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Behind the Mask of Modern Japan

With 14 Illustrations

WILLARD PRICE

American Soldier in Reykjavik

With 6 Illustrations

34 Natural Color Photographs

LUTHER M. CHOVAN

Taming the Outlaw Missouri River

With 25 Illustrations and Map

FREDERICK SIMPICH

Victory's Portrait in the Marianas

With 17 Paintings

WILLIAM FRANKLIN DRAPER

The White War in Norway

With 23 Illustrations and Map

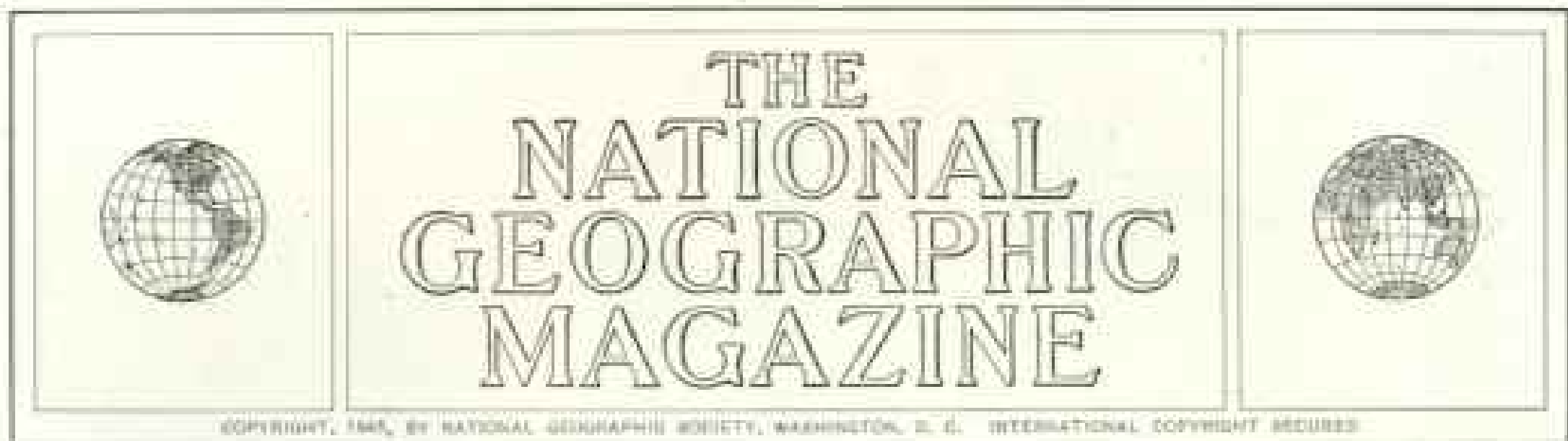
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Behind the Mask of Modern Japan

BY WILLARD PRICE

MANY things in the behavior of Japanese soldiers have puzzled American fighters and their Allies in the Pacific. Certainly Japanese warships, planes, and ordnance were modern enough to give us plenty of trouble.* Japanese soldiers dress in modern uniforms, even if they look slovenly, and they handle modern weapons.

But the man inside! "He belongs to another planet," one American officer says. And a GI remarked, "He's way off the beam."

Certainly there is nothing modern in some of the Jap's reactions. His veneration of the *samurai* sword, his effort to terrify his opponent with *banzai* screams, the way he invites death, his fear of torture, his feeling of disgrace if captured, the charms and talismans he wears, his curious mixtures of old and new medical methods, the superstitions upon which he relies so much—all help make him a puzzle.

And above all else that is strange about him is his extraordinary emperor complex.

It is hard to understand these things after a visit to Japan which has been limited to her great cities. Tokyo was modern and cosmopolitan and will be more so when it is rebuilt.† It always was the poorest place to find the real Japan or the savage fighter we have brought to heel.

Farmers, Villagers Backbone of Army

But back in the villages and farms is another Japan, a real and very old one. From there, not from the cities, most of Japan's fighting men were recruited. They were the sons of peasants and fishermen.

The village my wife and I lived in for five years was not one of the most primitive. During the summer, people came from Tokyo to take cottages and bask on the fine beaches. But during the rest of the year it was just a

village of farmers, fishermen, and an emperor.

They belong together, for they all represent the Japan of the long past.

The Emperor's summer palace was there, and he spent not only the summer but many weeks during the rest of the year in Hayama. We lived in a small house within a stone's throw of his palace and for nine months in the year were the only Americans to live in Hayama. We had unique opportunities to see and hear about one of the world's least-known rulers.

Emperor Becomes "Human" in Hayama

In Tokyo he was kept in close seclusion, but in Hayama he could at least come out of his garden to the beach, and human beings could look at him without being struck blind!

The Emperor is of peculiar interest to anyone who wants to know why Japan is what it is today.

But before we look at him, let us drop in on the more humble folk of Hayama and learn some of the views of life and death that were carried to the battlefield.

It was astonishing to find here, behind the modern front of Japan, customs and beliefs that belonged to a primitive stage of man's development.

Our friend the cooper, who made bathtubs and set them out along the side of the road so that any passer-by might crouch down in them to try them for fit, complained of stomach-aches.

* See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Unknown Japan," August, 1942; "Hidden Key to the Pacific," June, 1942, and "Springboards to Tokyo," October, 1944, all by Willard Price.

† See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Japan, Child of the World's Old Age," by William Elliot Griffis, March, 1933; and "Tokyo Today," by William R. Castle, Jr., February, 1932.



Black Star

What Is Their Dearest Wish? "To Die for the Emperor!" Schoolboys Shout in Unison

These Japanese lads celebrate a German victory. Their crude painting shows a torpedoes British ship. The Nazi propaganda poster speaks about "Europe's fate." Victorious Americans found Tokyo children unusually thin. Though they had been drilled as perfect little militarists, they saluted occupation troops and waved from roadsides. In the re-education of its youth lies the hope of a democratic, peaceful Japan.

"Perhaps you ate something that disagreed with you."

"No, no. This trouble has nothing to do with food."

"Then you know the cause of it?"

"Yes, I know. It's that Kato."

A neighbor, Kato, had died two months previously.

"But he's dead. How could he hurt you?"

The cooper smiled grimly. "It's after they're dead that you have to look out for them."

"But what has he against you?"

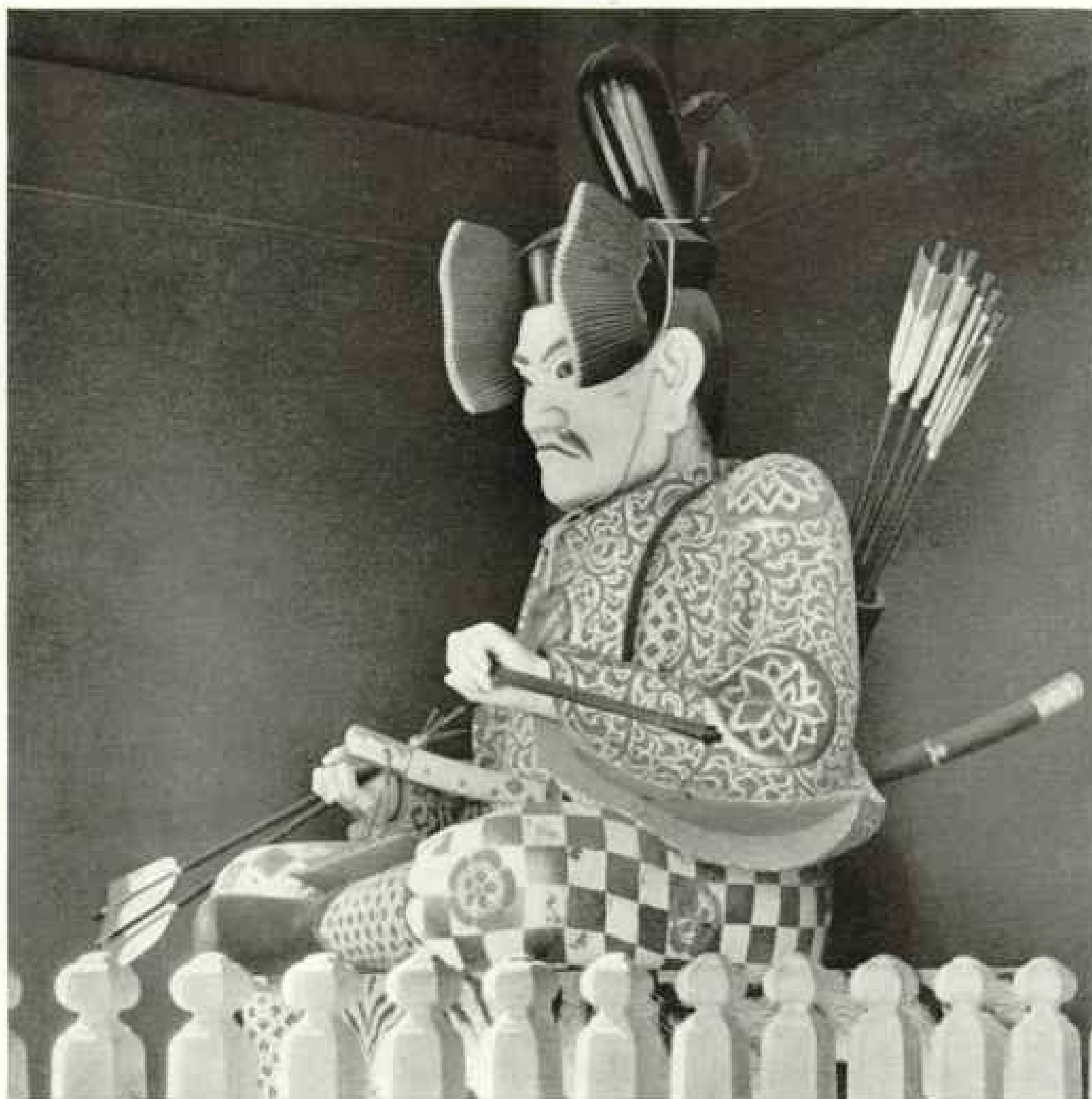
"Oh, he burned himself and blamed me for

it. He bought one of my bathtubs. He was careless about the stove guard. It came loose and he got up against the stove."

The stove is an integral part of the Japanese bathtub and is separated from the bathing compartment only by a stove guard or board (page 518).

"Kato wanted me to pay damages. Of course I refused. He said the day would come when he would get at my soul."

The cooper placed his hand over his stomach. He evidently thought of the seat of the soul as being the stomach or abdomen. This was once the common belief of all Asia, as far



Staff Photographer W. Robert Mann

The Symbol of Imperial Militarism Wears Arrows, Sword, Sneer, and "Blinders"

At Kamakura this fearsome figure sits at the entrance of the shrine to the Japanese war god. That god is Ojin Tenno (A. D. 270-310), the 15th Emperor, more widely known as Hachiman (Eight Banners). As he awaited birth, Japanese believe, he inspired his mother, the Empress Jingo, to clothe herself in armor, fit out a fleet, and invade Korea. Shintoists and Buddhists alike worship him.

west as old Judaea, where it appeared in such Biblical expressions as "bowels of compassion" and "bowels of mercies."

Potent Powers of the Dead

The weird conception at the bottom of all this fear of the deceased is that the dead have superhuman powers. They can do things that they never could have done while living. Alive, a man may be weak and of no importance in the community. Dead, he is a divine power, for good or evil.

This helps explain the apparent eagerness of some Japanese soldiers to commit suicide.

One GI marveled, "They seem to think they are spiting us when they bop themselves off!"

The man committing hara-kiri is likely to hurl a savage cry at his enemies as if he were about to begin fighting rather than about to quit. He believes that once past the door of death he will emerge as a "god," with better weapons and supernatural strength.

If you have a grudge against someone, commit suicide and wreak vengeance upon him from the vantage point of the spirit world!

When the United States Congress passed the Immigration Act of 1924, with its "Japanese exclusion clause," some students killed



ARTHUR

Hirohito, the "God" Who Takes American Orders, Leaves Tokyo's Yasukuni Shrine

To Yasukuni the ashes of Japan's dead heroes are sent for enshrinement and deification. Hirohito was the author's neighbor at Hayama, a seaside village, but sight of him did not paralyze Mr. Price's eyes (page 513). The theory of the Emperor's blinding countenance stems from his supposed descent from the sun. Overhead are chrysanthemums, the imperial crest. At right are tubs for *sake*, given to deities but drunk by the shrine's priests.

themselves after writing notes explaining their intention of using their supernatural powers to make life miserable for American Congressmen.

So the dead Kato was making it hot for the cooper.

"But have you seen a doctor about your stomach?"

"No. I went to the priest. I am paying him to make prayers."

"Prayers to which gods?"

"To Kato, of course."

That is something to look forward to—having a neighbor you have never liked compelled to knuckle down after your death and pray to you for mercy!

"And the priest sold me something to put on my *kamidana*."

"May I see your *kamidana*?"

He took me inside the little house. On one wall was a shelf about six feet from the floor. This was the *kamidana*, or god shelf. On it was a miniature Shinto shrine made of beautifully grained wood. Inside the shrine were tablets of white wood inscribed with the names of the cooper's ancestors. Before it stood small dishes containing offerings of water, salt, rice, fish, and vegetables.

"This is what the priest sold me." The cooper indicated a small lamp in the form of a saucer containing rapeseed oil in which a burning wick floated. "I must keep it lighted all the time until I feel better. I think it has helped me some already."

A Priest Treats Eye Ailment

This sort of thing came closer home when our own maid complained of eye trouble. We offered to send her to an oculist in Tokyo and pay for glasses if they were needed. She was most appreciative, but said she would have to think it over. Whenever the suggestion was repeated, she gently put us off. Then one day she disappeared for a few hours and came back with a burned spot above each eye.

"Yes," she said when we remarked on it. "I am to have five treatments. The priest applied moxa [a preparation of mugwort which is placed on the skin and then set on fire] here on my forehead; also here, and here, and here."

She indicated the back of each forearm, the inside of each wrist, and the middle of the back. "And I must not eat eggs or fish the day before treatment."

The eye trouble, of course, was caused by evil spirits, possibly the spirits of certain relatives with whom she had not got along very well. The burning was intended to make the spirits so uncomfortable that they would leave the body. The demonstration must have been

very convincing, for the patient could tell by her own suffering just how much the fire was tormenting her unwelcome visitors.

After the five treatments she looked like the tattooed lady in the circus. Her eyes continued bad. But she never went to the oculist.

Her husband, a fisherman, was one of the town fathers, had spent eight years in school, and read one of the large Tokyo papers. The wife could read, too. They did not belong to a submerged class. They were typical inhabitants of the Japanese countryside.

One day the woman came in with her daughter's baby on her back and set before us two slim pink cakes. She explained that the baby had been crying; so she had taken it to a Buddhist priest on the hillside above us. He had performed a rite of exorcism. He told her to contribute ten *sen* (a few cents) and make a prayer. Then he gave her the cakes as a sign that her prayer had been answered.

The cakes were rice paste, gummy and tasteless, but doubtless very high in spiritual value.

Paper Dolls for Diseases

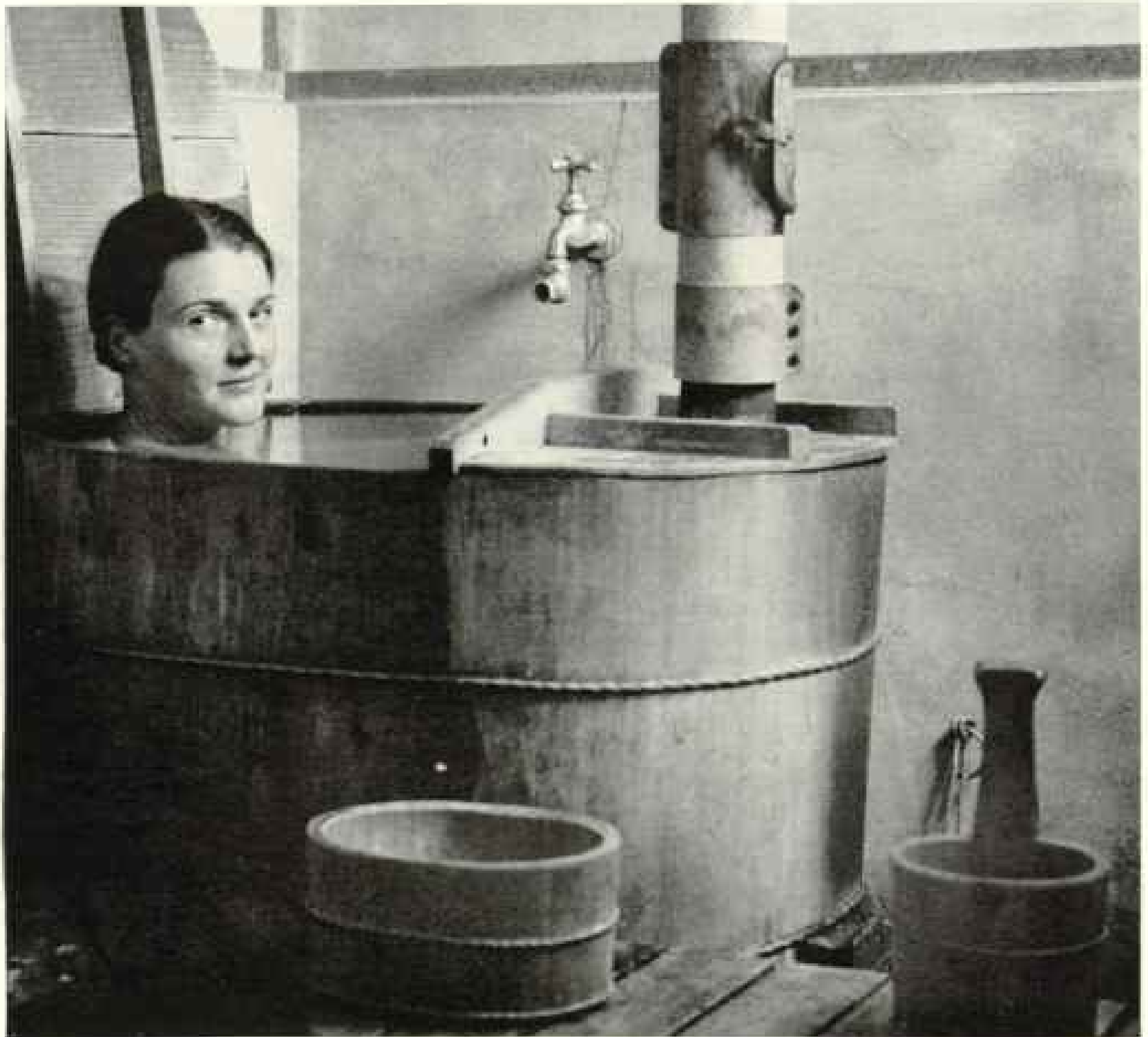
It is thought that the baby's crying is due to a certain worm that has managed to get into the body. You go to the priest to get it out.

Paper dolls, if properly blessed and paid for, are potent against disease. They are cut out of paper in two forms known as "man shapes" and "woman shapes."

The charcoal merchant suffering from a sudden headache could not use the woman shape his wife had bought a week before. He had to repair to the shrine and purchase a man shape. The priest wrote his age and sex on it. Then the sufferer took it home and proceeded to touch every part of his body with it while repeating a Shinto prayer.

Almost every house in the village, including the one we rented, was plastered near the front door with papers bearing printed charms supposed to protect the household. Pilgrims make long and expensive trips to sacred mountains or famous shrines to obtain potent charms. Dragons, devils' heads, hairy monsters brandishing long swords, Kwannon of the thousand arms, who is the Goddess of Mercy—all cooperate to repel evil.

One day a neighbor was showing my wife a drawerful of her small treasures. There were amulets and talismans picked up at various temples. One made the eyes strong. Another improved the handwriting. A few of the teeth of a deceased relative had been preserved; they had been picked out of the



Willard Prier

An American in a Japanese Tub—Winter's Snuggest Place in the Poorly Heated Empire

Stove and tub are a unit. Charcoal is fed by tongs into the firebox (lower right). Deeper than it seems, the water extends below the rinsing platform. A board, extending the full depth, protects Mrs. Willard Prier from the hot iron. Failure of such a stove guard revealed a curious aspect of Japanese superstition. The author found a stovemaking praying, as to a god, to the angry spirit of a deceased customer burned by one of his tubs (page 513).

ashes after cremation. There were also nail cuttings of various members of the family.

Among the articles was a small white package. It bore the woman's name. My wife expressed polite curiosity. The woman explained shyly that the package contained a portion of her umbilical cord.

Children Disciplined by Terror

It was saved by her mother at her birth and must be kept until death, when it is buried with its owner. It ensures rebirth. Some Japanese hold that reincarnation is impossible without it.

A woman was burned to death when she ran back into her blazing house to retrieve this vital link between the past and the future.

Fear of the "boogieman" is nothing compared with the many terrors that control the Japanese youngster. The *tengu* is a feathered monster with a human nose a yard long. The *oni* is an ogre with horns and a frightful reputation for eating bad children. A *nike-kubi* is a head which is securely anchored on the shoulders of some unpleasant person during the day, but which at night detaches itself and goes roaming about doing mischief.

The child who eats too much candy may expect a huge, hideous worm to visit him during the night. It will crawl under the covers, pry open his lips, and squirm down into his stomach, where it will produce great pain.

The stream that ran through our village deepened into a pool which would have been

a fine spot for swimming when the sea was too rough. But the boys never used it. I asked why.

"There's a *kappa* in it!"

A *kappa* is a greenish creature with web-footed claws that lives in deep pools. It reaches up to clutch the feet of the unwary, drags them down, and feasts upon their bodies.

And there are always ghosts, ghosts by the million. They float through the air, their legs dwindling away to nothing, their necks drawn out to frightful length and twisted like a snake, their hands extended and fingers cramped as if about to clutch a throat. They are acutely uncomfortable and always seeking a chance to vent their spite upon the living.

Nor do the children escape the world of monsters when they die. On the bank of the Sai-no-Kawara (the Japanese Buddhist Styx, or River of Souls) they encounter the merciless she-devil, the hag Shozuka-no-Baba. She steals their clothing, then sets them to work in the broiling sun piling stones. If they make their piles high enough they may cross the river. But every night the hag and her devils pull down the little towers.

A Kimono for a God

That is why the statue of Jizo is more common in Japan than that of any other god. Jizo is the special patron of children and travelers. His stone image may be found at the side of almost any road.

There was one a quarter-mile from Hayama on the way to Yokosuka. As we passed it one day we observed a pitiful little drama. A woman was slipping a child's kimono over the god. He was already well clothed in a blouse, a pair of shorts, a knitted cap, and a muffler. It is believed that this clothing is transmuted into garments for the children on the bank of the river (page 533).

Then the woman brought stones from the road and put them on the large pile already resting in the lap of the god. Every stone will lighten the labor of the dead children and hasten their admission to paradise.

These beliefs are not limited to children but are shared by adults. It is the same with the goblins and ogres, dragons, bodiless heads, and ghosts; horribly visualized in childhood, they haunt the uneducated throughout life. Nor are the educated quite free of them. A college graduate drew me away from the edge of the pool where the *kappa* was supposed to lurk.

"Of course we don't believe in such things," he laughed. "But it's just as well to be prudent."

A strange complex is the dread of the fox, to our minds a harmless and sometimes handsome beast, but to the Japanese a demon. Not only the insane are supposed to be foxed. Hospitals report many cases of hysteria induced by the idea of the power of a fox to enter the body and take control. In this demonic possession the victim will hold conversation with the fox, which replies in a high cracked voice.

This hypnotic phenomenon is of great interest to psychiatrists. Often the doctor can do nothing. It is necessary to call in a priest who will argue with the fox and bribe it with cakes to leave the victim. Not all foxes are regarded as demons, however, for the fox is both messenger and symbol of Inari, the rice deity.

Big department stores of Japan have fox shrines on the roof and many business buildings are similarly equipped (page 523).

"Some of our employees have objected because there is no fox shrine on our roof," the manager of the Tokyo branch of Eastman Kodak Company told me. "I tell them that this is an American firm. But they say an American oil refinery has a fox shrine and the annual convention of the employees is held there. Sessions begin with prayer by a priest before the shrine. The fox is also supposed to have a lot to do with luck in business."

By cultivating all these superstitions, and hundreds more, the Shinto-Buddhist priesthood reaps a large harvest and stultifies Japanese intelligence. When it first came from China, through Korea, Buddhism enriched Japan with many of the arts of civilization; but in the Japanese spiritual atmosphere it has withered into a racket. Shinto* always was ignorant, its practices primitive and often licentious, its priests uneducated and venal. Ethically it is a vacuum.

The Birth of Emperor Worship

The lack of any great religion or great philosophy in Japan made the Japanese susceptible to the pseudo-philosophy of emperor worship. This was encouraged by the ruling classes, who saw in it a way to hold the people in subservient obedience.

Thus an ancient myth is the real dictator of Japan. The myth is that all Japan's emperors, including Hirohito, have descended in direct line "unbroken through the ages" from Amaterasu, the Sun Goddess.

Not much of the glory of the Sun Goddess is left in the appearance of this mild little man, with his small black mustache, receding chin,

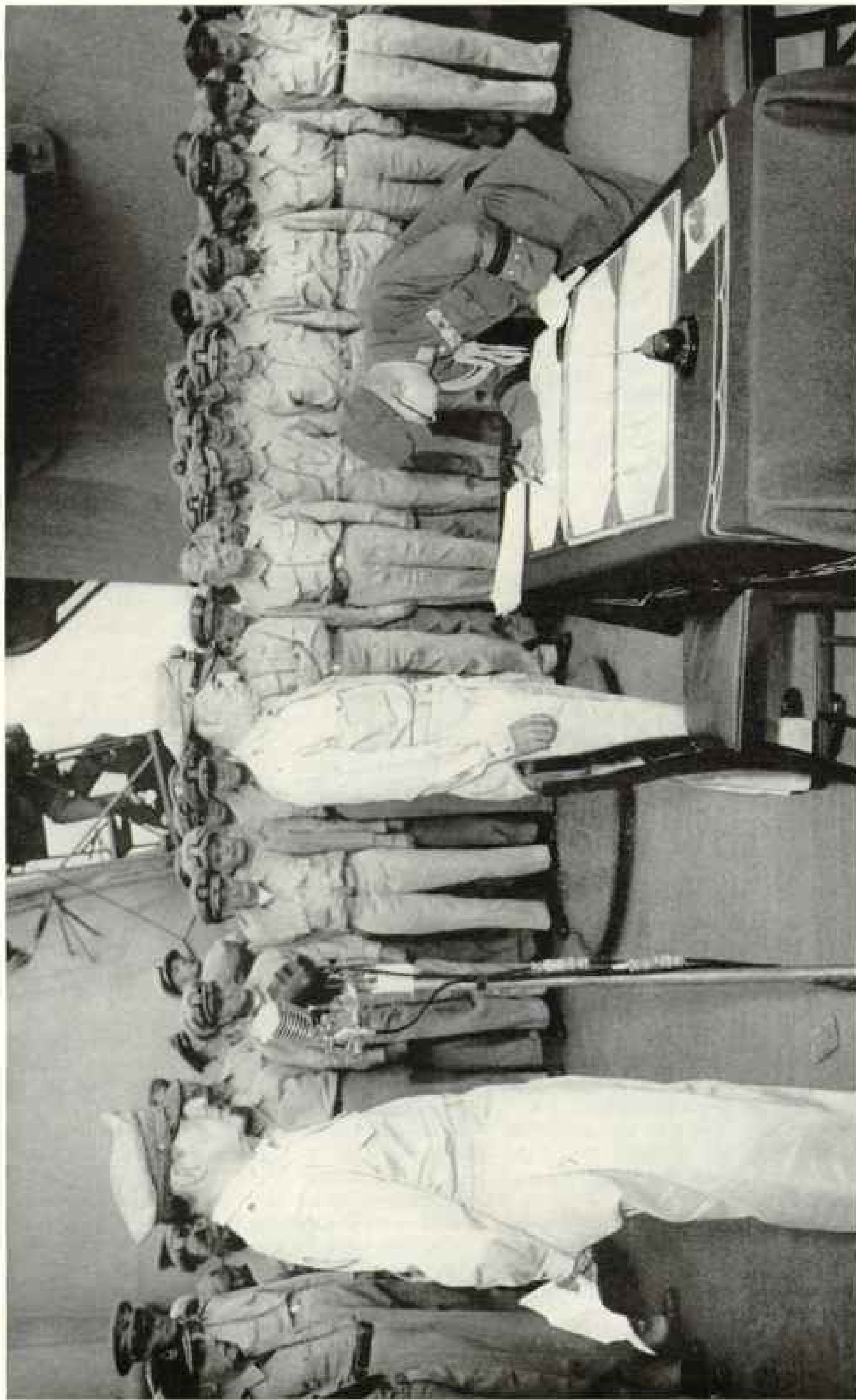
* See "Japan and the Pacific," by Joseph C. Grew, in the NATIONAL GEOGRAPHIC MAGAZINE, April, 1944.



U. S. Navy, limited from Press Ass'n

Goal Attained, Admiral Halsey's Fleet Anchors in Sagami Bay Beneath Fuji, Japan's Sacred Mountain

To our men, the Emperor's summer palace at Hayama was clearly visible. Japanese, who had lost their own fleet, lined the shore to see the vessels. Among them were ten battleships, including Britain's *Duke of York* and *King George V*. Left: one of America's *Tow* class. The fleet had an air cover of 1,200 planes.



U. S. Army Herald Corps, Official

Japanese Militarism Signs Its Death Warrant Aboard the U.S.S. *Missouri* in Tokyo Bay, September 2, 1945

As Army Gen. Douglas MacArthur broadcast the surrender ceremony, his chief of staff, Lt. Gen. Richard K. Sutherland, coached the signatories. Chief of the Imperial General Staff, Gen. Yoshijiro Umezu, unlike all the others, stood up. As he signed, a Japanese colonel wept. Among the witnesses were Vice Adm. John S. McCain (right of microphone), who died a few days later, and Adm. William F. Halsey (garrison cap). Extreme right: Gen. Carl A. Spaatz, whose Army airmen were overheard, alerted for any eleventh-hour treachery. Americans did not salute the enemy delegation and, as if contemptuously, did not wear ties.

thick glasses, and unruly black hair (page 516).

The Emperor gains in stature when mounted on a white horse. But as we saw him almost daily, hunting shells on the beach, swimming, going out in his small yacht to get marine specimens for his aquarium, playing with his children, or reading under the pines on the little point that juts out into the sea in the direction of Fuji's white cone across Sagami Bay, he lost a little of his fabled magnificence.

Nor was his "palace" exactly what the word connotes to most of us. The most imposing part was the high wall surrounding its garden, punctuated by sentry boxes occupied day and night by soldiers of the Emperor's guard.

The house itself was an ordinary low wood-and-paper structure with the usual tile roof. We were never inside it, but came to know it well through reports of villagers employed in the building or on the grounds.

There were no screens in the palace, and mosquitoes were not few along the shores of Sagami Bay. A net was hung over the imperial beds at night.

The royal prisoner was not allowed a telephone except for palace use. Any communication with the outside world had to go through channels. It would have been inconceivable that his words should reach the public without editing. Emperors of the past have sometimes said the wrong things and have spent the rest of their lives in a monastery.

The simplicity of the Emperor's life is the more amazing, since he is one of the richest men in the world. Bismarck advised the Japanese statesmen to give their ruler prestige by making him peerless in the wealth of his personal possessions; it was a Japanese idea to keep him from using this wealth.

Hirohito Poses as Great Example

Thus they made him a paragon of virtue. We may doubt that he likes being a paragon. Probably he and his family do not care any more for discomfort than most people. But he must pose as the great example.

Knowing that their Emperor had unlimited wealth, yet lived like one of them, the people could be persuaded to eat the bitter cake of frugality and like it.

The Army's plans of military conquest and the Mitsuis' and Mitsubishi's schemes of commercial conquest meant that the last drop of juice had to be squeezed out of the public to finance war and industry.

If the squeezed farmer protested, he had only to be reminded of the example of his Heavenly King.

In this philosophy, low standards of living

became a cult, an ideal. Persons who had a little more than others were ashamed of it and hid the fact. The outside of a Japanese house is purposely made less attractive than the inside. Within the house the best wood is in the ceiling, where it will not ordinarily be noticed.

A Tailor May Not Fit the Heavenly King

Art objects usually are displayed one at a time; the rest are kept in a cupboard or godown. The "front yard," pride of the Western home, is in Japan put behind the house, where it cannot be seen by the passer-by.

The Japanese soldier is not ashamed of his coarse, uncouth uniform, because he knows his Emperor's is little better. The Emperor's may not even fit so well, since no one dares measure the imperial person. No ordinary hand may be laid upon him. Certainly a tailor would not be allowed such a liberty.

If it should be desperately necessary, exception may be made in the case of a physician. The Emperor Meiji's pulse was taken through a piece of silk, and Meiji was, to my mind, the most democratic of Japanese emperors.

Even members of the royal house are sacrosanct, to their own disadvantage. In 1869 a Japanese doctor besought a foreign physician to prescribe for a princess.

"Have you made a thorough examination?" the Western physician asked.

"No. It is impossible to do so in the case of such a high personage as the princess."

"I could not prescribe without examining the patient."

"Very sorry. It is against the custom of the country."

And the recovery of the princess was left to chance.

Too exalted to touch, too rich to count his wealth, yet eating coarse unhulled rice like a coolie, Hirohito was held up as a model for commoners who would like to eat polished rice and cannot on the wages allowed them by government-controlled industry.

The factory worker who must rise before six is told that his Emperor also is up before six. And, unhappily for us, that was true. Our early-morning sleep was broken by the sound of wood chopping in the palace garden.

At first we were entertained by the novel idea of the Heavenly King wielding an ax. But after a few repetitions the novelty wore off. When the imperial thud-thud ruptured the dawn, Mary would bury her head under the covers, muttering savagely, "It's that man again!"

The royal jewels are far removed from the



WILLIAM PRIOR

In Tokyo a Shrine Atop a Busy Department Store Is Not a Curiosity; It Is a Necessity

Hotels, factories, even some American business firms have felt compelled to erect shrines. This could be a temple of Japan's strange fox cult, though the usual fox images are lacking. In Shinto, the fox is the messenger of Inari, deity of rice and wealth. How the fox madness possesses the superstitious is described by the author (page 519). These women clap hands to catch the gods' attention, ring a gong overhead, then pray.

royal person. The only jewelry ordinarily worn by Hirohito was a chrome wrist watch made in Japan. It cost three dollars. He doubtless contributed it to the metal drive.

Cleanliness, however, is not expensive. The keeper of the palace bath, who came to know us, explained his master's bathing facilities:

"There are two baths. One is a tub made in America. The Emperor Meiji put it in. That was in the days when American things seemed better than ours.

"Of course my Emperor never uses that bath. How can one become clean in so little water? And there is no stove in it—no way to keep the water hot. He likes it at 110°. The baths in the Imperial Hotel? No, nothing like those. It is very plain, exactly like what you will find in any Japanese home."

A banker from Osaka, summoned to the royal presence, told us later: "Really, it was something of a shock, the plainness of every-

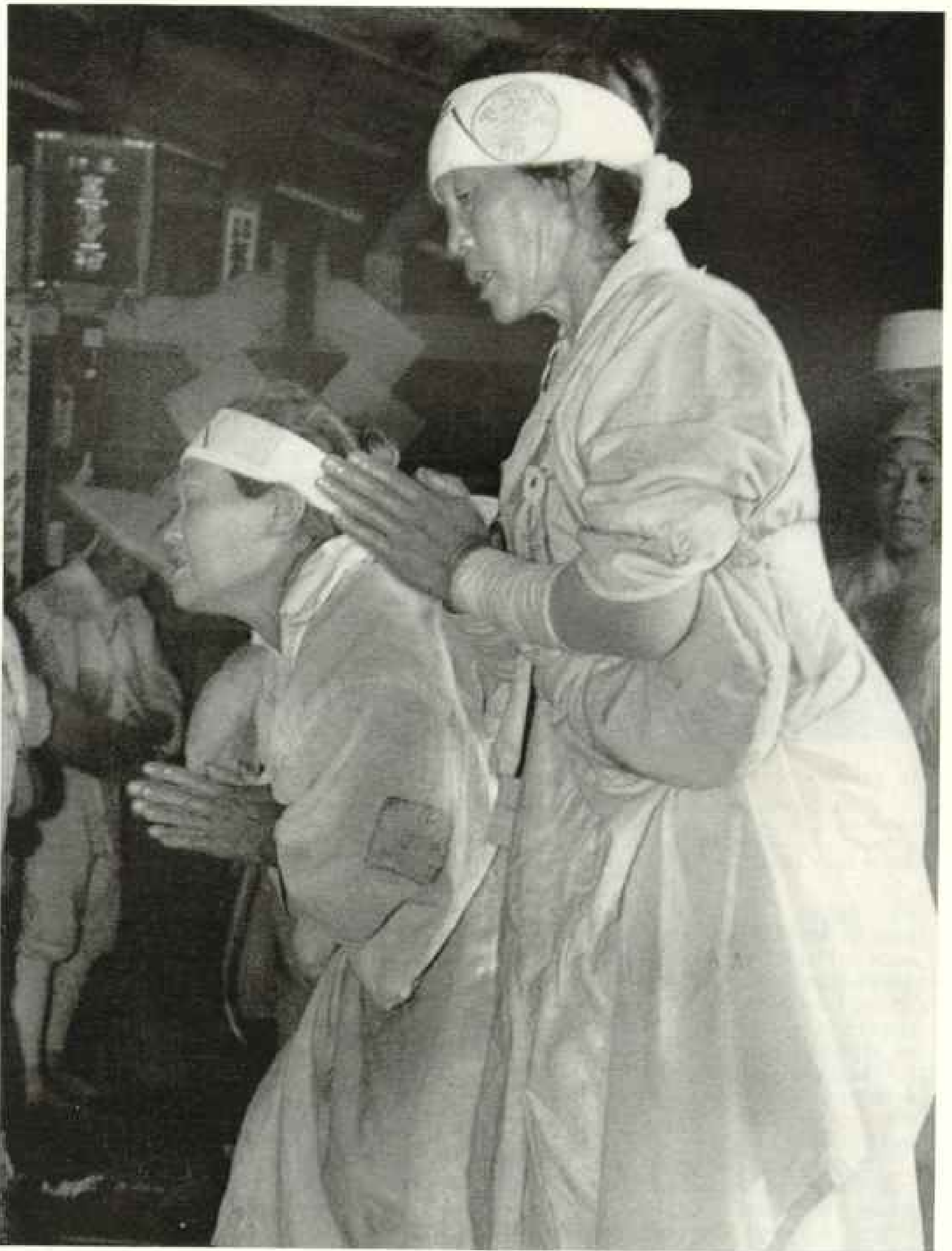
thing, almost shabbiness. I was ashamed to go back to the luxury of my own home."

I did not suggest that possibly all this pretense of poverty was done for effect, and that perhaps it is just as vulgar for a rich man to act like a poor one as for a poor man to act like a rich one.

General Staff Lives in Luxury

Not that Hirohito had anything to say about how he should act. He was kept in ostentatious penury by the great minds of the Imperial Household and General Staff who, not being great examples, did not feel bound to observe like restrictions.

The Empress did not share her husband's beach activities. The children were rarely present, since they had their own palaces and attendants. Although the Emperor is publicized as the father of all Japanese, he did not seem to me, or perhaps was not allowed to be,



Wide World

Pilgrims to Fuji's Divine Fire Beseech Shinto's Gods to Safeguard Sons in the Army

Formerly women were forbidden to visit the volcano's summit. Nowadays even grannies toil upward 1,000 feet a day. (The record ascent is eight hours). Each shrine visited stamps the pilgrim garb (sleeve, center). Headbands, too, bear sacred symbols. An arm bandage is pure costume; often a white glove is worn instead. White is Shinto's hue of purity. A pattern in the background, Shinto's sacred paper, *gohei*, stands for the divine presence.

a particularly devoted father to his own children. But the children sometimes joined their parents for a brief picnic among the pines.

When this happened, the very special consideration paid to the Heir Apparent was noticeable. Here was the next link in the Sun Goddess dynasty, "unbroken for ages eternal." Akihito was born December 23, 1933.

Since his birth, the Crown Prince has been watched anxiously for fear the mental condition of his grandfather Yoshihito may have skipped a generation to alight upon him. So far, there has been no report that he is not normal. Certainly, on the beach playing with his spades, his dog, and his toy automobile, His Enlightened Benevolence behaved pretty much like any other boy.

His mother, perhaps, gave the imperial line a fresh start. The Princess Nagako Kuni was selected for Hirohito because she was not one of the Fujiwara family, from which empresses were usually chosen. It was hoped that the infusion of new blood would cleanse the line.

The Fujiwaras did not like the implication and opposed the marriage. The only reason they could give was that the proposed empress was color-blind.

This defect does not seem to have prevented her from fulfilling her duties as Japan's First Lady.

Moon Viewing and Insect Hearing

The Emperor is an amateur biologist of some ability. He likes moon viewing (an art in Japan), insect hearing, and verse writing. He is not a bad swimmer and negotiated the surf well in spite of ragged black rocks. The Emperor's beach is distinctly inferior to the public beach that adjoins it.

He takes an interest in hawking. We were invited along with a few other foreigners to attend an imperial hawk hunt in the Imperial Hunting Preserve in Saitama Prefecture. This is an ancient sport of Japanese emperors.

However, so jealously guarded is royal dignity that Hirohito was allowed to do little more than look on. The chief performers were not the hunters but the hawks—or, to be more exact, the hawks were the hunters.

These highly trained birds would soar up from the hand of the hawk guardian, circle until prey had been sighted, swoop down upon the rabbit or grouse or giant heron, kill it, pluck out the heart, which is the choice tidbit preferred by the bird, then stay by the carcass until the *takajo* (hawker) had arrived.

A well-taught bird will eat no more of the flesh, but will look forward to being rewarded

with a few bits of pigeon meat from the basket at the belt of the *takajo*.

Why this is the sport of kings is not quite clear—perhaps because the kings do not have to exert themselves. But it does fill one with admiration for the intelligence and strength of the nimble goshawk and the magnificent giant peregrine falcon.

An even more effete sport is duck netting, of which a demonstration was staged the same day. In the same preserve a large pond accommodates 35,000 ducks. Each hunter is equipped with a silken net with a long bamboo handle.

The idea is to catch a duck in the net as it flies up from the water. But to make it easier, a narrow canal has been dug leading from the pond back into the field. The hunters hide near the edge of the canal.

Beaters shoo some birds from the pond up into the canal. At a signal the hunters run out from behind their blinds, thus startling the birds, which fly up and attempt to escape. Since the canal is only six feet wide and its abrupt banks are six feet high, some birds are inevitably caught in the big nets.

To anyone who has sloshed through the cold water of the Adirondacks or the Maine lakes for hours to get just one long shot, this seems about as arduous as a duck hunt in a shooting gallery.

To make the performance more absurd, it was required that every participant wear tails and a top hat (page 532).

It is only fair to say that this moribund nonsense was not to be charged against Hirohito's personal account. He was merely the victim of it. The sport was devised by the Tokugawa Shogunate, which in its latter days became almost as effete as the Court itself. Japanese institutions seem very likely to canker if allowed to persist too long.

All this would seem to indicate that the activities of the Emperor are not very serious. Moon viewing, star gazing, insect hearing, duck netting, verse writing, and amateur biology hardly seem man-size jobs, let alone god-size. But neither were the desk duties of the Emperor much more earth-shaking.

A Land of Seals, Not Signatures

He was at his desk by nine. Papers were there for his approval. Officials were on hand to tell him what to sign and where. The chief palace officials were the Grand Keeper of the Imperial Seals, the Minister of the Imperial Household, and the Grand Chamberlain.

Lesser chamberlains and gentlemen in waiting abounded. They lived outside the palace, and when they arrived in the morning they

had to bathe and put on fresh clothing before coming into the Presence.

The Emperor rarely signs his name, but affixes the imperial seal. Japan is a land of seals, not of signatures. Every adult has his seal and stamps it in red ink on his check or any legal document.

It is not necessary that the Emperor read the papers placed before him.

"That would put too great a burden upon him," a solicitous gentleman in waiting explained. "Every document is carefully checked by the proper persons before it reaches His Majesty. It is only necessary that he approve it."

Of course this simplifies matters considerably. It leaves the Emperor free to do much of his own secretarial work. He has secretaries but, being a lover of meticulous detail, he enjoys looking after the files himself, devising cataloguing systems for his papers and tapping out on his own typewriter the cards for his carefully kept card index. He keeps a diary. If he is honest in it, what pathos there must be within its pages!

Barred from great matters, he makes much of small ones. Even before the war brought on a paper shortage, he insisted that no scrap of paper be wasted. It must be used on both sides. When no longer needed, it went back to the paper mill. The imperial pencil is worn down until nothing remains but a stub; erasers likewise.

Public Appearances Few

The public appearances of the Emperor have been few. He occasionally made a three-minute address before the Diet. He reviewed the troops, visited Shinto shrines, honored the war dead.

For the most part he was kept in strict seclusion. The rule was relaxed in the unimportant village of Hayama, but most citizens of Tokyo are born, live, and die without ever seeing their neighbor behind the moat. It was necessary to the fiction of his divinity that he remain aloof.

Also, there seems to be a tradition that a god cannot smile. At least Hirohito seldom does. This probably does not mean that his nature is unsmiling, but that he has been taught the mannerism of perpetual dignity to discourage familiarity.

He has no intimate outside his family. No one caller visited the Hayama palace often enough to be classed as a close friend of the Emperor. In fact, social calls were almost unknown. How could the yokels' notion that no one could look full into the face of the Son of Heaven and live be maintained if the

Emperor were reported as having tea with this or that notable?

Even official calls were severely screened. No other ruler in the world was so inaccessible. Even the Premier had to furnish reasons satisfactory to the guardians of the Throne before he was permitted an audience.

The only men who might walk in upon the Emperor at any time unannounced were the Army and Navy Chiefs of Staff. Their privilege was "the right of direct access."

This is based on the very convenient theory of the "mystic coalition." The mystic coalition meant that the Emperor and the Army were one. Thus the Emperor could not divorce himself from Army action, and the Army could always command obedience in the name of the Emperor. Together they have undertaken the "redemption" of the world, an attempt which, in my opinion, will not end with the present war.

Without the prestige of the Emperor the whole military setup of Japan would long ago have come tumbling down. It was his authority, pocketed by the Chief of Staff, that awed Cabinet, Diet, and people into submission.

Teaching Obedience to the Emperor

Therefore, the whole educational machinery of Japan has been devoted to building up that indispensable prestige. Every citizen from childhood up is inculcated with the doctrine of complete obedience to the will of the Emperor.

"How do you do it?" I asked Ogawa, teacher of history and morals in our village school.

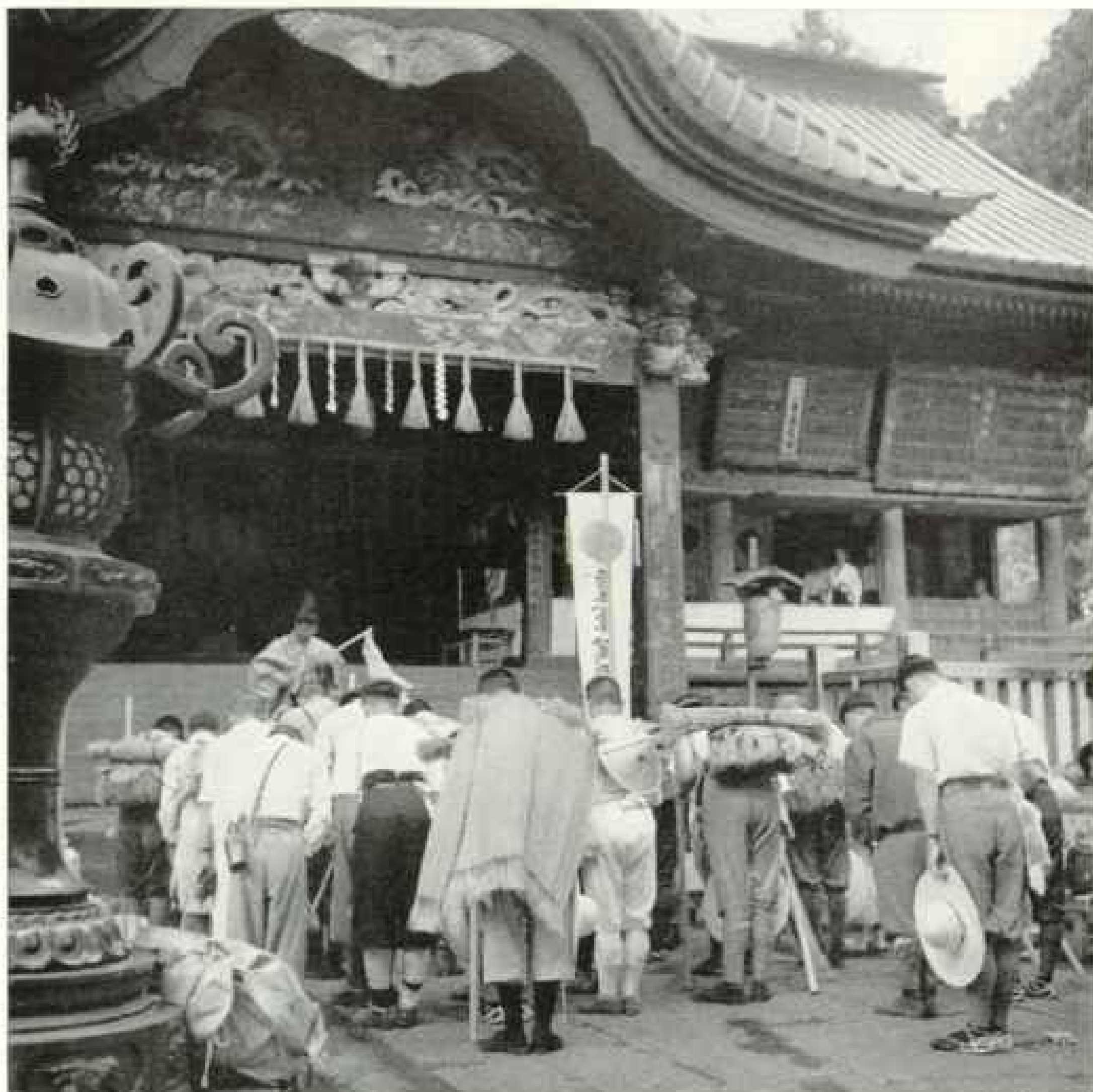
He was an engaging young man. No one would suspect him of being an utter fool and a teacher of foolishness. It is astonishing with what apparent common sense an intelligent Japanese can dispense nonsense. Ogawa's views on most subjects were sane enough. He even had a sense of humor, but it disappeared into a bottomless pit of gravity whenever the emperor question came up.

"How do you teach children their—ah—responsibility to the Emperor?"

Ogawa sucked in his breath and raised his eyes to the ceiling. That was his way whenever the discussion turned to matters sublime.

"Perhaps," he said, "you will come to the school on portrait-unveiling day. Then you will see for yourself."

The school was—and is, if it escaped bombing—a large, low structure standing a half mile from Hayama village on the road to Zushi, the broad, paved royal road used by imperial processions. It bears no resemblance to the little red-brick schoolhouse that we might think of in connection with a village.



Germaine Kullerman

With a Hempen Brush, His Sacred Wand, a Shinto Priest Purifies Pilgrims to Fuji

At Yoshida, lying on one of the six paths to the volcano's crater, a banner identifies members of the Young Men's Military Association. For the cindery climb ahead, they carry alpenstocks. On their backs are mats—their bedding, sun and rain shields. Overhead stretches a taboo rope, sacred to the Sun Goddess. Left: a bronze lantern, gift of someone eager to gain merit with the gods.

It served a couple of hundred pupils from several villages.

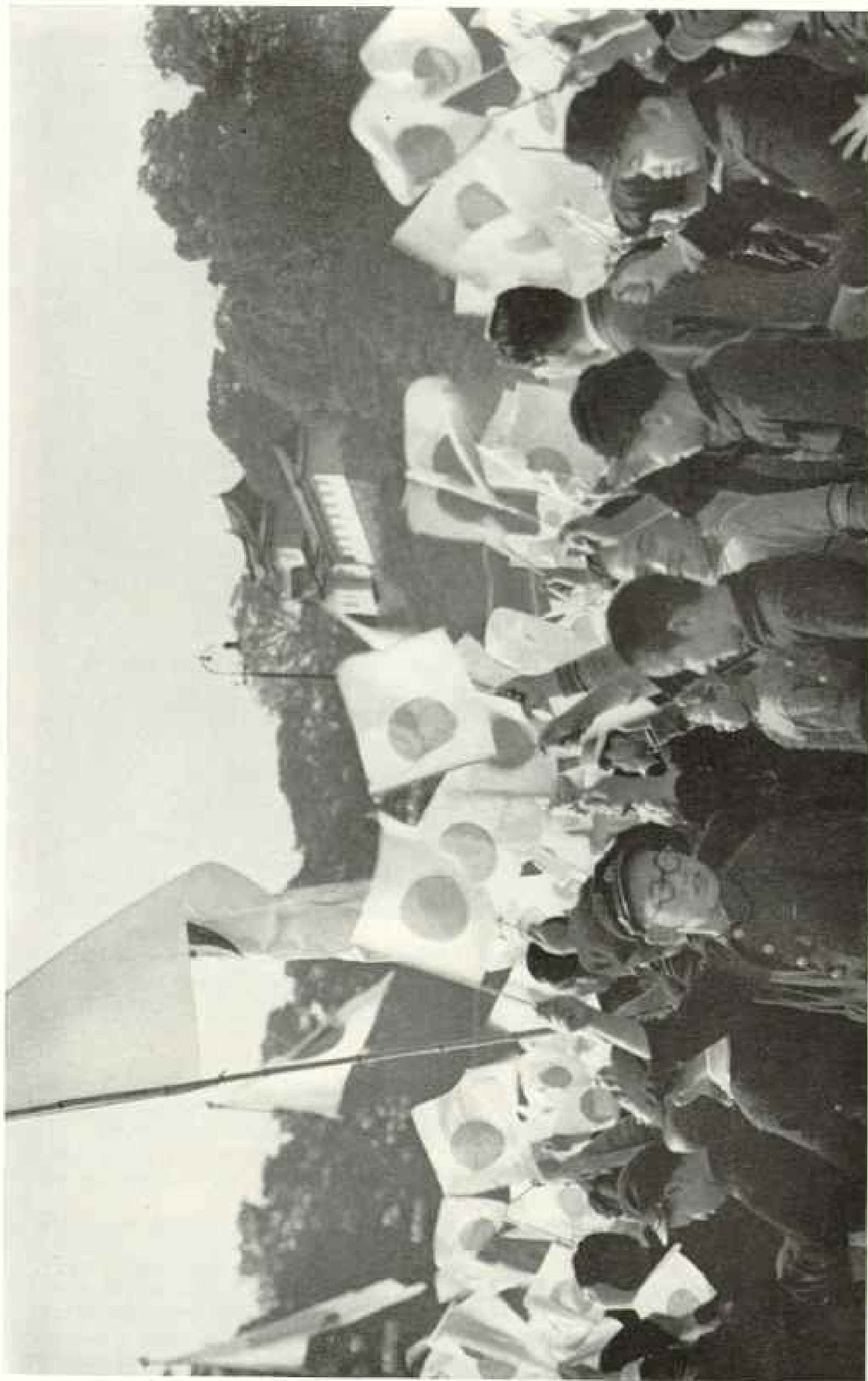
I remember that it consisted of at least two—it may have been three—long barracklike buildings in almost modernistic style. Behind it were cherry trees and a lane up a hillside through the woods to a Buddhist temple. At one end was a large playground for games and military exercises.

A curious little stone building stood alone between the school and the street. It was about ten feet square and beautifully designed. It had no windows and only a very solid-looking door. It reminded me of a mausoleum.

The sole objects in this building were two pictures and a scroll. The pictures were photographs of the Emperor and Empress.

On the morning of my visit the portraits had already been removed, with ceremony, to the school auditorium.

Ogawa slipped me into a back seat. The auditorium was full of children. Although the meeting had not yet been called to order, there was an air of paralysis in the room. I thought of an American school auditorium with its whispering, rustling, and smothered laughter. Here two hundred children scarcely breathed.



Blank star.

Flags Flutter and *Banzai* Screams Ring Out. Uniformed Schoolboys Give Thanks at the Imperial Palace for a Victory

By the tens of thousands, Tokyo children paraded to the moats and walls of their "forbidden city." This class was led by its teacher (right), the entire school by its principal. How emperor-worship ceremonies unnerved educators is described by the author, who saw two incredible devotions. Suicide was the fate of any teacher who fumbled (page 576). Before palace gates such as the one above, twosome Japanese committed *bara-kiri* when the Emperor announced Japan's surrender.

Their eyes were fixed upon a cabinet on the stage. It suggested a church altar. The doors of the cabinet stood open, but a curtain with heavily tasseled draw cords concealed the holy of holies. No one was on the stage.

Presently an Army officer stepped to the front of the floor, but not up on the stage, and called the assembly to attention. Everyone stood.

An Army man, by the way, was assigned to each school. He was nominally subordinate to the principal, but actually "advised" both principal and faculty, and they did well to follow his advice.

He snapped an order in that raucous, unintelligible way that is the pride and joy of the Japanese military man. Every student bowed. It was not a bow, but a right-angle cramp. All the body above the hips lay strictly horizontal.

From the rear nothing could be seen but row upon row of uncomely Japanese buttocks. In courtesy I emulated the pose, but could not hold it long. Everyone else remained in this position for 15 minutes. That alone should be sufficient to make any child remember the Emperor!

Of course no one could any longer see the cabinet—unless one peeked. The one who did so saw the principal in a fine state of dither—for one false move would necessitate suicide—ascend the platform and approach the cabinet, stopping every few steps to bow profoundly.

Unveiling the Emperor's Portrait

Arriving at the cabinet, he grasped the draw cords and drew apart the curtain. He was already bowing again so deeply that he could not have seen what was revealed.

There now looked benignly out upon the bowed backs of the audience the mustached, small-chinned Emperor and his pretty Empress, dressed in Shinto ceremonial robes. The pictures were ordinary black-and-white photographs about a foot square, cheaply framed.

The Army officer read an imperial message in a hard, strained voice. After this, the principal drew shut the curtains. Then, bent double, he walked backward across the platform and down the steps, a feat requiring no little skill. It was easy to imagine him practicing it many a night after hours.

Back in the audience and still bent double, he furtively wiped the perspiration from his face with a paper handkerchief.

At a signal the students straightened, turned, and marched soberly out of the auditorium.

I was amazed to see that many eyes were wet with tears. One boy broke into uncontrollable sobbing and had to be taken in charge by a teacher. I must admit that even this cynical foreigner was moved.

"You see how we do it?" It was Ogawa.

"Yes," I said sadly, "I see how you do it."

I suffered to think that humanity had progressed so little as to be still susceptible to such witch-doctor tactics.

Nearly every school in the Empire has copies of the imperial portraits. Some have been reluctant to receive them because of the responsibility involved. A fireproof and earthquake-proof resting place must be provided for them.

They may be kept in a safe in the principal's office, but it is obviously better to keep them in a fireproof building all their own so that, if the school burns, they may escape injury. The stories told of principals committing suicide when they have failed to rescue the portraits from the flames are not fiction.

Hara-kiri for Damage to a Picture

Some years ago a Tokyo primary school attended by 7,000 children was burned. After the fire an American asked the Japanese principal whether all the children had escaped unhurt.

"You will rejoice to hear," said the principal, "that the Emperor's picture was unharmed."

Whether or not any of the pupils were injured was of secondary importance.

Hara-kiri is the penalty not only if the portraits are burned, but also if they are lost, torn, or even soiled. Of course no one would steal them for their intrinsic value. But the thief might blackmail the principal, exacting a large sum as his price for returning the pictures.

There is nothing ancient about this rite. Bowing to the imperial pictures began in 1891. This was just two years after the constitution drafted by Prince Hirobumi Ito, first premier, had raised the Mikado to an eminence unknown in two millenniums.

But the full possibilities of emperor worship were not realized by Ito and his contemporaries. It remained for the Army in 1936 to solemnize the cult and surround it with grave penalties.

Those who have compared the ceremony with our salute to the flag have only to attend to feel the tremendous difference. The salute is a gesture of patriotism; the picture ceremony is religious worship.

"Before you leave, you must see our new *kito-jo*," said Ogawa. He took me out to a

corner of the playground where a new shrine of sweet, fresh wood had just been erected. Kito-jo means "praying place."

"It is for worship of the Sun Goddess, ancestress of our Emperor."

"How is it used?"

"Mainly by individuals. Anyone who is troubled may come here. He is usually helped. You have no idea how useful it is if any one of our pupils breaks the rules. He is sent here. He comes back with a proper spirit."

The strangulation of the Japanese people by rules, rules, rules is clinched by this device.

"And young men who enter the Army are sent here to give thanks. Sometimes they are not as thankful as they should be." I knew that. Japanese boys sometimes resorted to extraordinary measures to escape the draft. "But this puts them in the proper spirit."

"It is essential," continued Ogawa, "to start the day right. Every morning we all assemble on this field and do the 'worshiping at a distance.'"

"What is this worshiping at a distance?"

"We all face Tokyo if the Emperor is there, Hayama if he is here, bow, and remain so for 60 seconds. During that same minute millions of other students all over the Empire are doing the same thing. It is very inspiring."

"What else do you do to inculcate the—proper spirit?"

"Well, there are my courses in history and morals. And, ah yes, the reading of the rescript. That will be done next Wednesday. Would you like to come?"

I had not supposed that anything could be more paralyzing than the portrait ceremony. But the rescript ceremony outdid it.

The very word "rescript" is suggestive. The written answer of a Roman emperor to an inquiry on a matter of law was called a rescript. So was an official reply written by the Pope. The Japanese, who combined Roman emperor and Pope in their Son of Heaven, seized upon the word to designate a written message of the Emperor.

Importance of Imperial Rescripts

There is one great lack in State Shinto—it has no Bible. In recent years rescripts of various emperors have been gathered, and the published collection has shown signs of becoming the sacred book of the State religion.

One of the most revered of these is the Imperial Rescript on Education issued in 1890 by the Emperor Meiji, in whose reign Japan undertook modern education.

This rescript, as holy as the Lord's Prayer of the Christians but never so casually repeated, calls upon all Japanese subjects to

offer themselves for the State "and thus guard and maintain the prosperity of Our Imperial Throne, coeval with heaven and earth."

Emphasis is placed upon these words of the rescript: "The way here set forth is . . . infallible for all ages and true in all places."

This has been exploited to the full by the Army as a divine imperative that the imperial way be extended to all places—that is, to the entire world. Thus Japan's educational creed established world conquest as the ultimate aim of all education.

Rescript Ends War

The deep significance of the imperial rescript was brought dramatically to the world's attention last August. An imperial rescript ended the war.

Fanatical young Japanese officers, according to an Associated Press dispatch of September 9, 1945, tried to prevent the sending of the Emperor's recording of the surrender rescript to a radio station. They knew the authority it carried. The commanding general of the Emperor's personal guards was slain and his name forged to an order sending troops to surround the palace. The plot failed when the forgery was discovered.

On August 15 the rescript was broadcast. The Japanese nation obeyed implicitly.

"We do not ordinarily admit foreigners to a rescript ceremony," said Ogawa. "You will be very careful about your deportment."

Ogawa was evidently not quite sure of me. "If anything incorrect should happen," he said, "the principal would have to kill himself. So would I." The statement was quite calm and matter-of-fact. He meant it.

Again I was given a back seat. Again the deathlike hush. But this time the platform was occupied. All the faculty, with the exception of the principal, was seated there. The cabinet had been replaced by a lectern.

At a signal everyone rose. There was a long wait but no fidgeting, no whispering. Out of the stillness at last came the sound of slow footsteps in the corridor. Grave and measured, they came nearer. Finally they reached the door. There stood, or rather bent, the principal, in frock coat, his white-gloved hands grasping a tray raised to the level of his bowed forehead. The tray was covered with a white cloth and on it rested a lacquer box.

Everyone bowed toward the box.

The principal resumed his arduous progress toward the platform. Unable to look ahead, he stepped warily. The consequences if he should bump against the corner of a desk, or brush the tray against the wall, or slip on a dropped pencil, were too awful to contemplate.



Three Lines

Banner-hung and Laughter-filled, the Ginza Was Tokyo's Broadway, Its Shopping Center

Here prewar tourists mixed with jugglers, vendors, geisha, and beady-eyed countryfolk seeing the city sights. Many signs were in English—for example, "fire alarm" (upper right). To end a fire hazard in the 1870's, Tokyo erected its first stone and brick units on the Ginza. However, even steel and concrete crumbled under B-29's; occupation troops found the Ginza more than half demolished. Famous stores and theaters were ruined or closed. Willows bordering the avenue (left) were gone or dying. Center: a subway station.

The perspiration came out on my own forehead. I have no doubt that everyone in the room was suffering for him, except possibly some rebels who had felt his wrath and were secretly glorying in his discomfort.

Up the steps he felt his way, and to the lectern. There he deposited his precious burden. We all bowed again, and again straightened. His large white gloves moving like a magician's over the box, he removed the lid and drew out something wrapped in purple silk.

The audience bowed.

He drew off the purple silk and disclosed something wrapped in white silk.

Another bow.

Hesitatingly, as if he hardly dared penetrate

the last mysteries, he took off the white silk.

He now held in his hand what appeared to be a parchment roll. It looked like a Hebrew scripture or a college diploma. But now we were bowing down again, and this time we stayed down.

He opened the scroll and began to read. This must be an agonizing experience, since the mispronunciation of one word would mean at least dismissal and possibly more serious consequences.

"I have known a school principal to commit suicide because, at a ceremonial reading, he misread one of the characters," testified one schoolteacher. Nor is the document easy to read, being written in archaic Japanese. After each such ceremony a detailed report goes



Suzuki from Black Star

Dressed to Fish! The Emperor's Guests Wear Top Hats in Respect for His Divinity

Even at a Japanese baseball game attended by Hirohito, Americans and native dignitaries wore silk hats and tails. So did the umpire! Guests at imperial duck hunts were attired similarly (page 525). This body of water is the Emperor's carp pool. His subjects admire the carp as a symbol of masculinity.

from the military officer in the school to military headquarters.

At the end of the reading we straightened, only to bow again as each wrapping was replaced on the document and it was put into the box. Then the tray was lifted to brow level and the principal undertook the hazardous journey across the platform, down the steps, along the aisle, out the door, down the corridor, and outdoors to the sacred vault.

"We Die for the Emperor"

The audience sang the national anthem to the accompaniment of a small wheezy organ.

The rescript ceremony safely over, the Army officer immediately cashed in on the emotion it had generated by making, in a strident voice, an impassioned appeal for all-out support of the war in China. With Hitlerian fervor, he screamed louder and louder. But he was evidently making himself ridiculous to only one member of his audience. All others seemed to rise with him from pitch to pitch of excitement. At last he reached a shrieking climax with:

"What is your dearest wish?"

And in one shrill cry the children gave the required response:

"To die for the Emperor! *Tenno heika banzai!* Long live the Emperor!" (Page 514.)

The meeting was over. The children were trembling and sniffing as they went out. The teachers, distributed among them, were watching them. I had noticed that before the officer began his harangue the teachers had come down to stand in the assembly. When I had a chance, I asked Ogawa about this.

"Our children are intensely patriotic," he said proudly. "Sometimes it leads them to do rash things. A few months ago, after a talk like this, one of our boys would have stabbed himself with his jackknife if a teacher had not stopped him."

"Do you think such hysteria is good for the children?"

But he did not understand and I despaired of making it clear. You can't explain paranoia to a paranoiac.

A Member of Parliament who formerly served as an instructor in Japan records that small boys have been known to commit suicide after a particularly emotional lesson in "the Japanese spirit."

But those who taught in Japan in the twenties have no idea of the intensification of this fanaticism in the late thirties.

The Rescript on Education could once be read from a book or paper. Now it must be a scroll enveloped in folderol.

Once bare hands would do. Now white



Richard P. Price

In Hakone, Stone Idols of Jizo, a Buddhist Deity, Wear Dead Children's Garments

Usually the idols appear in groups of six, known as the six succorers. Bereaved mothers dress them in hopes the god will rescue their offspring from the River of Souls' dry bed, a purgatory where demons compel children to pile stones. Each stone laid at the foot of an idol, therefore, relieves a child of such penance (p. 519).

gloves are necessary, and should the document be handled with gloves that have been worn previously, custom decrees suicide.

Once the place of reading was not important. Later an American teacher was seriously beaten by his students because he read the rescript from a point one step lower than the highest part of the platform.

Recently, in the chapel of a Sendai mission school, a stained-glass window had to be curtained because the Lord and his saints must not be allowed to look down upon the sacred writing of the Emperor.

Formerly the rescript might be kept in the school safe with other papers. Now it should have, if not a separate building, at least a safe of its own.

And this safe is no ordinary one. A teacher friend described the one in her school. Wrapped in silk, the rescript reposed behind a curtain screen, behind a wooden door, behind an iron door with combination lock, and all this was surrounded by an elaborate black partition six feet high.

Such a compartment reminds one of the repository of the Koran in a Mohammedan mosque. Was that where the Japanese picked up the idea?

Certainly every effort is made to copy from existing religions and go them one better.

The mission schools were forced to knuckle down to the Emperor or go out of business. Inspectors visited the schools and asked such questions as these:

"Which is the more worthy of reverence, Christ or the Emperor?"

"Which is the more important, the Imperial Rescript on Education or the Christian Bible?"

Children of mission schools, as of all other schools, were required to visit Shinto shrines and bow to the imperial ancestors.

Mission Schools Had to Close

The mission schools were given the choice of abandoning their principles or closing. Most of them closed long before Pearl Harbor compelled them to do so.

If the emperor myth had been expounded only in assembly, it would have been bad enough. But it was a daily theme in every classroom. Ogawa explained to me how it was worked into courses on reading, writing, and even arithmetic. As for his subjects, history and morals, the Emperor stood at the center of them.

Ogawa showed me some of the textbooks used not only in his school but in the higher schools and the universities.

Here are a few random excerpts. First, from a nursery catechism:

"What do you love best in the world?"

"The Emperor, of course."

"Better than your father and mother?"

"Yes. He is the Lord of Heaven, the father of my father and mother."

"What will you give the Emperor?"

"All my best toys and my life when he wants it."

Children in the primary grades learn from the *Textbook of Ethics for Ordinary Primary Schools*, which has been a standard text for several decades, that "Amaterasu sent down Ninigi-no-Mikoto and caused him to rule over this country. The great-grandchild of this prince was the Emperor Jimmu. More than 2,570 years have elapsed since the accession to the throne of this Emperor. His successors throughout successive generations have ascended the throne."

Emperor's Report to His Ancestors

Of course all these statements are false and the intelligent writers doubtless knew they were false. Jimmu, if he ever existed at all, which is doubtful, was hardly the great-grandchild of a god. The span of time since the beginning of the dynasty is exaggerated by at least six centuries, and the succession has been frequently broken by adoption or usurpation.

The main ring of the Shinto circus is the Grand Shrine of Ise. Here the Emperor goes to report to his ancestors. Here all good subjects should repair at some time in their lives. The textbook on ethics implants the idea early:

"Children! Thus deeply does the Imperial Family revere and worship the Grand Imperial Shrine! . . . And even people living in remote places, having once made the pilgrimage to the Ise shrine, and having bowed deeply in the divine presence and raised their eyes to the sacred majesty, have felt a lifelong desire fulfilled."*

Teachers are helped to expound the "eternal truths" of the *National History for Ordinary Primary Schools* by an official commentary which tells them:

"We subjects who live under such an illustrious Imperial family are for the most part descendants of the gods."†

"Ogawa-san," I said, "why do they say 'for the most part'? Aren't all Japanese subjects descendants of the gods?"

Ogawa was slightly embarrassed.

"Well," he explained, "you see there has to be a distinction between native Japanese and foreigners who have taken Japanese citizenship—I mean Koreans, Chinese, and so forth."**

"And Englishmen and Americans," I added.

"So, for example, if my wife and I should become Japanese subjects, that would not make us children of Izanagi [the male deity from whose left eye Amaterasu was born]."

"I'm afraid not."

"But if we foreigners are not descendants of the gods, too, then what are we?"

Ogawa took a long sip of tea before he answered.

"I believe you have your own theory of evolution," he suggested mildly.

I bowed to his logic and embraced my ape ancestors. I think I prefer them to his gods.

How could Ogawa think otherwise about Nipponese pre-eminence when the *Handbook of Ethics* tells him:

"There are many countries in the world, but there is not one that, like our great Japanese Empire, has one Emperor of the same dynasty through the course of the ages. We who have been born in such an exalted country . . . †

Racial conceit is not a monopoly of the Japanese, but they seem to have more than their fair share of it. More important, it has been used as a weapon of national policy.

Army Man "Reforms" the Schools

As the campaign was intensified, an Army man became Minister of Education. He was General Baron Sadao Araki, Japan's most voluble exponent of the emperor myth. He had formerly been Inspector General of Military Education and had thoroughly revised and fanaticized the Army educational program. In the late thirties, as Minister of Education, his influence reached the smallest hamlet and the last home in the Empire. He "reformed" the school system. The already elaborate fictions of the schoolbooks were further romanticized.

He did not believe in half measures. Progressive teachers all over the country were dismissed. Many were imprisoned for "dangerous thoughts." His Bureau of Thought Control undertook to question all teachers and students and turned over to the police those who did not give the right answers.

The last traces of liberalism in the universities were stamped out. It was announced that the Tokyo and Kyoto Imperial Universities, "in harmony with the times," would establish courses on the "History of Japanese

* *Modern Japan and Shinto Nationalism*, by D. C. Holtom, published by the University of Chicago Press, Chicago, Illinois.

† *Government by Assassination*, by Hugh Byas, published by Alfred A. Knopf, New York City.

** See, in the NATIONAL GEOGRAPHIC MAGAZINE, "Jap Rule in the Hermit Nation," by Willard Price, October, 1945, and "I Lived on Formosa," by Joseph W. Ballantine, January, 1945.



Three Lions

A Modern Geisha Curtsies to a Client; Her Old-style Aids Bow until Noses Touch Floor

Taught from the age of seven, geisha are licensed entertainers. At stag banquets they sing, dance, and play instruments. A geisha acts like a lady but, according to a proverb, "A white crow and a pure geisha are unknown." Her doleful songs and artificial voice soon bore Occidentals. Here a sliding door reveals a room's tapestry-paper wall.

Ideology" and the "History of the Japanese Spirit." Able educators have been turned into servile propagandists.

Standing one day with a well-known Tokyo professor atop Eagle's Nest, a little hill overlooking Hayama, I asked some daring questions about the myth of the Sun Goddess and the belief in the Emperor's divinity. We could see from our vantage point the palace and its walled gardens. Possibly one of the figures on the beach beyond was the Son of Heaven himself.

The scene was peaceful, with Fuji glistening white across Sagami Bay and the smoke of Mihara volcano puffing over O Shima far out to sea. Surely, I thought, there can be no danger here in bringing up subjects taboo in a crowd.

"Undoubtedly," I said, "you appreciate the legendary character of these 'historical' facts. How do you discuss them with the students in your classes?"

Despite our isolation he looked about furtively, as if fearful that a spy might be lurking near; then, lowering his voice almost to a whisper, he replied: "It is far more comfortable to teach in a classroom than in prison. We prefer to teach what is permitted rather than nothing."

Not until the militarist oligarchy has been thoroughly stamped out will truth dare to emerge in Japan. Even then it will take long re-education before Japan becomes modern in spirit.

American Soldier in Reykjavík

BY CORPORAL LUTHER M. CHOVAN, USA

With Illustrations from Photographs by the Author

WHEN we were on the troopship heading for Iceland, we started forming opinions about what we thought our next station would be like. To us, the name Iceland suggested a country almost always bound by ice and snow. Most of us imagined the people to be coarse-looking, dressing in warm clothes, regardless of style. We were, however, soon to change our opinions.

Our course ran along the coast for a considerable distance. Along the ocean edge the terrain was fairly level. In the distance could be seen one large snow-capped mountain. Later we learned that this was Mount Hekla, Iceland's most famous volcano.

Grass and vegetation could be seen growing on the mountainsides and coastal strip. Villages with small but modern houses were situated beside the fjords. At closer range we could see automobiles and the children, dressed in brightly colored clothing, running about. Already we were wondering if this was the Iceland we had imagined it to be.

We were taken from our troopship by small, light ships and docked at a pier in Reykjavík. A motorized column of Army vehicles immediately took us to a small camp. The camp was composed of Nissen huts, the small, half-rounded buildings built of steel ribs and corrugated iron (Plates II, VIII, and p. 546).

What Soldiers Wished to Know

First questions asked by us of the veteran troops already living in the camp were: "What are the people like? Do they speak English? Are they friendly toward us? Where do they get the modern clothes? Doesn't it get awfully cold here in the winter? Is there any social life up here?"

In answer they told us that the people were like Norwegians. Most of the younger ones spoke English. They did not give the American an open-armed invitation to their homes.

The clothes were, for the most part, imported from England and the U. S. A. It did not get so cold in degrees, but the wind blew terrifically in winter—so strong that a person could not walk upright across a street. Other stories told of sections of the tin huts being blown away. As for the social life for American soldiers, it was practically nil.

Thus informed, we settled down to orienting ourselves with the Army routine.

This first day the sun shone until 11:30

p. m., since it was August, when there is no real darkness. Having been accustomed to the heat of a summer day in the U. S. A., we almost froze, even when in our sleeping bags and blankets.

Upon looking about the following day, I could see our camp was located among small Icelandic farms and houses. I was truly amazed to see cotton dresses and rayon-type stockings whipping in the breeze beside the Icelandic homes but a few yards from camp. I, as well as others, had expected to see heavy woolen clothing.

These first few days we were largely confined to the immediate vicinity surrounding our huts. We thoroughly established ourselves, building clothes racks and clothes hangers from heavy wire, improvising individual bunk lights from tin cans and anything else that could act as a reflector, and making a foot locker from empty wooden equipment boxes.

There was the camp to become familiar with. We found everything was located in separate buildings. The mess hall was in one, the exchange in another. There were also the movie hut, the dispensary, the orderly room, and last, but not least, the washroom, the shower room, and the latrine, these located seemingly as far from our hut as possible.

My first contacts with Icelanders were while on guard duty or on an outside work detail. The smaller children were all for the American soldier. This was, no doubt, because of the soldier's generosity with candy, fruit, and chewing gum. Because of war conditions, the Icelanders had practically none of our fruits or sweets. The only time they had fruit was at Christmas time, when they made a special effort to run their small ships to the U. S. A. to load up with fruits, nuts, butter, and other luxuries (page 547).

The Appeal of Chewing Gum

About the first English to be picked up by children when around American soldiers was "Gimme candy, gum." Any response from a serviceman would quickly bring smiles and squeals of delight from the youngsters. Any benevolence on our part almost always was accompanied by a little "thank you" or, in the case of the girls, a curtsy.

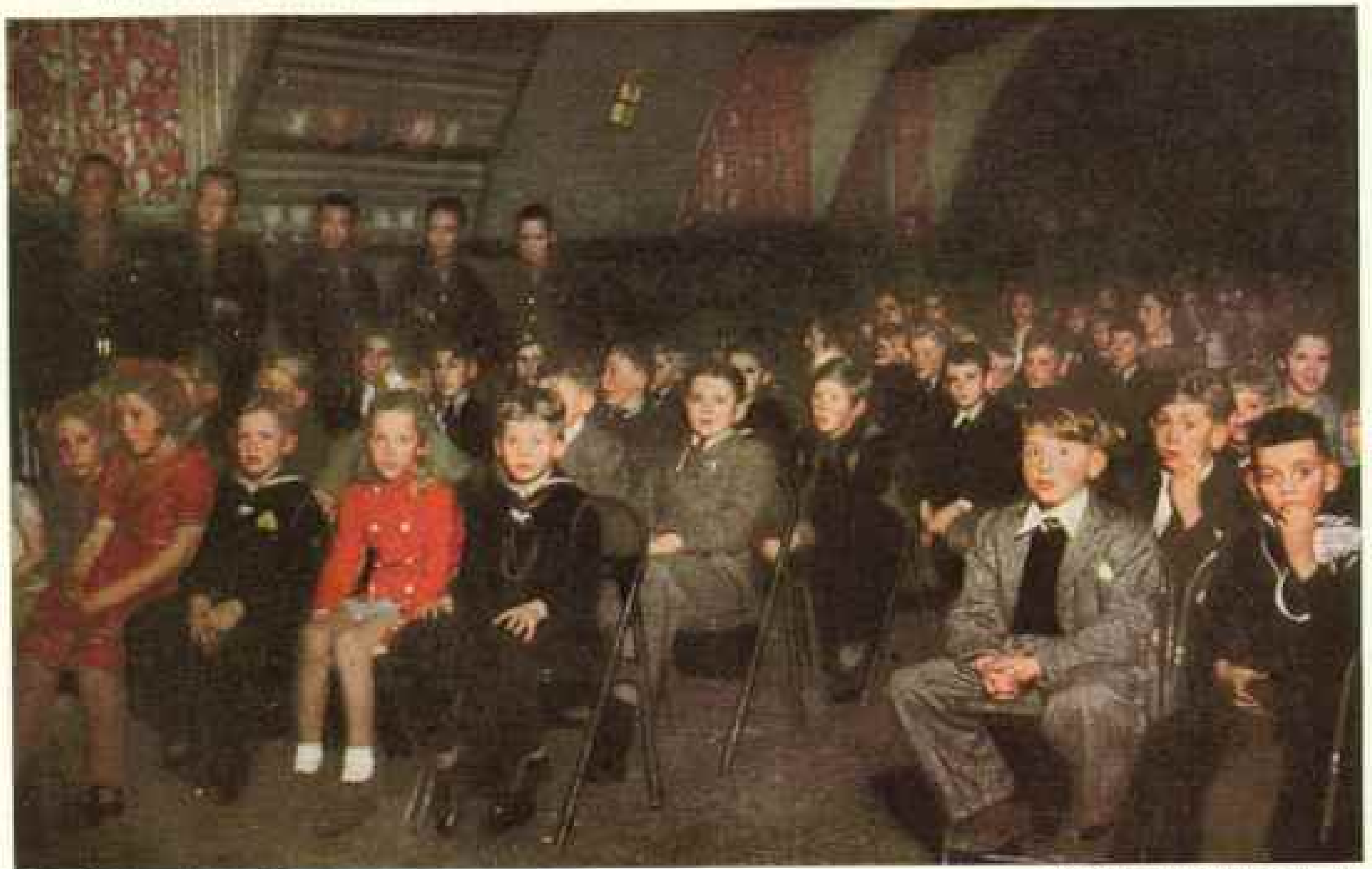
While on guard duty at a post beside the main road, I would often save an apple or an orange to give to one of the children who went

Iceland Defrosted



Yanks and Icelanders Skate on Tjörninn, a Small Lake in the Heart of Reykjavik

Iceland belies its name; winters are fairly mild. In January Reykjavik freezes and thaws, though it is only 160 miles below the Arctic Circle. As to skating arm in arm, the girls told Americans, "No, thank you."



© National Geographic Society

Photographs by Luther M. Chazan

Icelanders Await the GI Santa at a Christmas Party. Are They Good Children?

Every day was Christmas—"Candy? Gum?"—when kids met Yanks. These Reykjavik youngsters got gifts in the Red Cross Recreation Club. They address Santa by other names; they hang no stockings.

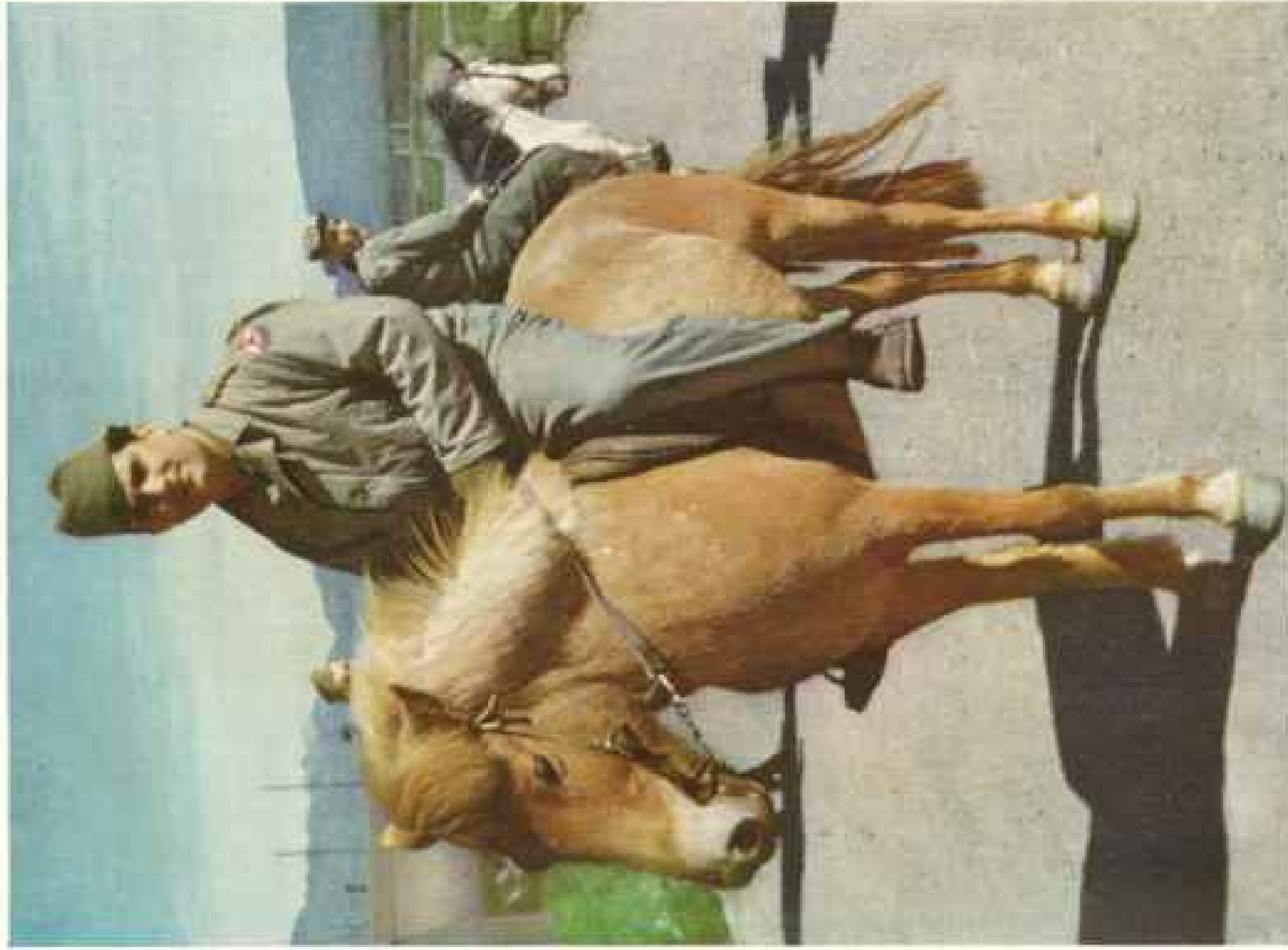


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Photograph by Luther M. Chan

"Homeward" Plods a Parka-clad Yank, Hoping He Can Tell His Snow-covered Nissen Hut from the Others

Since mid-1944 he and his comrades guarded Iceland against German threats. Thanks to the Gull Stream, he had few days like this, but a gale occasionally stripped tin from his hut. Summers he found cool. When he and 600 others, still in winter garments, returned to New York last June, they stepped into a heat wave.



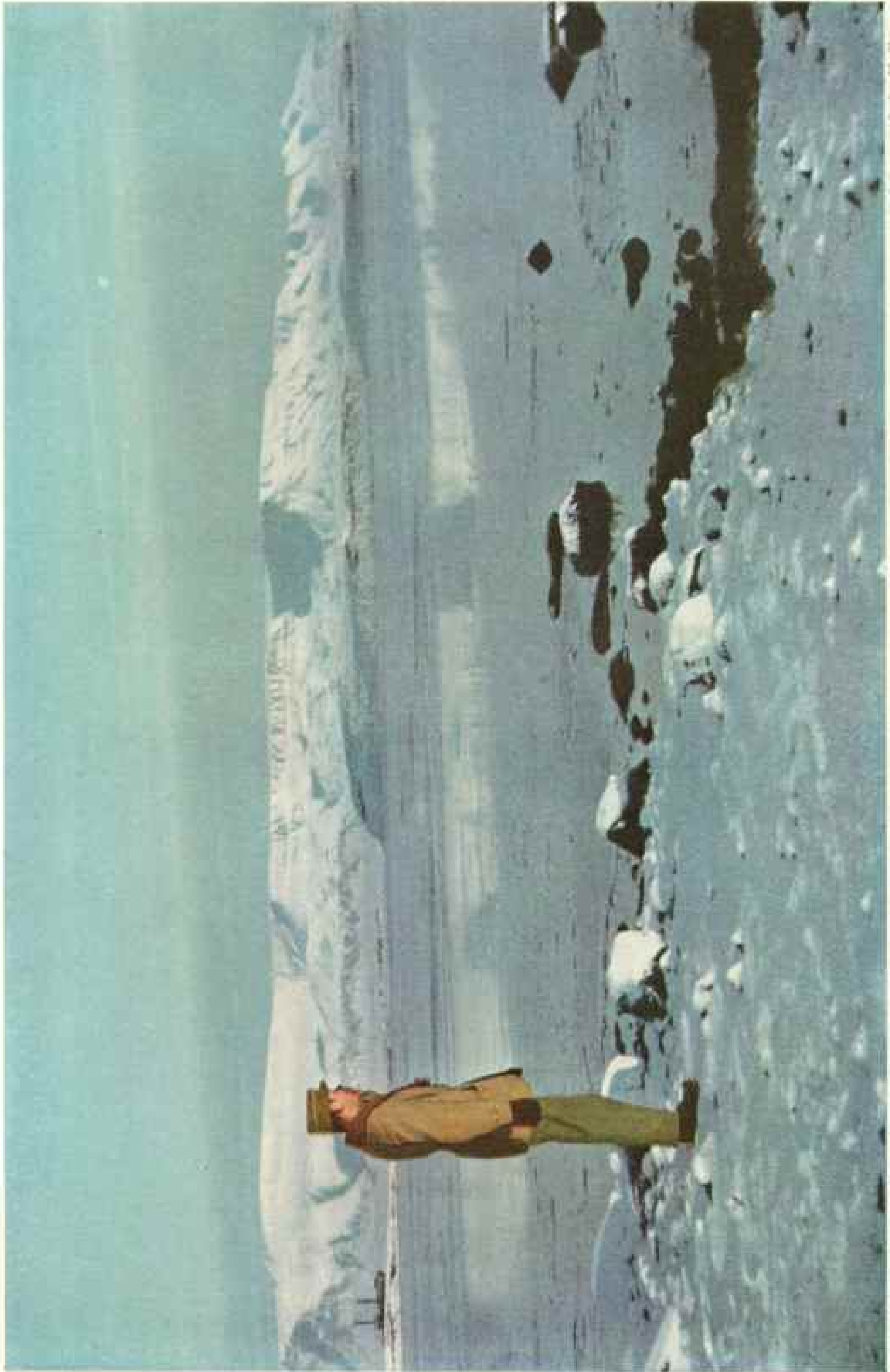
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Off-duty Yanks Ride Iceland's Shaggy Ponies Around Camp
 Faithful, obedient, and intelligent is the Iceland pony, but for the "cavalry" he's too small—four to five feet high (Plate XI).



Photographs by Arthur M. Chaney

Seeing Iceland Through American Binoculars
 On the breakwater, the photographer and his friends overlook the harbor of Hafnarfjörður. In woollens, the boys dress for the cool summer.

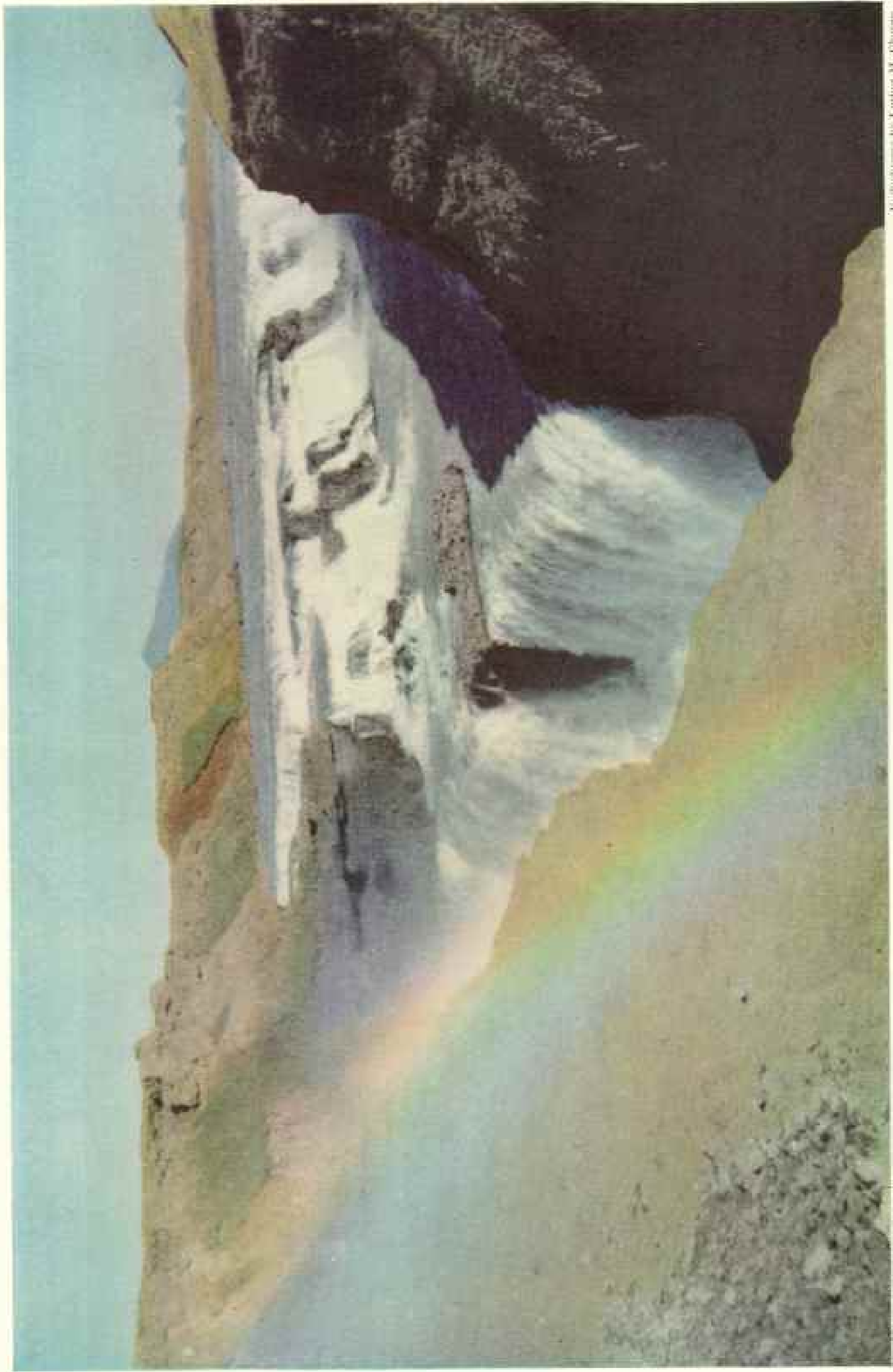


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Redrawn by Luther M. Chernin

This Icy Wilderness, Surveyed by an American Soldier, Is the View Outside Reykjavik, Home of 45,000 People

Influenced by the warm Gulf Stream, Faxa Bay remains ice free, though it lies in Bering Strait latitudes. On the opposite shore stands Mount Esja, a 2,980-foot block of lava (Plate XXII). Winter's skiers and summer's hikers are its principal visitors. The soldier is looking for wild ducks.



© National Geographic Society

Illustration by Arthur M. Church

Rainbows Halo Gullfoss, the Golden Fall, Where Hvítá, the White River, Shatters Itself into Mist amid a Desert of Lava

The stream is fed by a glacier-side lake carrying a fleet of icebergs. First it swirls over a series of steps; then, twisting, plunges into its gorge—a total fall of some 150 feet. Mist-washed grass is the only sign of life in the desolate landscape. Gullfoss attracted many American troops.



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Reproduction by Lester M. Church

Picnicking Americans Celebrate Their Independence Day in Iceland. Its People Affirmed Their Freedom 1,015 Years Ago

A Red Cross girl (center, left) directs a frankfurter roast beside Lake Thingvalla. On an outdoor Java floor near by, Icelanders established their Althing, "grandmother of parliaments," at a time when Europe had medieval despotism. Long before Englishmen, they inaugurated trial by jury.



© National Geographic Society

Redrawn by Luther M. Church

Peering into a Steaming, Sulphur-lined Spring, Army Men Catch a Glimpse of Iceland's Volcano-heated Nether World

To medieval Europeans, the island's volcano Hekla was the chimney of Hell. Its hot springs rang from those in lofty ice fields to flows revealed by low tide. Reykjavík (Bay of Smokes) was so named because of its vaporous springs. In the background, admiring ring Great Geyser (Plate XII).



On Winter Days, When the Arctic Sun Blacks Out, a Yank Likes to Relax Indoors

One of the author's roommates, in Army fatigues and civilian slippers, reads in bed. Over his head, pin-up girls dance. He and his pals made the Nissen hut's curtains. His loud-speaker relays music.



© National Geographic Society

Photographs by Luther M. Thomas

Fiber Board and Army Cot, Quickly Adjusted, Make a Hut's Space-saving Card Table

In the background, the bookcase holds treasures for long winter evenings. Sitting around the stove and swapping gossip is a favorite pastime. Sleeping, too, is very popular.

by. It was usually one or two of the same persons, since they lived close by and would pass this particular guard post to and from school. They learned to speak English well. One of the boys was even permitted to come into camp to sell magazines to the soldiers. The magazines were those of ours purchased from the U. S. A.

One day one of the newer Americans in our camp stopped one of the smaller Icelandic boys and tried to question him. He knew a smattering of the Icelandic language, and he very crudely tried to get this boy to understand. After a painful effort on his part, the Icelandic boy responded with, "Aw, baloney! Speak English!"

A Visit to Reykjavik

After spending the first few days at camp, a friend and I decided to go into Reykjavik, the capital and largest city of Iceland. It has about 45,000 inhabitants (Plate XXII).*

Since we lived a short distance from the highway, we had a choice of going into town by two ways, either by Icelandic bus or by hitching a ride with one of our vehicles. The Icelandic bus service was quite reliable, and the fare in our money amounted to about eight cents (page 548).

Incidentally, when we landed in Iceland, one of the first things we did was to convert our money into Icelandic money. The Iceland unit of exchange is much smaller than ours. It is called the *króna* and is the equivalent of 15½ cents.

On this particular day we caught a ride on one of our Army trucks into the city. The first place we decided to go to was the American Red Cross recreation center. This was practically in the main part of the city and located among Icelandic buildings. The center was rather large, consisting of several Nissen huts, all connected.

There was a varied daily program outlined for us by the Red Cross personnel. It included a daily movie in the large hall or ballroom. Library and writing room were available. There were ping-pong, billiards, and various card and sitting games. Later a popular addition was built, and that was a bowling alley. This was of the duckpin type. Coffee and doughnuts were served twice daily.

At times there were special outings for the boys caring to see scenic spots some miles from town. The Army furnished transportation, and the Red Cross prepared the lunch, which was adequate. Usually it consisted of ham, cheese, and hot-dog sandwiches. There was always plenty of potato salad and pickles to be had.

The kind of soft drink varied from punch to Pepsi-Cola. Always there were cookies or cake and some form of fruit. The recreational tour usually took most of the day, and this was very enjoyable when the day was sunny, for the summer days are very long.

The trip took in various mountains, geysers, a beautiful falls, a wishing pool, and other sights throughout the interior. These outings were especially popular with the Americans new to the island (Plates VI, VII, XII).

Red Cross Items of Morale

After a time a large Army exchange store was established beside the Red Cross center. This was a great morale factor to the forces, for usually there was an abundance of ice cream, popcorn, candy, regular meals, and the usual soap, razor blades, etc. At times items such as boxed candy, socks, cigarette lighters, gloves, etc., could be bought.

To the soldier newly arrived on the island, probably his first contact with the Icelanders was at this Army store, where civilian personnel was employed when I was there. There were younger boys and, not to be overlooked—the girls.

As one would expect, the girls were quite Americanized in ways of meeting and dealing with people. Naturally, the girls were ceaselessly being asked for dates or kidded, the latter being called in GI parlance, "snow job." It meant the boys with their lingo (each and every one had a style) tried to influence the girls favorably. Confidentially, we didn't get very far; the girls were quite on the alert for even a radically different type of snow job.

After spending time enough to walk through the Red Cross center and get some ice cream, my friend and I decided to stroll around town. There we found a city prospering and carrying on a very modern existence. It was surprising to note the stores being supplied with our products. There were shoe stores, bookstores, hardware stores, clothing stores, etc.

The stores were not so large as ours, but well stocked. At the present time the largest percentage of products comes from the United States and the rest from England. Little manufacturing is carried on in Iceland, and that largely consists of woolen goods, candies, soaps and oils, and some furniture.

GI's Comment on Women's Hats

We were surprised to see the people in town dressed like our people back home. They had different-colored garments, our fur coats, rayon

* See "Ancient Iceland, New Pawn of War," 22 illustrations in the NATIONAL GEOGRAPHIC MAGAZINE, July, 1941.



December Nights Are Cold and Lonely to an American Sentry in Nissen-hut Alley

On the shortest day of the Reykjavik winter he does not see the sun from 2:31 p. m. to 10:22 a. m. the next morning. In the north, along the Arctic Circle, the sun almost disappears. People dwelling in deep fjords lose sight of it entirely.

or nylon stockings, and, as to be expected with our dress, the many different comical hat styles for women. I don't think I am alone in my opinion of the latter—ask most any man.

There were many souvenir shops selling small articles such as handkerchiefs, pillow-cases, bookmarkers—all with scenes of Iceland painted or embroidered on them. There are other useful articles locally made, such as sealskin gloves and purses, infant sleeping bags, sheepskin rugs, and Iceland-made heavy woolen sweaters. The latter are made with wool from their own sheep. These sweaters are colored and designed with attractive patterns. Many an American soldier's wife now wears one of them.

The prices of the smaller souvenir articles seemed rather above average, but the cost of the woolen garments was reasonable. These shops were very popular, especially around Christmas time. The girls behind the counters spoke English. Most of them had an accent, but some spoke almost as fluently as American girls. The girls in the shops were polite enough, and friendly in a business way.

In contrast to that, when we strolled the streets, trying to get a smile from one of the

girls, we had no success. The attitude was one of coolness toward us. Luckily, I managed to get a response from one of the girls waiting for a bus; I asked her just why the people were unfriendly toward us. She said there were so many of us on the streets, and soldiers naturally tried to flirt with the pretty girls.

It had been noted that soldiers' actions at times were not always gentlemanlike. An opinion of these people was that all men in uniform acted as some may have acted in exceptional cases.

This girl went on to explain that she was engaged to a sailor stationed there. She liked him a lot and hoped to marry him for what he was, not because of where he was from.

The people appeared to the average soldier as being haughty and proud and cold. They had a right to be proud, having a democratic form of government over 1,000 years old.

They were not necessarily unfriendly toward us. It was only that so many Icelandic girls had become engaged to Americans and become heartbroken when the soldier's duty called him away from the island. The mothers wanted to see their daughters happy, and so they wished them to be careful about their choices.



So Strong Is the Christmas Tradition that Unforested Iceland Imports Trees

Conical paper decorations contain candy. The author receives a present from the Icelandic wife of an American soldier. Below their outstretched hands, Junior is too busy to pose (page 552).

The girls themselves liked the American serviceman. He treated them in a manner especially fine to European women. The typical American, though outwardly appearing a "gay blade," was generally considerate and thoughtful when with them.

Well over one hundred Icelandic girls are happily married to American servicemen. Most of these are now living in America. The girls are much the same as ours. People are people and are not radically different from ours in any country.

A Land of Many Holidays

The people have many holidays. There are about twice as many public holidays as we have. They observe them religiously and call their work to a halt. Their free time is spent in much the same way as ours. They have their cafes, dances, radio programs, plays, indoor sports, concerts, etc.

At present their dancing is adapted after ours, and the music and records are usually ours. Individuals like their swing music, waltz, jitterbug, etc. However, there are the old folk dances which are held and attended by the older people.

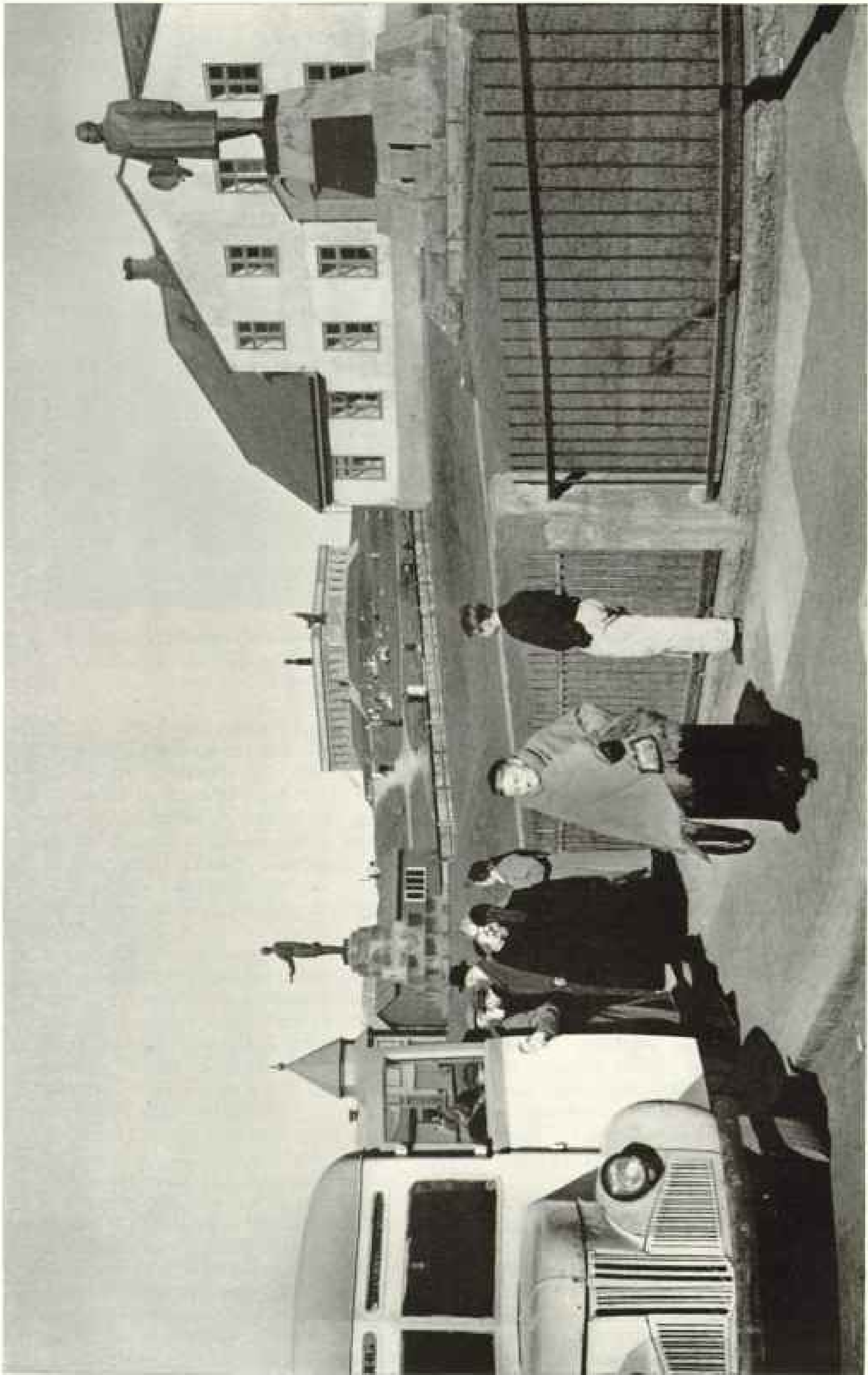
These women, incidentally, wear the decorative native costume of long dresses, elaborate

silver and gold embroidery, and black shawls. The old Icelandic folk dances are gradually being replaced by the American style and music. The American influence is definitely implanted in the island of Iceland. An important factor is the American movies, which are shown throughout Iceland. They are in English and are very popular. Again, too, English is taught as a required subject in the elementary schools.

Outdoor sports are popular. In summer it is salmon and trout fishing, pony riding, bicycling, outdoor handball, camping, and picnicking. In winter skiing ranks first and skating next (Plates I, III, and page 549).

There is some hunting in the mountains and on the lakes and rivers. There are few wild animals in Iceland, but the wild fowl congregate in large numbers during migration (Plates IV, X, and page 551). Also a kind of bird called ptarmigan is killed for food. This bird is similar to our wild grouse.

We did have difficulty in meeting the people in Iceland. However, once a friendship was struck, finer friends could hardly be had anywhere. There were ways to meet people, though, and that was to be introduced to them by another Icelander at his home. A soldier might be married or engaged to an Icelander—



Bus Riders Congregate in Downtown Reykjavik; Recreation Seekers Relax on the Grass in the Background

Iceland's Prime Minister and other officials have offices in the old building on the right; others are housed in a new structure (center). Left: a statue represents King Christian IX of Denmark extending a constitution to Iceland during his visit in 1874, the 1,000th year of the island's settlement. Right: Hannes Hafstein, the first native Minister responsible to the Althing after Denmark's grant of home rule in 1903.



Barnyard Ponies and Plowboy Jockeys Make Reykjavik Racing Strictly Amateur, but It's Fun for Icelanders and Yanks Alike

Icelandic ponies are built for endurance, not for speed (Plate XI). Because no rails restrain children, "Clear the track!" is a frequent shout. Through for the day, owner-jockeys mount their entries and ride home. Americans were surprised to see one in street clothes, rubber boots, and shell-rimmed glasses—which didn't hinder his winning. For the troops, Nissen hats in the distant center and right are convenient to the course. Spring shows the track and Mount Esja's snows (Plate IV).



U. S. Army Signal Corps, Official.

Half Glass, Half Breeze—a Reykjavik Telephone Booth

Though head and chest have shelter, this American soldier's legs are exposed to the weather. "Hallo!" is his greeting to Icelandic friends. He speaks low, because, if he raises his voice, his pals overhear him.

naturally he went to her home. He might bring a soldier or two with him, and the girl might ask her friends for a little social gathering. During the evening acquaintances were struck and friendships made.

People Like Music and Books

I was at one such party, and there were four girls present. The evening was very enjoyably spent. One of the girls played the piano and we all sang. Stephen Foster's music and other American folk songs are well liked by most Icelanders. We were singing about where the cotton and the corn and 'tatoes grow, the Icelanders as enthusiastically as I.

The culture of the people is high. They

have a love for music and good books. There are more books per capita among the Icelanders than among other nations in the world. There is no illiteracy, and, I might add, no unemployment. In fact, there has been none since the war began.

The Icelanders are great coffee drinkers and they like their sweets. They bake a type of small cake similar to our cookies. Some are covered with cream, some with fruit, and others with chocolate.

Later that evening the girls wanted to dance. Having never danced before, it was with reluctance that I was led to attempting a step with a tall blond *stúlka* (girl). The evening was enjoyable; yet these same girls would not date my friends or walk the streets with them. The reason for the latter was that their people talked about them, and then the Icelandic boys were jealous and did not care for their girl friends knowing soldiers.

Many soldiers were not fortunate in living near the towns where there was some social life to be had. These had to resort to other means of spending their free time. Many were restricted in travel and had to spend most of their time around camp. When the mail came in, everyone was busy for a while writing. Then there were movies to go to which changed either daily or every two days. Some of the movies were of recent production.

Some of the fellows participated in baseball, volleyball, and horseshoe pitching, while others just "batted the breeze" and complained about being in Iceland, away from it all.

One of the fellows in our hut was known to be going to town and trying to meet girls—or

so the other fellows thought. Not saying much, it was assumed that he met with failure.

After much ribbing, he was drawn into a bet with a corporal that he couldn't get a date twice with the same girl. He didn't know many people, but one girl was a good friend of his. By phoning back to our camp and to the one who boasted and bet this quiet fellow, the lady friend helped her boy friend win \$8.

Incidents like this helped pass the time and break up the monotony. Many Americans were almost glued to their bunks and seldom, if ever, left camp.

His Hobby Bird Study

Those interested in outdoor sports enjoyed mountain climbing, pony riding, baseball, fishing, etc. Some of the lakes and rivers abound with trout, which are a favorite everywhere. A hobby of mine was wild bird study. Since Iceland has a lot of wild fowl and shore birds, I found I could spend many enjoyable hours walking along the fjords. With my binoculars I identified 54 species of wild birds near camp. Many of these species visit the shores of the United States during migration; others winter in Iceland.

Upon investigating, I found Icelandic English ornithological literature in the form of a small handbook. Later I went to the University of Iceland and met Magnus Björnsson, an ornithologist and author. I did not, however, meet any Icelandic girls interested in birds.

Popularity of dancing was greatly increased at the Red Cross recreation center in Reykjavik. Dances were held twice a week and a special cabaret dance on Sunday for couples only. At the beginning of our occupation



Reykjavik Beauties Demonstrate a New-type Sled

This model, little known to Americans, was introduced into Iceland from the Scandinavian Peninsula in the 1920's. Town children like it, but country folk cling to the old-style coaster. It was designed for level terrain and accommodates two passengers. One steers and pushes, occasionally coasting on a runner. The other, sitting, tries to avoid spills.

only a few Icelandic girls would come to the dances. Gradually the number increased until there were from 40 to 60 girls, as an average.

As time went on, a feeling of friendship seemed to be in the offing, since Iceland seemed less cool towards the Americans. Perhaps one reason was that the war came fairly close to them now and then. Though Iceland was virtually free from bombings, she did lose several ships to German submarines. The two largest, the *Godofoss* and the *Dettifoss*, were torpedoed.

There were some courses offered the Americans to learn the Icelandic language. Though the number of Americans attending was not

large, a few learned to speak the language fairly well. Others, from associations with the people, learned a few phrases. Generally they were: "How are you," "Thank you," "Good night," "Good day," "My love," and others. Because I took pictures, I learned the words, "Please, may I take your picture? Thank you." It was surprising how many responded with a smile and a willingness to pose.

Christmas Eve with an Icelandic Family

An Icelandic family with whom I was very friendly invited two of us to spend Christmas Eve with the family. I was delighted and curious to know how they spent the holiday. The dinner was one of veal cutlets, with other dishes the same as ours.

The Icelanders I met have a late meal at 7 p. m. and what they call "coffee time" at 3:30 p. m., when everyone stops whatever he is doing and has a light lunch which usually consists of coffee, a sandwich or cookies, and cake. They don't bake many pies, probably because of the lack of fruits or filling material.

After dinner the family opened their presents around a Christmas tree in much the same manner as we do (page 547). A surprise for me was when they handed one to me. It was a book on Iceland written in English. The children constantly kept peeking at the name cards earlier in the evening. This pleasant evening went into the morning and ended up with group singing.

The Christmas tree was not large, but well decorated. These trees were imported, for few trees grow in Iceland (Plate IX).

At times troops were either stationed or had some work to be done far from towns and villages. When contacts were made with the farmers and sheepmen, there was a much greater feeling of friendliness, even though these people spoke little English. The difference in attitudes toward us was striking. Contacts keep these people informed about the world.

A large field house was constructed for our use. There we had regular basketball games,

boxing shows, concerts by the army band, movies, and even athletic demonstrations by an Icelandic sport club. At all of these functions Americans brought Icelandic guests. I once took four of my Icelandic friends to a concert.

During some of the boxing shows Icelanders boxed one another.

They have a form of wrestling different from ours. They call it *glima*, a scientific kind of wrestling which requires skill and coordination. It is based on throwing the opponent and making him land on his back rather than grappling on the floor.

Icelanders are gradually developing our methods of construction and road building. Already the Army has sold their Government heavy earth-moving equipment not needed by our Engineers.

GIs' Envoys of Good Feeling

Good feeling between the American and Icelanders is becoming established. A thorough understanding of each other is necessary, since each has had a different background. At times a little tolerance is necessary by both, but good will can be maintained and a feeling of brotherhood implanted.

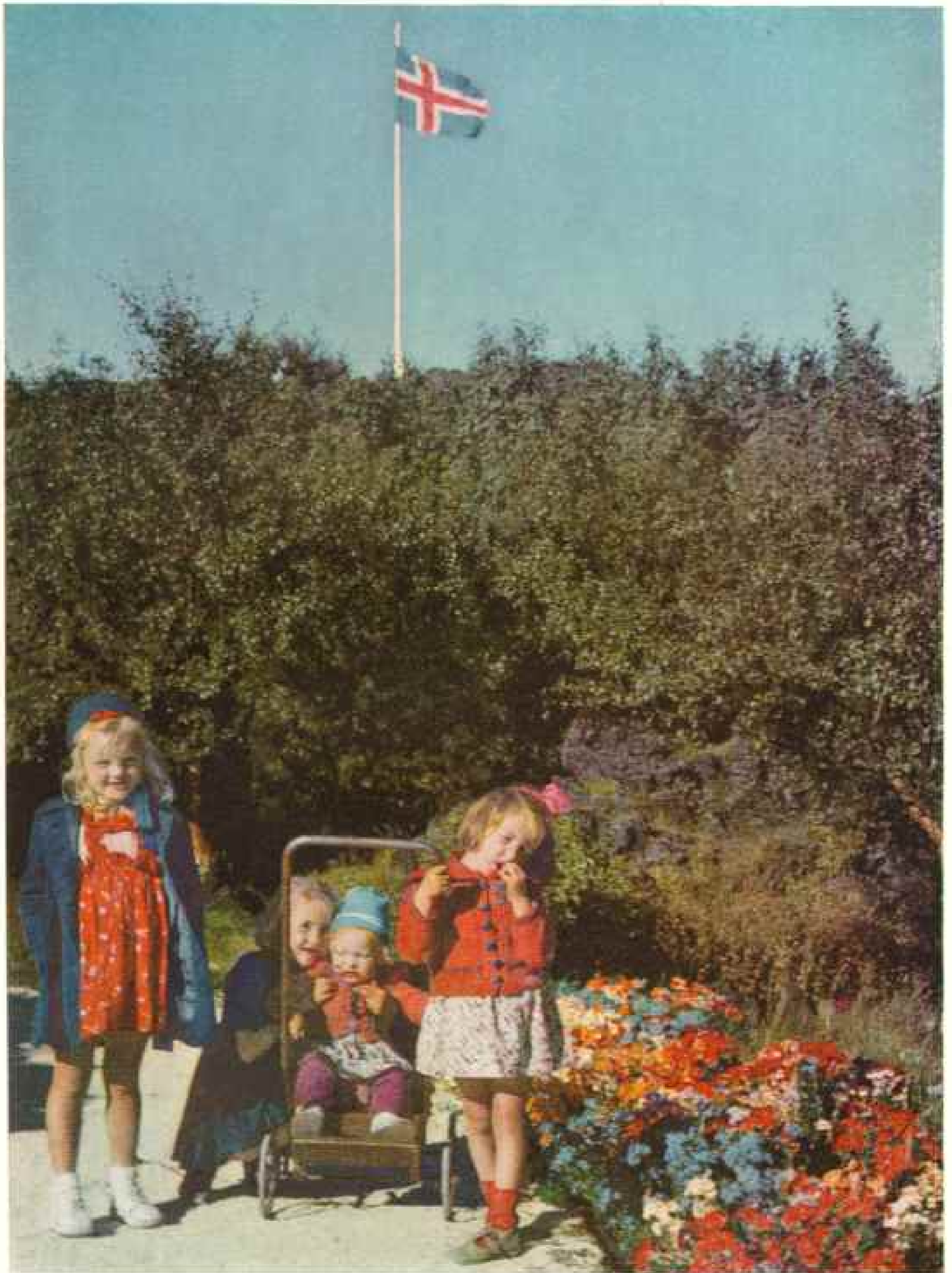
To the American soldier, appreciating the beauties of Nature, Iceland can be beautiful.* There are the massive lava formations, the many mighty waterfalls, streams, and lakes, so clean and clear, and phenomenal sunsets and rainbows, the latter often double. Aurora borealis formations are common spectacles, with their ever-changing colors of greens, reds, and yellows, the whole whipping chain of color dancing across the heavens.

Though lonely at outposts, a soldier's likes or dislikes of Iceland were generally determined by his interpretation of the natural surroundings.

* See "A Walking Tour Across Iceland," by Isobel Wylie Hutchinson, and "The Island of the Sagas," by Earl Hanson, both in the NATIONAL GEOGRAPHIC MAGAZINE, April, 1928; and "Sailing the Seven Seas in the Interest of Science," by J. P. Ault, December, 1922.

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Iceland Defrosted



© National Geographic Society

Reduction by Luther M. Clunan

A Portrait Bought by American Candy. Baby Is Dubious; Sister (right) Can't Wait to Eat

Over Hainarjökull flies Iceland's flag, adopted in 1915, when it shared honors with Denmark's. In 1944 Iceland became a republic, ending a 564-year union with the Danish crown. Shrubbiness in the park is a veritable forest; Icelandic wild trees are mere bushes. Trees, trains, and grown-up girls—these the Americans missed most.

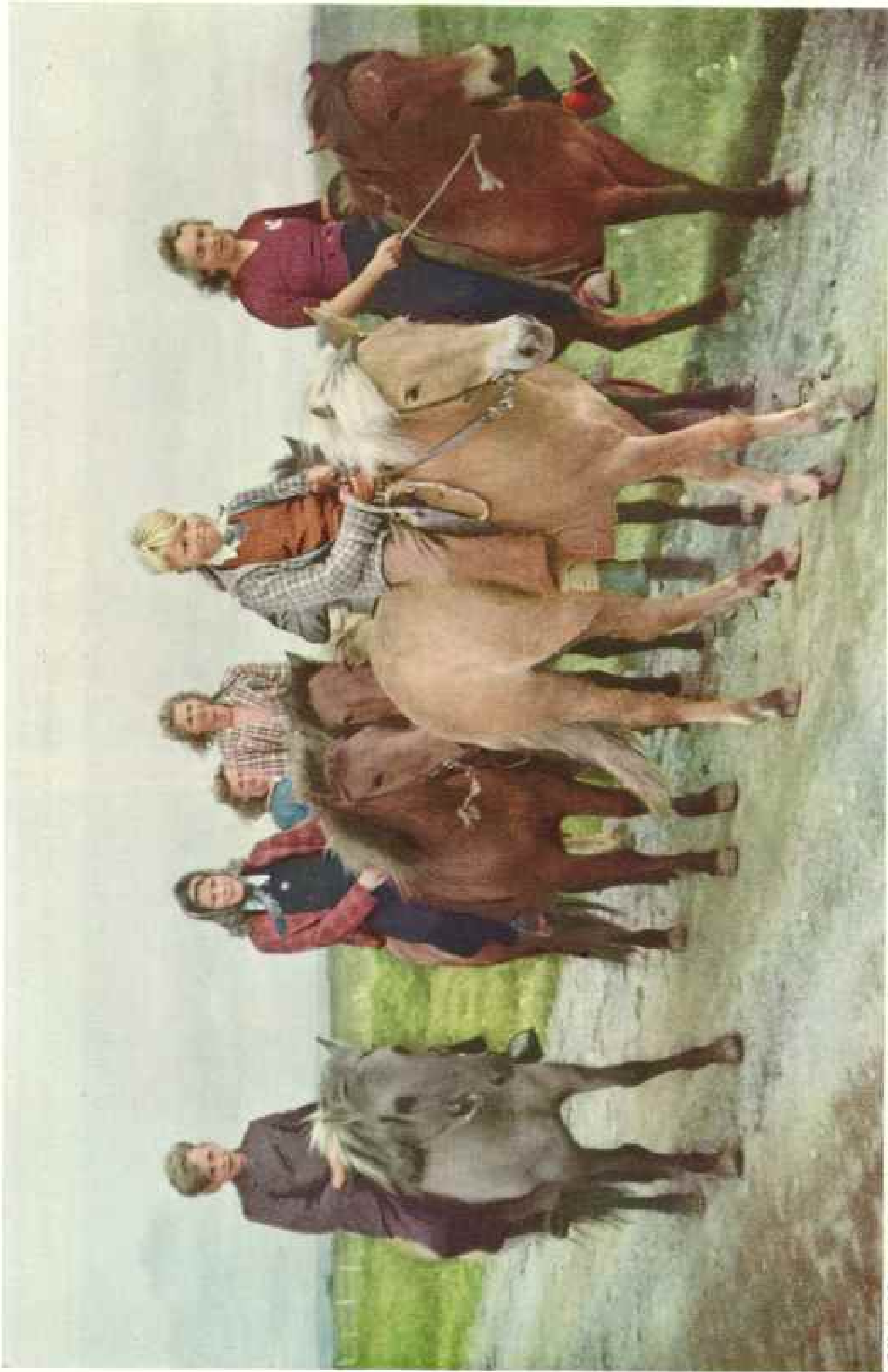


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Ducks on a Warm Beach, Skaters on Ice—That's the Paradox in Subarctic Reykjavik, Seen on a Hazy Winter Day

Tamed wild ducks enjoy an outlet from the city's hot-spring heating system (Plate XVII). A road, seen as a wall and bridge, bisects Lake Tjörnin. Beyond the passing automobile stands the Parliament Building, which houses the modern Althing. Three towers are radio masts; Oddi Fellows Hall partly blocks one.

Photographs by Luther M. Chinn

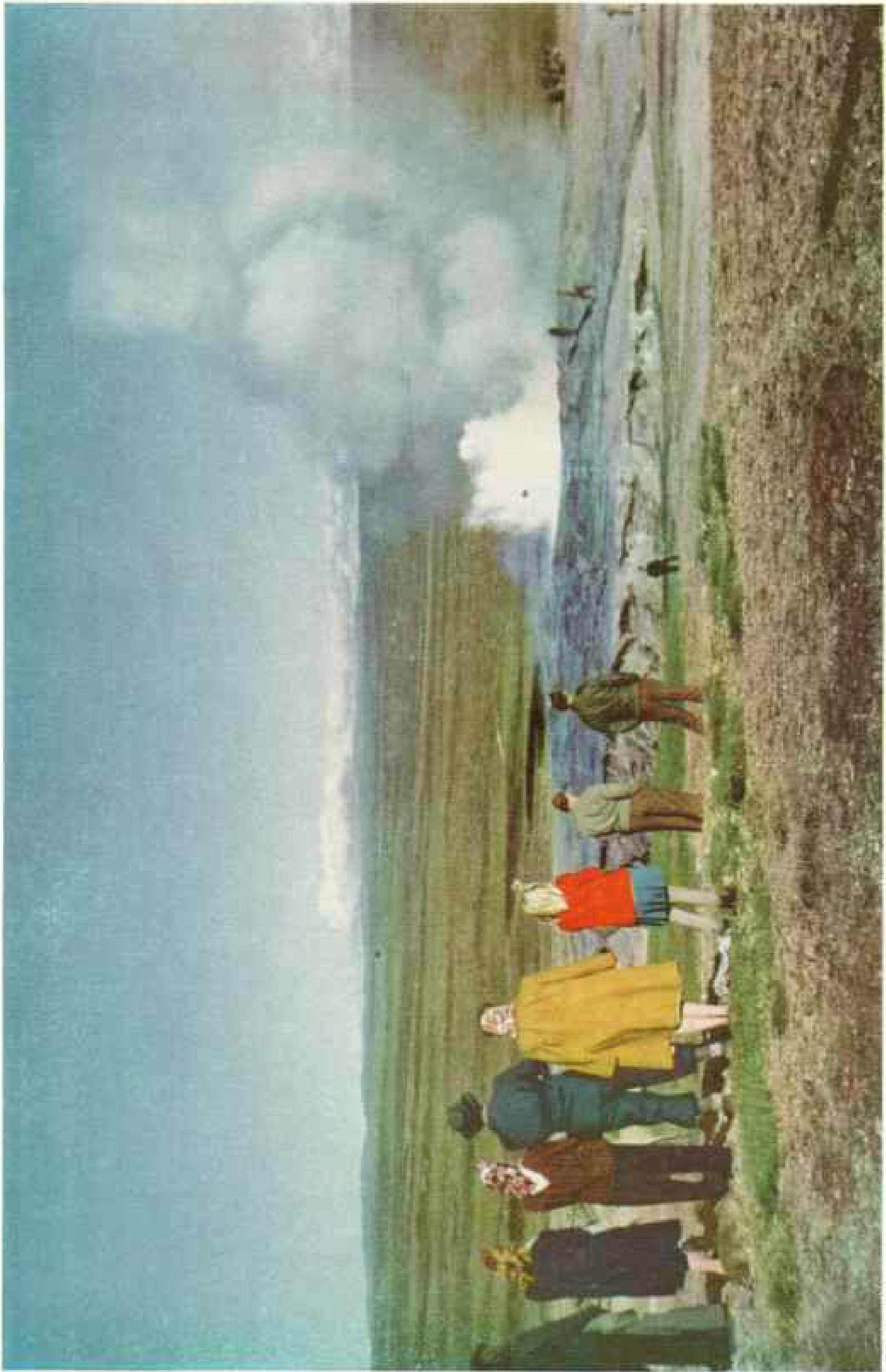


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Illustration by Luther H. Chinn

Farm Children's Faithful Companion, the Iceland Pony Is So Sure-footed that, by Reputation, He "Can Walk Downstairs Backward!"

A shaggy man is part of his winter equipment. He is not fast, but no work is too hard. Until buses came, he carried Iceland on his back. Even now there is one pony to every three Icelanders. Interior people could scarcely exist without horses.



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Illustration by Arthur H. Church

There Is a Rumble Like Thunder and the Ground Shakes When Great Geysir Starts to Fling a 150-foot Hot Shower

Geysir, literally the Gusher, gave its name to Yellowstone's and New Zealand's geysers. Steam generated by superheated rocks runs its boiler. About three decades ago it broke down; in 1935 it resumed violently. When the column falls, Icelanders and Americans will rush onto the silica basin and peer into the 70-foot-deep shaft.



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"Gee! Iceland's Beautiful!" the Yanks Exclaimed

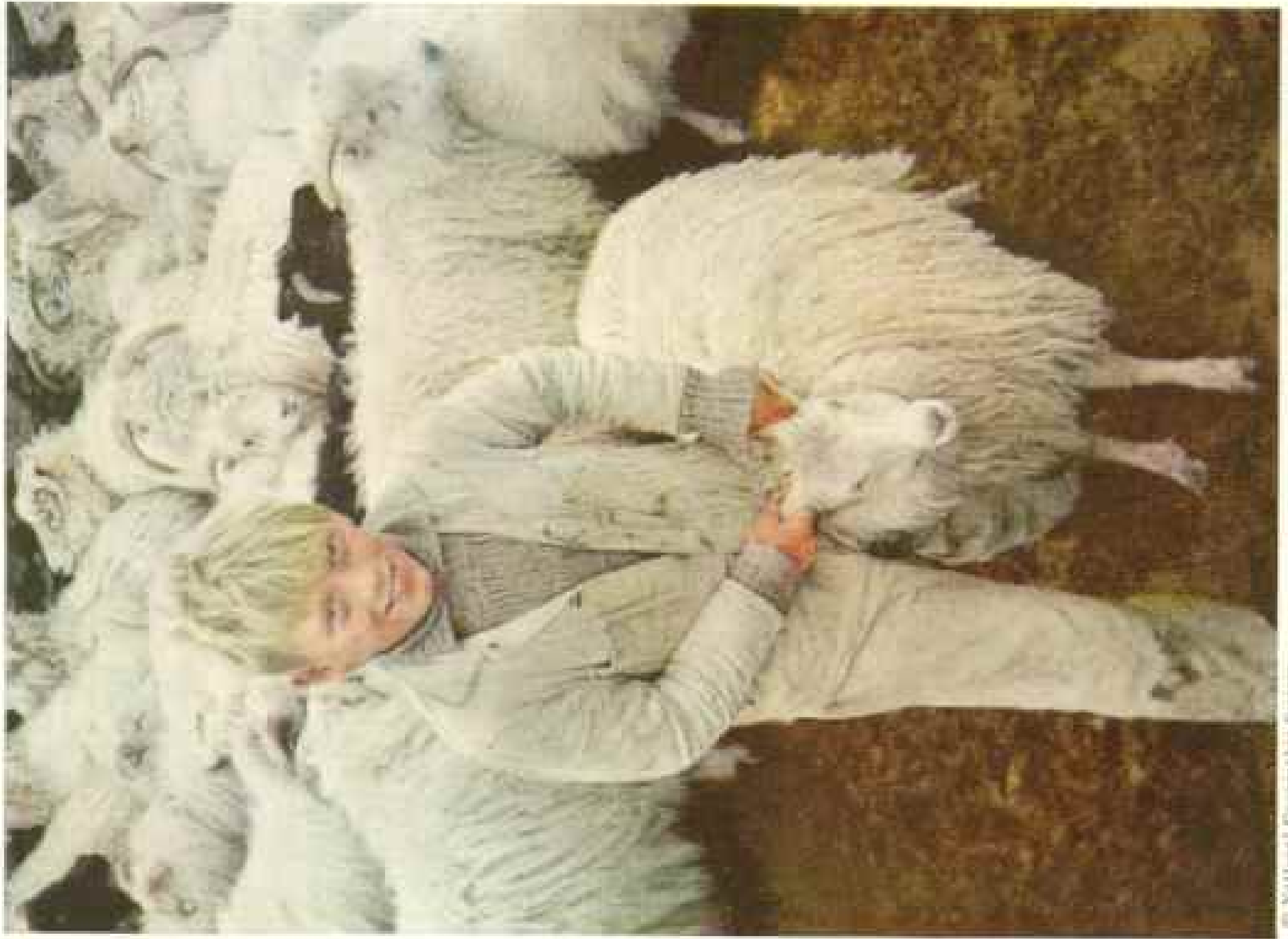
This sweater girl works on a farm. American soldiers married 135 of her Icelandic sisters. Most wives and a score of children are now in the United States.



Exhibitions by Luther M. Charvat

Is His Face Red! Sunburn in the Subarctic Surprised Him

As this Signal Corps man sweated, the temperature was near 50°, and he enjoyed sunlight until 11 p. m. Icelanders get a sunburn in a day's skiing.



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On the Farm, Life Depends on Sheep

For every Icelander there are six sheep. They represent meat, wool, cash, sometimes manure (or fuel). Ancestral sheep arrived with the first Norse settlers.



Reinholdson for Leifur M. Christoph

For a Reykjavik Festival She Wears Her Best

Old-time costumes are dying out. This girl would prefer a permanent like sister's, but papa says she will have to wait a few years.



Roundups by Larrin M. Clarrin

September's Noisy Roundup Herds Sheep from the Hills into Lava Corrals, Where Men at the Gate Identify and Sort Them

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© National Geographic Society

Illustration by Luther M. Clifton

Capped with a Man-made Vent, the Geyser at Hveragerdi Spouts Like an Oil Gusher
Every two hours, as steam accumulates, an explosion relieves pressure of its underground boiler.

Iceland Defrosted



With Spring Thaws, Flowers Bloom. The Inspectors Are Twin Girls



© National Geographic Society

Reproduction by Luther M. Thurin

Summer and Winter, Reykjavik Children Swim in a Pool Constantly Fed by Hot Springs

Lacking native coal and oil, the city harnessed volcanic energy by piping thermal-spring waters to homes and offices. For centuries Icelanders washed clothes in springs; some early Christian converts were baptized in warm ponds. These youngsters, using cork floats, swim indoors. Hardier souls choose the cool beaches.



© National Geographic Society

Iceland Grows Tomatoes and Cucumbers, Even Bananas and Hydrangeas, in Greenhouses Fed by Hot Springs the Year Round

Near Great Geysir, a gusher (left) says in all languages: "Hot water." A shed puffing steam (right) regulates the piped flow (horizontal line, center). Directly beyond it lie a bathhouse and, farther, the farmhouse. Tourists use the largest building. Some Icelandic farmers pipe hot water through fields to force vegetables.

Reproduction by Arthur M. Chanin



© National Geographic Society

Icelanders Love Summer—"The Blessed Sun," They Say

In a different hair-do, the sun-tanned girl with the rake appears in Plate XXIV (extreme right). Home-knit gloves protect her hands against blisters.



Photographs by Luther M. Clifton

Volunteer Milkmaid—Too Small for the Job

Her big brothers and sisters milk the cows. City-bound, the cans await pickup by truck. Iceland has had cooperative dairies for more than 40 years.



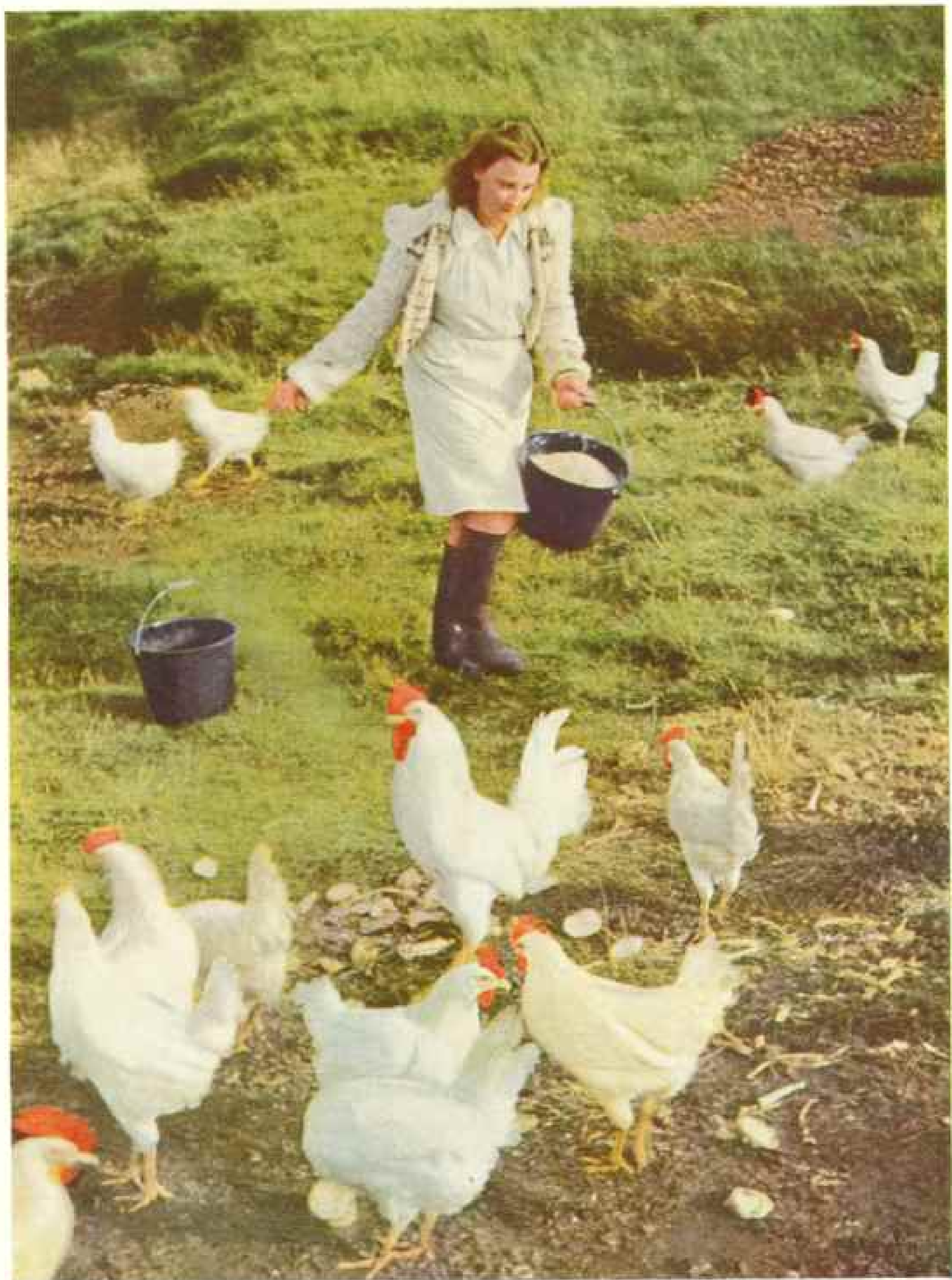
Haying Calls All Hands—Father, Daughter, Son—Except Mother, Who Sticks by Her Stove
Without flesh-giving hay, Iceland could not carry her horses, sheep, and cattle through the winter. Potatoes are a small crop by comparison. These emigrant Norwegians run a milk farm; the hay is for their cows.



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Illustrations by Luther M. Cloran

An Icelander "Makes Hay While the Sun Shines," an Expression He Learned from Yanks
He uses a machine of American design made in Europe. Cut off from the old country during the war, Iceland received a moderate number of U. S. farm implements. In the distance is the fjord which runs past Reykjavik.



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Reproduction by Luther H. Cleveland

When Egg Prices Soared in Wartime, Her Hens Laid a Nest Egg for the Housewife

Their imported American grain is dear. As corn bread, their mistress disdains it. "What! That chicken feed?" Twenty hens to a house, not big poultry farms, are the rule. Icelandic brunettes are not uncommon; many young cottontops eventually turn dark. Their remote ancestry is Irish as well as Norwegian.



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Reproduction by Lester M. Chivary

With Bright Paints, Reykjavik Relieves the Lack of Trees. This Is the West Side, Old-time Home of Fishing Families

Many homes are of wood ever corrugated iron. Crosses mark the Catholic hospital. A sea wall (right) leads to a shipyard. Reykjavik is convenient to the fishing banks. Per capita, Iceland is the leading fishing country. Its catch (a billion pounds in 1944) helped feed wartime Britain. Mount Esja in background (Plate IV).



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Was She Indignant When the Photographer Stole This Shot!

Warmed by spring water, she swims in the outdoor pool at Haimarjördur. Suit and cap are from America. Lipstick, too, is imported.



Contributions by Luther M. Chanen

Iceland Was Made for Skiing; Its Children Learn Early.

This Reykjavik girl traveled 20 miles for snow. Others try the glaciers except when summer thaws create hazards. Best terrain is the north coast.



"Running and Playing Strongly Banned" Doesn't Impress Baby in a Park

The sign is in Icelandic. Children who can read it can read the Old Norse sagas, so little has the language changed in 800 years. Their Norwegian cousins must have translations. It is as if Englishmen spoke Chaucer's tongue today.



© National Geographic Society

Restaurants by Luther M. Thurston

With Their Nylons and Toeless Slippers, Iceland Girls Are Up to Date

"See what a camera does for you," remarks the author, whose Army pals couldn't get into this home. The girls reflect the recent American influence. They speak English. The matron, educated a generation earlier, doesn't.

Taming the Outlaw Missouri River

BY FREDERICK SIMPICH

TAME the Missouri River. Put this runaway stream to work hauling boats, watering fields, and generating electric power. Stop floods, check soil erosion and dust storms!

That's the big order Uncle Sam has issued to his Army Engineers, Reclamation Bureau, and soil experts.

Already these agencies have agreed on a unified plan to conserve, control, and use the waters of the vast Missouri River Basin. This plan has been approved by Congress, and the initial stage has been authorized for construction. There is even some talk of creating here a monster "MVA," or Missouri Valley Authority, to be modeled after the TVA, or Tennessee Valley Authority.

On the map (pages 576-7), you see what a tremendous project the building of these 105 dams, with reservoirs, dikes, and levees, is to be (pages 583, 588).

Fort Peck Dam, in Montana, already completed, is one of the largest piles of earth ever moved by men. Of it, more later (page 583).

With NATIONAL GEOGRAPHIC cameraman Robert Sisson I traced the Missouri from Three Forks in Montana to where it spills its sticky stream into the Mississippi just north of St. Louis—a trip of 2,475 miles (pages 573, 579).

Basin Covers a Sixth of 48 States' Area

With its many tributaries, such as the Yellowstone, Platte, and Kansas, the Big Muddy draws rainfall and melted snow water from Montana, Wyoming, Colorado, North and South Dakota, Iowa, Nebraska, Minnesota, Kansas, Missouri, and Canada.

Covering about a sixth of the area of continental United States, this river's vast Basin holds the homes of millions of farm, town, and city dwellers. It also forms a fat market basket of meat, wheat, and corn from which comes a big share of the Nation's food, as well as considerable oil and coal (page 582).

"Improvement" of the Missouri River is nothing new. In the past 40 years 88 small storage reservoirs have been built in the upper Basin, mostly on main-stem tributaries, some of which develop electric power.

But so far most work has been piecemeal, for local reasons, such as irrigating a Montana valley, confining the stream in a fixed channel from Kansas City down to St. Louis, or trying with levees to keep floods from inundating farms in Missouri.

Lessons learned in these hard years of trial and error finally prove that the only way to make wisest use of this reckless river is to treat the Basin as a whole. This means using water in the stream's upper reaches for irrigation and power; using it farther downstream for navigation; and—wherever necessary in its whole length—building dams and levees to obtain flood control.

There's also the fact that all along the river scores of towns and cities depend on it for drinking water, use it in sanitation, in factories, and as a place to fish, swim, shoot ducks, and run their motorboats.

The Havoc of Floods

Ever since pioneer whites first struggled up its treacherous currents and built their fur-trading posts on its crumbling banks, the Missouri has been notorious for the havoc of its floods. Losses from high water increased in proportion as farms multiplied and cities grew up along the stream.

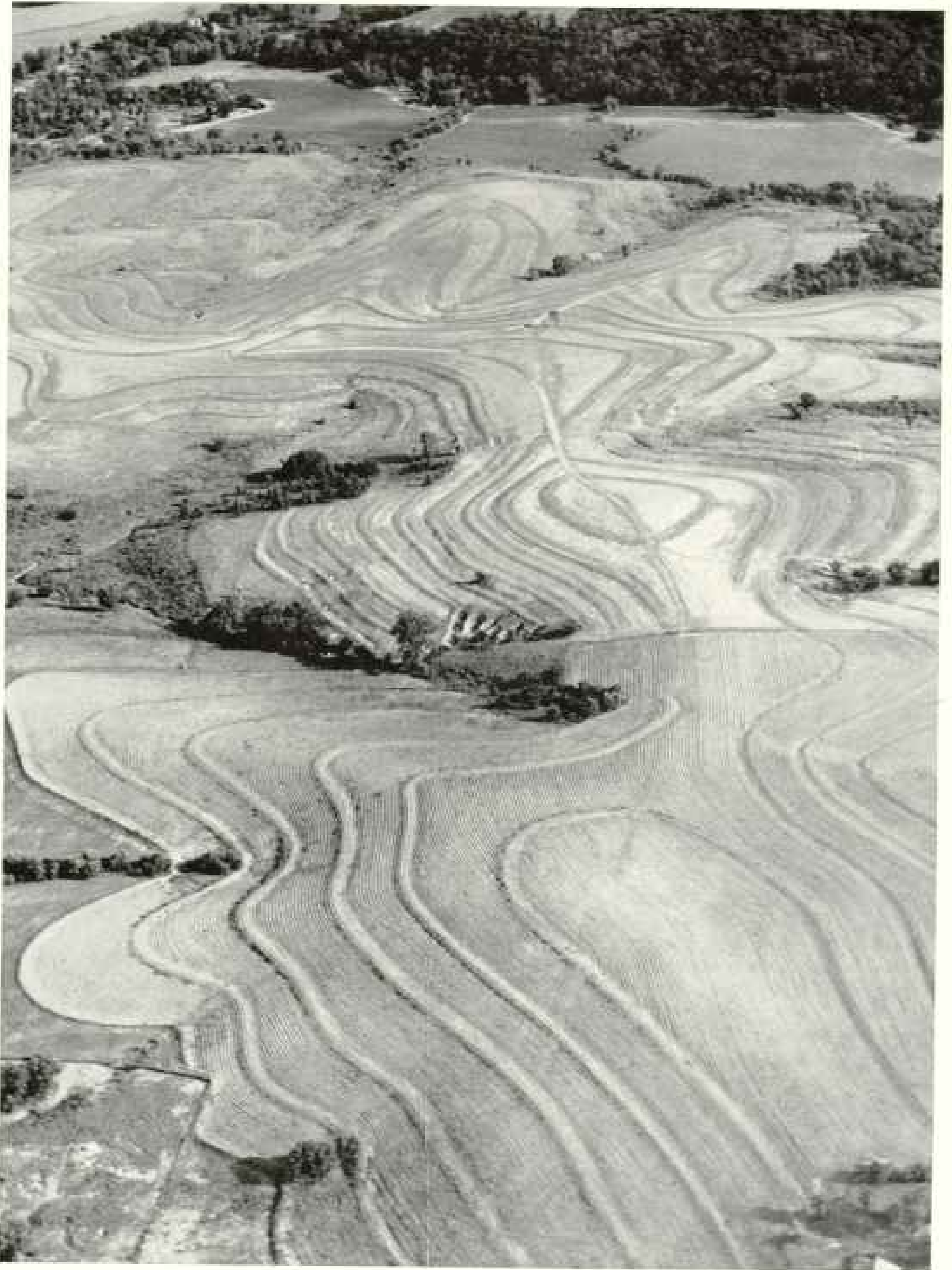
"The river is rising!" Ominous words those were in my boyhood days on this Big Muddy. In "high-water times" we saw uprooted trees, driftwood, railroad ties, lumber, runaway skiffs and flatboats, sections of fences and washed-out bridges, barns, outhouses, and drowned horses, hogs, and cattle riding sadly down toward the Gulf of Mexico on this tawny, stinking mixture of mud and water. Old pilots told me in my youth that they had seen people and animals riding, helpless, on tops of floating houses and haystacks.

There is an old saying along the muddy Missouri that its water is too thick to drink and too thin to plow.

Quitting its bed and cutting a new one elsewhere is an old trick of this river (page 594). Brunswick, Missouri, was built on the river front, but is now two miles inland. The original town of Franklin, Missouri, where Kit Carson lived as a boy and from which ox teams stretched out for the Santa Fe Trail,* has been completely washed away (page 580).

Digging a well near the mouth of Grand River, Missouri, a farmer uncovered an old Bible with the word "Naomi" on its cover. Old-timers remembered a steamer of this name had been wrecked here when the river ran through what is now the farmer's cornfield; later, taking another course, the quondam

* See "Santa Fe Trail, Path to Empire," by Frederick Simpich, NATIONAL GEOGRAPHIC MAGAZINE, August, 1929.



J. W. McDaniel

Northeast Kansas Farmers Seek to Avoid Water Erosion by Contour Plowing

Here men plow around the hills, making level furrows instead of ditchlike furrows up and down the natural slopes. This keeps rain and snow water from rushing downhill and washing away topsoil. Soil Conservation Service men, instructing farmers, thus improve millions of Missouri River watershed acres (page 597).

river bed filled up and became this field. That old Bible had belonged to the lost steamer.

Missionaries used to put Bibles aboard these river boats. They were stamped with the boat's name and secured to the reading-room table by a short chain.

Once, when the flood was cutting rapidly into the river-front farm where we lived, I lay awake at night and heard strips of undermined cornfield, perhaps 50 to 100 feet long and many feet thick, falling into the stream with a jarring sound like distant thunder.

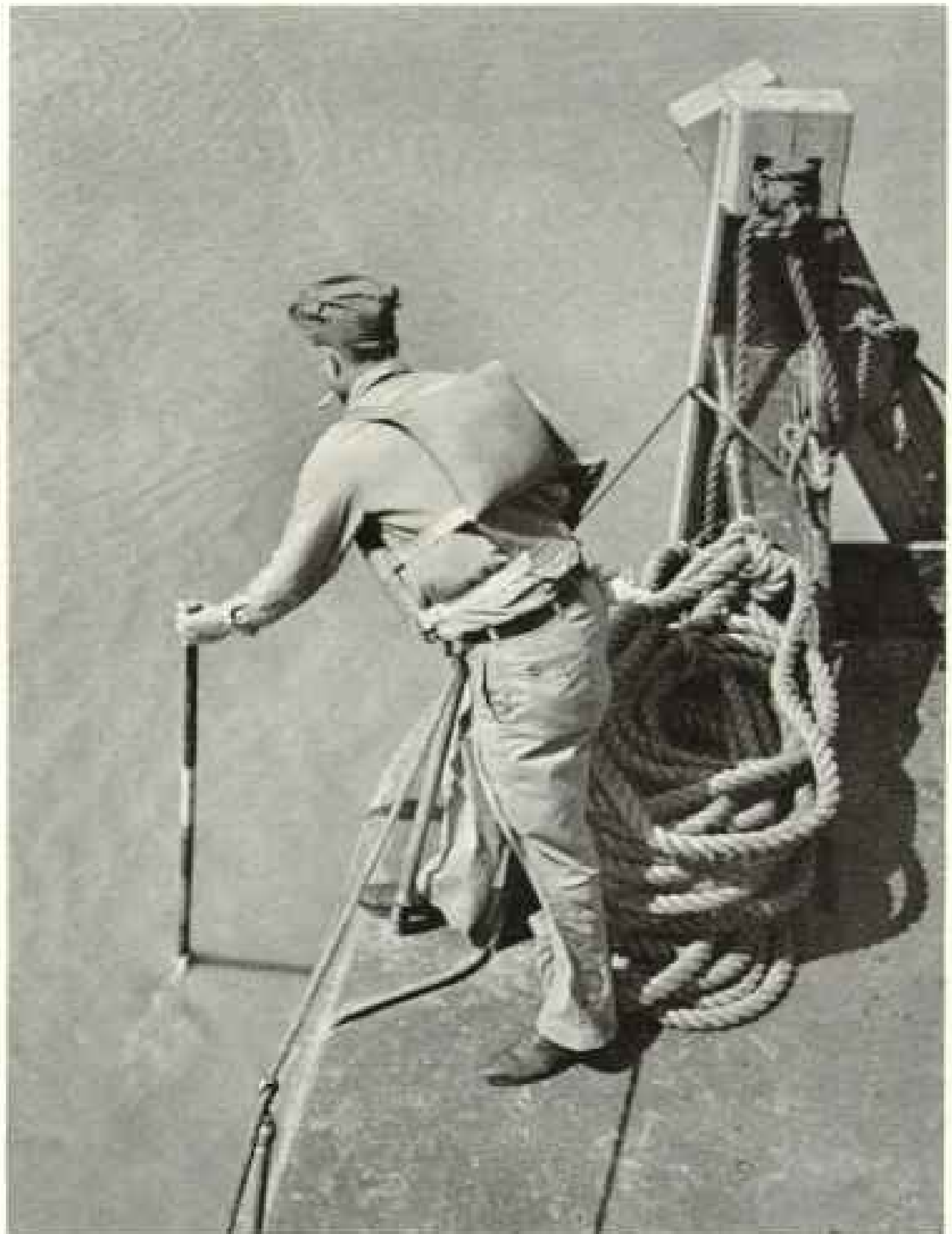
Shifting State Boundaries

Middle of the river's main channel was long considered the boundary between Iowa and Nebraska. Before engineers had "tied the river down" for navigation uses, it often ran wild, so that people on its banks found themselves living first in Iowa, then in Nebraska, or vice versa.

Ownership of land thus came into question; taxes, if levied, were often not paid.

One river trick, between Council Bluffs, Iowa, and Omaha, Nebraska, left a part of Pottawattamie County, Iowa, lying across the stream, in Nebraska. This confusion got so troublesome that on July 12, 1943, Congress approved a compact made between Iowa and Nebraska, whereby the center of the proposed stabilized channel of the Missouri is—with the exception of that part of Pottawattamie County just named—now the boundary line between the States. Each State ceded certain of its own lands, as cut off, to the other, relinquished jurisdiction, and made provisions for taxes, titles, liens, and mortgages.

Ice, too, is frightfully destructive (page



Staff Photographer Robert F. Elliott

With a Measuring Pole He Feels for the River Bottom and Calls Out the Depth

He's a deck hand on the *Sergeant Pryor*, an Army Engineers' river boat named for a soldier who was a member of the Lewis and Clark Expedition (page 572). This craft is based at Omaha, headquarters for Army Engineers charged with work on Missouri River flood control and navigation. These powerful boats can pull and push heavy tows.

582). Extra-cold winters may see the river frozen solid throughout much of its length. Then teams, trucks, and herds of cattle cross on the ice.

Coming with a thaw, floods build up ice jams that crush steamers, wreck wharves and bridges, and, by forming dams, drive the river far afield. Mandan, North Dakota, suffered from such a condition last winter. Tons of ice piled up in the roads. A cornfield belonging to a United States experimental farm was completely littered with ice, driftwood, and uprooted trees.

In one such ice jam at Council Bluffs, Iowa,

ice cakes 6 feet thick and 100 feet square were stacked against the bluffs. In 1944, Army Air Forces used bombers to break up ice jams in the Yellowstone River. In their distress local people often try to break these dangerous ice jams with dynamite, but seldom succeed.

When warm weather comes and the frozen river begins to thaw and send ice fields downstream, the sound of the cracking roar and grinding of giant cakes can be heard far away.

River's Wildness Astounded Marquette

Floating down the Mississippi in 1673, the French explorer Father Marquette was amazed to meet a mighty volume of dirty water pouring down from the west.

"I have seen nothing more frightful," he wrote. "A mass of large trees . . . real floating islands. They came rushing . . . so impetuously that we could not, without great danger, expose ourselves to pass across." That was the Missouri!

Nobody knows just when white men first explored the length of the Big Muddy. By 1764, when St. Louis was founded, French trappers had ventured far upstream.

When President Jefferson sent the Lewis and Clark Expedition to explore the Pacific Northwest in 1804-6, this party made the full transit of the Missouri from its mouth to its sources and found that other whites had already preceded them almost to the point where the Yellowstone flows into the Big Muddy.*

At a point about 50 miles south of where Helena, Montana, now stands, Lewis and Clark found that three streams meet to form the Missouri. They named them Jefferson, Madison, and Gallatin, in honor of the three statesmen who had encouraged this great expedition, on which white men for the first time crossed what is now the United States.

From this point, now known as Three Forks (page 579), the Missouri River, later joining with the Mississippi, forms a continuous stream down to the Gulf of Mexico, a distance of 3,740 river miles; hence this combined stream is one of the world's longest.

With all its bends and curves, the river has been likened to a great spiral stairway leading from the mountains down to the Gulf, some of its waters descending from heights 14,000 feet above sea level.

Up this stairway wound our first great trade route into the Northwest.

Before rails or highways came with trains and trucks, this river was the only path for men and goods. In fur-trade days the river swarmed with keelboats, canoes, pirogues, rafts, bullboats (which were buffalo skins

stretched over a framework), and other small craft. Then came steamers.

Many of the Santa Fe Trail merchants, as well as emigrants headed for the Mormon, Oregon, and California Trails, rode on steamers as far upstream as Independence, Missouri, later the home town of President Harry S. Truman.

After 1850, steamboat traffic on the river grew enormously. White settlements sprang up all along the river. Emigrant tides were rising, and Uncle Sam was sending steady streams of soldiers and supplies for use in campaigns against the Sioux and other Indians. In winter, Army and other horses often fed almost wholly on the bark of young cottonwood trees—a good forage.

In 1858 there were 306 steamboat arrivals at the port of Leavenworth, Kansas. Many of these were ornate side-wheelers, built for passenger trade. Earning up to \$65,000 on one round trip, some such boats quickly paid for themselves. Many dozens were lost, too, from fire, storms, and boiler explosions.

Heyday of River Pilots

This was the heyday of Missouri pilots, whose pay often reached \$1,200 to \$1,500 a month. Renegades held up and robbed some steamboats, just as the James boys later held up and robbed railroad trains.

In one season, 1867, seventy steamers reached Fort Benton, Montana, now a quiet, clean little town, but then the crowded, rip-roaring head of river navigation. Boats here found they had lifted themselves about half a mile above sea level! Besides civilian passengers and soldiers, they brought food, whisky, medicine, arms, and ammunition—and mining machinery.

Here was staged an amazing scene in American commercial history. At times there would be 30 to 40 steamers on that river stretch between Fort Benton and the mouth of the Yellowstone. Some brought teams and wagons and unloaded their freight into them, especially the whisky and mining machinery, for hauling to the new Montana gold fields. What today is Helena's main street was then "Last Chance Gulch," which yielded millions in gold. To this day, after rains, men sometimes pick up gold nuggets in Helena streets.

To get fresh meat, steamers carried a hunter, who walked the banks ahead of the boat. Indians in turn hunted the white man's meat hunter!

One day a certain skipper, from his wheel-

* See "Trailing History Down the Big Muddy," by Lewis R. FREEMAN, NATIONAL GEOGRAPHIC MAGAZINE, July, 1928.



U. S. Corps of Engineers, Official

From the West (left) the Yellowish Missouri Pours into the Clear Mississippi

Just north of St. Louis these famous rivers join. Rich farm lands cover the Missouri area at left, while to the east, in Illinois, a strip of timber separates corn and wheat fields from the Mississippi. Land on the Missouri side is subject to disastrous overflows, a menace which future dams, reservoirs, and levees will abate.

house, saw a man's hat drifting downstream. Though the wind often blew passengers' hats overboard, this one seemed to be riding peculiarly high. Grabbing his binoculars, the skipper had a look. It was his meat hunter, escaping from pursuing Indians and swimming for dear life to make the boat!

These boats burned wood. Indians cut and piled it at landing places and traded it for goods or whisky. Sometimes boats put wood-cutting crews ashore; these, in turn, were often ambushed by Indians. In emergency, steamers picked up driftwood, and there were even tales of hard-pressed skippers who burned bacon from their cargo. One captain had a

portable sawmill on board; he had only to touch the bank, drag a few logs on board, and be off.

Some Pilothouses Were Bullet-proofed

Indians constantly fired on the steamers. Some pilothouses were bullet-proofed with sheet iron, and cargo was piled around the deck to form barricades.

This whole vast Basin belonged once to the Crows, Pawnees, Osages, Mandans, Cheyennes, Sioux, Blackfeet, and Gros Ventres.*

* See "Indians of Our Western Plains," by Matthew W. Stirling, NATIONAL GEOGRAPHIC MAGAZINE, July, 1944.



Staff Photographer Robert F. Harlan

Two Bony Suckers on the Cold, Muddy Banks of Montana's Milk River

This grim stream is a tributary to the Missouri. It's one of the many rivers which will figure in tomorrow's gigantic development of the vast watershed. By "suckers" is meant the fish—not the boys! But the young fishermen had hoped for fat cutfish. Sport fishing flourishes in the Basin's streams (page 597).

To river-riding whites, the Indians seemed more numerous than they really were because the tribes all frequented the bottom lands along the streams where wood, water, and game were plentiful.

Indians Will Be Benefited, Too

Today, in this Basin, some 54,000 Indians still own close to 15,000,000 acres of land. Much of South Dakota still belongs to red men (581, 588). Some of the new dams and reservoirs will greatly benefit these Indians.

We visited Fort Belknap Indian Reservation with the Gros Ventres. "Do you know what that French name means?" I asked

a fat squaw. "It means 'fat bellies.'"

"That's me," she giggled, patting her enormous stomach.

There was a little girl here named "Falcon," (the hawk). Sisson took her picture as she sat on a horse trough and looked at a copy of the NATIONAL GEOGRAPHIC MAGAZINE (page 585). "My five brothers are all in the Marines and the Army now," said Falcon, "but they used to read this magazine at school."

Falcon's older sister wears slacks, has a Hollywood hair-do, works as a clerk in the Indian Agency, and uses lipstick just as her warpath ancestors used face paint.

We bought some beaded dolls and moccasins these Indians had made and went into their neat kitchen to eat boiled veal, beans, and potatoes.

That day an old Chippewa drifted into camp, and we showed him our .22 rifle, with a telescopic sight. He fondled the gun enviously and said, "I can't see how my people ever killed buffaloes with bows and arrows."

To this day you see traces of buffalo wallows and old trails worn by herds where they came down to the river to drink. Settlers show you steep cliffs, or "kills," too, such as those near Three Forks, over which Indians used to drive buffaloes in mass killings for meat.

Steamers had trouble many times when they met buffalo herds swimming the river; the animals got caught in the paddle wheels.

Great numbers of buffaloes drowned when trying to cross on ice that was weak from spring thaws. Then hundreds of the dead floated downstream, to lodge on islands and sand bars.

Salvaging Buffalo Bones

At Fort Peck engineers told me that in excavating they exhumed piles of buffalo skeletons. Some skulls had petrified. Today cattle herds walk out on winter ice that covers Fort Peck Reservoir, 189 miles long, often looking for a hole from which to get a drink.

Picking up old buffalo bones and shipping them east for use in sugar refining and other trades was for years a good cash business all over this Northwest.

In summer, upper river mosquitoes are a torturing plague. They are so bad that even deer come out at night to find escape on the breeze-swept sand bars.

Besides ice and Indians, early pilots had to risk being swamped by whirlpools. The steamer *Bishop* was wrecked that way. In a violent eddy below Sioux City the *Miner* narrowly missed disaster in a whirlpool so frightful that "the center of the eddy was nearly 12 feet below its circumference."

From this upper river steamboats vanished when railroads came. Since then, says one engineer, the Missouri "has probably been the most useless river in the United States," especially below Fort Peck Dam.

But today lower river cities, such as Sioux City, Omaha, St. Joseph and Kansas City, and St. Louis all demand navigation and are determined to see it restored. This Joint Plan (page 569) can be carried through, they insist, only by satisfying all Missouri Basin regional interests involved. Congress insists on that, too, and it votes the money!

Fly downstream from Omaha and you

plainly see how Army Engineers work to hold this river in its course.

With levees, dikes, dredges, rows of deeply driven piles, stone-covered banks, and even huge mattresses woven of boards or small willow trees, they seek to stabilize the channel, control silt, and keep water deep enough for the use of steamers and barges (pages 578, 584, and 586).

Today's job includes the completion of a levee system, wherever needed, from Sioux City down to the Missouri's mouth; also flood-defense works in Omaha and Kansas City. Among others, there will be seven flood-control dams on river tributaries in Missouri; Congress has authorized these.

In 1941 the Federal Barge Lines (linked with those on the Mississippi system) were operating three round trips a week between St. Louis and Kansas City. Socony-Vacuum Oil Company and the Sioux City and New Orleans Barge Line were also hauling river freight with towboats and barges (587, 595).

Till now, the fact that in spots the lower Missouri is still only 6 feet deep has prevented it from sharing freely in the enormous inland waterways traffic carried on the Mississippi and Ohio Rivers, and on the Intracoastal Waterway.*

Looking forward to the Army's completion of the 9-foot channel, levee system, etc., some towns have already built docks and elevators on the river's banks. Some of them point to the mountainous heaps of Kansas wheat piled on the ground in 1945, because there were no railroad cars to haul it away, and say, "Look, now, what we could do if we had a deeper channel in the river!"

Irrigation to Increase Population

As lower river people clamor for water to haul their barges, so upper river people demand more water for irrigation.

Today there isn't water enough in the river and its tributaries to serve navigation at all times and yet allow upstream people all they want for present farms and for now-dry lands which ask for irrigation.

There should be enough water when all proposed reservoirs are full. If not, the law provides that in the event of any water shortage, irrigation and domestic use would have prior claims over navigation.

In 80 percent of this Basin, rainfall is not enough to ensure regular crops. Droughts recur. Cattle die, or must be sacrificed for lack of forage. "We baled wild thistles," said Mrs.

* See "How We Use the Gulf of Mexico," by Frederick Simpich, NATIONAL GEOGRAPHIC MAGAZINE, January, 1944.



0 50 100 150
STATUTE MILES

Highways

Limit of Missouri River Basin

Dams completed and projected

Wildlife sanctuaries

Montana
 Fernie, Raymond, Leitchbridge, Maple Creek, Gravelbourg, Shaunavon, Assinibola, Weyburn, Moosomin, Estevan, Karlsruhe, Minot, Velva, Garrison Dam, Dickinson, Matidan, Black Butte, England, Rowman, Lemmon, McIntosh, Buffalo, Timber Lake, Dupree, Belle Fourche, Deadwood, Lead, Rapid City, Custer, Hot Springs, Pine Ridge, Indian Reservation, Martin, Chadron, Gordon, Crawford, Clinton, Alliance, Scottsbluff, Gering, Kimball, Sidney, Oshkosh, Mullen, Ogallala, Imperial, Yuma, Benkelman, St. Francis, Colby, Goodland, Scott City, Garden City, Johnson, Liberty, Hugoton, Hooker, Guyman, Texhoma.

North Dakota
 Ophim, Plentywood, Williston, Stanley, Minot, Velva, Garrison Dam, Dickinson, Matidan, Black Butte, England, Rowman, Lemmon, McIntosh, Buffalo, Timber Lake, Dupree, Belle Fourche, Deadwood, Lead, Rapid City, Custer, Hot Springs, Pine Ridge, Indian Reservation, Martin, Chadron, Gordon, Crawford, Clinton, Alliance, Scottsbluff, Gering, Kimball, Sidney, Oshkosh, Mullen, Ogallala, Imperial, Yuma, Benkelman, St. Francis, Colby, Goodland, Scott City, Garden City, Johnson, Liberty, Hugoton, Hooker, Guyman, Texhoma.

South Dakota
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Nebraska
 Ophim, Plentywood, Williston, Stanley, Minot, Velva, Garrison Dam, Dickinson, Matidan, Black Butte, England, Rowman, Lemmon, McIntosh, Buffalo, Timber Lake, Dupree, Belle Fourche, Deadwood, Lead, Rapid City, Custer, Hot Springs, Pine Ridge, Indian Reservation, Martin, Chadron, Gordon, Crawford, Clinton, Alliance, Scottsbluff, Gering, Kimball, Sidney, Oshkosh, Mullen, Ogallala, Imperial, Yuma, Benkelman, St. Francis, Colby, Goodland, Scott City, Garden City, Johnson, Liberty, Hugoton, Hooker, Guyman, Texhoma.

Wyoming
 Helena, Great Falls, Jordan, Circle, Glendive, Terry, Miles City, Baker, Lovell, Powell, Casper, Gillette, Newcastle, Midwest, Cheyenne, Douglas, Lusk, Wheatland, Torrington, Laramie, Cheyenne, Rawlins, Riverton, Lander, Seminoe Reservoir, Balfour, Platteville Reservoir, Pinedale, Kammerer, Evanston, Rock Springs, Green River, Comanche Peak, Bountiful, Murray, Tooele, Vernal, Roosevelt, Springville, Panguitch, Spanish Fork, Nephi, Price, Montrose, Gunnison, Salida, Victor, Pueblo, Rocky Ford, La Junta, Walsenburg, Springfield, Trinidad, Durango, Alamosa, Farmington, Amarillo, Quanah, Dawson, North Platte, Black Mesa, Hooker, Guyman, Texhoma.

Colorado
 Helena, Great Falls, Jordan, Circle, Glendive, Terry, Miles City, Baker, Lovell, Powell, Casper, Gillette, Newcastle, Midwest, Cheyenne, Douglas, Lusk, Wheatland, Torrington, Laramie, Cheyenne, Rawlins, Riverton, Lander, Seminoe Reservoir, Balfour, Platteville Reservoir, Pinedale, Kammerer, Evanston, Rock Springs, Green River, Comanche Peak, Bountiful, Murray, Tooele, Vernal, Roosevelt, Springville, Panguitch, Spanish Fork, Nephi, Price, Montrose, Gunnison, Salida, Victor, Pueblo, Rocky Ford, La Junta, Walsenburg, Springfield, Trinidad, Durango, Alamosa, Farmington, Amarillo, Quanah, Dawson, North Platte, Black Mesa, Hooker, Guyman, Texhoma.

Utah
 Helena, Great Falls, Jordan, Circle, Glendive, Terry, Miles City, Baker, Lovell, Powell, Casper, Gillette, Newcastle, Midwest, Cheyenne, Douglas, Lusk, Wheatland, Torrington, Laramie, Cheyenne, Rawlins, Riverton, Lander, Seminoe Reservoir, Balfour, Platteville Reservoir, Pinedale, Kammerer, Evanston, Rock Springs, Green River, Comanche Peak, Bountiful, Murray, Tooele, Vernal, Roosevelt, Springville, Panguitch, Spanish Fork, Nephi, Price, Montrose, Gunnison, Salida, Victor, Pueblo, Rocky Ford, La Junta, Walsenburg, Springfield, Trinidad, Durango, Alamosa, Farmington, Amarillo, Quanah, Dawson, North Platte, Black Mesa, Hooker, Guyman, Texhoma.

Idaho
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Arizona
 Helena, Great Falls, Jordan, Circle, Glendive, Terry, Miles City, Baker, Lovell, Powell, Casper, Gillette, Newcastle, Midwest, Cheyenne, Douglas, Lusk, Wheatland, Torrington, Laramie, Cheyenne, Rawlins, Riverton, Lander, Seminoe Reservoir, Balfour, Platteville Reservoir, Pinedale, Kammerer, Evanston, Rock Springs, Green River, Comanche Peak, Bountiful, Murray, Tooele, Vernal, Roosevelt, Springville, Panguitch, Spanish Fork, Nephi, Price, Montrose, Gunnison, Salida, Victor, Pueblo, Rocky Ford, La Junta, Walsenburg, Springfield, Trinidad, Durango, Alamosa, Farmington, Amarillo, Quanah, Dawson, North Platte, Black Mesa, Hooker, Guyman, Texhoma.

New Mexico
 Helena, Great Falls, Jordan, Circle, Glendive, Terry, Miles City, Baker, Lovell, Powell, Casper, Gillette, Newcastle, Midwest, Cheyenne, Douglas, Lusk, Wheatland, Torrington, Laramie, Cheyenne, Rawlins, Riverton, Lander, Seminoe Reservoir, Balfour, Platteville Reservoir, Pinedale, Kammerer, Evanston, Rock Springs, Green River, Comanche Peak, Bountiful, Murray, Tooele, Vernal, Roosevelt, Springville, Panguitch, Spanish Fork, Nephi, Price, Montrose, Gunnison, Salida, Victor, Pueblo, Rocky Ford, La Junta, Walsenburg, Springfield, Trinidad, Durango, Alamosa, Farmington, Amarillo, Quanah, Dawson, North Platte, Black Mesa, Hooker, Guyman, Texhoma.



Winnipeg

A

D

A

DAKOTA

MINNESOTA

MICHIGAN

DAKOTA

MINNEAPOLIS

ST. PAUL

WISCONSIN

NEBRASKA

IOWA

CHICAGO

OMAHA

COUNCIL BLUFFS

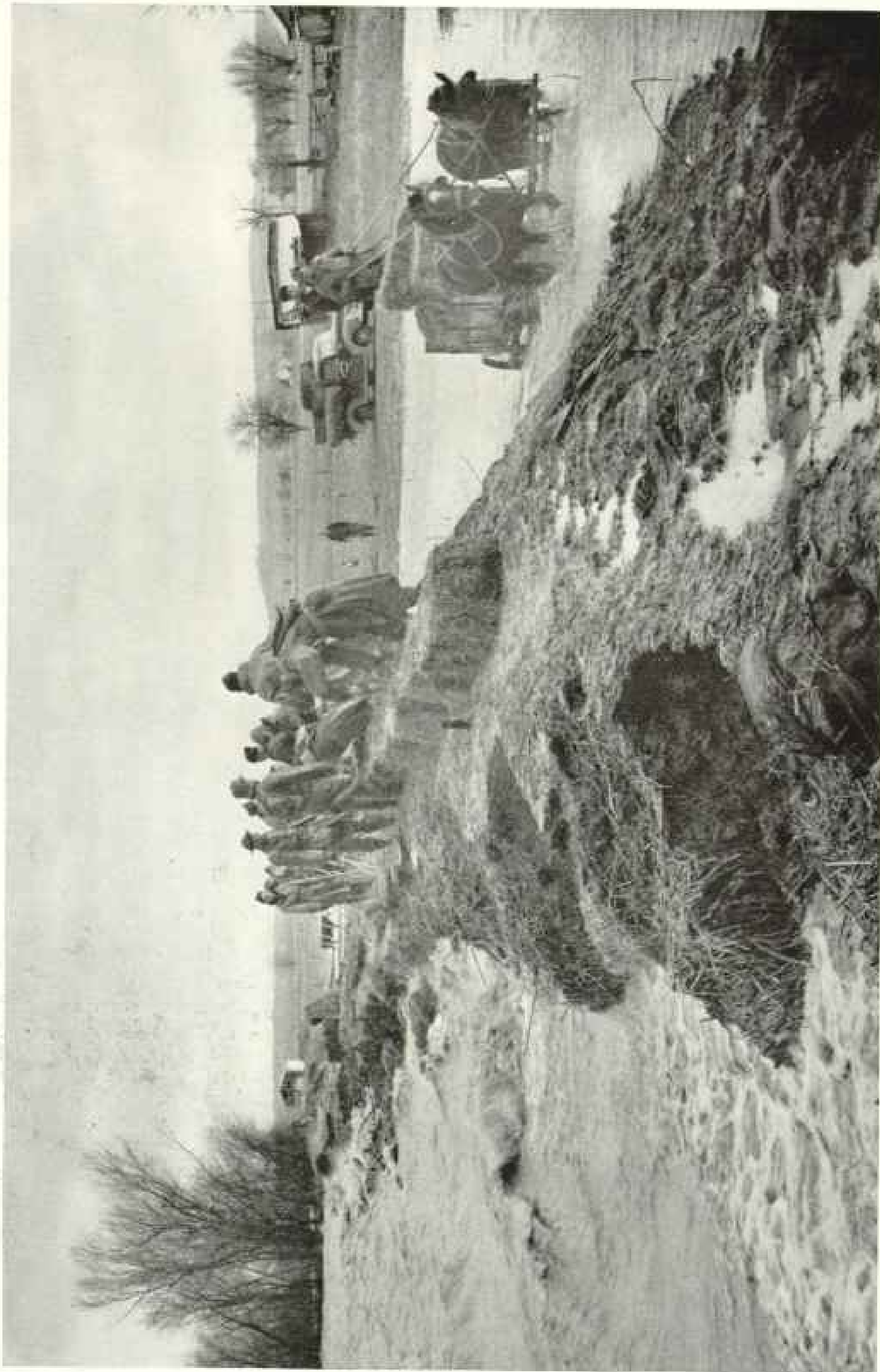
ILLINOIS

KANSAS

MISSOURI

OKLAHOMA

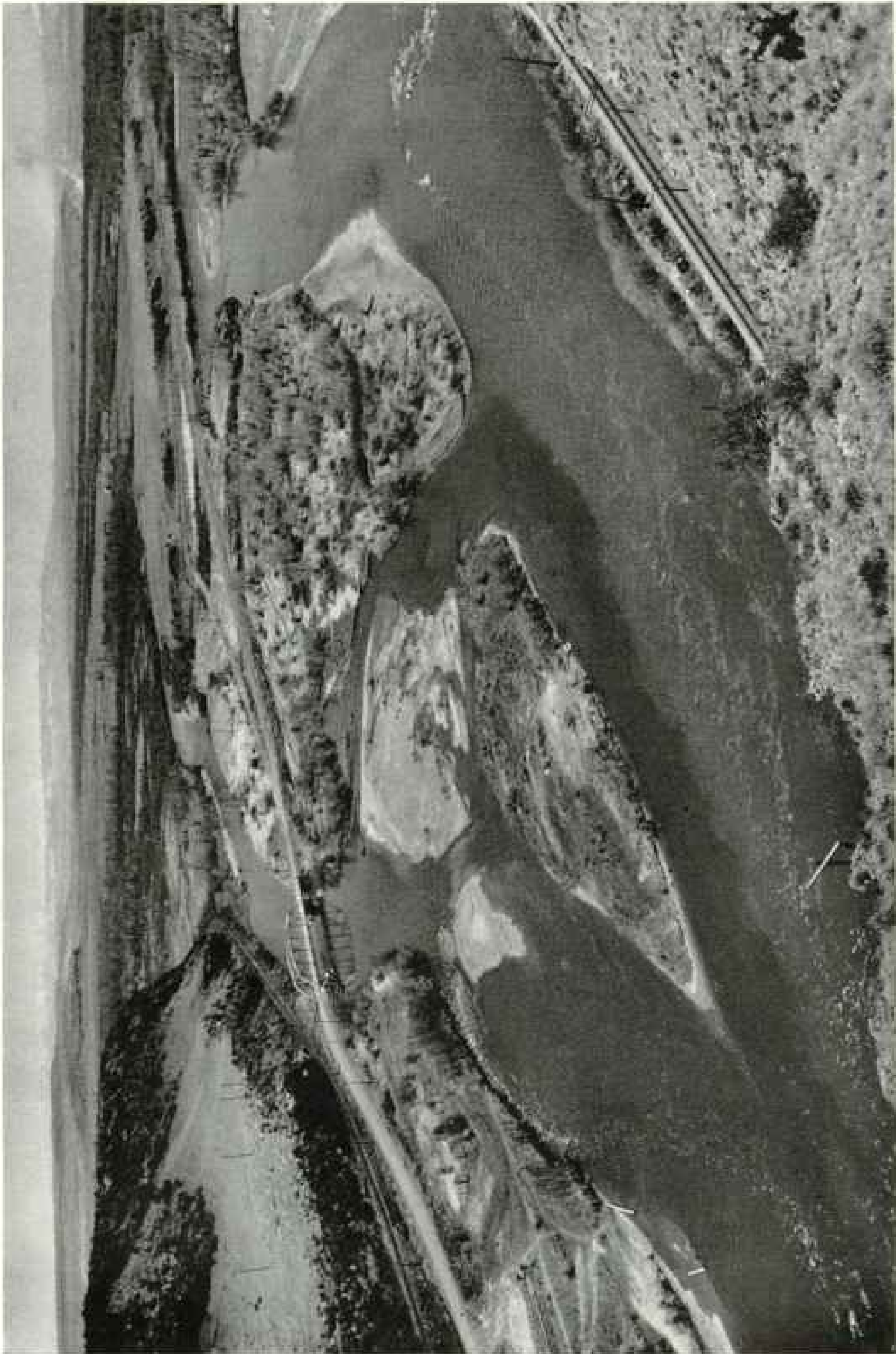
ARKANSAS



Angry Missouri River Waters Threaten to Breach a Levee and Flood a Farm

In the 1944 high waters, men of the Third Missouri Infantry joined with civilians to fight the muddy torrents. With sandbags, and bales of hay hauled by the worried farmer, they strengthened a crumbling dike against the rolling waves (page 375).

ACAP



Staff Photographer Robert F. Mason

Three Streams Unite to Form the Missouri River Near Three Forks, Montana, Where Smoke Rises in Background

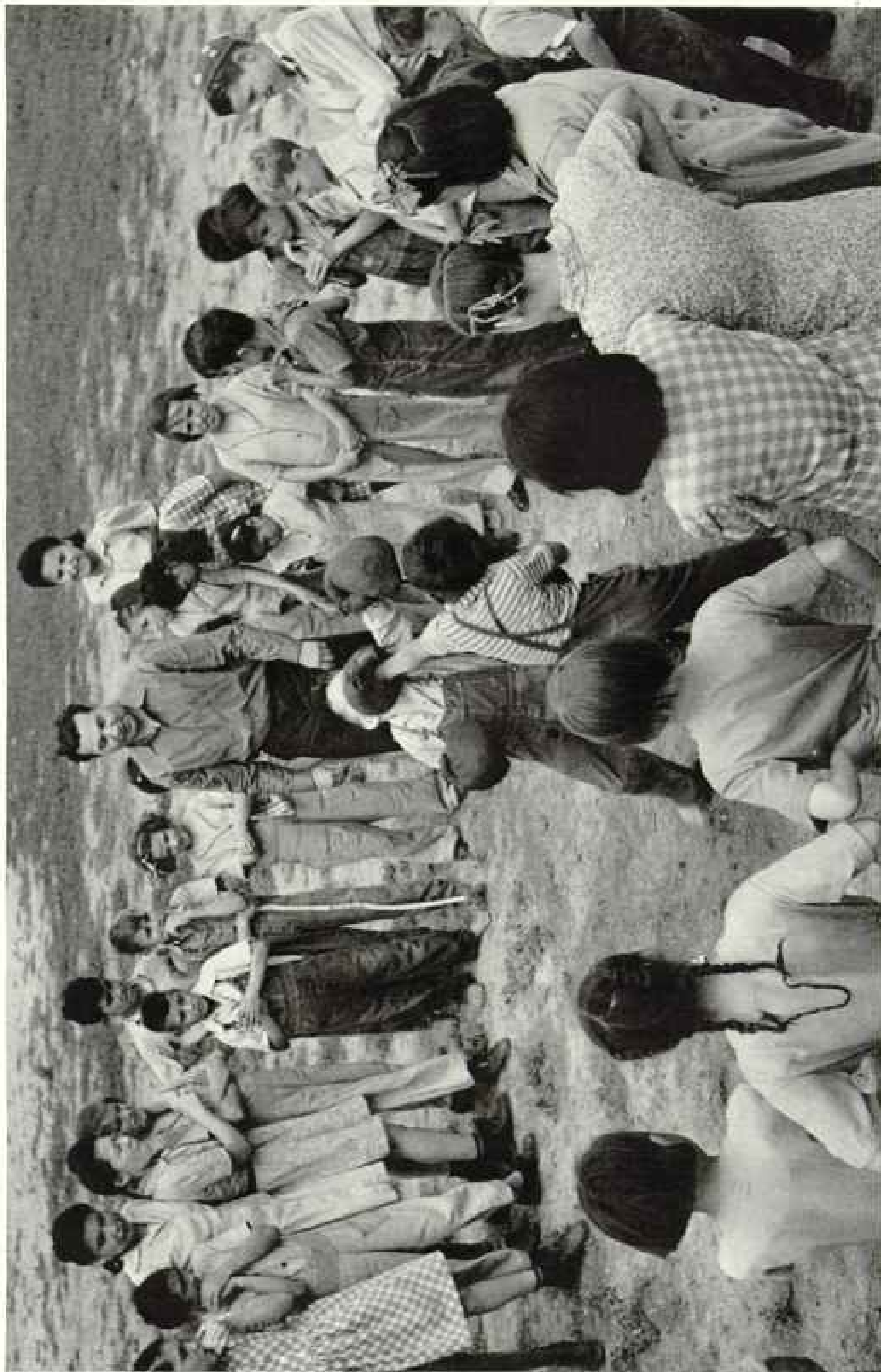
The Gallatin (left) ; the Jefferson (right). Upstream to the right, but not visible here, the Madison flows into the Jefferson (page 572). U. S. No. 10 crosses the bridge.



Staff Photographer Robert F. Brown

Lookout Point above Boonville, Famous in the Eventful Annals of the Romantic Missouri

Kit Carson in his youth lived just across the stream from this point, in what was then Franklin (page 569). Mexican traders came here to buy goods. Boonville asserts that its Thespian Hall is the oldest surviving theater building west of the Alleghenies.



Staff Photographer Robert P. Stone

Leading with His Left, an Indian Boy Lands a "Haymaker" on His Opponent's Nose

Indian schoolgirls, in pigtails, slacks, and mail-order frocks, watch with mingled feelings as the boys fight with the white man's boxing gloves, instead of knives or tomahawks. A referee insists on fair play. All is part of their reeducation that turns Sioux youngsters into modern Americans at Pierre, South Dakota (page 574).



L. D. Mitchell

Hailstones, Some 9 Inches in Circumference, Fell at Hiawatha, Kansas

This picture was made hours after the storm; so the stones have melted considerably. No wind blew when they fell, but they were so heavy that nearly every roof in the northern half of Hiawatha was damaged. The girl is Mary Kay Hill, daughter of Virgil Hill, of the *Topeka Daily Capital*.

Ralph Polk of Williston, North Dakota, "and fed them to our starving herd."

About 300,000 people moved off these plains in the past decade because of drought. Between 1930 and 1940, certain areas in western North Dakota lost 28.7 percent of their population. Riding through there now, you see abandoned farms, windowless houses, and "ghost towns" with empty stores.

Not all this loss was due to dust and drought. There was no drought in the period 1940-1944; yet in that time Montana and the Dakotas lost about a sixth of their people. This did not include those overseas with the armed forces; they went to take war jobs elsewhere

or quit because business was bad in the Basin.

It is significant, says the Bureau of Reclamation, that those subdivisions of the Basin which lost most people in the decade after 1930 also felt the greatest population shrinkage in the period between 1940-44. But these losses were largely confined to the nonirrigated regions. Population grew, in these periods, on the irrigated lands.

In the Basin today about 5,000,000 acres are already irrigated. Under the Plan, almost as many additional acres will be watered.

Even during the drought years of 1930-39, this Basin produced 41.5 per cent of all our wheat, 43.4 per cent of our rye, and 34.8 per cent of our barley, as well as a big share of our cattle and sheep.

In 1941, when rains were abundant, this Basin yielded more than half our wheat and rye, half our barley, and nearly one-third of our wool.

Droughts will recur, of course. Long-time weather records show that. And nobody ex-

pects the waters of the Missouri River system to irrigate this whole Basin.

But there is enough water to create "islands of safety" and to stabilize population. One chief benefit will be more watered fields to grow more hay, alfalfa, grain sorghum, and other feed crops, so that when dry spells come again cattle will not starve or have to be shipped out.

Many other business activities here depend on agriculture; hence new farms to come under the plow will bring thousands of new families, who will become customers of the towns.

"We believe that this valley-wide improve-

ment will mean a living for at least 600,000 more people," says the Bureau of Reclamation, "and we estimate this increased population will support 13,800 new small businesses of about 40 different types.

"We get letters all the time from soldiers, asking about postwar opportunities out here. We figure that about 300,000 men and women now in the services will return to this Basin after the war, and that other thousands will settle here after their war work is done."

Facts about the Big Dams

Fort Peck Dam and Reservoir is an example of the multiple-purpose projects to rise here. It stores water during winter and spring and lets it out in the summer and fall when the Missouri River gets low.

The reservoir supplies water for navigation on the lower Missouri and Mississippi, reduces high water on the Missouri in flood times, and generates hydroelectric power. Later, water from it will be used for irrigation when certain downstream storage is provided.

At peak, 10,546 men were working on the dam, which took about seven years to build.

Earthwork here dwarfs that in any other earth dam. The dam is about 21,026 feet long, including a dike section on its west abutment. Its maximum height above the river bed is 250 feet, and its maximum width at the base is 4,900 feet.

Behind the dam Fort Peck Reservoir, when full, will have a 1,500-mile shoreline; in area (245,000 acres) it will be larger than the Dead Sea. The waterfall through the spillway here is slightly greater than at Niagara Falls (page 591).

Two other enormous dams would be built



STAFF PHOTOGRAPHER ROBERT F. STEVEN

Falcon's Grandfather Was a French Fur Trapper

She belongs to the Gros Ventre tribe and lives on a reservation near Harlem, Montana. "My five brothers are all in the Marines and the Army now," she said, "but they used to read this magazine at school" (page 574).

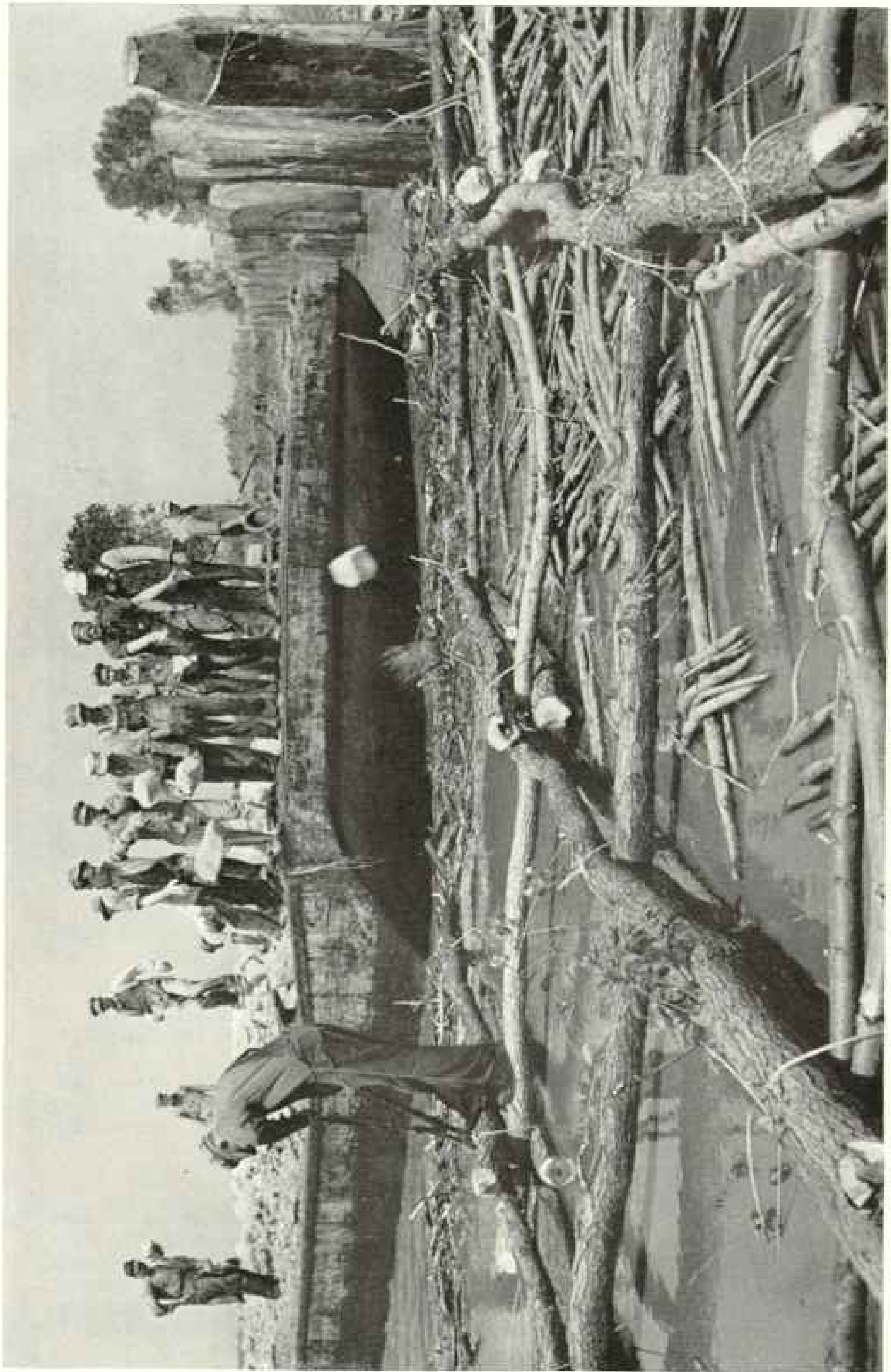
in the main stem of the Missouri, under the proposed Plan. These are the Garrison, in North Dakota, and Oahe, in South Dakota. Comparable to Fort Peck Dam in size, these projects will create glittering blue lakes to stretch for hundreds of square miles over this now semiarid land.

Boats Built at Inland Yards

So far, Fort Peck's main benefit has been in navigation and flood control. The water it releases also maintains all-year navigation depths over the "Chain of Rocks" at St. Louis.

This extra water was needed to float down to the Gulf the hundreds of warcraft built in our inland yards.

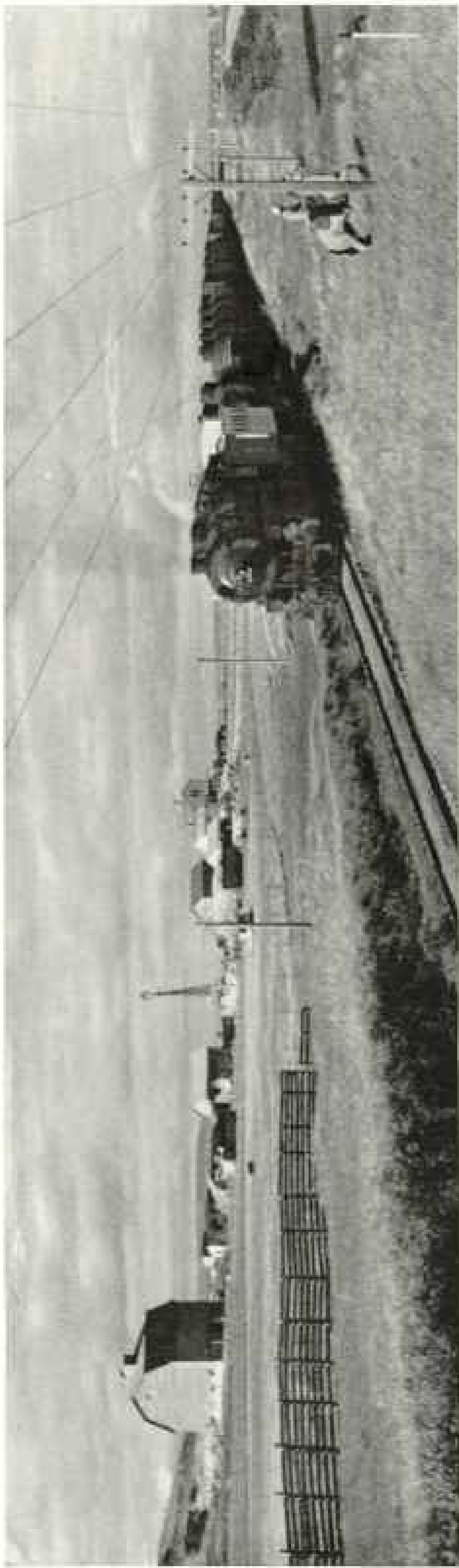
Other dams, totaling 103, are planned for



Woven of Willows, a Giant "Mattress" Is Laid Against the River Bank

Men on the barge throw rocks on the mattress to weight it down and hold it in place near Waldron, Missouri. Piles are driven at right. A man with pliers is cutting off ends of wires that tie the willows together. These mats prevent erosion of banks and help stabilize the channel (pages 575, 586, 587).

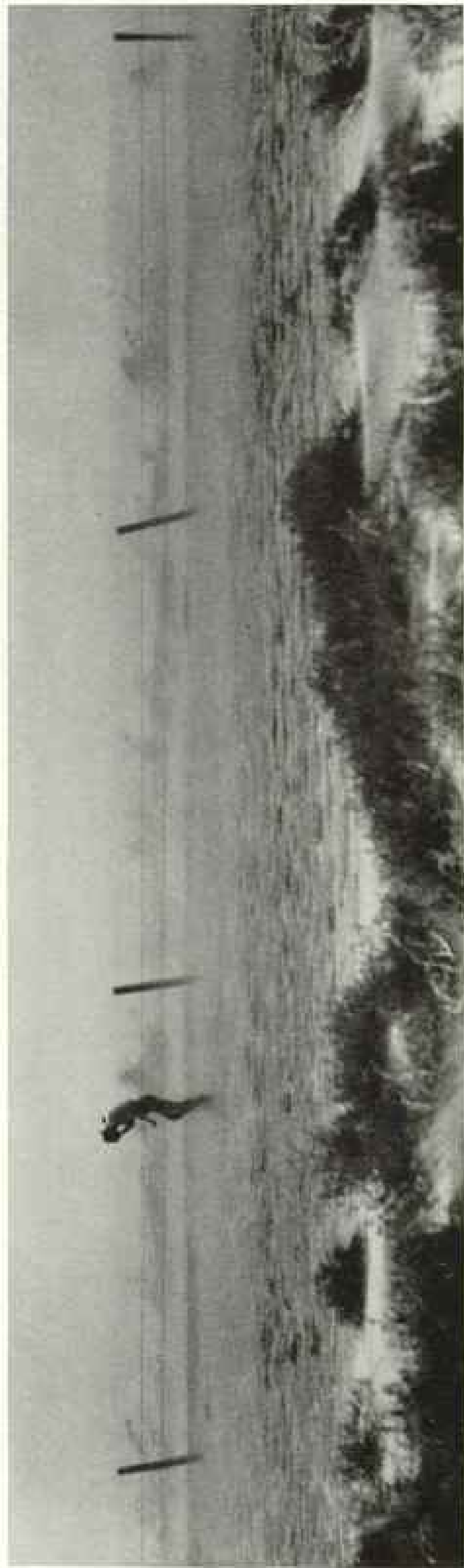
Staff Photographer Robert F. Alton



Staff Photographer B. Anthony Bennett

A Network of Railroads and Highways Serves the Vast Missouri River Watershed, Which Touches Ten States

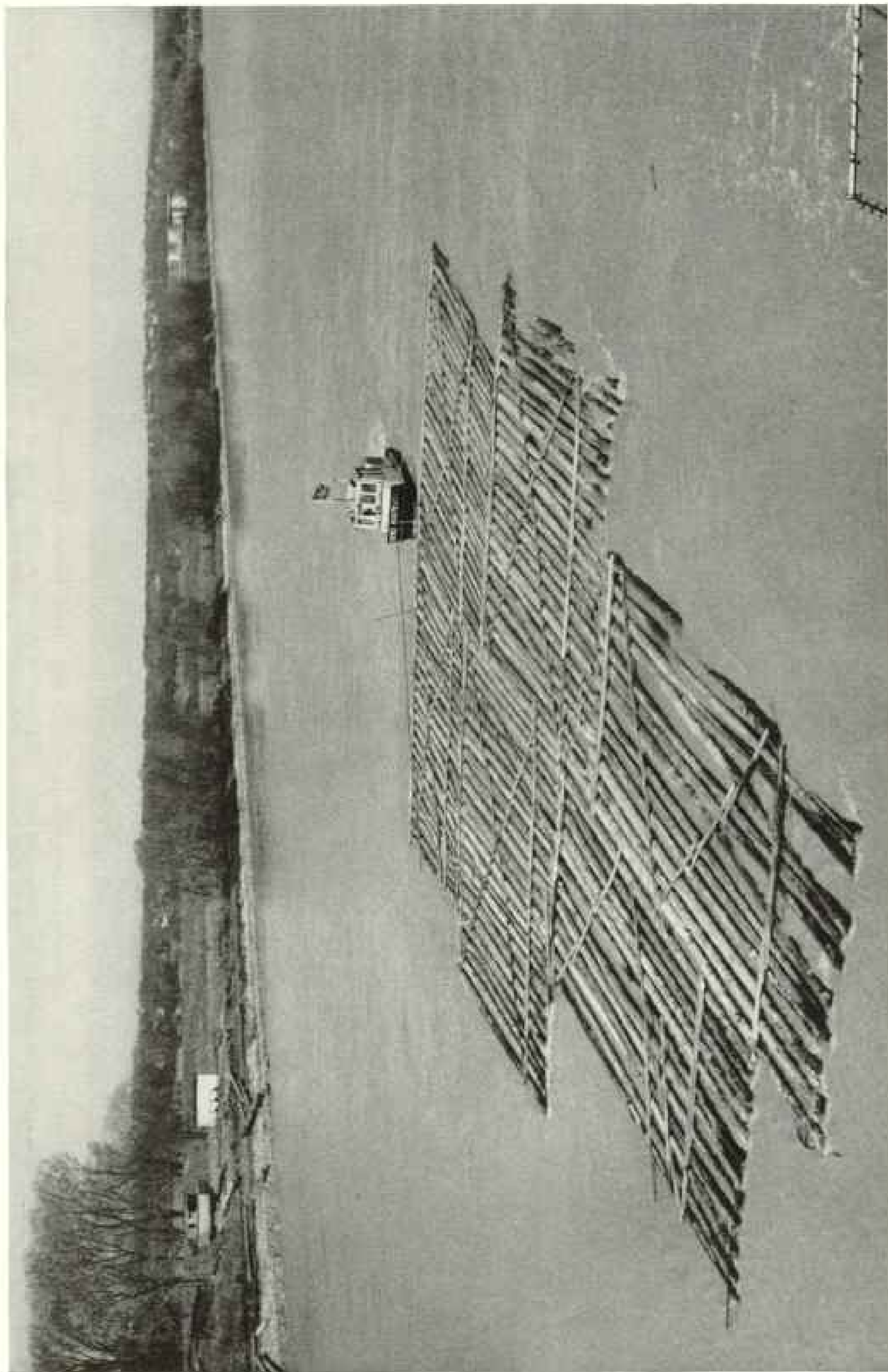
Here a Chicago and North Western Railway freight train puffs across farm lands near Clinton, Nebraska. The Basin's States produce much of our grain (page 582).



V. H. Hill Construction Service

South Dakota Winds Start a Big "Real Estate Movement"

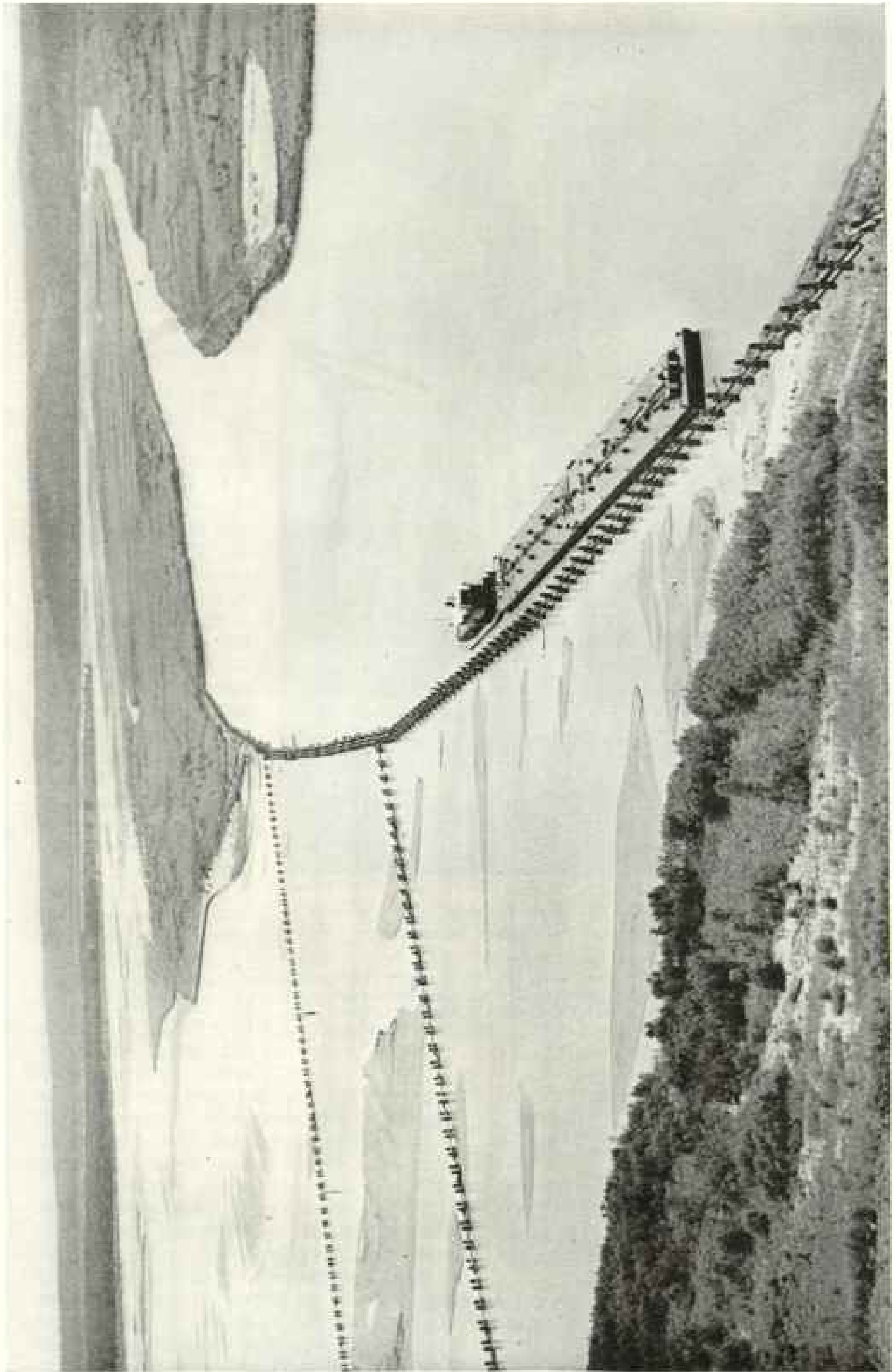
Holding his hat, a man leans against the howling dust storm as he walks. The wind builds little dust heaps behind some Russian thistles (foreground). Others it digs up by their roots and rolls along the ground (page 596).



Staff Photographer Robert F. Simon

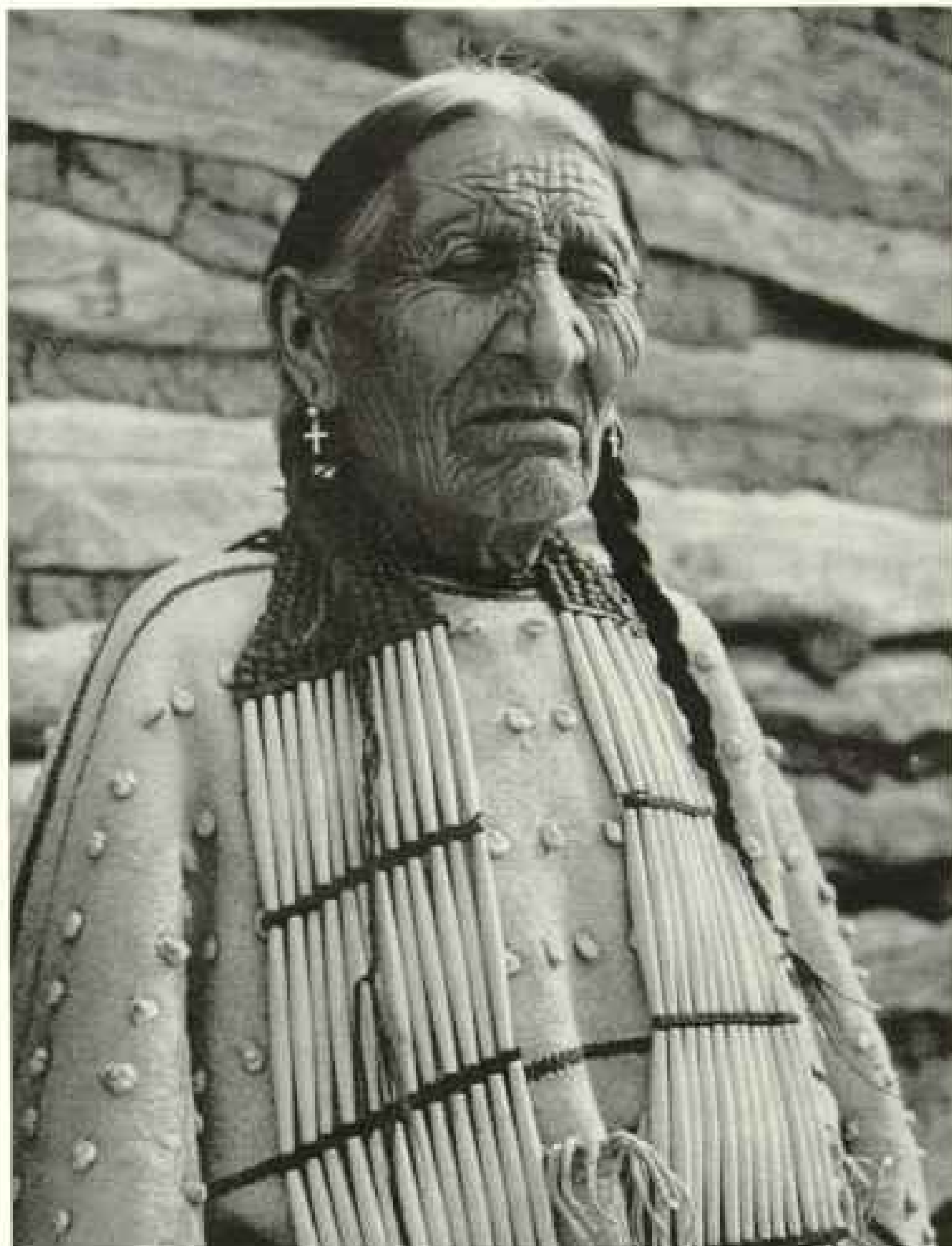
An Army Engineer Launch Moves This Huge Raft of Piles along the Missouri Below Kansas City

Veritable forests of these long, heavy timbers have been driven into the river's mud banks and sand bars to help control its currents. With their aid, the river can be made to scour out its own channel or make fills where new earth deposits are desired (pages 575, 587).



A Socony-Vacuum Oil Company's Tow Breasts the Big Muddy Near Sloan, Iowa

Seeking deep water, the tow hugs the row of piles that stabilizes the channel. Two rows of piles at left are forming a sand bar to fill up, eventually, a slough, or cutoff; this is a shallow new channel, cut by the river in flood when it left its main channel and overflowed bottom-land fields (page 575).



BULL TOTANA

This Sioux Squaw Is So Old She Remembers When Whites First Built Towns along the Upper Missouri

She lives on the Pine Ridge Reservation in South Dakota. Her buckskin jacket is dotted with cowrie shells that look like elk teeth. The vertical cylinders on her chest are of bone, in imitation of those originally made from shells by early Dutch traders in New Jersey. Various Indian tribes were living along the Missouri when whites first explored it; some 54,000 are still here, mostly in South Dakota (pages 574 and 581).

various spots in the Basin. Many will be built in the drainage areas of the Yellowstone, the Platte, and the Kansas, the Missouri's largest tributaries.

One dam, the Kanopolis on the Smoky Hill River in Kansas, was about two-thirds completed when work was halted in order to divert manpower, tools, and materials to the war effort.

The greatest use of hydroelectric power on the main river, so far, is at Great Falls, Montana (page 596). Here are four privately owned dams, and juice generated by them helps

to light up the State and run its great mines, smelters, and other industries. Hydroelectric plants also exist at falls on many of the Missouri's tributaries.

New Plans for Fighting Floods

The lower 1,000 miles of the Missouri flow through flat valley or "bottom" lands which are among America's richest. This bottom ranges from 2 to 17 miles wide, and below Sioux City adds up to about 1,800,000 acres.

In this lush, fertile, Nilelike garden strip lie also 1,000 miles of railway, fine highways, and some 60 towns and villages, besides rich, busy sections of Omaha and Kansas City, with their stockyards, markets, railroad yards, warehouses, airports, etc. (pages 592, 593).

Though flash floods occur on most Missouri River tributaries and on the main stem at Yankton, Pierre, Mandan, etc., it is here in this rich bottom area that greatest losses are suffered from high water (pages 578, 590).

In one terrible flood, that of 1903, Kansas City for days had no light and power, no city water, no fire protec-

tion, and not a train in or out over any of its railroads. There were death, despair, martial law, and enormous financial loss. No wonder Kansas City, like other busy lower river towns, watches the flood gauges and worries!

Hydrologists of the Weather Bureau, who measure rain and snowfall and predict the river's rises, warn that any year, with just the right combination of melting snow and heavy rainfall on ground already wet, the 1903 flood can be repeated. It almost happened in 1943, when flood heights came within a few inches of overtopping the river bank at

the upper end of the central industrial district. On a disaster of this kind no mere dollar value could have been set.

Nobody can estimate the loss in lives and property which constantly recurring floods have caused along the Missouri and on many of its tributaries, such as the Platte, Osage, Yellowstone, and Kansas. In the historic 1844 flood, waters covered the bottom lands from bluff to bluff, making a yellow sea hundreds of miles long.

"Too much water!" say those whose oft-threatened homes dot the Valley. So they ask for dams and reservoirs to hold back flood waters, and they, too, must be heard. They look with hope on the promised levee system complete from Sioux City to the river's mouth.

And the mud, silt, and sand! Walk through these Missouri bottom lands after any high water, and mud is everywhere. Muddy marks on trees, fences, and the sides of barns show how high the water rose. Another saying about this muddy water is that it's "too thick to swim in, yet not thick enough to walk on."

Cubic Miles of Silt

I have seen floods that left sand bars right out in a cornfield, where the young cornstalks had been pushed down by the current and then actually covered with silt. To keep drainage ditches open means cleaning them of silt after every flood. This is why the course of every ditch many years old is paralleled by high banks of earth formed of silt dug from the ditch.

It is estimated that since the Lewis and Clark Expedition (page 572) about 10 cubic



Staff Photographer Robert F. Kline

Army Engineers Measure the River's Silt Content from an Omaha Bridge

Samples are taken from various depths, since water may be muddiest near the Missouri's bottom. Every day enough silt passes Omaha to load 5,500 railroad cars of 50 tons each. Since the days of the Lewis and Clark Expedition, it is estimated that about ten cubic miles of mud have moved down this river!

miles of silt have moved down this river.

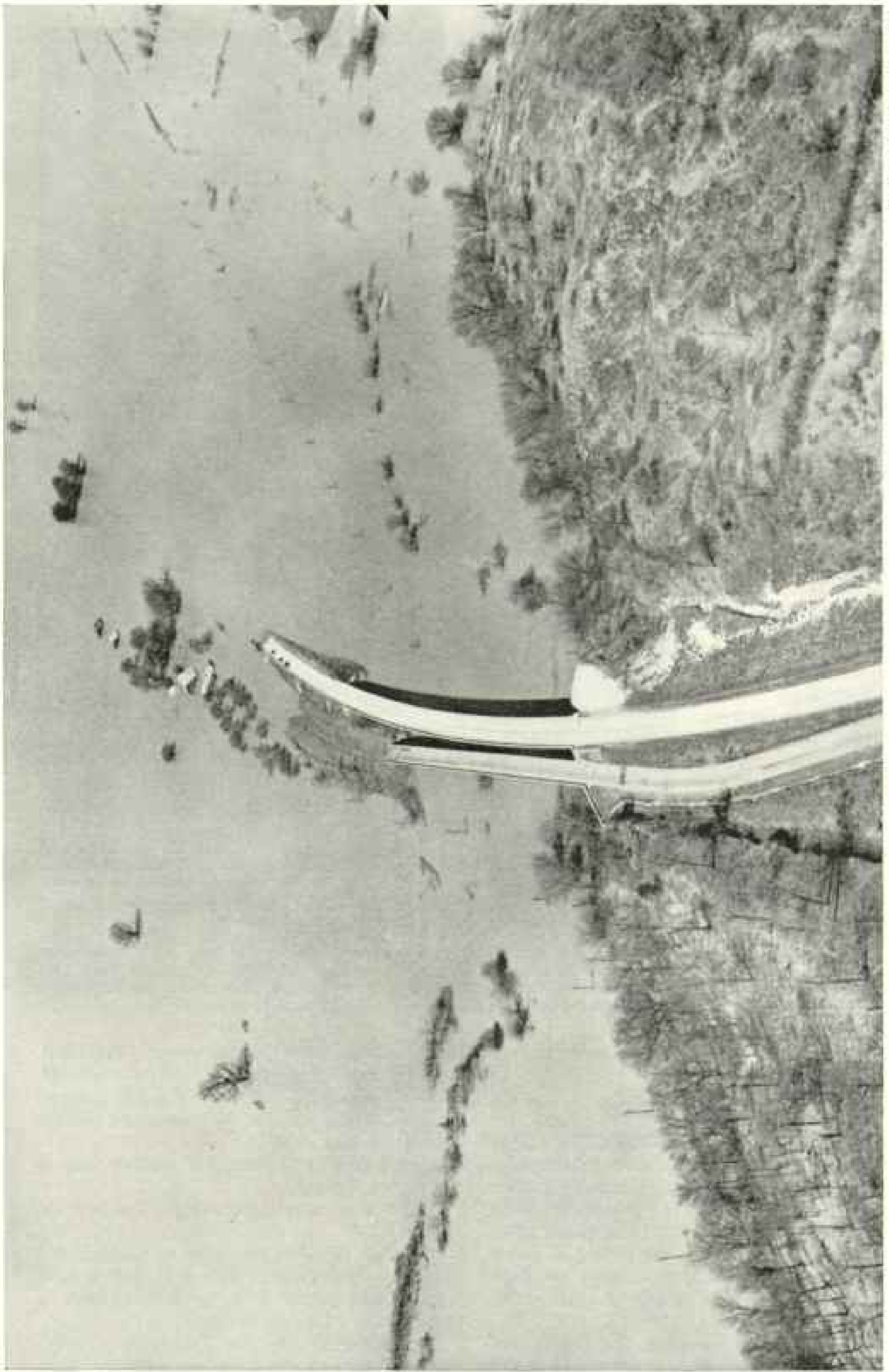
Every day 275,000 tons ride past Omaha. It would need the daily use of 5,500 railroad cars of 50 tons each or 110 trains of 50 cars to haul all that mud!

In one bad flood year, 240 million tons of silt passed Omaha.

"How does that figure out?" I asked the engineers.

"Enough to cover one acre of ground to a height of 27.8 miles," they said, "or a solid block of one square mile, reaching as high as the Empire State Building."

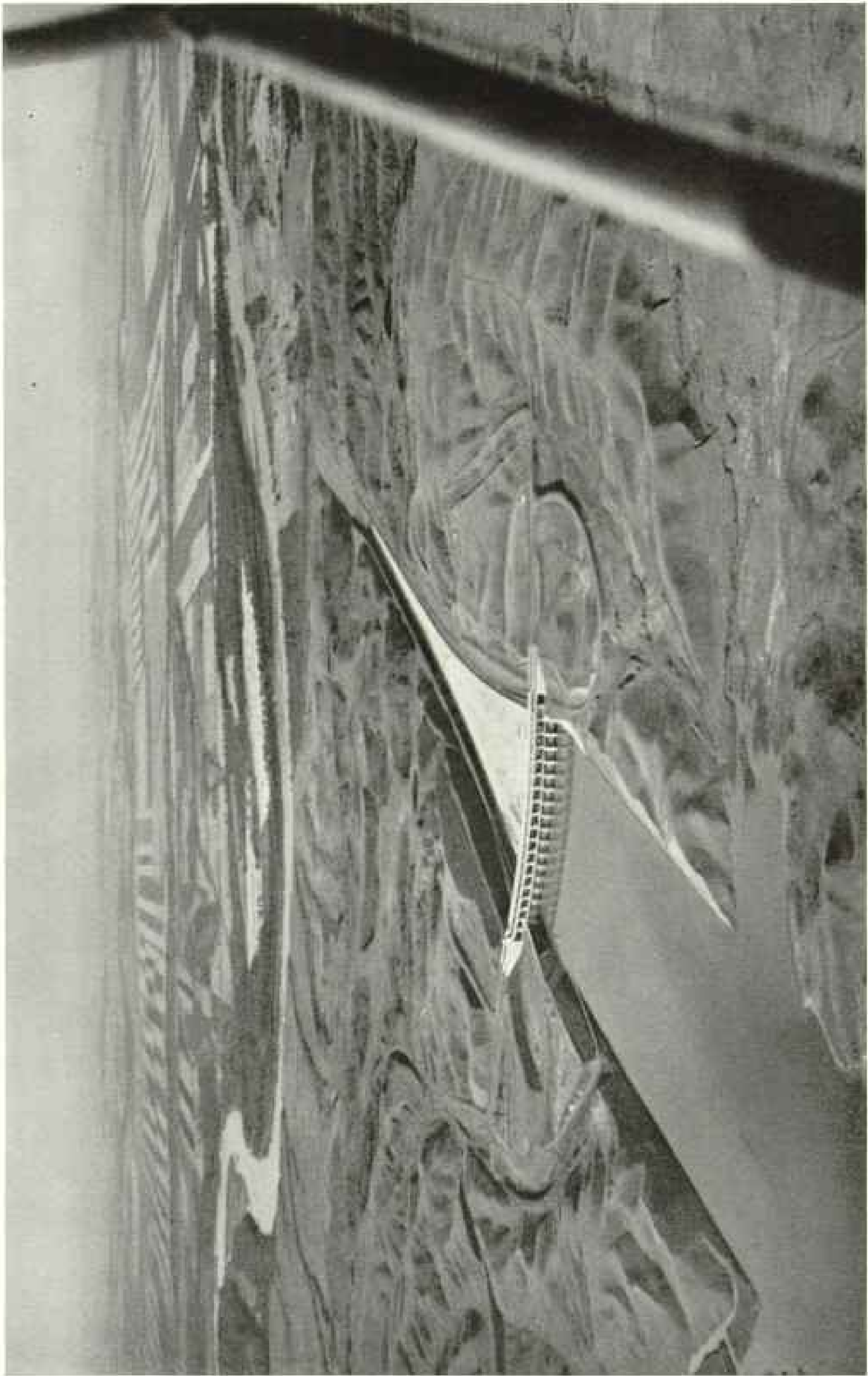
Look at a map of the Mississippi Delta; see how it has built itself out into the Gulf



U. S. Arthur' Air Photos, from DWH

Rising River Waters Inundate Bottom Lands Near Boonville, Missouri

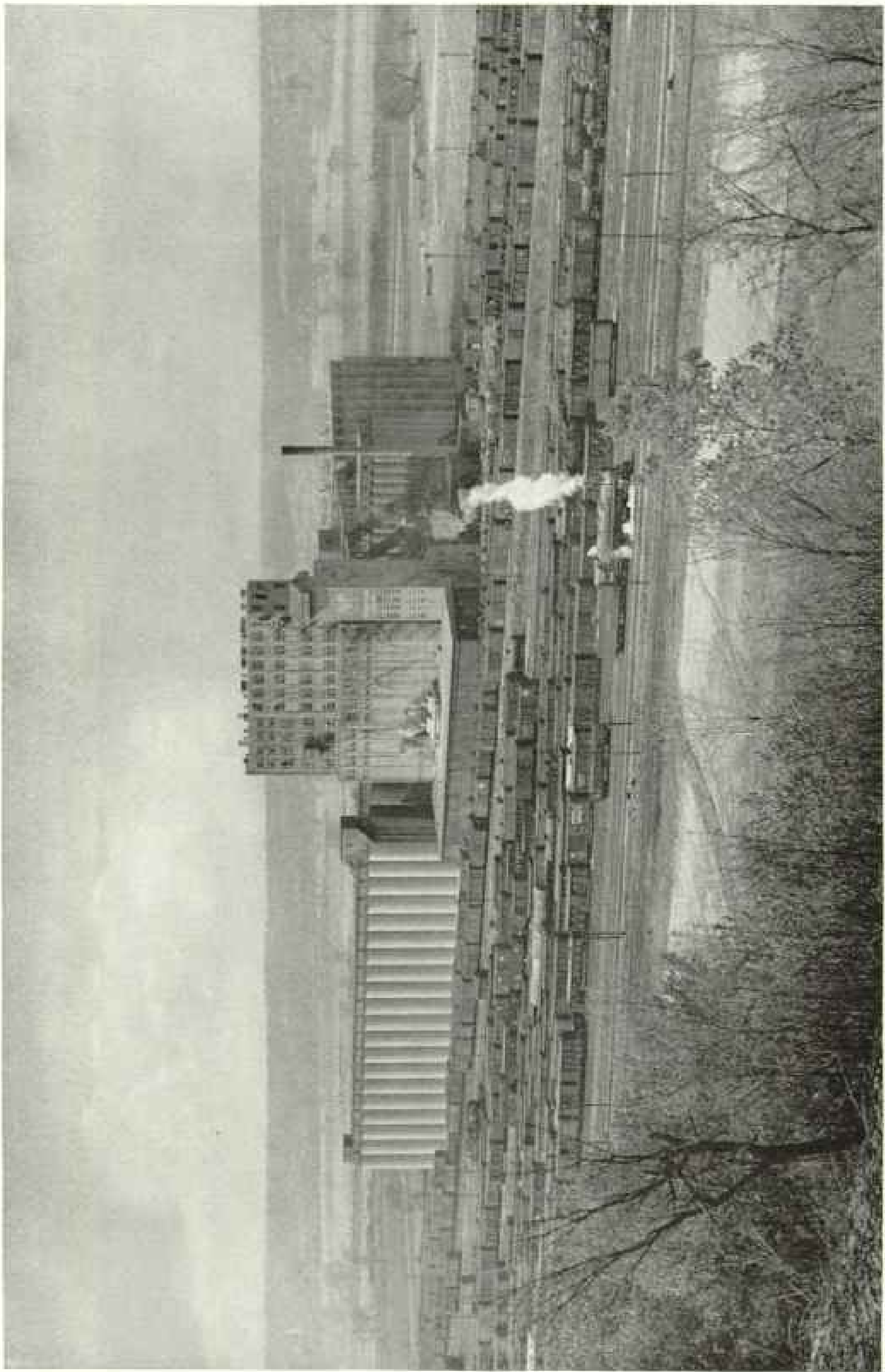
Three motorcars halt at the point where the highway disappears under the flood. Tops of houses, trees, and telephone poles dot the watery waste. In this disastrous 1944 flood the American Red Cross estimated that nearly one and a half million acres of lowlands were inundated; thousands of homeless had to be cared for (page 588).



E. H. Curtis of Engineers, Official

This Giant Spillway Discharges Surplus Water from the Vast Fort Peck Reservoir

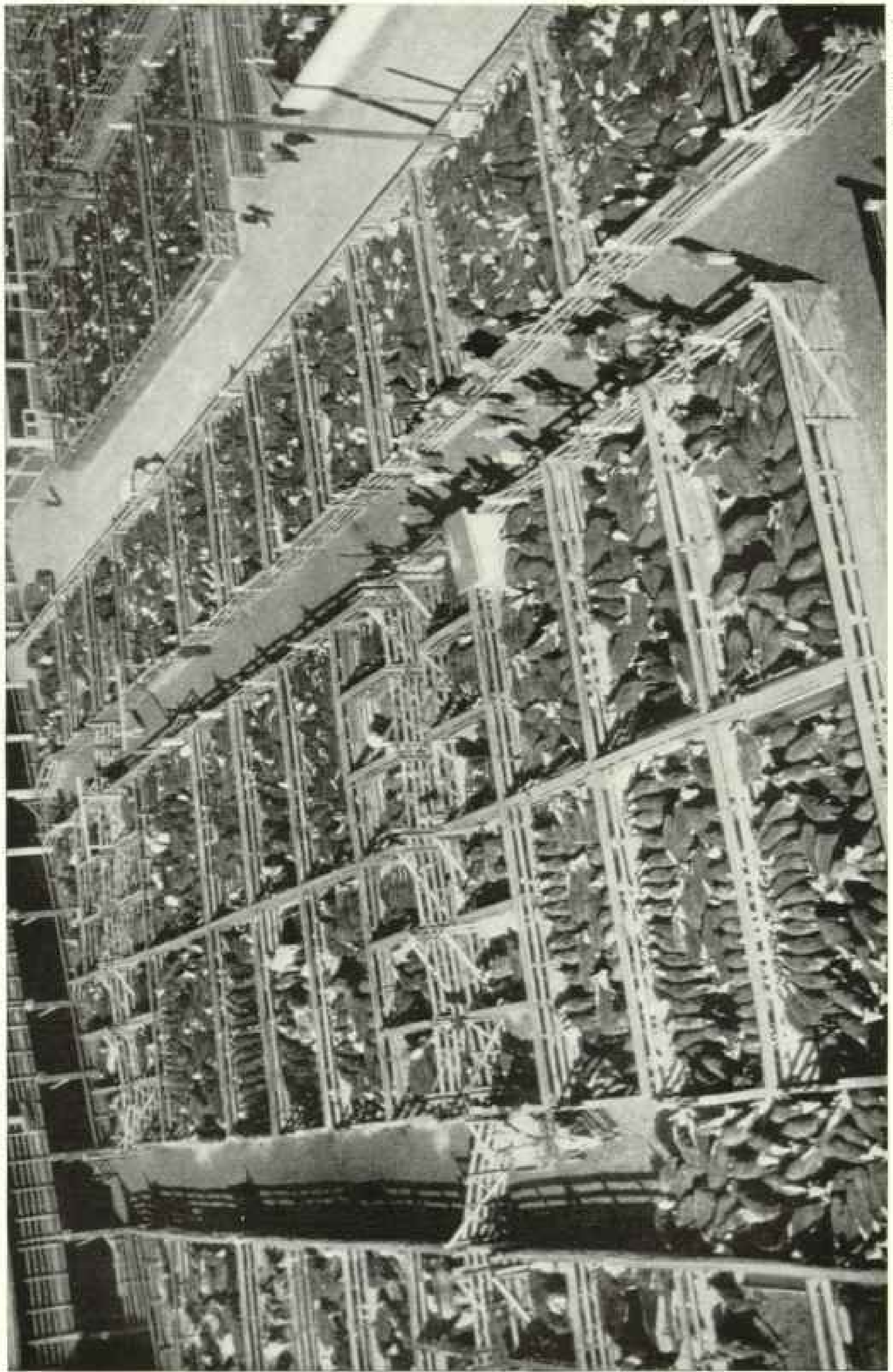
The damlike structure in left center is a series of enormous floodgates, which are raised or lowered to control the volume of escaping water. A roadway runs along its top. To dig the stupendous, concrete-lined mile-long spillway, more than 14,000,000 cubic yards of earth were excavated. In background is the winding Missouri River, with cleared bottom land seen as strips (page 583).



Staff Photographer Robert F. Blount

Long Freight Trains Unload Wheat at Kansas City's Mammoth Grain Elevators

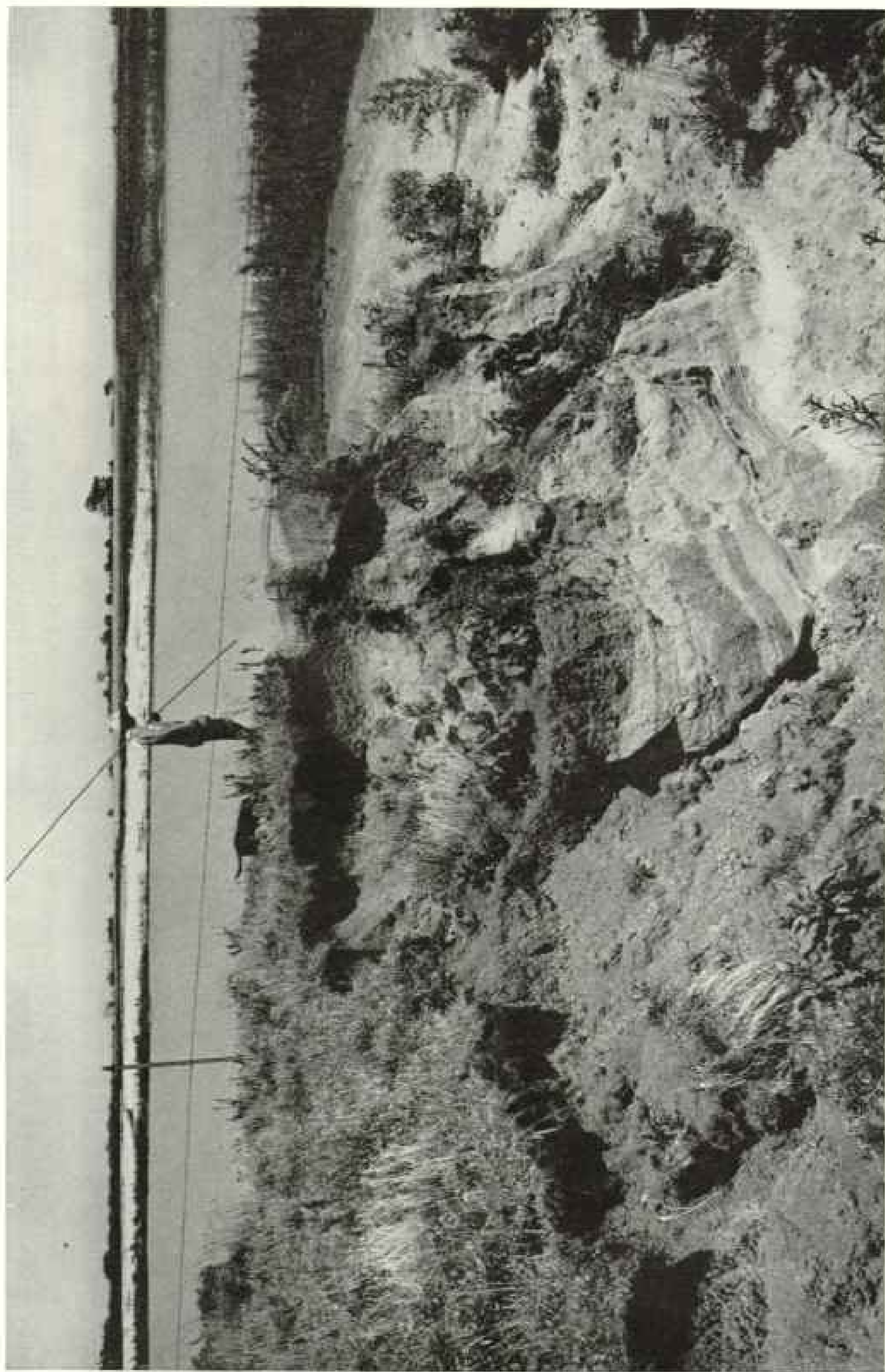
In the 1945 harvest season much wheat was piled on the ground in Kansas and Nebraska, because of car shortage. Advocates of improved Missouri River navigation insist much of the Midwest's wheat crops should be moved by water. This elevator and midway yards occupy bottom lands menaced by Missouri River floods.



AP Photo Peter Aarh

Packed Like Sardines in a Can, Cattle Crowd Kansas City's Giant Stockyards

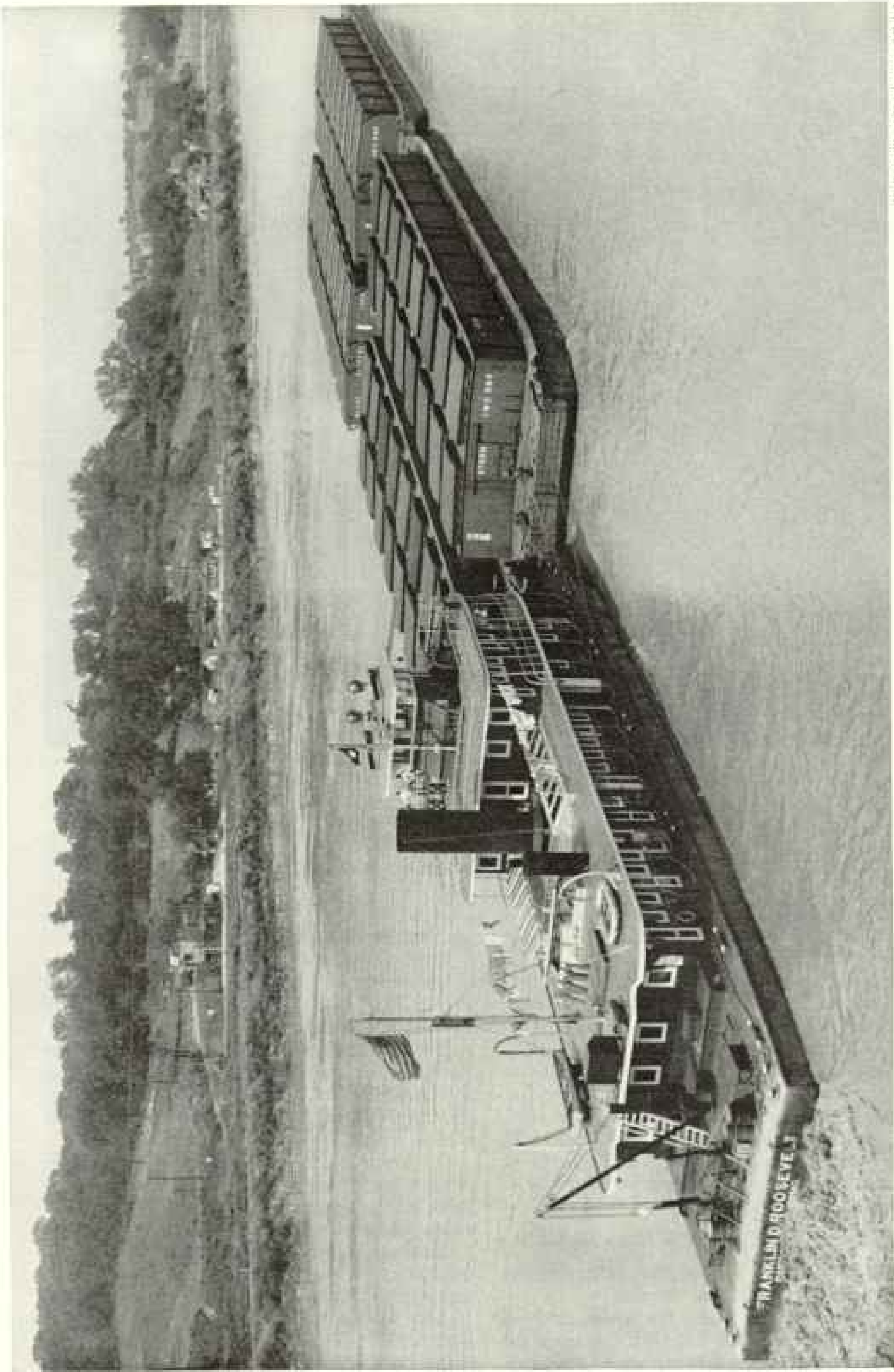
Bawling, grunting, and rattling their neighbors' horns, 54,130 cattle—largest number ever to reach an American stockyard in a 24-hour period—jammed these pens on October 18, 1943. Kansas City is one of the Nation's biggest cattle markets. Many animals arrive by truck from Missouri, Kansas, and Nebraska.



Arthur Wilmon

Disastrous Water Erosion Created This Desolate Scene on a St. Charles County, Missouri, Farm Near the River's Mouth

Here a growing gully cuts through what once was a rich, level field. In 1943, floods washed away a schoolhouse and two groups of farm buildings that stood where the sand bar now appears (upper left). In 1944, another flood inundated more than 85,000 acres in this county (page 578).



U. S. Corps of Engineers. Official

A Federal Barge Lines Towboat Pushes Its Charges Downstream from Kansas City

Pioneer Kansas City, once called Westport, was a child of the river, fostered by steamboat navigation. When railroads came, they drove hundreds of packet boats out of business. Now, with a channel being cleared from as far upstream as Omaha and beyond, river traffic may revive (page 575).



MONTANA POWER CO.

Missouri River "Water over the Dam" Makes Hydroelectric Power Near Great Falls, Montana

From here 45,000 kilowatts of electric current are carried far and near to Montana cities and homes; to mines, smelters, and other industries. This installation, the Morony plant, 14 miles downstream from the city of Great Falls, is one of several erected along the Missouri in Montana (page 588).

of Mexico for long leagues. Silt did this.

Mountains of earth have been carried downstream through the centuries to build this peninsula on which the Mississippi's "passes" pour out into the Gulf. From the Missouri Ozarks, since whites came, an average of six inches of topsoil has been lost.

Not only has erosion damaged millions of acres in Kansas, Nebraska, and elsewhere, but the silt itself, when settling on overflowed land, fills up irrigation and drainage ditches, kills some growing crops, and lays on the fields an airtight, plasterlike cake that is injurious to plant life.

Wind and Hard Rains War on Topsoil

How to combat this erosion is a problem for the Soil Conservation Service.

Uncle Sam can't stop high winds or hold back hard rains. But his Soil Conservation Service and farm scientists can alter farm prac-

tices so as to repair lands already damaged and reduce loss from future droughts.

Loss of Basin topsoil has been greatest in those regions of high winds and sudden heavy rains. These include parts of Montana, South Dakota, Colorado, and Kansas (page 585).

Water erosion alone has been most injurious in the loess hills of eastern Nebraska and southeast South Dakota; prairies of east Kansas have also in some cases lost most of their topsoil (page 594).

On much Basin land both wind and water work together to ruin the fields; when water falls in bucketfuls, it washes away soil already loosened by wind.

Much of the silt moving down the Missouri originates on the slopes of its upper tributaries. New dams, as planned, can't stop this. If not controlled before or after the dams are built, eroded silt will finally pile up behind the dams till it fills up or impairs the reservoirs.

So Uncle Sam works now on a big soil-conservation job on the Missouri watersheds. His experts teach farmers how to cut down these topsoil losses by several means.

One is stubble-mulch farming. This means leaving much of last year's stubble or crop residue scattered on the ground till his new crop is high enough to protect itself and the soil.

Strip cropping, to guard against winds, simply means cultivating alternate strips of a field, so that at all times only one half the strips are plowed up; the other strips lie fallow.

Contour plowing also tends to keep a farm from washing away. Till a few years ago, contour work was rare. Now, as you fly over, you see its telltale fancy curves and loops all through the grain-growing areas (page 570).

"But we can't do much to help the whole Missouri watershed," say the Soil Conservation officials, "unless every individual farmer does his part. Every owner must make wise use of both grass and tilled land.

"Besides contouring and strip cropping, he must observe rotation to hold fertility, and make wise use of stubble to hold down dust and rain erosion. He must also plant grass along waterways to catch and hold silt, build small dams in tinier streams to catch pond water for livestock, and plant shrubs and trees wherever convenient."

Water in Arid Regions

But it's not only grass and field crops that need more water; many an upriver community needs more for domestic use.

To get water to drink or to wash their faces, some people have to haul it for miles. The town of Fessenden, North Dakota, hauls water 11 miles, a daily round trip of 22.

Since 1882, when artesian water was found in a well 955 feet deep near Aberdeen, South Dakota, fully 15,000 flowing wells have been drilled in the Dakotas. The strongest had artesian pressures of 200 pounds per square inch.

Running wild, out of control, some strong wells behaved most sensationally, "blowing up enormous quantities of sand and causing extensive cavings of the surface," says W. E. Wrather, Director of the U. S. Geological Survey.

The area of artesian flow originally covered about 45,000 square miles in the Dakotas, extending also into adjacent States and Canada. The wells still flow in most of this area, although the pressure and yield of the wells are much diminished.

Men have been killed here in fights over waterholes from which livestock drink, or in

quarrels over the rights to water for irrigation.

You who live in lands of ample rain can't even imagine how much people in arid regions think and talk about water. This whole big Missouri River project is, after all, a plan to save water.

Not only Basin farmers and ranchers, but 15,000,000 fishermen and hunters all over the United States are interested in what happens along the Missouri.

Dams, Fish, and Wildlife

More wild ducks and geese breed in this Basin than in any equal area of our land. Riding through South Dakota in the spring, we saw even small puddles full of ducks.

Pheasants were so thick on the highways we had to slow down again and again to avoid hitting one. We even met many ducks walking along the highway to get gravel for their gizzards.

In the dry early 1930's, says Albert M. Day, Assistant Director of the U. S. Fish and Wildlife Service, "our duck and goose population dwindled to about 27 million. Today it may be nearly four times as many, or 105,000,000."

This increase is largely due to more favorable weather, but Federal aid to wildlife also had something to do with it. In the Basin more than 70 major and minor nesting refuges have been created.

In the Basin's thousands of miles of streams sport fishing is abundant, and Government hatcheries yield tons of fish eggs, fry, and fingerlings for restocking (page 574).

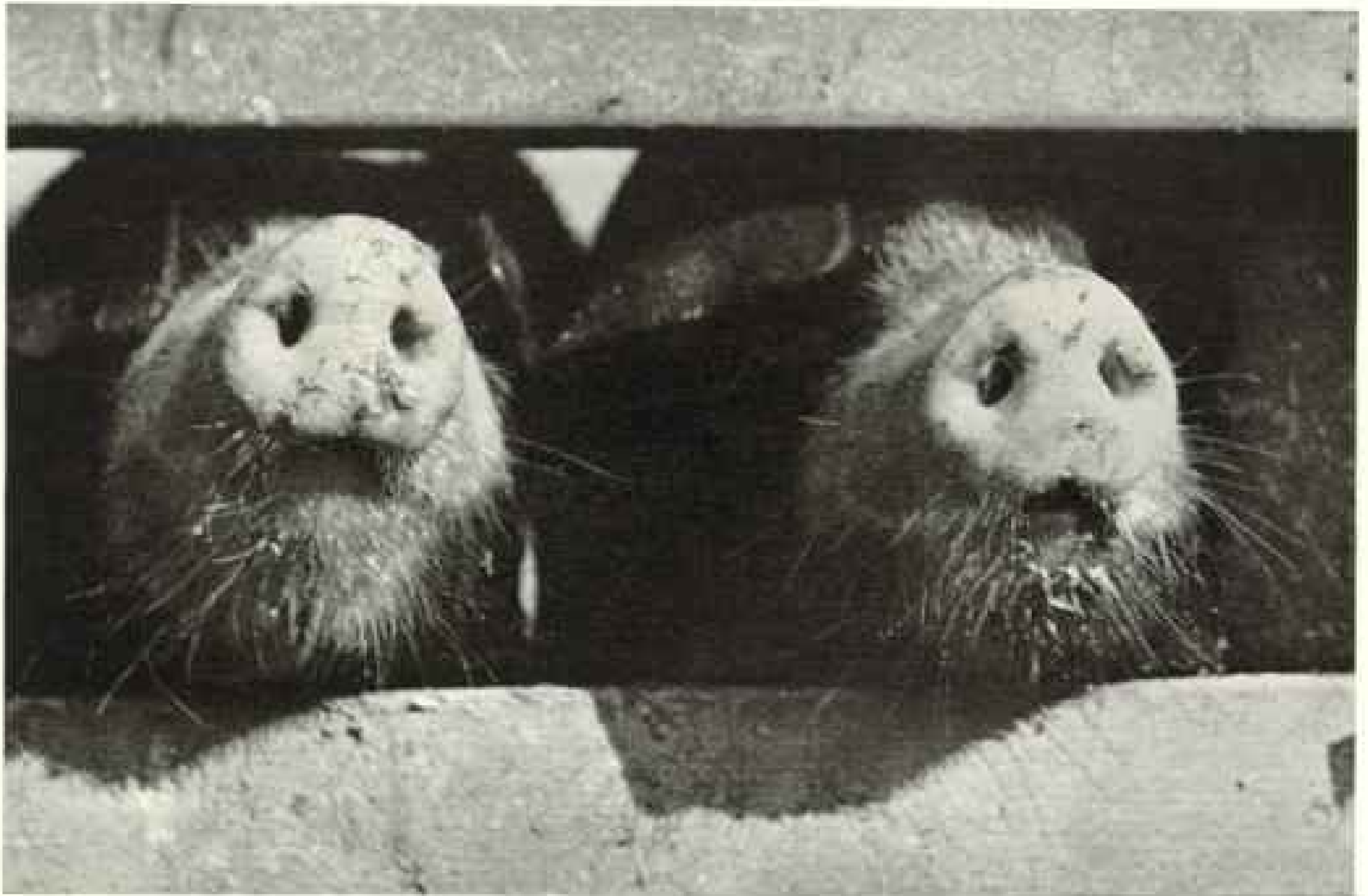
All these new dams and big reservoirs are bound to have important effects on fish and game. New game refuges will be created, and streams that once were dry each summer will again have an abundant flow, making playgrounds for thousands of vacationists.

But mere creation of big bodies of fresh water, with shorelines that fluctuate widely, is not necessarily good for ducks and geese or even for fish.

When water in great quantity is suddenly drawn from an artificial lake, as for irrigation, the lake level falls behind the dam. If fish have just spawned about the lake's grassy edges, fish eggs will be left exposed by falling water level or covered with silt and thus ruined. In the same way, feed for both fish and waterfowl is destroyed.

Behind some new dams, as lakes rise, water will cover vast brushy areas now frequented by deer and other wildlife and will even cover several important game refuges.

Rising water will also cover many sites of former Indian camps and the haunts of even earlier Americans. This gives archeologists an



Not Seals' Faces, But Pigs' Noses Poked Through a Fence Crack

PH

These are South Dakota porkers. Corn is a major crop in the Missouri watershed. Most of it is fed to swine and cattle and thus goes to market as meat (page 587).

interest in the ancient valleys now to be inundated.

"These man-made reservoirs will engulf a lot of historic spots so far unexplored by archeologists," says the Smithsonian Institution. "Before these new dams fill up and water rises to hide them forever, we ought to study these Indian camp sites and the ruins left by people who were there before the Indians.

"Scores of large village sites, burial places, and numerous groups of pictographs on rock faces are certain to disappear beneath the rising waters of the projected reservoirs."

A Lake the Size of Wyoming

Engineers are working with wildlife interests and Indian spokesmen on these problems. When all these reservoirs are full, they will hold 63,000,000 acre-feet of water—enough to form a lake a foot deep, covering 98,000 square miles—an area equal to Wyoming's.

"After we've piled up all this water," an engineer told me, "our problem is going to be how to use it for the greatest good of the most people."

How to knit this whole system together so that every dam, lake, levee, powerhouse, steamer channel, and irrigation ditch falls into the right place—that's the job for Army and

Reclamation Bureau men, working in harmony.

It may take 500,000 man-years of work and cost well over a billion. But it will be worth it.

"Engineers and agriculture experts can't wipe out all the risks that farmers and ranchers must face," says the Reclamation Bureau. "Our Joint Plan takes full cognizance of the fact that dry spells will come back, winds blow, and that there will be soil erosion.

"But in years of trial and study we have at last learned much about how men may best raise livestock and grow crops in this watershed, and, working with Army Engineers, we are starting as soon as materials are available to make beneficial use of the lessons we have learned."*

* In its series of State articles, the NATIONAL GEOGRAPHIC MAGAZINE has published the following on our Commonwealths which lie within the vast Basin of the Missouri River: "Missouri, Mother of the West," April, 1923, and "Land of a Million Smiles (Ozarks)," May, 1943, both by Frederick Simpich; "Speaking of Kansas," by Frederick Simpich, August, 1937; "Minnesota, Mother of Lakes and Rivers," by Glanville Smith, March, 1935; "Nebraska, the Cornhusker State," by Leo A. Borah, May, 1945; "Iowa, Abiding Place of Plenty," by Leo A. Borah, August, 1939; "Colorado, a Barrier That Became a Goal," by McFall Kerbey, July, 1932; "Grass Makes Wyoming Fat," by Frederick Simpich, August, 1945.

Victory's Portrait in the Marianas

BY LT. WILLIAM FRANKLIN DRAPER, USNR

AS A NAVY combat artist, I was privileged to portray history in the making as our forces invaded Saipan and Guam, two of the Marianas Islands, in the summer of 1944.

One of my most satisfactory moments of the entire campaign occurred almost a year after its finish. I refer to the solution of a mystery that had puzzled me all these months. These are the circumstances:

On June 18, 1944, I was attracted by a column of smoke arising from Aslito, a Japanese airfield on Saipan. Believing the Marines had captured it, I set out with the hope of finding material for a painting.

As I walked across a battle-scarred cane patch, I came on a gruesome sight. There was a burned-out Sherman tank, one of its treads ripped off. Its American crew was nowhere in sight, but around the tank were the bodies of 16 Japanese. Plate XIII shows what I saw.

Something extraordinary had happened here. How had the Japanese died? Did the Americans escape? Wishing I were a detective, I could only speculate on this mystery as I sketched. Though I made inquiries later, I could find no answer.

A Medal of Honor Gives the Clue

In the June, 1945, issue of *All Hands*, a Navy publication, I came across an explanation. I quote:

"On Saipan . . . Sgt. Robert H. McCard, USMC, Centralia, Illinois, and members of his tank crew were ambushed by 77-mm. guns. Although their tank was put out of action . . . McCard carried on resolutely, bringing all tank weapons to bear on the Jap guns. . .

"When the hostile fire increased, McCard ordered his crew out of the escape hatch, exposing himself to fire by throwing hand grenades to cover their withdrawal. Seriously wounded . . . McCard then dismantled one of the machine guns. When the Japs began running toward him, he killed 16 before he himself was killed."

For his heroism, Sergeant McCard received a posthumous award of the Medal of Honor.

Nothing can convince me that I did not paint the field where he sacrificed his life to save his companions.

A second noteworthy experience was service on a battleship, one of Pearl Harbor's "old unsinkables."

On previous campaigns I had ridden transports and PC's off the Aleutians, destroyers and PT's in the South Pacific. My last assign-

ment was with the U.S.S. *Yorktown*, a carrier (Plates II and III).

I was with her when she launched her planes against Truk, Hollandia, and the Palau Islands.* On this trip I had the comfort of her air protection.

My Berth—the Mighty *Tennessee*

Now I was aboard the U.S.S. *Tennessee*. Her 32,000 tons, commissioned in 1920, too late for the first World War, were four years past the theoretical age of obsolescence. Thanks to the Japanese, who had laid her up for repairs, her 14-inch guns were directed by modernized fire control. She was a better ship than ever.

The Japanese must have thought they had the *Tennessee* when they bombed her at Pearl Harbor. But, only slightly wounded, she lived to take part in landings from the Aleutians to the Palaus.

Now she was headed for Saipan. Later she fought a Jap fleet off Leyte and helped soften up Iwo Jima.

On an uneventful trip from the Marshall Islands, the *Tennessee's* crew was restless. Any kind of activity was welcome except swabbing decks (Plate IV). Each evening before sundown, "happy hour" was held. Then the men assembled for a band concert or boxing match. From towers and gun turrets they whistled and applauded (Plate V). I was amazed by their nonchalance in enemy waters. A year earlier, every moment would have been fraught with danger.

On June 14, D Day minus one, the tremendous invasion force struck Saipan. Carriers, battleships, cruisers, and destroyers hurled a daylong torrent of bombs and shells.

Tall Chimney Sways, Refuses to Fall

As her six-gun main battery fired, the *Tennessee* lurched under the shock. My cabin was littered with broken light bulbs. From the bulkhead, a washstand and cabinet fell to the deck. When the five-inch turrets joined the 14-inchers, the din was unbearable.

The *Tennessee* took up a position a thousand yards offshore in the strait between Saipan and Tinian.

With my binoculars I watched her shells rip holes in a concrete fortress. With one salvo its walls disappeared, exposing a big

* See "Painting History in the Pacific," by William F. Draper, NATIONAL GEOGRAPHIC MAGAZINE, October, 1944; also "Navy Artist Paints the Aleutians," August, 1943, and "Jungle War: Bougainville and New Caledonia," April, 1944, both by Lieutenant Draper.

gun. With the second salvo the gun itself dissolved.

Strangely, a tougher target was an ordinary sugar mill. Shell after shell, showering flame and rubble, struck the mill, but none could topple its tall chimney. With each salvo it swayed. Surely, we imagined, the next shell would accomplish its destruction. But it was still standing when I went ashore for a close examination (Plate XI).

Meanwhile the *Tennessee* set fire to an oil dump; a tornado of smoke rolled thousands of feet into the sky. Even our aircraft spotters were impressed. Assigned to watch the sky and nothing else, they couldn't resist stealing an occasional glance shoreward (Plate VI).

On D Day plus one, the *Tennessee* received three hits from Tinian. One shell penetrated a five-inch gun turret. Nevertheless, the ship carried on, giving more than she took (Plate VII).

At dusk on D plus one I was being transferred to a transport in preparation for going ashore in a landing boat. Without warning, enemy planes swooped in. All the transports retreated to sea. We in the small boats were left marooned offshore. Soon the horizon was ablaze with antiaircraft fire from the transports (Plate IX).

My Roommate—a Blind Duck

Meanwhile shells from shore fell around our boats. One splashed within 30 feet. I cannot deny I was scared.

Once on land, I took up quarters in a vacated Japanese house. Like every other unit in the village, it was a wreck (Plate XVI, upper). Broken cups, shattered plaster, scattered clothes, torn books—everything was a mess.

My room was the kitchen. For diminutiveness, the modern one-room apartment's kitchenette could take lessons. To sleep full length, I stretched out diagonally. Even so, I had to accept a roommate. A pet duck abandoned by the Japanese tenant pressed his company on me the first night. In vain did I shoo him out: as soon as I was asleep he came back. In the morning I learned that he was blind.

A fellow boarder in the house was a welcome comrade. Whom should I find there but Lt. Price Berrien, USNR, a firm friend of college days!

Exploring, Berrien and I unearthed some Japanese canned crabmeat and several bottles of *sake*, the enemy's rice beer. At the evening "cocktail hour" we reminisced about Harvard.

Churned by tanks, Saipan's dust covered us head to foot and made breathing difficult, to say nothing of painting. To escape the dust,

Berrien and I tried the beach, but the dead fish, rotting food, and vagrant oil were even worse. An abandoned barge, lately used as a Japanese machine-gun nest, was our bathhouse. Plate XV shows it on the extreme right.

Jap Woman Weeps for Child She Killed

We were not the only bathers on the beach. Under guard, Japanese women from an internment camp near by brought their children for a wash. At sight of the laughing, playing children, one woman moaned and wept. She had choked her own baby, convinced the Marines would torture it.

Twelve days on Saipan saw my survey completed. At 4 o'clock one morning I was driven to Aslito airfield to fly home. Just as I was boarding the plane, I heard the ping of a sniper's bullet, and did I hit the dirt!

When my plane set down in the Marshalls, I found the Guam expeditionary force ready to sail and could not resist going along. This time I sailed on a transport. Marines occupied every available space (Plate XVI, lower).

Following the first wave of Marines, I landed on Guam under enemy mortar fire (Plate VIII). Already a field-hospital station was being set up (Plate X). From it the wounded were evacuated to LST's (Plate I). As everyone knows, there were many casualties on both Saipan and Guam.

Guam was muddy, not dusty, for the rainy season had begun. A shell-shattered coastline was a picture of desolation.

Caves and tunnels honeycombed the island. Flame throwers smoked out the defenders.

Agat, a village, took a terrific beating from naval guns. Only the wall of the native Christian church was standing (Plate XII). Soon after I finished my sketch, the enemy bombarded the ruined town.

Our Likely Possessions in the Future

Guam's Chamorros, our liberated native wards, were happy to see Americans again after two and a half years of Japanese misrule.

Eleven of them, including three former Navy men, escaped by canoe to one of our destroyers. Some related how they and two-score others had been thrown into a pit as our invasion began. Drunken Japanese guards threw hand grenades into their midst. Several captives escaped, killed the guards, and liberated 200 kinsmen.

With Japan's surrender last August, my thoughts returned to the Marianas. I hope that they may remain American bases—naval and aerial watchtowers from which we may ever keep an eye on Japanese aggression.

Victory's Portrait in the Marianas



© National Geographic Society

Oil Painting by Lt. William F. Draper, USMC

That B-29's May Shatter Japan, an American Marine Pays a Price with Blood

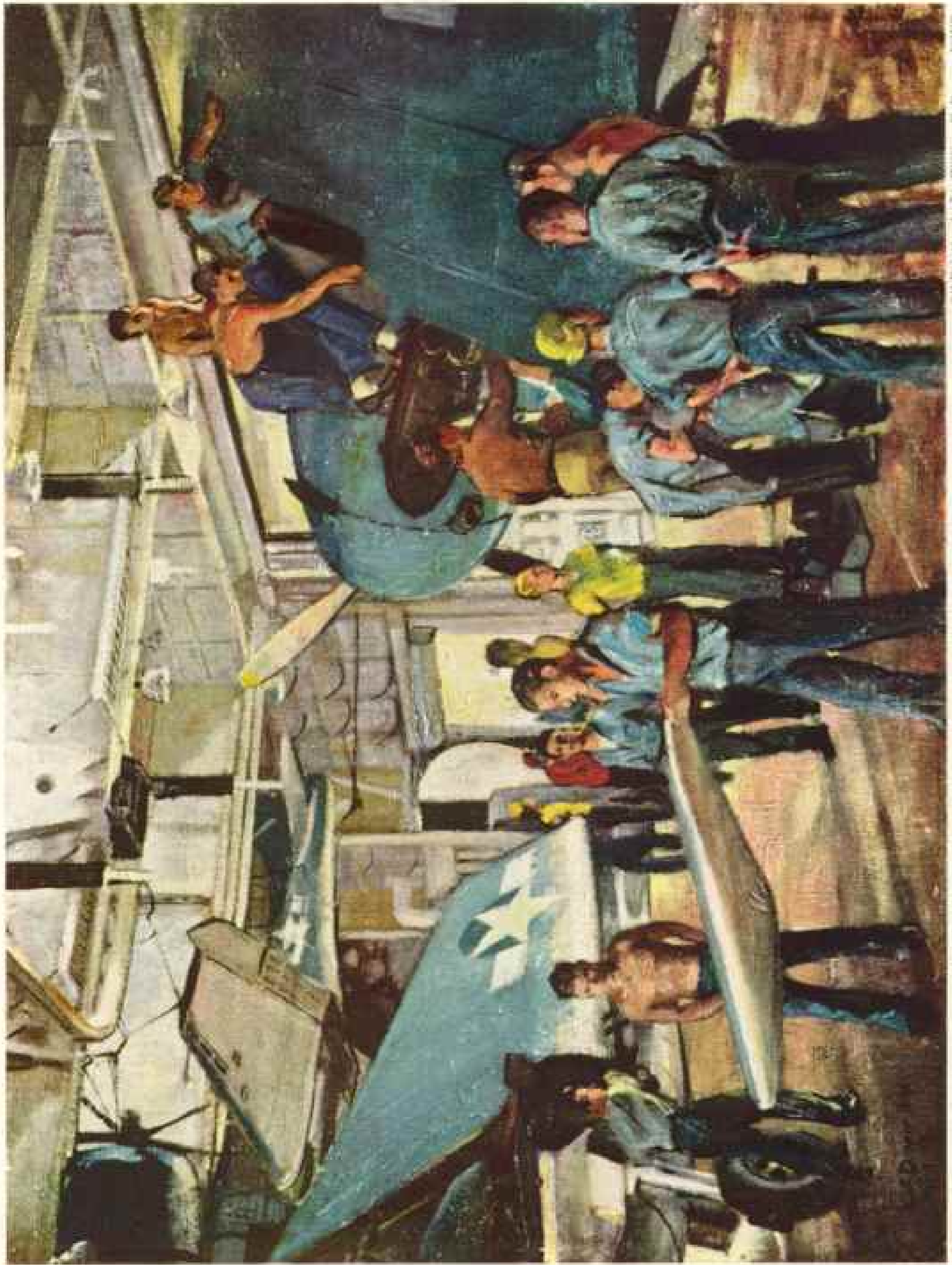
Tenderly lifted from an alligator to an LST, he is one of 20,000 Americans wounded during the Marianas campaign in the summer of 1944. Some 5,100 like him gave their lives. Japan's total casualties, nearly all dead, were 55,000. Their number was but a fraction of the millions killed, injured, or dispossessed in Japan as a consequence of losing the Marianas. Victory gave the United States three potential aircraft carriers—Saipan, Guam, and Tinian. Bulldozers covered them with 8,000-foot runways. Hundreds of Superfortresses came in to roost. By mid-1945 they had reduced the enemy's industrial cities to panic and ruin. Meanwhile the Marianas conquest led to Iwo Jima and Okinawa, still closer to Japan. From them our flying raiders cut Nippon's maritime lifeline to a stealthy trickle of ships. Lt. William F. Draper, a Navy combat artist, depicts the Marianas victory with this series of paintings, his fourth in the NATIONAL GEOGRAPHIC MAGAZINE.



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To Escape Night's Landing Hazards, Yorktown's Brood Races Home at Sunset off Saipan



© National Geographic Society
Oil Painting by Lt. William F. Draper, USN
Yorktown's Hangar Deck Mends a Battle-worn Fighter (left) and Torpedo Bomber. A Spare Dive Bomber Hangs Overhead



Oil Painting by L.L. Draper, USNR

When the Loud-speaker Booms, "Sweepers, Start Your Brooms!" Tennessee Gets a "Clean Sweep-Down Fore and Aft"



Oil Painting by Lt. William F. Drisler, USNR

A Ghost from Pearl Harbor, Tennessee Trains with Gloves, Mocking Japan's Power in Her Own Waters.

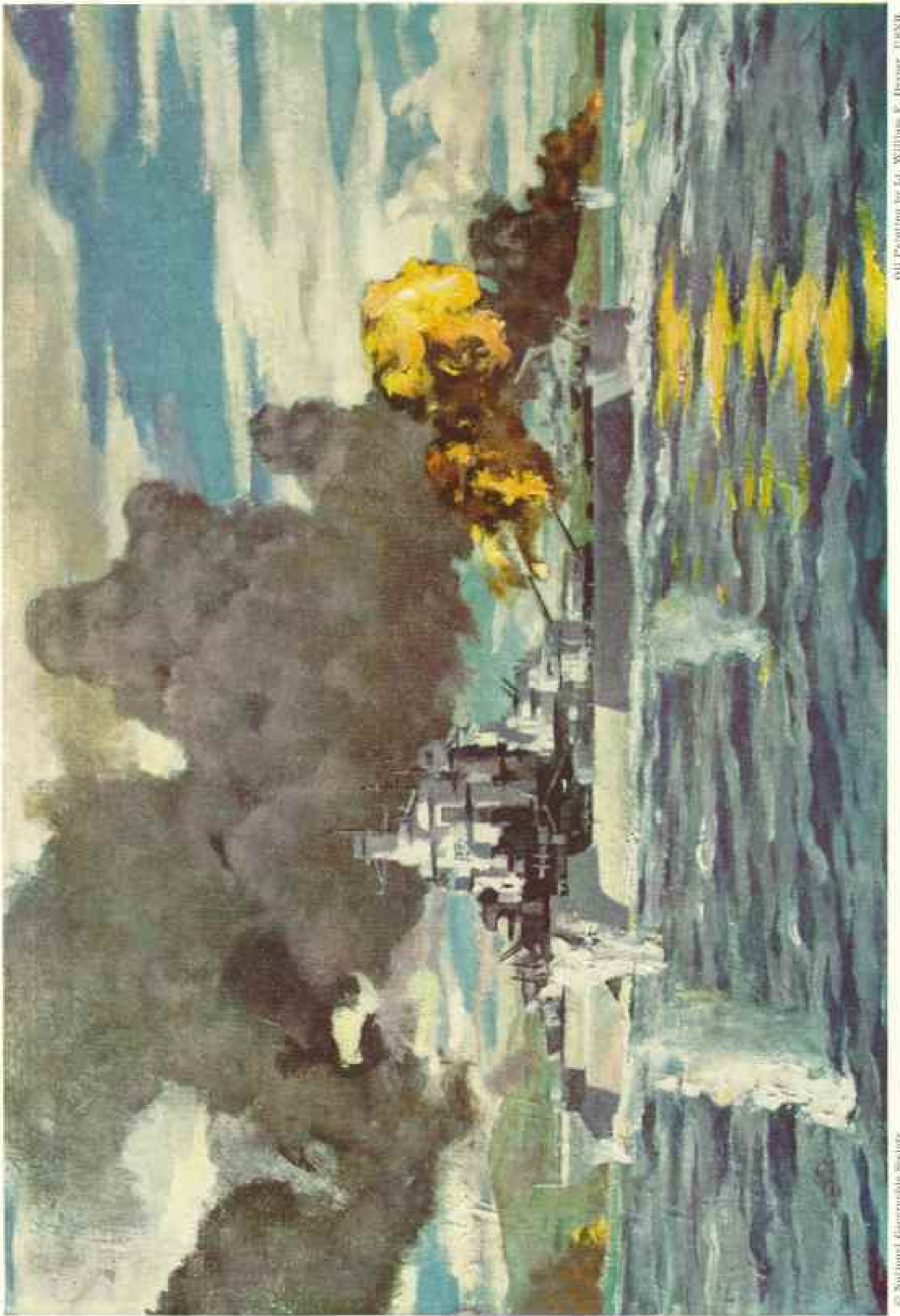
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Tennessee's Aircraft Lookouts Steal a Glance at What Her 14-inch Guns Are Doing to Saipan's Oil Dumps

Oil Painting by Lt. William F. Dwyer, USMC



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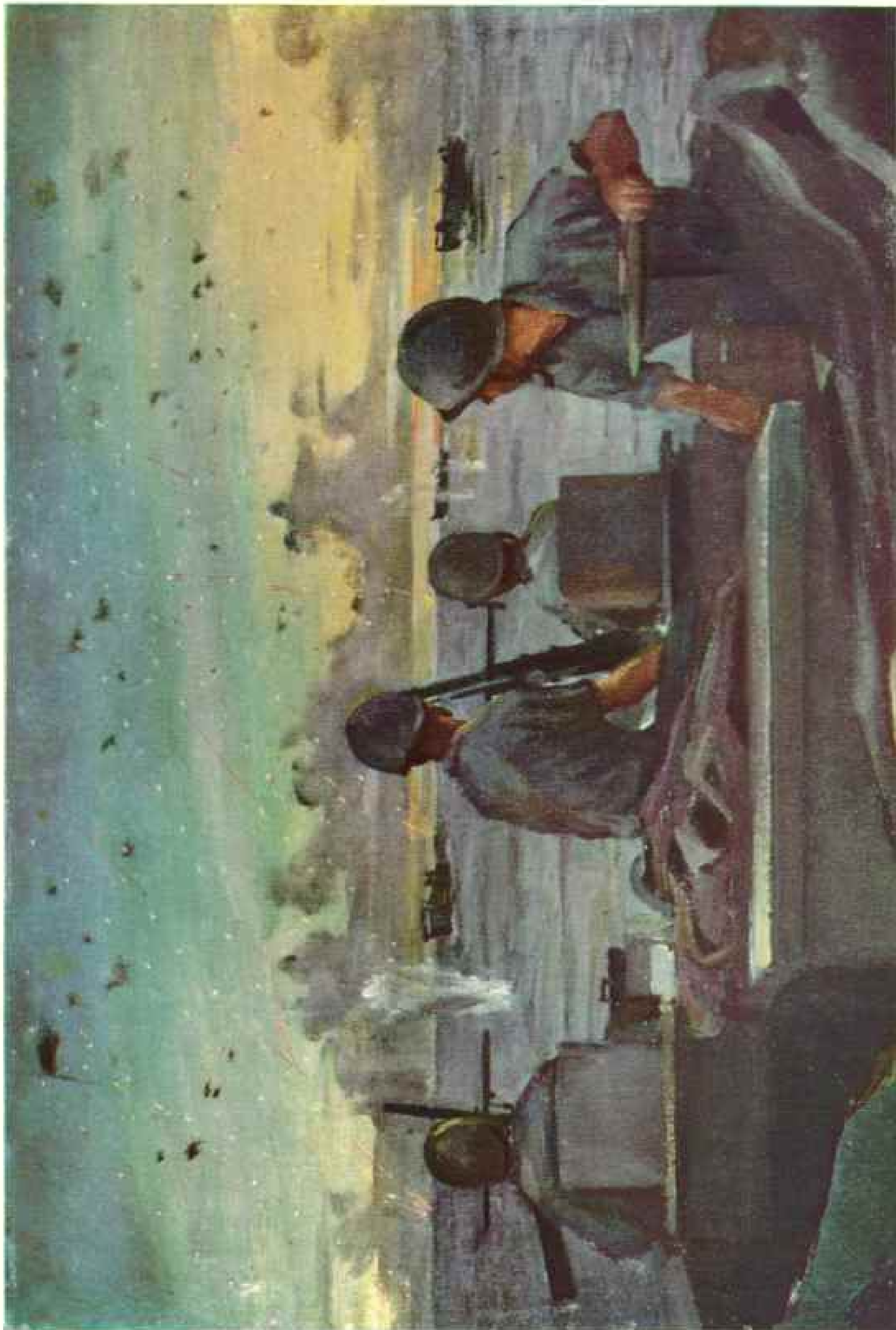
Straddled by Enemy Shells from Nearby Tinian, Tennessee Sticks to the Job of Softening Saipan

Oil Painting by Ed. William F. Draper, USMC



© National Geographic Society

Behind a Barrage from Rocket Ships, Trendless Landing Craft Transfer Guam's Invaders to Reef-burbling Alligators



© National Geographic Society

Oil Painting by Lt. William F. Doucet, USMC

Off Saipan, Landing Boats Weave Amid Shells from Shore. On the Horizon, Our Guns Probe the Sky for Planes



© National Geographic Society

Oil Painting by Lt. William F. Draper, 1918

With Inverted Belly, a Japanese Plane Salutes Gamm's First Wounded, Boarding an Alligator for a Hospital Ship



© National Geographic Society

Oil Painting by Lt. William F. Drayton, USMC

Marines Stalk Snipers Smoked Out of a Sugar Mill by Naval Guns on Saipan's D Day



© National Geographic Society

Oil Painting by Lt. William F. Draper, USMC

On Guam Beachhead Our Men Dig in Beside a Native Christian Church Shattered by Fire from the Fleet (right)



© National Geographic Society

Old Painting by Lt. William F. Propper, USMC

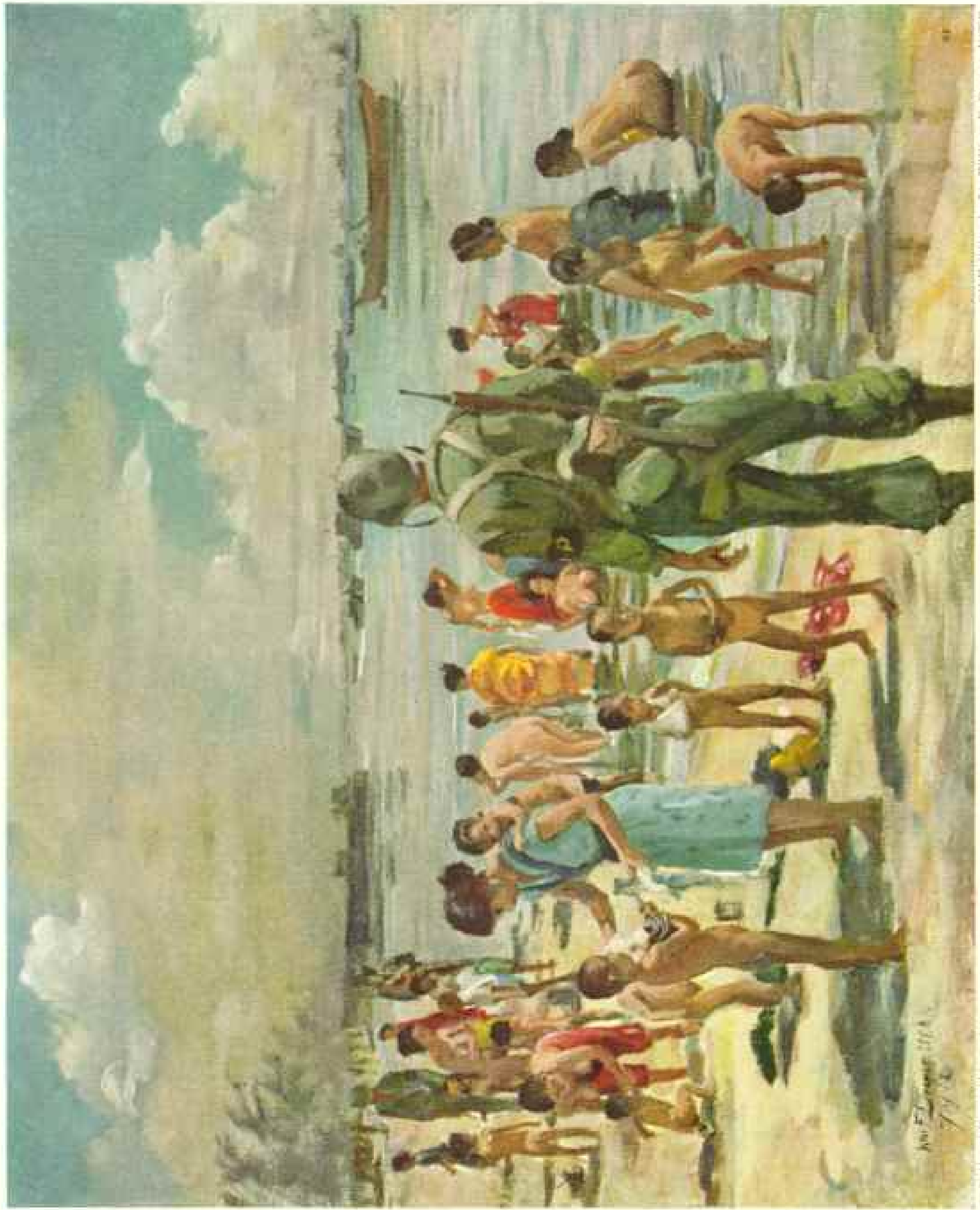
From His Disabled Tank, a Marine Fought Until He and 16 Japanese Lay Dead in a Saipan Cane Field (See Text)



Oil Painting by Le. Arthur F. Draper, 1945

A Gilded Geisha House, Transformed into an American Hospital, Receives Marines Wounded on Saipan

© National Geographic Society



Old Painting by Lt. William P. Draper, USNR

Glad to Be Alive, Japanese Women and Children Remove Suipan's Dust under the Eyes of American MP's

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Marines Dip Bath Water from a Well Near Their Saipan Command Post



© National Geographic Society

Oil Paintings by Lt. William P. Draper, USMC

Sheltered by Half a Tent, Marines Play Cards on Transport's Deck

The White War in Norway

BY THOMAS R. HENRY

NORWAY was dancing all night, through midnight dusk and midnight dawn, when the lilacs bloomed.

It danced to fiddles and pipes up and down broad avenues of Oslo and Trondheim, in public squares of Hamar and Lillehammer, along birch-shaded country roads.

Day after day through late May and early June the liberation dancing continued without regard for brief hours of lilac-scented twilight which separated dates on the calendar. Girls danced in costumes, little changed since Viking days, which had been hidden in trunks stored in attics for five years. Old ladies danced in the dresses they had worn at their weddings. There was little sleep, it seemed, for a month in Norway.

Fighting in Europe had ended. Commanders of German occupation forces under the midnight sun flew to Scotland and arranged to surrender their troops. Quisling and his collaborators, after giving themselves up, were taken without ceremony from their requisitioned mansions and thrown into jail to await trial (page 632). The terrible concentration camp of Grini near Oslo gave up 5,000 patriot inmates, who looked as if they were rising from their graves on Judgment Day (pages 625, 633, 639). Their cells were filled with false Norwegians who had served the enemy.

A Beloved King Returns

Tall, stately King Haakon, then nearly 73, came back to his throne amid scenes of wild jubilation (pages 618, 623). All institutions of government were restored as they had been before 1940 (pages 621, 627).

But these events seemed only episodes in the dancing. For the white war was over. Five years it had been a continuous battle in white; so white it had been nearly invisible against the dark background of the war as a whole. Men in white uniforms—canvas and ermine—had fought in white blizzards amid white mountains, the rattle of their rifles unheard against the roaring of white waterfalls (map, page 620).

It had been a war of white soldiers maneuvering swiftly and silently on skis among white birches. Summers when the birches were green had been breathing spells in the wraith-like struggle which continued from the German occupation of Norway until the last German soldier had been marched to a prison reservation.

Nowhere else in Europe had the enemy occupation been more disturbed by resistance forces than in Norway through the long white nights of five winters. Efforts to placate the populace failed everywhere. German commanders never could relax in their vigilance, or their ammunition dumps would start exploding from Tromsø to Stavanger.

Underground Even Used Nazi Cars

Walls had ears. Trusted girl secretaries, showered with gifts of looted jewelry, remained spies of the Underground in the offices of high officials. Chauffeurs, supposedly completely purchased collaborationists, were using the cars of quisling State officials and German generals to run hunted Underground leaders over the Swedish border after midnight.

And all took place in the everlasting whiteness. It was a painting in white on a white canvas, and all who took part in the events were lost in the overwhelming whiteness. There was no distinguishing snowdrifts and birch trees from sharpshooters and saboteurs.

So Norway was dancing when the sixth blossoming of the lilac bushes and the sixth appearance of carpets of violets in marshy fields at the heads of the fjords marked the white war's ending.

It danced, although it was hungry. Enemy troops had requisitioned much of its grain, much of its fish. Transportation had broken down through coal shortage, so that only with the utmost difficulty could food be brought from the farms to the cities. Many of the best cattle had been taken to Germany. There was no gasoline for the fishing boats, and the coastal waters were mined.

About once a week there would be a supply of fresh lobster in Oslo. Then the city feasted. Now and then fishermen, venturing a few weeks early along cold mountain rivers, would bring a few salmon into Trondheim and there would be feasts in the hotels. But always bread was scarce, meat nonexistent. Yet empty stomachs seemed to make little difference in the dancing.

Two Cigarettes Weekly Ration

Moreover, it was dancing with very little alcoholic stimulus. Beer, the supply of which seemed inexhaustible, had less than half of one percent alcoholic content. The only potent liquor was eau de vie, distilled from sawdust and wood chips, which cost 100 kroner (about \$20) a bottle. The Norwegian



Norwegian Official

A King Who Waged War in Exile Salutes His People, Who Carried On at Home

After five years in England, King Haakon VII returns to Oslo June 7, 1945. Crown Prince Olav, wartime chief of Norway's armed forces, wears British battle dress. From Bethesda, Maryland, her home in the United States, Crown Princess Martha returns with her children. Prince Harald and Princess Ragnhild are outlined against a Norwegian destroyer. Princess Astrid is partly hidden by her father (pages 621, 623).

was rationed to two cigarettes a week, and for a month after liberation the standard price for a package of American or British cigarettes was \$6. Stores were empty of everything. But Norway seemed hungrier for dancing than for food, liquor, or tobacco.

Dancing and movies. Lines of people two and three blocks long would stand for hours in front of a cinema, not to be admitted but to buy tickets for several days hence. I saw these lines start to form at 4 A. M. with people gathering in the rain, although the ticket sellers would not be on duty until 9. Movies had been boycotted during the German occupation. The populace of Oslo had refused to patronize pictures approved by the enemy and attended by enemy soldiers.

Norway had plenty of reason to dance. Not only was it free at last, but Germans no longer occupied its public buildings and arrogant German officers no longer caned civil-

ians from the sidewalks of its cities. The country, too, was essentially unscarred. The white war had left only flesh wounds which would heal rapidly with the resumption of peace.

For nearly five years the people had waited for an Allied invasion which never came. At least it never came in a way observable to the majority of the people. The country might well have been another Normandy, its cities rubble heaps from air bombing and shellfire. But relatively few cities were damaged. It was hard for Norwegians to sit by while the rest of Europe was liberated, but today Norway is profoundly grateful that it was not the battlefield of the great invasion.

The nation itself came out of the war with its reputation unclouded. Relatively few of its people had been collaborationists. Never since the foundation of the Kingdom by Harald the Fair-haired in 872 had Norwegian citizens



U. S. Army Signal Corps, Official

U. S. Army Uniforms in a Hotel Window Teach Oslo to Recognize Americans

"H7" stands for King Haakon VII. "V" may be the victory sign of the Germans, who stole it. Norwegians often wrote H7 within the V. Despite five years of war, the people appear well dressed. However, men's shirts are likely to be only collars and sleeves; front and back have gone into handkerchiefs. Women wear the last items of once-extensive wardrobes; some made clothes from blankets and sheets.

performed deeds of greater valor and self-sacrifice than had the wraithlike soldiers of the white army which had fought from the southernmost cape of Lindesnes to the ice-covered rocks of Arctic Spitsbergen. They had proved worthy of their Viking ancestry, which in recent centuries had turned its energy largely away from war toward accomplishments in the arts and sciences.

To the cause of the Allied world, Norway had made one noteworthy contribution—the services of its merchant fleet, the nation's greatest single asset. Nearly half was lost.

By mid-June most of the 300,000 Germans who had constituted the occupation force had been disarmed and confined in concentration areas by American and British troops sent to Norway to keep the Nazis under rigid control until they could be sent back to Germany.

These troops constituted some of the pick of both the Allied armies.

The British sent the "Red Devils of Arnhem," their First Airborne Division (page 631). Part of the American force was a battalion of Norwegian Americans recruited specifically for service in the land of their ancestors. They had been given rigorous training in mountain fighting and ski jumping. They included some of the world's foremost ski experts.

Originally, it seems, at least a small-scale Norwegian invasion had been planned, but it had been abandoned when it became apparent that America's full military strength in western Europe was needed in Normandy. So this battalion had been sent over the Channel. It had suffered heavy losses, so that the force which finally appeared in Oslo was, because of replacements, far from the homogeneous group which had been intended. Still, more than half the men spoke Norwegian and had some association with the country.



In Its Far North, Norway Has a New Neighbor—Russia

Finland, which formerly joined Norway on the Arctic Ocean, has ceded the Petsamo region to the U. S. S. R. Approximately a third of Norway lies above the Arctic Circle; its climate is tempered by the Gulf Stream. Southern Norway bears few war scars, but Finnmark Province is "scorched earth," the handiwork of retreating Germans (page 631). Most of Norway's three millions live along the many fjords.

Center of the American area was Norway's capital, 900-year-old Oslo, where a population of close to 300,000 gave the troops a hearty welcome. The American camps stretched all the way down Oslofjord on both sides.

From Rubble Heaps to Home Comforts

From the first, the homes of the city were thrown open to the Americans. They had come from Germany where "fraternization" was then strictly forbidden, where speaking to a German girl on the street was likely to bring a \$64 fine. Here the boys were deluged with the loveliest of blond femininity. They had come from cities which were rubble heaps into a town of wide, clean streets, few damaged buildings, electric lights, hot and cold running water, bathtubs, streetcars, a subway, and, above all, friendship. It was almost like being back in America again.

The troops went about freely through the city of the ancestors of so many of them. From the first, the most cordial relations be-



The remainder of the American contingent, excluding the numerous auxiliary troops, was drawn from the so-called Special Service infantry, Uncle Sam's super-commandos, who were trained in all the ways of mountain warfare. They had fought almost constantly since their first appearance in the mountains near Cassino in Italy in the early winter of 1944.



Norwegian Official

More Popular Than Ever, Norway's Exiled Leaders Come Home to a Joyful Welcome

Since his return May 31, 1945, aboard the British liner *Andes*, C. J. Hambro (left) has continued as head of the Storting (Parliament) and the Conservative Party. Trygve Lie (center) carried on as Foreign Minister. Johan Nygaardsvold (right), true to his promise, resigned as Prime Minister but retained his seat in the Storting (page 627).

tween soldiers and civilians were promoted by the American commander, Brig. Gen. Owen Summers.

There was plenty of sight-seeing. Foremost among places of interest for the soldiers was the Norwegian Folk Museum at Bygdøy, a peninsula jutting into the fjord near Oslo. Here characteristic old timber houses from all parts of the country have been re-erected in natural settings. In a special building are preserved the remains of two Viking ships, the Oseberg ship and the Gokstad ship, which are probably the city's greatest historic treasures.

At Frognersteteren, also near Oslo, the soldiers saw many relics of the voyages of Fridtjof Nansen and Roald Amundsen, especially Nansen's ship *Fram*, which now is preserved in a building designed especially for it on the shore of the fjord. In a few minutes by electric railway they could reach the great

dark forest of Holmenkollen, one of the world's foremost skiing fields.

With the citizens of Oslo the soldiers lounged about the palace grounds during the night-long summer evenings, and many doubtless got a new conception of the democracy of royalty as they saw King Haakon stroll and little Prince Harald romp among the people.

There can be no doubt that this royal old gentleman is one of the most popular of the world's few remaining monarchs.

On June 7 he returned from his long exile in England, exactly five years from the day of his departure, and 40 years from the day on which Norway separated from Sweden (page 618). In the fjord the Danish-born King transferred to the gunboat in which he had first come to his Kingdom 40 years ago in November.

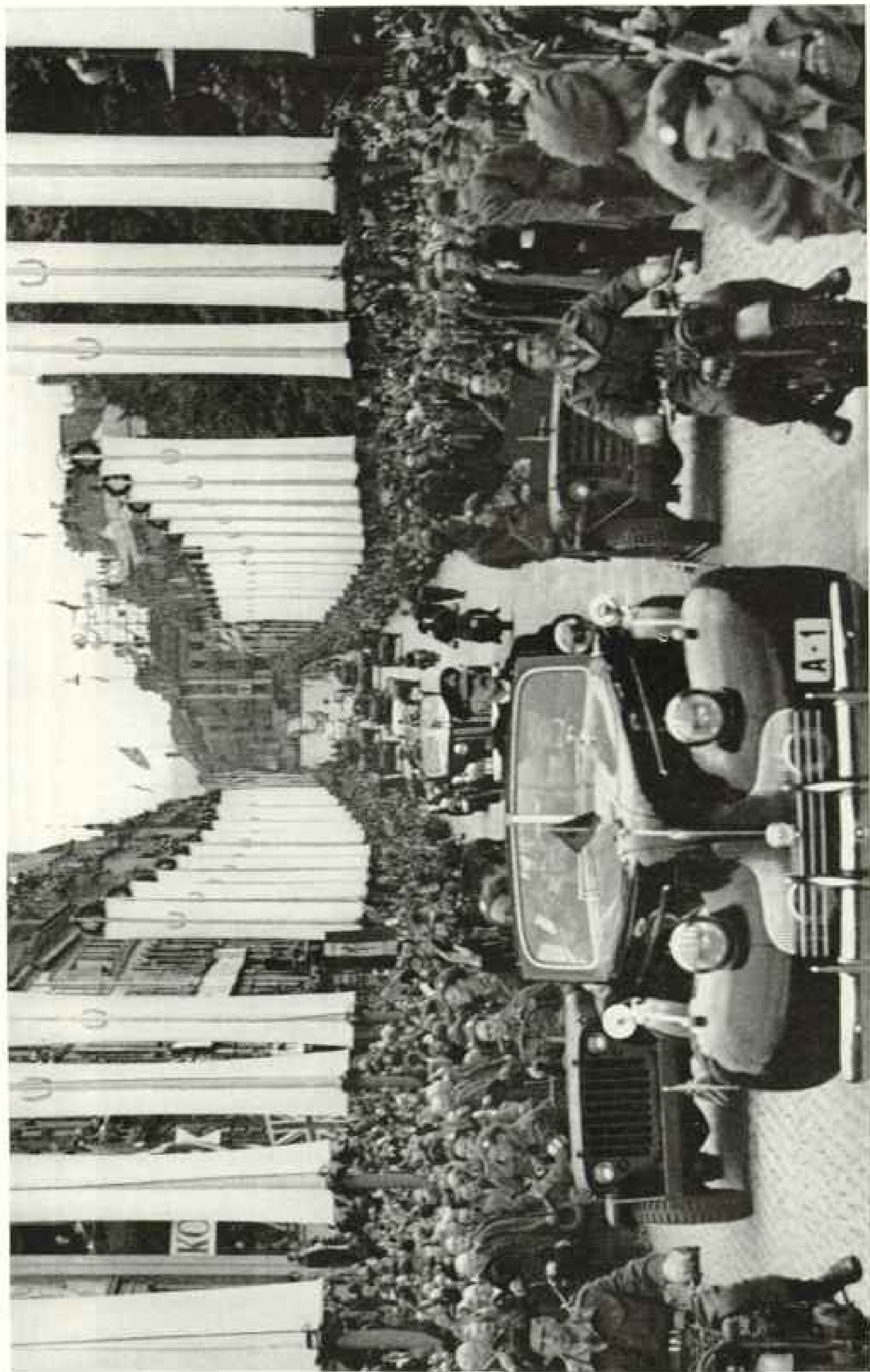
It is hardly an exaggeration to say that all Norway had gathered in Oslo to welcome him.



U. S. Army Medical Corps, Official

Candy and Chewing Gum Speak Louder Than Words When U. S. Army Nurses Make Friends with Children Near Oslo

More than fifty these girls are behind in their studies, for Germany closed many Norwegian schools. Teachers and students, united for resistance, met in one another's homes. Boys and girls learned never to whisper secrets. Some demonstrated outside prisons. Even babies shared dangers, riding weapons hidden in perambulators.



Norwegian Official

So Beloved Is King Haakon VII, Riding Home from Exile, That His People Gave Up Sheets to Beflag His Avenue of Triumph

For the homecoming, June 7, 1945, Karl Johan's Gate, Oslo's main thoroughfare, temporarily became Peace Street, and white was the appropriate color. Welcomers came from all Norway; even rooftops were crowded. That night 80,000 people filed past the Royal Palace. An armed guard trained in Sweden escorts the King. His peacetime chauffeur, who met him at the quay, is again at the wheel of Oslo's number A-1 (pages 618, 671).



U. S. Army Signal Corps, Official

An Informer, Masked by a Hangman's Black Hood, Ferrets Out War Criminals Hiding Among Captured German Regulars

In one prisoner-of-war camp, some 100 Gestapo and SS men were found masquerading in the uniforms of "innocent" Luftwaffe or Wehrmacht men. This informer may be either a pretended quailing or a German deserter. His arm-in-arm escorts are members of the Home Force. Right: a Norwegian regular home from duty abroad.



Norwegian official.

"We're Free!" That's What the Victory Flash Meant to Women in Grini, the Nazis' Big Concentration Camp Near Oslo

Men and women were separated by a fence; nevertheless, many became engaged. These women may have delivered illegal newspapers or served as Underground couriers. Some women performed sabotage; others were spies in German offices. Grini, surrounded by electric wires and land mines, handled some 20,000 prisoners during the occupation. Food and vitamin concentrates were smuggled into the camp. Eight thousand Norwegians went to jails in Germany; many never returned.



U. S. Army Signal Corps, Official

Homeward-bound, Liberated Russians Get a Gala Send-off from the Yanks in Norway

Germany held some 84,000 Russians captive in Norway. Last June many set out by boxcar across Sweden and Finland. At each departure, Oslo witnessed an international celebration. United States Army musicians played; the Russians responded with accordions. British officers took part in the speechmaking. Thousands of Norwegians sang and cheered (page 629).

They had been arriving for days by train, in wagons, on foot. Nearly a million citizens were there. They slept in the lilac-scented rain on the wet ground in the parks, or they wandered and danced about the streets all night. The parade on Haakon's arrival lasted five hours. It was the greatest day in Norway's history (page 623).

No Voice Raised Against the King

But every day for a week there were nearly as impressive parades. The city was a tossing sea of flags.

In Norway, as in other crowned democ-

racies, kingship is a symbol. But Haakon is loved by his people as an individual as well as a king.

Naturally, after the ordeal through which Norway has passed, somewhat bitter politics have arisen. Men who have led the Home Front movement at constant risk of their lives, men who have undergone the horrors of months in Grini believe their hour has come to govern the country, for the preservation of whose integrity they feel themselves largely responsible. But no voice in any party—even the relatively conservative Norwegian Communist party—ever is raised against the King.



Norwegian Official

Oslo, Welcoming the Cabinet Home from London, Celebrates the Rebirth of a Nation

Citizens in their holiday best fill the quayside and flag-draped upper decks May 31, 1945. At the sight of their leaders, gone five years, some men and women wept (page 621). Dark uniforms clothe members of the Norwegian police.

The feeling of intense loyalty extends from the farmers and fishermen around the southern tips of the shores of Oslofjord to the Lapp reindeer herders of war-desolated Finnmark, where the Germans pursued a scorched-earth policy against the advancing Russians.

Fair Trials for Collaborators

In other invaded countries there has been considerable rowdyism among resistance forces after liberation. Known collaborators have been strung from lampposts, and women who have openly consorted with Germans have had their heads shaved at public gatherings—and all this without benefit of

trial. Doubtless a few innocent have suffered with many guilty. It has been regrettable but thoroughly understandable.

The Norwegian, with his intense loyalty to his institutions and his respect for law and order under the King, has set a better example. Nobody has been condemned without a fair trial in open court, not even Quisling. This intense legalism has aroused the wonder of American soldiers. It has also somewhat irked men of the Underground and Norwegians who have passed through the horrors of Grini or been confined for days in mid-winter in the damp, unheated, windowless cells, where absolute darkness was perpetual,



U. S. Army Signal Corps, Official

"Boys, This Is a —." The Yank Can't Find a Word for *Jeep* in His Norway Guide



Norwegian Official

Refugees from a Slave Hunt Await Rescue on an Island 275 Miles above the Arctic Circle

As the Russians invaded Finnmark, Norway's northern province, retreating Germans ordered the deportation of 61,000 citizens. Some who fled were hunted down with dogs and shot. Here on Söröya, 500 survived starvation, exposure, and the manhunt until March, 1945, when four British destroyers evacuated them. An 85-year-old woman skied to the rendezvous; the youngest refugee was 10 days old. These women lived in the earth house (background); others endured the winter in snow huts. Many were in rags (page 631).

under the Gestapo headquarters near the Royal Palace. This place has been visited by nearly every American soldier in Oslo.

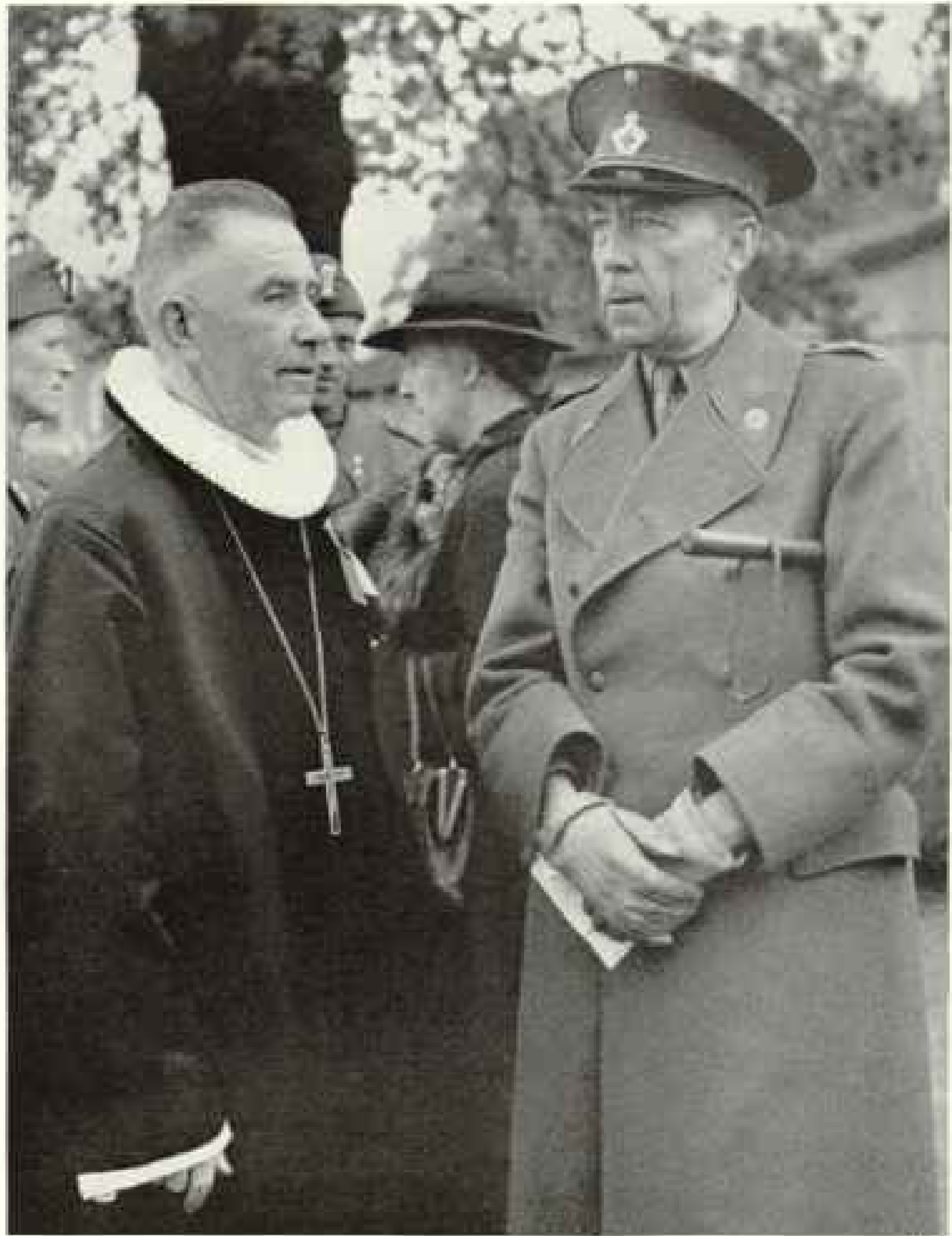
Norway's second and third cities, Bergen and Trondheim, are chiefly under British control, but American troops are free to visit them on two- and three-day passes.

For Norwegians and Yanks of Norwegian descent, Trondheim comes close to being a holy city. It once was the nation's capital. Kings still are crowned in its medieval cathedral, one of the finest examples of Gothic architecture in northern Europe. It contains the shrine of the country's patron saint, Olav.

Throughout the war Trondheim was an important German submarine base. From its concrete pens, built so that they were essentially immune to air attack, slunk under-sea wolf packs to range up and down the western coast of Europe and halfway across the Atlantic. They sent scores of Allied supply ships to the bottom. Trondheim and Bergen became two of the most important ports in Germany's naval warfare, especially during the latter part of the war.

Bergen has been visited by the Americans mainly for its scenery and history. Chief city of west Norway, it stands in a pocket formed by seven mountains, with the great granite shape of Mount Ulriken showing like a huge gable behind the roofs of the town. A funicular railway leads to the summit of Mount Fløien, a lesser peak which affords memorable views far out to sea beyond the maze of coastal islands (page 635).

All along the mountainous road between



Bishop Eivind Berggrav Confers with Count Folke Bernadotte

Primate of the Norwegian State Church, the Bishop was arrested by the Nazis in March, 1942. Shortly before V-E Day he was rescued dramatically by the Home Front. During his imprisonment he inspired his countrymen with secret messages. Vidkun Quisling, whom he defied, is reported to have called him "You triple traitor"—quite a compliment from a quisling. The Count, who represents the Swedish Red Cross, independently carried on negotiations with Heinrich Himmler for Germany's surrender.

Oslo and Trondheim the Americans passed through reservations where disarmed German troops had been concentrated and through camps of liberated Russian and Yugoslav slave laborers. The red flag of Russia with its gold hammer and sickle flew from many mastheads, and gigantic pictures of Stalin marked the entrance of each camp (page 626).

These Russians were popular with the Norwegian country people with whom they had associated. They were everywhere a fine, clean-looking lot of men. Their conduct after liberation was exemplary in the face of natural



Norwegian Official

This Jail-built Radio Set Fooled German Guards

Its operator, a captive liberated from Grini concentration camp, constructed five others like it, though he ran the risk of torture and death. A Bergen couple operated an Underground set in the basement of a German office, their former home, where they were permitted to keep one room. The Nazis' radio detectors never spotted it because their own receiving set "leaked" signals from the same address.

vengeance impulses, for they had been beaten and starved by the Germans. Beriberi and other dread diseases appeared in many of the Russian camps.

Post Cards from Hell

A few miles east of Trondheim is a fjord-side village of a few hundred inhabitants, which before the war was visited by thousands of British and American tourists solely because of its name. Americans especially liked to send home post cards with the postmark "Hell." They also could bring home as souvenirs return train tickets from Trondheim to Hell.

There is nothing about this hamlet of fishermen and farmers remotely suggestive of its sinister name. But from time immemorial the village has been "Hell," probably through some contraction of letters, and it remains "Hell," greatly to the profit of its post office

and those of its citizens who deal in picture post cards.

The Germans chose a site near Hell for one of their largest military airfields in Norway. From here came swooping sea raiders whose special job was to break up the North Cape (Nordkapp) convoys to Russia.* They preyed on Allied shipping all the way from Iceland to the British Isles.

Hell at times took on some characteristics of its infernal namesake, especially when its heavy antiaircraft guns were turned on American and British bombers. When the field was taken over by a Royal Air Force wing, German ordnance soldiers were set to work putting the ack-ack guns in good condition after they had been sabotaged. Great open fires served their forges, and for a few days the place

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



British Official

A Victory Handshake Expresses the Close Solidarity Between Britain and Norway

In front of Oslo's City Hall, Crown Prince Olav (right) greets Maj. Gen. R. E. Urquhart, who led the airborne "Red Devils of Arnhem" into Norway (page 619). An anonymous Home Front trooper (with arm band) deservedly shares the spotlight. Ski cap, ski boots and socks, white windbreaker, and knickers are his uniform, designed for the "white war" in the snow.

resembled, from a distance, the city of Beelzebub. There were even sulphur fumes in the air during a slight snow flurry one day in early June.

The Luftwaffe men, officers and soldiers, stationed here were a picked lot and were treated as such. The clubhouse for enlisted men was finer than many officers' clubs I had seen at airfields in the United States or England.

But the village itself has returned quickly to normal, and is about the nearest approach in Europe to the crossroads hamlet of the comic supplements where the farmers sit about the cracker barrel in the country store, chewing tobacco and whittling. For occasional American soldier visitors the storekeeper had placed in stock again a plentiful supply of post cards.

From Hell north to Tromsø, a distance of nearly 500 miles, there was little activity of

any kind, since fisherfolk were confined to ports by lack of gasoline for their boats.

Shortly after the arrival of the Allied forces a regular plane service was set up from Oslo. Many soldiers of Norwegian descent have taken advantage of it to visit the old homesteads because their parents or grandparents came originally from the Tromsø neighborhood.

The little city is north of the Arctic Circle and is headquarters for polar traffic and for communications with Spitsbergen. It has an observatory for study of the northern lights and an Arctic museum.

From Tromsø it was possible during the summer, providing special permission was obtained from the Russians, to proceed eastward into Norway's desolated Arctic Province of Finnmark. Here war left its worst scars. The Germans, retreating from the Russians, destroyed everything in their path (page 628).



Normatus Omnia

Vidkun Quisling Feasts Children of the *Hird*, His Guard—a Photograph Found in Gimle, His Luxurious Palace

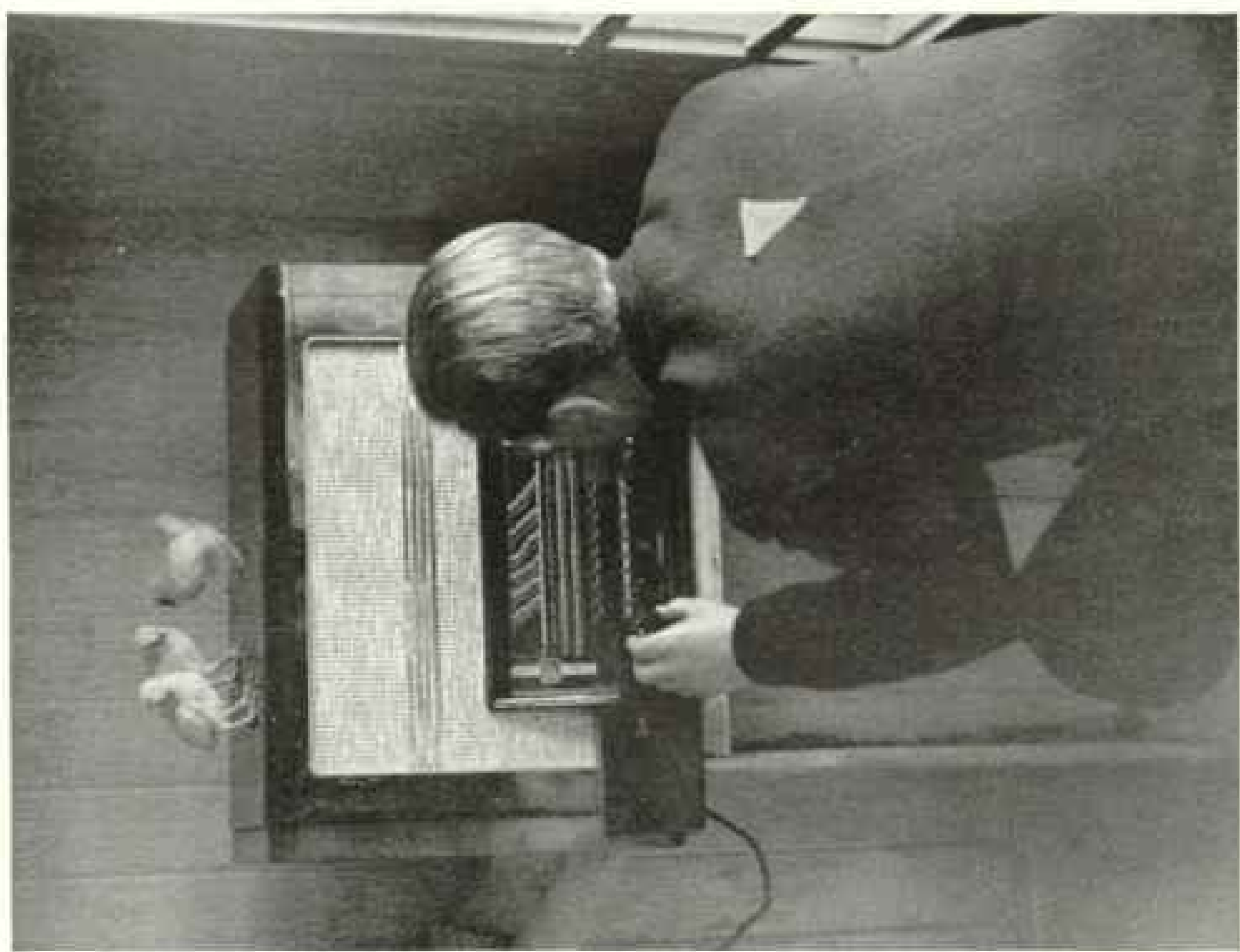
Before he went on trial for treason, Quisling was tossed, with 300 "common collaborators," into Møllergaten 19, the Oslo jail (page 637). The traitor was condemned to death by a firing squad last September. The innocent offspring of its quislings worry Norway. They do not merit segregation; yet without it they face persecution by young patriots. In Norse mythology, *Gimle* meant God's Hall, and in Viking times *Hird* was the King's Guard.



British Official

Young Norway on RAF Shoulders Waves the British Flag

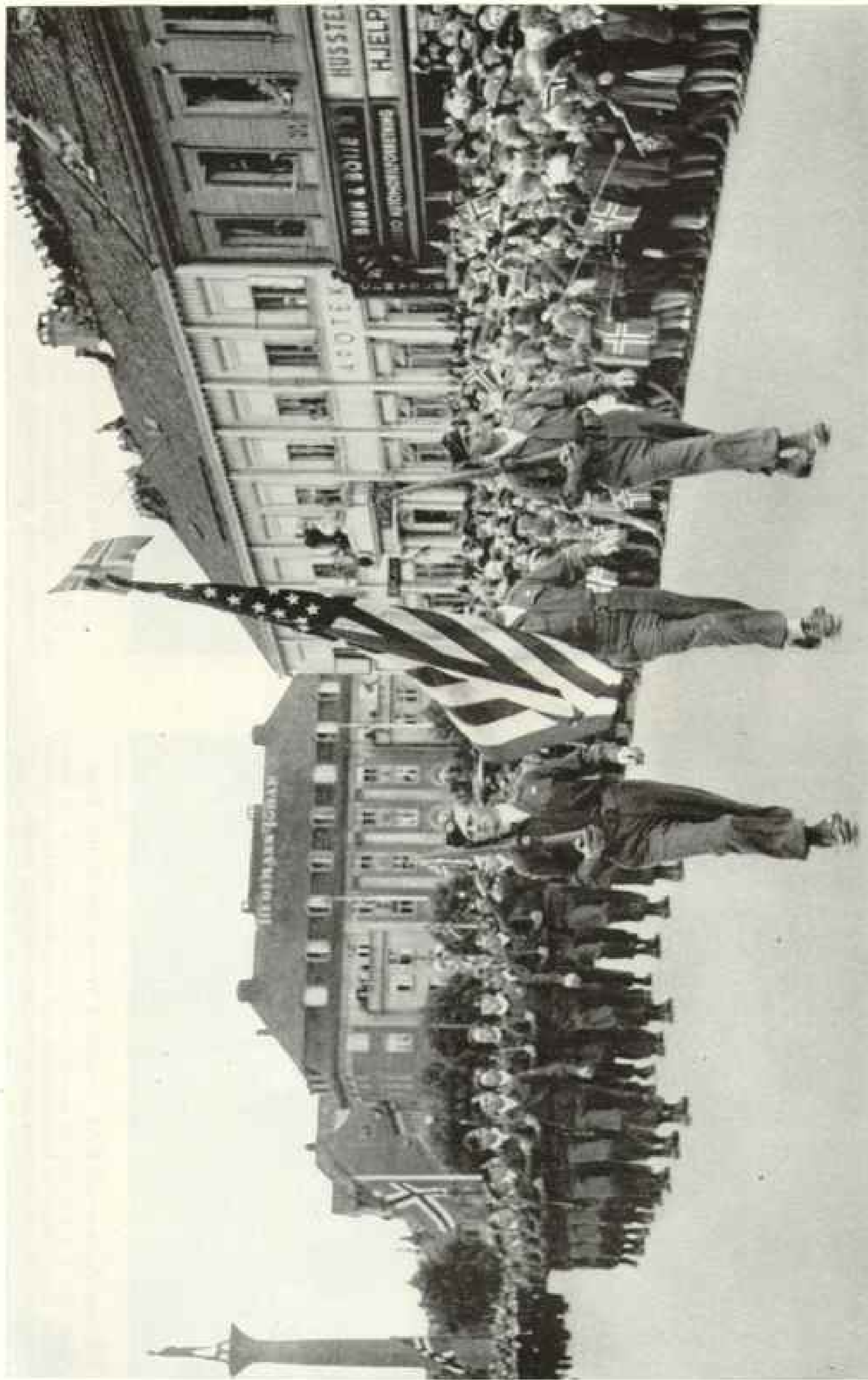
Soon after V-E Day this air gunner flew to Oslo with supplies for British airborne forces. Many of his companions lost their lives carrying weapons to Norwegians. His ribbon stands for the Distinguished Flying Medal.



Norwegian Official

A Secret Radio Operates in a Prison's Chicken Coop

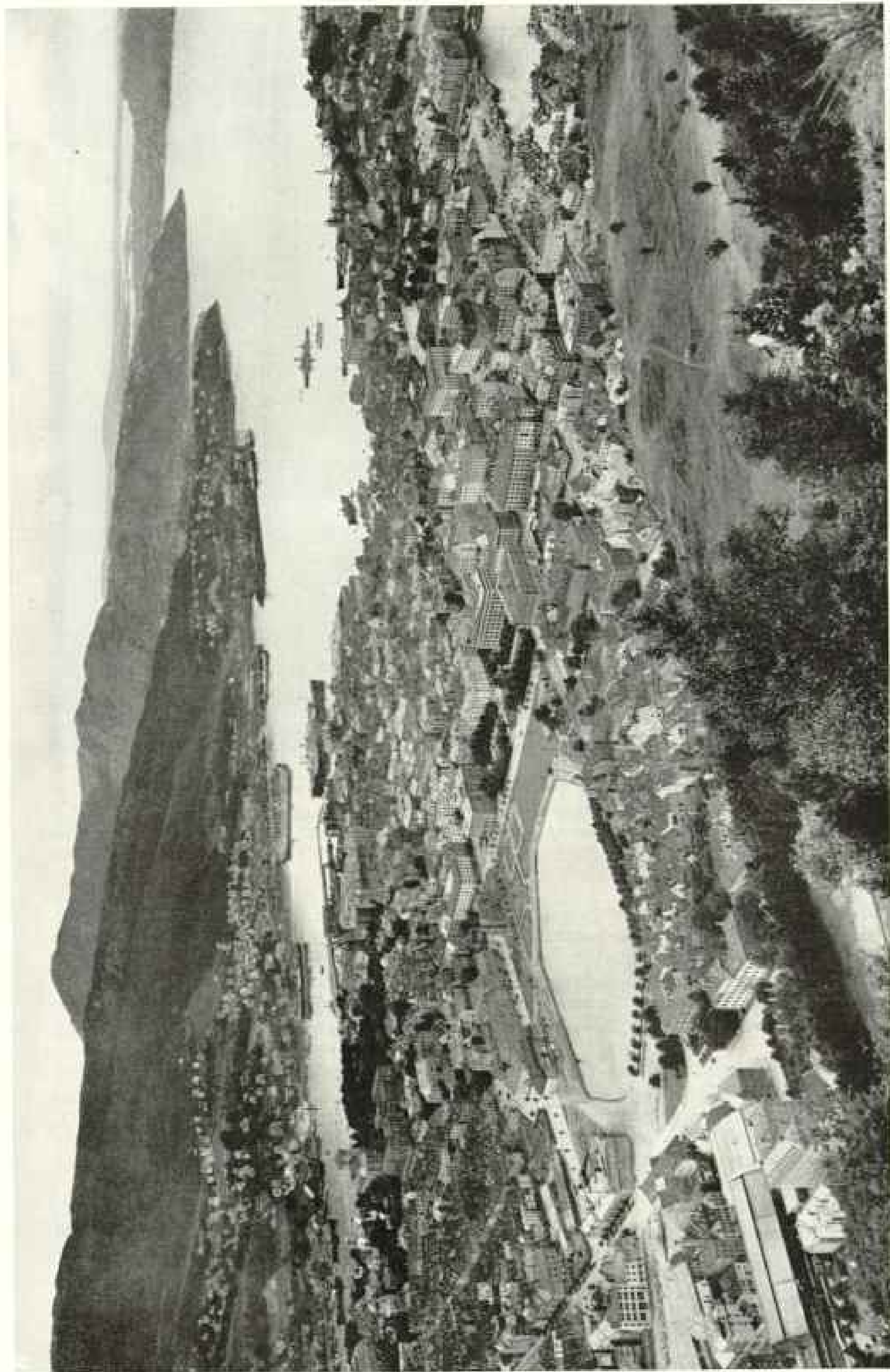
A liberated captive, identified by his triangle, demonstrates a German-made set at Grini. The Underground built its own compact, portable transmitters and receivers. Parts were made by hand; tubes were stolen from German sets.



Office of Strategic Services

Sidewalks Overflow and Roofs Become Galleries as Norwegian Americans Carry the Stars and Stripes into Trondheim

Out of the "white war" in the mountains march these Office of Strategic Services troops, especially chosen as linguists and skiers (page 636). Following the three leaders is a mixed unit—Americans in overseas caps, Norwegians in berets—parading in honor of Crown Prince Olav. Left: a statue to Olav Trygvason, the Viking king who introduced Christianity into Norway. Germany used Trondheim, Norway's "holy city," as a U-boat base and army headquarters (page 629).



Wichit Wornat

This Was Unscarred Bergen Before the Nazis Built Concrete U-boat Pens and the RAF Dropped Six-ton Earthquake Bombs
Seen from Mount Flöien, Norway's second city stretches along the Byfjord. The lake is Little Lungegaard. Vaagen, the main harbor bounded by the old Hanscable quarter, exposes its tip at the extreme right. Seven mountains crown down on the city (page 629).



British Official

German Sailors Sadly Examine the *Tirpitz*, Bottom Up in the Fjord at Tromsø

On November 12, 1944, twenty-nine RAF bombers found the Nazi battleship a sitting duck. Several six-ton bombs struck; within 15 minutes the 45,000-ton monster turned turtle. Its ignominious end removed a mighty menace to Murmansk's Arctic convoys. Norway's liberation gave the British this close-up of the propeller shaft, high and dry.

This was a rather obvious procedure, since the Red Army, far away from its base, was forced to live to some extent off the country.

At best, there was little enough sustenance for them in Finnmark. Towns were leveled and reindeer herds were dispersed or slaughtered.

This was particularly hard on the Lapp nomads. The two principal Lapp settlements, Karasjok and Kautokeino, were burned. Had it not been for the end of the war, the coming winter might well have meant starvation for these people, deprived of their herds. From the first they have been among the most loyal of Norse citizens.

Yanks Drop in from the Sky

The white war was not Norway's alone, although her white-clad saboteurs, vanishing into blizzards like bodiless spirits of the tempest-blown snow, were the chief actors.

Neither the United States nor England ever forgot the land of the northern lights. Perhaps the most thrilling episode of the ghostly fighting was a 16-man invasion of the aurora-haloed white mountains last March by American paratroopers of the Norwegian Operational Group.

Most of them were soldiers of Norwegian descent belonging to that colorful American military organization, Maj. Gen. William J. Donovan's Office of Strategic Services. The plan was to cut the north-south railroad line and thus break up German troop transport.

In all, five attempts were made to land. Twice the white-clad paratroopers commanded by Maj. William E. Colby set out from Scotland, once in January and once in February. Both times they were forced back when their B-24 bombers encountered heavy snowstorms. The third attempt, a week before Easter, was partly successful.



Norwegian Official

Charcoal-burning Buses Await Liberated Patriots at Möllergaten 19, a Nazi Jail in Oslo

For identification and medical examinations, they were taken to Grini, a concentration camp (page 617). Then they returned to the capital in a triumphal procession. Locked in Möllergaten's dark cells, political prisoners were treated like common criminals; they got ten minutes' airing a day. Though communications were forbidden, captives exchanged messages and even circulated an illegal newspaper.

The expedition started with 36 men and officers. Of these, 16 parachuted successfully to within a few miles of the rendezvous point, a high mountain lake northeast of Trondheim. The planes carrying the others with their equipment were unable to get through a storm and turned back. On the fourth and fifth attempts to rejoin their comrades, a plane crashed each time; 10 paratroopers and 14 airmen in all were killed (page 638).

It was 20 below zero in the mountains the Sunday before Easter. Snow wraiths swirled in the wind through the high passes and over the glasslike ice of Jævsjø (*sjö* means "lake"). The men dropped over a radius of about ten miles. It was eight hours before they were able to assemble in one spot. The snow over which they made their way on skis was five feet deep. The country, near the Swedish border, was almost uninhabited.

The men were dressed in snow-white parkas

of wind-resistant cloth, light, durable, and serviceable. Unlike the German Army, the American Army does not favor furs for winter mountain fighting. Especially in eastern Germany, vast warehouses filled with fur garments, loot from the furriers of two-thirds of Europe, were overrun. These quickly became heavy, cumbersome, and, even in the coldest weather, too warm for battle uniforms.

The Americans who landed on the lake quickly made tents of their white parachutes to shelter themselves from the wind. Several of them were old hands at the game. They had parachuted behind enemy lines before in France. They had been given intensive training for months for this particular exploit in the Scottish Highlands region, especially on the high slopes of the Grampians.

They were to be joined at Jævsjø by a small group of Norwegian Underground saboteurs. Arrangements had been made by radio.



Office of Strategic Services

Behind Enemy Lines, U. S. Para-ski-troops Fire a Salute to 13 Yanks in a Rocky Tomb

Near Juvöjü, a Norwegian lake, their parachute rendezvous in a flight from Scotland, these Office of Strategic Services men found their companions killed in the crash of a plane. Snow-white parkas protected them from 20-below-zero cold. Somewhere in the snow, they hid their explosives. With them they blew up bridges and rails in the spring of 1945. Outnumbered 10 to 1, they outran Nazi pursuers in a 50-mile ski chase.

There was hardly a day for five years when the Norse resistance men were not in radio communication with their army headquarters in London, and Major Colby's group rarely failed to get a daily report of its activities back in OSS offices in England.

A Gun Recalls the Password

The passwords had been agreed upon. The American was to ask an approaching native:

"Is there good fishing around here?"

The answer: "Yes, especially in winter."

But the first Norwegian, a native of the section, challenged by Colby forgot in his excitement and answered what he knew to be the truth:

"No, it's no damned good!"

He quickly recalled the correct answer when a gun was pressed against his back!

With the men had been dropped approximately ten tons of equipment, including three tons of explosives. Much of it fell into small fjords or forests in 15 feet of snow, and the men had to work about a week to recover it. Then it was cached on the lake and well camouflaged with snow and with the white parachutes.

On the trail each ski trooper carried 85 pounds of equipment on his back. Every third man alternated every two hours in dragging a toboggan loaded with 2-pound blocks of a plastic explosive far more powerful than dynamite, which could be molded into any shape by hand.

The landing on the lake had been unobserved. There were no German patrols in these lonely mountains. The men kept well hidden for a week. Any fire, of course, was out of the question, despite the intense cold. Smoke certainly would arouse suspicion.

The first bridge-blowing job was accomplished successfully on Easter Sunday.

It was snowing. The enemy had left only a couple of sentries on duty while the rest of the guard were attending Easter services at a near-by village church. With ski tracks quickly covered by falling snow, the white-parkaed Americans made their way back to the parachute-tent bivouac without any clash with the enemy.

An intensive search for them started immediately. German ski patrols combed the mountains, and it was necessary to cut loose from the base of operations.



114

Proudly She Wears Her Prison Badge, an Honor Won When the Nazis Jailed Her at Grini

Her cap says she was a student at Oslo's University. When Germany closed it, hundreds went into the Underground or fought openly in the hills. Peace, which this girl celebrates, means she must exchange excitement for dull study.

The next job was on a larger scale and correspondingly more difficult: to blow up about four miles of the north-south rail line, which was well guarded with sentry posts. This feat also was accomplished in a storm, with the white-clad men hidden in the whiteness of the snow. They infiltrated the sentry line in groups of three. The demolition job was a complete success. A hundred charges went off in two minutes.

But the Easter Sunday job had put the Germans on the alert. The chase started at once, with the Americans outnumbered ten to one. But they were better men on skis. They fled 50 miles into the mountains without pausing for breath. This probably was a record of some sort.

Penicillin Saves Wounded Patriot

One soldier, a Norwegian patriot who had joined the group, had a bullet wound in his abdomen. He was treated with penicillin and dragged on a sled hastily improvised from a pair of skis. The man was unconscious most of the time. He was taken over the Swedish border and placed in the care of some villagers. He is now recovered.

Return to the lake was out of the question.

The ski troopers found shelter in the cabin of a *seter*, one of the high mountain pastures used by farmers in summer for their cattle and goats. Food was restricted to the amount each man carried on his back.

Once, however, a German food cache was found. It contained flour and champagne. This curious combination is not surprising. Wherever German troops were stationed, even at the loneliest outposts, there was always plenty of champagne, presumably looted from France. The Americans had several good meals of pancakes and champagne.

A long halt anywhere would have been suicide, for the mountains were full of enemy ski patrols. The Americans must keep constantly on the move, living off the country as best they could. At one time they were reduced to eating reindeer moss for a couple of days.

What seemed at first a big break in luck came when they encountered a nomad Lapp with a herd of reindeer. He was fleeing from the Germans. The paratroopers bought and ate one of the animals.

Though constantly on the move, the Americans managed to keep in touch by radio with London. Their superior officers knew where

they were, but could not help them. The group hid in the mountains until the war ended.

When they heard over the air the news of the German capitulation, they came out of the mountains toward the little town of Steinkjer. From a farmhouse they telephoned to the Steinkjer hotel asking that dinner and beds be reserved for them.

When the bearded, long-haired, white-clad Yanks and their Norwegian companions reached town a half hour later, they were greeted by the mayor and a band in the central square.

Throughout the war, RAF, American, and Norwegian pilots risked their lives night after night, flying low over ice-covered mountain peaks through cloud and snow and swooping blind through narrow valleys to drop supplies to the Norwegian resistance forces. Many planes and men were lost in the white war.

Heroes of the Underground

But the major credit for everything accomplished against the common enemy in Norway belongs to the resistance forces, the little groups of hunted, sleepless, nameless men who for five years fought against odds of a thousand to one. A month after the German capitulation I met a leader of the movement at an Oslo cocktail party. Before the war he had been a rising young attorney. He still was going under an assumed name, because of various complications arising from work left undone. His wife, whom he had not seen since the beginning of the war, still thought he was dead.

The movement in Norway was on much the same pattern as in other invaded countries. The men were organized in small groups. Each group knew only its own leader. It did not know the members of any other group or the higher officers from whom orders came for sabotage jobs. Lifelong friends, members of different groups, knew nothing of each other's activities. Old neighbors were amazed when, after the capitulation, they found that both had served as saboteurs. Sometimes they actually had suspected each other of serving the Germans.

For the most part, these little groups hid out in the mountains from which, moving swiftly and silently as ermines through the snow, they raided German installations.

The chill of late winter still was in the air when I encountered one of these groups at a high mountain inn at the peak of a ridge between Oslo and Trondheim. They had just left their hiding place. They were led by a Norse paratrooper who had been flown from

Britain and dropped into the mountains with special sabotage equipment. A few weeks before, they had been living in a comfortable Eskimo-type igloo which the leader had learned to build as a Boy Scout.

Naturally, the resistance groups were of valuable aid to the Americans and British in locating German secret installations. A precious memory of the war is a night spent with the local resistance group at Lillehammer after a raid on a country hotel which had served for a time as German staff headquarters. Many secret documents still were concealed there, but staff officers who remained were almost perpetually drunk. They had large supplies of champagne and cognac which they knew eventually must be handed over to the Allies. They were trying to consume as much as possible before the day came. The raiders had acted on information from a German deserter who had joined the Norwegian Underground.

After the last war, a large number of German and Austrian orphans were taken into Norwegian homes and reared and educated as members of the families. They returned to their own countries later. When the forces of the Reich invaded Norway in April, 1940, charges were made that these same boys and girls served as guides and that their intimate knowledge of the country played an important part in its quick reduction. This was true.

But there is another side to the story which throws a better light on human nature. Some of these orphans were not wholly ungrateful. On the contrary, a number had volunteered because of their gratitude. An appeal had been made to them to help save Norway, which they loved. Norway, they were told, had been invaded and was being oppressed by the British. The German Army's mission was to liberate their benefactors, whom they looked upon as fathers, mothers, brothers, and sisters.

When the orphans, especially those from Austria, learned the true picture, some of them shot themselves and many others deserted to the Underground. Some remained on duty in German uniforms, an excellent position in which to serve as spies for the Underground. They played a real part in the white war.

With the weird white war passing into history, the mountainous, forested land of the Vikings and the northern lights seems the happiest country in Europe. That is why its people dance all night in the avenues and the squares.*

* For additional articles on Norway in the NATIONAL GEOGRAPHIC MAGAZINE, see: "Norway, an Active Ally," by Wilhelm Morgenstjerne, March, 1943; "Country Life in Norway," by Axel H. Oxholm, April, 1939; and "Life in a Norway Valley," by Abbie L. Bosworth, May, 1935.

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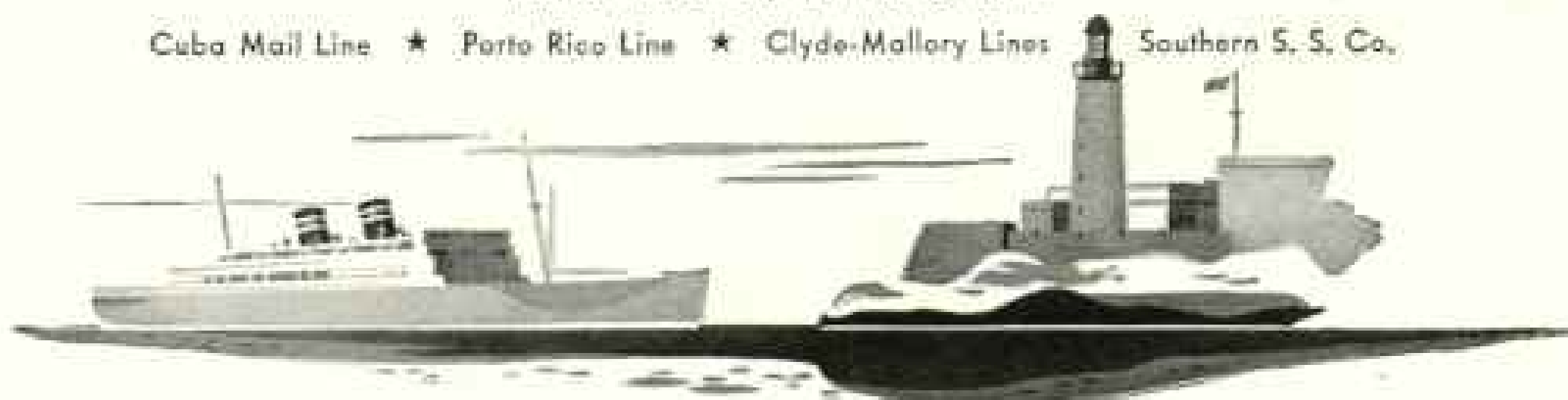


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YES, that is the all-important question in house heating. For the "Comfort Conscious Zone" is the only part of your rooms that matters so far as bodily comfort is concerned. It is the space from the floor to standing height, approximately six feet. The upper space might be called the "Waste Heat Zone," because heat that rises there is largely wasted.

In the average home during the heating season, temperature from floor to ceiling may vary as much as twenty degrees. All too frequently floors are drafty and too cold for children to play on without endangering their health.

Fortunately, Minneapolis-Honeywell has devised a new and different heating control system that will correct this condition. It is called MODUFLOW. By an ingenious method of heat control and supply, Moduflow utilizes much of the heat formerly wasted at the ceiling to heat the lower levels; result — blissful, even comfort from top to bottom of the "Comfort Conscious Zone."

Learn how easily and economically Moduflow can be installed in your present heating system or new home. Mail the coupon today for free booklet.

MODUFLOW

THE NEW HONEYWELL HEATING CONTROL SYSTEM



Free! SEND FOR THIS BOOKLET

Minneapolis-Honeywell Regulator Co.
 2902 Fourth Ave. S., Minneapolis 8, Minn.
 Please send me free copy of "Heating and Air Conditioning the Past and Present."

Name _____

Address _____

City _____ State _____

Buy and Hold MORE Victory Bonds!

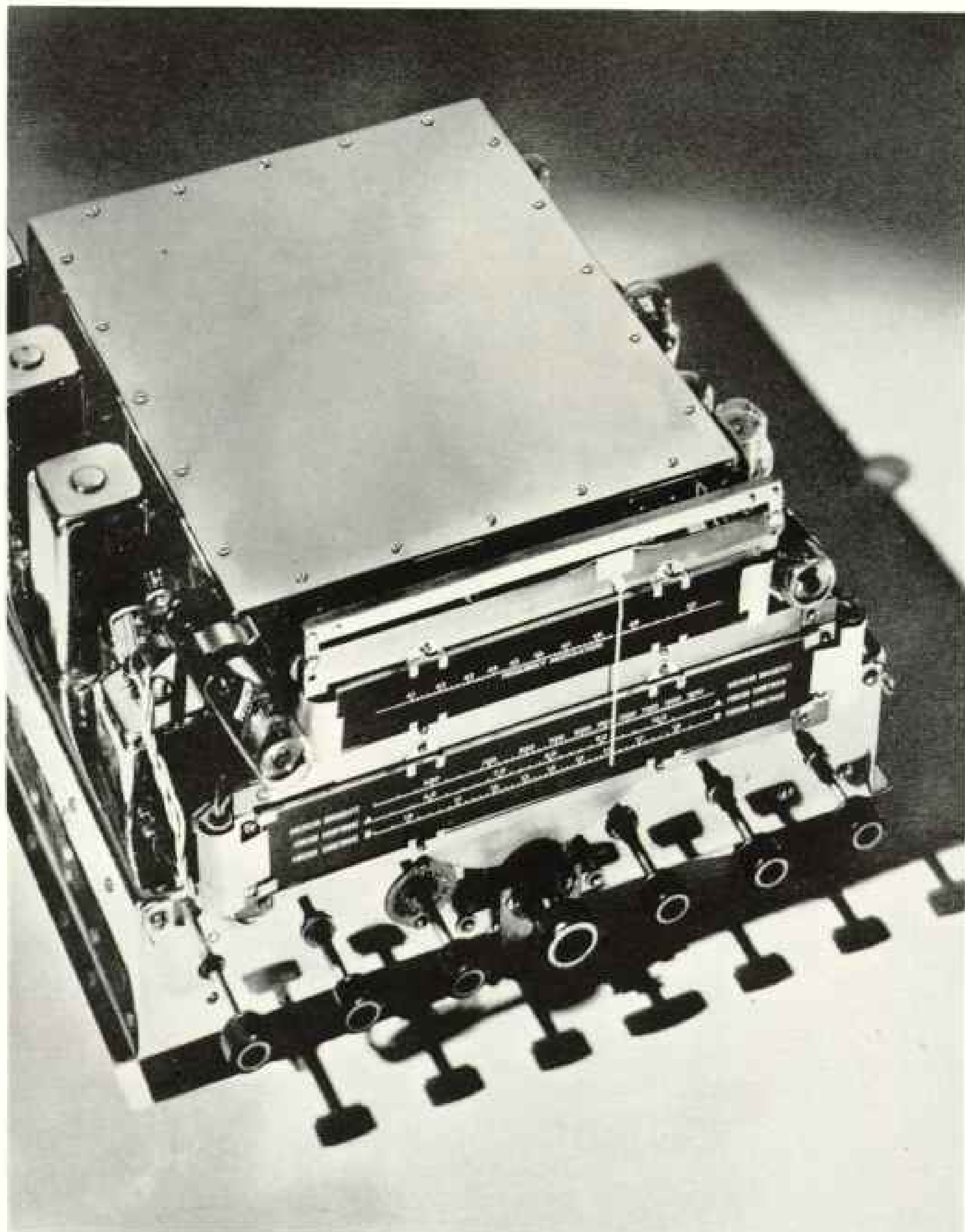


Ever Smarter Looking, ever giving greater value — The General Tire, through pioneering advances, has kept far ahead in mileage, safety, comfort and reliability. One thing that has never changed is General's original principle . . . building the top-quality tire at all times. The Generals you buy today proudly uphold this tradition.



— goes a long way to make friends

© THE GENERAL TIRE & RUBBER CO.
AKRON, OHIO



These are the "works" of a Scott radio . . . Don't they say, better than words, "Here is elegant engineering"? Before long a limited number of people who are able to afford the very best in a radio and record player are going to have a Scott. Wide choice of cabinets to fit your décor, or custom installations if you prefer. Prices start around \$500. Write us about our plans . . . Scott Radio Laboratories, Inc., 4448 Ravenswood Avenue, Chicago 40, Illinois.



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LOCKHEED CONSTELLATION

THERE'S A NEW STANDARD IN AIR TRANSPORTATION!

Lockheed Constellation

Lockheed Aircraft Corporation, Burbank, California  Years ahead in the science of flight





INDOORS OR OUT

**“Hardware” really means
HARD WEAR**

NO OTHER EQUIPMENT for your home must withstand such rough usage as hardware. And experience has taught that no plating will long protect rustable metals. Hardware that is truly worthy of its name is made of solid brass.

Solid brass cannot rust. Fashioned into hardware it insures smooth operation and long-lasting beauty. It will withstand continued exposure to weather as well as to humid atmosphere in kitchen, bath and laundry.

Homeowners will be glad to know that such hardware, especially designed for the moderate-priced home, is a definite postwar promise of the industry.

The American Brass Company does not make hardware, but, for more than a century, has supplied brass, bronze and other copper alloys to leading manufacturers. If you are interested in building or modernizing, send for free booklet “How to Protect your Home against Rust.”

Anaconda Copper & Brass



THE AMERICAN BRASS COMPANY

General Offices: Waterbury 88, Connecticut

Subsidiary of Anaconda Copper Mining Company

In Canada: ANACONDA AMERICAN BRASS, LTD., New Toronto, Ont.

BUY VICTORY BONDS . . . Help assure World Peace



KEEP ON BUYING VICTORY BONDS

"Meet Daisy, my dressmaker!"

It's a far cry from Paris to a pasture. But in the world of fashion, Daisy's quite a figure!

Chances are, you already own one of her "creations" . . . a soft little dress, a trim suit, perhaps a cozy housecoat. In the lining or on the price-tag, it's identified as *Aralac*.*

Aralac is another exciting product to be conjured from a pail of milk. Spun from the casein particles into fleece-light strands, its composition is much like that of wool or fur. It boasts the *livensness* common to protein fibers. Weaves into fabrics that are colorful . . . smooth-fitting . . . delightful to feel.

Furthermore, they disprove a time-worn old proverb. For here's one case where you can "eat your milk and wear it, too." While providing, by the millions of yards, a welcome new material for designers' scissors . . . *Aralac* does not divert a single glass of milk from your family's table.

In developing this versatile textile . . . out of once-discarded wastes . . . National Dairy simply carries forward a wide-ranging program to increase the usefulness of milk by-

products. At National Dairy Laboratories, research goes on each day to improve the processing of cheese, butter, ice cream. A continual effort to find new and better ways to bring you milk, nature's most nearly perfect food, in all its forms.

*Dep. U. S. Pat. 198.

Dedicated to the wider use and better understanding of dairy products as human food . . . as a base for the development of new products and materials . . . as a source of health and enduring progress on the farms and in the towns and cities of America.



**NATIONAL DAIRY
PRODUCTS CORPORATION**

AND AFFILIATED COMPANIES

Here's the Big News about New Static-Free F-M Radio

(F-M... "Frequency Modulation"—sensational new method of radio broadcasting)

1.



Not even thunderstorms... or other natural static will mar a Zenith F-M radio's life-like tone. No popping or crackling to annoy you, because all static or interference will be virtually abolished. And only a Zenith will have a new way to increase listening range.

2.



Smooth as satin tonal realism will be a feature of Zenith F-M radios. You'll hear music and voices against a backdrop of velvety silence. No electrical noises, no distorted sounds... just pure, uninterrupted listening pleasure. When you hear it you'll agree it has the touch of genius.

3.



Genuine F-M... not imitation... Zenith collaborated with the originator in bringing F-M to its present peak of perfection. Through long experience in operating its own 50,000 watt F-M station, and through important new Radionic developments, Zenith will have F-M radios with the touch of genius.

4.



No overlapping or fading stations with genuine Zenith F-M. It will be as superior as a sharp photograph is to an out-of-focus snapshot. Each F-M station will tune in with razor-sharp precision and stay on the beam until you turn the dial.

5.



Records come alive! First, Zenith's new way to reproduce record music ends all needle-noise, scratch and rattle. Then, the music goes through the static-free F-M radio circuit. The result—all the hidden beauty never heard in records before, plus the tonal realism of F-M.

For the Best in Radio Keep Your Eye on Zenith

ZENITH
RADIO

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RADIO • FM • RADAR • TELEVISION • RADIO-PHONOGRAPHS • HEARING AIDS

Naturally a Leader in F-M
Because
Zenith Concentrates on

**RADIONICS
EXCLUSIVELY**

Following the discovery of F-M (Frequency Modulation), Zenith joined with the originators in its development. In fact, Zenith's 30 years of concentration on Radionics Exclusively has played a vital part in bringing genuine F-M to its present perfection.

This vast reservoir of experience in Radionics—the science of radio waves—has led to amazing achievements in manufacturing F-M devices for the armed forces. And all Zenith's wartime discoveries will be incorporated in the coming new Zenith F-M Radios and Radio-Phonographs.

When you see and hear them, you'll know instantly that there's a touch of genius in everything Zenith does.

**BUY VICTORY BONDS—
BETTER THAN CASH!**

AIR POWER

We've Got It—Shall We Keep It?

Air power proved the deciding factor in defeating Germany, admits the captured German general Von Rundstedt. It has played perhaps an even bigger part in the crushing of Japan. There is no question that air power is vital to the future security of the nation.

These facts arouse searching questions among thoughtful Americans:



Now that we have achieved air supremacy, is it going to be easy to retain it in the future?

No. We can lose our air edge unless new and better aircraft equipment is constantly being designed and produced. This requires a complex development cycle of many steps, all taking time, skill and effort.

What are the steps?

Army and Navy outline requirements. The aircraft industry, applying the results of continuing research, designs prototypes. Army and Navy test and prove them. Industry makes further refinements. Then follows a production run in sufficient numbers to permit adequate testing by tactical units, with further refinements to follow. Only then is the equipment proven, ready for mass production in an emergency.

How much time does this involve?

At least five years.

Does that mean that the first-line equipment with which we won air superiority was actually under development before the war began?

Yes. As typical examples, the Hamilton Standard Hydromatic propeller was conceived in 1935, the Pratt & Whitney Double Wasp engine in 1937, the Vought Corsair fighter in 1938, the original Sikorsky helicopter in 1938.

How much of the aircraft job was done by

the basic aircraft industry itself?

All the designing and developing. Up to 1942, all the production of airframes and propellers and 98% of engines. Since then, over nine tenths of the airframes and about half of the propellers and engines. The rest were built by auxiliary producers.

How quickly did the auxiliary producers get into full production?

Eighteen months to two years.

With our accumulated knowledge and experience, could we, in case of a future emergency, shorten that development and production cycle?

Possibly, but as performance goes up, it takes more engineering skill, more time, more money than ever.

What is the American aircraft industry doing to keep ahead?

It is well along in the development of radically advanced equipment.

What are foreign countries doing?

Exactly the same thing.

Who will command the air in 1950?

The nation with the strongest and most technically competent aircraft industry, the most effective air force, the most efficient air line system, the most air-wise public.

UNITED AIRCRAFT CORPORATION

EAST HARTFORD, CONNECTICUT, U. S. A.

PRATT & WHITNEY ENGINES • HAMILTON STANDARD PROPELLERS • CHANCE VUGHT AIRPLANES • SIKORSKY HELICOPTERS



U. S. F. & G. salutes the Wonder State!

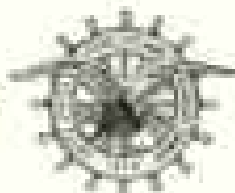


The Arkansas Capitol at Little Rock reflects the progressive spirit of the state. U. S. F. & G. as producer insurance policies and surety bonds have contributed to the growth of agriculture, business and industry in Arkansas.

Arkansas is an Empire in Itself!

With its resources of oil, coal and natural gas . . . its deposits of bauxite, antimony, manganese, cinnabar and many other minerals . . . its forests and fertile soil where cotton, grain and fruits flourish . . . Arkansas is an empire in itself. Here a proud past points the way to a brilliant future through its rapid industrial expansion. ☪ In Arkansas, as in every state, U.S.F.&G. safeguards business and the individual, writing practically all forms of fidelity and surety bonds and casualty insurance policies.

Consult your insurance agent or broker



as you would your doctor or lawyer

U. S. F. & G.

UNITED STATES
FIDELITY & GUARANTY CO.

affiliate

FIDELITY AND GUARANTY FIRE CORPORATION
HOME OFFICES: BALTIMORE 3, MD.

Jerome Kern consults his critics . . .



One of a series of events in the lines of great company, devised for Magnavox by Walter Richards.

Illustrated at right is the Magnavox Belvedere, one of a wide variety of models ranging from traditional to smart contemporary designs . . . each a masterpiece in tone as well as craftsmanship. The Magnavox Company, Fort Wayne 4, Indiana.

THEY STOPPED PRACTICING—to gather 'round the piano and the dynamic little figure at the keyboard. They all listened carefully—for they knew from past experience that Jerome Kern wanted their opinions . . . valued them, *acted upon them*. It was the porter who was first to speak. "Mis-tah Jehc-ry," he said, "you've got anothah hit there . . . sho' as you is born!"

And another hit it was! . . . joining such famous Kern melodies as "O! Man River," "The Last Time I Saw Paris," and "Smoke Gets in Your Eyes." There is a special treat today for all who listen to Jerome Kern's music played on the Magnavox radio-phonograph. A superb musical instrument for home reproduction of broadcast or recorded music, Magnavox is truly fine furniture, authentically styled and designed for years of service.

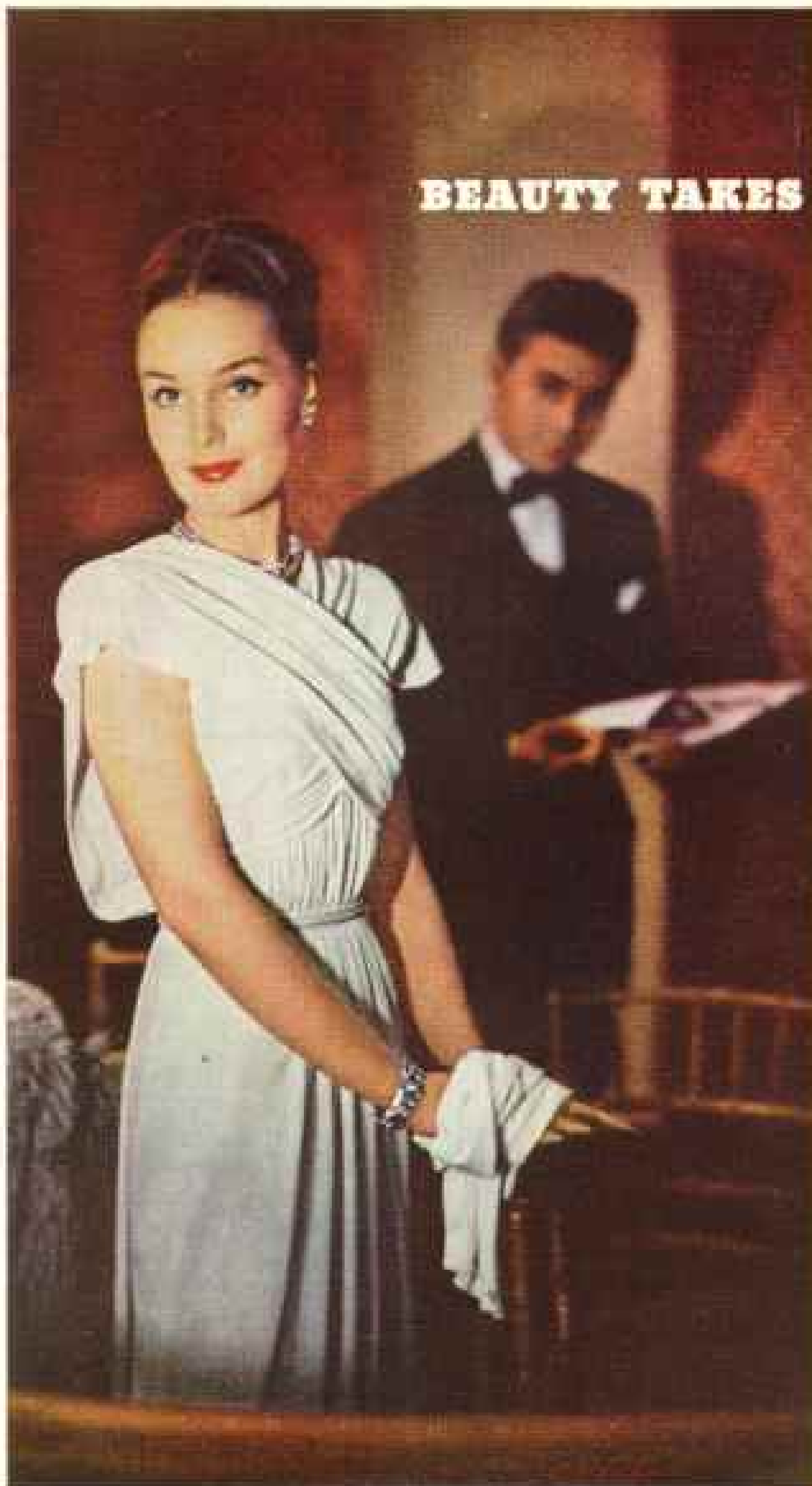
In choosing Magnavox for his own home, Jerome Kern has followed the example of Sir Thomas Beecham, Jascha Heifetz and other great notables of music. But you don't have to be a musician to appreciate the superior tonal qualities of Magnavox. If you like good music, if you take pleasure in beautiful furniture, if you want to get the most for your investment . . . then your final choice can only be a Magnavox!



Magnavox.
RADIO PHONOGRAPH

The choice of great artists

BEAUTY TAKES A BOW



When you see those new cars with Body by Fisher — you'll be quick to say that beauty takes a bow. They are truly beautiful.

It's easy to see that the Fisher Body organization has come out of the war with its skill and craftsmanship at a new peak.

So when you have the pleasure of selecting a new car again, there's one thing to remember — be sure that it carries the emblem of Body by Fisher.

It stands today, as it has stood for more than 37 years, as the sure sign of a better automobile. It means that all the skills inherent in the Fisher Body organization have now been combined to bring you greater beauty, to give you greater comfort and safety.

Body by Fisher



BETTER BY FAR

Fisher Body Craftsman's Guild Model-Building Competition — 8 university scholarships, 624 other awards for boys 12 years of age and older. Enroll now! Guild Headquarters: General Motors Bldg., Detroit 2, Michigan.

You get Body by Fisher
only on

GENERAL MOTORS CARS

CHEVROLET

PONTIAC

OLDSMOBILE

BUICK

CADILLAC



Boeing Stratocruiser (above) and Boeing B-29 Superfortress

BUY VICTORY BONDS

Trail-blazer for peacetime flight

The Boeing B-29 Superfortress is something more than the weapon that helped win the war against Japan. It embodies principles that will revolutionize air transport now that victory is won.

Not only have the great Boeing planes in which you may soon travel already been designed . . . a military version of the first super-transport of the future—the Boeing Stratocruiser — has broken all records for transcontinental flight, averaging 383 miles per hour from coast to coast!

Boeing has had more experience in the design and building of

four-engine aircraft than any other manufacturer in the world. Like the Superfortress, the new Stratocruiser has four engines—and even greater horsepower will be added.

Like the B-29, it has the extraordinarily efficient Boeing wing, giving it huge carrying capacity—plus higher performance and greater economy in operation than any other transport.

Again, like the Superfortress, the Stratocruiser benefits from Boeing leadership in stratosphere research and the production of aircraft for high-level, over-weather operation. And it has improved

pressurized cabins — plus new refinements in sound-proofing.

It has all the structural and aerodynamic advances of the last three years, proved in war on Boeing-built aircraft—all the features contributing to safe navigation, ease of control and dependable performance—plus passenger comfort never before imagined.

Now that peace is here, Boeing principles of research, design, engineering and manufacture will bring you the Stratocruiser and other advances in air transport . . . and you may know of any airplane—if it's "Built by Boeing" it's built to lead.

DESIGNERS OF THE B-29 SUPERFORTRESS • THE FLYING FORTRESS • THE NEW STRATOCRUISER
THE KAYDET TRAINER • THE STRATOLINER • PAN AMERICAN CLIPPERS

BOEING

GIVE REAL

MEXICAN BASKETS

FILLED WITH

Fabulous Fruit

FROM
BLUE
GOOSE



America's finest, juiciest fruit... giant-sized du Cormice and d'Anjou pears, golden Blue Goose oranges, enormous Delicious apples, famed Coachella Valley dates, meaty mammoth walnuts, etc. ... cellophane protected, gorgeous ribbon bow.

No other gift so delicious, so tasteful, so welcome to your family, friends, returning servicemen, business associates. Write or wire for color catalog.

"Fiestacita" Genuine imported Mexican Basket \$8.95
\$31 as pictured above. Weight about 15 lbs. Express prepaid.

"La Fiesta" Mexican Basket \$14.95
\$30—Weight about 25 lbs. Express prepaid.

"WONDERLAND" GIFT BASKET No. 21

About 20 lbs. choicest fruit in hand-woven basket; cellophane protected; gay ribbon as pictured. Express prepaid \$12.



Fruit O' the Calendar Memberships

Start now with gorgeous 15-lb. December "Luxury" basket. Then select 8, 5 or 2 additional packages from this list—Jan., pears; Feb., Delicious apples; Mar., seedless grapefruit; July, Desert dates; Aug., Summer pears; Sept., Blushy peaches; Oct., Delicious apples; Nov., du Cormice pears. Everything express prepaid. Memberships: 9 months, \$31.00; 6 months, \$22.50; 3 months, \$14.00.

Mail Order TODAY to



BLUE GOOSE ORCHARDS, American Fruit Growers, Inc., 347 Fir St., Medford, Oregon.

Please send _____ baskets; _____ Fruit O' the Calendar memberships as indicated on names and addresses attached.

My name _____

Address _____

Check enclosed for \$ _____

Shipments guaranteed to arrive in perfect condition (military camps at your risk). No orders shipped outside U.S. No C.O.D.'s. Reference: First National Bank, Medford.



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The people of Colorado Springs invite you to make your home in their delightful city at the foot of Pikes Peak. Mild, dry, sunny winters... cool, invigorating summers—310 sunny days a year. Metropolitan cultural and educational advantages, scenic wonderland, moderate living costs. Write for beautifully illustrated booklet.

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COLORADO SPRINGS CHAMBER OF COMMERCE
155 Pikes Peak Ave., Colorado Springs, Colorado
Please send me 24-page booklet, "Your Home in Colorado Springs."

NAME _____

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MOST HEALTHFUL YEAR 'ROUND CLIMATE IN AMERICA

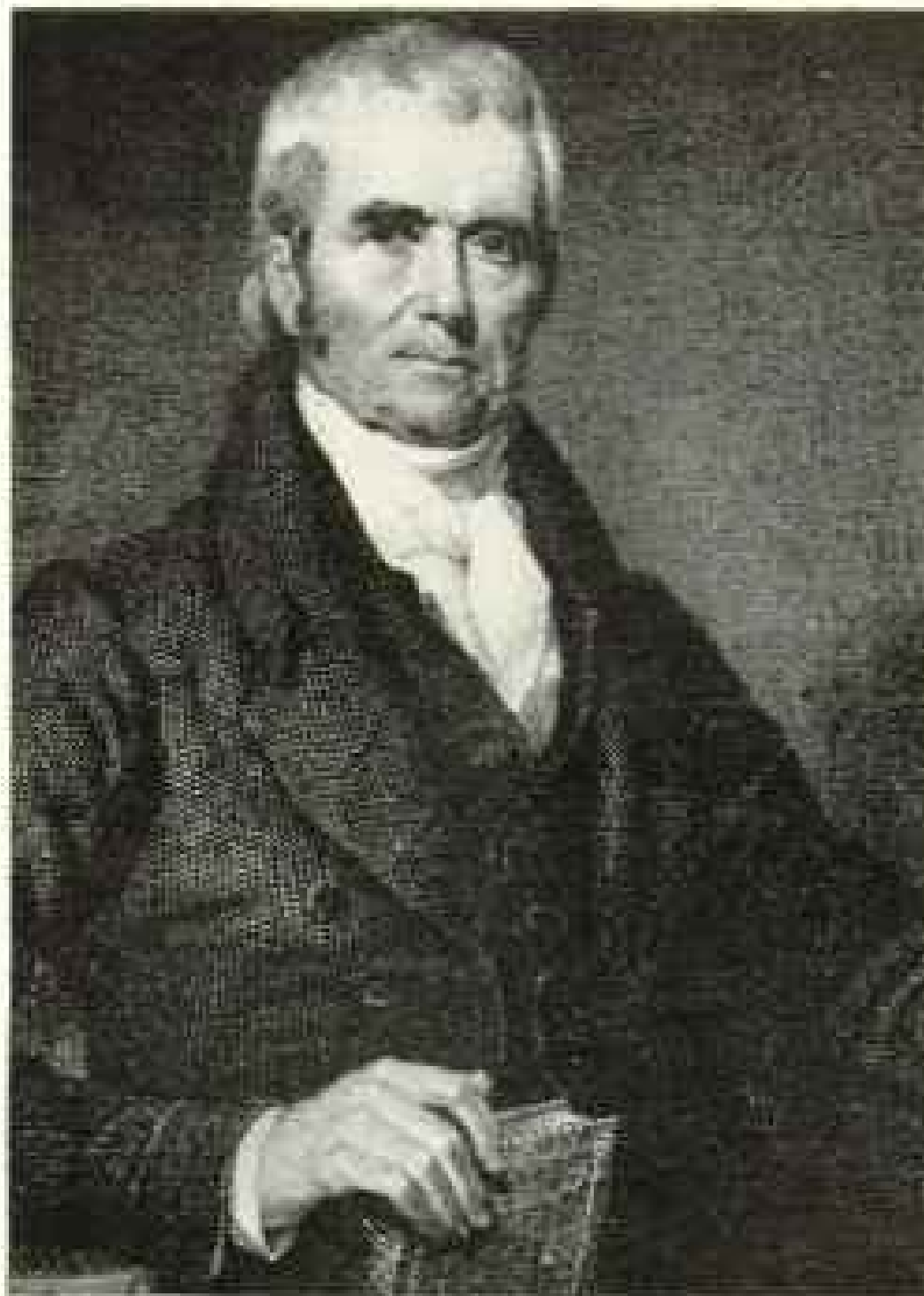
1946 FORD *with many advancements* *- now in production!*



There's a **Ford** *in your future!*

Here is the most beautiful Ford car ever built—with more improvements than many pre-war yearly models. . . . Under the broad hood there's new and greater power. Plus improved economy in oil and gasoline. . . . Colorful interiors invite you to relax in luxury. Plenty of elbow-room,

knee-room, head-room. New-type springs assure a full-cushioned level ride. Brakes are new hydraulics—extra-large and self-centering—to make stops quick, smooth and quiet. . . . Ask your Ford Dealer about the smartest Ford cars ever built. FORD MOTOR COMPANY



The court spoke ...with a pen!

A frontier Virginian from the Blue Ridge country... brave soldier at Brandywine and Monmouth... staunch supporter of Washington in the terrible winter at Valley Forge, John Marshall later became the most brilliant of American jurists... whose decisions did much to make the U. S. Constitution a living document.

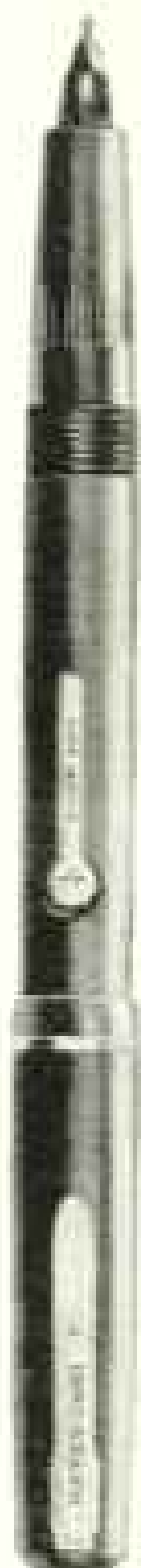
Marshall's inspired opinions were penned with quill on an ink-spotted pine table. Today the defenders of the Constitution—in the field and at home—have better pens, Inkographs... precision built, reliable, sturdy, durable yet light... adapted to any hand, fine in workmanship... with a 14kt solid gold ball-like point that writes with the ease of a soft lead pencil.

Service men's needs come first, so if your dealer is out of stock—keep trying.

Inkograph on the barrel and clip guarantees the genuine... sorry, no mail orders, only dealers can supply you.

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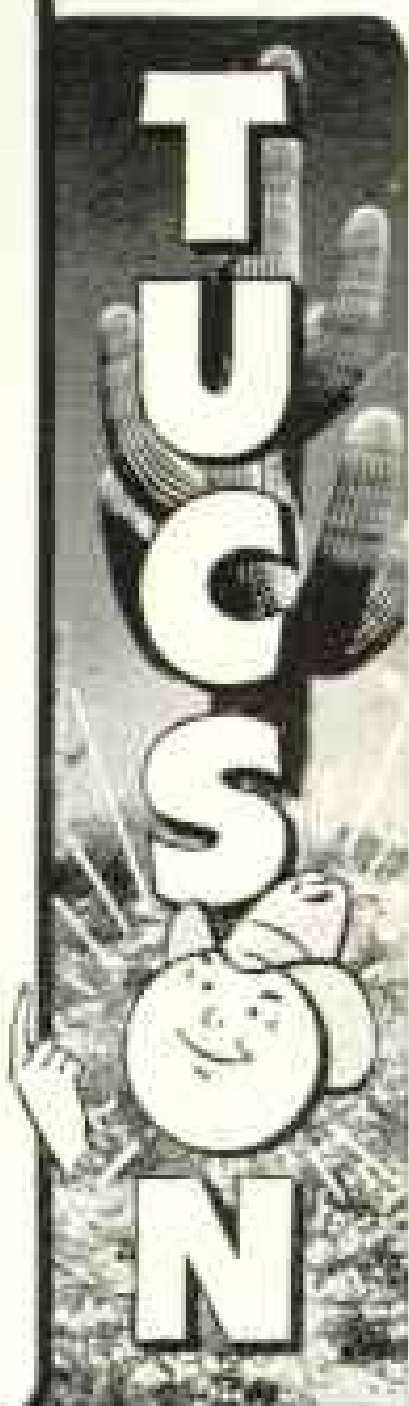
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... from hum-drum care. Here are guest ranches, outdoor fun, natural splendors, University of Arizona, Old Mexico next door. For free booklet write Tucson Sunshine Climate Club -4504-B, Rialto, Tucson, Ariz.

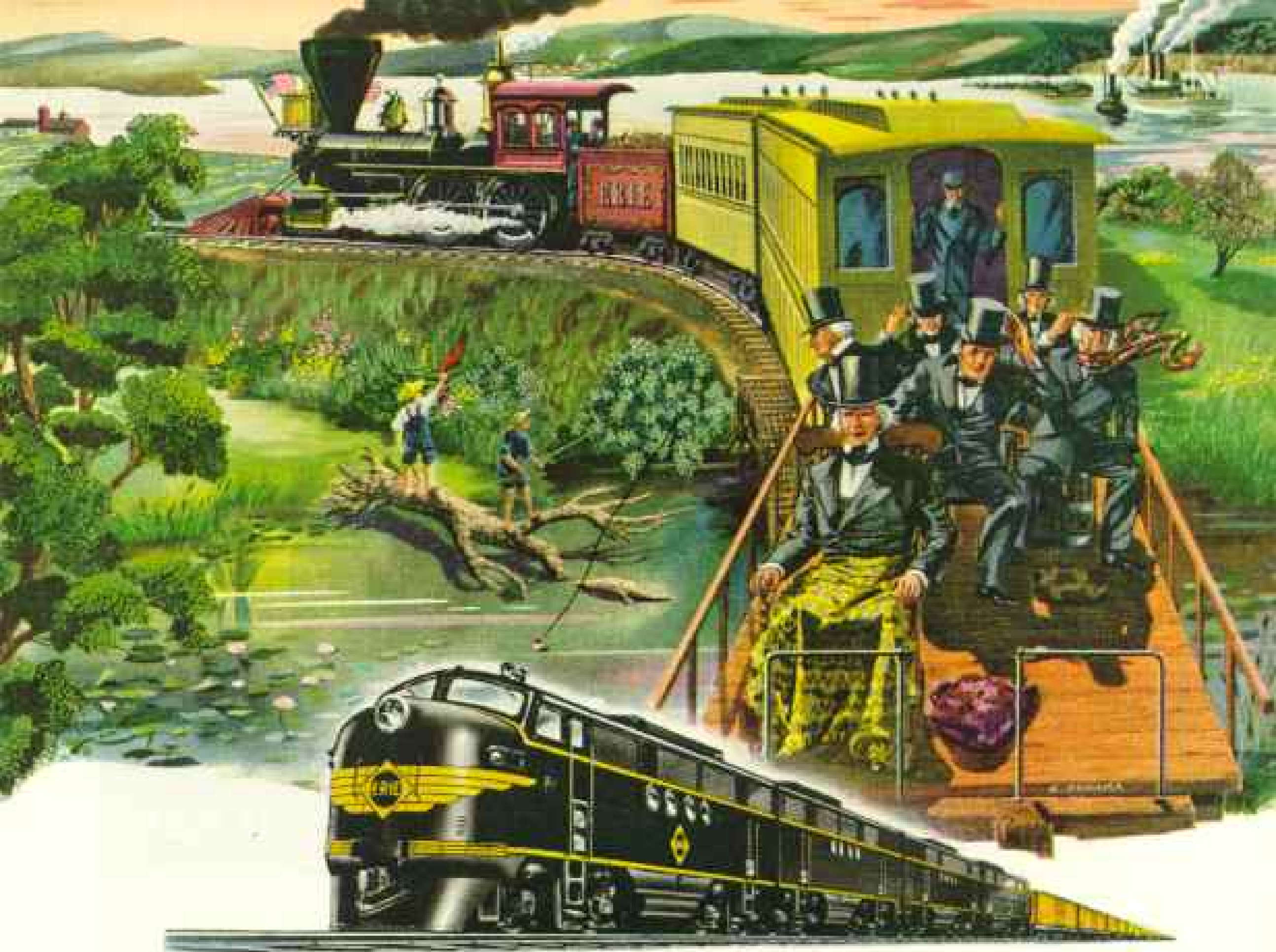
**UNCHANGED BY WAR
TUCSON'S DESERT
CLIMATE BECKONS**

But please remember—

Do not come without confirmed reservations for living accommodations!



Your place in the sun is TUCSON



To celebrate the opening of the then longest rail line in America, the Erie Railroad arranged a now famous junket for May 14, 1851. Included among the guests who made the 487-mile trip were President Millard Fillmore, several members of his cabinet and Daniel Webster, who is pictured here as he elected to travel.

SAMPLE OF THE NEW AND BETTER

In his hair was the snow of 69 active years — but in the heart and mind of Daniel Webster was ever-youthful eagerness to sample new and better things.

So when the Erie Railroad celebrated the opening of the first "long" rail line, he prescribed his own accommodations. Other distinguished guests could ride in coaches if they preferred — Mr. Webster would take a rocking chair on an open flatcar, so as not to miss anything new and exciting.

Were he with us today, Daniel would still find new and better things along the lines of the Erie. Heavy grades that "bottlenecked" freight movements for a long time, have bowed down before

General Motors Diesel locomotives — and long strings of freight cars now move with dependable on-time regularity without split-up between Chicago and Jersey City.

Here, as in the service of 83 other major lines and heavy industries, this modern motive power is dramatically heralding new and better things to come.

For their great power, their speed, their unmatched smoothness make one thing clear: *When whole lines become completely GM Diesalized, schedules can be clipped, costs still more reduced — and all your travels blessed with fresh new comfort and ease.*

KEEP AMERICA STRONG
BUY MORE VICTORY BONDS



LOCOMOTIVES **ELECTRO-MOTIVE DIVISION**, La Grange, Ill.

SINGLE ENGINES Up to 200 H.P.]
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ENGINES 150 to 2000 H.P. **CLEVELAND DIESEL ENGINE DIVISION**, Cleveland 11, Ohio



THE BRITISH ISLES STILL STAND

You were the principal visitors to these islands in the days before the war and never did you travel far as strangers, for continually you met reminders of our common heritage. Place names, alone, made you feel at home. But much more than that, birthplaces, ancestral homes and shrines, honored by the memory of the founders of the United States, served but to emphasize our kinship.

In peacetime when you come again, time honored sites must share their age-old interest with other and more recent shrines of pilgrimage. Cities which stood up to the fury of the enemy. Cities, towns and villages and whole areas of our countryside where your brave forces made their wartime homes. With what pride will fathers show their sons, and sons their parents and friends, the places where they prepared themselves to fight and conquer the common enemy in their desire for the liberation of mankind and the freedom of the world.

Representation of British Railways in North America is maintained through
T. D. Slattery, General Traffic Manager
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Railways*



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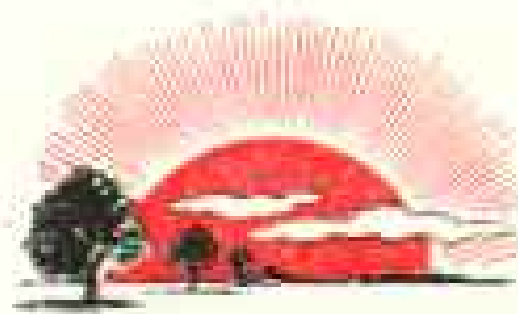
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OFFICE-MILL

LAWRENCE, MASS.

Cancer has its hopeful



side! It starts small, as a malignant growth of cells at one point in the



body, and may



spread

quickly. But cancer often sends out

danger signals,



permitting early

recognition, and if treated properly

it can usually be checked.



These are cancer's danger signals

1—Any unusual lump or thickening, especially in the breast.

2—Any irregular or unexplained bleeding.

3—Any sore that does not heal, particularly about the mouth, tongue, or lips.

4—Loss of appetite or persistent unexplained indigestion.

5—Noticeable changes in the form, size, or color of a mole or wart.

6—Any persistent changes in the normal habits of elimination.

Here's hopeful news. These danger signals do not invariably mean that you have cancer. They are signs that something is wrong; that you should have an immediate examination by a

competent doctor.

But remember, medical science can cure cancer *only* if it is discovered early, before it has a chance to grow or spread.

No medicines can cure cancer. Beware of quacks and those who promise to cure cancer with drugs or other unproved methods.

Only three things can check, destroy or remove cancer . . . X-rays, radium, surgery, used singly or in combination. *There are no short cuts or substitutes.*

Send for Metropolitan's Free Booklet 115N, for further information about cancer.

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The adjustable axolotl

DOWN MEXICO WAY, and in some of our western lakes, lives a creature called the axolotl.

His odd name was given him by the Aztecs.

But his name isn't the only odd thing about him. In the first place, he isn't, technically, a finished product of any ordinary life cycle. He's simply the aquatic larva of the North American salamander, *Ambystoma tigrinum*. And he has an ability to adjust himself to changes in his living conditions which might well cause a lot of us humans to turn grass-green with envy.

In some of these western lakes, as long as there is plenty of food and water, he apparently feels no urge to make a change. So he doesn't. He lives, reproduces, and dies an axolotl.

But suppose, as sometimes happens, the water starts to dry up. The axolotl can't live on dry land. He can, however, as experiments have shown, dispense with his gills and start breathing with his lungs, lose his fins, develop eyelids, and thus become a salamander which lives on dry land very happily.

Like the axolotl, man is often confronted with events which threaten to make a major change in his living conditions. But, unlike the axolotl, he can't transform himself physically to meet them.

So, if he is wise, he takes other steps to cope with these threats. He carries insurance.

His home won't dry up. But it may burn down, or even blow away. Insurance is the answer to that.

He might be hurt and unable to work. Or an auto accident might result in a judgment against him which could take away his house and put a mortgage on his earning power for years. Insurance is the answer to that.

And if, unlike the axolotl, he worries about what may happen to his family after he's gone, insurance is the answer to that, too.

MORAL: Insure in The Travelers. All forms of insurance and surety bonds. The Travelers Insurance Company, The Travelers Indemnity Company, The Travelers Fire Insurance Company, Hartford, Connecticut.

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The satisfaction of giving (and getting) Sheaffer writing instruments is the satisfaction of giving (and getting) the best! . . . Put yourself on the receiving end—wouldn't you like to get the finest gift of its kind ever made—particularly when that gift becomes an intimate personal possession?

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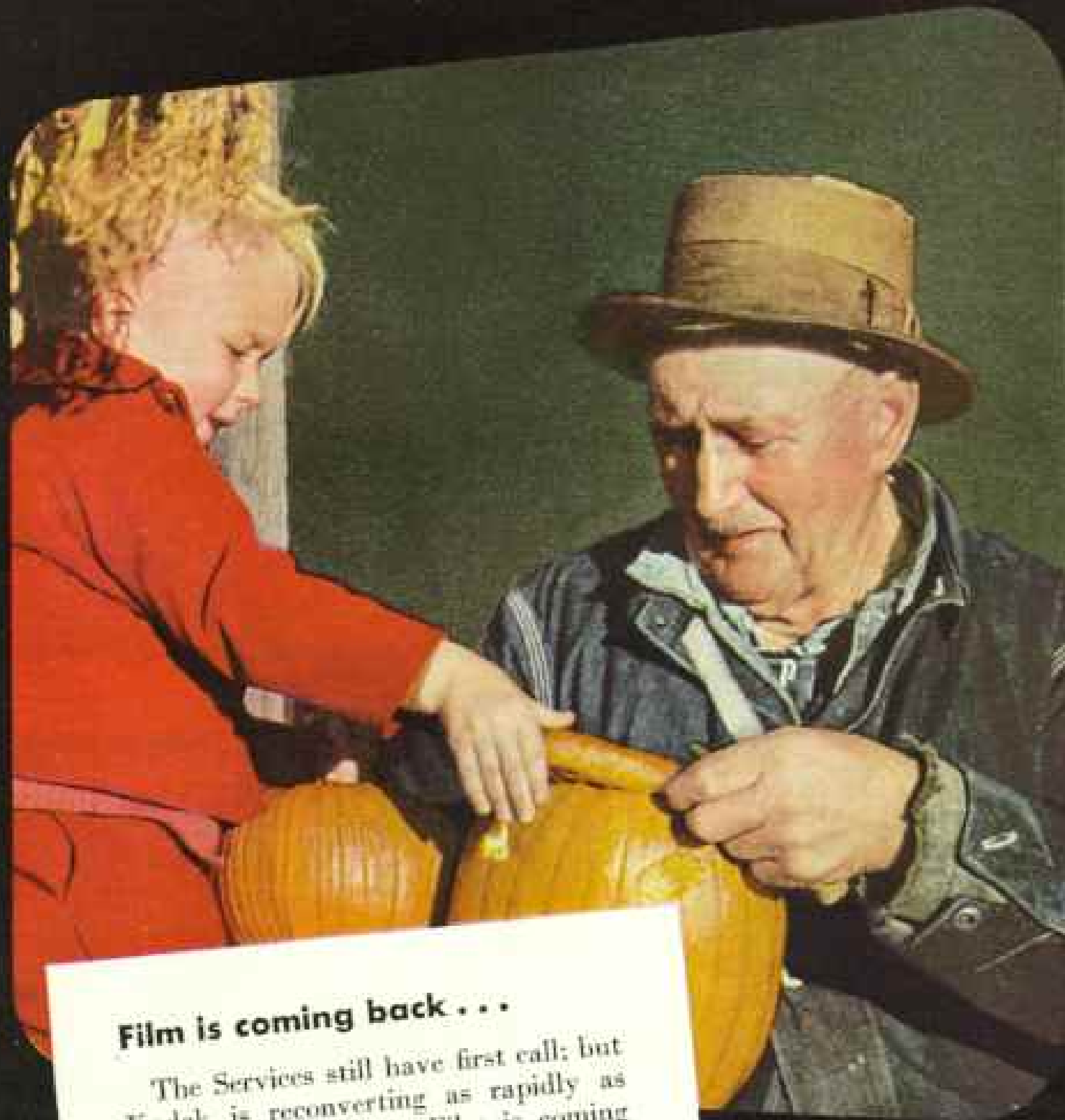
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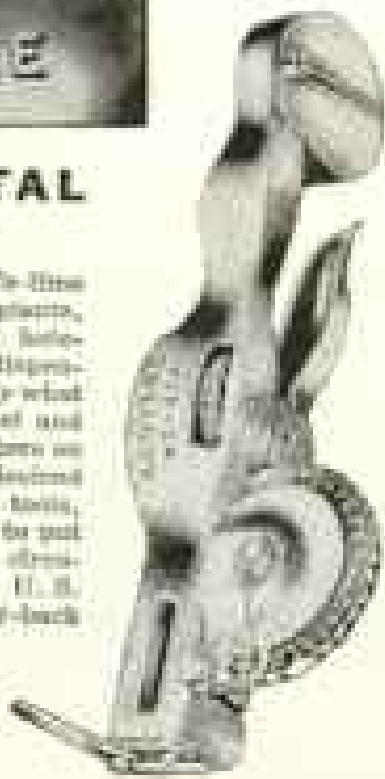


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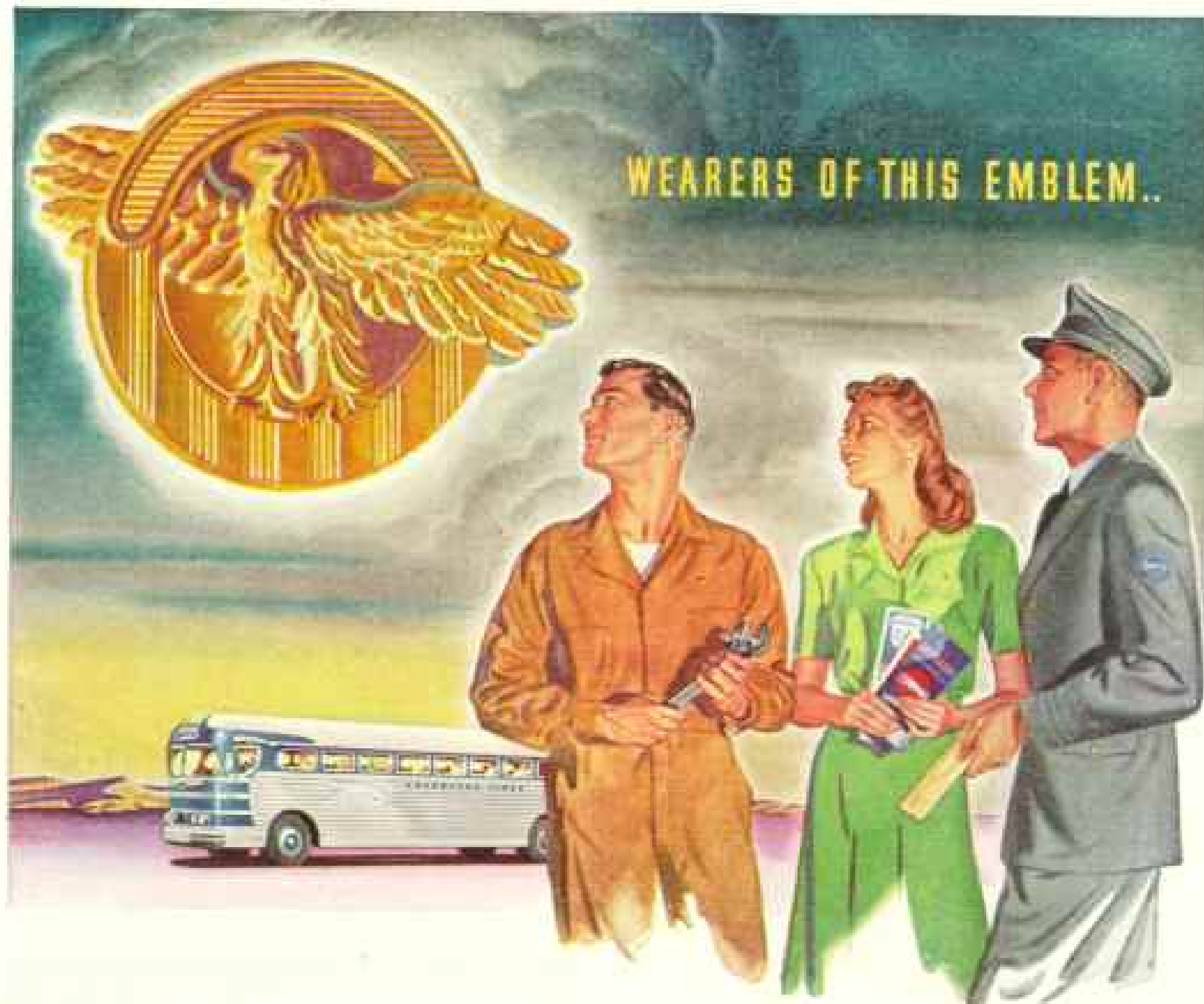
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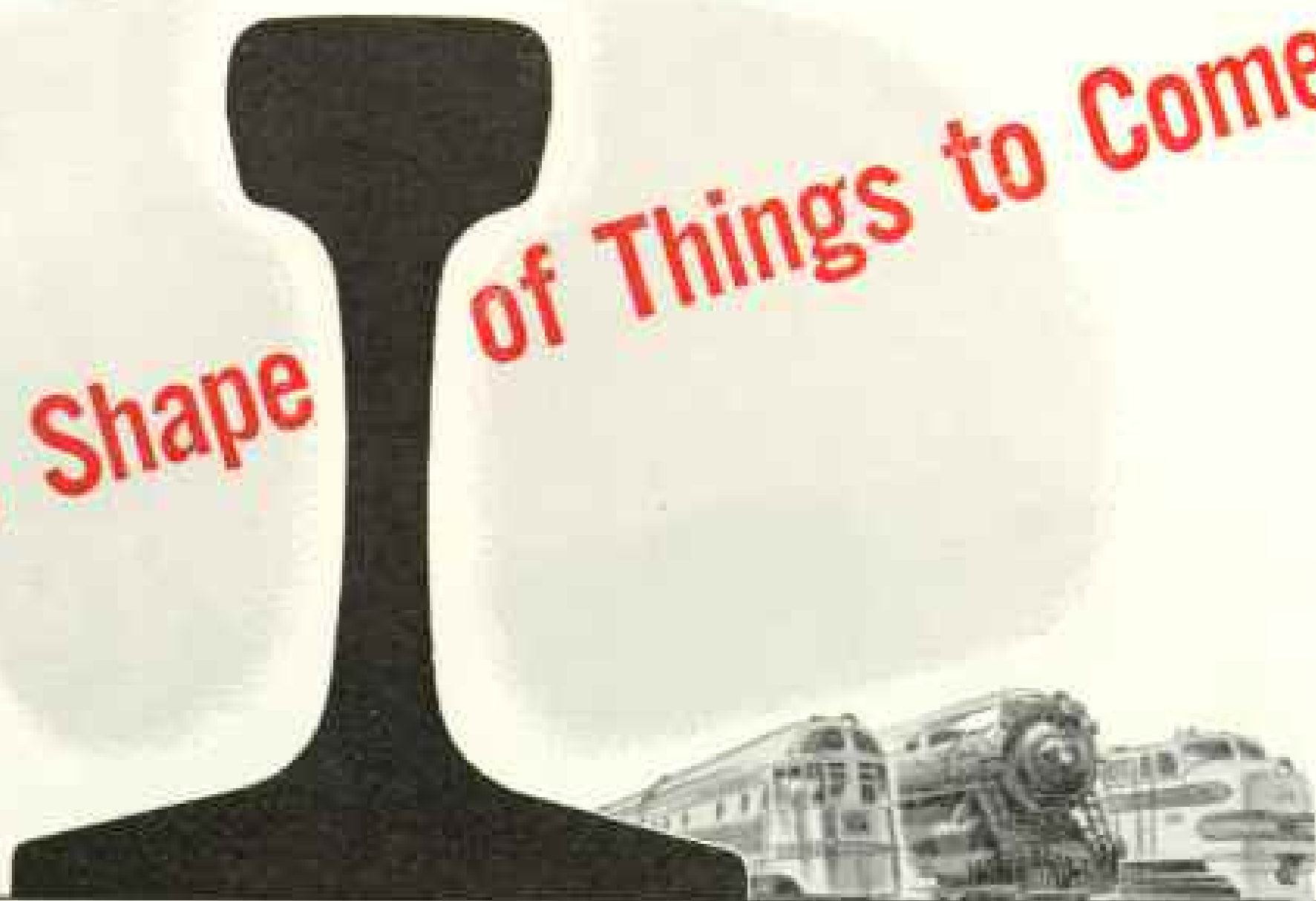
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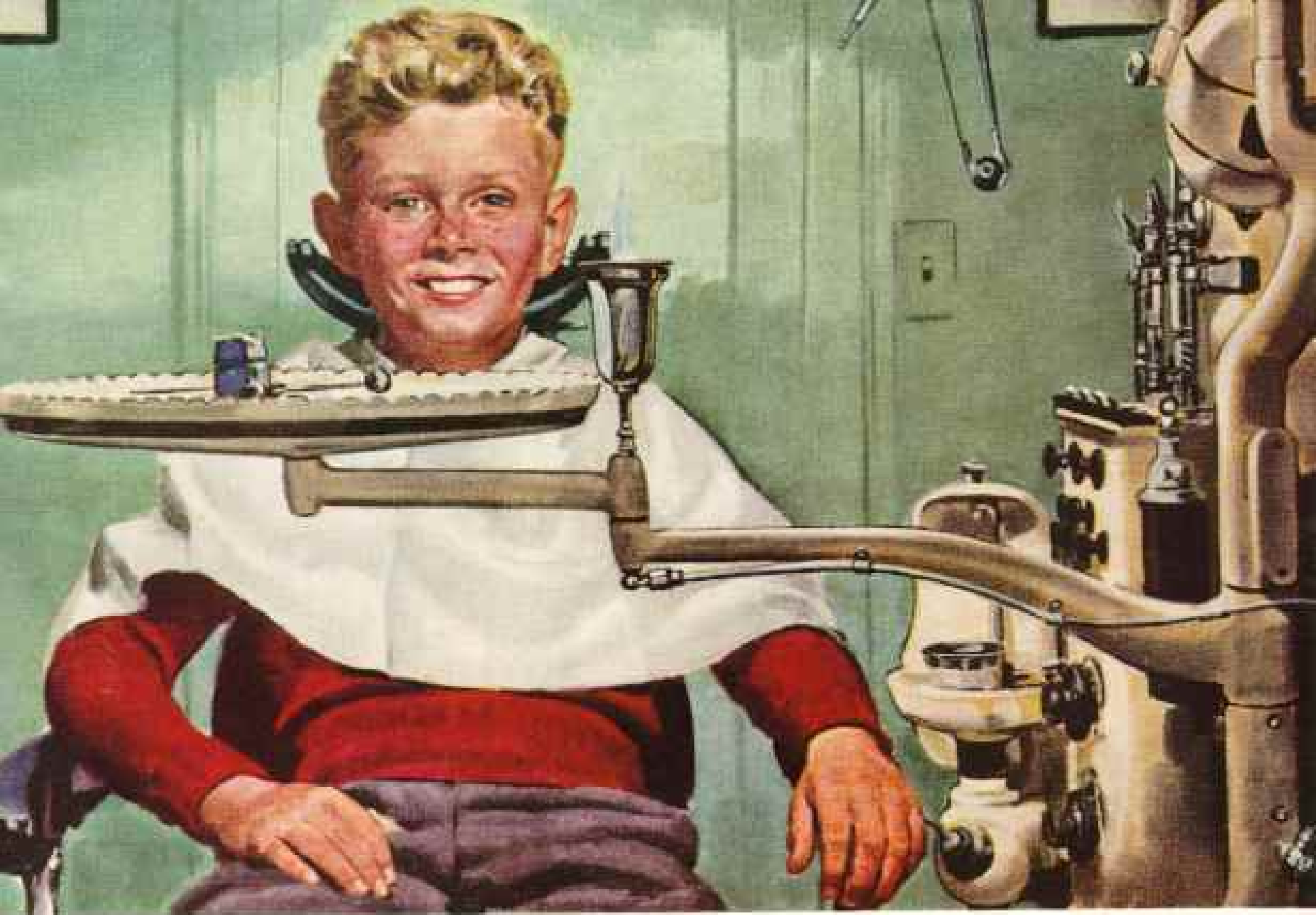
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