so hard all winter pulling home loads of firewood are loosed and wander in companies over the barrens. The cows, too, are allowed to range. Barney, the little boy who brought our milk, walked four or five miles every evening to catch his cow.

If there is any leisure in the outports, it is during winter when the days are short and outdoor work is restricted. If the summer has been profitable, people live well; if not, they scrape along until the next summer and hope for the best. The winter food supply is supplemented with game—rabbits and grouse—while good catches of speckled trout are taken from the frozen lakes.

"Fish and Brewis" a Favorite Dish

A characteristic Newfoundland dish is called "fish and brewis." The fish, either fresh or salt-cured, is boiled; "brewis" is made from cakes of hardtack soaked overnight and brought to a boil. Served with butter sauce or pork fat, it is *the* Sunday breakfast. Or as an old fisherman once said to me: "Us fellars, we loves it; to we it's what espaghetti is to the Eyetalians."

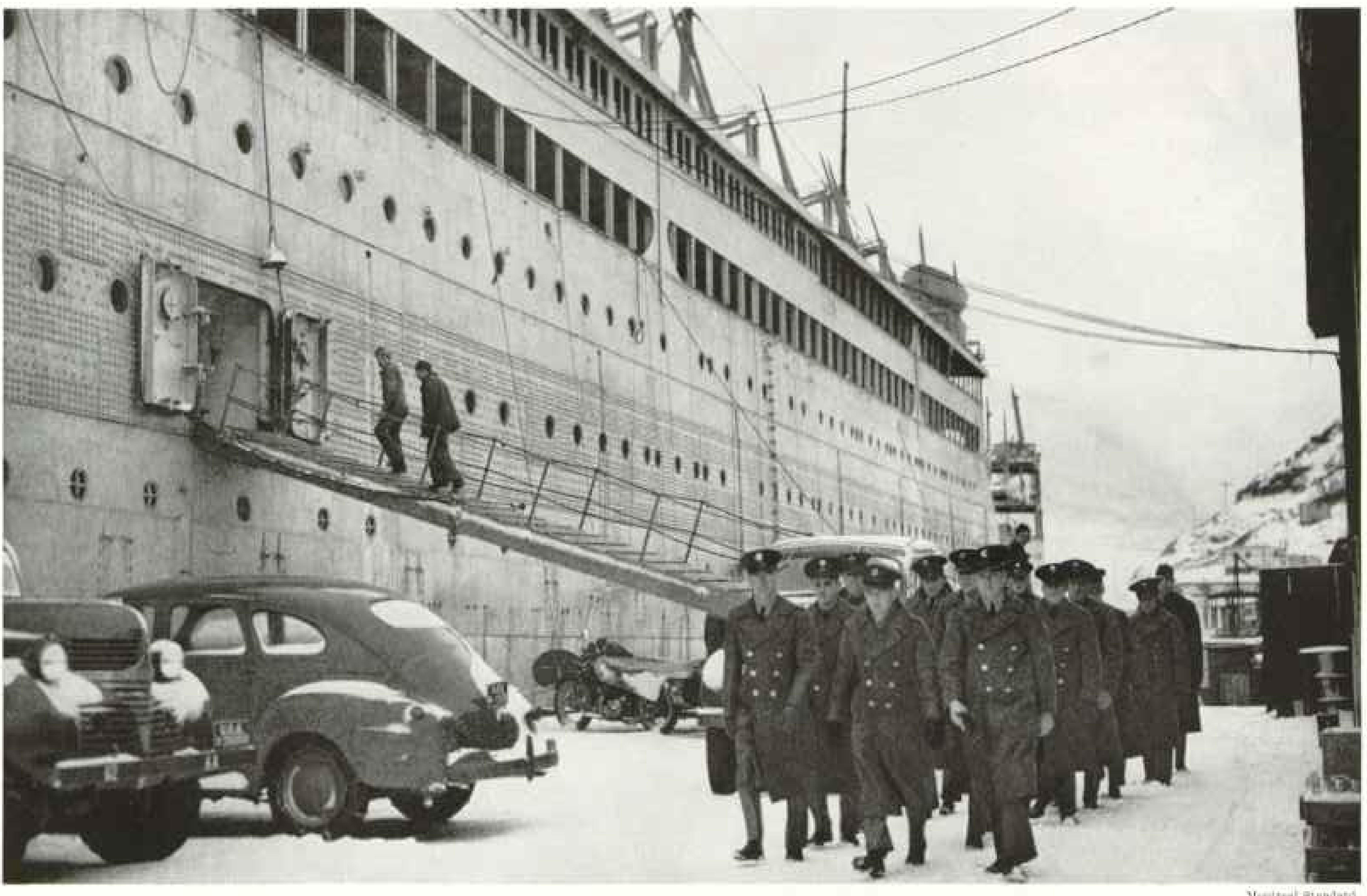
In winter the men are kept busy overhauling and mending their nets, building new boats, cutting and storing firewood for present use and for the following summer. Day after day, load upon load swings down the narrow trails through the snow. The low catamarans—sleds with two high runners fastened by cross-bars and uprights—are piled high with spruce and fir logs. The bells of the ponies ring merrily. In northern Newfoundland Eskimo dogs are used in place of horses because there are no roads as there are in the Avalon Peninsula.

Wood is burned both for cooking and heating. Coal at $12 a ton would unbalance the family budget. The village housewife bakes her bread in a large barrel-shaped oven that sits on the top step of a stove made in three low broad steps to burn long logs and have a wide heating surface. This is important, for it is the only source of heat in the house. Often the kitchen, being the warmest room, is the center of all family activities.

Ewing Galloway

Haven of Hope and Healing in the North Is the Grenfell Mission Center at St. Anthony Harbour, Newfoundland

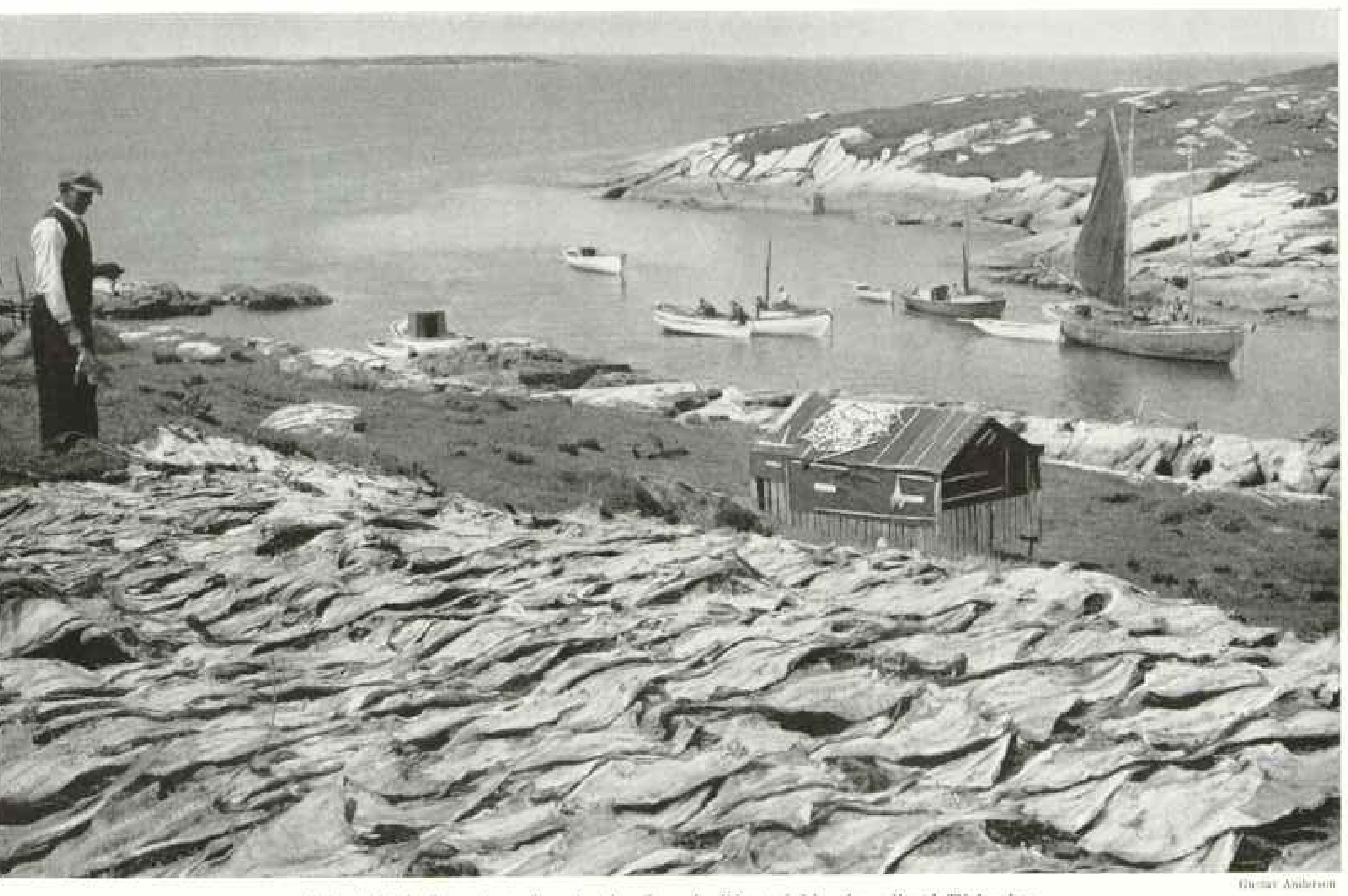
Here are located many of the welfare activities founded by the late Sir Wilfred Grenfell, the "Labrador doctor." To the left of the anchored ship are the Grenfell Mission wharf, Hospital, and Children's Home. In greenhouses donated by the Garden Clubs of America (extreme left), vegetable seedlings are started early and given to the people to help offset the short northern growing season.



Montreal Standard

United States Soldiers in Newfoundland Leave Their Temporary Floating Barracks to Go to Church

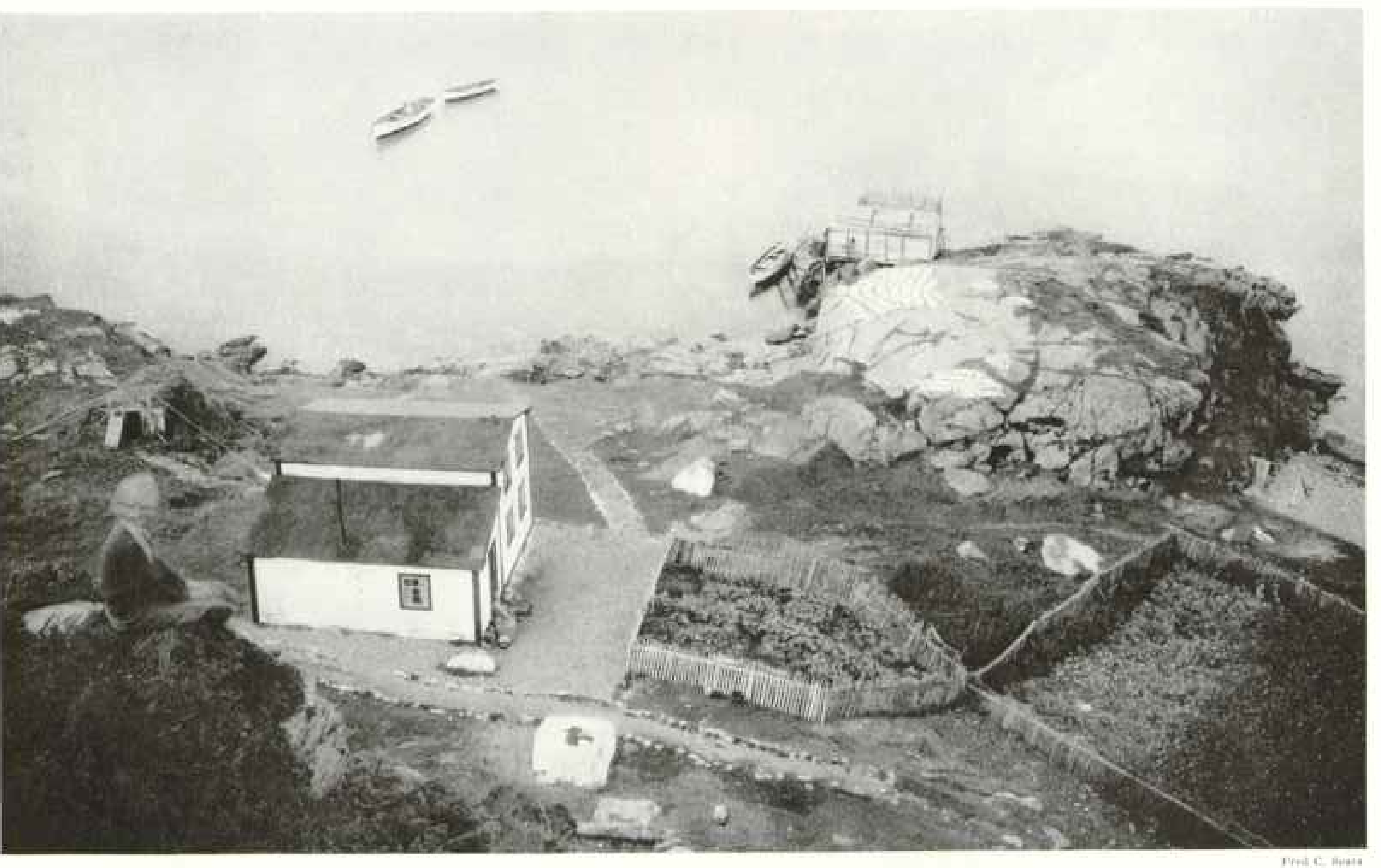
Sent to garrison the new American base at St. John's, they were quartered on the Army transport *Edmund B. Alexander* until housing ashore could be completed.



Gustav Anderson

Salted Cod, Spread to Dry in the Sun, Is King of Newfoundland Fisheries

These fish are being dried on spruce branches at Flower Island, but more often the "flakes," or drying racks, are of wood or wire, raised high enough to permit ventilation (pages 116, 125). Cod is stored in salt and exposed to the sun for varying periods, according to demands of different markets.



Fred C. Sears

Humble Cottage and Meager Gardens on a Rocky Coast Symbolize the Newfoundland Fisherman's Struggle

White patches on the rocky point are codfish drying. Vegetables are grown on thin plots of soil among the bare rocks, well fenced to keep out wandering goats. Produce is stored for winter use in the moundlike cellar behind the house at left. This homestead is on the north coast.

Ernest Maunder

Anchored on the Shallow Banks, a Cod-fishing Schooner Awaits Return of Her Dories

Her crew is fishing for cod with line trawls, sunk near the bottom with thousands of baited hooks (page 130). The triangular sail is set while at anchor to help guide the dories back and to keep the ship headed into the seas. Besides dorymen, the schooner's crew includes captain, cook, and mess boy.

George Whiteley, Jr.

Dories Drop Astern One by One to Lay Their Lines for Cod in a "Flying Set"

Towed behind the Newfoundland schooner *Democracy*, the dories gradually cut loose to spread afar on Banquereau, a large fishing bank off Nova Scotia. Later the ship will return to pick them up.

There is always a large iron kettle of hot water on the hob, for everyone, old and young, takes a good cup of tea, strong and often.

Once an old soul paid an afternoon call on my wife, who is an American. After a while the visitor somewhat naïvely remarked, "Customs change in different countries, don't they? Sure, my daughter who lives in Boston has been telling me how different it is up there. Now here, saving your presence, we'd never think of letting anybody call without offering them a bit o' warm tea." She got her tea!

The long days of May bring the first cheery sign of spring. Work on the land begins. Between planting potatoes, painting boats, whitewashing houses, building cattle fences to keep out the ubiquitous cattle—"Green stuff be's so wonnerful 'ard to raise 'ere, sir"—preparations are made for the fishery.

First Come Salmon, Then Cod

In mid-May salmon nets are put out. These are just long straight nets, 20 feet deep, anchored at right angles to the coast. Vast schools of salmon frequent the Newfoundland area during spring. They come in from their winter haunts, at the edge of the continental shelf, to seek the plentiful food supply of the warming coast waters before starting for the rivers where they will eventually spawn. Over four million pounds of salmon are caught in June and July, most of it on the north and east coasts.

Ordinarily, most of the catch was shipped freshly frozen to Britain, but it now comes to the United States or Canada.

By mid-July the codfish run is at its height. Fishermen are working day and night with no thought of regular food or sleep so long as "cod are running plenty," while despair fills

George Whiteley, Jr.

Four Tons of Codfish "in the Bag"

The bulbous portion of the net is the end of a huge cone-shaped trawl, in which the fish have been scooped from the ocean bottom off Newfoundland. Steam trawlers drag the huge, wide-mouthed nets a few feet above the sea floor. The catch collects at the tip, which fishermen call the "cod end" (pages 133, 136, 137).

Giles from Black Star

Fertilizer Is Provided by the Generous Sea

A truckload of capelin, which spawn by millions near Newfoundland beaches in June, is unloaded to enrich a farmer's fields. Vast schools of cod pursue and devour the fish, which belong to the smelt family. They are used for bait on trawl lines and also make good eating.

their hearts if the boats return empty from the traps. Cod is gold to the fisherman, and he certainly sweats for it.

By far the largest amount of fish is caught in cod traps. In June and July the cod schools come to land in vast quantities, seeking the abundant food supply provided by the shoreward spawning migration of a small troutlike fish, the capelin.

I have often seen the surface of the ocean for acres around my boat a writhing mass of cod and capelin, the big fish rushing and leaping clear out of the water, gorging themselves on the bait. Cod chase the capelin right to the coast and make trap fishing possible.

Imagine a roofless square room whose floor and four walls are of six-inch mesh netting, each side 90 feet long and 70 feet high. One wall or side is really a double door that is left ajar, and from the opening a long wall of netting 70 feet high stretches maybe 250 feet toward the shore. This is the "leader." Corks are fastened to the top of the walls of the trap and pieces of lead to the foot. The whole contraption is set in the sea in about 60 feet of water at right angles to the shore, toward which the leader points, and is securely buoyed and moored by cables and anchors. That is a cod trap.

The first trap was devised and used by my paternal grandfather in 1863. Before that a cod seine was employed. A seven-oared longboat would put to sea and row around all day looking for cod playing on the surface or resting near the bottom in shallow water. When the fish were found, the long seine was cast in the time-honored fashion. Sometimes big hauls, ten thousand pounds or more, were taken.

Men were hardy in those days, thinking nothing of rowing ten miles, hauling a load of fish, and rowing home again. Old-timers shake their heads at the present motorboating generation. "'Tis wiser and weaker you're gettin'," they say.

Fishermen Knit Their Own Nets

A cod trap completely equipped costs about $800 today. They are made—knit—by most of the men, for the Newfoundland fisherman is a versatile craftsman, as ready to knit a trap as build a small schooner. If an industrious fisherman has saved enough to buy the necessary twine and rope to knit a trap, he usually gets four or five neighbors to help

him operate it, paying them wages or offering a share of the catch. Thus we have what the village calls "Mike Mallony's crew," or it may be a family affair, "Ol' man Pico and de boys."

Traps are hauled twice a day, at early morning and late evening. Before dawn the pop-popping motorboats towing one or two skiffs are on their way.

The fish are cleaned and dressed soon after the boat's return to the stage. As a boy I was told that pronging fish from a loaded boat onto a high stagehead was good back exercise. Just a local name for hard work! The fish are dressed by being beheaded, gutted, and having a part of the backbone removed by the "splitter." Indeed, the whole cleaning operation is known as "splitting" fish (page 127). Usually three men are needed to do it—a "cut throat," a "header," and a "splitter."

Montreal Standard

Military Police Investigate the Girl Problem!

Two fair guests at a dance for soldiers in St. John's, Newfoundland, attract the favorable attention of a Canadian (left) and an American, detailed to see that all goes smoothly. The Canadian's arm band has the letters "G M P," for "Garrison Military Police," and the other's "M P" is for "Military Police."

Having been split, the fish are washed, packed in layers in long "bulks," and salted with coarse salt, one layer upon another.

No one visiting the coast during August and September can fail to see—and sometimes smell—quantities of salt cod on wooden, bough-covered platforms called "flakes," drying in the sun (pages 116, 120). The dried cod are shipped in peacetime to Italy, and to Spain, Brazil, Puerto Rico, and elsewhere.

The coast fishery is not considered a very dangerous vocation, but I have seen and heard of many a narrow escape. The majority of fishermen cannot swim, the water being so cold that there is little desire to learn.

When a big haul of cod is made, the men are loath to lose any, so the small boats are loaded till the waves lap in over the gunwale—and the winds may change, the fog roll down, and a gale sweep in, in the twinkling of an eye.

I like the story of an old chap who was coming in through the harbor mouth low down with fish. A following wave filled the boat, and his two men climbed the mast; but he, remaining unmoved at the tiller, brought his load of fish alongside the stage, the water up to his *mouth*. He could not swim.

Bankers "Sail to Set You Crazy"

In addition to this prosaic but profitable shore fishery, Newfoundland has two others, far more romantic and daring, the Bank and the Labrador fisheries.

The Grand Banks of Newfoundland are submarine plateaus, greater in area than the

Montreal Standard

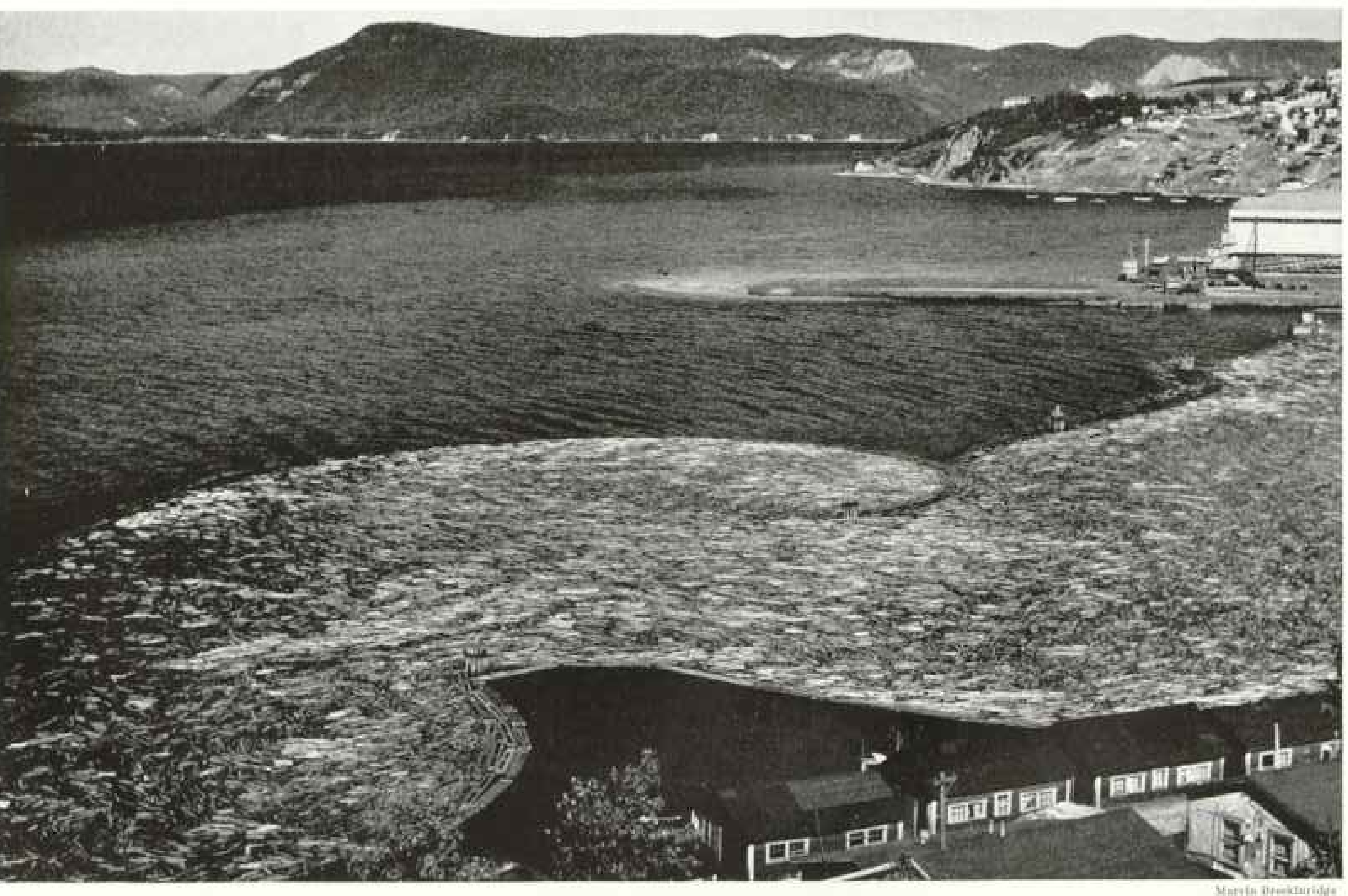
Canadian Soldiers of Today Parade on Ground Sacred to the Memory of Troops Who Fought in 1914-18

This Montreal unit in training to defend the British Empire is drawn up on the grounds of the Newfoundland Memorial University College, St. John's, established to honor Newfoundlanders who served in the first World War. Football goal posts are at right. The only privileged guests are the dogs, which abound everywhere.

George Whiteley, Jr.

Deft-fingered Men, Working at Top Speed, Clean Cod on a Mass-production Basis on a Steam Trawler

From the shallow boxes at right the fish are transferred to bins beside the cleaning tables (left). There one man, the "cut throat," rips open the cod's belly. Next, the "header" removes the intestines, saves the cod liver for tonic purposes, and pulls off the head. Then the "splitter" removes the backbone, and the fish go into the tubs of water for washing (center). Finally the cod are salted and stowed in the hold. If the fish are to be kept fresh, they are merely gutted and packed in ice.



Marvin Breckinridge

The News You Read This Morning May Have Been Printed on Paper Made from This Newfoundland Pulpwood

Thousands of logs, enclosed by a boom, await manufacture into paper at Corner Brook, on the west coast. Spruce and fir are most generally used for the purpose. Lumber and other timber products also are produced. In the right background is the entrance to Humber River, noted for salmon fishing.

Three Lions

Husky Newfoundland Lumberjacks, Far from Home, Wield Axes and Saws for the Mother Country

Early in the war, nearly 1,000 woodsmen from Newfoundland were engaged to cut timber in England. Formerly they felled pulpwood trees for papermaking (page 158).

Gustav Anderson from Galloway

Hungry Newfoundland Fishermen Eat a Lot of Bread

A brawny housewife sets her fresh-baked loaves out to cool. She wears heavy socks instead of shoes around the house.

island itself. "Bankers" are fast-sailing two-masted schooners, among the most beautiful things of this world (page 122). A full-rigged banker with "all her linen hung," and heeling over to a freshening breeze, is a picture of rare beauty and grace.

> She can sail to set you crazy,
> Not a timber in her's lazy,
> She's an able, handsome lady,
> Watch her go—

Long ages ago the Banks were dry land—the edge of the North American Continent. The charts show their present contour; the outside dotted line marks the 100-fathom edge (600 feet). The sea floor slopes steeply beyond this, sometimes falling 6,000 feet in a few miles. The average depth of water over the Banks is about 200 feet. In the northeast the Virgin Rocks lie only 18 feet from the surface. They break during rough weather.

From Fortune Bay on the south coast of the island hails Newfoundland's fleet of sailing bankers. The short days of early March, notwithstanding boisterous and often bitterly cold weather, find the banksmen fitting out their schooners and preparing for the season's fishery.

These Fortune Bay vessels are practically the last of the large and famous North Atlantic fleet of salt cod catchers that used to range over the offshore banks, from Cape Hatteras to Labrador. Gloucester and Nova Scotia's fishermen have turned more and more to motive power and to supplying the fresh-fish trade.

Hard Life Aboard a Banker

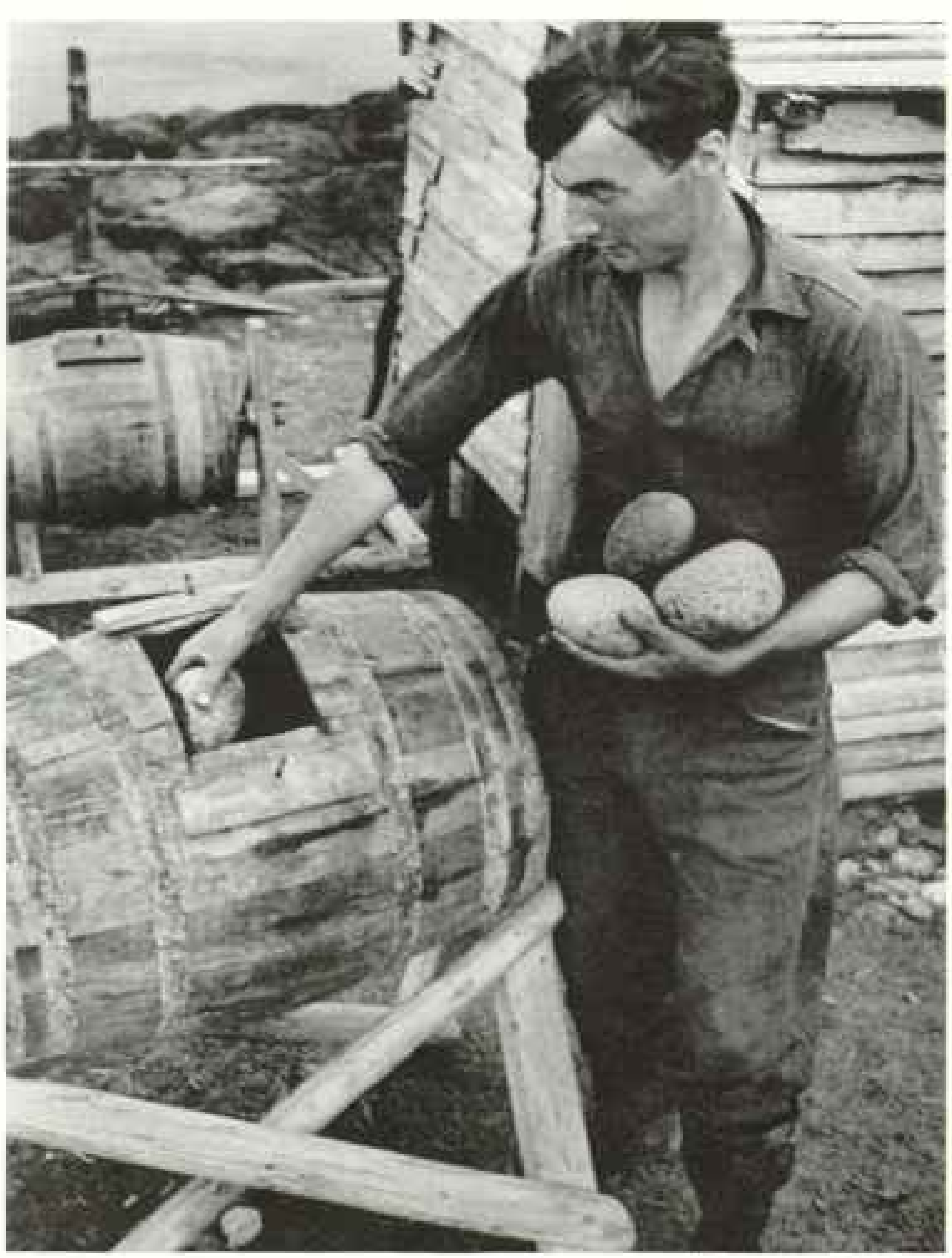
Several years ago I made a spring trip on the banker *Democracy*, a typical vessel of about 120 tons, carrying when loaded 1,800 quintals (pronounced "kentals") of salt cod. A quintal, 112 pounds, is the measure used for cod (page 122).

Bank fishing is done by line trawl. A strong, slender line, often miles long, is buoyed and anchored, so that for the greater part of its length it is on or near the bottom; thousands of baited hooks hang 18 inches from the main stem. Two men in a dory, a small high-sided, flat-bottomed boat, set and haul the trawl, bringing their catch back to the schooner. We were using ten dories, so our crew numbered 20 fishermen besides the captain, cook, and a mess boy, aged 12.

Trawls, of course, have to be baited at every set, and herring is the best bait available in

March. Barrels of them are seined and frozen overnight as hard as rocks. They are thus stowed in the ships' bait lockers. The cold weather keeps them frozen. We took our bait at a little bay near Rencontre West and set sail for Misaine Bank, off the east coast of Nova Scotia, where most of the spring fishing is carried on.

Instead of making the run in the usual three days, we wasted nine because of bad weather and drifting ice. Once when the fog lifted slightly for a moment, the lookout suddenly shouted "Breakers!" and the ship struck hard before anything could be done. Fortunately, we were running on a heavy swell at the time and it carried the ship over the crest of the reef into deeper water. The rock must have taken a slice out of our keel, but there were no other ill effects.



Wallenberg from Three Lions

Even Fish Heads Have Their Use in Newfoundland

Boiled, dried cod heads are placed in the fish-meal mill with a handful of rocks. The barrel is then revolved until the stones have ground the heads to pulp, which is dried and fed to pigs. The mills are rare in Newfoundland today.

On the evening of the ninth day we rounded the extreme end of the pack ice, and from tide eddies on the surface of the oily sea the skipper judged we were nearing the edge of the bank. During the night we came upon a small fleet of 11 bankers, all anchored and with most of the crews splitting the day's catch by the light of kerosene-flare lamps—a strange, unnatural spectacle.

Knives and Gore Suggest a Pirate Ship

In the distance a ship would appear as if on fire. Ruddy light from the flaming torches around the cabin house and splitting tables cast lurid, grotesque shadows on the patched riding sail. When the ship plunged and rolled in the swell and the canvas shook, the shadows writhed and disappeared as if alive—tenuous ghostly shapes riding on the wind.

We steered close to hail and ask for news. The bloody splitting tables wreathed in smoke, the gory oil clothes of the men, the flashing cleaning knives, all suggested a scene in the bold days of Henry Morgan.

On the whole we experienced a rough spring. Drift ice, borne out of the Gulf of St. Lawrence, repeatedly drove the schooners from the ground. One morning the pack drifted upon the fleet so fast that several ships with trawls set overnight had not sufficient warning to pick them up and so lost them.

For days on end we lay to, under foresail and jumbo, while the wind whistled through the rigging. It is surprising how little water will come on board when the canvas is light

Wallensburg from Three Lions

Giant Newfoundland Dogs Are as Heavy as a Man, Yet Gentle as a Kitten

A puppy held by Hon. Harold Macpherson, breeder of the dogs, seems tiny in comparison to its parents. Weighing as much as 150 pounds, Newfoundlands transport mails between the railroad and isolated "outports" and make excellent herders and retrievers. Their chief ancestors probably were Pyrenees Mountain sheep dogs, brought over by Basque fishermen.

and the ship hove to. Huge combers, with every drop of their wild wind-torn crests bursting with relentless power, would surge down on the *Democracy*, intent on sweeping everything off the deck. But only a sheet of spray would wet the bulwarks.

The schooner would dip and drop swiftly into the trough as if seeking shelter from the wind. Eventually the storm would lighten and the seas flatten out into a black, oily swell.

Fog Fought with Horn, Bell, Cannon

But water often came on board as we sailed over the Banks in search of fish. Lying on my bunk in the cabin aft, the deck beams just clearing my head, I could hear the surge of seas pouring in over the taffrail, sluicing the ship from stem to stern as she reeled and sidled, snuggling into the foaming turmoil. Only a two-inch planking between us and water that was nearly two degrees below freezing point!

On foggy days the captain lashed the double-bellows foghorn and the mess boy to the weather rail and bade him pump the handle as if his life depended on it. Then he himself would struggle from the cabin carrying a short brass swivel gun which he fitted to the taffrail. Priming the gun with powder, he touched it off with a red-hot poker. The deafening boom rolled away through the mist to comfort distant dories. Meanwhile "cook" was perched on the fo'c'sle head banging a huge bell with a belaying pin.

With the cannon shattering our little world every five minutes and the horn going continually and the bell pealing whenever cook wasn't down below turning out those molasses buns of his, we used to have quite a day of it. But the lives of 20 men depended more or less on the amount of noise created, so consideration for the ears became a secondary matter. The skipper told me that often he couldn't hear for days afterward.

We all ate together in the commodious forecastle where 14 of the crew also slept; the rest of us slept aft, two in each bunk. The food was plain, but there was lots of it and we were hearty eaters. Dishes of beans and hash, cod tongues and heads, halibut, fresh seal, salt

beef, hot cakes, and molasses buns were served up by cook—an important man on a banker.

On Sunday, unless in some emergency, the banksmen take a welcome rest and patch and darn their clothes. Sunday evening our fellows all gathered in the cabin and sang hymns before turning in early. They would be up again at crack of dawn to be off in the dories, or perhaps earlier to wrestle with a frozen mainsail on an icy deck.

As the skipper once said, referring to landsmen in general: "Those fellows, when they go to bed, the devil and all wouldn't wake 'em afore they'd had their rest. But with us, to be called out of bunk a half-dozen times in a night, why, we think that a good turn! Just a help to pass the night!"

The naïveté of the men was often amusing. One old veteran, called "Uncle" as a mark of respect, liked looking at the magazines I had brought. One night I saw him gazing at one of those cold-cream advertisements that portray the charms of some flower of society. Rubbing a gnarled hand over his bristling beard, he remarked slowly and seriously, "They ought to use the Pond's cream method on I."

Spring fishing depends a good deal on the weather. Hauling trawls in rough sea is a muscle-racking, back-breaking job. The surface water is nearly always at zero centigrade; hands are numbed with cold; the trawl, heavy with fish, is an absolute dead weight. Then there is the long row back to the schooner with loaded dory.

Wandering Dories Dare Sudden Gales

Fierce gales suddenly sweep the Banks, and ice and fog menace the wandering dories. But come what may, fish have to be caught, the vessel loaded, the bills paid. As a rule, the skippers are careful about risking the lives of their men unnecessarily, although often the order "Dories away!" booms out when to a landsman the idea of putting boats out in such a storm would seem madness.

The dory, well handled, is an able craft. I know of several occasions when fishermen were separated from their vessels in fog and lost. Rowing to land 150 or 200 miles away, they arrived exhausted by cold and hunger, but subsequently recovered.

One May a loaded banker running before a gale struck an iceberg and sank. The crew of 25 escaped in dories and rowed 180 miles to St. John's. One man had been hit by a falling block when the ship struck. He died, but the rest were as fit as ever. Most of the lives lost on the Banks are of men swept overboard in a storm when rescue is impossible.

A local folksong describes the dutiful banksman's wife:

> And she tore up her red petticoat
> To make mittens for his hands
> To brave the cold nor'westers
> On the Banks of Newfound*land*.

In Newfoundland the name of the island is commonly pronounced—as in this song—with the accent on the last syllable. In strictly correct usage all three are accented equally.

Schooners Give Way to Power Trawlers

Banking may well be considered arduous, but it gives the men what they seem instinctively to desire—infinite variety. If by their fishing they can make a living, they would rather face wind and cold and the uncertainties of sea life than take any job on shore.

But the day of sail is passing. The time is not far off when bankers will be as rare as clipper ships. Steam- or oil-driven trawlers are rapidly taking the place of sailing vessels on the North Atlantic fishing ground.

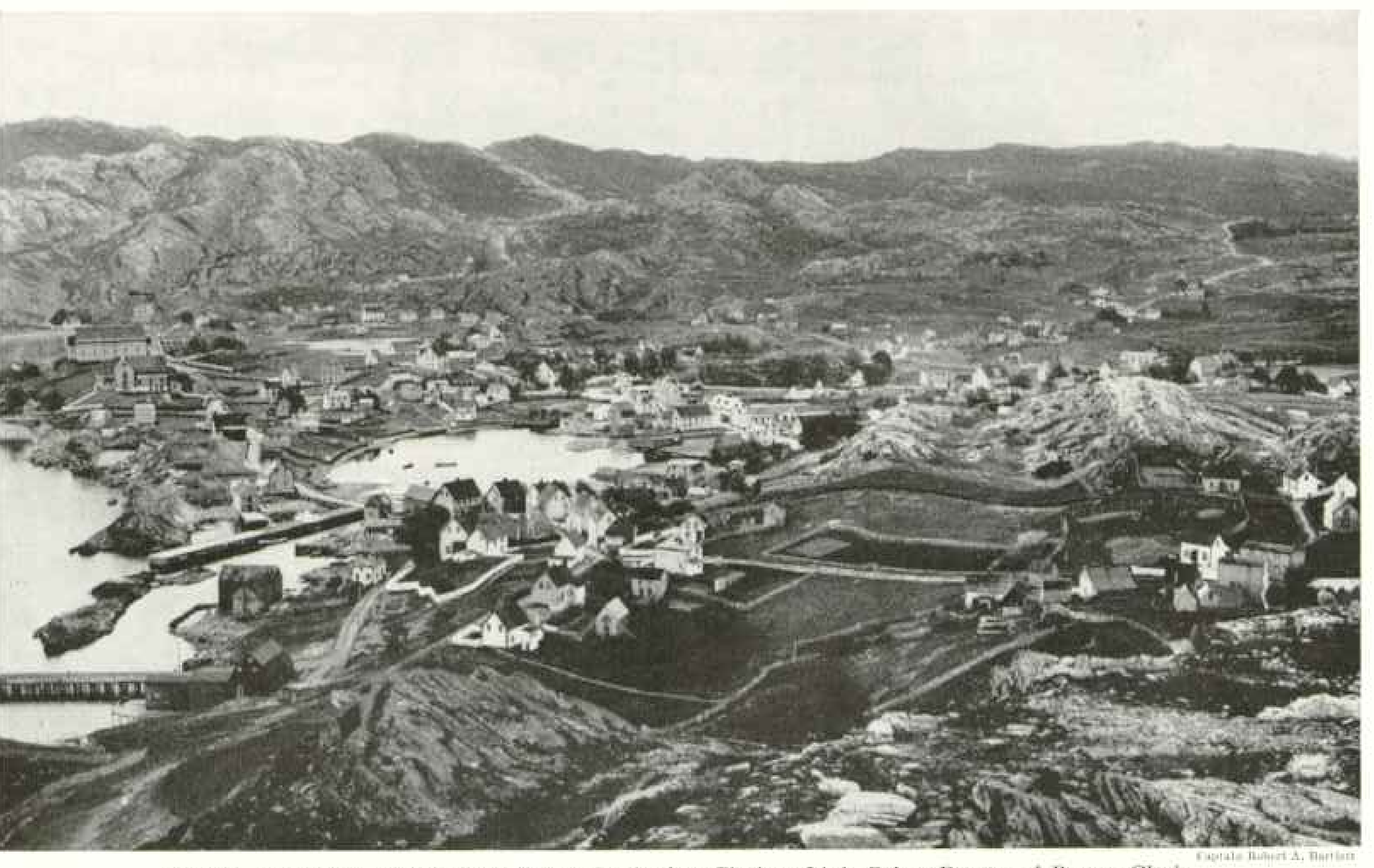
The biggest trawlers in the Newfoundland area in peacetime are French and Spanish ships manned by Breton and Basque sailors whose forefathers followed Cabot. These 2,000-ton ships reach the Grand Banks in early April, fish till June, and return home to refit and discharge their catch of salt cod. They wander all over the Banks and venture north to Greenland. Their very names—such as *Tramontana* (North Wind)—betoken their trade.

The trawl or net that steam trawlers fish with is like a huge ice-cream cone about 150 feet long, with a mouth 100 feet wide. The procedure in fishing is somewhat like this:

After sounding to find the depth of water so that the skipper may judge the length of cable required, the trawl is "shot away" from the windward side. The ship then steams full speed ahead, and the steel towing cable is paid out as the trawl sinks.

The mouth of the net is kept open by two "otter boards"—large rectangular doors of heavy iron-bound wood weighing over 1,500 pounds. These doors are fastened near the side of the trawl's mouth and are set at such an angle that when they are drawn through the water or over the bottom, they tend to diverge, pulling the trawl into shape and stretching the mouth agape.

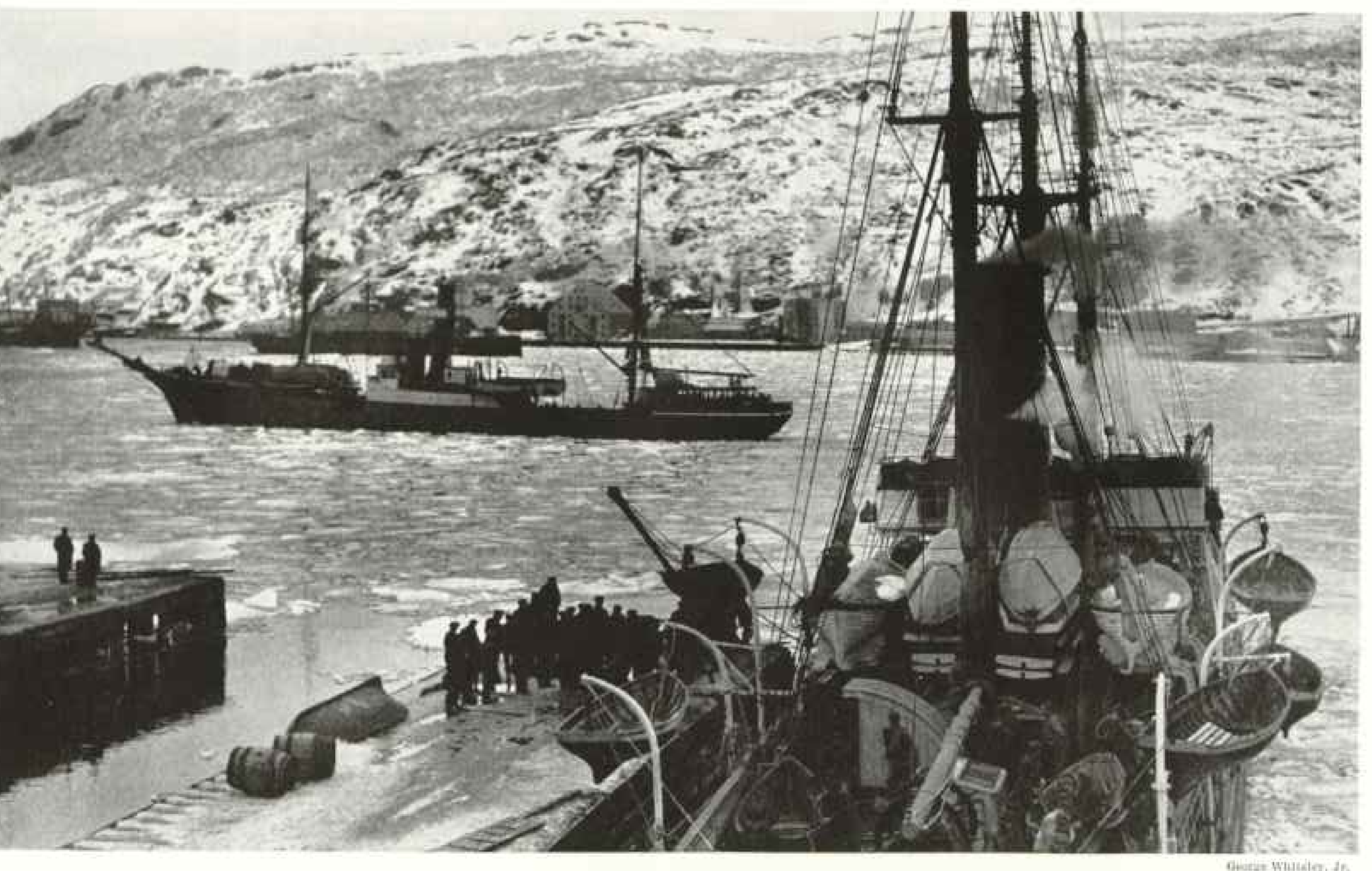
The trawl is towed for an hour or longer. Then a sharp blast on the whistle warns the men that the skipper is going to "haul back." In the fo'c'sle tired fishermen clamber from their bunks, reach for jumper and oil clothes. Those having a "mug up" in the galley hastily drain the last drop of tea and make for the companionway. All hands on deck!



Captain Robert A. Bartlett

Nestling Among Rocky Hills Scoured Bare by Ancient Glaciers, Little Brigus Dreams of Bygone Glories

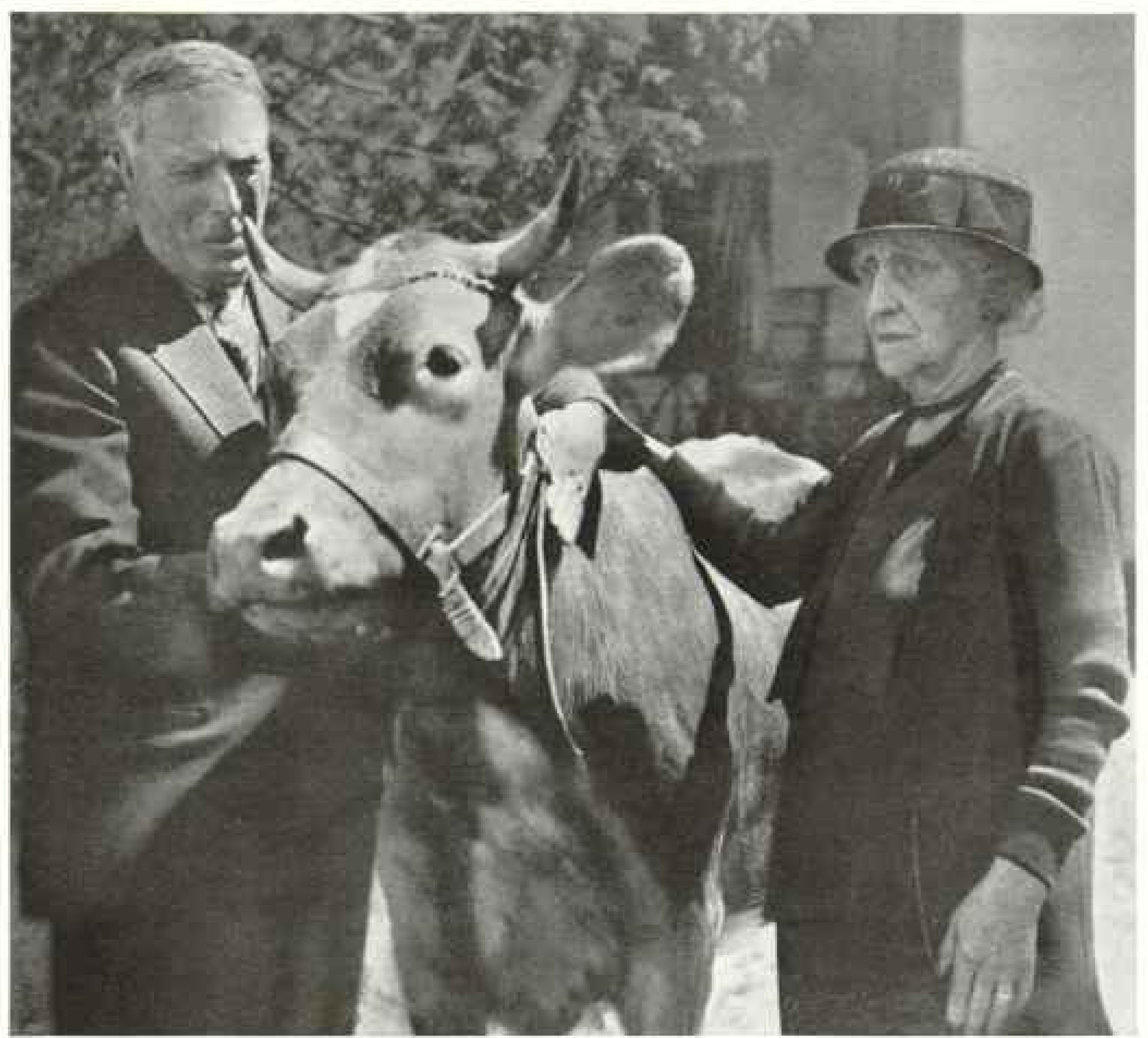
Birthplace of "Cap'n Bob" Bartlett, Brigus was once a busy home port for schooners that fished off Labrador, headquarters of a sealing fleet, and a center of shipbuilding (pages 136 and 138). Brigus records date back to 1687. Many fine old houses, still standing, remind the visitor of the town's past importance. Moss and lichens cover the rocks, and grass grows only in hollows where a little soil has accumulated. The road to St. John's winds away to the right.



George Whitsley, Jr.

Stout Newfoundland Sealing Ships Head North Before Winter Ice Is Out of St. John's Harbour

The *Neptune*, left, stands for the Narrows while the *Thetis* prepares to follow on the annual seal hunt early in March. Seals are hunted primarily for their fat, which is used in soap making. Today's sealers are mostly old wooden craft, built of teak and greenheart, a hard West Indian wood. They carry many small boats for rescuing their crews of 150 to 175 in case of need, and for hunting adult seals among loose ice cakes.



Captain Robert A. Bartlett

"Cap'n Bob" Bartlett, Noted Newfoundland Explorer, Brings His Mother a Guernsey

The salty navigator goes north each year in his auxiliary schooner *Effie M. Morrissey* for exploration and scientific investigation in the Arctic. He got his first taste of deep-water sailing while fishing for cod with his father off Labrador. Captain Bob commanded Admiral Robert E. Peary's ship *Roosevelt*. On the successful dash for the North Pole in 1909, he accompanied his leader as head of the last supporting party, turning back at latitude 87° 48′. Peary, Matt Henson, and four Eskimos continued on to the Pole.

The catch block holding the two cables together over the quarter is knocked open. With a terrific clang the block catapults against the ship's side; the cables spring apart, ripping to shreds the crest of the seas. The ship lists slightly; the trawl way down there below, a thousand feet astern, is a heavy drag. The ship is swinging broadside on; green seas tumble in over the rail and pour out in a flood through the scuppers as she lifts on the swell. Bells jangle in the engine room. Slow speed!

Landing 8,000 Pounds of Fish

The winch heaves and wheezes, puffs, clanks; steam hisses in a cloud from the packings. As it warms up, fathom after fathom of the cable is steadily pulled in.

Slowly the ship circles, bringing the net abeam. Then without warning the seas suddenly burst apart right under the bow with foam and turmoil; the huge for'ard door emerges, swinging and clanging against the rail as though to break open the ship. Then up comes the after door. Once up, they are hooked to their gallows by a short chain.

The winch starts heaving again. Ground ropes and head ropes come over the rail. The men, all hands, seize hold of the ropes and masses of twine, hauling everything onto the deck. It's a hard strenuous drag. What's the catch this time? Is it a water haul? The twine is certainly heavy. Rocks, dogfish, or cod?

"Thar she comes, boys!" A whitish up-

heaval of sea water, a hundred feet from the ship, heralds the fast rising cod end. With the foaming and seething of a caldron the tip of the cone—the cod end—breaks the surface of the sea. "That's the fish, boys! See them white bellies—cod and haddock in the bag!"

The cod end with its precious contents is warped in inch by inch by hand. When the men can no longer budge it, a strap on the trawl is fastened to the winch niggerhead, and with a roar of the winch up comes the bag out of the sea. The skipper anxiously watches the straining meshes until the bag is safely over the rail. There it hangs, 8,000 pounds of fish suspended from the masthead, an almost spherical pear-shaped basket streaming torrents of water onto the deck (page 123).

One of the men dives in under the bag to loosen the slipknot that keeps it closed. He tugs hard and feels the knot give way. He jumps aside just in time. Like a cataract the enormous weight of fish descends upon the deck, filling waist-deep the "checkers," the enclosures that prevent the fish from washing about.

If the bag is not torn and no meshes of the trawl are broken, the cod end is securely fastened and the trawl shot away again. Then the men dress and stow away the catch in ice or in salt.

That's steam trawling, a quick way of catching fish—when you can find them to catch.

"Down North" to the Labrador Fisheries

Newfoundland's other schooner fishery is carried on far from the Grand Banks. "Down north" to the Labrador the vessels head, north to the boreal waters where the icebergs grow. These Labrador schooners, mostly local-built, are smaller than bankers, carry fewer men, and use cod traps and motorboats in place of line trawl and dories.

Mid-June sees the Labradorman setting sail from his home port on the northern coast of the island. If the ice is loose, the schooner pushes her way across the Strait of Belle Isle and down the Labrador coast, down among the shoals and breakers, the "runs" and the "tickles" of that little-known alluring peninsula. Incidentally, the 110,000 square miles of Labrador belong to Newfoundland (maps, pages 77 and 113).

When the fish are found, out goes the trap and the season begins. If in one harbor the hauls decrease and the fish move elsewhere, away goes the schooner on their trail.

The Labradorman is a "dog for fish." Although no deep-sea sailorman, as the banksman is, he will push his schooner into any little hole in the wall alongshore if the fish are there. "Lee shore" and "good holding ground" are words empty of meaning for the cod-hunting Labradorman.

While making my way along the coast, I have often been given a lift from harbor to harbor in one of these little craft. Once while I journeyed to a lonely island, the *Florrie and Verna* picked me up.

It was getting late in the season. The skipper was anxious. As we sailed north of Battle Harbour through a region of islands and tickles known as Domino Run, we hailed several schooners, anchored in sheltered coves, to ask "How's the fish?" Of course no vessel getting fish wants neighbors. Motorboats coming in from the traps were scanned; boats jigging vainly to find a "sign" of fish were noted. Nothing escaped observation. A boat low down with cod would be a certain sign.

"What's the use of hailing the other skippers?" I asked our captain. "They won't tell you the truth."

"I can tell pretty well by the way they talk," he answered.

Almost always, I think, he *could* tell.

One morning as we ghosted through a white mist, heading seaward by a channel unfamiliar to me, the little vessel went lightly aground on rock bottom. With the tide falling rapidly, I mentally resigned us to a 12-hour delay at least. The situation looked hopeless. But the captain acted with great energy and steadiness. Putting off a boat with a kedge anchor and keeping his sails drawing full, he got off in twenty minutes. Nothing is allowed to interrupt the search for cod. "Time is fish and fish is money."

There had not been an excited word throughout, much less swearing. "We expect to be on the bottom some of the time," was all the skipper said afterward.

It was among this large floating population that the late Sir Wilfred Grenfell began his medical work nearly fifty years ago. Though internationally famous, he was simply "the doctor" to Labrador fishermen (page 118).

Terse Sailor Talk, Salted with Humor

I have a predilection for the speech of our northern Newfoundlanders, the fishermen who sail their hundreds of little craft to Labrador. Their dialect is crude and untutored, yet terse, picturesque, homely, and vigorous.

I recall one rough night going north in a schooner. Blowing a living gale it was, and the sea ran mountains high. The schooner twisted and writhed under close-reefed canvas. Some deck cargo worked loose, a trap keg catapulted across the quarter and stove a hole

International News

"Your King and Country Need You"—Lumberjacks Read the Call to Arms

"Will you answer your country's call?" continues the King's proclamation posted in a Newfoundland lumber camp. It concludes with the words, "God Save the King!"

in the trap boat. The skipper was lashed to the wheel box. A wild night it was.

"Be gob," yelled the skipper, salt spray dripping from his whiskers, his oil hat pulled low over his face, "I've never seen it twice worse than this!"

Commenting on the weather next morning, he remarked, "I 'low it blow so hard last night fourteen men wouldn't have pushed a darnin' needle to win'ard."

If a young shaver of seventeen or so is given to boasting, the veteran admonishes with, "My son, I've wrung more salt water out of my mitts than you've ever sailed over," or "Hark of 'un talk. My little man, I've been farther up aloft than you've been away from home."

How St. John's Seems to a Country Boy

A northern lad once interested me with a description of how St. John's, the capital city, first appeared to him. He had sailed up from home, a tiny fishing village in Bonavista Bay, on his father's schooner. To come to St. John's was a big event in his life.

"The first thing I noticed," he told me, "was the noise. There was a wonderful lot of noise. Everything seemed all of a buzz. When I walked up from the wharf to the street, there was the people, flocks of them. I never see so many afore, and they was all rushing about, always walking a lot faster than down home.

"So many people was going everywhere, I thought that's all they had to do—walk around and spend money, cause there was shops everywhere I'd look. It never come to my mind that they had to earn any money anywhere. I could see nobody working, and there was no small wharves and fish flakes like home, only big buildings and big wharves—nobody fishing at all. I thought the city was made up of people who came there in the fall and left again to go fishing come springtime. I must have been wonderful stunned!"

St. John's and the near-by villages bordering on Conception Bay formed Newfoundland's first settled region.

One of these little hamlets, Brigus, is the birthplace of Captain Bob Bartlett, the Arctic navigator. He was skipper of Robert E. Peary's *Roosevelt* and led the Admiral's chief supporting party, thus helping to make possible the famous dash to the Pole (pages 134 and 136).

Bob's father, Captain William Bartlett, like most Conception Bay skippers of that day, had a fishing station on Labrador, and young Bob got his first taste of deep-water sailing—

Montreal Standard

"Three Blocks Down That Way, Soldier, Then Turn to Your Right"

A member of the crack Newfoundland Constabulary, in his winter uniform of fur cap and long-skirted overcoat, points the way for a United States Army truck hauling supplies for the new American base at St. John's. Long white cuffs on the officer's coat are for better visibility while directing traffic. Policing of the island is conducted by the Constabulary and a newer organization, the Newfoundland Rangers.

and valuable training in resourcefulness—while hunting for cod on that rough, uncharted coast.

Captain Bob is still going north every summer. Of late years he has commanded his own auxiliary schooner, the *Effie M. Morrissey*. While passing by Newfoundland en route to the Arctic, he always calls and spends a day or two in his picturesque home town.*

Brigus, with its fivescore houses, nestles at the head of a long valley and is surrounded by crouching hills, barren and bleak and scarred by glacial abrasion. It is a fascinating little village, one to walk and climb leisurely about and examine with interest.

Settled more than 300 years, once a thriving shipbuilding center, the home port of hundreds of Labrador fishermen, the headquarters of a great seal fishery carried on by stout sailing craft, Brigus has now the air of a retired, quietly reserved old seaman. The graceful lines of the houses and fine shade trees reflect former prosperity.

An English curate once visited Brigus at the height of its seal-fishing importance. He was taken to see a veteran sealing captain about to sail for the seal hunt. Immediately hot water and spirits were produced and a toast proposed.

"Bloody decks to en!" growled the old skipper, grim and piratical.

The curate was horrified.

"Really, my dear, sir!" he exclaimed. "As a minister of religion, I could not drink to such a sanguinary wish as that."

It was explained that no piracy was intended and that this was the customary toast among the seal fishermen (page 135).

St. John's Far Older Than New York

Both Brigus and Harbour Grace, another Conception Bay village now famous for its airport, were serious trade rivals to St. John's a century ago, but St. John's has always been the British capital of Newfoundland. Its commodious harbor, protected from all winds, was the headquarters of the fishery and the rendezvous for international trading.

Here Spanish wines, olive oil, salt for curing fish, English cordage, cloth, hosiery, Sheffield ware, were bartered and traded beyond the pale of customs collectors. Twenty years before the Pilgrim Fathers landed at Plymouth,

* See "Sealing Saga of Newfoundland," July, 1929, and "Greenland from 1898 to Now," July, 1940, both by Capt. Robert A. Bartlett, in the NATIONAL GEOGRAPHIC MAGAZINE.

some 250 ships were sailing annually to St. John's to fish and trade.

When New York was an infant colony an official thus wrote home: "Tryalls have been made severall times this Spring for codfish . . . a small ketch sent out by ye Governour hath founde severall good fishing bancks . . . not three leagues from Sandy Hook. Presently a vessel to goe to Newfoundland to get fishermen, lines, hooks and other necessaryes for fishing."

By 1645 there was an extensive trade between St. John's and New England. Ships sailed from New England with corn, cattle, and rum to barter for fish and fish oil, or for brandy and sail canvas brought in for trade from European ports.

Seagoing Wine Improved in Flavor

Once a vessel of an old Devonshire business house trading in Newfoundland took a part cargo of salt at Cádiz, filling up with wine from Oporto. The wine was discharged in Devon, but in some way several pipes of port were left embedded in the salt and were discovered only on the discharge of the cargo in Newfoundland.

This wine was sent back to England the following year, but the flavor was found to be so much improved by the two voyages across the Atlantic and the winter in the cool climate that it became an established practice to ship port to Newfoundland. Quantities of the famous "Newman's Port," so named for its importer, may still be found maturing in the old firm's bonded warehouse in St. John's.

The city, population now about 50,000, is on the north side of the harbor and mounts up on wide, steep slopes. Many of the streets are hilly. The environs are impressive, especially the magnificent hills that ring it in. On the highest of them Marconi received his first wireless message from across the Atlantic.

Walk down the principal business street, Water Street, a winding cobblestone thoroughfare. On the seaward side after each block of shops and office buildings, not more than four stories high, is a wide square or cove. There one catches a glimpse of the busy harbor beyond—the spars and rigging of sailing craft, steamers lying at anchor in the stream, puffing tugs, sailboats. The wharves are really the shops' back doors, for most of the whole island's business passes through them and the neighboring warehouses.

Probably the strangest thing you will notice is the number of horse-drawn vehicles—the high-sprung trap of the country farmer, the massive wheeled long-carts, and low, flat drays piled high with casks of cod oil, drums of fish, barrels of port and beef, molasses puncheons, boxes of all sorts. The clatter of wheels over the rough pavement is deafening. One has to shout to be heard. Old-fashioned? Yes, but weaving among the carts are modern American and British motorcars (page 115).

Customs and manners of past and present are found here side by side much more obviously than on the mainland. The past dies slowly. The present grows apace.

Traffic moves with moderate speed always to the left in St. John's. Posters on the shop windows proclaim shipments of fruit and vegetables just in from the States. In the dry-goods stores wares are displayed as in the days of Victoria, and the clerks—"clarks"—have that Victorian courtesy.

People walk home to dinner. A man may be seen here and there carrying home a large unwrapped codfish. The shops look English to American eyes, though an Englishman would find little suggestive of the Old Country about them.

Fish and Fisherfolk Everywhere

St. John's, with its public buildings, parks, and modest residential district, is rather different from the rest of Newfoundland, but then Newfoundland is full of contrasts. And even in St. John's, but ten minutes walk from Government House—the local Buckingham Palace, where lives His Excellency the Governor—one finds the fishing stages, the boats, and the fisherfolk, and their weather-beaten houses perched on the hillside at the entrance of the harbor.

An early riser can hear the motorboats going out to the traps, just as in the thousands of outports all around the island. But ever more frequently now is heard the droning overtone of airplane motors as big flying boats patrol the waters far beyond this North Atlantic rampart and new bombers take off for the fighting front in Europe.

Newfoundland's future is tied to the success of its fisheries and the degree to which the people in the fishing villages can be made self-sufficing. But social and economic changes taking place as a result of the war will doubtless have an important effect upon Britain's oldest colony.

The Index for Volume LXXIX (January-June, 1941) of the National Geographic Magazine will be mailed about July 15 upon request of members who bind their copies for reference.

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To carry out the purposes for which it was founded fifty-three 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 which The Magazine can use, 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 have solved secrets that have puzzled historians for three hundred years.

In Mexico, The Society and the Smithsonian Institution, January 16, 1939, 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, 291 B. C. 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 coöperated 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.

The world's largest ice field and glacial system outside the Polar regions was discovered in Alaska by Bradford Washburn while making explorations for The Society and the Harvard Institute of Exploration, 1937-8.

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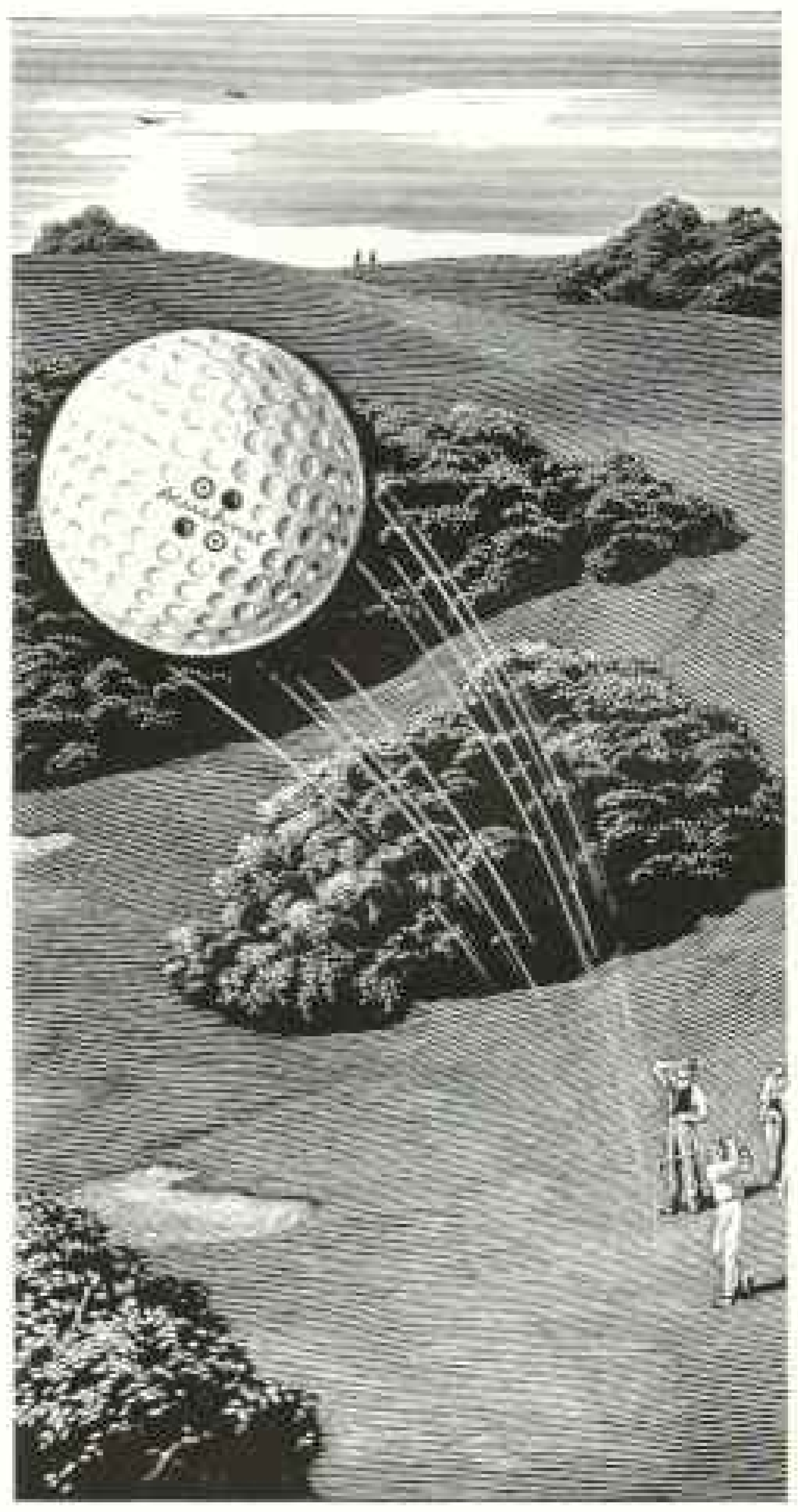

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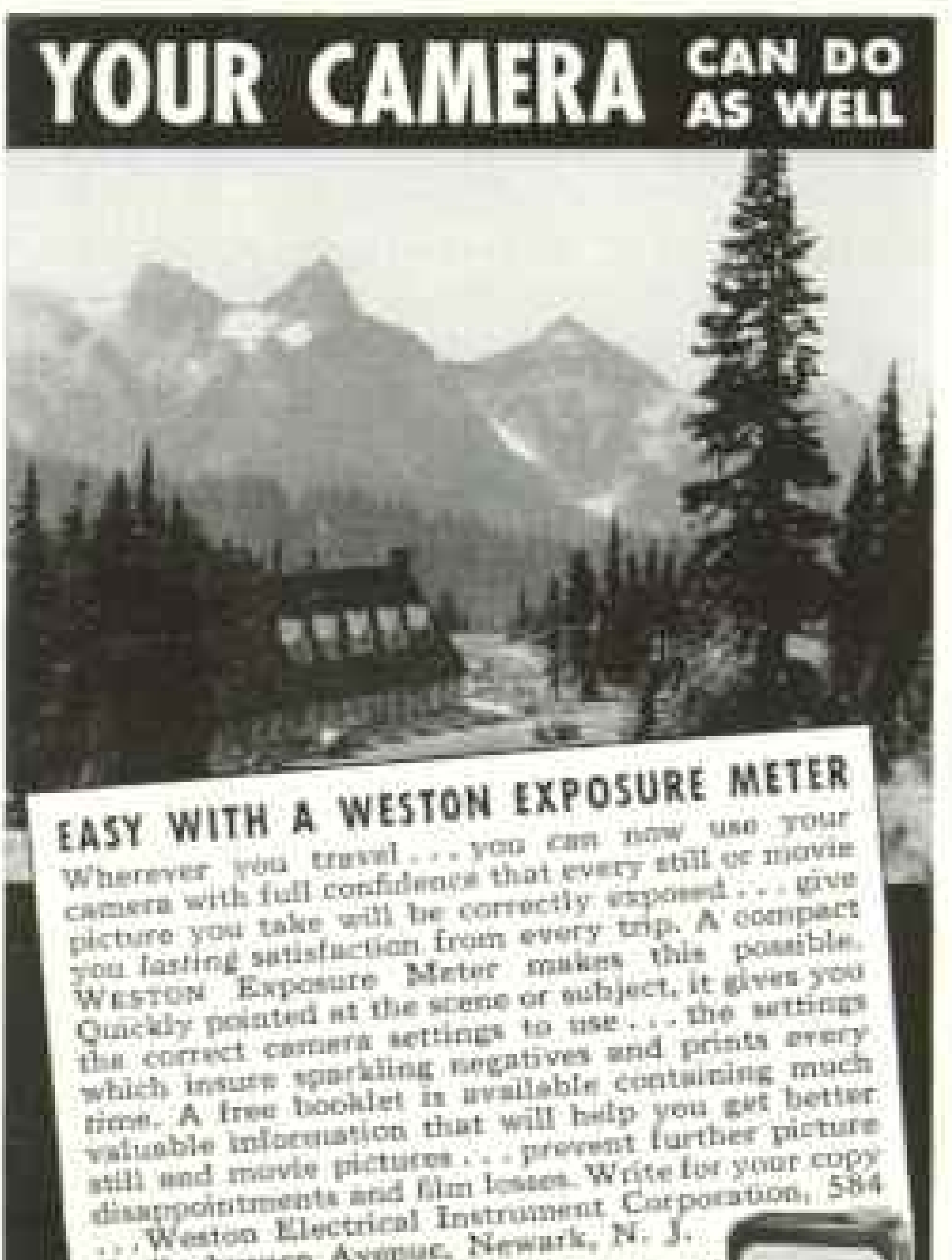

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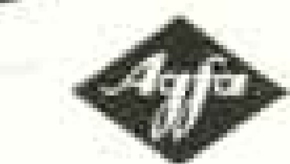

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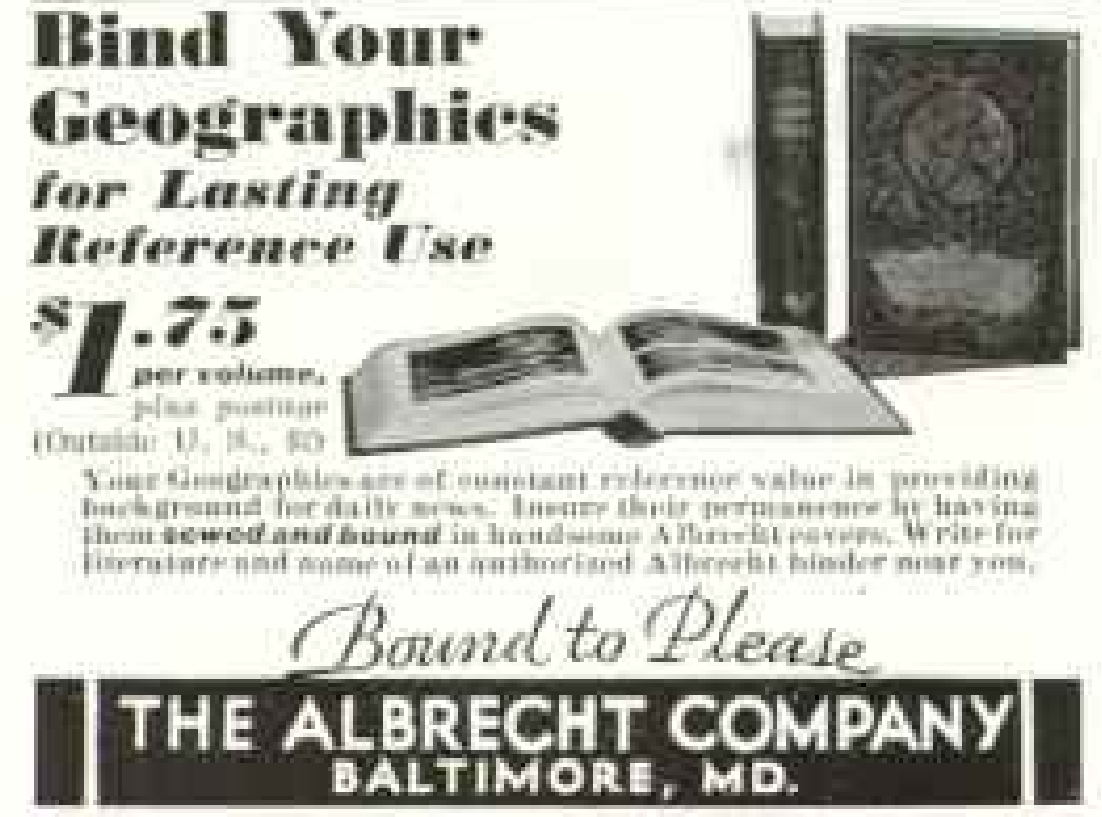

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Some Suggestions for enjoying your Summer

Week-end athletes should be careful. It is unwise to plunge straight from business into hours of strenuous exercise over the week end. Exercise is most beneficial when you take it easily and gradually. Stop before you are "all in," and avoid any unusual exertion soon after eating. That's the way full-time athletes keep in shape.

There's danger in the sun. You cannot get a nice coat of tan all at once—but you can get painfully, dangerously burned trying to. It is much better to expose yourself to the Summer sun gradually, in slowly increasing doses. To prevent sunstroke or heat exhaustion, it is well to keep the head covered in direct sunlight; to wear light, loose, porous clothing; and to get plenty of rest.

There are poisons abroad. It is well to be able to recognize poison ivy and poison sumac. Also, to look before you leap or step or reach—in sections where these hazards are present or where there are poisonous snakes. Dependable antiseptics should be kept handy to prevent cuts and scratches from becoming infected. If infection does threaten, a doctor should be seen *promptly*, before one of these poisons has time to do serious harm.

Eat and drink carefully. Drink plenty of cool, clear water—but, like experienced hikers, carry pure water with you or drink only from wells, brooks, or springs that you know are safe. It is wise to make sure that the milk you get in a strange locality is pure. You will feel better if you eat light foods, right for Summer, and if you are careful to avoid overeating.

Water sports bring their hazards. Learn to swim . . . always swim with companions or in sight of other people. Before you dive, make sure the water is deep enough and that there are no submerged objects you might hit. Any boat you are in should be manned by someone who can handle it safely. Those who cannot swim would do well to stay out of small boats altogether.

Please send me a copy of your booklet, 71-N, "First Aid."

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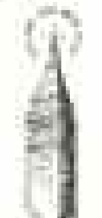

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★ OF COURSE we're prejudiced, but we believe you will get more value for your money in a G-E. Today's General Electrics are priced about the same as other good refrigerators, and there are more than a dozen beautiful G-E models available—up to 16 cu. ft. in size. You are sure to find one built to your budget. Prices are as low as $124.95 for a big 6 cu. ft. General Electric. All prices subject to regional differentials and to change without notice.

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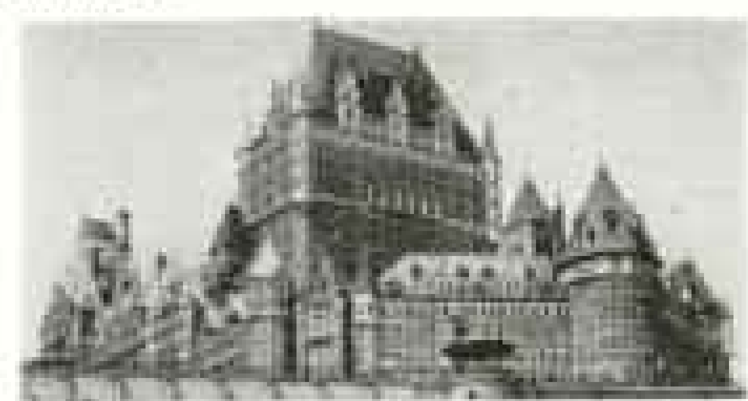

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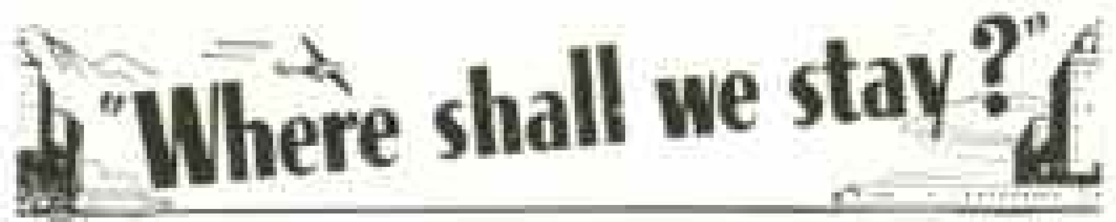

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